Durham County

2007

Community Health Assessment

Submitted by:

Durham County Health Department

and

The Partnership for a Healthy Durham

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EXECUTIVE SUMMARY

The State of North Carolina requires that all Local Health Departments submit a comprehensive Community Health Assessment every four years and a State of the County Health Report (SOTCH) in each of the interim years. Often, local Healthy Carolinians partnerships take the responsibility for conducting these assessments. Durham's 2003 Community Health Assessment, along with recent SOTCH Reports for Durham, can be viewed at www.healthydurham.org.

As in 2003, this assessment has been a collaborative effort. It was led by the Coordinator of the vibrant *Partnership for a Healthy Durham* and involved many members of the Partnership. The Partnership for a Healthy Durham is the certified Healthy Carolinians program in Durham County, and the Health work-group of the Durham Results-Based Accountability Initiative.

The goal of Durham's 2007 Community Health Assessment was **to provide, in one location, a compilation of valid and reliable information about the health of the Durham community.** We have strived to do this in ways that will make it easy for members of the Durham community to access and understand the information.

As in the 2003 assessment, the *Evans & Stoddart Field Model* was used to provide an organizing framework for the information presented in this document. The model, shown in visual form at the beginning of each section of the full document, comprises the following major health domains:

- Health and Function
- Well-Being
- Disease
- Health Care
- Prosperity
- Physical Environment
- Social Environment
- Individual Behaviors and
- Genetic endowment.

As was the case with Durham's 2003 Community Health Assessment:

- Genetic endowment is excluded, as it is something that public health policy or interventions cannot influence.
- The Health domain and the Well-being domain have been collapsed together into one section of the document.

SOURCES

Information provided in this year's Community Health Assessment came from:

1. Results from *the 2007 Durham County Health Assessment Survey* – a random telephone survey of 700 residents of Durham County;
2. Results from the 2007 *Behavioral Risk Factor Surveillance Survey* for Durham County – a random phone survey of 400 residents;
3. Preliminary results from the *Youth Risk Behavior Survey* (YRBS) – a survey of 484 Middle School students and 392 High School students attending Durham Public Schools;
4. Results from a series of *Community Listening Sessions* in which more than 70 individuals from different parts of Durham participated;

5. The Report of an *Action-Oriented Community Diagnosis* undertaken in the communities served by Lincoln Community Health Center;
6. The North Carolina State Center for Health Statistics and
7. Agencies and organizations in Durham County.

Since this was the first YRBS survey for Durham County, it will not be possible to define trends in risk behavior of Durham's youth until the next survey is conducted. It is also very important to note that the results of the Durham YRBS that are presented in this 2007 Community Health Assessment are based only on a preliminary analysis of the survey results.

For much of the data about Durham County in the 2007 Assessment, comparisons are made between Durham County and other NC counties of similar size and demographics. These were Forsyth, Guilford and Mecklenburg counties. Comparisons were also made with the State of North Carolina.

KEY FINDINGS

1. Health Function and Well-Being

Main findings in the twin domains of health and well-being are:

- In 2007, 40% of Durham's population rated their well-being as *high* – compared with 31% in 2003.
- 28.6% of those who have attended college rate their health as excellent – whereas only 15% of residents of Durham who have not attended college rate their health as *excellent.*
- 30% of those who identify themselves as Caucasian rate their health as *excellent* – whereas only 17% of Durham's minorities rate their health as *excellent*.
- The percentage of people in Durham who state that they have a problem for which they have taken prescription medication for at least three months in a row has increased from 44% in 2003 to 53% in 2007.
- Durham has a lower percentage of deaths due to motor vehicle crashes than for the State of North Carolina overall (9.2% for 0-19 year-olds in Durham, compared with 16% statewide - and 13.6% for 20-39 year-olds in Durham, compared with 20% statewide).

However:

- Durham has a significant intentional injury problem. For 0-19 year-olds homicide caused 11.3% of deaths in Durham - compared with 4.7% statewide; and for 20-39 year-olds homicides caused 20.6% of deaths - compared with 10.7% statewide.
- In 2007, 32% of Latino students in Durham Public High Schools reported that they had attempted to commit suicide during the past year (compared with 15% of other students).
- The percentage of Latinos who rate their well-being as *high* has not increased since 2003.
- After declining for several years, the reported bicycle crash rate in Durham has increased for each of the last three years – to the extent that Durham's is now higher than the NC rate.

Many programs and resources in Durham County that aim to promote health and well-being are described in the Assessment. The newly-formed Injury Prevention Committee of *The Partnership for a Healthy Durham* is:

- Exploring ways to collect accurate 'baseline' data about injuries;
- Developing mechanisms for improved communication and information-sharing between the many agencies and organizations in Durham County that play a role in injury prevention;
- Identifying best practices in injury prevention;

2. Disease

Main findings in the disease domain are:

- The downward trend in heart disease rates is continuing among all segments of the population.
- 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.

However:

- For most of the leading causes of death the rates are much higher for minorities than for the general population. This is particularly true for minority males.
- 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 1,000 live births for the overall Durham population.
- Cancer is the leading cause of death in Durham County.
- 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 latest year for which data is available) the most common mode of infection for transmission of HIV was "men having sex with men" (MSM).
- Age-adjusted rates of prostate cancer is increasing.
- 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 much higher asthma rates (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.

Many programs and resources in Durham County that aim to prevent disease are described in the Assessment. The Infant Mortality Reduction Task Force of *The Partnership for a Healthy Durham* has established support groups for women in several Durham neighborhoods and initiated fatherhood education.

3. Health Care

Main findings in the health care domain are:

- In 2007, 79% of the total Durham population rated their health care as very good, compared with 72% in 2003.
- In 2007, 80% of African-Americans in Durham rated their health care as very good, compared with 73% in 2003.
- When compared with all of the comparison counties, and the rest of North Carolina, Durham has a very large number of health workers, especially physicians (67.1 physicians per 10,000 - compared with 20.8 per 10,000 population statewide).

However:

- Estimates of the number of uninsured adults under the age of 65 in Durham County lie between 13% and 26%.
- In 2006, 78% of the patients served by Lincoln Community Health Center were uninsured - compared with an average rate of 51% for similar Health Centers statewide.
- 82% of people served by Lincoln Community Health Center live below the federal poverty level – compared with a statewide average of 54%.

- Factors associated with being uninsured in Durham include being a minority, male, under the age of 45, less educated, or living in a household with an income of less than $50,000. In 2007, 72% of Latinos reported having no insurance coverage.
- The percentage of adults in Durham who are employed for wages but without any health insurance increased from 15% in 2004 to 27% in 2006.
- 28% of Latinos stated that they had to forego seeing a doctor because of the cost.

Many programs and resources in Durham County that focus on health care are described in the Assessment. Also, the Access to Healthcare Committee of the *Partnership for a Healthy Durham* has:

- Participated in the development of *Project Access* – a program to increase access to specialty care for uninsured individuals, especially Lincoln Community Health Center patients (to be started by July 2008).
- Participated in the research on a *health plan for uninsured patients* in Durham County who wish to purchase a modified basic health plan.
- Sponsored monthly *learning sessions* for community members to learn about local, state, or federal healthcare services and programs (i.e. home health and hospice services).
- Published a monthly article about health in Durham in the *Herald-Sun* newspaper.
- Created a "glossary" of health access terminology and a brochure describing options for basic medical services for the uninsured.

4. Prosperity

Main findings in the prosperity domain are:

- In 2005 Durham had median and household family incomes that are higher than for NC overall.
- The unemployment rate in Durham has gradually declined since 2002.
- Home ownership rates in Durham County increased from 55% to 71% between 2003 and 2007. Home ownership rates among African Americans increased from 42% to 63% during the same period and home ownership rates among Latinos increased from 13% to 27% during the same period.

However:

- There is a disparity between 'wages earned' and 'per capita income' in Durham County – suggesting that many of those earning higher wages may not be residents in the County.
- The 2007 'point in time' count of the homeless found 539 homeless persons in Durham County.

Many programs and resources in Durham County that focus on increasing prosperity are described in the Assessment.

5. Physical Environment

Main findings in the physical environment domain are:

- In 2007, 40% of Durham's population described their home as an excellent place to live in – compared with 32% in 2003. 30% of African Americans in Durham described their home as an excellent place to live in – compared to 29% in 2003 and 21% of Durham's Latino population described their home as an excellent place to live in (compared with only 10% in 2003).
- Lead screenings are increasing for children in Durham, and the number of children testing positive for lead exposure is decreasing.
- Participants in listening sessions expressed high levels of satisfaction with Durham's transportation system.

Many programs and resources in Durham County that focus on changing the physical environment are described in the Assessment.

6. **Social Environment**

Main findings in the social environment domain are:

- The great diversity of Durham is reflected in the fact that Durham became a 'Majority-Minority' County in 2005 – when Durham was approximately 48.4% Caucasian, 37.2% African-American, 11% Latino, 4% Asian, 8.4% other and 2% multi-racial.
- According to 2005 census projections, 16.8% of Durham residents over five years old spoke a language other than English when at home.
- Durham has a higher rate of "non-family households" than all the comparison counties and NC as a whole.
- The number of cases of child abuse that were confirmed by the Department of Social Services has dropped from approximately 23 per 1,000 children in 2000 to 7 per 1,000 children in 2006.
- The percentage of Caucasian students in Durham Public Middle Schools and High Schools who reported in 2007 that a parent or family member has talked with them about sex was less than for other students – and Caucasian students who have engaged in sexual activity reported lower rates of condom use than other students.

However:

- After dropping each year since 1997, Durham's violent crime rate increased in 2006.
- In 2004–2005, there were 2,160 domestic violence hotline calls and 1,558 domestic violence clients in Durham County. 26% of the domestic violence clients were Caucasian, 46% were African-American, 20% were Latino, and 98% were women.
- Almost 46% of students in Durham's schools qualified for free or reduced price lunches in 2006, meaning that they live with families with low incomes.
- 72.5% of Durham's overall population feels safe walking in their neighborhood during the day (compared with only 45% of Latinos) and 42% of people in Durham feel safe walking in their neighborhood during the night (compared with only 20% of Latinos).

Many programs and resources in Durham County that aim to improve the social environment are described in the full assessment. Also, the Substance Abuse Committee of *The Partnership for a Healthy Durham* has completed a comprehensive summary of substance abuse in Durham County. This report documents how substance abuse is a 'crosscutting issue' that affects almost every aspect of life in Durham. The Committee is currently developing strategies to address (a) access to substance abuse services, (b) substance abuse in the social environment - including issues of access to alcohol and other substances, (c) substance abuse education (including a "tool-kit" of resources for parents on how to prevent substance abuse).

7. **Individual Behaviors**

Main findings in the domain of individual behavior are:

- The numbers of smokers in all population groups continues to decline (from 17.5% in 2003 to 14% in 2007).
- The people of Durham show strong support for additional taxes on cigarettes and prevention programs - with 48.7% saying they would support an additional tax of $1.00 or more on a packet of cigarettes if the funds went to smoking prevention and cessation programs.
- 78% of residents of Durham County surveyed stated that they believed that they would increase their physical activity if their community had more accessible sidewalks or trails for walking or bicycling.

- The number of women over 40 in Durham County who have had a mammogram in the past two years increased from 80% to 88% between 2004 and 2006. This is the highest rate among all the comparison counties.
- The number of people in Durham County who have been screened for colorectal cancer increased from 58% to 74% from 2004 to 2006.
- In 2005, 27.5% of the Durham population consumed at least 5 fruits and vegetables daily compared with 22.5% for NC overall. The rates are lowest for those who did not attend college, minorities, males, and people in household earning less than $50,000 / year.

However:

- 65% of Durham residents surveyed in 2007 are overweight or obese.
- In 2006, 27% of the children (2 – 4 years old) enrolled in the *Women, Infants, Children Program* (WIC) in Durham County were overweight. The Durham rate has increased every year since 2002 (when the rate was 10%) and is also much higher than the 2006 rate of 15% for North Carolina overall.
- In 2005, only 36.3% of Durham County residents meet national recommendations for physical activity compared with 42.1% statewide. Rates are worse for those who did not attend college, minorities, and people in household earning less than $50,000 / year.
- The rate of Latina teen pregnancies continues to be high (178 per 1,000 females aged 15-17 compared with 48 per 1,000 for the rest of Durham).

Many programs and resources in Durham County that focus on changing individual behaviors are described in the Assessment. Also, the Obesity and Chronic Illness Committee of the *Partnership for a Healthy Durham* has:

- Created a Durham County map, to be published online, that will show places for healthy food choices and exercise.
- Implemented a nutrition survey that is in the final stage of data collection.

The Working Group has also promoted and supported: collection of information on health behaviors of Latinos in Durham by El Centro Hispano; collection of BMI's and nutrition information in selected Durham Public Schools; positive changes in school food offerings in Durham Public Schools; DINE for Life (the Durham County Health Department's Program serving 15 schools with over 50% of the student body eligible for Food Stamps); and the establishment by El Centro Hispano of a soccer academy (that has over 80 members) and a nutrition and diabetes education program that has already served 4,908 individuals in 2007.

Future plans of the Committee include the development of multi-agency services for physical activity and nutrition improvement (targeting low-income Durham residents) and a worksite program focusing on healthy weight and nutrition for employees of Durham Public Schools.

CONCLUSION AND NEXT STEPS

The findings from this 2007 Community Health Assessment suggest that Durham is poised to become not only a ***City of Medicine*** but also a ***Community of Health***. The work of the *Partnership for a Healthy Durham*, which is currently planning and implementing several far-reaching health initiatives, will be critical to bringing about this transition.

Several important issues that require further exploration were identified during the 2007 Community Health Assessment. They include:

- The mental health of Latino youth in Durham;
- The continuing increase in cancer rates and

- The possible relationship between gang activity, substance abuse and perceptions of safety in the City of Durham.

The next steps are to:

- Report to the many neighborhoods and organizations in Durham County in print and at public forums
- Review/revise the priorities of the Partnership for a Healthy Durham in light of the assessment findings and
- Develop Action Plans to be submitted to the State of North Carolina by June 1, 2008.

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- State Office of Healthy Carolinians
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- Triangle Community Foundation
- Kate B. Reynolds Foundation
- The Duke Endowment
- Durham Results-Based Accountability Initiative
- Durham County Health Department.

Introduction

The 2007 Durham County Health Assessment fulfills a requirement from the NC State Division of Public Health to submit a comprehensive health assessment of the county every four years. The 2003 assessment is available on www.healthydurham.org. The Technical Assistance and Steering Committees of the *Partnership for a Healthy Durham* designed the assessment. The Partnership for a Healthy Durham is the certified Healthy Carolinians program in Durham County, and the Health work-group of the Durham Results-Based Accountability Initiative. For more information on the Partnership for a Healthy Durham, see www.healthydurham.org.

About the assessment

The primary goal of the 2007 Community Health Assessment was to provide, in one location, a compilation of valid and reliable information about the health of the Durham community - and to do this in way that will make it easy for members of the Durham community to access and understand the information.

A secondary goal was to meet the standards relating to Community Health Assessment established by (a) the *North Carolina Local Health Department Accreditation Board* and (b) the *Governors Task Force for Healthy Carolinians*.[1] *Durham County Health Department* will be required to meet these standards to become an accredited Local Health Department and the *Partnership for a Healthy Durham* will be required to meet the standards to be recertified as a Healthy Carolinians Partnership.

Sources

Data for this assessment came from many sources, which are referenced along with each piece of data. There is a great deal of information available from these sources about Durham and North Carolina's health, and we could not include all disaggregated specifics within this document. If readers are interested in a particular piece of information, we encourage them to go to the source for further details.

Primary data came from the following sources:

1. The *Durham County Health Assessment Survey* is a telephone survey of 700 people that was implemented from June to July 2007 by the Community Health Institute of John Snow, Inc. The full report on the telephone survey is available online at www.healthydurham.org. The questions were the same as those asked in 2003 for that year's assessment.
2. The *NC Behavioral Risk Factor Surveillance System* is an annual telephone survey of approximately 400 Durham County residents. The questions come from the Centers for Disease Control and Prevention's (CDC) standardized national survey. It is available on the State Center for Health Statistics' website at http://www.schs.state.nc.us/SCHS/brfss/.
3. The *Youth Risk Behavior Survey* (YRBS) is a written survey of 484 middle school students and 392 high school students attending the Durham Public School system. The survey was administered in the spring of 2007. These questions also came from a national

[1] The accreditation standards can be found at http://nciph.sph.unc.edu/accred/materials.htm

standardized survey from the Centers for Disease Control and Prevention (CDC). Since this was the first YRBS survey for Durham County, it will not be possible to define trends until the next YRBS survey is conducted. Also, since the final report of the YRBS is not yet available, only the preliminary results could be presented in this document.

4. A series of seven *Listening Sessions* (n=51) that we carried out throughout the Durham community in the spring of 2007. We asked these groups a set of questions about their perception of health and health determinants. A full transcript of these listening sessions is available through the Partnership for a Healthy Durham (info@healthydurham.org).
5. An *Action-Oriented Community Diagnosis* implemented by a group of students from the School of Public Health at the University of North Carolina (Chapel Hill). The "community" for this study was the patient population of Lincoln Community Health Center. Lincoln is Durham County's main source of primary healthcare for the uninsured and low-income population. The students conducted their study through the fall of 2006 – spring 2007. They collected secondary data and also carried out a series of "key informant" interviews with community members and service providers. They also conducted two listening sessions, the data of which were added to the seven listening sessions the Partnership conducted to create a set of nine sessions (n=70). The full report of the study is available at www.hsl.unc.edu.

Secondary data came from many sources. The most common is the State Center for Health Statistics of the NC Division of Public Health. Their website contains a compilation of a many health data, including:

- Vital statistics
- NC Central Cancer Registry
- Basic Automated Birth Yearbook (BABY Book)
- NC Hospital Discharge Data.

Their "County-Level Data" page (http://www.schs.state.nc.us/SCHS/data/county.cfm) and "County Health Data Book" (http://www.schs.state.nc.us/SCHS/data/databook/) contain numerous county-level statistics.

Organizing Framework

Many factors affect our health, both as populations and as individuals. While we can look at disease states and vital statistics to know the end results of our health, there are many ways to analyze a population's health risks, influences, and resources. Evans and Stoddart offered a framework for organizing these "determinants of health" in 1990 (Evans RG, Stoddart GL. "Producing Health, Consuming Health Care." *Social Science and Medicine*, vol. 31, no. 12, pp. 1347-63; reprinted in Evans RG, Morris LB, Marmor TR. *Why are Some People Healthy and Others Not?* Chapter 2. New York: A deGruyter, 1994.)

Social environment
Physical environment
Individual response
Genetic endowment
Health Care
Disease / Infection
Health & Function
Prosperity
Well-being

Each of these boxes represents a category of factors that influence or define people's health. These categories form the chapters of this assessment, with two exceptions. The "Health and Function" and "Well-being" categories have been combined into one chapter, as they were in 2003. The "Genetic Endowment" category is excluded from this assessment, as it is something that public health policy or interventions cannot influence.

In each chapter, we present a compilation of health indicators within that category of health determinants. Wherever possible, we show disaggregated data, or data specific to sub-populations within Durham County (often racial/ethnic groups, age groups, or gender). These indicators are sometimes in the form of a percentage of the population with a certain characteristic or behavior, or a rate (i.e. the number of people per 1,000 persons who have that condition). Please be careful to note the method of measurement and scale used – they are often different for each indicator. For more information about margin of error or actual raw numbers (rather than percentages or rates), please see the original data source.

For context, we compare Durham's rates with those of the entire state of North Carolina. Wherever possible, we also include the US rates; however, US rates should be interpreted with caution, as they are sometimes measured differently than the state and county.

For this Assessment we also compared Durham's rates with those of three other North Carolina counties: Forsyth, Guilford, and Mecklenburg. We selected these counties as comparable to Durham on the basis of Census projections for:

- Population of the county,
- Racial / ethnic diversity,
- Income and poverty figures and
- Age diversity

COUNTY	Population	% children	% over 65	% African-American	% Latino	Median household income	% living in poverty	Homeownership rates
Durham	*246,896*	*24.3%*	*9.5%*	*38%*	*11%*	*$44,048*	*14.9%*	*54.3%*
North Carolina	8,856,505	24.7%	12.1%	21.8%	6.4%	$40,863	13.8%	69.4%
Forsyth	332,355	24.7%	12.5%	25.9%	9.5%	$42,491	13.6%	65.6%
Guilford	451,905	24.1%	12%	31%	5.3%	$42,545	14.7%	62.7%
Mecklenburg	827,445	26.4%	8.4%	29.8%	9.1%	$49,683	12.8%	62.3%

So while, for example, Guilford and Mecklenburg are much larger than Durham in population, they are comparable in population diversity. Other counties with similar population size, such as Buncombe and Cumberland, had larger differences in age structure or income data.

In each chapter, there is a section at the end listing “Initiatives and Resources in Durham” that addresses the issues compiled in that chapter. This is meant to give the readers an idea of the kinds of programs locally available, the breadth of response to these issues, and how to find more information about local initiatives. This is surely not an exhaustive list of all groups involved in this subject, just the ones that are already familiar to the Partnership for a Healthy Durham as coalition members. It is possible that some of the programs mentioned have changed since this report was compiled.

About Durham

Durham history

Long before the Bull City was named for Dr. Bartlett Durham in the 1800’s, the community was making history. Before Europeans arrived, two Native American tribes — the Eno and the Occaneechi, related to the Sioux — lived and farmed here. Durham is thought to be the site of an ancient Native American village named Adshusheer. The Great Indian Trading Path is traced through Durham, and Native Americans helped to mold Durham by establishing settlement sites, transportation routes, and environmentally-friendly patterns of natural resource use.

In 1701, Durham’s beauty was chronicled by the explorer John Lawson, who called the area ‘the flower of the Carolinas.’ During the mid-1700’s, Scots, Irish, and English colonists settled on land granted to John Carteret, Earl of Granville, by King Charles I (for whom the Carolinas are named). Early settlers built gristmills, such as West Point, and worked the land.

Prior to the American Revolution, frontiersmen in what is now Durham were involved in the ‘War of Regulators.’ According to legend, Loyalist militia cut Cornwallis Road through this area in 1771 to quell the rebellion. Later, William Johnston, a local shopkeeper and farmer, forged Revolutionary ammunition, served in the Provincial Capital Congress in 1775, and helped underwrite Daniel Boone’s westward explorations.

During the period between the Revolutionary and Civil Wars, large plantations such as Hardscrabble, Cameron, and Leigh were established. By 1860, Stagville Plantation lay at the center of one of the largest plantation holdings in the South. African slaves were brought to labor

on these farms and plantations, and slave quarters became the hearth of distinctively Southern cultural traditions involving crafts, social relations, life rituals, music, and dance. There were free African-Americans in the area as well, including several who fought in the Revolutionary War. In 1849, Dr. Bartlett Durham, for whom the city is named, provided land for a railroad station.

Due to a disagreement between plantation owners and farmers, North Carolina was the last state to secede from the Union. Durhamites fought in several North Carolina regiments. Seventeen days after Lee surrendered his army at Appomattox, Union General Sherman and Confederate General Johnston negotiated the largest surrender and the end of the Civil War at Bennett Place in Durham.

After the ceasefire in Durham, Yankee and Rebel troops celebrated together and discovered Brightleaf tobacco—with a taste that led to the ultimate success of Washington Duke and his family and spawned one of the world’s largest corporations (which included American Tobacco, Liggett & Meyers, R.J. Reynolds, and P. Lorillard). Tobacco soon inspired other Durham developments. The first mill to produce denim and the world’s largest hosiery maker were established in Durham during this time.

In 1887, Trinity College moved from Randolph County to Durham. Washington Duke and Julian Carr donated money and land to facilitate the move. Following a $40 million donation by Washington Duke’s son, James Buchanan Duke, Trinity College was renamed Duke University in 1924. In 1910, Dr. James E. Shepard founded North Carolina Central University, the nation’s first publicly supported Liberal Arts College for African-Americans.

After the Civil War, the African American economy progressed through a combination of vocational training, jobs, land ownership, business ownership, and community leadership. In 1898, John Merrick founded North Carolina Mutual Life Insurance Company, which today is the largest and oldest African American owned life insurance Company in the nation. With its founding in 1907, M&F Bank became one of the nation’s strongest African American owned and managed bank. So many other businesses joined these two in Durham’s Parrish Street neighborhood that the area became famous across the country as “Black Wall Street.”

The Durham Committee on the Affairs of Black People, organized in 1935 by C.C. Spaulding and Dr. James E. Shepard, has been cited nationally for its role in the sit-in movements of the 1950’s and 1960's. The committee also has used its voting strength to pursue social and economic rights for African-Americans and other ethnic groups.

In the late 1950’s, Reverend Douglas Moore, minister of Durham’s Asbury Temple Methodist Church, along with other religious and community leaders, pioneered sit-ins throughout North Carolina to protest discrimination at lunch counters that served only Caucasians. A sit-in at a Woolworth’s counter in Greensboro, NC, captured the nation’s attention. Within days, Dr. Martin Luther King Jr. met Reverend Moore in Durham, where Dr. King coined his famous rallying cry “Fill up the jails,” during a speech at Caucasian Rock Baptist Church.

Advocating non-violent confrontation with segregation laws for the first time, Dr. King said, 'Let us not fear going to jail. If the officials threaten to arrest us for standing up for our rights, we must answer by saying that we are willing and prepared to fill up the jails of the South.'

In the 1950s–60s, what is now the world's largest university-related research park and namesake for the vast Triangle region was carved from Durham pinelands as a special Durham County tax district. Research Triangle Park is encompassed on three sides by the City of Durham, with a small portion now spilling into Wake County toward Cary and Morrisville. RTP scientists have developed everything from Astroturf® to AZT and won Nobel Prizes in the process. Now, nearly 140 major research and development companies, including Bayer, GlaxoSmithKline, IBM, Underwriters Laboratories, and agencies such as the EPA, employ more than 45,000.

The origin of Durham's nickname, the 'Bull City,' has nothing to do with cattle! John Green of the Blackwell Tobacco Company named his product 'Bull' Durham Tobacco after Colman's Mustard, which used a bull in its logo and which Green mistakenly thought was produced in Durham, England.

By the time James B. Duke of the American Tobacco Company purchased the Blackwell Tobacco Company in 1898, Bull Durham was the most famous trademark in the world. It sparked such popular phrases as 'bullpen' (from a Bull Durham ad painted behind the Yankees' dugout) and 'shooting the bull' (most likely from chewing tobacco). The famous bull's image was painted all over the world, including on the Great Pyramid of Egypt!"[2]

Facts about Durham

Durham County is in the Piedmont region of North Carolina, approximately 150 miles from the coast to the east and 170 miles from the Appalachian Mountains to the west. In 2005, the Census projection found almost 247,000 people living in the County. It is dominated by Durham City, where 80% of the population lives and 33% of the land is incorporated.

Durham is a 299-square mile single-city county. It's 25 miles long, 16 miles wide and 28 miles from corner to corner and one of the most compact counties in North Carolina at one-half to one-third the land area of neighboring counties. It contains 98,000 acres of hardwood and evergreen forests including the only remaining old growth Piedmont bottomland forests.

Durham is a county of neighborhoods. In 2006, the Durham Results-Based Accountability workgroup on neighborhoods counted 167 organized, active neighborhood associations (www.durhamnc.gov/rba).

Durham is known as the City of Medicine, USA, with healthcare as a major industry including more than 300 medical and health-related companies and medical practices with a combined payroll that exceeds $1.5 billion annually.

[2] Some of the information about the history of Durham was obtained from http://www.durham-nc.com/about/history_glance.php

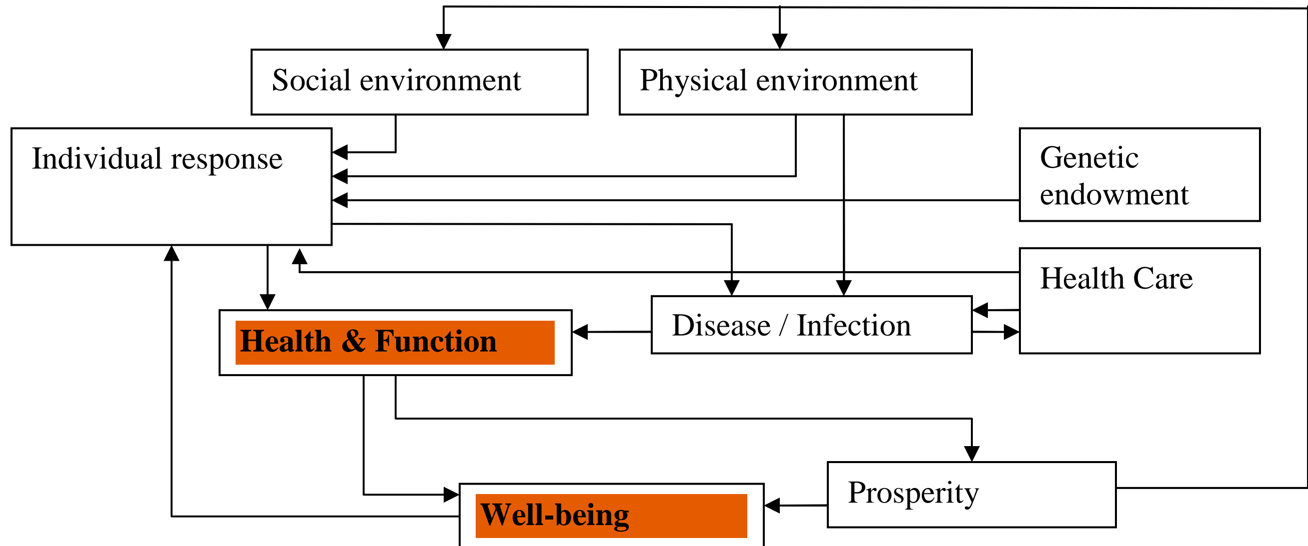
In addition to Duke and NCCU, Durham is home to NC School of Science & Math, Durham Technical Community College, many private schools and progressive Durham Public Schools, the seventh largest school district in the state with 31,000 students and 4,500 employees.

Durham has two major corporate and research parks. Research Triangle Park is a 7,000-acre research and production district, encompassed by the city of Durham. It accommodates more than 140 major research companies employing 39,000. Treyburn is a 5,300-acre corporate park, country club and residential area in northeast Durham. It houses several companies and is home to more than 100 families. [3]

In recent years many of the buildings in downtown Durham that were once tobacco factories and warehouses have been converted into businesses and residences. The American Tobacco District, West Village and Brightleaaf Square are all examples of such conversions. These developments have also led to the revitalization and beautification of Downtown Durham and the recent creation of Durham Central Park.[4]

[3] Much of the information for this section was obtained from http://www.durham-nc.com/about/durham_facts.php#maj
[4] Additional information can be found at the following websites: http://www.americantobaccohistoricdistrict.com/, http://www.westvillageapts.com/, and http://www.historicbrightleaf.com/

Health, function, and well-being



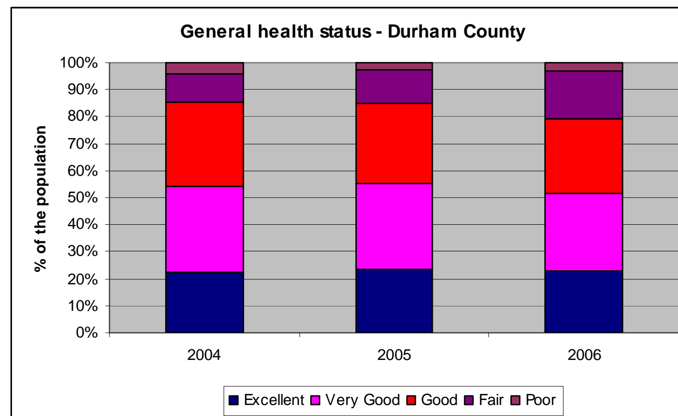
Key Findings

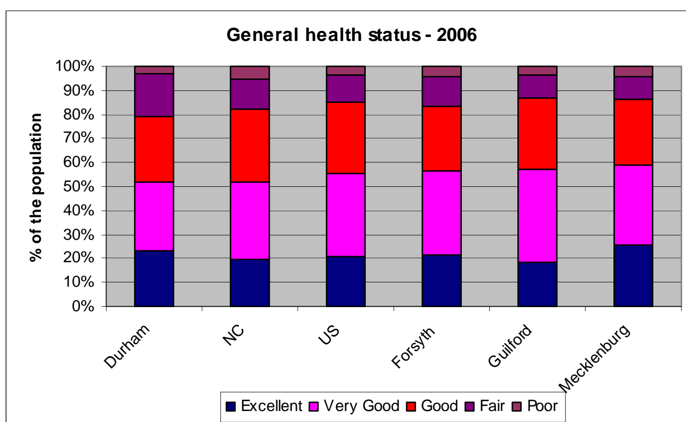
Key findings in the twin domains of health and well-being are:

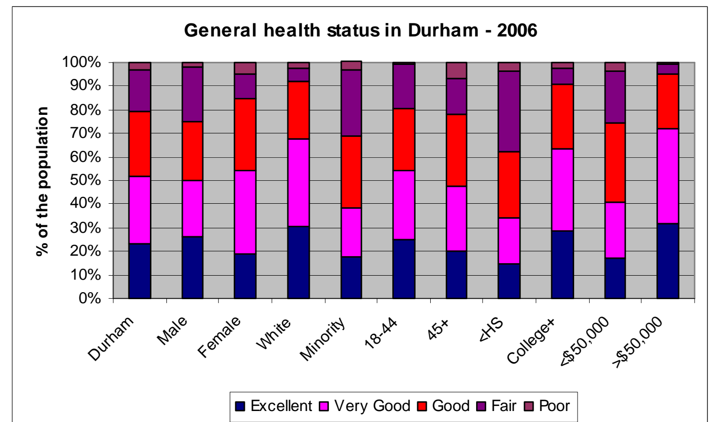
- In 2007, 40% of Durham's population rated their well-being as *high* – compared with 31% in 2003.
- 28.6% of those who have attended college rate their health as excellent – whereas only 15% of residents of Durham who have not attended college rate their health as *excellent.*
- 30% of those who identify themselves as Caucasian rate their health as *excellent* – whereas only 17% of Durham's minorities rate their health as *excellent*.
- The percentage of Latinos who rate their well being as *high* has not increased since 2003.
- Durham has a significant intentional injury problem. For 0-19 year-olds homicide caused 11.3% of deaths in Durham - compared with 4.7% statewide; and for 20-39 year-olds homicides caused 20.6% of deaths - compared with 10.7% statewide.
- The percentage of people in Durham who state that they have a problem for which they have taken prescription medication for at least three months in a row has increased from 44% in 2003 to 53% in 2007.
- In 2007, 32% of Latino students in Durham Public High Schools reported that they had attempted to commit suicide during the past year (compared with 15% of other students).
- Durham has a lower percentage of deaths due to motor vehicle crashes than for the State of North Carolina overall (9.2% for 0-19 year-olds in Durham, compared with 16% statewide - and 13.6% for 20-39 year-olds in Durham, compared with 20% statewide).

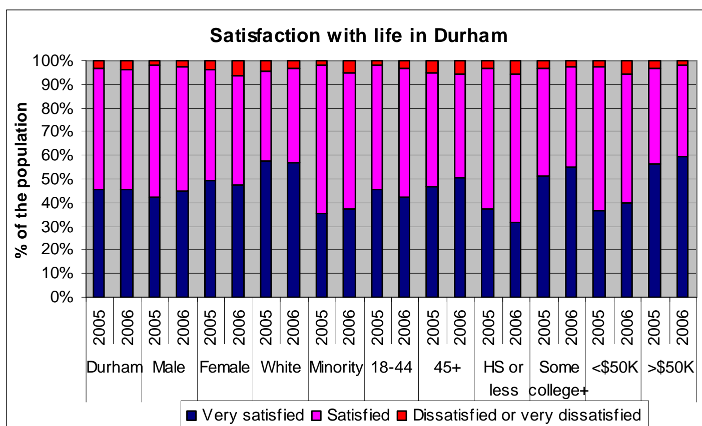
General health and well-being

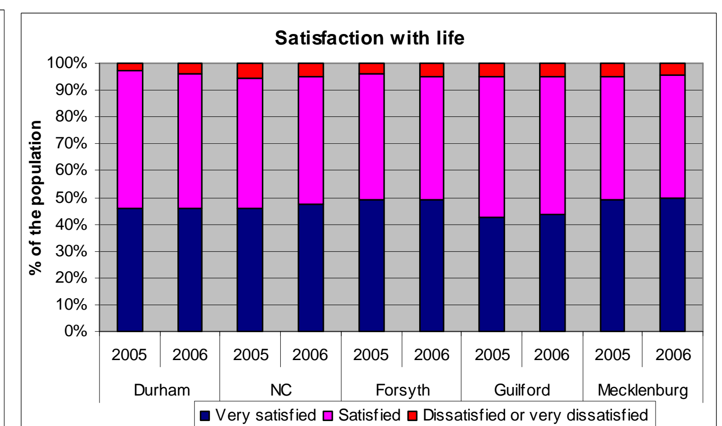
When asked how they rate their overall personal health, the majority of Durham residents consider themselves in excellent, very good, or good health. In 2006, 23.1% of Durham said that in general, their health was excellent and 28.6% said it was "very good." In addition, 45.8% in Durham said that they were "very satisfied" with their lives, and 50.2% said they were "satisfied."







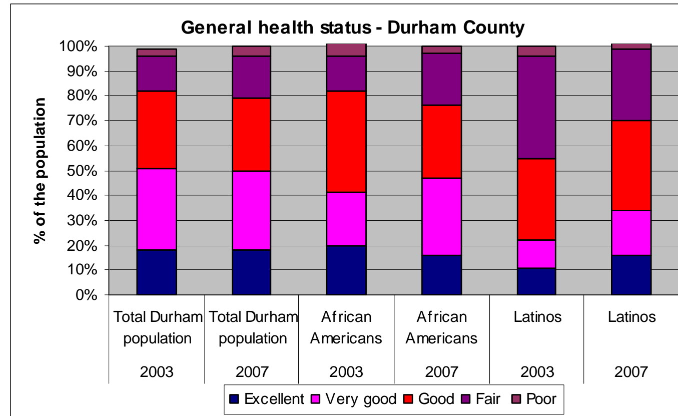




Data source: NC Behavioral Risk Factor Surveillance System (http://www.schs.state.nc.us/SCHS/brfss), National Behavioral Risk Factor Surveillance System (http://www.cdc.gov/brfss/)

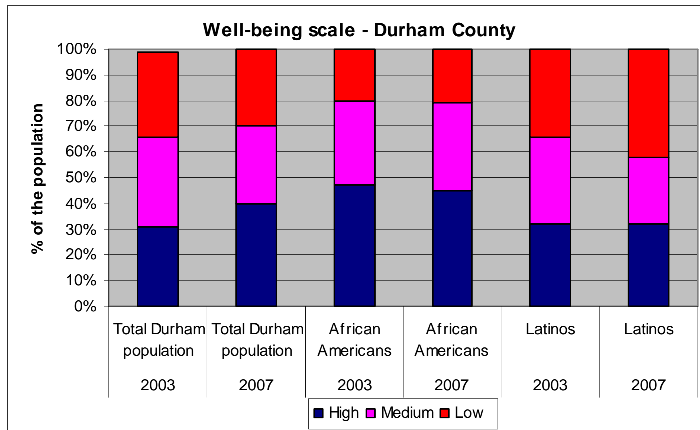
Please note that on all graphs, these indications mean:	
18-44: 18-44 years old	Some college +: Some college education or more
45+: Over 45 years old	<$50K: Household income is less than $50,000
HS or less: High school education or less	>$50K: Household income is more than $50,000

The Durham County Health Assessment Survey asked survey respondents to rate their current health status, and found in 2007 that 18% said it was "excellent," and 32% said it was "very good," similar to 2003 findings.



Data source: Durham County Health Assessment Survey

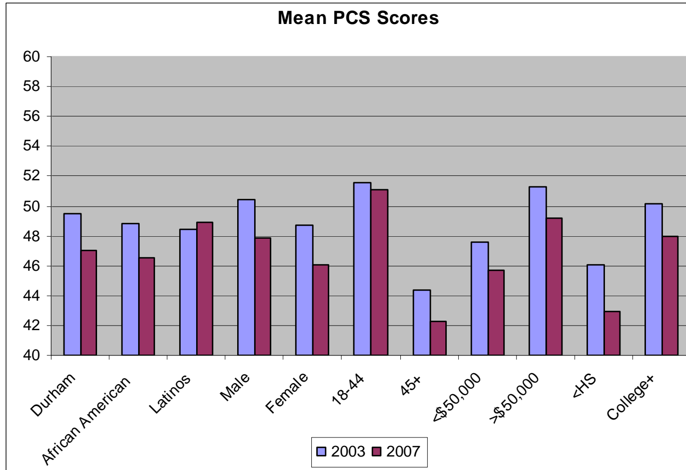
The Durham County Health Assessment Survey created a "well-being scale" based on a composite of seven of their survey questions, in which people rated their sense of personal health and well-being. In 2007, it found that 30% of Durham ranked "low" or "medium" on the scale, and 40% ranked "high."

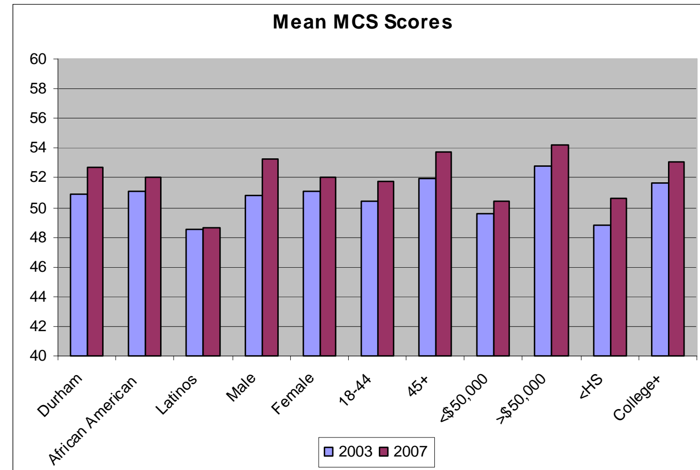


Well-being Scale – Durham 2007			
	Low	Medium	High
Durham	30%	30%	40%
Male	28%	31%	42%
Female	31%	31%	38%
<$50,000	27%	30%	41%
>$50,000	25%	36%	40%
<HS	32%	24%	45%
College+	27%	36%	38%

Data source: Durham County Health Assessment Survey

The Survey also created composite scores for physical and mental well-being. The "Physical Component Summary" (PCS) and "Mental Component Summary" (MCS) are scales that summarize the physical and mental health status of a population. Scores above 50 are above the national average for physical or mental health. The total population of Durham scored 47 on the PCS and 52.7 on the MCS.





Data source: Durham County Health Assessment Survey

The Youth Risk Behavior Study of Durham' Public Schools[1] showed that Hispanic students in Middle Schools recorded far higher levels of depression and feelings of insecurity. Over 14% of these students reported that they did not go to school at least once in the past 30 days because they felt unsafe either at school or on their way to and from school. This compares to just over 4% for other students. Additionally, 34.3% of Latino students in Middle Schools said that during the past 12 months, they felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities. This compares to only 16.7% of other students in Middle Schools.

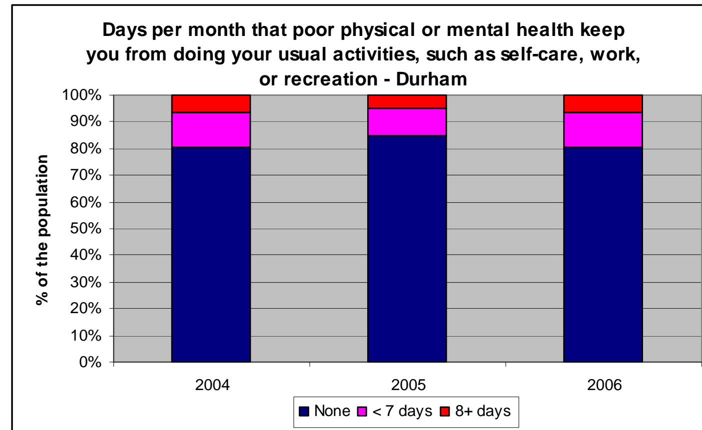
In High Schools, 32% of Latino students said that during the past 12 months they had attempted to commit suicide. This compares to just over 15% for other students in High Schools. Latino students in High Schools recorded higher levels of feelings of insecurity. Over 25% of these students reported that they did not go to school at least once in the past 30 days because they felt unsafe either at school or on their way to and from school. This compares to just over 9% for other students.

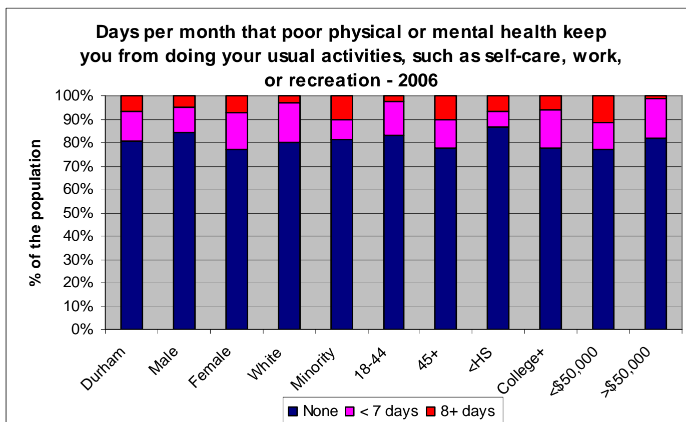
African-American students in High Schools also reported higher levels of feeling depressed than other students. 28.6% reported feeling alone in life, compared to 17.9% of other students.

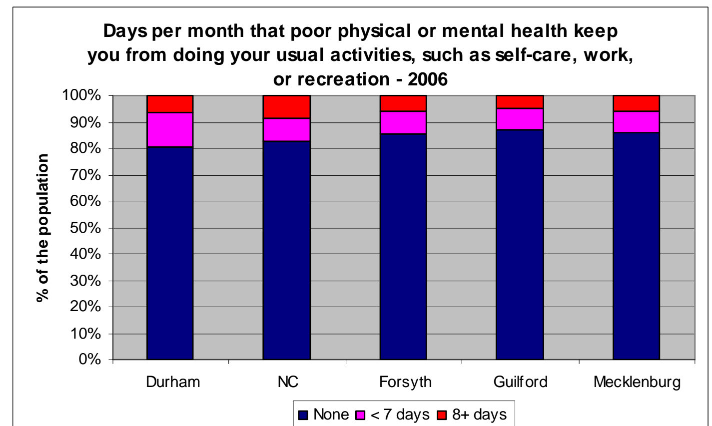
Function

The Behavioral Risk Factor Surveillance Survey asks Durham residents how many days out of a month that poor physical or mental health kept them from their activities. In 2006, 79.9% of Durham said that this happened on none of the days in the past month.

[1] YRBS results presented here are preliminary. The final Report on the 2007 YRBS in Durham Public Schools will be available in December 2007.



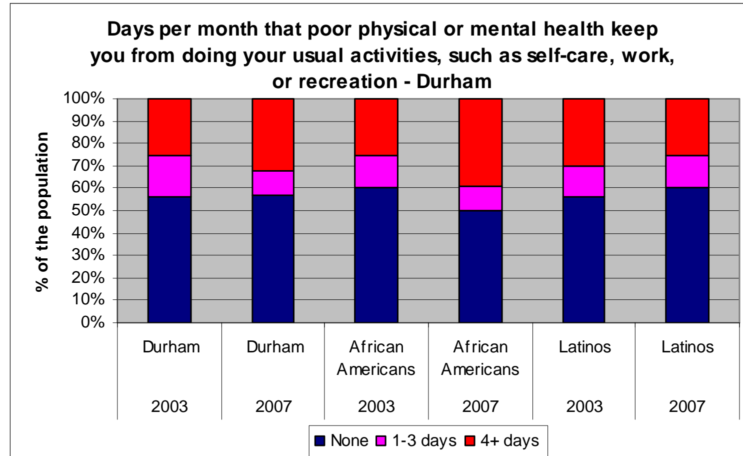




Data source: NC Behavioral Risk Factor Surveillance System (http://www.schs.state.nc.us/SCHS/brfss)

The Durham County Health Assessment survey asked a similar question. In 2007, it found that 57% of the population had not been limited on any days of the past month by poor physical or mental health; 32% were limited on four or more days. Of those who said they were limited in their activities, the most often sited impairments were:

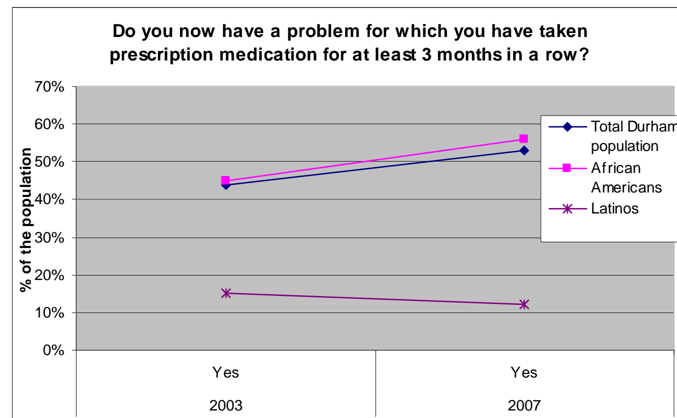
- Arthritis / rheumatism – 14%
- Bone / joint injuries – 12%
- Back / neck problems – 14%
- Breathing problems – 7%
- Heart problems – 7%



Data source: Durham County Health Assessment Survey

When asked how many times in the past month that pain interfered with their normal work, fewer Durham residents in 2007 said “none” or “a little bit” than in 2003 (51% versus 55%, 22% versus 27%, respectively). More felt that pain interfered “moderately” (10% versus 8%) or “quite a bit” (12% versus 6%).

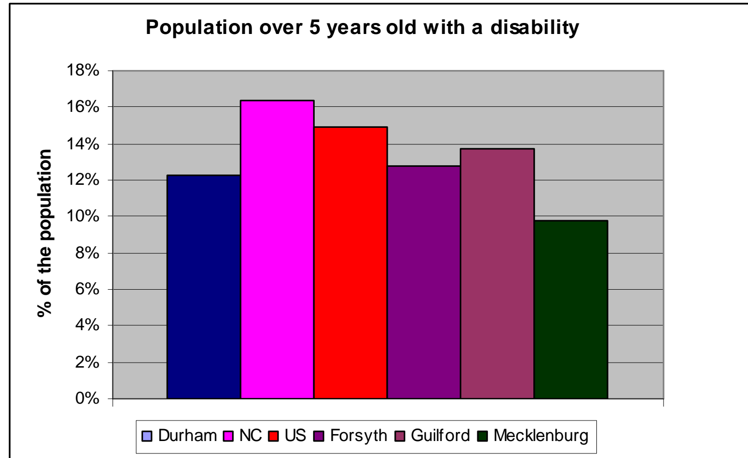
53% of Durham residents have a problem for which they have taken a prescription medication for at least three consecutive months, up from 44% in 2003.



Data source: Durham County Health Assessment Survey

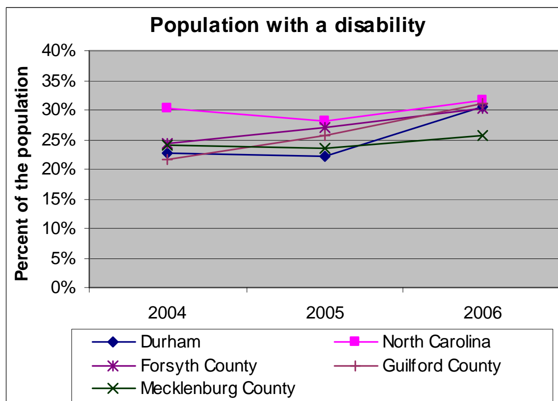
Disability

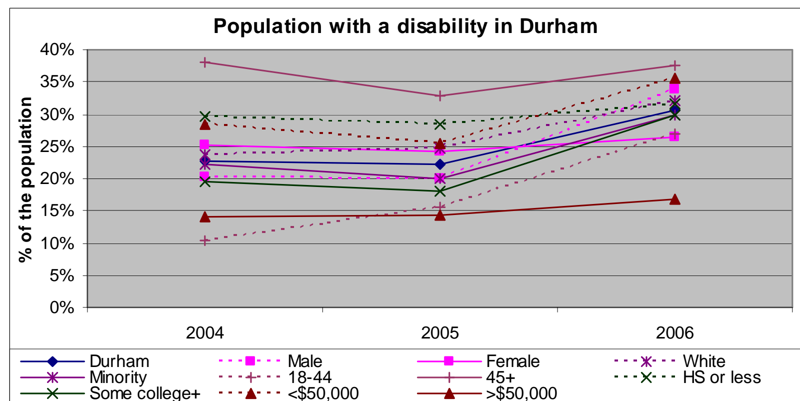
According to the 2005 Census projection, 12.3% of Durham County has a disability. Of the disabled population, 32% are over the age of 65, and 10% are between the ages of 5 and 15 years old. Of the Durham population of people over 65 years old, 40.8% of them have a disability.



Data source: US Census (www.census.gov)

The BRFSS also assesses who has a disability among adults, finding that 30.5% of adults in Durham had a disability in 2006.





Data source: NC Behavioral Risk Factor Surveillance System (http://www.schs.state.nc.us/SCHS/brfss)

Injury[1]

Combined, injuries are the fourth leading cause of death in Durham for all ages. It is important, however, to aggregate by age groups, because it shows that injury is a “disease of the young.” Combined intentional and unintentional deaths are responsible for 32.3% of the child deaths (0-19 years old) in Durham; they are responsible for 54.3% of young adults’ deaths (20-39 years old).

Comparing Durham’s injury death rates to those of North Carolina (2001-2005 Death Counts at the State Center for Health Statistics, www.schs.state.nc.us), it is clear that Durham has a significant intentional injury problem. For 0-19 year olds, homicide caused 11.3% of deaths in

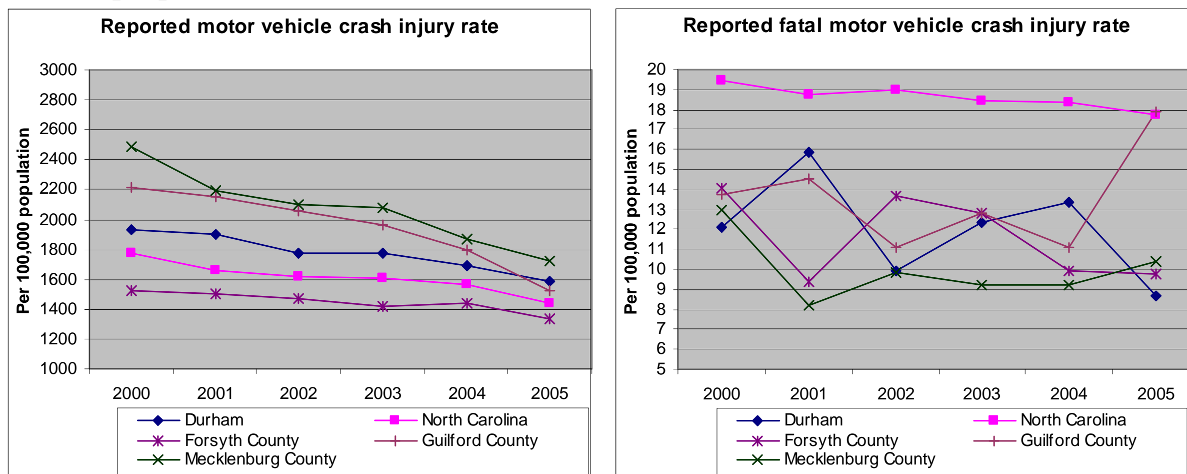
[1] Injuries are one of the main causes of disability and death. Injury is divided into two categories – *intentional* (homicide, suicide, assault, abuse, etc), and *unintentional* (motor vehicle crashes, falls, accidental drowning or poisonings, burns, etc).

Durham, compared to 3.6% in the state; for 20-39 year olds, homicide caused 20.6% of deaths, compared to 13.6% in the state. However, Durham has a lower percentage of deaths due to motor vehicle crashes (9.2% versus 12.2% for 0-19 year olds, 13.6% versus 24.9% for 20-39 year olds).

Deaths are only one means of measuring injuries, however, as shown in the inpatient hospital utilization data at the State Center for Health Statistics (www.schs.state.nc.us). Among 18 main diagnostic categories, "Injuries and poisonings" was the fourth highest cause for inpatient hospitalization among Durham residents in 2005. At an average cost of $29,760 per case, this category had the second highest total hospitalization charges in the County, almost $57 million that year.

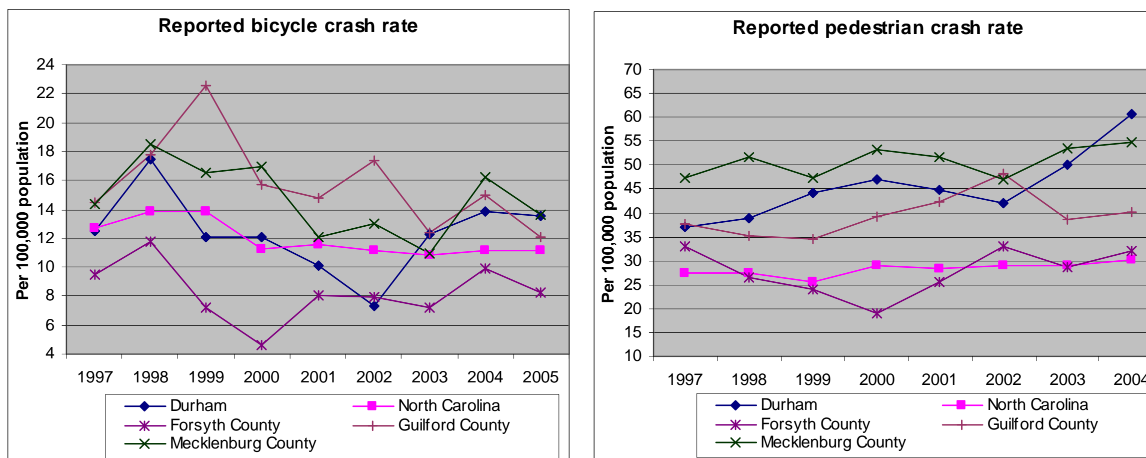
Motor vehicle injuries

Transportation is one of the main factors in unintentional injuries. This data shows crash rates among motor vehicles, between motor vehicles and pedestrians, and between motor vehicles and bicyclists. In 2005, there were 3,849 motor vehicle crash injuries in Durham, or 1,584 per 100,000 people. That same year, 21 of those motor vehicle crash injuries were fatal, or 8.6 per 100,000 people.



Data source: North Carolina Alcohol Facts, http://www.hsrc.unc.edu/ncaf/

The NC Department of Transportation reported 33 bicycle crashes with motor vehicles in Durham in 2005, or 13.6 per 100,000 people. In 2004, there were 145 crashes between motor vehicles and pedestrians in Durham, or 60.7 per 100,000 people.



Data source: NC Department of Transportation, http://www.pedbikeinfo.org/pbcat/index.htm

Intentional injury is discussed further in the "Social Environment" chapter of the assessment.

Discussion

Helping the population have good health, function, and well-being is the end goal of public health. Absence of disease, affordable healthcare, and healthy behaviors are intermediate goals towards this end. It is hard to measure, as it can be very subjective. Much of the data contained in the description of Durham residents' general health and well-being is self-reported, and thus reflects people's perceptions of health, wellness, disability, and function. However, their perception is their reality. People pursue health not as an end in itself, but in order to accomplish other goals and enjoy their lives as they envision them.

Injuries provide an example of how difficult it is to quantify health and the cost of poor health. As a disease of the young, it can take away years of potential life for the victim, but also quality of life for that person's family as they cope with the loss or lifelong disability of their youth. There are sometimes protracted medical costs with disabilities. For many families who live paycheck to paycheck, even a broken leg can cause financial crisis. Injuries cost society in the loss of a productive member, but also in terms of services such as Emergency Medical Services, Police, Fire Department, and expensive emergency room healthcare.

Initiatives and Resources in Durham

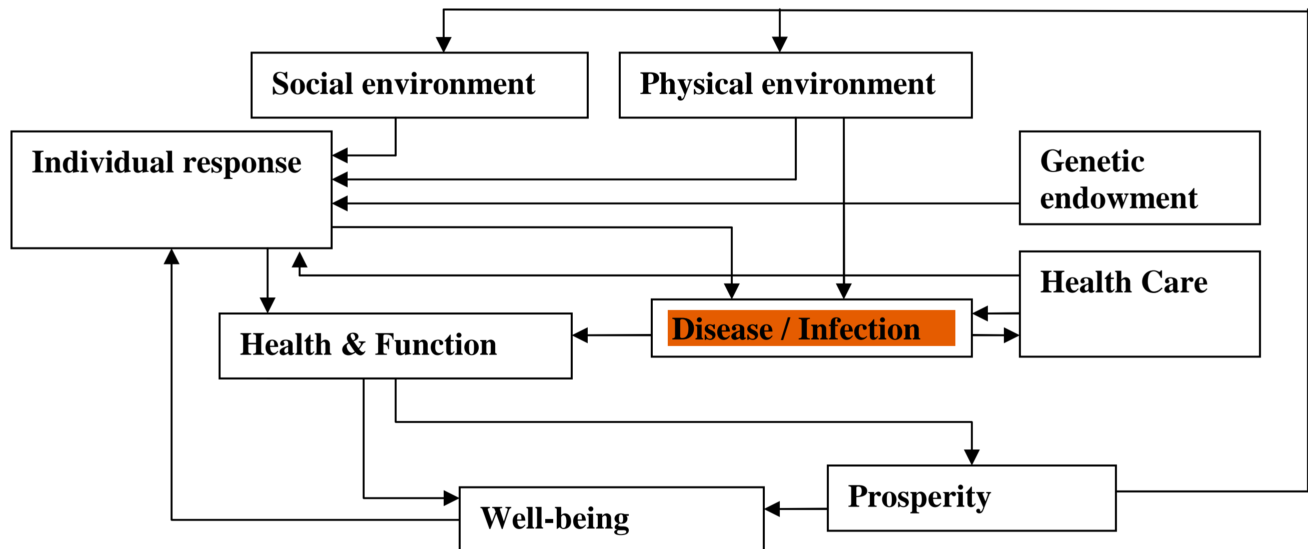
The newly-formed Injury Prevention Working Group of *The Partnership for a Healthy Durham* is:

- Exploring ways to collect accurate 'baseline' data about injuries;
- Developing mechanisms for improved communication and information-sharing between the many agencies and organizations in Durham County that play a role in injury prevention;
- Identifying best practices in injury prevention;

Injury prevention

- **Duke Trauma Center** - committed to the optimal care of injured patients in an organized system from pre-hospital through rehabilitation stages. http://trauma.dukehealth.org/.
- **Safe Kids** – A program of the NC Department of Insurance and State Fire Marshal's Office focused on reducing and preventing accidental childhood injuries. www.ncdoi.com/OSFM/ProgramsPreventionAndGrants/SafeKidsMessage.asp, 661-5880.
- The **Durham County Gun Safety Team** educates the community on gun safety and safe storage of guns. 560-7765.
- **Welcome Baby** – parenting education courses, as well as car seat safety classes. www.welcomebaby.org, 560-7150

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).

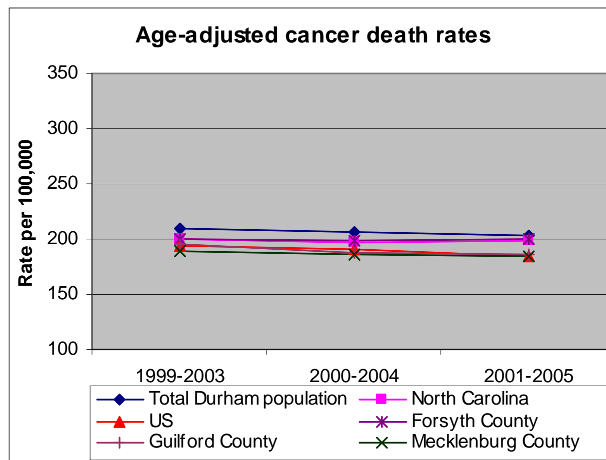
- The percentage of people reporting a history of cardio-vascular disease (CVD) increased at a faster rate in Durham than in any of the comparison counties.
- In 2007, African-American students in middle schools in Durham County reported higher rates of asthma (27.5%) than the rest of the school population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

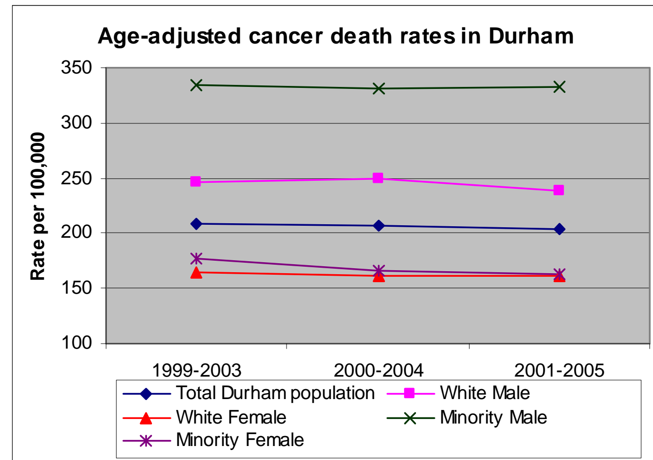
Leading causes of death

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

Cancers

The second leading cause of death in the US, cancer is the leading cause of death in Durham County.[1] 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.





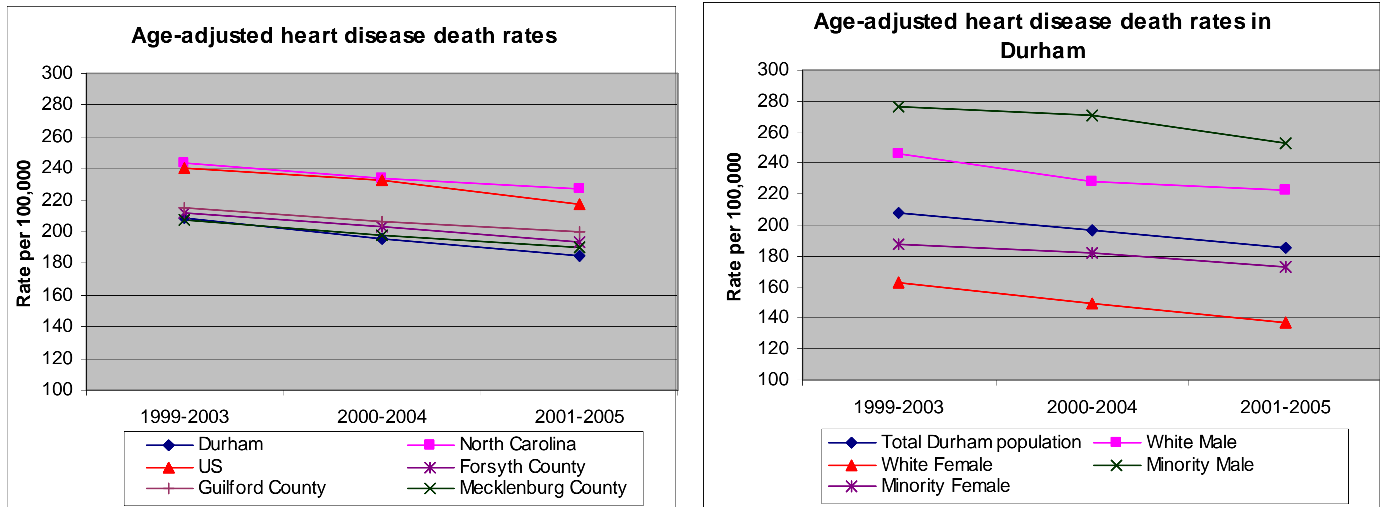
Data source: NC State Center for Health Statistics, County Health Data Book (http://www.schs.state.nc.us/SCHS/data/databook/)
** Note: The US rates were measured differently than NC state data, therefore interpret with caution.*

> "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*

[1] 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).

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. 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. [1]



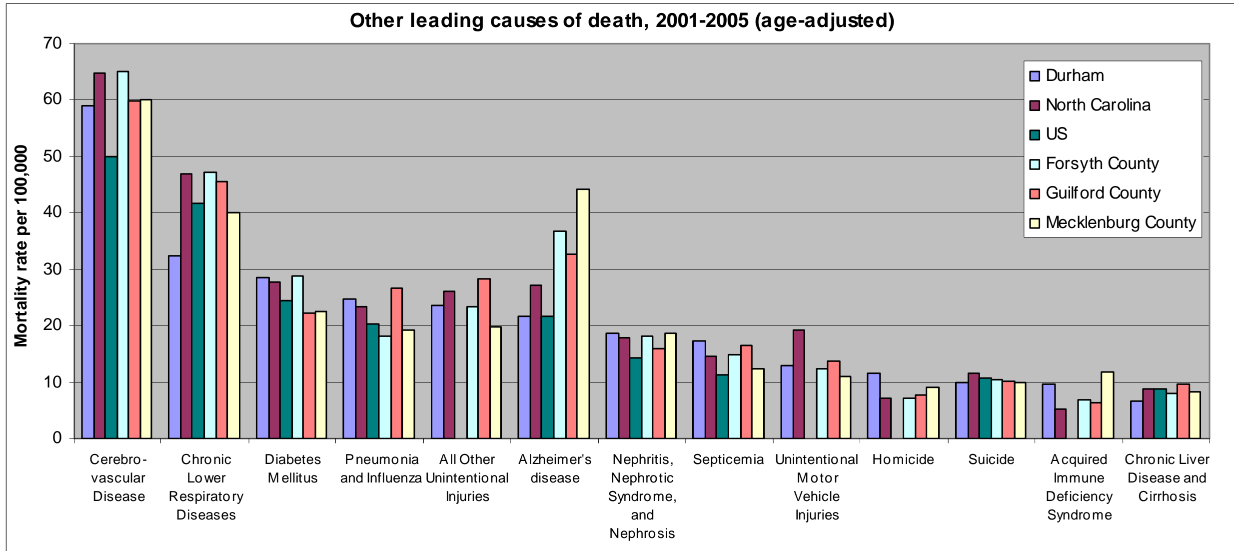
Data source: NC State Center for Health Statistics, County Health Data Book (http://www.schs.state.nc.us/SCHS/data/databook/)
** Note: The US rates were measured differently than NC state data, therefore interpret with caution.*

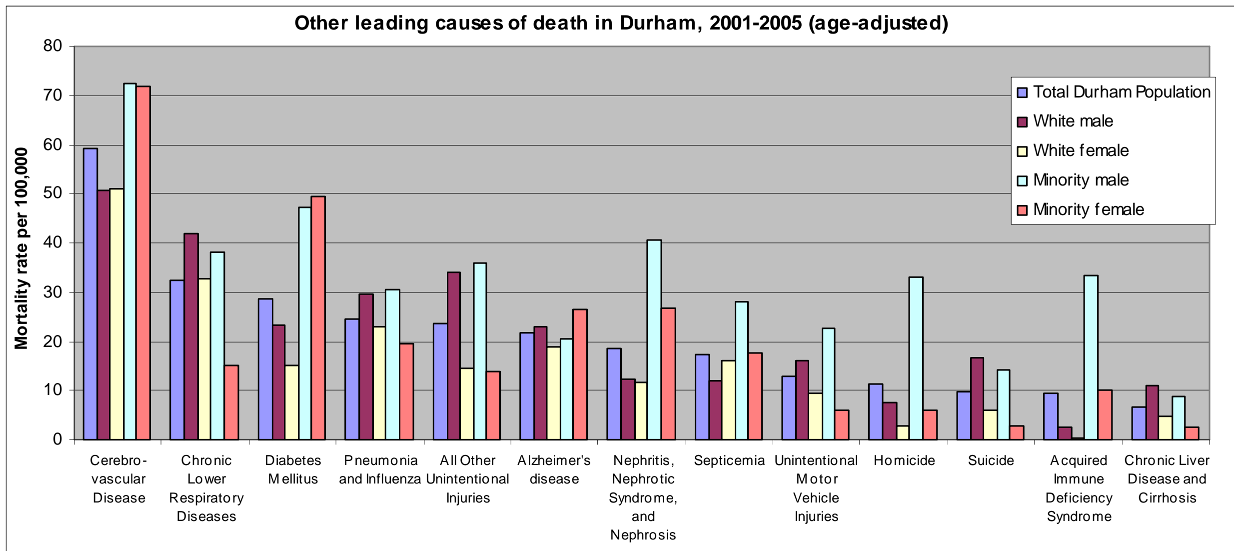
Other leading causes of death

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)*

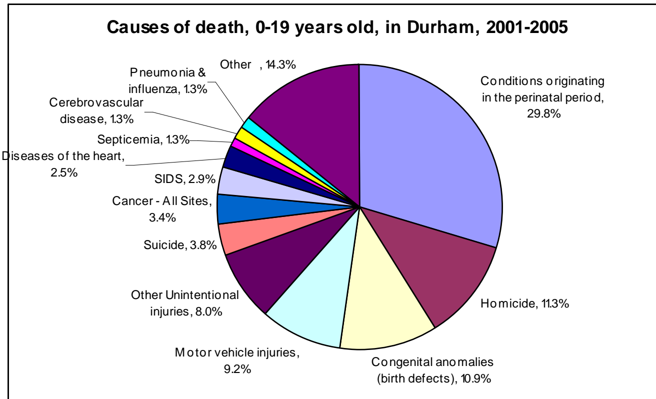
[1] The most common kind of heart disease is coronary heart disease, which results from blockages in the arteries over time, and can result in heart attacks (National Library of Medicine, www.nlm.nih.gov/medlineplus/).





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.



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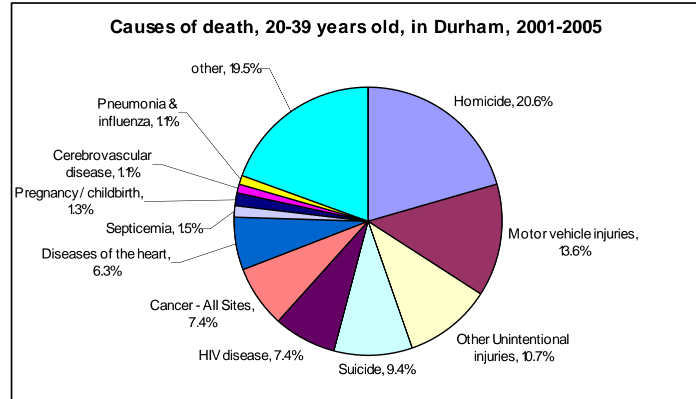
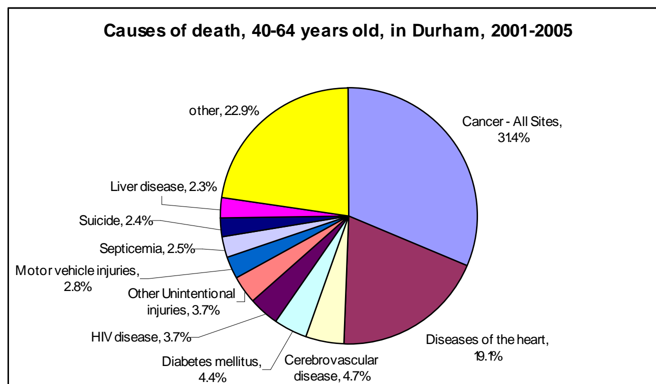
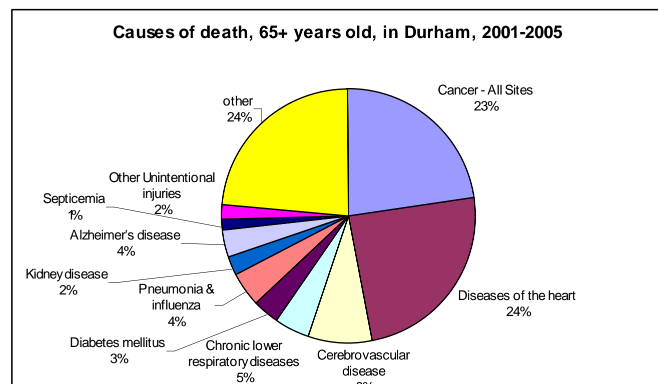


N=457



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/)

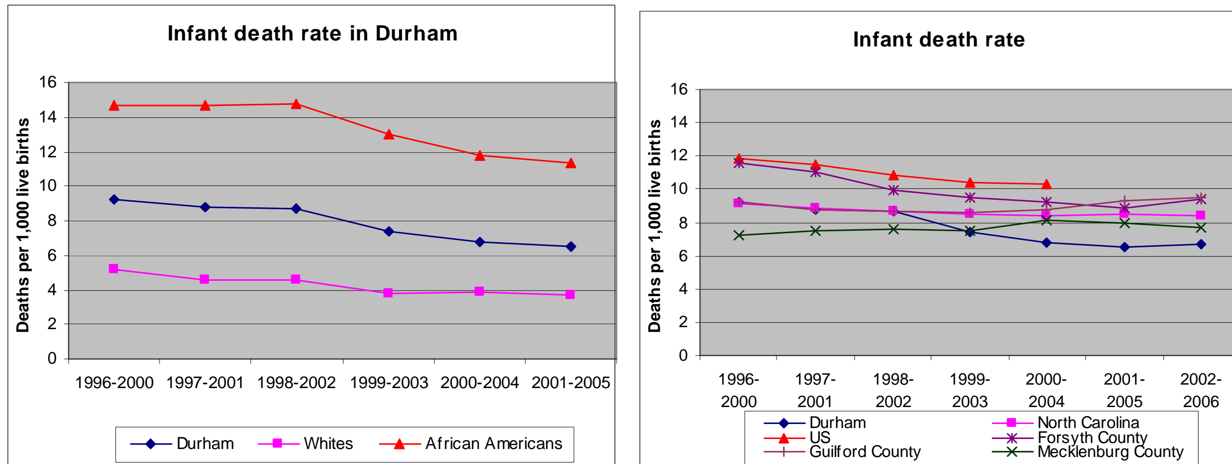
Infant mortality[1]

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

[1] 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

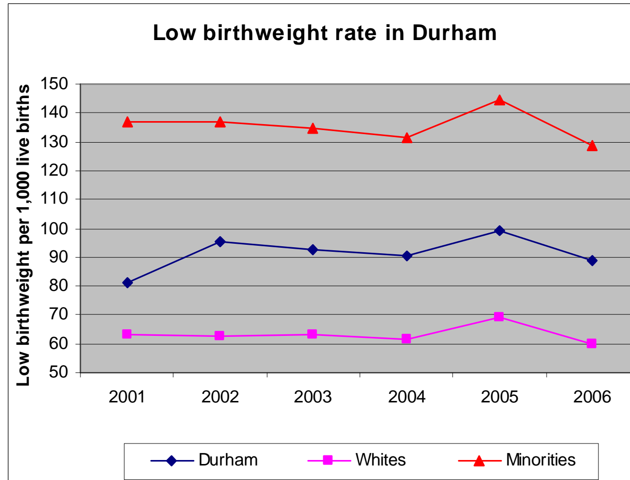
deaths per 1,000 live births, compared to the rate of 7.2 for the entire population. The charts below are five-year averages of infant death rates.

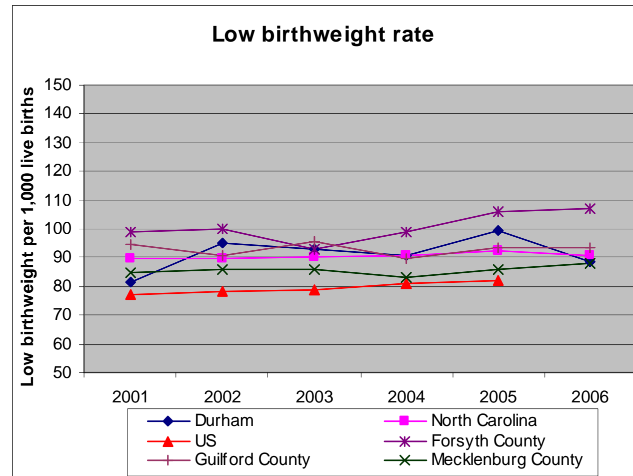


Data source: NC State Center for Health Statistics, County Health Data Book (http://www.schs.state.nc.us/SCHS/data/databook/), March of Dimes "Peristats" (http://www.marchofdimes.com/peristats/)

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). 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/)

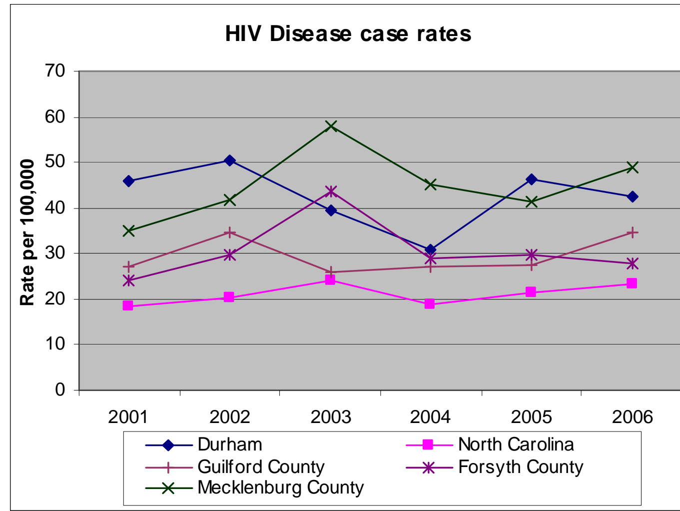
Congenital anomalies (birth defects) are the second leading cause of infant deaths in Durham from 2003-2005, followed by acute illnesses such as blood stream infections or pneumonia. Sudden Infant Death Syndrome, or SIDS, has caused one infant death each year in Durham. Over half of infant deaths in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

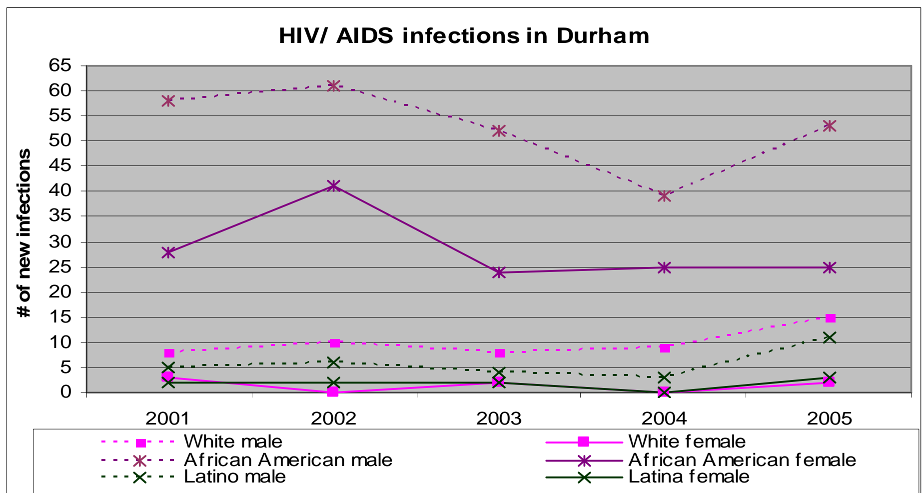
Communicable diseases

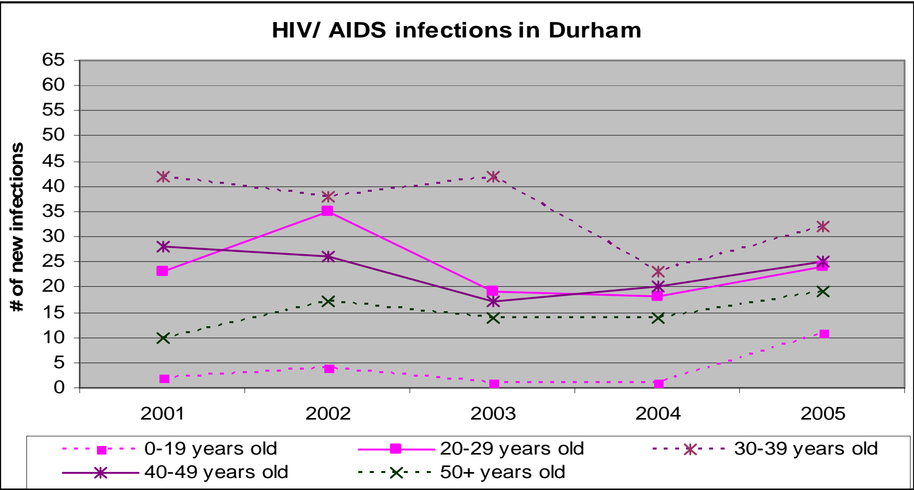
HIV/AIDS

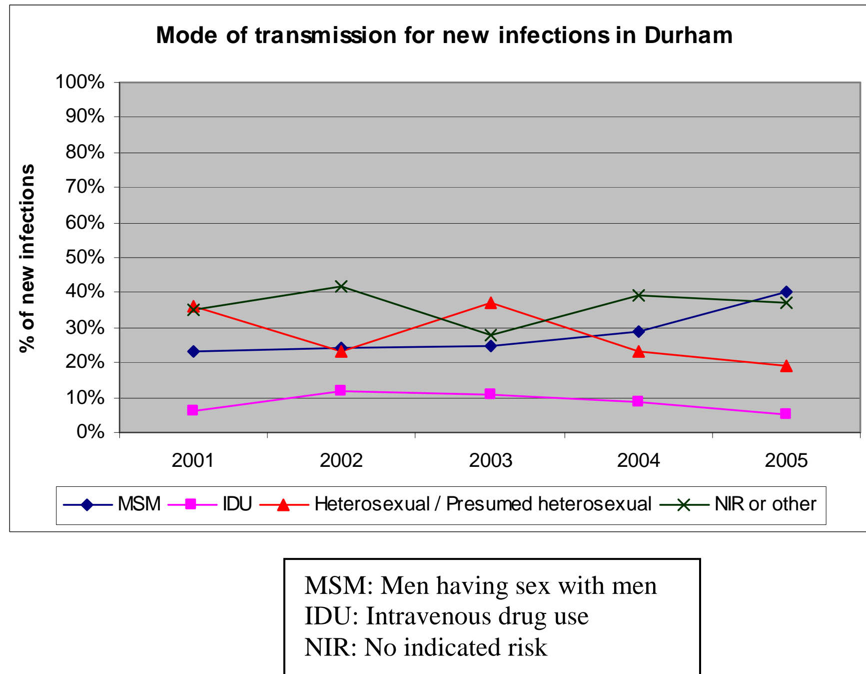
As of the end of 2005, Durham County had 716 people knowingly living with HIV and 398 people living with AIDS, for a total of 1,114 persons confirmed as having the infection (the Centers for Disease Control and Prevention estimate nationally that 25% of persons living with HIV virus don't know they are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

[1] 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).


HIV Disease case rates
Rate per 100,000
70
60
50
40
30
20
10
0
2001
2002
2003
2004
2005
2006
Durham
North Carolina
Guilford County
Forsyth County
Mecklenburg County


HIV/ AIDS infections in Durham
# of new infections
65
60
55
50
45
40
35
30
25
20
15
10
5
0
2001
2002
2003
2004
2005
White male
White female
African American male
African American female
Latino male
Latina female


HIV/ AIDS infections in Durham
# of new infections
65
60
55
50
45
40
35
30
25
20
15
10
5
0
2001
2002
2003
2004
2005
0-19 years old
20-29 years old
30-39 years old
40-49 years old
50+ years old



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

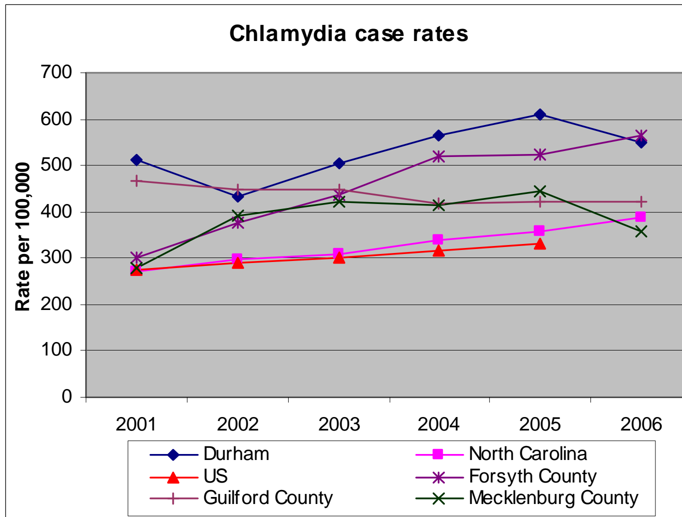
Data source: NC Department of Public Health, HIV/STD Prevention and Care Branch (http://www.epi.state.nc.us/epi/hiv/surveillance.html)

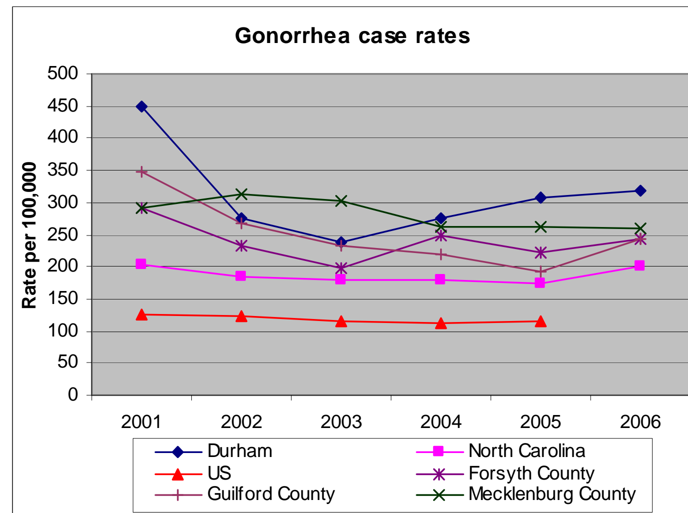
The Durham County Health Assessment Survey in 2007 found that 58% of Durham residents agreed that HIV is a major problem in Durham; among African Americans, 70% agreed with that, and among Latinos, 79% agreed. Among all respondents, 80% had spoken with their healthcare provider about getting tested for 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.

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.[1]

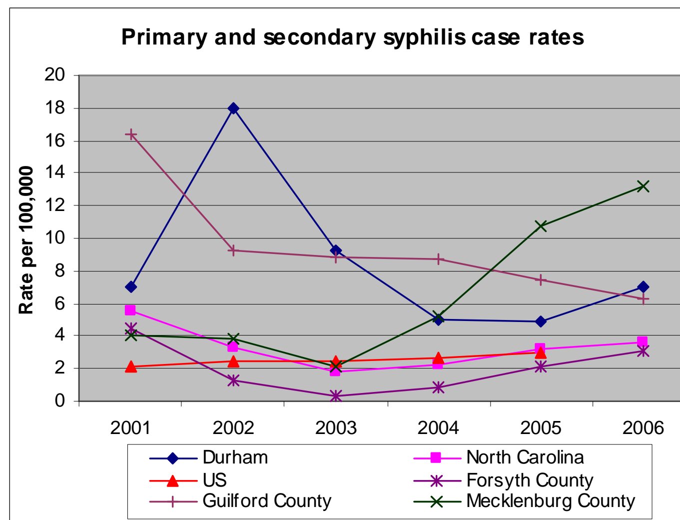
[1] Chlamydia, Gonorrhea, and Syphilis are bacterial infections that are often undiagnosed because symptoms are often mild or absent. The bacteria are transmitted through vaginal, oral, or anal sex. They can lead to chronic conditions in women and men, such as infertility or pelvic inflammatory disease (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).





"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."

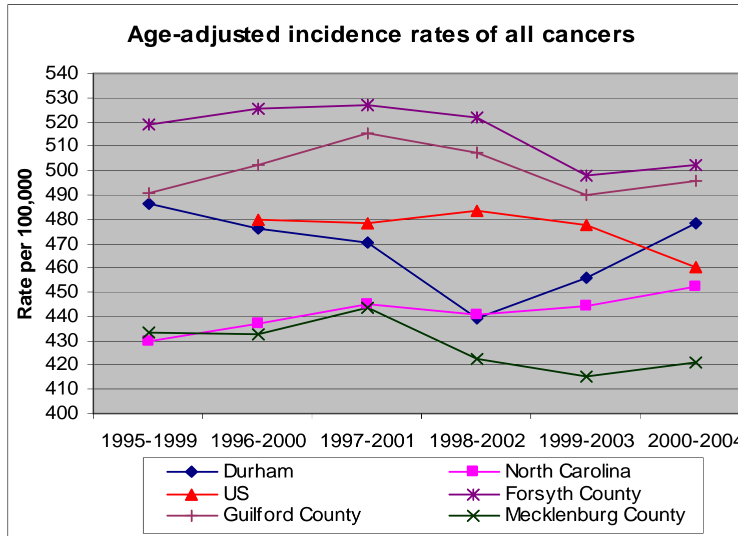
- Durham County resident

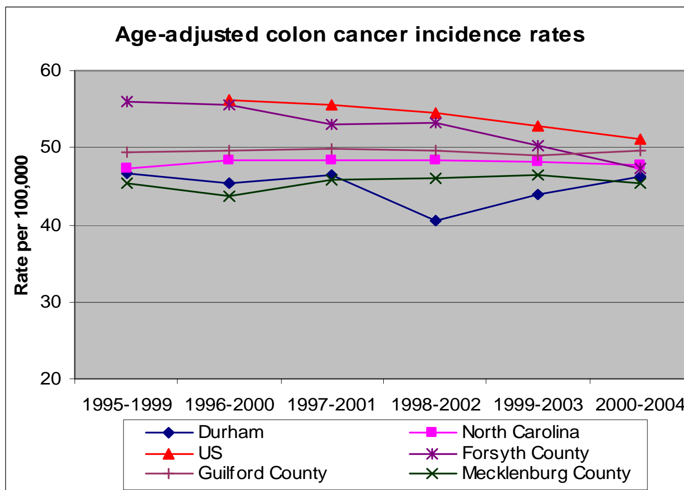


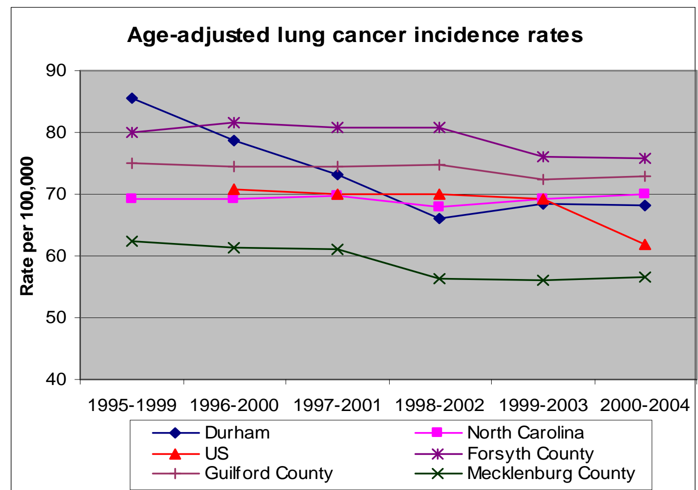
Data source: NC Department of Public Health, HIV/STD Prevention and Care Branch (http://www.epi.state.nc.us/epi/hiv/surveillance.html); CDC STD surveillance (http://www.cdc.gov/std/stats/)

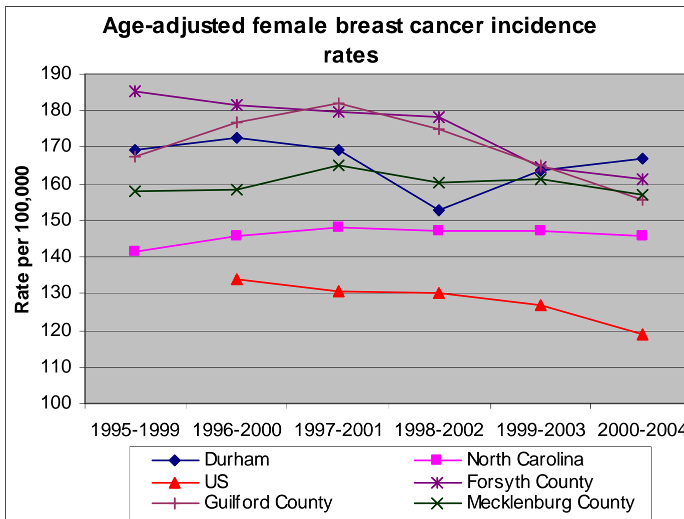
Cancer

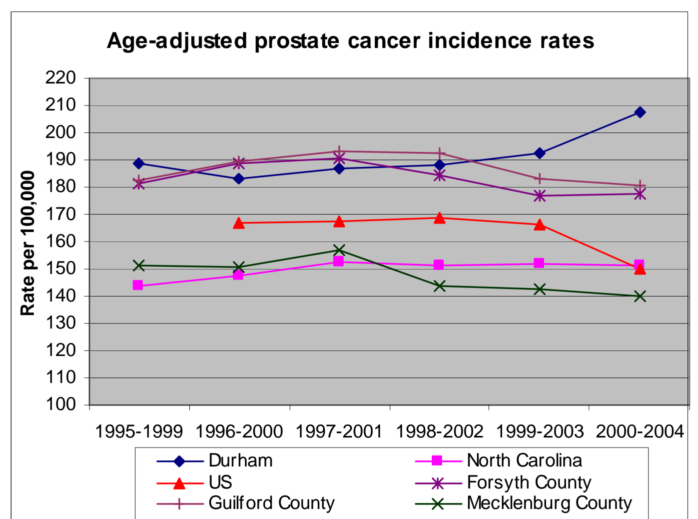
Besides the deaths caused by cancer, there is also data on how many people are diagnosed each year with cancers. From 2000-2004, there were 4,669 cases of all cancers in Durham, or an age-adjusted rate of 478.3 per 100,000 persons. In that same time period in Durham, there were 440 cases of colorectal 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).











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)

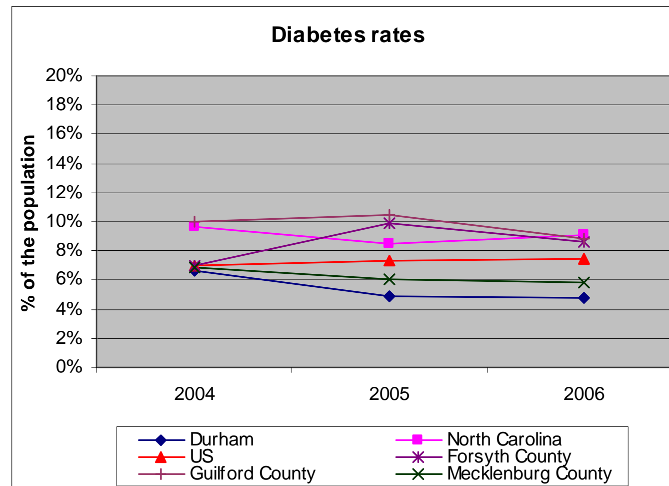
Note: US data is from a different source than other data, so has variances in measurement. The US data listed are for years 1999, 2000, 2001, 2002, and 2003. Use for general reference only.

> "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

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.[1]



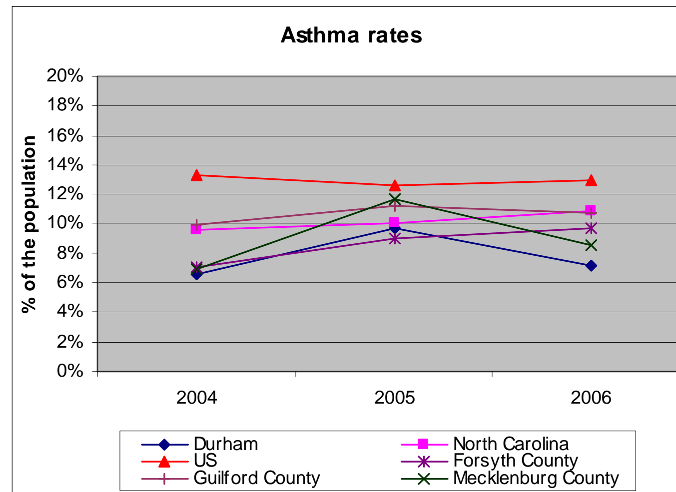
Data source: NC Behavioral Risk Factor Surveillance System (http://www.schs.state.nc.us/SCHS/brfss), National Behavioral Risk Factor Surveillance System (http://www.cdc.gov/brfss/)

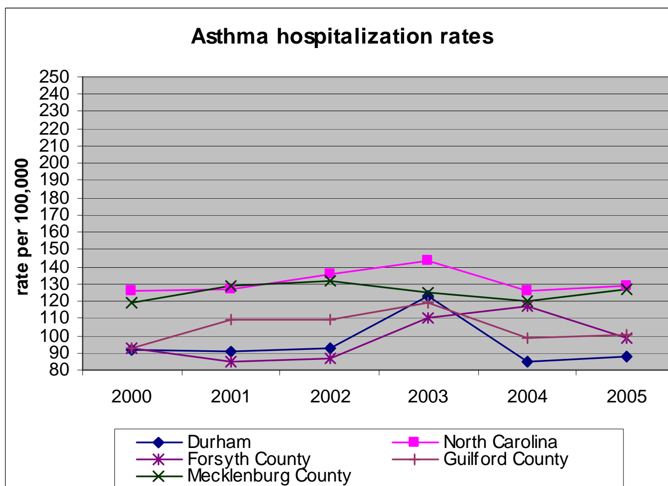
Asthma

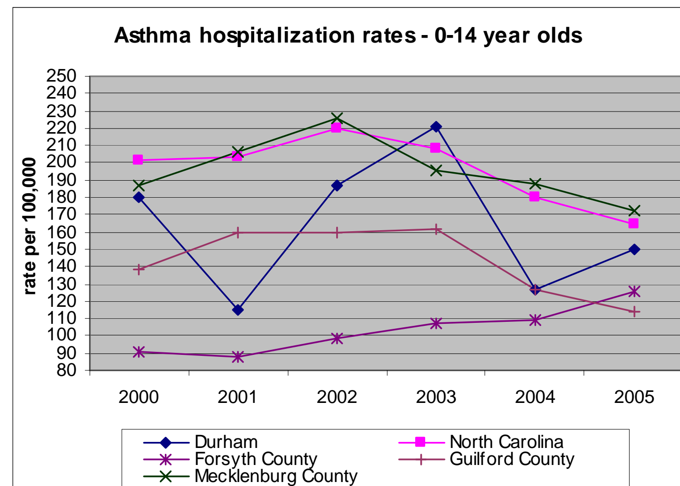
The NC Behavioral Risk Factor Surveillance System asked Durham County residents if they had ever been diagnosed with asthma by a healthcare provider. In 2006, 7.2% of respondents, or 32 people, said that they had. Another source of information for asthma is hospital discharges with a primary diagnosis of asthma. In 2005, 213 people went to the hospital for asthma, or 87.9 per

[1] The American Diabetes Association (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." If 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.

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.[1]







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

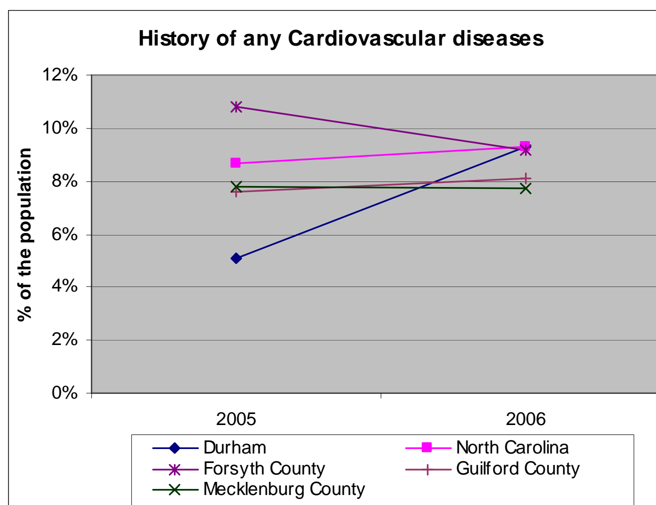
From the Youth Risk Behavior Study of Durham Public Schools[2], the reported rate of asthma was much higher at 27.5% for African-American versus 15.4% for non-African Americans in Middle Schools. Fewer Latino students in Middle Schools reported any diagnosis of asthma, though this may be impacted by the lower number of Latino students who have seen a doctor.

[1] 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/).

[2] YRBS results presented here are preliminary. The final Report on the 2007 YRBS in Durham Public Schools will be available in December 2007.

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 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			
Durham	**21.1%**	**Durham**	**21.1%**
Male	20.0%	NC	20.0%
Female	22.0%	US	22.0%
Caucasian	22.5%	Forsyth	22.5%
Minority	19.7%	Guilford	19.7%
18-44	10.9%	Mecklenburg	10.9%
45+	37.3%		
HS or less	24.1%		
Some college+	19.1%		
<$50,000	20.9%		
>$50,000	20.2%		

Ever been told by a healthcare provider that your blood cholesterol is high - 2005			
Durham	**29.0%**	**Durham**	**29.0%**
Male	34.2%	NC	36.3%
Female	24.7%	US	35.6%
Caucasian	29.4%	Forsyth	40.0%
Minority	28.4%	Guilford	34.0%
18-44	18.4%	Mecklenburg	33.2%
45+	39.4%		
HS or less	33.4%		
Some college+	27.6%		
<$50,000	26.2%		
>$50,000	33.0%		

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	Some college +: Some college education or more
45+: Over 45 years old	<$50,000: Household income is less than $50,000
HS or less: High school education or less	>$50,000: Household income is more than $50,000

Mental health and substance abuse

> There are not enough health services for people without health insurance, or for people who are mentally ill.
> *- Durham County resident*

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.

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).[1]

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), 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.[2]

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 recorded higher levels of alcohol use at school, and three times the level of heroin use.[3]

[1] *The National Alliance for the Mentally Ill* (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.

[2] *The National Institute on Drug Abuse* (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."

[3] YRBS results presented here are preliminary. The final Report on the 2007 YRBS in Durham Public Schools will be available in December 2007.

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, 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, 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/, 681-2621.
- **Planned Parenthood of Central North Carolina** provides confidential and affordable reproductive health care. www.plannedparenthood.org/centralnc, (866-942-7762.
- **El Centro Hispano** has HIV prevention education programs. www.elcentronc.org, 687-4635.
- **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, 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, 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, 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, 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
- 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, 309-2600.
- **Durham Together for Resilient Youth** is a coalition focused on reducing substance use among youth. 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, 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).

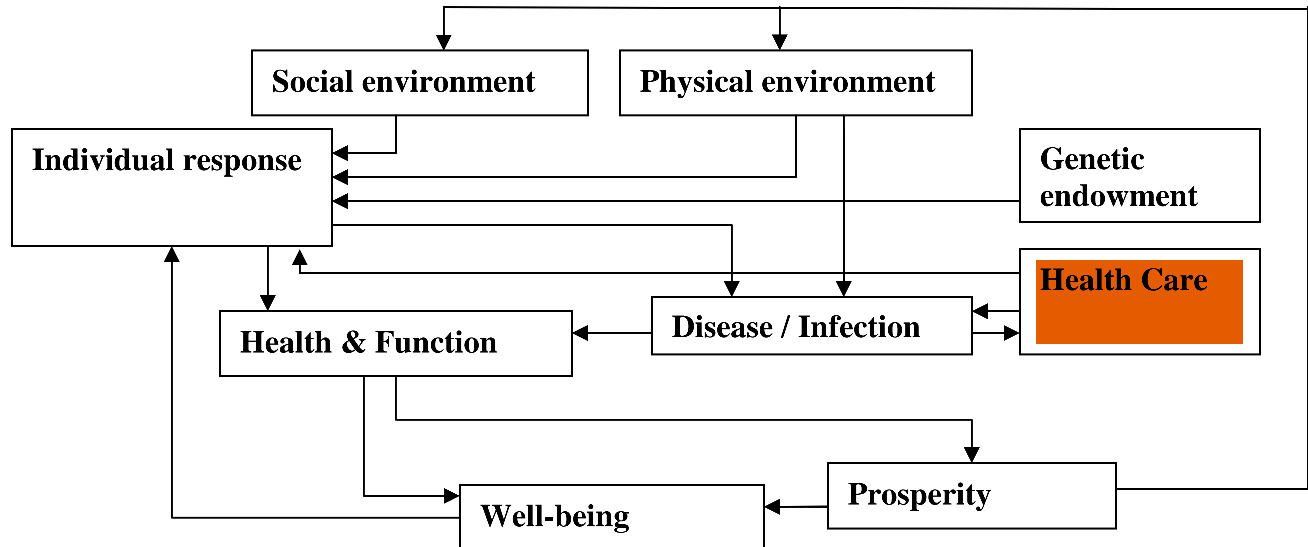
v. *Psychiatry Residency Clinic* (for adults only). The Psychiatry Out-patient Clinic is staffed by resident-level psychiatrists who are supervised by attending psychiatrists on the Duke faculty. Social work services are available. The clinic works with patients with a wide range of psychiatric and emotional 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.

Healthcare



Key Findings

Main findings in the health care domain are:

- In 2007, 79% of the total Durham population rated their health care as very good, compared with 72% in 2003.
- In 2007, 80% of African-Americans in Durham rated their health care as very good, compared with 73% in 2003.
- Estimates of the number of uninsured adults under the age of 65 in Durham lie between 13% and 26%.
- 78% of the patients served by Lincoln Community Health Center in 2006 were uninsured - compared with an average rate of 51% for similar Health Centers statewide.
- 82% of people served by Lincoln Community Health Center live below the federal poverty level – compared with a statewide average of 54%.
- Factors associated with being uninsured in Durham include being a minority, male, under the age of 45, less educated, or living in a household with an income of less than $50,000.
- The percentage of adults in Durham who are employed for wages but without any health insurance increased from 15% in 2004 to 27.5% in 2006.
- 72% of Latinos reported that they had no insurance coverage in 2007.
- When compared with all of the comparison counties and the rest of North Carolina, Durham has a very large number of health workers, especially physicians (67.1 physicians per 10,000 population compared with 20.8 per 10,000 population statewide).

Insurance rates

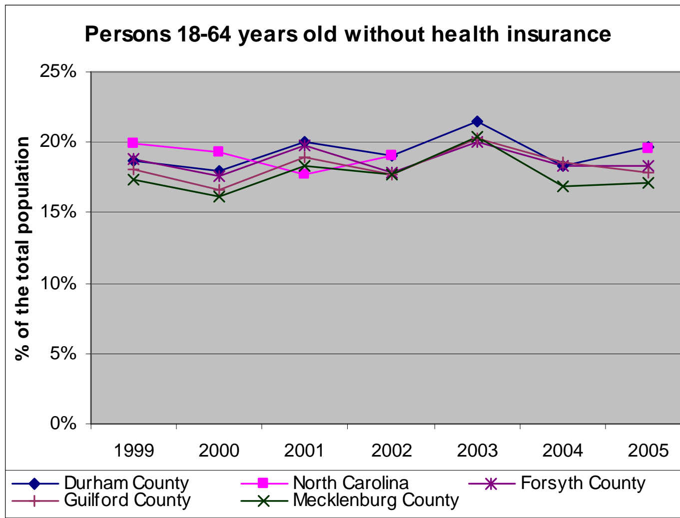
Data from four sources indicate that the percent of uninsured Durham residents lies between 13% and 26%. According to the Sheps Center for Health Services Research, 6,963 children, or 11.6% of Durham's children, have no health insurance. Among adults ages 18-64, 31,222, 19.6% are uninsured (most adults over the age of 65 have Medicare).

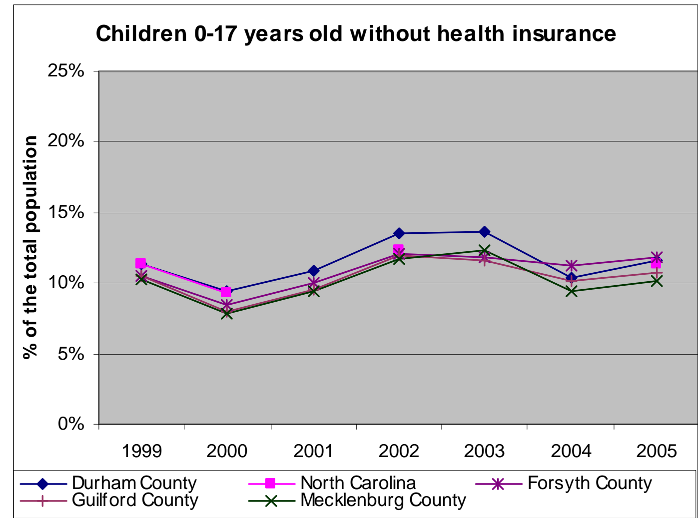
> "[A strength in Durham is…] Trust in the health services. Although they give me appointments a little bit late, because they are helping many people, I am going to have an appointment. I have the hope or the confidence that within a month, or less, they will help me with my problems. I feel that that is a strength."
>
> *- Durham County resident*

According to the BRFSS, 26.2% of adults under the age of 65 had no health insurance in 2006. Among those employed for wages, the rate of uninsured rose to 27.3% in 2006.

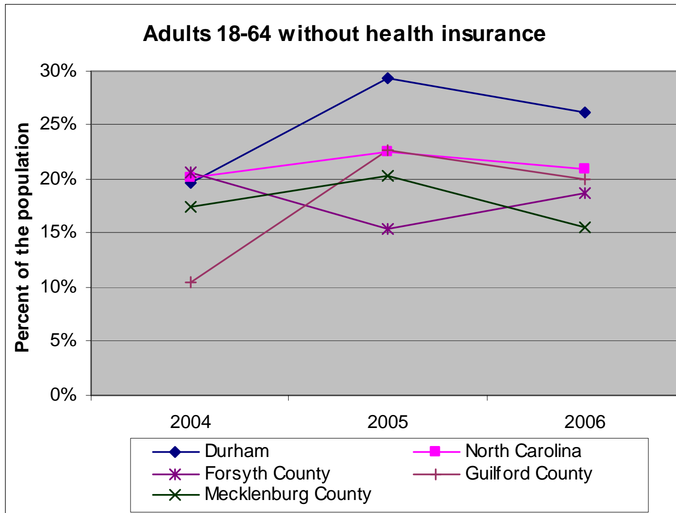
According to the Durham County Health Assessment Survey, the percent of Durham County residents with health insurance coverage rose between 2003 and 2007. In 2003, 17% of Durham said they had no kind of health coverage; broken down by race/ethnicity, 14% of African Americans and 78% of Latinos had no coverage. In 2007, 13% of Durham reported having no coverage, including 13% of African Americans and 72% of Latinos.

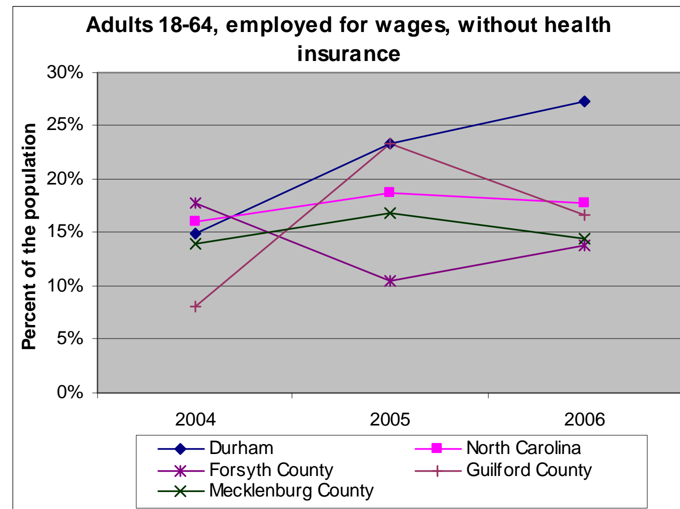
Factors associated with being uninsured include being male, minority, under age 45, less educated, or in a household earning less than $50,000. While the majority of non-elderly North Carolinians still receive their healthcare through their employer, the number of uninsured residents of Durham who are employed for wages is increasing.

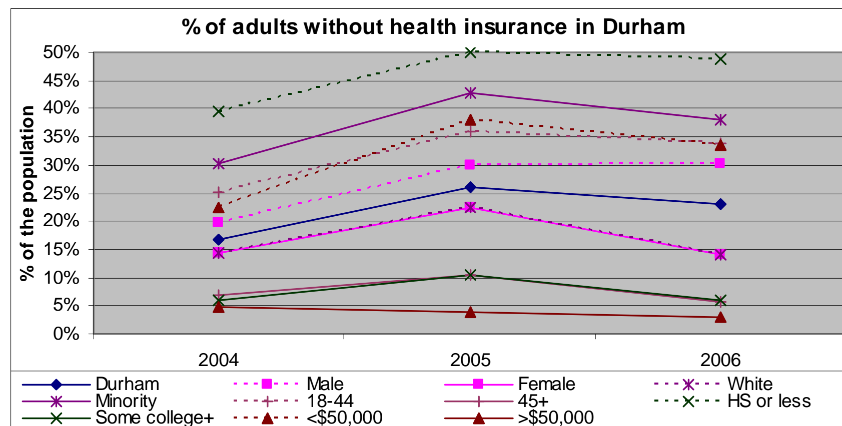




Data source: Sheps Center for Health Services Research (http://www.schsr.unc.edu/)







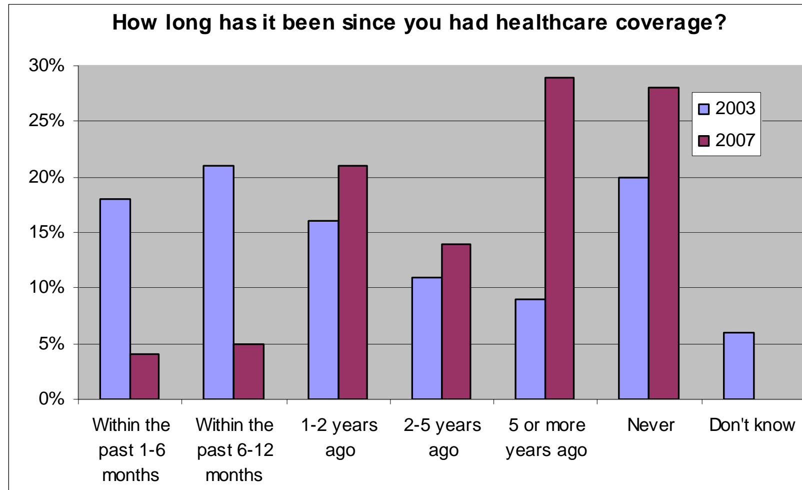
> "Prevention is the most important thing. We have too many people here without health insurance."
> *- Durham County resident*

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	College +: Some college education or more
45+: Over 45 years old	<$50,000: Household income is less than $50,000
< HS: High school education or less	>$50,000: Household income is more than $50,000

In addition, a 2003 survey of 1,131 Durham residents by the Duke Clinical Research Institute ("Perceptions of Access and Barriers to Healthcare: A Survey of Durham County, NC") found that 92% of Caucasians had health insurance, compared to 77% of African Americans and 32% of Latinos.

The number of people who report going without health insurance for longer amounts of time (2-5 years or more) has increased from 2003-2007. Of the 13% of the respondents who had no healthcare coverage (64 people), 29% hadn't had coverage since five or more years ago, and 28% never had it.



Data source: Durham County Health Assessment Survey

> "Yeah, and I've had bad mammograms, and I've been going through this since I've been here, without insurance. And I went to a doctor here, and he took my history, looked at my mammograms, he explained every procedure... And he said, 'OK, I'm going to be right back, I'm going to go set up the appointment to have your biopsies done.' He came back in less than a minute, he said 'There's been a change of plans, they're probably benign… and I'll get back to you in a couple of weeks.' He found out I had no insurance. So, it went from right down to what kind of stitch he was going to give me, and how big my scar was going to be to, 'there's been a change of plans, they're probably benign.' And it's frustrating, makes you feel real bad, too, makes you feel lower than dirt."
>
> *- Durham County resident*

Lincoln Community Health Center is a "federally qualified health center" (FQHC) that provides primary care to the underserved in Durham County. In 2006, 78% of their patient population was uninsured, compared to a statewide average among FQHCs of 51.2%. Similarly, 82% of Lincoln's patients live below 100% of the federal poverty level, compared to the statewide average of 54% (NC Community Health Center Association, www.ncchca.org).

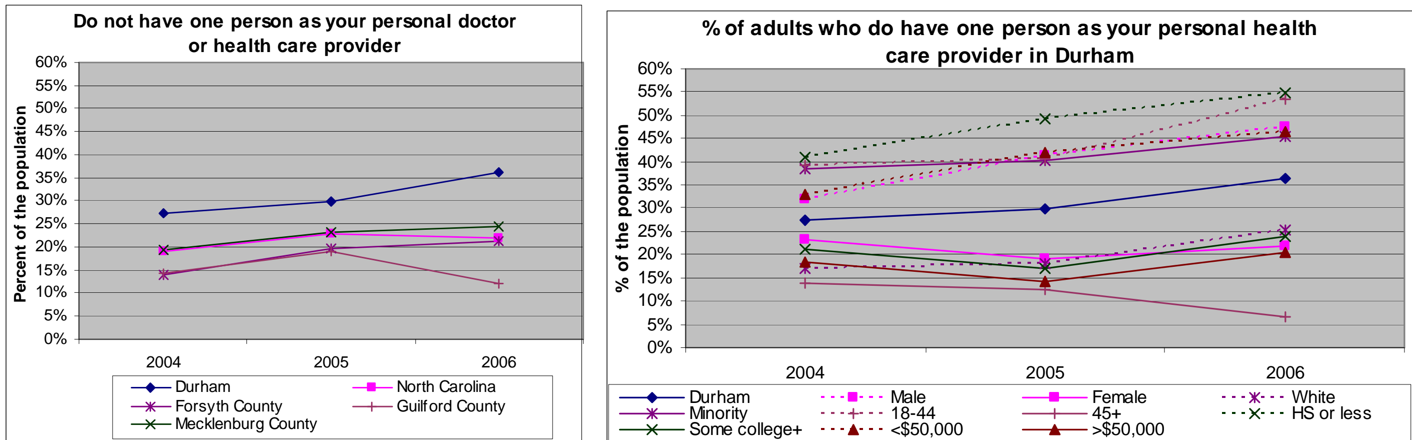
Accessibility of healthcare

Besides having health insurance or not, there are several other factors that can affect people's ability to access adequate healthcare. One is their relationship with a healthcare provider. Durham has very high numbers of healthcare professionals in the county.

2006 Health Professionals per 10,000 Population					
	Physicians	Primary Care Physicians	Dentists	Registered Nurses	Nurse Practitioners
Durham	67.1	21.9	6.8	211.1	10.0
NC	20.8	9.0	4.4	92.9	3.0
Forsyth	40.7	14.0	5.8	168.3	4.7
Guilford	24.7	10.5	5.4	113.0	3.8
Mecklenburg	26.0	10.5	6.4	109.9	3.5

Data source: Sheps Center for Health Services Research (http://www.shepscenter.unc.edu/hp/profiles.htm)

But many Durham residents (36.3% according to the BRFSS) feel they do not have *one person* who serves as their personal healthcare provider. This may be a result of people having more than one person who they consider as their healthcare provider, reflecting a recent trend to move away from the managed care "gatekeeper" models. This could also reflect the scheduling changes in some clinics so that while there may be a "primary care home," the providers rotate through the clinics at different times.



Data source: NC Behavioral Risk Factor Surveillance System (http://www.schs.state.nc.us/SCHS/brfss)

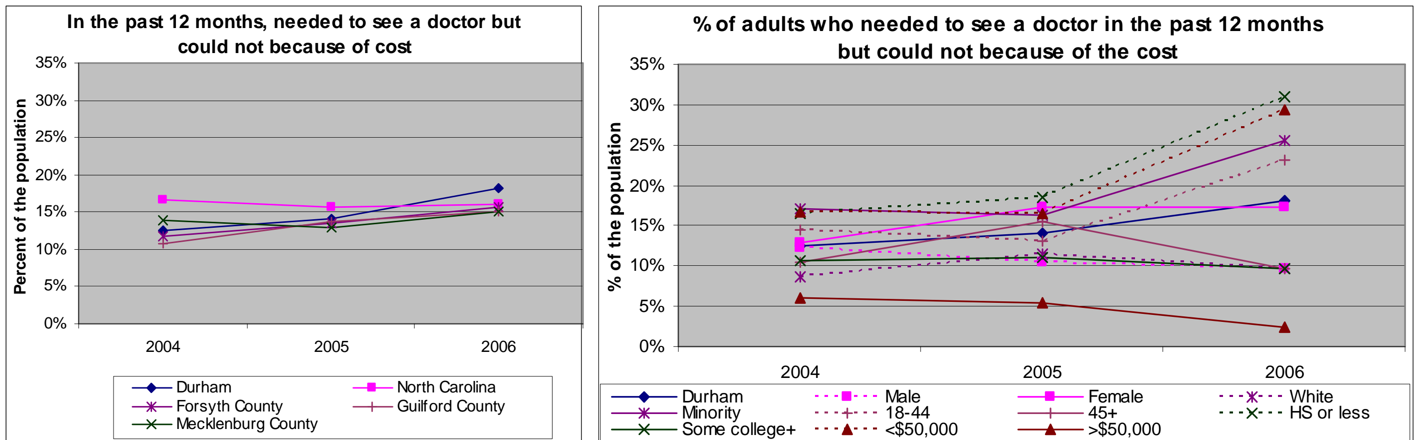
This trend is going the opposite way in the findings of the 2007 Durham County Health Assessment Survey. 23% of Durham residents do not have one person that they think of as their personal healthcare provider, down from 31% in 2003. The survey found that 19% of African Americans do not have a personal healthcare provider, down from 30% in 2003; the same was true for 75% Latinos, down from 87% in 2003.

According to preliminary results of the Youth Risk Behavior Survey in Durham Public Schools[18], caucasian students in Middle Schools report far better access to healthcare than minority students, with 68.9% having seen a doctor in the past 12 months and 76.9% having seen a dentist in the same period. This compares to 47.6% and 48.7% for all other students in Middle Schools (in Durham Public Schools), respectively.

Another factor that can impact people's ability to receive healthcare is the out-of-pocket costs associated with treatment. Of those in the Durham County Health Assessment Survey who did not have insurance, 55% (34 people) said the main reason they didn't have insurance was because it was too expensive. The other most frequently mentioned reasons had to do with employment – 19% (12 people) said they didn't have insurance because they were between jobs, and 14% (nine people) said their job didn't offer benefits such as health insurance.

In the 2006 BRFSS, 50 people, or 18.2% of those surveyed, said that they hadn't gone to the doctor when needed because of the cost.

[18] It should be noted that this result is based on a preliminary analysis of the survey results and is therefore subject to confirmation once the final report of the Durham YRBS has been made available.



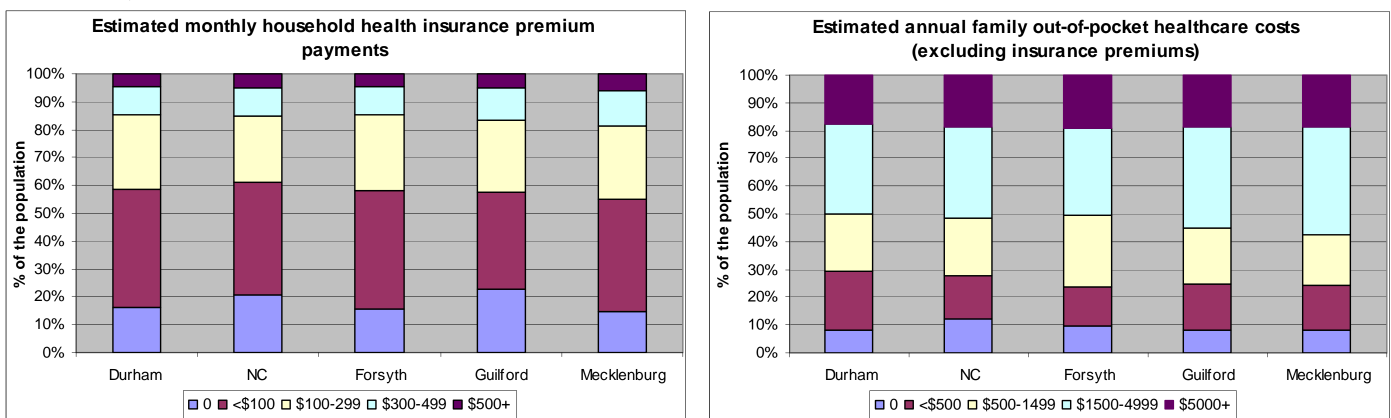
Data source: NC Behavioral Risk Factor Surveillance System (http://www.schs.state.nc.us/SCHS/brfss)

The 2007 Durham County Health Assessment survey found that a lower number, only 10% of those surveyed, said that there was a time in the past 12 months that they needed to see a doctor, but could not because of the cost. This was down from 12% in 2003. Latinos were more likely to forego seeing a doctor because of the cost – 28% saying this in 2007.

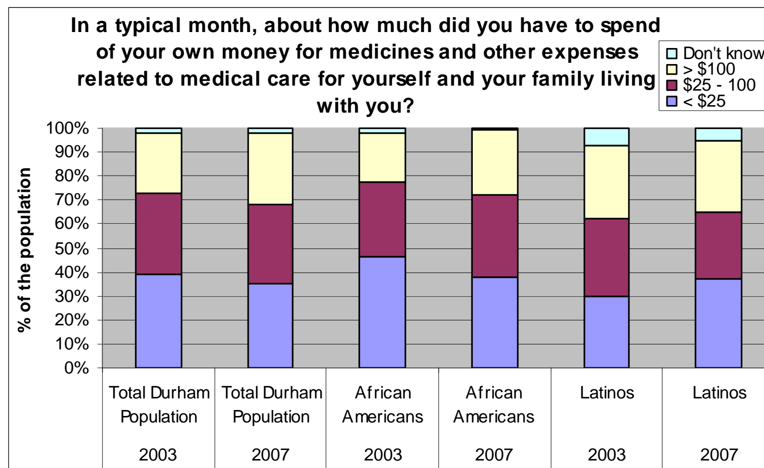
> "A person doesn't go to the doctor here. Because if you go to the clinic for an emergency, you get very expensive bills - $600, 800. Really expensive."
>
> *- Durham County resident*

In 2004, the NC Behavioral Risk Factor Surveillance System asked some additional questions about healthcare costs. That year, 14.4% of Durham residents surveyed said that they or another family member in their household had had problems paying medical bills. This compares with 19.5% of North Carolinians, 17.6% of Forsyth County, 12.8% of Guilford County, and 14.9% of Mecklenburg County residents.

That year, the BRFSS found that most of the households with health insurance in Durham (42.2%) were paying under $100 in monthly health insurance premium costs. Among all those surveyed, 32% estimated their annual family healthcare costs (excluding premiums) at $1500-$4,999.



Data source: 2004 NC Behavioral Risk Factor Surveillance System (http://www.schs.state.nc.us/SCHS/brfss)
** Note – The question about premiums was asked only of those who were insured.*

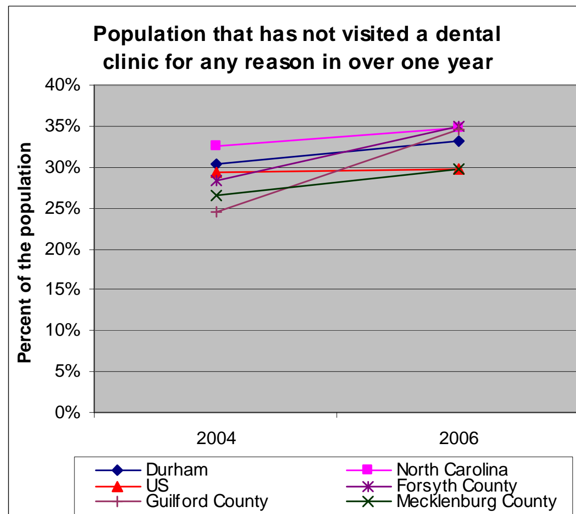


Data source: Durham County Health Assessment Survey

> "The cost of medications is extremely high. If you don't have the money to pay for it, you tend to sacrifice your own health to put food on the table."
> *- Durham County resident*

Another factor in healthcare is prescription medications. In the 2007 Durham County Health Assessment Survey, 19% responded that they had delayed filling or not filled a prescription, compared to 18% in 2003. The main reasons they gave for not filling prescriptions were that they couldn't afford the prescriptions or procrastinated in filling it.

Another aspect of healthcare is oral health. In 2006, the BRFSS found that roughly 1/3 of Durham has not been to a dental clinic for any reason in over one year. Of these, 5.6% have never been to a dental clinic, and 17.2% haven't been in over two years.



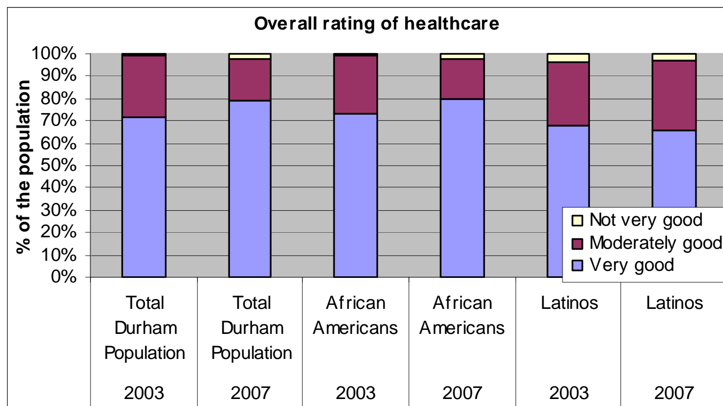
Population in Durham that has not visited a dental clinic for any reason in over one year	
Durham	33.2%
Male	38.2%
Female	26.7%
White	19.8%
Minority	44.0%
18-44	37.7%
45+	26.2%
HS or less	48.0%
Some college+	23.5%
<$50,000	39.7%
>$50,000	17.3%

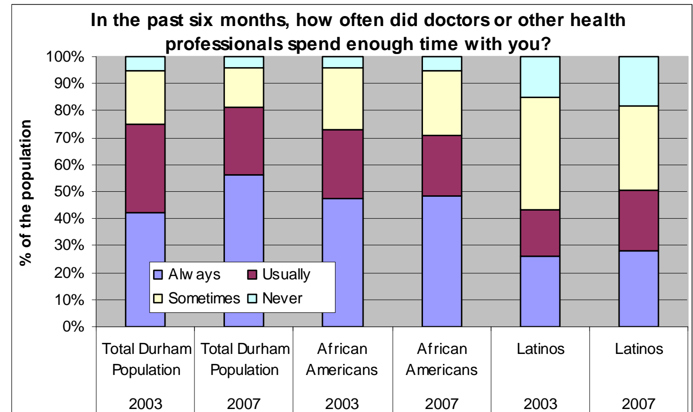
Data source: NC Behavioral Risk Factor Surveillance System (http://www.schs.state.nc.us/SCHS/brfss), National Behavioral Risk Factor Surveillance System (http://www.cdc.gov/brfss/)

Satisfaction with healthcare

How people feel about their healthcare experiences can affect their health outcomes, usage of healthcare resources, adherence with healthcare advice, personal health practices, and other

consequences. According to the 2007 Durham County Health Assessment survey, 79% of Durham believes their healthcare overall was "very good." In addition, 56% of Durham thought their healthcare providers had spend enough time with them over the past six months.





Data source: Durham County Health Assessment Survey

> "I think they help us a lot. In our countries, sometimes is a little bit hard, but the help they give us here is a lot. I think that that's why many of us are here, because of our children... Many of us don't have resources to pay them, but the clinic is really good."
>
> *- Durham County resident*

The 2003 Duke Clinical Research Institute report on "Perceptions of Access and Barriers to Healthcare: A Survey of Durham County, NC" cited some valuable perspective from Durham residents on their healthcare experiences –

- 16% of African Americans and Latinos thought that the healthcare system very often treats people unfairly based on a person's ethnicity.
- Among African American respondents:
  - 27% of African Americans saw racism (defined as *being treated worse than others because of race or ethnicity*) as a major problem in healthcare
  - 20% felt judged by a healthcare provider because of their race/ethnicity.
- Among Latino respondents:
  - 35-40% of Latinos saw racism as a problem in healthcare
  - 27% thought that the healthcare system very often treats people unfairly based on their ability to speak English.
  - 34% reported being treated with disrespect due to their inability to speak English.
  - 29% felt as though their ethnicity presented a major problem when obtaining healthcare.
  - 51% expressed difficulty with getting care because of a lack of providers who speak their language.
- 41% of African Americans and 53% of Latinos cited insurance coverage as a major problem; 28% of African Americans reported being treated with disrespect if they didn't carry insurance.

> "I just don't believe in the health care system. I don't believe in it."
>
> *- Durham County resident*

- 81.5% of all respondents reported being able to trust Duke University Hospital and Durham Regional Hospital to do what is best for patients at least most of the time.

Discussion

Durham is a county very rich in healthcare resources. Duke University Health System operates two hospitals in the county (Duke Hospital and Durham Regional Hospital), and is affiliated with many local clinics and health research programs. These attract many health professionals to the area, and offer state-of-the-art healthcare; however, because of its renowned and excellent services, many of the people they serve come from outside of the county. This could be reflected in the fact that, although we are surrounded by so many healthcare professionals, many don't have a personal attachment to one.

The rising cost of healthcare is a major cause for the number of people without health insurance. Families and employers, faced with rising premiums, more often feel they cannot afford health insurance. Healthcare costs are rising because of several factors, cited in the NC Institute of Medicine's 2006 report from their Task Force on Covering the Uninsured, "Expanding Health Insurance Coverage to More North Carolinians":

- Increasing utilization of new technology and treatments, which are often more expensive
- Consumer demand
- Increasing use and cost of prescription drugs
- Increase in disease prevalence, particularly expensive obesity-related chronic diseases
- Increase in costs of services, particularly expensive hospital care
- Defensive medicine leading providers to use extra tests or procedures

This document is available at http://www.nciom.org/projects/uninsured/uninsuredreport.html.

Durham is fortunate to have a strong safety net of healthcare options for the uninsured. Lincoln Community Health Center and the Durham County Health Department provide many primary healthcare services, including dental, prenatal, mental, pharmacy, and labs; they provide these services at their main locations and throughout the community at site such as homeless shelters, schools, and neighborhood centers. Duke University Health System also provides discounted care to low-income uninsured people. These programs, through leveraging grant, charity, and governmental funding to provide high-quality healthcare services at low cost, help keep the out-of-pocket healthcare costs lower for eligible families.

Access to care emerged as a major theme in the "action-oriented community assessment" of Lincoln's patient population.

> "Community members overwhelmingly agreed that Lincoln is an asset to the community. On more than one occasion, we heard a simple statement of gratitude for the clinic: 'Thank God for Lincoln.' Fewer community members said access to healthcare was a problem than did service providers. However, of those that did speak about healthcare, they told us that healthcare costs are a major strain on their household budgets… It is clear from all of our interviews that Lincoln plays an integral role in facilitating access to healthcare in Durham. We learned that Lincoln carries a great deal of responsibility – both financially and socially – in serving the uninsured community. They are challenged to maintain hours that are convenient for clients considered to be the

> 'working poor,' employ a bilingual staff to serve Durham's growing Hispanic community, and stay afloat financially among a non-paying or low-paying clientele" (pp 22-23).

Healthcare has a major impact on the health of individuals. The NC Institute of Medicine analyzed NC Behavioral Risk Factor Surveillance System and hospital discharge data on the uninsured as part of their 2006 report (mentioned above). They found that, comparing to the insured population statewide, the uninsured are –

- More likely to have no personal doctor or healthcare provider
- More likely to be in fair or poor health
- More likely to report that there were times in the last 12 months when they needed to see a doctor, but could not because of costs
- Less likely to have had a mammogram, ever or in the past year (women)
- Less likely to have ever had a colorectal screening
- Less likely to have ever had a Prostrate Specific Antigen Test (men)
- More likely to report difficulties paying their medical bills
- More likely to have been contacted by a collection agency in the past year as a result of unpaid medical bills
- More likely to cut back on living expenses (such as utilities, food, clothing, or transportation) to pay for medical bills
- More likely to be hospitalized for preventable conditions

These findings reflected similar analyses on a national level. "The uninsured are more likely to delay seeking care because of the costs, and are more likely to be diagnosed with severe health problems, such as late-stage cancer" (p 41). They cited Institute of Medicine of the National Academies estimates that the uninsured have a 25% higher chance of premature death than those with insurance. Being uninsured also affects worker productivity and children's achievement in school, which negatively impacts families' earnings and the communities' economy.

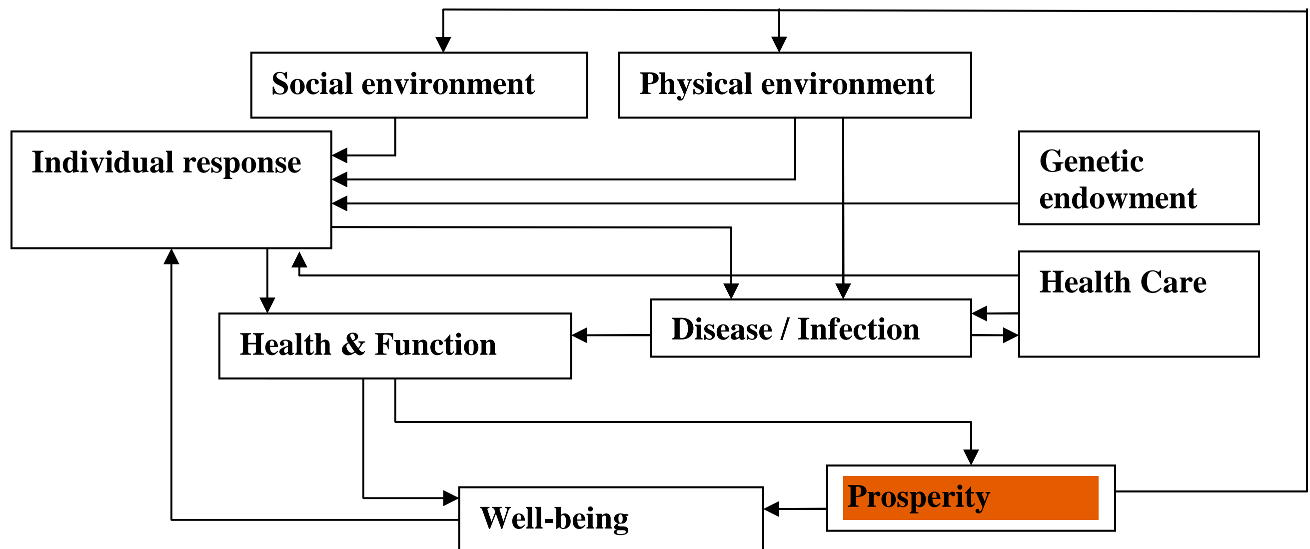
The cost of healthcare affects people's health as well-exemplified in the finding that individuals reported that one of the main reasons they didn't fill prescriptions was that the medications were too expensive. This cost barriers can be real or perceived. For example, there are many initiatives and resources in Durham to help pay for medications, however, people who need the services and service providers don't necessarily know how to access the resources. Often, better communication between patients and their providers about financial constraints can help if providers are aware of the resources and/or know how to re-think treatment regimens using less expensive therapy.

Although the details remain under heated debate (in a series of articles in the journal *Health Affairs*), a significant portion of personal bankruptcies appear to be due to medical bills. Many of the reported bankruptcies are among the insured; not all insurance is comprehensive. Many of the insured population find themselves swamped with medical care costs that their insurers do not cover. This again can lead to a great deal of stress and financial hardships for families, and cause people to forgo needed care.

Initiatives and Resources in Durham

- The **Access to Healthcare Committee** of the Partnership for a Healthy Durham is working towards helping increase healthcare coverage for Durham residents, particularly those under 65 years old. www.healthydurham.org, 560-7833.
- **Durham Congregations, Associations, and Neighborhoods** is a grassroots organization with a Health Action Team that is focused on access to healthcare. www.durhamcan.org, 530-8515.
- The **North Carolina Institute of Medicine** is a statewide organization (headquartered in Durham), serving as a non-partisan source of health policy analysis. www.nciom.org, 401-6599.
- **Lincoln Community Health Center** provides outpatient healthcare to the underserved population in Durham. www.lincolnchc.org, 956-4000.
- **LATCH** is an outreach, primary care and case management system for any Durham resident without health insurance, to help them better manage their health and secure health services. www.communityhealth.mc.duke.edu/clinical/?/latch, 620-8034.
- **Senior PHARM*Assist*** helps older adults and some individuals under 60 years old with information about prescription drug coverage programs, financial assistance with purchasing prescription drugs, medication reviews, and referrals to other resources. www.seniorpharmassist.org, 688-4772.
- The **Department of Social Services** administers the Medicaid programs in Durham, along with other assistance programs. www.durhamcountync.gov/departments/dssv/. 560-8000.
- The **Durham County Health Department** provides clinical services in family planning, sexually transmitted infections, tuberculosis, immunizations, and dentistry. They also provide programs in community health, health education, environmental health, and nutrition. http://www.durhamcountync.gov/departments/phth/, 560-7600.

Prosperity



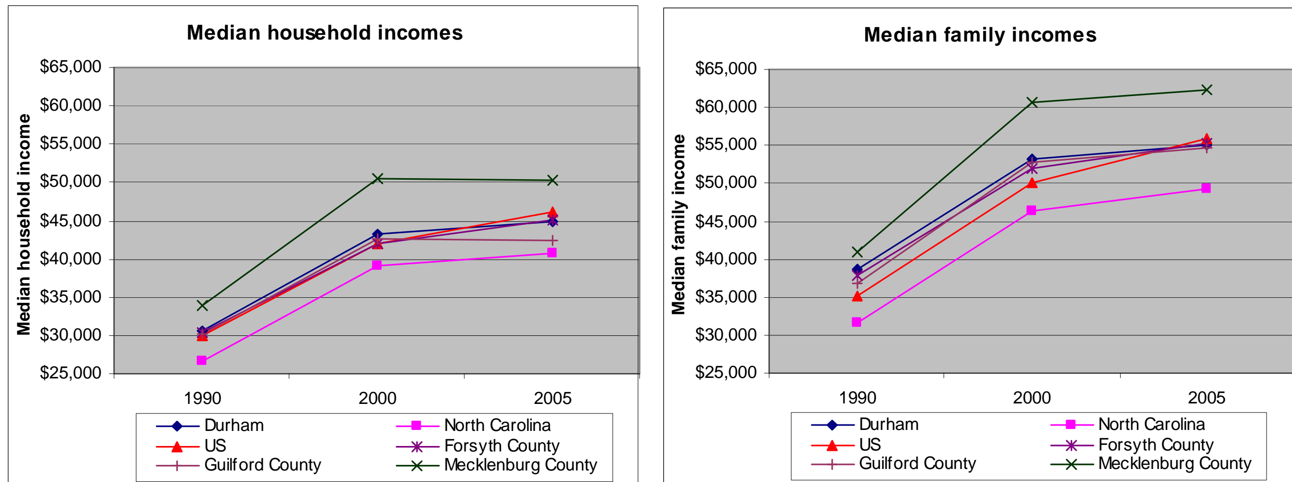
Key Findings

Main findings in the prosperity domain are:

- In 2005, Durham had median and household family incomes that are higher than for NC overall.
- The unemployment rate in Durham has gradually declined since 2002.
- Home ownership rates in Durham County increased from 55% to 71% between 2003 and 2007. Home ownership rates among African Americans increased from 42% to 63% during the same period and home ownership rates among Latinos increased from 13% to 27% during the same period.
- There is a disparity between 'wages earned' and 'per capita income' in Durham County – suggesting that many of those earning higher wages may not be resident in the County.
- The 2007 annual 'point in time' count of the homeless found 539 homeless persons in Durham County.

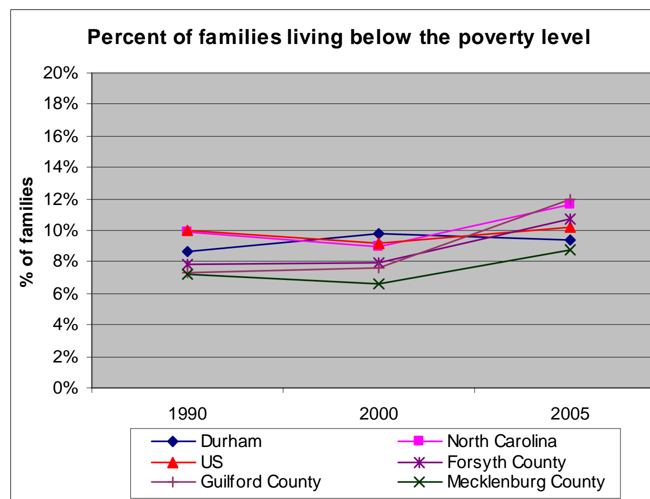
Income

Durham has median household and family incomes that are higher than the state's rates – the 2005 median household income in Durham was $44,941, and the median family income was $55,023.



Data source: US Census (www.census.gov)

In 2005, the median earnings for workers in Durham County were $28,163. The median earnings for a male full-time, year-round worker was $41,634, while for female full-time, year-round workers was $38,077.



Data source: US Census (www.census.gov)

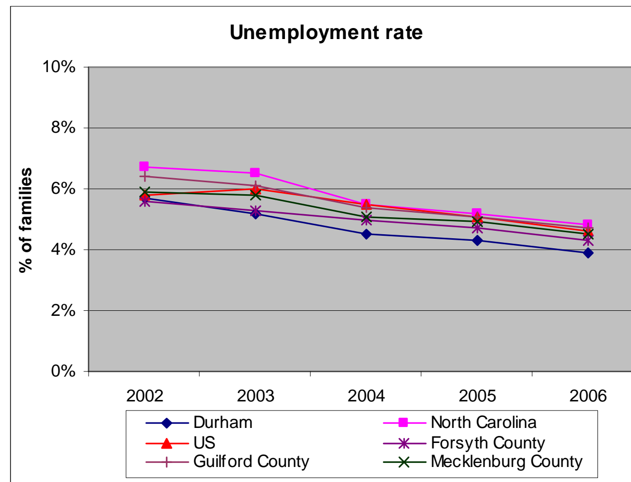
Durham has a lower percentage of families living in poverty than the state or the US at 9.4% in 2005. However, 14.4% of families with children were living with incomes under the poverty level. The rate grows even higher for female-headed households with no husband present, of which 29% lived in poverty, 33.4% of those with children under 18 and 45.7% of those with children under five years old.

> "You can see that [Durham]'s a city in development, and this is very important for us, but even more for our children, who are going to grow up in Durham, and are going to find what they need."
> *- Durham County resident*

Employment

Durham has many opportunities for employment. According to the NC Department of Commerce (http://www.nccommerce.com/en), 10% of Durham County's jobs are in government, the remaining 90% in private industry. Of all jobs, 18.7% are in manufacturing, 10.6% in

educational services, and 18.4% in health care and social assistance. Durham's average unemployment rate in 2006 was 3.9% of the average annual civilian labor force.

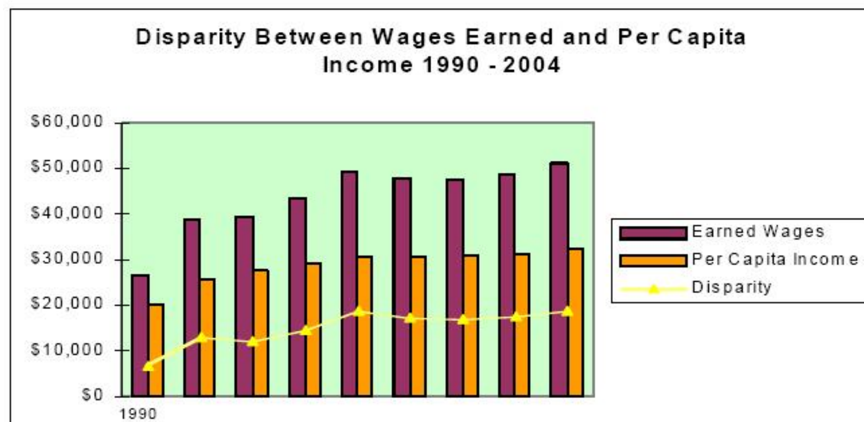


> "Every day it's harder to find work [because] there is much more competition."
> *- Durham County resident*

Data source: Log into North Carolina (www.linc.state.nc.us)

> "The average income is strong, but a lot of those incomes leave Durham at the end of the day."
> *- Durham County resident*

As the Economic Workgroup of the Results-Based Accountability (www.durhamnc.gov/rba) initiative noted, however, that there is a disparity between wages earned and per capita income in Durham County. This might indicate that some of the people earning higher wages in Durham County aren't residing in the county.



Employment emerged as a theme in the "action-oriented community assessment" of Lincoln Community Health Center's patient population.

> "Most community members agreed that being able to earn enough money to survive was difficult due to multiple factors. Many felt that full-time jobs were scarce while others felt that there were plenty available but that those available did not pay enough to live off of. Other notable barriers included lack of work experience and a lack of education or training… Some thought that difficulties faced by some Hispanics in getting identification documents limited their employment opportunities. Most service providers agreed that employment was an issue for the community, noting that 50% of jobs in Durham are taken by people who live outside of Durham and that these tend to be higher paying jobs; many of the uninsured and underinsured work in the service

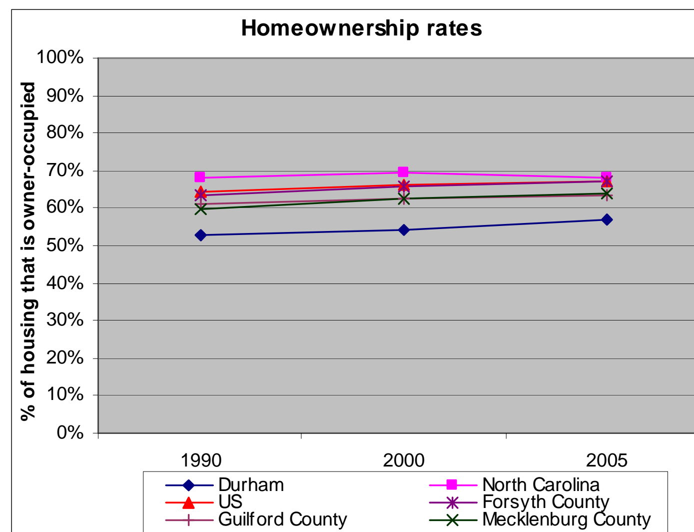
industry which often does not pay as well as other jobs. Many also brought up the conflict between employment hours and ability to seek medical care" (p 35).

Housing

Housing is a good indicator for economic well-being, and it is also a factor that influences health in many ways. In regards to prosperity, owning a house is a primary means to build wealth.

Durham has relatively low homeownership rates – in 2005, 57% of homes were owner-occupied. Durham's Results-Based Accountability workgroup for Housing (available at http://www.durhamnc.gov/rba/pdf/affordable_housing.pdf) attributes these low homeownership rates, among other factors, to:

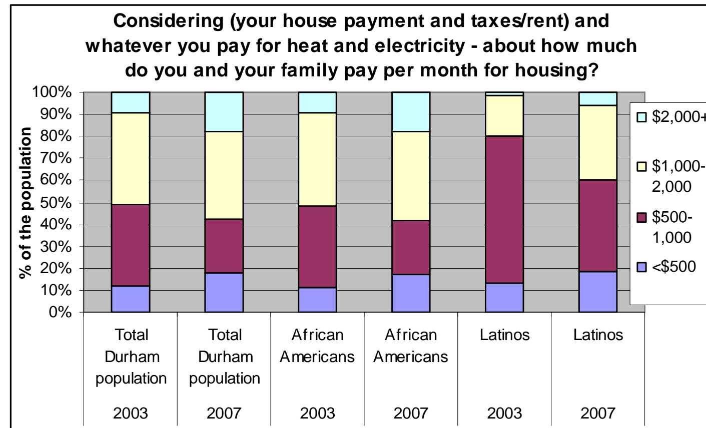
- New home prices rising faster than household income
- Recent increases in home foreclosures in the area
- Increasing numbers of "severely burdened" low-income homeowners



Data source: US Census (www.census.gov)

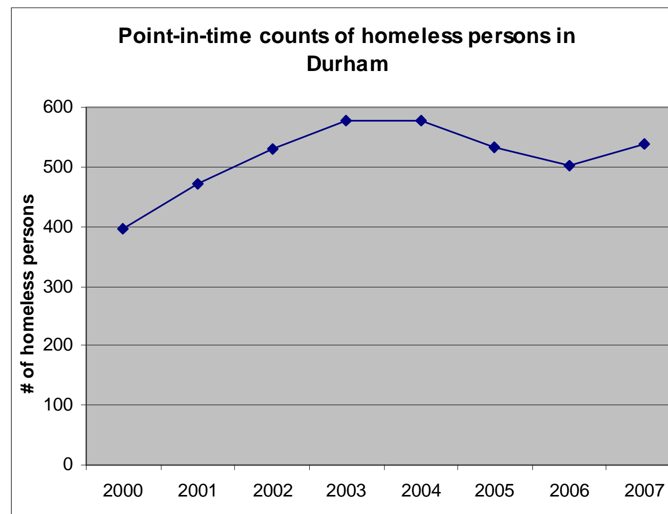
According to the Durham County Health Assessment Survey, homeownership rates increased from 55% to 71% between 2003 and 2007. Homeownership among African Americans increased from 42% to 63% and among Latinos from 13% to 27% during that time period.

Most Durham families (40%) spend between $1000 and $2000 on housing and utilities.



Data source: Durham County Health Assessment Survey

Every January Durham conducts a "point-in-time" count of the homeless, by visiting shelters and places on the streets where homeless people often stay. In 2007, they counted 539 total homeless persons in Durham. Of these, 95 were considered "chronically homeless," and 37 were unsheltered (living in the streets).



> "To me housing is a big issue...because if you don t have any place to go or stay, if you don't have food and nowhere to stay, you are not thinking about what I'm talking about with healthcare."
> *- Durham County resident*

Housing emerged as a theme during the "action-oriented community assessment" of Lincoln's patient population as well.

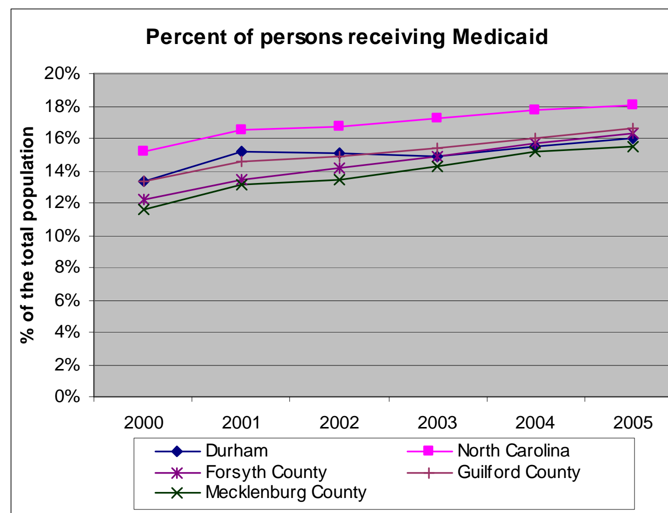
> "The ability to obtain quality and affordable housing is limited and is a fundamental issue in the community which affects all aspects of life (i.e. employment, transportation, healthcare, etc)" (p 2). "Overall, community members were divided on the issue of housing. Hispanic community members almost unanimously reported that finding housing was difficult, citing cost of housing, quality of housing, and issues obtaining housing related to having IDs as barriers. However, none of the non-Hispanic interviewees believed it was difficult to obtain housing, praising the Durham Housing Authority for its efforts in aiding community members in finding housing. Those who did think housing was an issue were often concerned about the safety of available housing. The service providers who thought housing was an issue, however, were primarily concerned with the quality of available housing as well as its affordability" (pp 35-36).

Social services

Social services are available to families that qualify due to economic hardship. Medicaid is a program for low-income families that provides healthcare for eligible persons (based on the federal poverty level, or FPL). Eligible populations include –

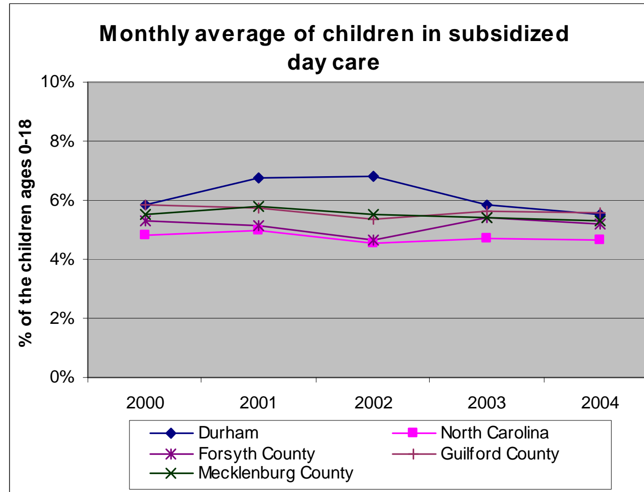
- Pregnant women with family incomes of less than 185% FPL
- Aged, blind, or disabled persons with incomes of less than 100% FPL
- Infants with family incomes of less than 185% FPL
- Children ages 1-5 with family incomes of less than 133% FPL
- Children ages 6-18 with family incomes of less than 100% FPL
- Persons deemed "medically needy"

In Durham, 38,868 people, or 16% of the total population, received Medicaid at some point during 2005.



Data source: Log into North Carolina (http://linc.state.nc.us/)
Note: This measurement is the "Unduplicated count of Medicaid eligibles": An eligible is defined as a person who receives a Medicaid ID card authorizing Medicaid coverage for any portion of the state fiscal year. Eligibles are unduplicated with respect to the state for the fiscal year.

Another income-based service is child care subsidies – through income eligibility and other qualifications, families can receive assistance paying for child care costs. Funding for this service comes through federal and state sources such as Temporary Assistance for Needy Families (TANF), the federal Child Care and Development Fund, Social Services Block Grants, and Smart Start funds. In 2004, a monthly average of 3,204 children (or 5.5% of the estimated population under 18 years old) were in subsidized day care.



Data source: Log into North Carolina (http://linc.state.nc.us/).
Note – this is the average monthly number of children receiving subsidies.

Discussion

The relationship between an individual's wealth and health is circular – having extra resources means that individuals can better afford to take care of their health; also, having poor health impedes a person's ability to amass wealth.

Lower income people have less means to maintain their health. There is a great deal of research, for example, showing that low-income neighborhoods are farther away from grocery stores, meaning that people don't have access to the stores that are most likely to provide fresh fruits and vegetables; this research has also shown that proximity to grocery stores improves the community's health (see www.healthydurham.org/committees/obesityandchronic/index.php). As pointed out in the Healthcare chapter, the escalating cost of healthcare means that fewer low-income families can afford health insurance. Working extra jobs means less time and energy for exercise or active recreation.

> "To maintain a family, to be paying rent and car payments, you need to work two jobs, one full-time in the mornings and another in the afternoons … or that both [in the couple] work. If you're a single mother – even worse, when are you going to be left with time even for your children? And the kids? Who will take care of them for me? I pick them up, I take them home, buy them McDonald's or Burger King and then I leave. You are also losing communication with your children."
>
> *- Durham County resident*

Also, poor health impedes a family's ability to accrue wealth. Wage earners who are ill or have family members who are ill may not able to work as much or as well as healthier people. This can deprive the family of hourly wages, as well as lost opportunities for promotion or raises. Medical care expenditures can quickly eat away at a family's income and savings, as well. As referenced in the Healthcare chapter, even people who have health insurance can find themselves in bankruptcy from medical bills.

Poor health can cost the family in terms of income, but also costs society in terms of lost productivity. *Be Active North Carolina*, a statewide organization, commissioned a study of the

economic costs of unhealthy lifestyles in 2005. They found that health consequences of illnesses associated with physical inactivity, excess weight, inadequate fruit and vegetable intake, and Type II Diabetes cost the State of North Carolina $24.1 billion in 2003, which they estimated to rise to $36 billion in 2008. Using the same estimates, these risk factors cost Durham $659 million in 2003, with a forecast to $982 million in 2008. These costs come about in direct medical expenses, insurance claims, and lost work productivity. The results showed that an overweight child age 5-11 will incur $200,000 in direct medical expenses attributable to their weight by the time the child approaches retirement.

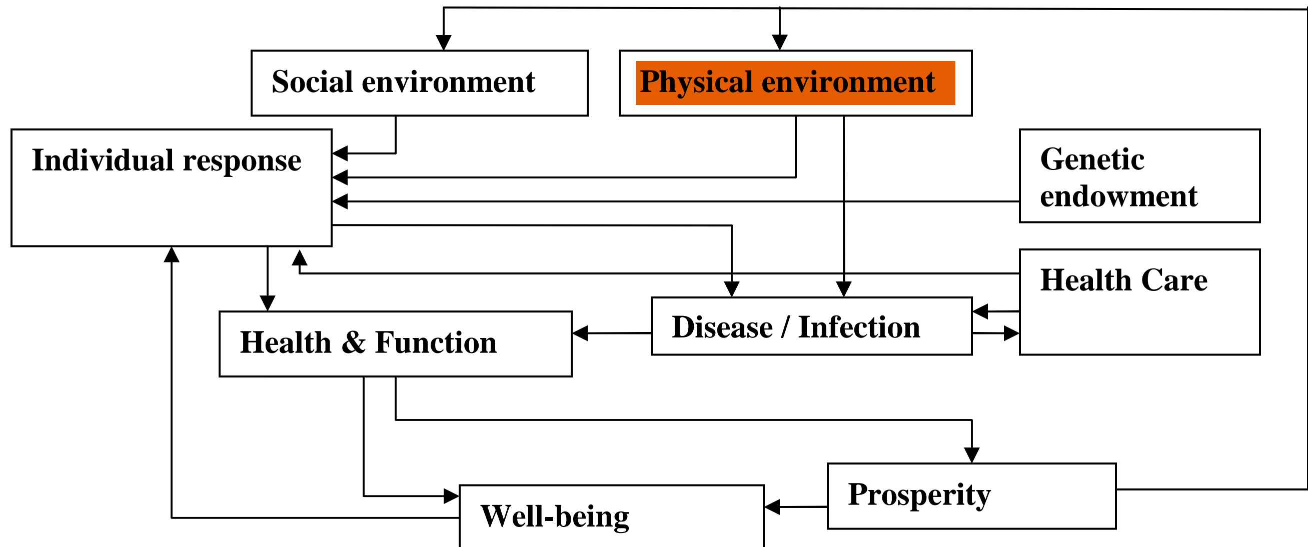
It is clear that a family's ability to pay for good health and healthcare affects their overall well-being, and good health and healthcare in return affects a family's ability to enjoy prosperity. This is true on a societal level as well. For this reason, some employers are looking into health promotion and wellness programs, as a means of saving money on health insurance premiums and improving their productivity. Government has also invested in health promotion and disease prevention programs for their population, anticipating that it will save money in the long-term by avoiding healthcare costs for expensive diseases.

Initiatives and Resources in Durham

- Durham's City & County "**Results-Based Accountability**" initiative has a workgroup focused on creating a "Prosperous Economy." This initiative is a partnership of public sector and community efforts working towards measurable accomplishments in creating a healthy environment in Durham. www.durhamnc.gov/rba, 560-0020.
- The City of Durham has agencies focused on prosperity –
  - **Office of Economic and Workforce Development** - business services and workforce development services in economic development priority areas.
  - **Community Development Department** – administers community development block grants and affordable housing programs.

  www.durhamnc.gov, 560-1200.
- **Durham Chamber of Commerce** – business leadership organization with programs and activities in public policy, economic and workforce development, and business development. www.durhamchamber.org, 682-2133.
- **Durham Convention and Visitors' Bureau** - a local tourism development authority chartered by state and local government in cooperation with the private sector to attract and serve visitors to the City and County of Durham. www.durham-nc.com, 687-0288.
- Durham **Department of Social Services** – administers programs for eligible low-income families, such as food stamps, Medicaid, temporary or emergency financial assistance, and child care. http://www.durhamcountync.gov/departments/dssv/, 560-8000.
- **Downtown Durham, Inc** provides assistance for large and small businesses focused on downtown revitalization. www.downtowndurham.com, 682-2800.
- **Self-Help** – an organization based in Durham whose mission is to create and protect ownership and economic opportunity for people of color, women, rural residents and low-wealth families and communities. www.selfhelp.org, 956-4400.

Physical Environment



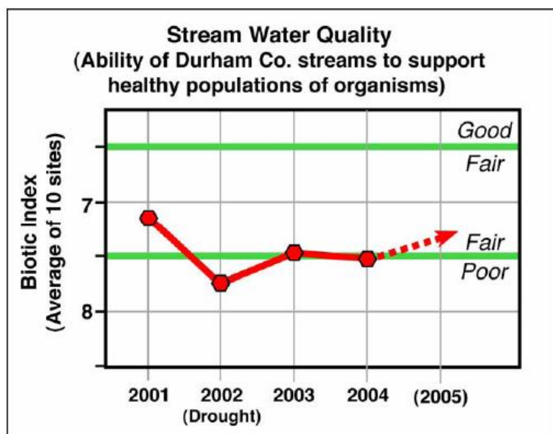
Key Findings

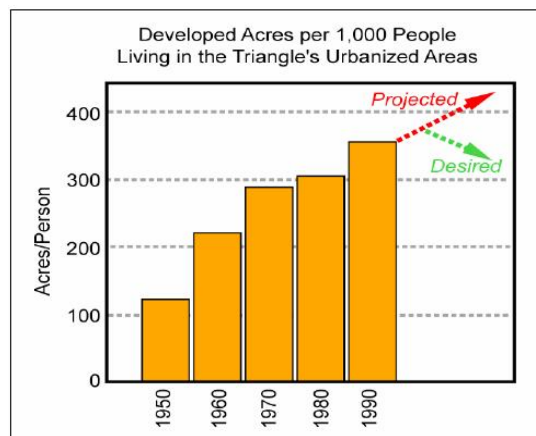
Main findings in the physical environment domain are:

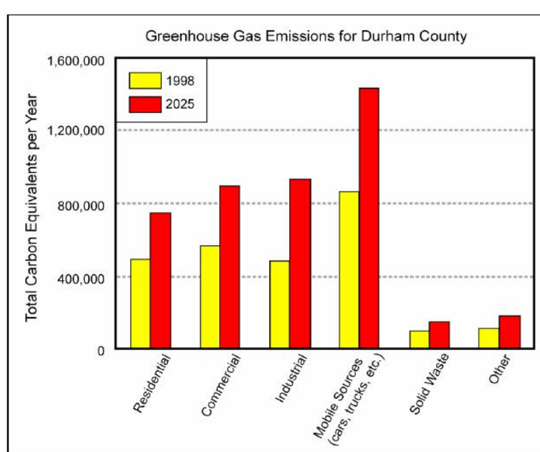
- In 2007, 40% of Durham's population described their home as an excellent place to live – compared with 32% in 2003. 30% of African Americans in Durham described their home as an excellent place to live in – compared to 29% in 2003. However, only 21% of Durham's Latino population described their home as an excellent place to live in (compared with 10% in 2003).
- Lead screenings are increasing for children in Durham, and the number of children testing positive for lead exposure is decreasing.
- Participants in listening sessions expressed general satisfaction with Durham's transportation system.

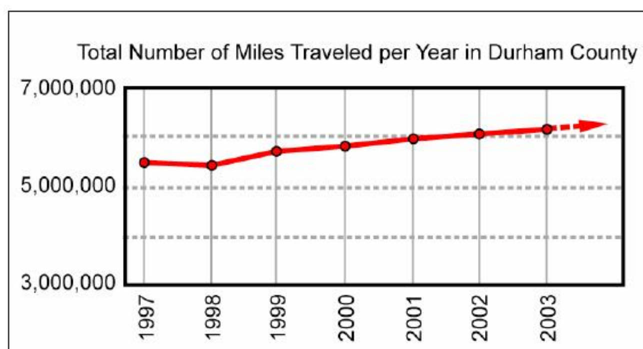
Pollution

Durham's environment workgroup for the "Results-Based Accountability" initiative has identified several indicators of environmental health in Durham. The following graphs are from their reports (available at www.durham.nc.gov/rba):







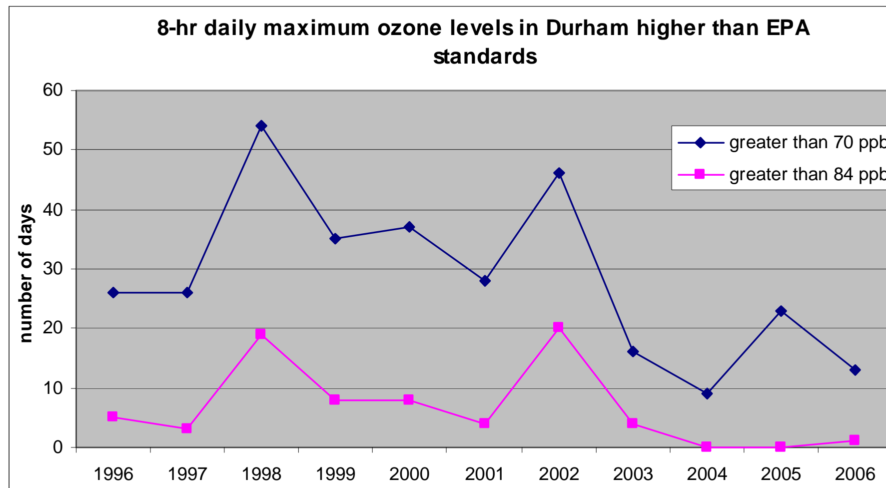


The nonprofit agency Environmental Defense has compiled a series of county-level pollution reports at www.scorecard.org. These are their findings for Durham County:

- Durham ranks 42nd among 66 NC counties* for "cancer risk score," or the reported cancer-causing substances released into the air and water, meaning 41 other counties had higher cancer risks from pollution.[1]
- Durham had the 7th highest health risks from criteria air pollutants among 25 NC counties
- Durham has the second worst "added cancer risk" from hazardous air pollutants in NC
- 7.43% of Durham's surface waters have impaired or threatened uses due to low water quality standards

The Environmental Protection Agency (EPA) (http://www.epa.gov/mxplorer/index.htm) measures air pollutants such as ozone. In 2006, there were 13 days in which there were ozone levels higher than the EPA's new, lower standard of 70 ppm (parts per million), and there was one day in which the ozone levels were above 84 ppm (the current standard).

[1] Only counties with cancer hazards from manufacturing facilities were ranked.



In 2004, the NC Behavioral Risk Factor Surveillance System asked people statewide about their perception of pollution-induced illness. It asked, "Things like dust, mold, smoke, and chemicals inside the home or office can cause poor indoor air quality. In the past 12 months have you had an illness or symptom that you think was caused by something in the air inside a home, office, or other building?" 19.8% of Durham answered yes, compared to 16.4% of the North Carolina.

It also asked about outdoor air quality. To the question, "Things like smog, automobile exhaust, and chemicals can cause outdoor air pollution. In the past 12 months have you had an illness or symptom that you think was caused by pollution in the air outdoors?", 12.6% of Durham said yes, compared to 12% of North Carolina.

"There isn't a lot of pollution."

"We usually have good air quality here."

"The drinking water here is awesome. I drink right out of the tap."
- Durham County residents

Populations that suspect poor indoor air quality caused an illness in the past 12 months

Durham	**19.8%**
NC	16.4%
Forsyth	16.5%
Guilford	17.8%
Mecklenburg	18.3%

Durham	**19.8%**
Male	20.0%
Female	19.6%
Caucasian	15.7%
Minority	24.6%
18-44	23.8%
45+	15.2%
HS or less	10.3%
Some college+	24.2%
<$50K	17.7%
>$50K	23.4%

Populations that suspect poor outdoor air quality caused an illness in the past 12 months

Durham	**12.6%**
NC	12.0%
Forsyth	13.1%
Guilford	9.5%
Mecklenburg	13.3%

Durham	**12.6%**
Male	12.0%
Female	13.2%
Caucasian	9.8%
Minority	15.8%
18-44	14.1%
45+	11.1%
HS or less	6.6%
Some college+	15.5%
<$50K	14.8%
>$50K	11.1%

Data source: NC Behavioral Risk Factor Surveillance System (www.schs.state.nc.us/SCHS/brfss)

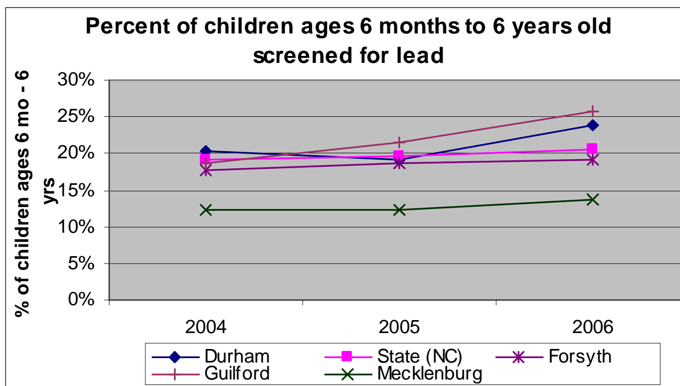
Please note that on all graphs, these indications mean:

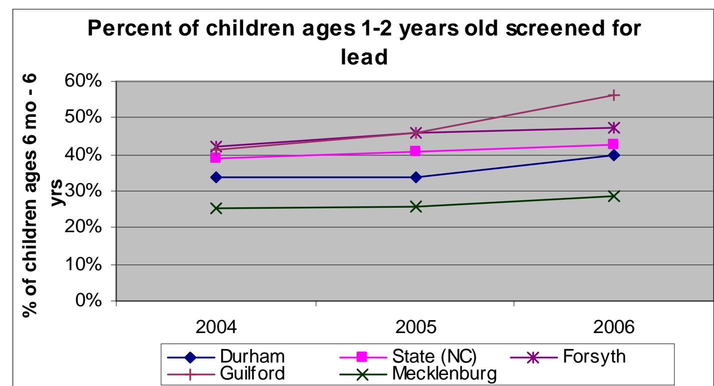
18-44: 18-44 years old
45+: Over 45 years old
< HS: High school education or less
College +: Some college education or more
<$50,000: Household income is less than $50,000
>$50,000: Household income is more than $50,000

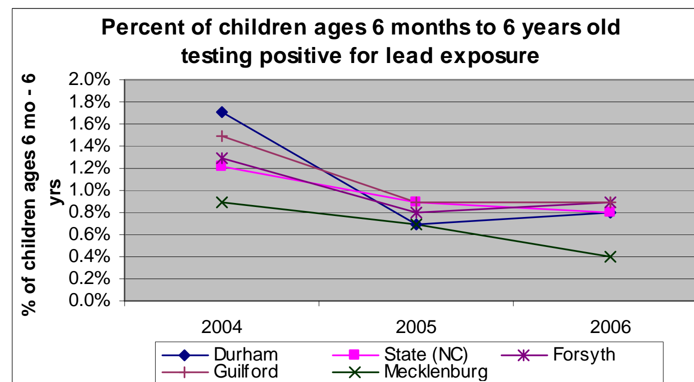
Lead

Durham's lead screening program targets children six months to six years of age. Children in this age group are most vulnerable to the harmful effects of lead as they absorb more of the lead into their developing body. Lead is most prevalent in buildings built before 1978, when lead paint was banned, but can also be found in other products such as pottery, dust and soil, plastic mini-blinds, and home remedies such as Azarcon. Lead poising is associated with delayed mental and physical development, slow muscle and bone development, reduced IQ, attention problems, poor motor skills, immune system problems and, in girls, delayed puberty.

A blood lead test is the only way to know for sure if children are exposed to lead. Over the past five years, the Durham County Health Department has been screening children through their Lead Education and Assessment Program (LEAP). LEAP employees 2.0 health educators to provide on-site lead screenings, raise awareness of the potential lead threats, and conduct outreach in high risk communities. All children receiving Medicaid are screened for lead at 12 and 24 months of age. In addition, children are screened in daycares, schools, during outreach events, in primary care settings, and in homes.







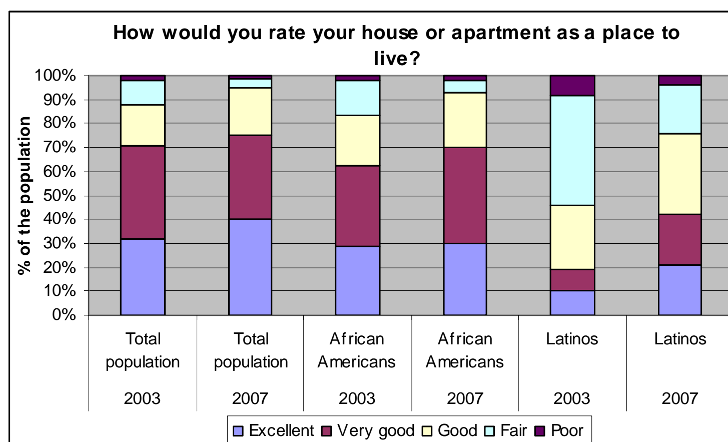
Data source: North Carolina Childhood Blood Lead Surveillance Data

According to the CDC, in 1978, there were 13.5 million children in the United States with elevated blood lead levels. By 2002, that number had dropped to 310,000 children. Over the past 12 years in North Carolina, there has been a dramatic 88% decrease in the prevalence of elevated lead exposure among children tested, from 7.0% in 1995 to 0.8% in 2006.

Repeated, long term exposure to lead can elevate blood lead levels. Therefore, in July 2007, the Durham County Health Department developed a plan to lower the threshold at which government intervenes when lead is found in the bloodstream of children. Children found with lead levels below the "action level" of 10 ug/dL (i.e. between 5 and 10 ug/dL) will receive in-home assessments by the LEAP team. The assessments will provide educational information and help identify potential lead sources to be eliminated. In 2006, there were 11 children in Durham with blood lead levels confirmed as being greater than 10 ug/dL. Of the 5,126 children between the ages of six months to six years of age screened in Durham, over 25% have blood lead levels greater than 5 ug/dL.

Housing quality

The Durham County Health Assessment survey asked Durham residents to rate their house or apartment as a place to live. In 2007, 40% said it was excellent and 35% said it was very good.



Data source: Durham County Health Assessment Survey

Discussion

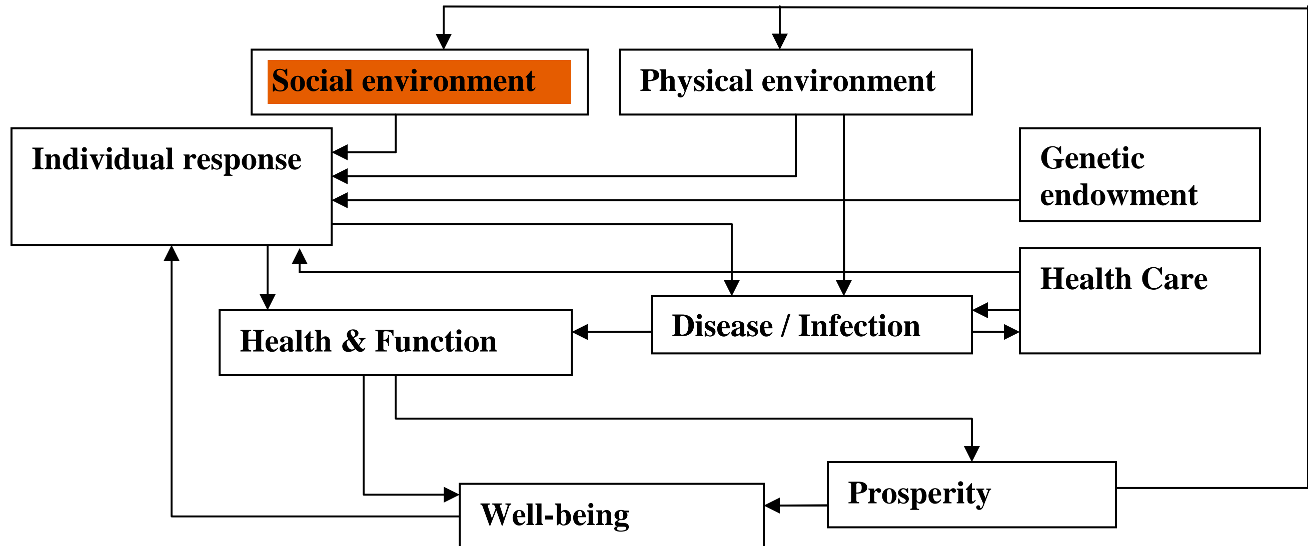
The physical environment plays an enormous role in the health of populations. Exposures to different materials have various long-term impacts on the human body. For example, long-term exposure to air pollutants such as ozone and particulate matter is associated with impaired fertility, birth defects, asthma, emphysema, lung cancer, and heart attacks. Polluted drinking water can spread harmful contaminants such as E.coli or lead, (http://www.epa.gov/safewater/dwh/index.html), and polluted waterways can affect the health of animals and plants that live in that water.

In addition to directly causing disease or illness, the physical environment has aesthetic and quality of life role that is important yet hard to measure. For example, concrete and asphalt create a "heat island" effect that raises ambient temperatures in the hot summer. Lining the streets with trees can abate noise and be pleasing to road users (in addition to helping convert carbon dioxide back to oxygen). Using public transportation decreases the amount of noise and pollution from commuters, but also has an impact on people's stress from their daily traffic-filled travel to work. A greenspace or park offers a place for people to by physically active and also enjoy nature.

Initiatives and Resources in Durham

- **Environment Workgroup** of Durham's City & County "Results-Based Accountability" initiative – a partnership of public sector and community efforts working towards measurable accomplishments in creating a healthy environment in Durham. www.durhamnc.gov/rba
- **Durham County Health Department's Lead program** – Health Educators and Nurses work together to screen children six months to six years old for lead, and treat any who are positive for lead exposure. Environmental Health staff investigate sources of lead in the community. www.durhamcountync.gov/departments/phth, 560-7600.
- **Ellerbee Creek Watershed Association** is a group of Durham residents dedicated to restoring Ellerbee Creek and making it an asset for the citizens of Durham. www.ellerbeecreek.org, 698-8161.
- **Durham Bike Co-op** is a member-drive, member-funded cooperative proposing an open community for bicyclists and bicycle culture in Durham. www.durhambikecoop.org.
- **Triangle Transit Authority** offers bus service, ride-share matching, and regional transit planning within the Triangle (Durham, Orange, and Wake Counties). www.ridetta.org, 485-RIDE.
- **Environmental Sustainability @ Duke** is a clearinghouse of news and information about environmental stewardship at Duke University. http://www.duke.edu/web/ESC/, 660-1434.
- **Durham City-County Planning Department** is involved in planning community growth, including protecting natural resources. http://www.durhamnc.gov/departments/planning/, 560-4137.
- The **Durham Environmental Affairs Board** of the Board of Commissioners tracks environmental conditions in the county from year to year. http://www.co.durham.nc.us/departments/bocc/Boards/Minutes/eab/index.html.

Social environment



Key Findings

Key findings in the domain of the social environment were:

- The great diversity of Durham is reflected in the fact that Durham became a "Majority-Minority" County in 2005 – when Durham was 48.4% Caucasian, 37.2% African-American, 11% (approximately) Latino, 4% Asian, 8.4% other and 2% multi-racial.
- According to the 2005 census, 16.8% of Durham residents over five years old spoke a language other than English when at home.
- Durham has a higher rate of "non-family households" than all the comparison counties and NC as a whole.
- The number of cases of child abuse that were confirmed by the Department of Social Services has dropped from approximately 23 per 1,000 children in 2000 to 7 per 1,000 children in 2006.
- After dropping each year since 1997, Durham's violent crime rate increased in 2006.
- In 2004–2005 there were 2,160 domestic violence hotline calls and 1,558 domestic violence clients in Durham County. 26% of the domestic violence clients were Caucasian, 46% were African-American, 20% were Latino, and 98% were women.
- Almost 46% of students in Durham's schools qualified for free or reduced price lunches in 2006, meaning that they live with families with low incomes.
- 72.5% of Durham's overall population feels safe walking in their neighborhood during the day (compared only 45% of Latinos) and 42% of people in Durham feel safe walking in their neighborhood during the night (compared with only 20% of Latinos).

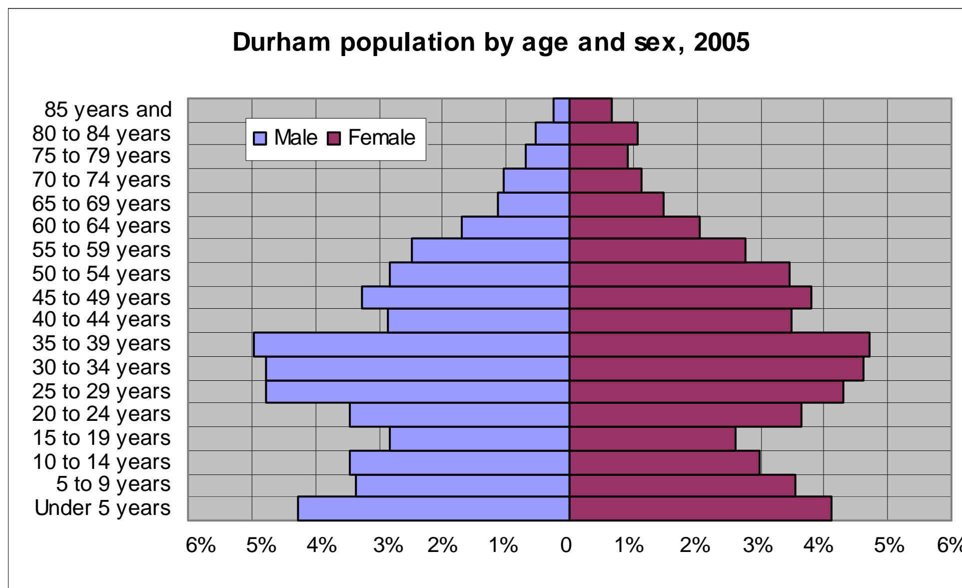
- The percentage of Caucasian students in Durham Public Middle Schools and High Schools who reported in 2007 that a parent or family member has talked with them about sex was less than for other students – and Caucasian students who have engaged in sexual activity reported lower rates of condom use than other students.

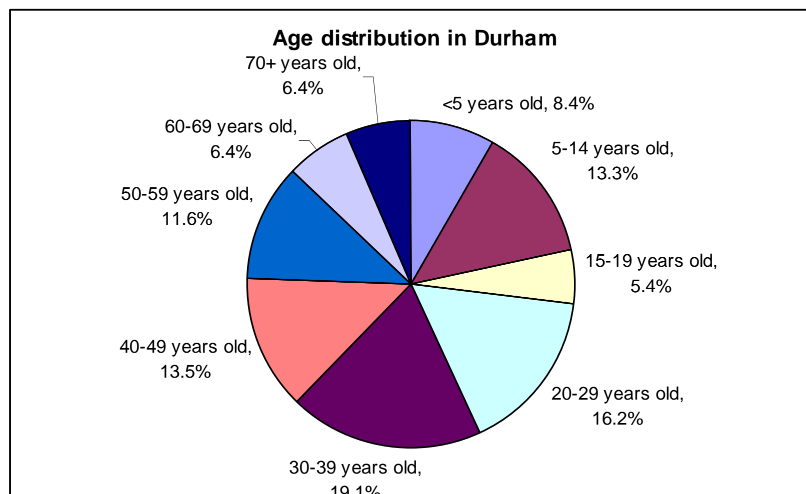
Demographics

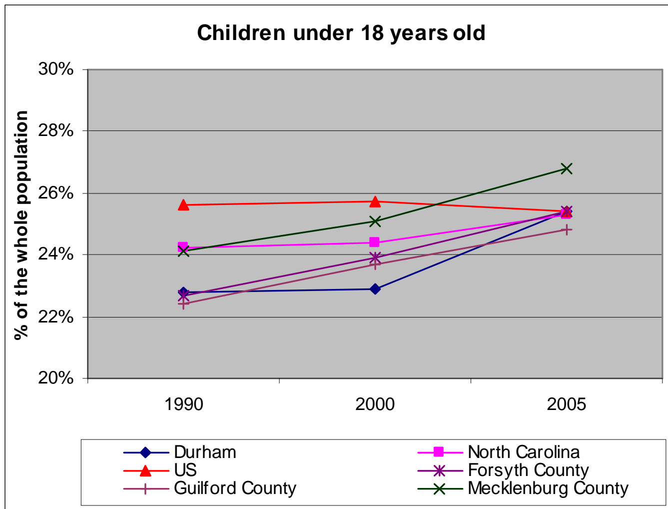
What do the social environments in Durham look like? One way to look at communities is through their basic demographics.

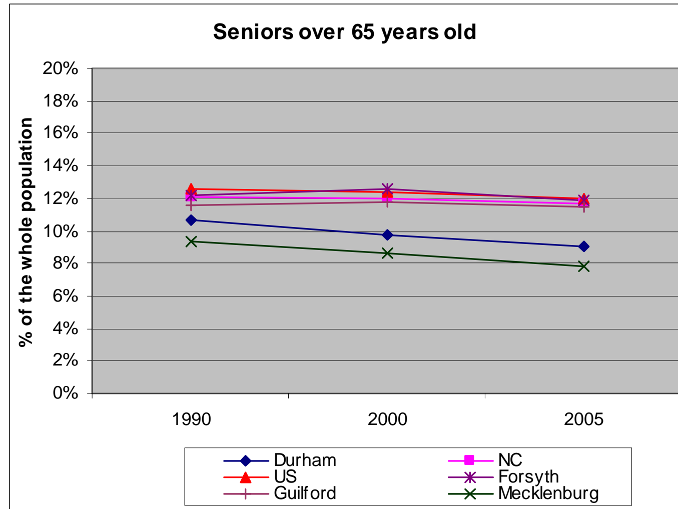
Age and sex

The Census shows that the largest age group in Durham for both men and women is 35-39 year olds. According to the 2005 Census, 25.4% of Durham is under 18 years old, and 9% are seniors over 65 years old.





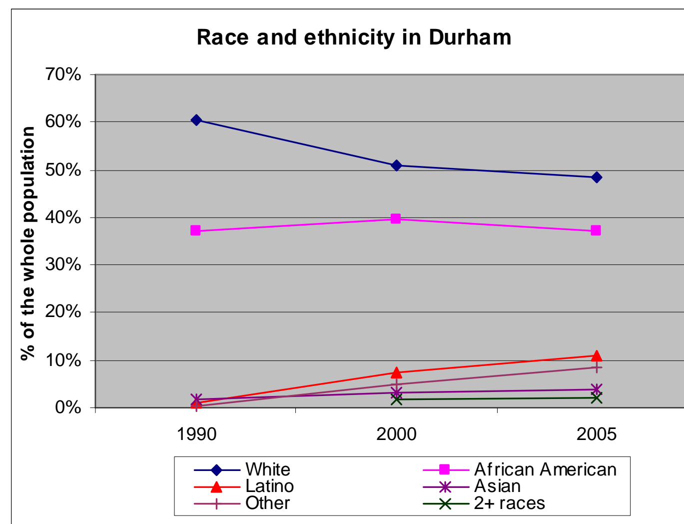




Data source: US Census, www.census.gov

Race / ethnicity

Durham is highly diverse racially and ethnically. In 2005, it became a "Majority-Minority" county, or one in which more than 50% of the county is considered "minority." That year, Durham was 48.4% Caucasian, 37.2% African American, 11% Latino (although this is based on a low sample number and may not be reliable), 4% Asian, 8.4% "other," and 2% multi-racial.



Data source: US Census, www.census.gov

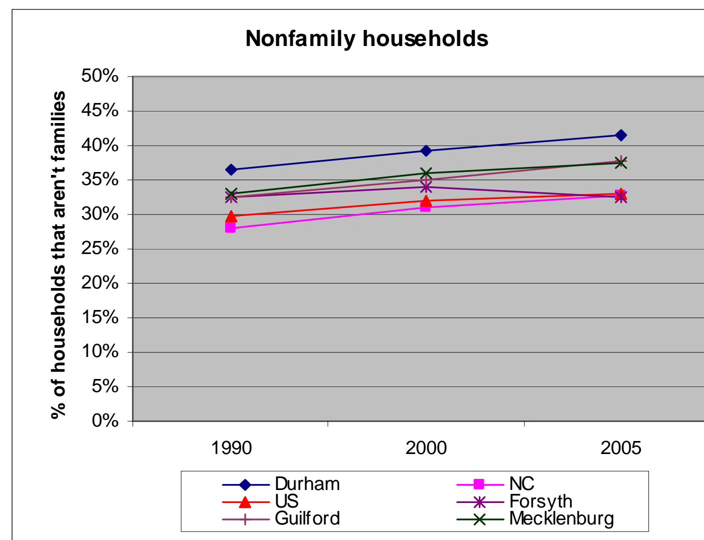
According to the 2005 Census projection, 16.8% of Durham County residents over the age of five spoke a language other than English at home; of these, 68% were Spanish speakers. In 2006, the Census found that 13.9% of Durham was foreign-born, of whom 79.7% are not naturalized citizens.

"Race relations" was a theme of the study of Lincoln Community Health Center's patient population.

"Many community members felt that members of these minority groups often have fewer resources available to them than others and can find themselves competing for those scarce resources. Many African Americans felt as if the neighborhoods, jobs, and other resources historically serving them were being used more and more by Hispanics. One community member said: 'Why don't they have their own doctors?' On the other hand, many Hispanics feel unwelcome by African-Americans and believe that they are targeted for crime and other negative feelings simply because they are Hispanic. 'My husband and others and I have come to the conclusion that many black people think that we come here to take the opportunities for jobs that they have,' an interviewee said… Most long-time Durham residents said the racial and ethnic composition of the county had changed, specifically noting the growth of the Hispanic presence in the county and their use of resources more traditionally utilized by African Americans… Both community members and service providers were divided. Many suggested that the groups in Durham 'get along fine,' citing increased intermarriage and interaction at schools, churches, and other locations. Many interviewees felt that tensions did exist and told of specific incidences of negative interactions and sentiments that occurred in the community" (pp 31-32).

Households

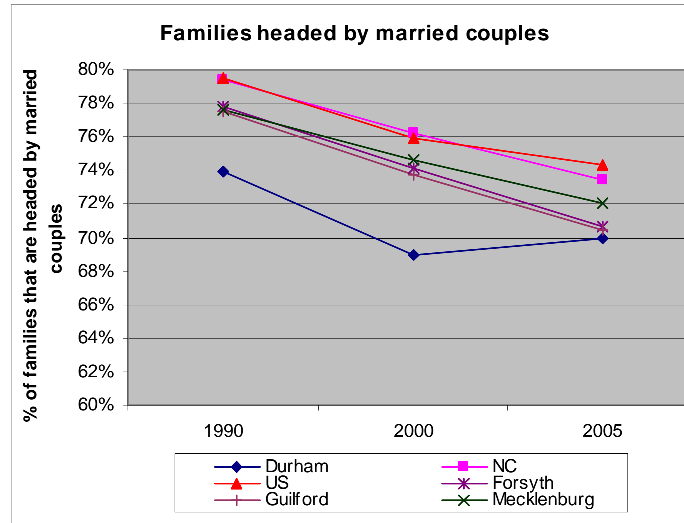
Not all people live with their families, which is why the Census counts households as well as families. In 2005, Durham had 99,196 households, with an average of 2.3 persons per household. Of these households, 28.3% had children, 40.8% were headed by married couples, 4% by male householders and 13.8% by female householders. 41.4% of households were not families, meaning that they were persons living alone or with non-relatives. 4.3% of Durham's households were headed by unmarried partners – 3.5% opposite sex couples and 0.8% same sex couples. The high rate of non-family households in Durham is likely due to, among other things, young people coming to the universities in Durham, and single people recruited to work in local industries.



Data source: US Census, www.census.gov

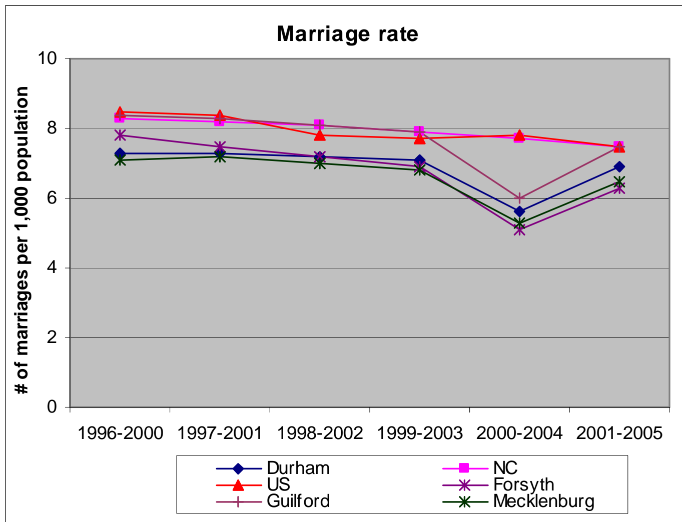
Families

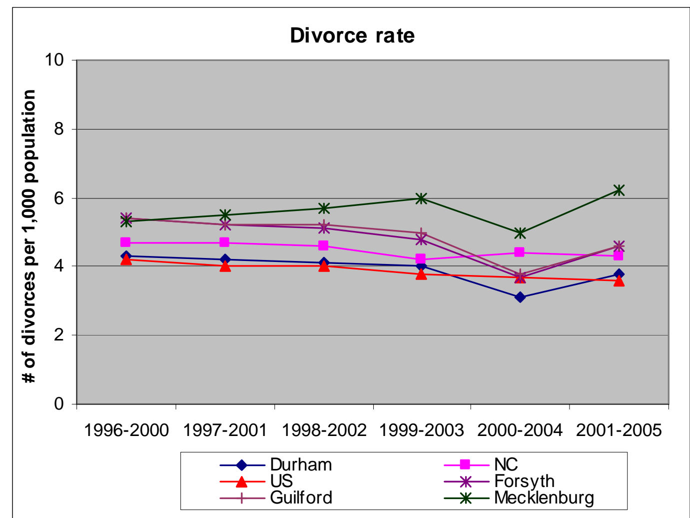
In 2005, according to the Census projection, Durham had over 58,000 families, with an average family size of 3.11 people. 70% of these families are married couples, 6.8% have a male householder with no wife present, and 23.5% have a female householder with no husband present.



Data source: US Census, www.census.gov

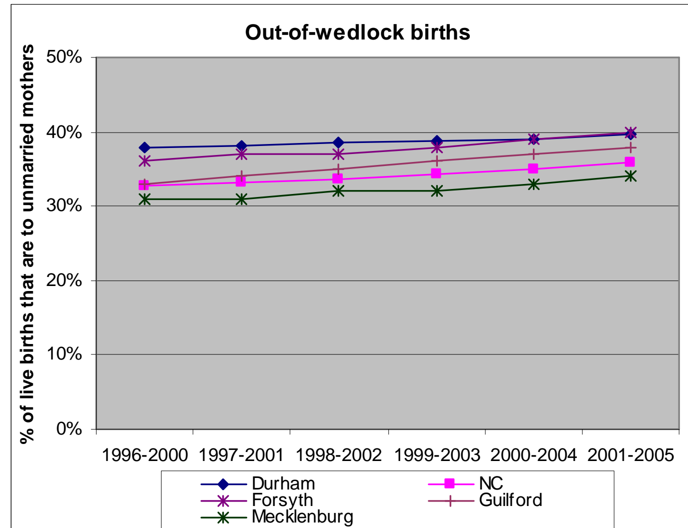
NC's vital statistics provides information on marriage and divorce rates. From 2001-2005, Durham's marriage rate was 6.9% (# of marriages per 1,000 people); the divorce rate was 3.8 (# of divorces per 1,000 people). During that time period, the number of births to women who weren't married ("out of wedlock births") was 39.7% of live births.





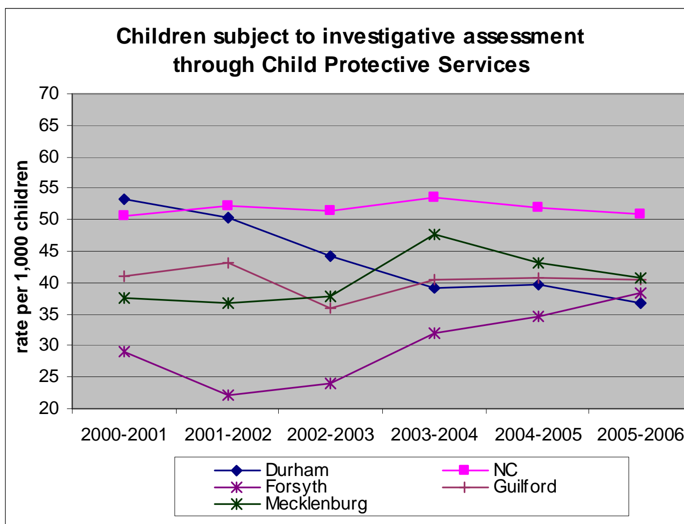
"Talking about it. Everything that has to do with health. My parents, they really don't talk about health stuff with me, so I think it'd be good to come up to me. I want to sit down with my parents and talk about stuff that they don't want to talk about."

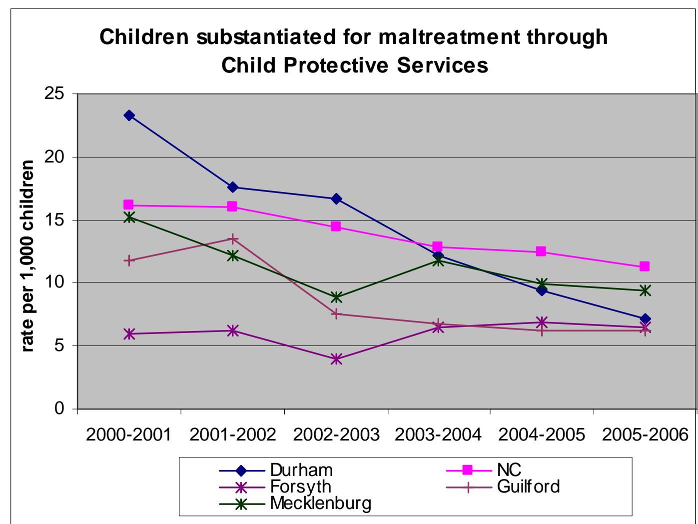
- Durham County resident

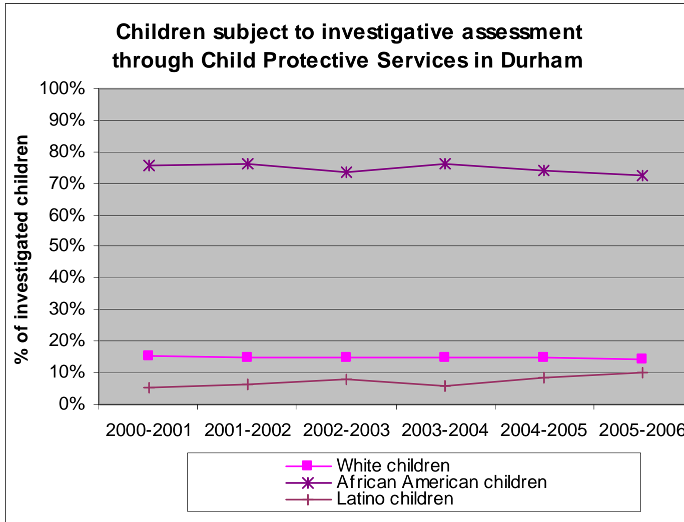


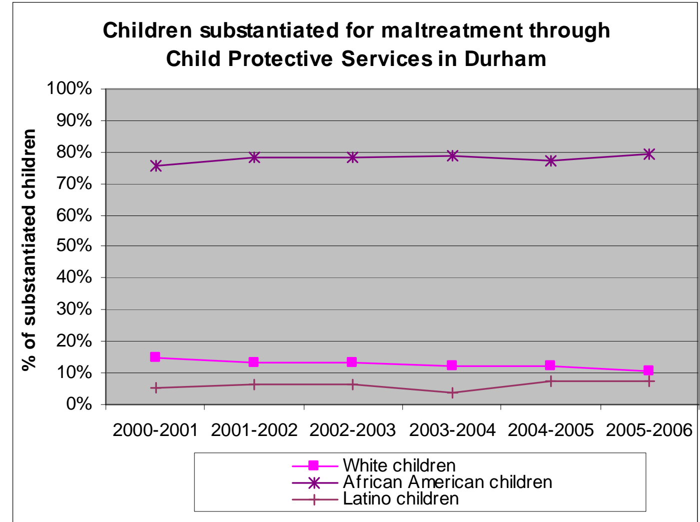
Data source: NC State Center for Health Statistics, Vital Statistics, http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm, National Center for Health Statistics, National Vital Statistics System, http://www.cdc.gov/nchs/nversuss.htm
** Note: The US marriage and divorce rates are for the years 2000, 2001, 2002, 2003, 2004, 2005, use for general reference only.*

Child Protective Services, a program of the Department of Social Services, intervenes with families when child maltreatment is suspected. In 2005-2006, they investigated 2,207 children, and substantiated that 428 were maltreated by their families. Of the maltreated children, 79.2% were African American, 10.5% Caucasian, and 7.2% Latino.









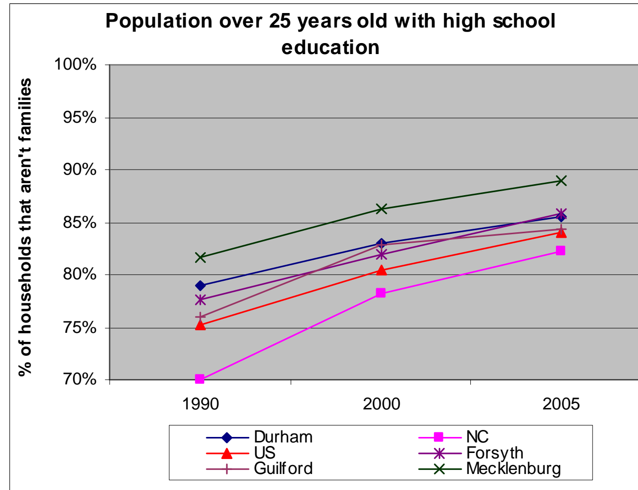
Data source: NC Dept of Social Services, Child Welfare Central Registry Data, http://www.dhhs.state.nc.us/dss/stats/cr.htm

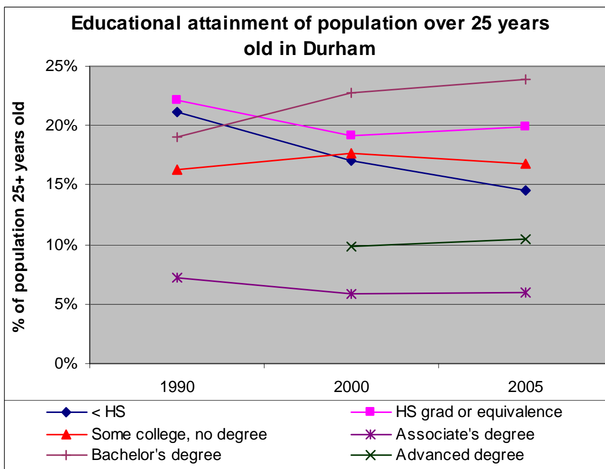
In 2007, 2% of those responding to the Durham County Health Assessment survey said that their household had problems that led people to threaten, hit or push in the past four weeks. In 2003, that figure was 4%. Extrapolating from census data, this suggests that approximately 1,160 families in Durham County have had problems in the past month that led to some form of violence. According to the NC Coalition Against Domestic Violence (www.nccadv.org), ten women in Durham have been murdered in domestic violence situations since 2003. In 2004-2005, there were 2,160 domestic violence hotline calls and 1,558 domestic violence clients from Durham. Of these 1,558, 26% were Caucasian, 46% African American, 20% Latino, and 98% women. Half were over the age of 45 years old, 22% 34-44 years old, 12% under the age of 25. According to the Durham Police Department, they investigated 1,935 domestic violence cases in 2004 and 1,858 in 2005, and there were children present in 9% of those cases (Substance Use and Abuse Durham County, 2007, www.healthydurham.org).

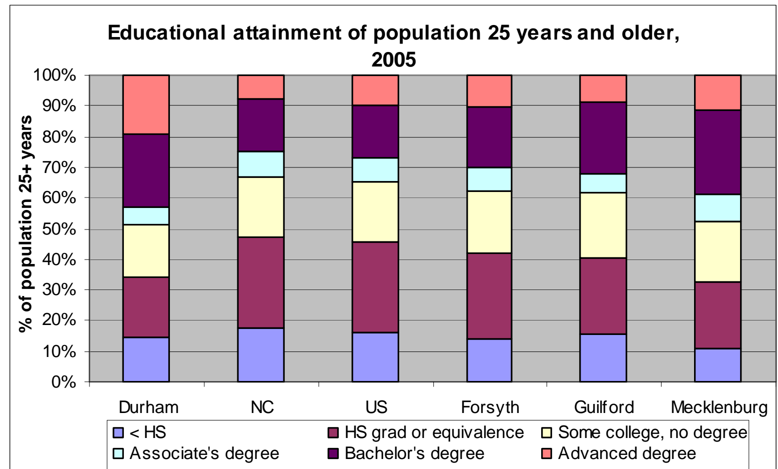
Education

Durham is a well-educated county, and places a value on education. 85.5% of Durham residents over 25 years old have at least a high school education; 23.9% have a Bachelor’s degree, and 19.1% have an advanced degree (Master’s, Doctorate, or professional).

> “The biggest barrier to employment is education. And all the tests, in most places, even for fast foods, you have to take it on a computer, so literacy is the biggest barrier to job employment and next to that is the criminal background.”
>
> *- Durham County resident*







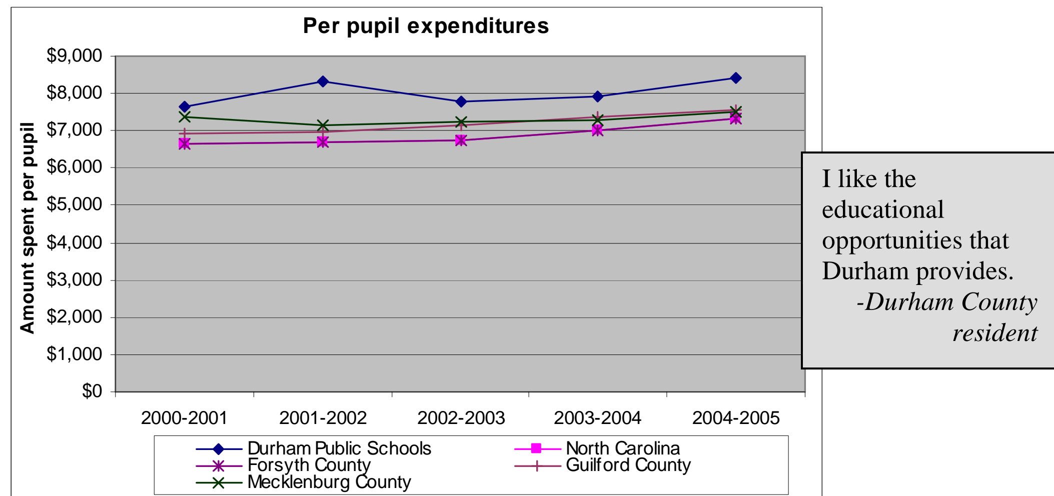
Data source: US Census, www.census.gov
** Note – "Advanced degree" includes masters' degrees, professional degrees, and doctorates*

It's fortunate to have such a high level of education, as the Census clearly shows the economic benefits to persons with higher levels of education.

Durham population 25 years and older	% living in poverty	Median earnings
< HS graduate	19.6%	$17,347
HS graduate or equivalency	11.5%	$25,351
Some college or associate's degree	8.3%	$28,873
Bachelor's degree	5.5%	$40,392
Graduate or professional degree	2.1%	$52,205

Durham Public Schools is the seventh largest school system in North Carolina, with almost 32,000 students and 2,300 teachers at its 46 schools. Of the student population, 54% are African American, 24.3% are Caucasian, and 15.7% are Latino. Almost 46% of students qualified for free or reduced lunches in 2006, meaning they live in families with low incomes (www.dpsnc.net).

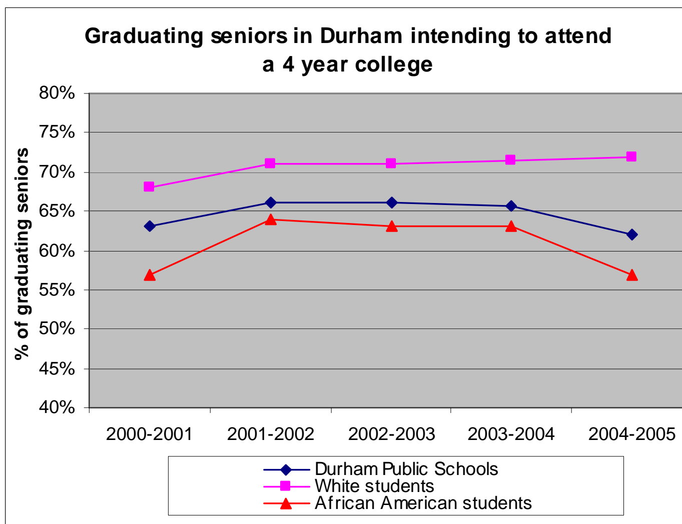
Durham County spends more per student than the North Carolina average, ranking 29th in the state (115 school systems) for financial commitment to public schools in 2004-2005, when the per pupil expenditure was $8,415.

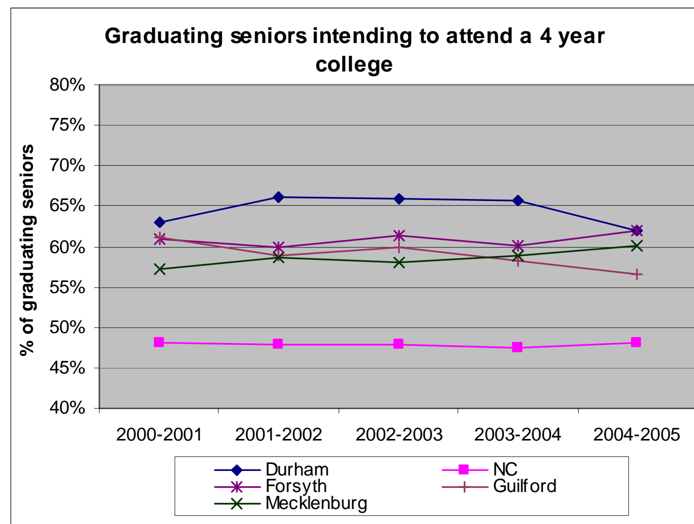


I like the educational opportunities that Durham provides.
-Durham County resident

Data source: NC Department of Public Instruction, http://www.ncpublicschools.org/fbs/resources/data/

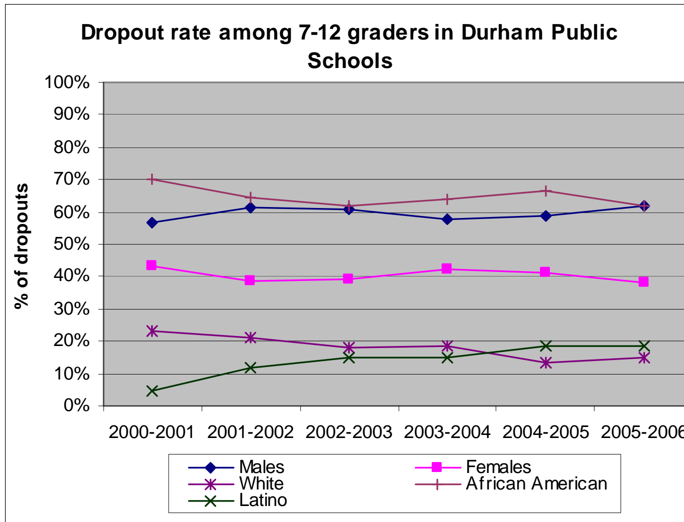
A large percentage (62%) of seniors at Durham Public Schools' high schools expect to pursue a four year degree, either in North Carolina or elsewhere, after they graduate, including 71.9% of Caucasian students and 56.8% of African American students.

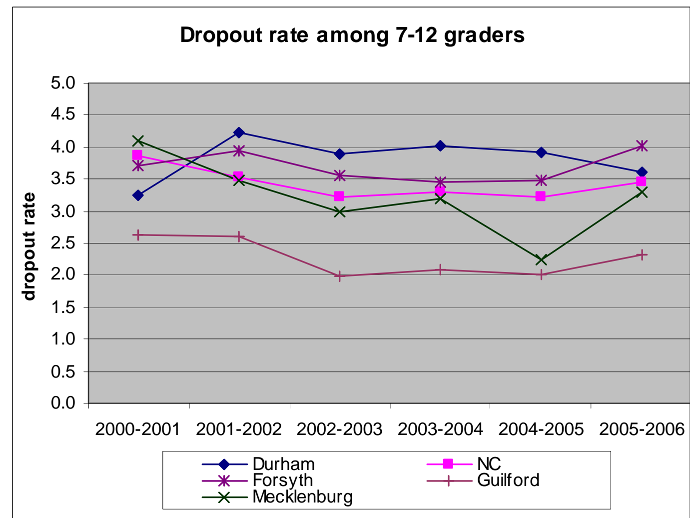




Data source: NC Department of Public Instruction, http://www.ncpublicschools.org/fbs/resources/data/

The dropout rate among 7-12 graders at Durham Public schools was 3.6%. Of dropouts, 61.7% were males, 62.1% African American, 18.7% Latinos, and 15.1% Caucasians.





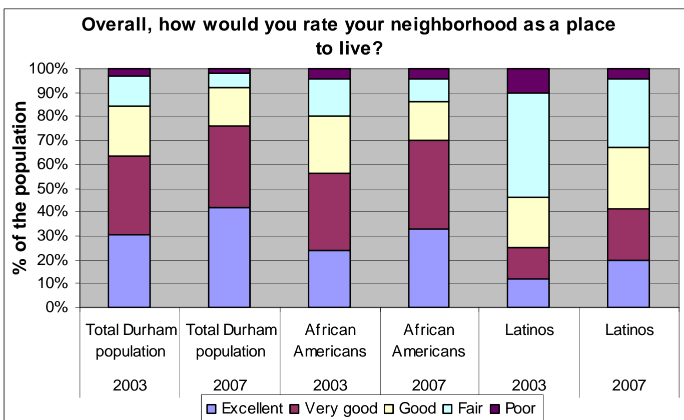
Data source: NC Department of Public Instruction, http://www.ncpublicschools.org/fbs/resources/data/

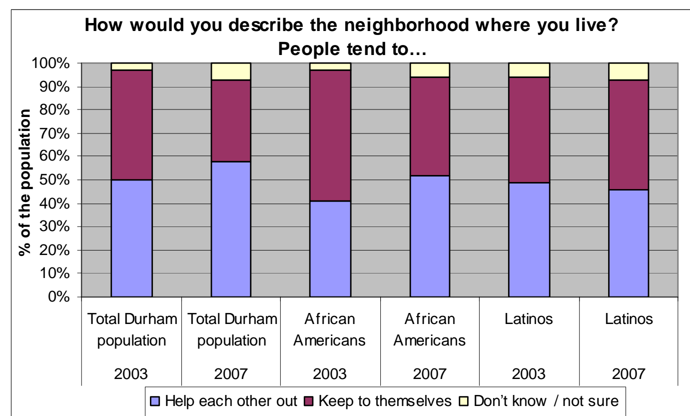
Education was also a main theme of the "action oriented community assessment" of Lincoln Community Health Center's patient population.

> "In comparison to health, employment, and other issues, education does not rank high in priority for most community members... Community members conveyed that it is hard to value an education when they spend the majority of their time working multiple jobs just to make enough money. Yet this presents a problem because without an education, job opportunities are limited and wages run low. There appears be a need to educate community members about various community resources. Low literacy levels and the inability to navigate the healthcare and school systems corroborate this idea of a lack of education within the community as a predominant issue" (p 29).

Neighborhoods

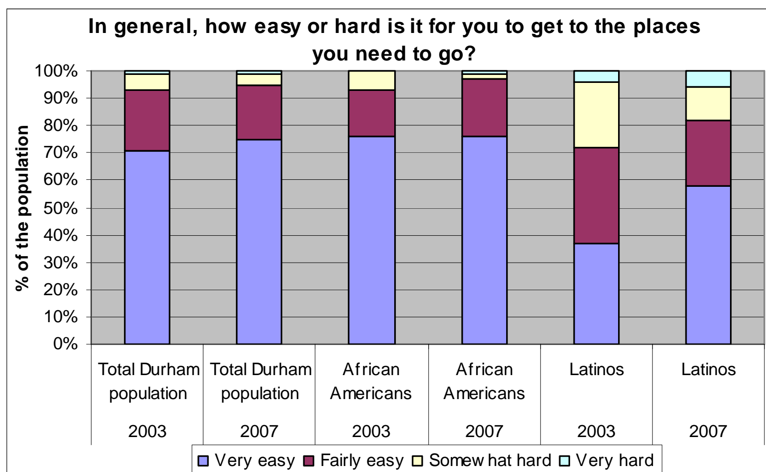
Durham is a county of neighborhoods. In 2006, the Durham Results-Based Accountability workgroup on neighborhoods counted 167 organized, active neighborhood associations (www.durhamnc.gov/rba). In 2007, 42% of Durham residents participating in the Durham County Health Assessment survey said that their neighborhood was an excellent place to live; 34% said it was "very good." 58% said that people in the neighborhood tend to help each other out.





Data source: Durham Health Assessment Survey

Transportation is a key aspect of neighborhoods and the social environment. In the Durham County Health Assessment survey, 75% said that it was “very easy” for them to get around.



Data source: Durham Health Assessment Survey

> I lived in a big city before I lived in Durham, and it was always really loud. Durham’s much quieter by comparison. I know more about the people around me than I did.
> *- Durham County resident*

Transportation was also a theme in the study of Lincoln Community Health Center’s patient population.

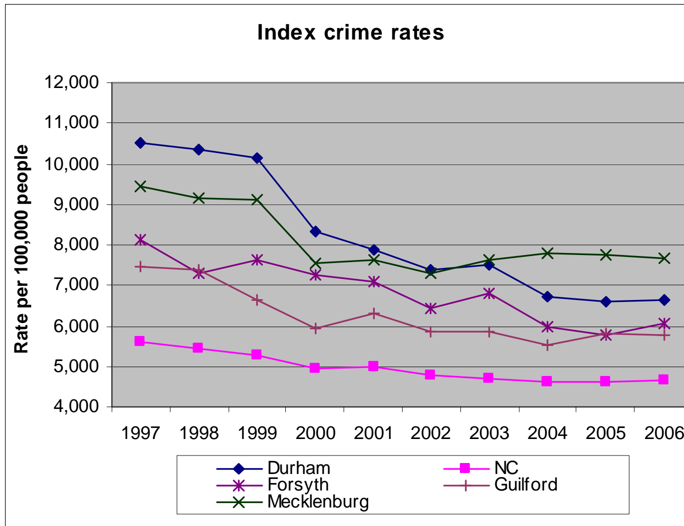
> “Community members almost unanimously reported that transportation was a huge issue in their communities, while service providers did not emphasize it nearly as much. Both groups praised Durham’s public transportation as a valuable resource for community members without other options. Limited incomes prevent many in the community from buying cars, leaving public transportation and walking as the only alternatives. The issue of safety arose with both these methods of transportation, with many community members citing worries of being shot in crossfire while walking or being robbed on the buses, in the main bus terminal, or at a poorly-lit bus stop. In addition, many felt that buses ran too infrequently and that bus stops were inconveniently located, limiting their options for employment and ability to reach other locations. As one community member put it, ‘Most people don’t have transportation to the grocery store’” (p 34).

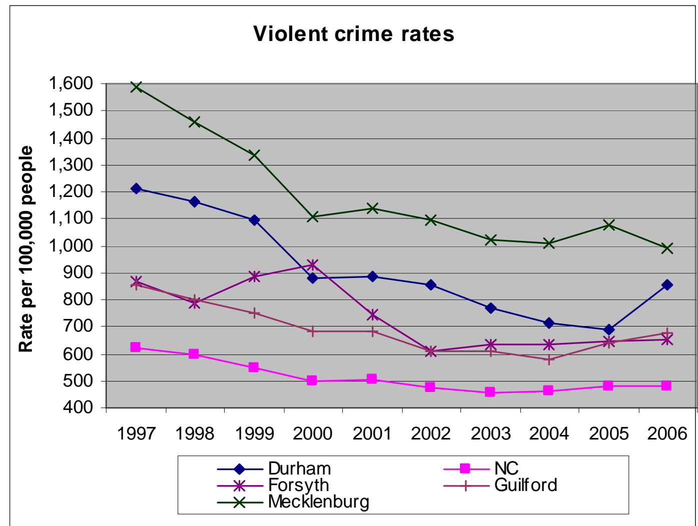
Crime

Crime was also a main theme in the 2006-2007 study of Lincoln Community Health Center’s patient population.

> “Over one half of community members interviewed agreed that crime and safety were major problems in their community. Our interviewees told us of the many ways in which crime and fear for their safety affect their everyday lives. Gang violence, racially motivated crime, transportation safety, and feeling concerned for the safety of their children were main points of concern. A few felt that owning a gun was necessary for peace of mind. Some were scared to take the bus. Others thought it too unsafe to walk to the grocery store or even leave their houses. Still others felt they could not escape it, even inside their own homes and neighborhoods. ‘We [go] back to crime … everything goes back to crime…’ one community member said” (p 26).

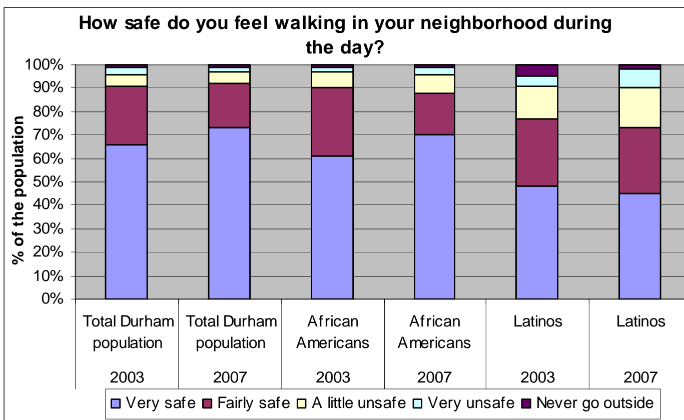
The North Carolina Uniform Crime Reporting system gives data on crimes in each county. In 2006, the index crime rate (total number of murders, rapes, robberies, aggravated assaults, burglaries, larcenies and motor vehicle thefts) was 6,640.5 per 100,000 people. That same year, the violent crime rate (murder, rape, robbery, and aggravated assault) rose slightly to 855.4 per 100,000 people. Both rates in Durham have fallen significantly over the past ten years.

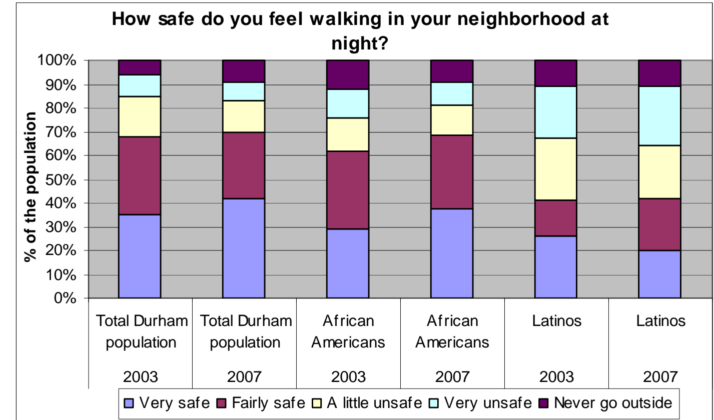


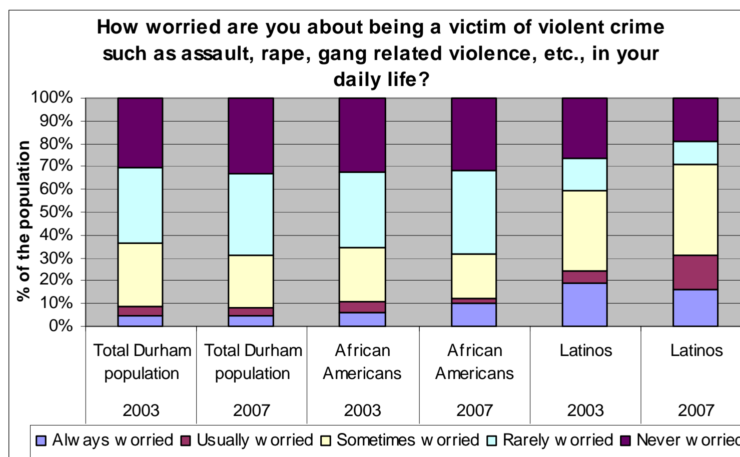


Data source: NC Department of Justice, SBI, http://sbi2.jus.state.nc.us/crp/public/Default.htm

In the Durham County Health Assessment survey, 73% of Durham residents said they felt "very safe" walking in their neighborhood during the day, and 19% felt "fairly safe." Only 42% felt "very safe" at night, with 28% feeling "fairly safe." 33% said they were "never worried" about being a victim of violent crime, and 36% said they were "rarely worried."







Data source: Durham County Health Assessment survey

"We're right in the middle of gang violence. If you've ever seen 'Welcome to Durham' we're in it."

"A lot of gang members. Not on my street, but on the next street over. It's a whole bunch of gang members over there. They shoot guns, and there's little kids out there, and that's bad."

-Durham County residents

"I think the crime issue is overblown by the media."
"Durham has a bad reputation."
"I think it's safer here than anywhere else."
"We have a bad reputation for crime and poor schools, which is undeserved."

-Durham County residents

According to the Durham County Health Assessment survey, 20% of Durham County residents keep firearms in their homes. Of those 20%, 33% say the firearms are for sport / hunting, and 44% say they are for protection reasons; 20% of those with firearms keep them unlocked and loaded. These figures are largely unchanged from 2003, except that in 2003 only 29% of firearms owners kept them in their home for protection reasons.

Latinos are much less likely to have firearms in their homes – only 4% do, and of them, 75% say they are for home protection and 20% leave them loaded and unlocked. Of African Americans, 12% have firearms in their homes. They are mostly (76%) for home protection.

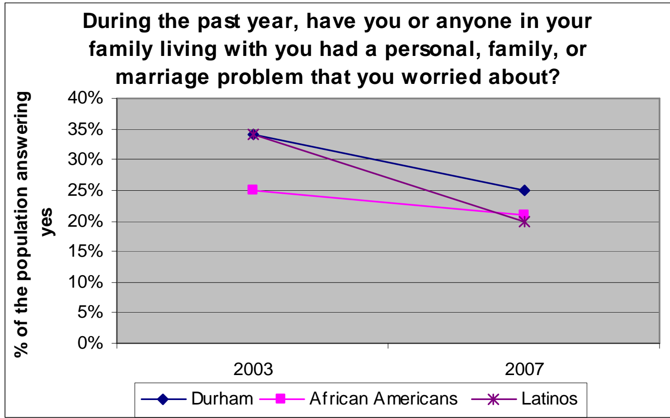
In 2004, the NC BRFSS also asked about the presence of firearms in the house. Durham had a low rate of firearms ownership, at 22.1%. Of these, 29.2% (n=23) people said their firearms were loaded, and of those, twelve people also kept their firearms unlocked.

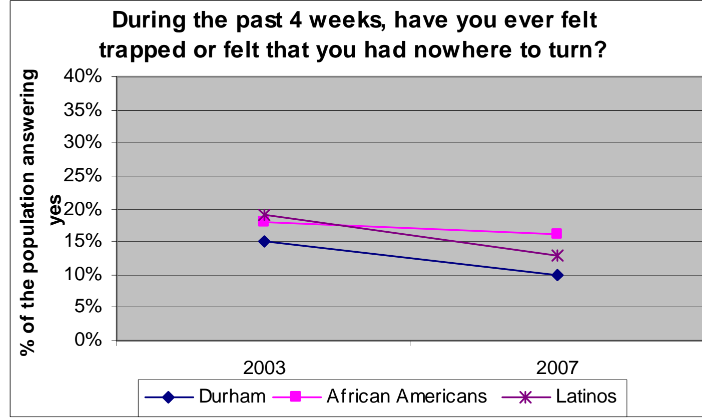
Population that keeps firearms in their home	
Durham	22.1%
NC	40.9%
Forsyth	35.2%
Guilford	35.6%
Mecklenburg	25.4%

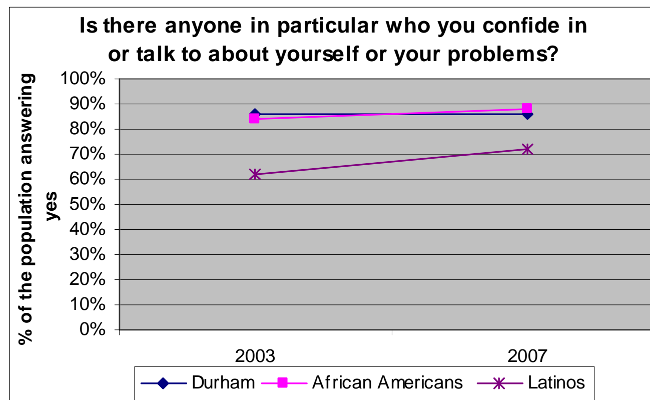
Data source: NC Behavioral Risk Factor Surveillance System (www.schs.state.nc.us/SCHS/brfss)

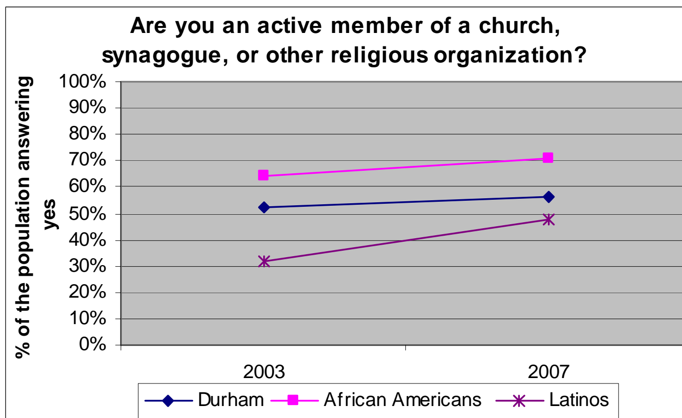
Social support

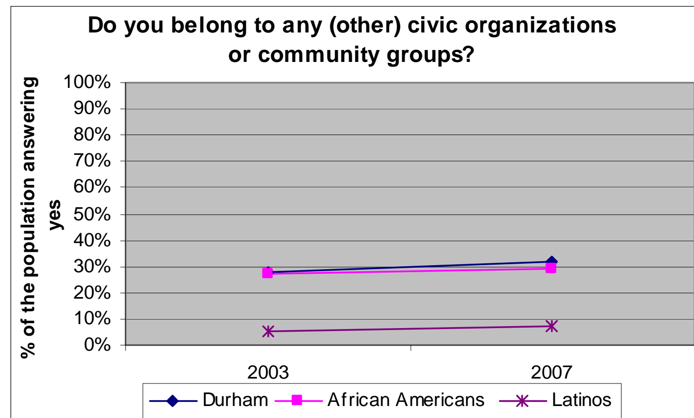
Social support can be critical to helping people maintain good health. For example, the Durham County Health Assessment survey found that people who attend church have higher mental health scores on the aforementioned mental health scale (MCS) than do those who don't attend church. According to the questions about social support in this year's survey, Durham residents have better indicators of social support than in 2003: 26% were worried about a personal problem of theirs or their family's in the past year; 10% said they felt trapped and had nowhere to turn in the past month; 86% have someone to confide their problems in; 56% are members of a religious organization and 32% are engaged in a civic or community group.

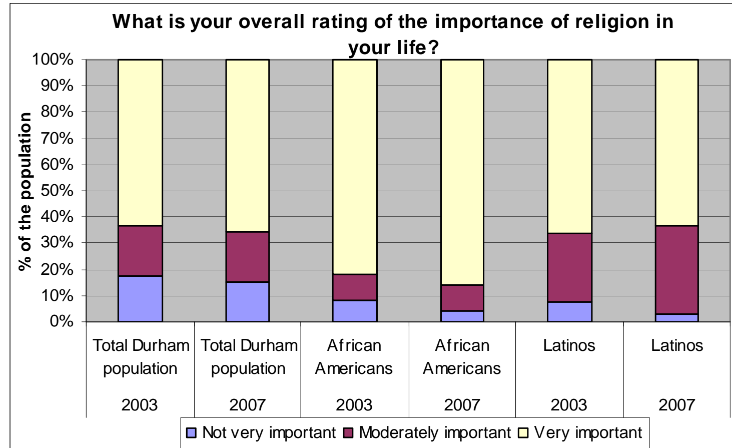

During the past year, have you or anyone in your family living with you had a personal, family, or marriage problem that you worried about?
% of the population answering yes
40%
35%
30%
25%
20%
15%
10%
5%
0%
2003
2007
Durham
African Americans
Latinos


During the past 4 weeks, have you ever felt trapped or felt that you had nowhere to turn?
% of the population answering yes
40%
35%
30%
25%
20%
15%
10%
5%
0%
2003
2007
Durham
African Americans
Latinos


Is there anyone in particular who you confide in or talk to about yourself or your problems?
% of the population answering yes
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2003
2007
Durham
African Americans
Latinos


Are you an active member of a church, synagogue, or other religious organization?
% of the population answering yes
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2003
2007
Durham
African Americans
Latinos

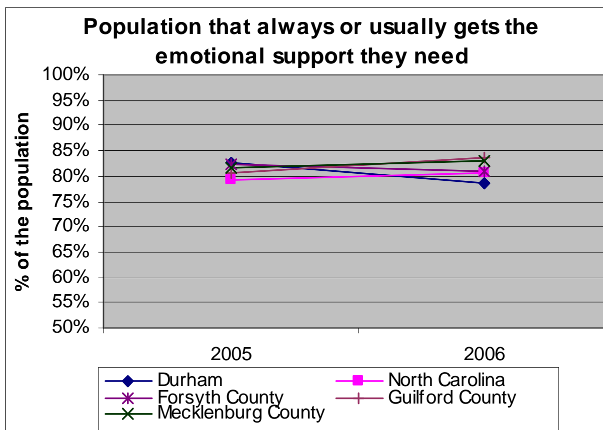

Do you belong to any (other) civic organizations or community groups?
% of the population answering yes
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2003
2007
Durham
African Americans
Latinos

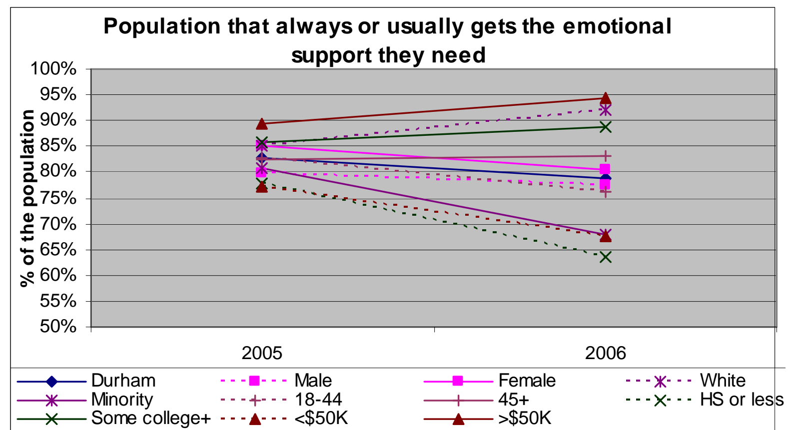


Data source: Durham County Health Assessment survey

> "You get somebody that people trust. Especially black women, we trust that person that does our hair."
> *- Durham County resident*

The BRFSS also asked about social support, finding that in 2006, 78.7% of Durham said that they "always" or "usually" get the emotional support they need.





Data source: NC Behavioral Risk Factor Surveillance System (www.schs.state.nc.us/SCHS/brfss)

Schools

The Youth Risk Behavior Survey of students in Durham Public Schools found some preliminary data about the social environments of schools.[1]

- Girls in Middle Schools were much more likely to have been taught about sexual abstinence than boys in Middle Schools.
- Females in Middle Schools generally reported higher school grades and lower proclivity to violent behavior or carrying weapons than boys in Middle Schools. They did report a slightly higher instance of drinking in the past 30 days (20.4%

[1] YRBS results presented here are preliminary. The final Report on the 2007 YRBS in Durham Public Schools will be available in December 2007.

vs. 16.9%) than boys in Middle Schools

- Female students in High Schools generally reported higher levels of being harassed, bullied, or teased at school as male students in High Schools. More than twice as many girls as boys reported feelings of depression and thoughts of suicide.
- African Americans in Middle Schools reported fewer incidences of being harassed or bullied at school and lower rates of having used cocaine powder or crack cocaine than other students in Middle Schools (2.2% vs. 6.1%). These same students also reported higher instances of having been taught about sexual abstinence and the dangers of HIV, AIDS, and other STDs.
- African American students in High Schools also reported higher instances of having spoken with a parent or adult family member about sex. Among these students who are sexually active, a higher percentage reported using condoms than other students who are sexually active.
- African Americans in Middle Schools reported fewer cases of being offered drugs at school. However, African Americans in High Schools reported fewer cases of being offered drugs at school than other students in High Schools (in Durham Public Schools).
- Boys in Middle Schools reported much higher levels of physical violence or being victims of vandalism, and slightly higher smoking rates than females in Middle Schools. Also, boys in High Schools reported much higher levels of physical violence and carrying weapons, higher levels of sexual activity, higher levels of marijuana use, and lower levels having talked with a parent or adult family member about sex.
- Latino students in both Middle and High Schools reported fewer incidences of getting into fights.
- 37.7% of Caucasian students in Middle Schools reporting having been harassed of bullied at school in the past 12 months. This compares to 25.6% of other students in Middle Schools.
- While fewer Caucasian students in High Schools were sexually active, among those who are condom use was lower than that found among other students in High Schools. Additionally, a lower than average number of Caucasian students in High Schools said a parent or adult family member had spoken to them about sex.

Discussion

What do these factors have to do with health? The authors of the model of health determinants on which this assessment is based started with a simpler model: health and healthcare. As they delved deeper into a more complex depiction of the influences on a population's health, they expanded it to include individual choice, or behavior. They then found that people's individual choices, and indeed perhaps even biological stamina, are influenced by their social environment. Choices, such as smoking, can be socially conditioned. The "psychological dynamics of status and class" have both powerful and subtle effects (p 50). They note,

> "Moreover, the gradients in mortality and morbidity across socio-economic classes appear to be relatively stable over long periods of time, even though the principal causes of death have changed

> considerably. *This implies that there are underlying factors that influence susceptibility to a whole range of diseases*. They are general rather than specific risk factors. Whatever is going around, people in lower social positions tend to get more of it, and to die earlier – even after adjustment for the effects of specific individual or environmental hazards (Marmot, Shipley, and Rose, 1984)" (p 46) (emphasis theirs).

For this reason, things like race, education, family structure and function, neighborhood quality, and social support are included in a county health assessment. Throughout the assessment, the reader will note racial and ethnic differences in disease rates and other indicators. The same is true for levels of education and income. As researchers and health practitioners try to solve long-standing problems such as infant mortality, they find that despite adequate healthcare, nutrition, etc, it may be something as vague and hard to quantify as stress that is highly associated with the outcome.

Durham comes through in this health assessment as a place of good social environments, with a high number of young, well-educated, professional people, a highly diverse racial and ethnic composition, decreasing crime, highly engaged neighborhoods, and strong social support among its residents. However, income and status disparities exist in Durham, and many have not been able to fully participate in the economic expansion that Durham has enjoyed (largely because of its focus on the high technology and knowledge economy). This has lead many to comment that there are truly "Two Durhams" – one of wealth, status, and education, and the other struggling to maintain their livelihoods and health (for more on this, see the "Prosperity" chapter of this assessment).

Initiatives and Resources in Durham

Seniors and children

- Children's Workgroup of Durham's City & County "**Results-Based Accountability**" initiative – a partnership of public sector and community efforts working towards measurable accomplishments in helping children to be ready for a succeed in school. www.durhamnc.gov/rba
- **Durham's Partnership for Children** works to ensure all children arrive at school healthy and ready to succeed, through administering child development programs for children ages birth to five years old. www.dpfc.net, 403-6960.
- **Durham's Council for Senior Citizens** promotes the highest level of well-being for older adults, including social and senior center services, nutrition and adult day health services. www.councilseniorcitizens.org, 688-8247.

Race / ethnicity groups

- **El Centro Hispano** is a community based organization dedicated to strengthening the Latino community and improving the quality of life of Latino residents in Durham. www.elcentronc.org, 687-4635.

Domestic / family violence prevention and intervention

- Durham **Department of Social Services** – administers programs for eligible low-income families, such as food stamps, Medicaid, temporary or emergency financial assistance, and child care. www.durhamcountync.gov/departments/dssv/, 560-8000.

- The **Durham Crisis Response Center** works with the community to end domestic and sexual violence through advocacy, education, support and prevention. www.durhamcrisisresponse.org, 403-9425.
- The **NC Coalition Against Domestic Violence** (headquartered in Durham) seeks to create social change through the elimination of the institutional, cultural, and individual oppressions that contribute to domestic violence. www.nccadv.org, 956-9124.

Education

- **Durham Public Schools** is the public school system for Durham County. www.dpsnc.net, 560-2000.
- **Durham Technical Community College** provide postsecondary education that prepares students for careers in vocational and technical fields, the first two years of a baccalaureate degree to prepare students for professional careers, basic skills and general education programs that enable students to live productive lives, and skills development courses that meet workforce training needs of the residents and employers of Durham and Orange counties. www.durhamtech.edu, 686-3300.
- The **Durham Literacy Center** (DLC) works to assist Durham County adults achieve personal goals and experience positive life change through increased literacy, including computer literacy and English as a Second Language. www.durhamliteracy.org, 489-8383.
- **North Carolina Central University** is a historically black university in Durham, with bachelors' degrees in 100 fields and graduate degrees in 40 disciplines. www.nccu.edu, 530-6100.
- **Duke University** is a large research university located in Durham, with nine schools, including Duke Medical School. www.duke.edu, 684-8411.

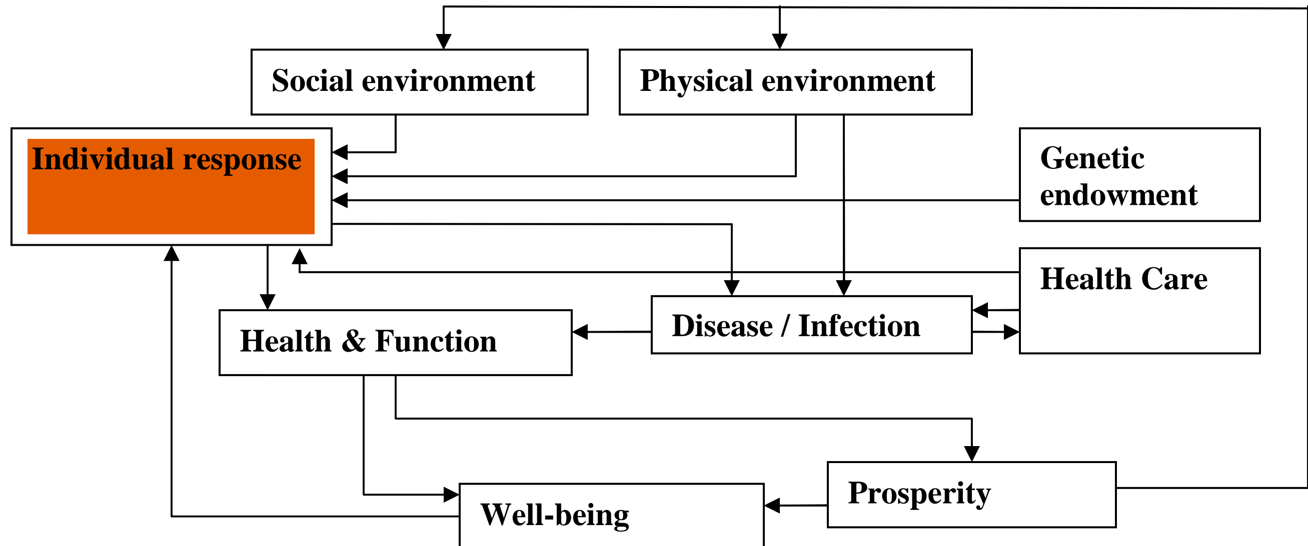
Crime and safety

- Safety Workgroup of Durham's City & County "**Results-Based Accountability**" initiative – a partnership of public sector and community efforts working towards measurable accomplishments in ensuring that all residents are safe in Durham. www.durhamnc.gov/rba
- **Durham's Partners Against Crime** program promotes collaboration among police officers, Durham residents, and city and county government officials to find sustainable solutions to community crime problems and quality of life issues. http://www.durhampolice.com/pac/, 560-4322.

Neighborhoods

- Neighborhoods Workgroup of Durham's City & County "**Results-Based Accountability**" initiative – a partnership of public sector and community efforts working towards measurable accomplishments towards all Durham citizens enjoying sustainable thriving neighborhoods with efficient and well-maintained infrastructure. www.durhamnc.gov/rba
- **Durham's Inter-Neighborhood Council** works to increase the influence of neighborhoods by speaking in a unified voice on issues on which the membership reaches consensus. www.durhaminc.org.

Individual behavior



Key Findings

Main findings in the domain of individual behavior are:

- The numbers of smokers in all population groups continues to decline (from 17.5% in 2003 to 14% in 2007).
- The people of Durham show strong support for additional taxes on cigarettes and prevention programs - with 48.7% saying they would support an additional tax of $1.00 or more on a packet of cigarettes if the funds went to smoking prevention and cessation programs.
- 78% of residents of Durham County surveyed stated that they believed that they would increase their physical activity if their community had more accessible sidewalks or trails for walking or bicycling.
- The number of women over 40 in Durham County who have had a mammogram in the past two years increased from 80% to 88% between 2004 and 2006. This is the best rate among all the comparison counties.
- The number of people in Durham County who have been screened for colorectal cancer increased from 58% to 74% from 2004 to 2006.
- 65% Durham residents surveyed are overweight or obese.
- In 2006, 27% of the children (2 – 4 years old) enrolled in the *Women, Infants, Children Program* (WIC) in Durham County were overweight. The Durham rate has increased every year since 2002 (when the rate was 10%) and is also much higher than the 2006 rate of 15% for North Carolina overall.
- In 2005, 27.5% of the Durham population consumed at least 5 fruits and vegetables daily compared with 22.5% for NC overall. The rates are lowest for those who did

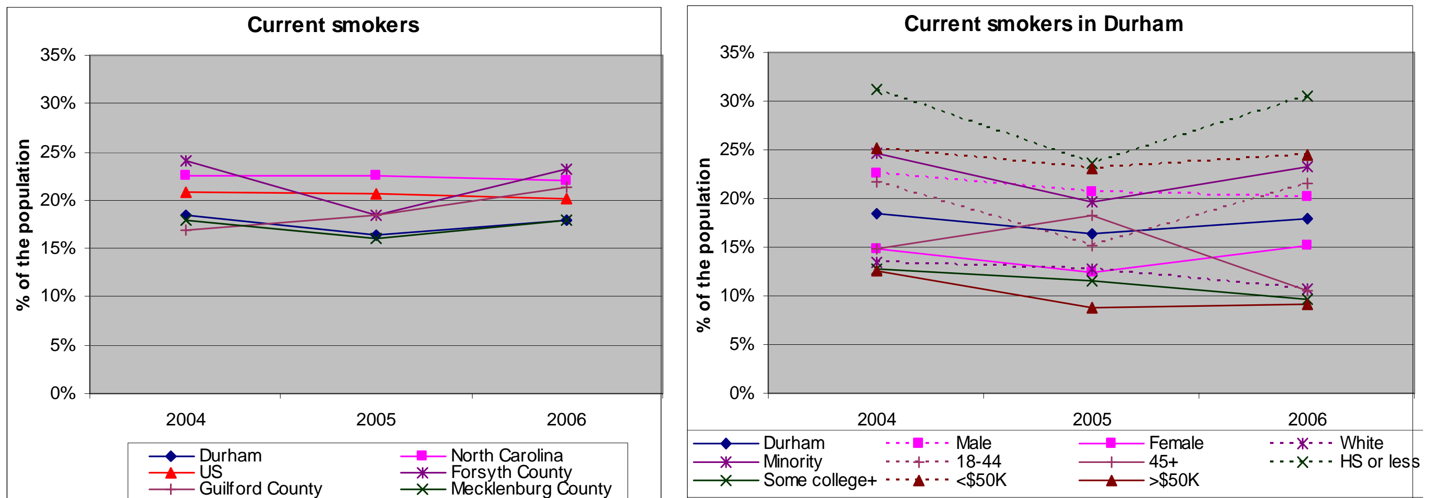
not attend college, minorities, males, and people in households earning less than $50,000 a year.

- Only 36.3% of Durham County residents meet national recommendations for physical activity compared with 42.1% statewide. Rates are worse for those who did not attend college, minorities, and people in households earning less than $50,000 a year.
- The rate of Latina teen pregnancies continues to be high (178 per 1,000 females aged 15-17 compared with 48 per 1,000 for the rest of Durham).

Substance use

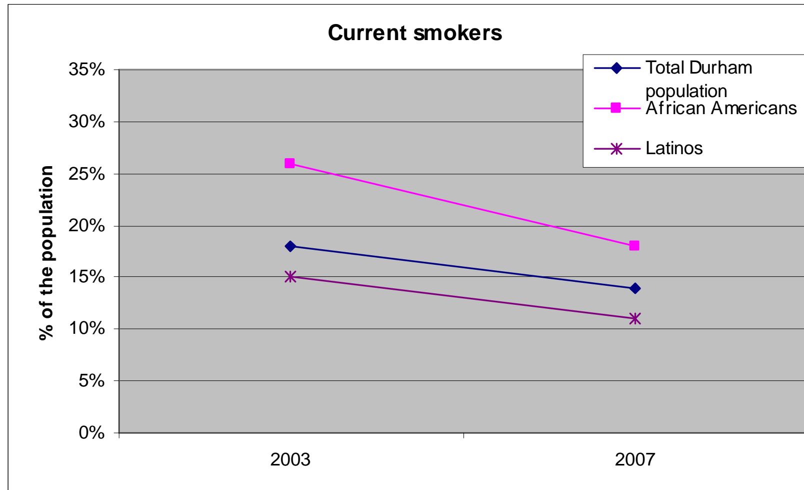
Tobacco

In 2006, the NC Behavioral Risk Factor Surveillance System (BRFSS) revealed that 18% of people in Durham County are current smokers. The Durham County Health Assessment survey found that 14% of the County smoke cigarettes.[1]



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

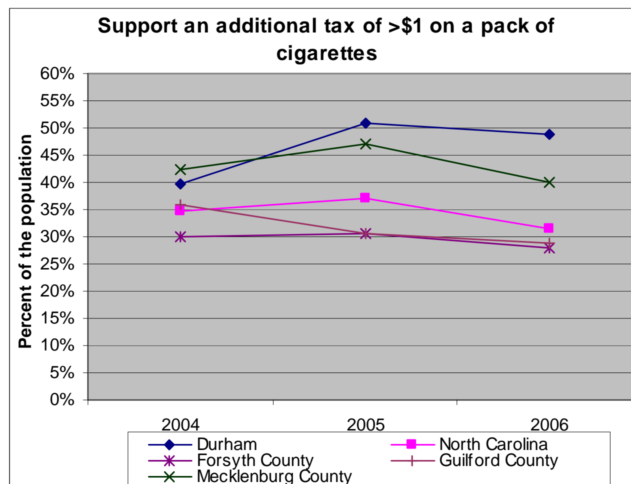
[1] Smoking raises a person's risk for several serious chronic diseases, such as many types of cancer (lung, mouth, throat, bladder, kidney, stomach, and others). It is also associated with emphysema and bronchial diseases. Smokers are twice as likely to die from heart attacks as non-smokers. Altogether, the CDC estimates that smoking can shorten a person's life by more than 13 years (American Cancer Society, www.cancer.org).



Data source: Durham County Health Assessment survey

Please note that on all graphs, these indications mean:	
18-44: 18-44 years old	College +: Some college education or more
45+: Over 45 years old	<$50,000: Household income is less than $50,000
< HS: High school education or less	>$50,000: Household income is more than $50,000

Durham shows a great deal of support for additional taxes on cigarettes, with 48.7% of the county saying they would support an additional tax of over $1.00 on a pack of cigarettes, if the funds went to prevention and quitting programs.



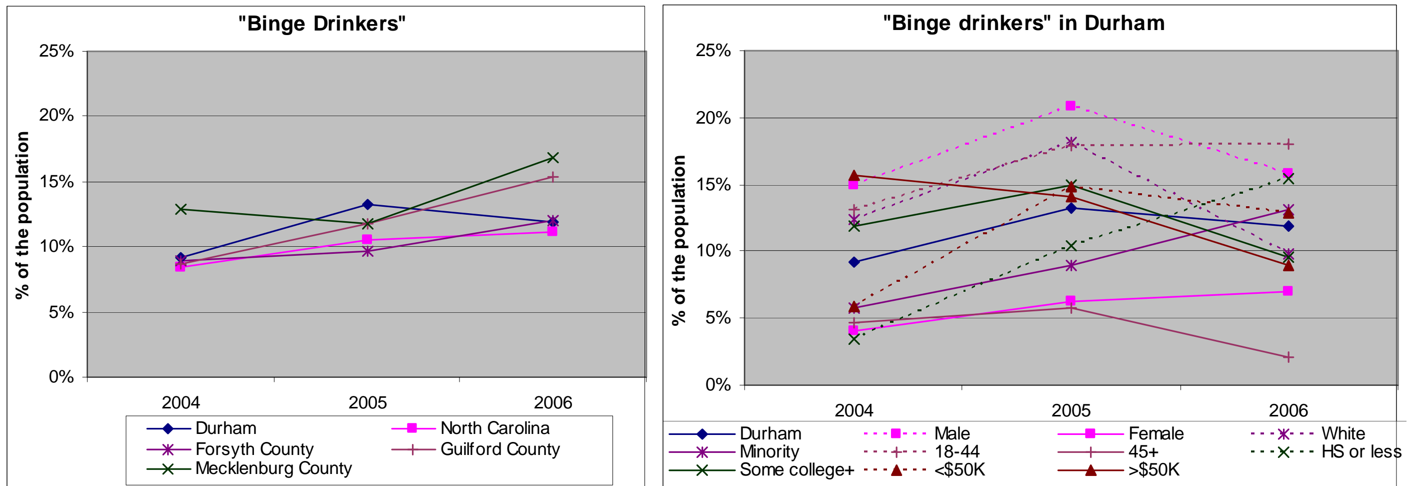
> "This part of the world has changed a lot, but it's still tobacco city. We have been slower than other areas to come around about smoking."
>
> "I said I'd never spend $2 on cigarettes. But maybe the way to get me to quit is to tax it to, $20 a pack. I supported that."
> - *Durham County residents*

Data source: NC Behavioral Risk Factor Surveillance System (http://www.schs.state.nc.us/SCHS/brfss)
** Note: This question asked, "How much additional tax on a pack of cigarettes would you be willing to support if a considerable portion of the money raised was used to fund smoking prevention programs for our youth and provide treatment options for tobacco users who want to quit?"*

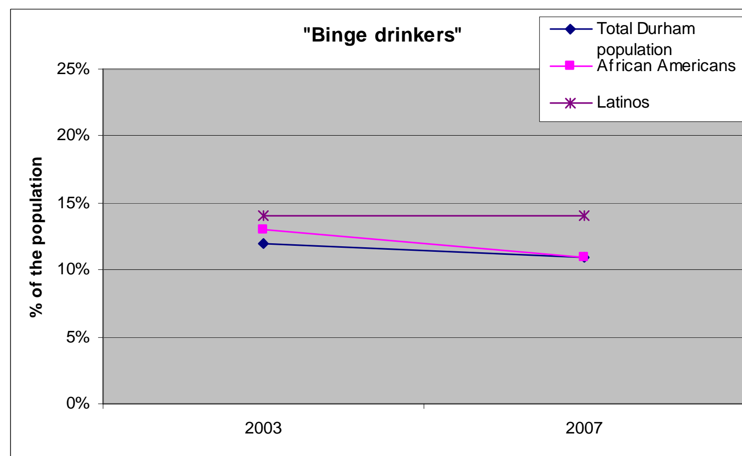
Alcohol

In 2006, 11.9% of Durham County qualified as "binge drinkers" per the NC BRFSS, because they had consumed five or more drinks on one occasion in the past month. The Durham County Health Assessment survey found a similar rate, at 11%. In the US, a standard drink has about

half an ounce of pure alcohol. This amount of pure alcohol is found in 12 oz regular beer or wine cooler; 8oz of malt liquor; 5 oz of wine or 1.5 oz of 80 proof of liquor (gin, rum, vodka, or whiskey).[1]



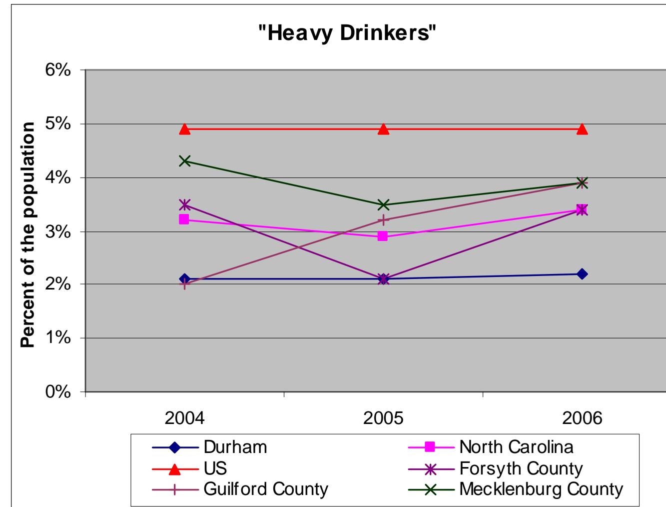
Data source: NC Behavioral Risk Factor Surveillance System (http://www.schs.state.nc.us/SCHS/brfss), US Behavioral Risk Factor Surveillance System (www.cdc.gov/brfss)
** Note: "Binge drinkers" are adults reporting having had five or more drinks on one occasion in the past 30 days*



Data source: Durham County Health Assessment survey

The BRFSS also assesses heavy drinkers, defined as men who have more than two drinks per day or women who have more than one drink per day in the past 30 days. Only 2.2% of Durham respondents, or 11 people, could be considered heavy drinkers in 2006.

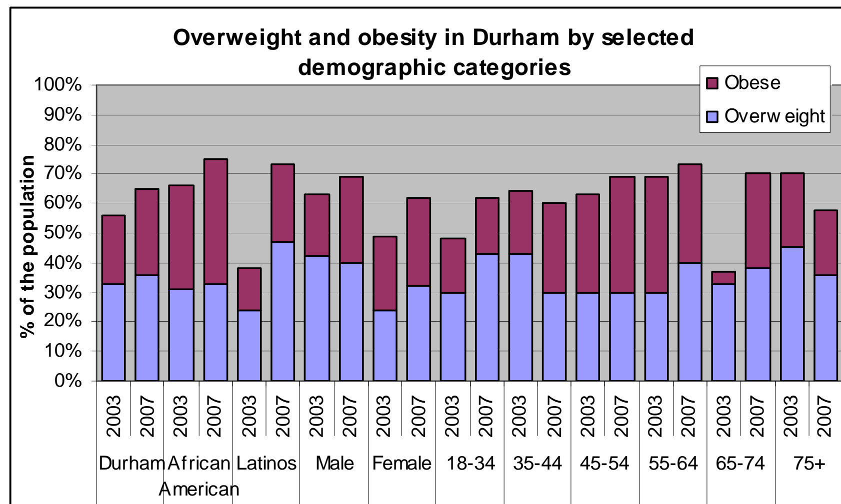
[1] Excessive alcohol consumption can lead to several health problems, which the CDC divided into "immediate" and "long-term" (www.cdc.gov/alcohol/). Immediate health risks from excessive alcohol include increased risk of injuries, both unintentional (falls, traffic injuries, etc) and intentional (intimate partner violence and child maltreatment), increased risk behaviors such as unprotected sex, alcohol poisoning, and fetal harm if pregnant. Over time excessive alcohol use is associated with strokes, heart diseases, psychiatric problems, cancers (oral, liver, prostate, and breast), and liver disease.



Data source: NC Behavioral Risk Factor Surveillance System (http://www.schs.state.nc.us/SCHS/brfss), US Behavioral Risk Factor Surveillance System (www.cdc.gov/brfss)
** Note: "Heavy drinkers" are adult men having had more than two drinks per day and adult women having more than one drink per day during the past 30 days*

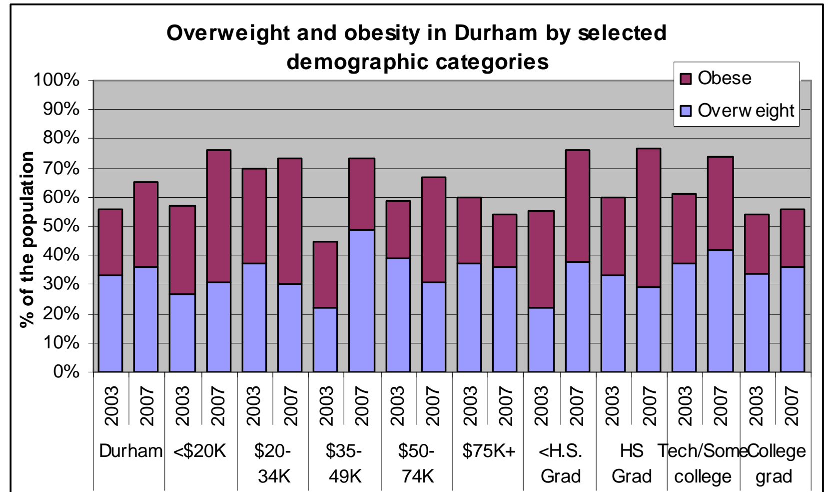
Overweight / obesity

According to the Durham County Health Assessment survey, 65% of Durham is overweight or obese (Body Mass Index or BMI of >25) – 36% considered "overweight" (compared to 33% in 2003) and 29% "obese" (compared to 23% in 2003).[1]



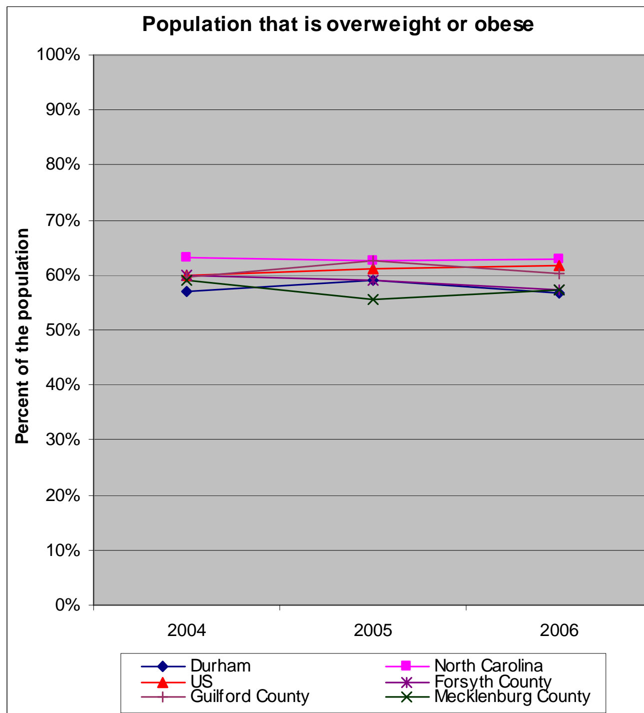
[1] Overweight and obesity are significant health risks that are associated with several poor health outcomes. For example, overweight or obese people are more likely to develop hypertension, Type 2 Diabetes, heart disease, stroke, osteoarthritis, respiratory problems, and some cancers. The risk rises with the more weight a person has over the recommendation (CDC, http://www.cdc.gov/nccdphp/dnpa/obesity/).

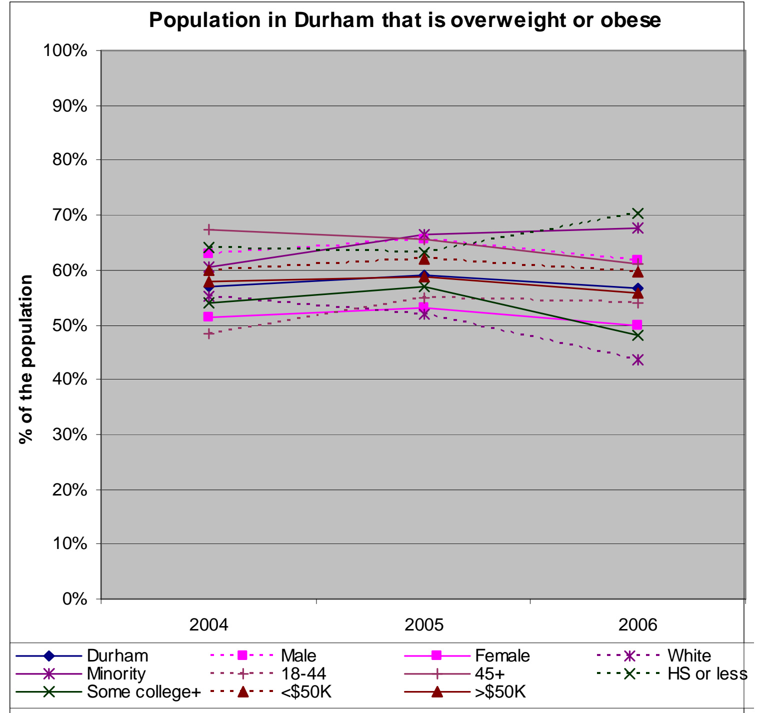
> "I used to like Cokes, but I eliminated the Cokes for water. I like to shop, so I go to the mall to do my walking. I love working with flowers, and sorrowfully I put my flowers out to soon and the weather got to them too soon and I lost them this weekend…"
>
> *- Durham County resident*



Data source: Durham County Health Assessment survey

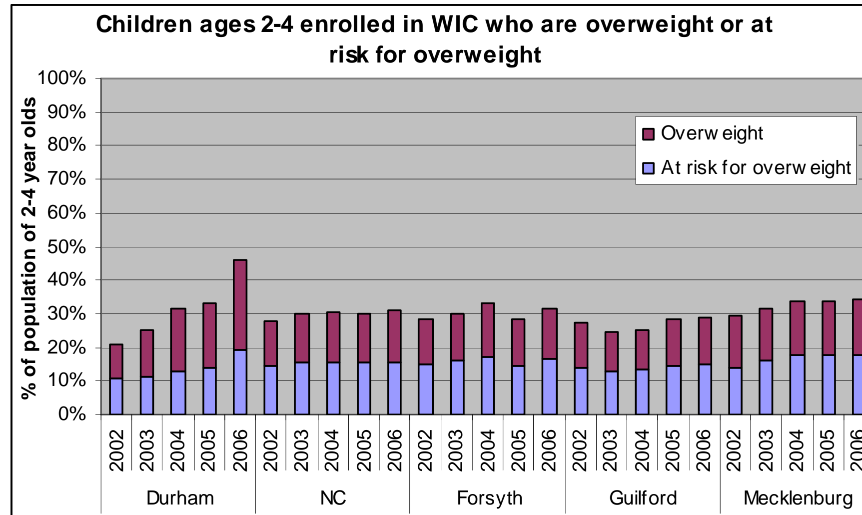
The BRFSS found that 56.7% of Durham County overweight or obese in 2006.





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

The NC-Nutrition and Physical Activity Surveillance System (NC-NPASS) collects data on children seen in North Carolina Public Health Sponsored WIC and child health clinics. In 2006, 648 of these children, or 26.8% of the total number of children seen at these sites, were overweight.



Data source: North Carolina Nutrition and Physical Activity Surveillance System, http://www.eatsmartmovemorenc.com/data/index.html

> We have to get the little ones used to eating vegetables. We, since we were small, we're used to eating spicy food, meat, so we're used to that; for this reason we have to show the little ones, because we want the best for them.
>
> *- Durham County resident*

Nutrition

In 2005, the Behavioral Risk Factor Surveillance System asked North Carolinians about how many fruits and vegetables they eat a day. They found that 27.5% of Durham respondents met the recommendation for fruit and vegetable consumption.[1]

Population that consumes at least five fruits or vegetables daily			
Durham	27.5%	Durham	22.5%
NC	22.5%	Male	24.7%
Forsyth	26.9%	Female	30.1%
Guilford	23.7%	Caucasian	32.4%
Mecklenburg	24.4%	Minority	23.0%
		18-44	27.8%
		45+	27.2%
		HS or less	22.9%
		Some college+	30.5%
		<$50K	24.5%
		>$50K	35.8%

Data source: NC Behavioral Risk Factor Surveillance System (http://www.schs.state.nc.us/SCHS/brfss)

[1] Nutrition is one of the most important parts of staying healthy, because of its direct influence on weight. Good nutrition, as described in the US Department of Health and Human Services and US Department of Agriculture's *Dietary Guidelines for Americans,* lowers the risk of many chronic diseases such as heart disease, stroke, some cancers, diabetes, and osteoporosis. Fruits and vegetables, in particular, contain the vitamins and minerals to protect the body against many of those diseases (www.cdc.gov/nccdphp/dnpa/nutrition/, www.fruitandveggiesmatter.gov).

> "In my family, we eat almost always at home, not outside. Eat more vegetables and fruit, water all the time. Give my children milk. Take them to the park to run."
>
> "The people who have time to cook are fortunate to eat home-cooked food, but not those that are running around all day and they have few chances to exercise. My husband & co-workers work from 7:00 AM and don't get home until 7-8 PM, so they don't feel like cooking and even less like doing exercise; they get home, eat something quickly, then go to bed so they can wake up early the next day."
>
> *- Durham County resident*

In the Youth Risk Behavior Survey of Middle Schools in Durham, African Americans in Middle Schools reported fewer incidences of eating dinner at home with their families. Latino students reported higher incidences of not eating breakfast in the week (25.3% vs. 12.7%). In the High Schools, African Americans students reported lower frequencies in eating salads, carrots, or of drinking milk than other students.[1]

Physical activity

The Durham County Health Assessment survey compiled some of the physical activity habits of overweight and obese persons.[2]

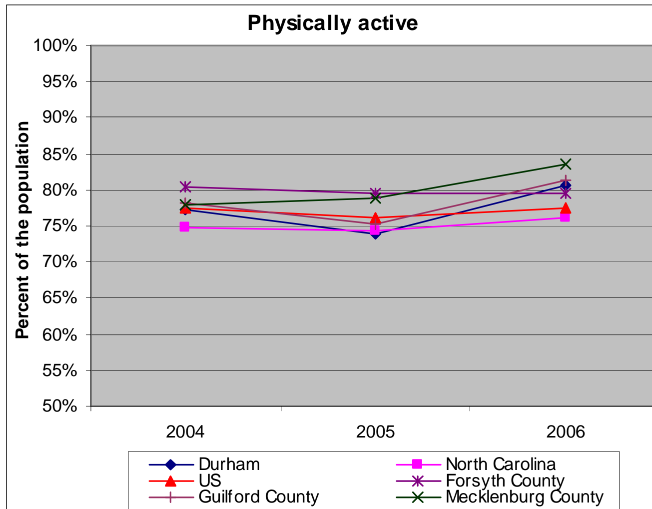
	Overweight (25 – 29.9)	**Obese (> 29.9)**
Days per Week Participate in Moderate Activity for at least 10 Minutes		
Two times or less a week	14%	11%
Three - four times a week	31%	39%
5 or more times a week	56%	50%
Amount of Time Usually Keep at Moderate Activity		
Half-hour or less	50%	51%
31 min. to an hour	27%	33%
More than an hour	23%	16%
Days per Week Participate in Vigorous Activity for at least 10 Minutes		
Two times or less a week	31%	52%
Three – four times a week	41%	31%
5 or more times a week	28%	17%
Amount of Time Usually Keep at Vigorous Activity		
Half-hour or less	41%	38%
31 min. to an hour	36%	41%
More than an hour	23%	21%

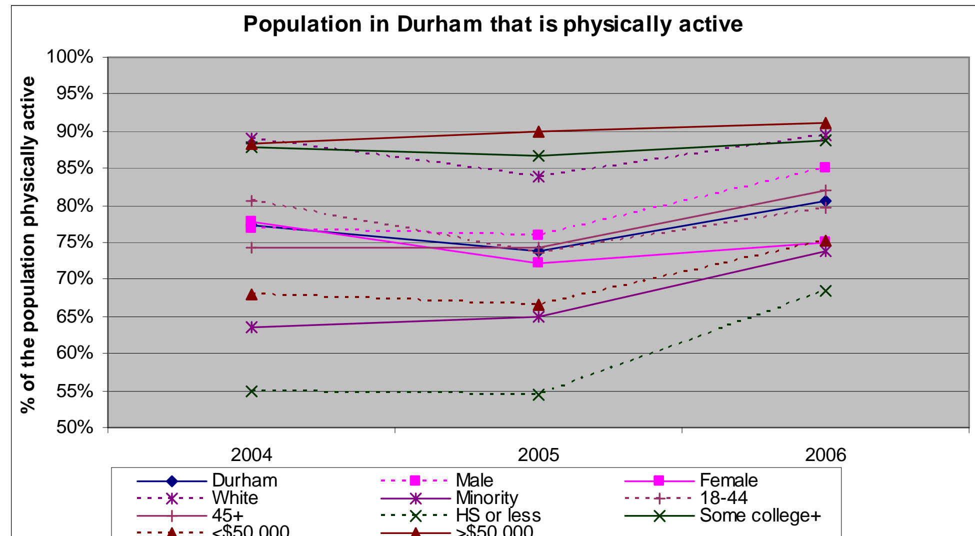
> "I think a barrier is our sedentary lifestyle, and the fast food, and the television."
>
> "The 207 channels."
>
> "Between our parent's generation and their grandchildren's generations, we've become a drive through society. It's time to go back to fresh fruits and vegetables, and not sitting in front of the TV. Look at all the obese children now. Back in the day, my mother used to throw me out at 8am and not allow me back unless to eat, and came in before dark to have a bath and go to bed. Because you played outside, that's what you did. I didn't have videogames, I didn't have a cell phone."
>
> *- Durham County residents*

The BRFSS annually collects data on the percentage of population that engaged in physical activity during the past month (other than as part of a

[1] YRBS results presented here are preliminary. The final Report on the 2007 YRBS in Durham Public Schools will be available in December 2007.
[2] Physical activity also has a key role in determining weight. The CDC recommends regular physical activity to reduce several health risks, including heart disease, diabetes, colon cancer, depression and anxiety, and others (www.cdc.gov/nccdphp/dnpa/physical/). They recommend that adults should engage in moderate-intensity physical activities for at least 30 minutes on five or more days of the week.

regular job) (this measure includes physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise).





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

In 2005, the BRFSS assessed how many people were meeting physical activity recommendations (*moderate physical activity for 30 or more minutes per day, five or more days per week; or vigorous physical activity for 20 or more minutes per day, three or more days per week*).

Population that meets physical activity recommendations			
Durham	36.3%	Durham	36.3%
NC	42.1%	Male	34.1%
Forsyth	41.5%	Female	38.3%
Guilford	42.4%	Caucasian	49.2%
Mecklenburg	43.4%	Minority	24.0%
		18-44	34.8%
		45+	39.0%
		HS or less	26.1%
		Some college+	24.8%
		<$50K	33.3%
		>$50K	43.7%

Data source: NC Behavioral Risk Factor Surveillance System (http://www.schs.state.nc.us/SCHS/brfss)

In 2006, the BRFSS also asked about the impact of the physical environment on people's behaviors; 78% of Durham said they believed they would increase their physical activity if their community has more accessible sidewalks or trails for walking or bicycling.

In the Youth Risk Behavior Survey of Middle Schools in Durham[1], girls reported much higher levels of activity associated with weight loss than boys in Middle Schools. African Americans reported higher rates of watching TV or playing video games 5 or more hours per day, being home alone over 6 hours per day. Latino students reported lower rates of physical activity and participation in extracurricular activities. Caucasian students report much higher rates of physical activity every day of the week (40% vs. 28.4%) and much higher rates of participation in extracurricular activities (77.7% vs. 55% for all other students). In the high Schools, African Americans reported higher rates of watching TV five or more hours per day than other students. Latino students in High Schools reported lower rates of physical activity and participation in extracurricular activities than other students in High Schools.

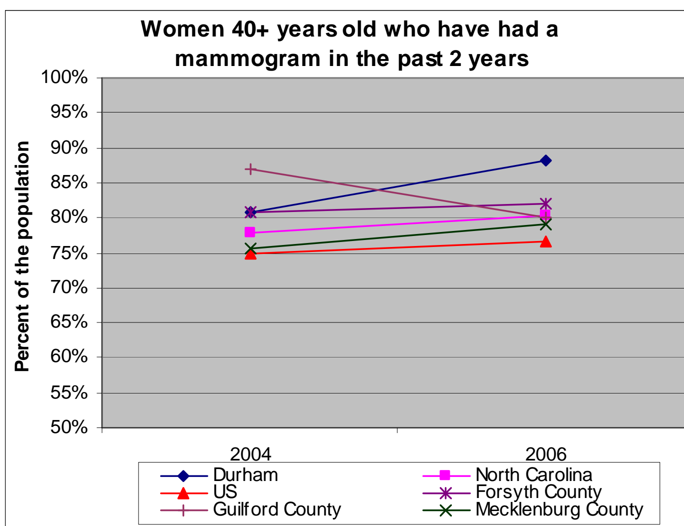
Healthcare screenings

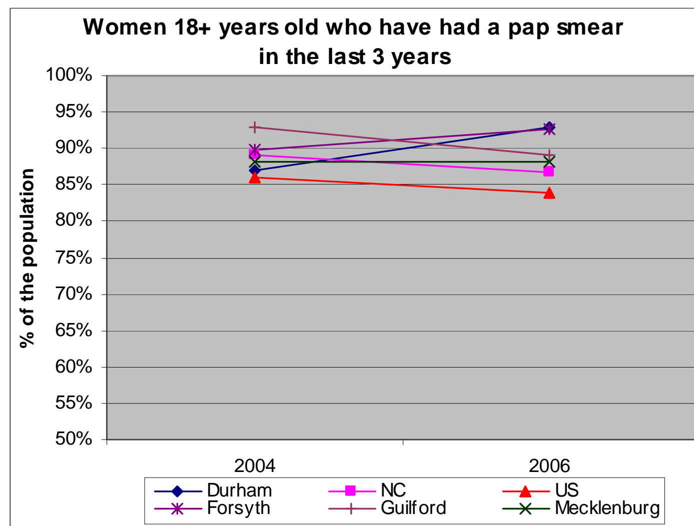
Screenings are an important part of preventive healthcare. Regular checks of medical indicators give healthcare professionals clues if conditions are developing. Early intervention can be lifesaving; for example, detecting breast cancer at its earliest stages improves the likelihood that treatment will be successful (American Cancer Society, www.cancer.org). It can also save time, medical costs, and health, as treatments during diseases' earlier stages can be less invasive and difficult than more aggressive therapies if conditions are more serious.

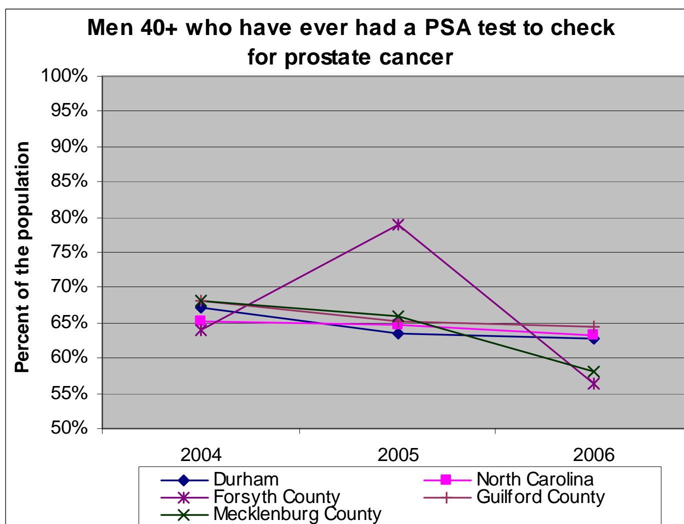
[1] YRBS results presented here are preliminary. The final Report on the 2007 YRBS in Durham Public Schools will be available in December 2007.

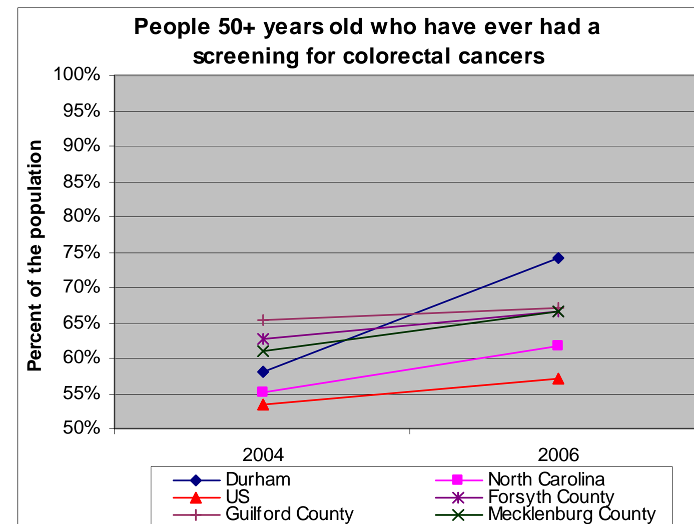
The National Cancer Institute (www.cancer.gov) recommends that all women age 40 or older should have a mammogram every one to two years to detect breast cancer, and all women have a Pap test at least once every three years from at least age 21 to detect cervical cancer. While there is some discussion about Prostate-Specific Antigen (PSA) tests (for detection of prostate cancer), some doctors recommend annual tests for men over 50 years old. The US Preventive Services Task Force strongly recommends that clinicians screen men and women 50 years of age or older for colorectal cancer (http://www.ahrq.gov/clinic/uspstf/uspscolo.htm).

In 2006, the BRFSS found that 88.3% of women over 40 had had a mammogram in the past two years, and that 92.9% of adult women have had a Pap smear in the past three years. 62.7% of men over 40 years old have ever had a PSA test, and 74.1% of people over 50 years old have ever had a sigmoidoscopy or colonoscopy to screen for colorectal cancers.





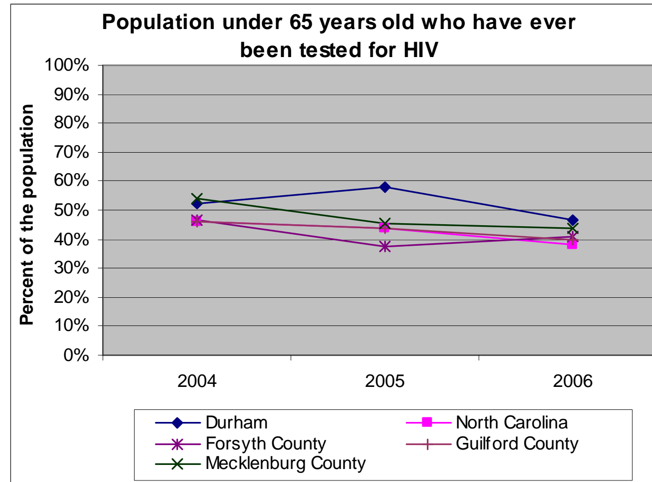


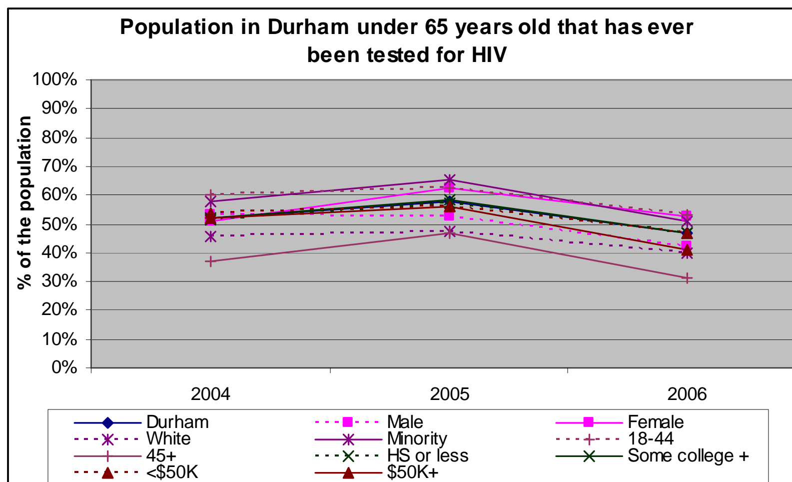


Data source: NC Behavioral Risk Factor Surveillance System (www.schs.state.nc.us/SCHS/brfss), US Behavioral Risk Factor Surveillance System (www.cdc.gov/brfss)

In 2006, the CDC changed their recommendations for HIV testing. The new guidelines (http://www.cdc.gov/mmwR/preview/mmwrhtml/rr5514a1.htm) recommend *routine* HIV

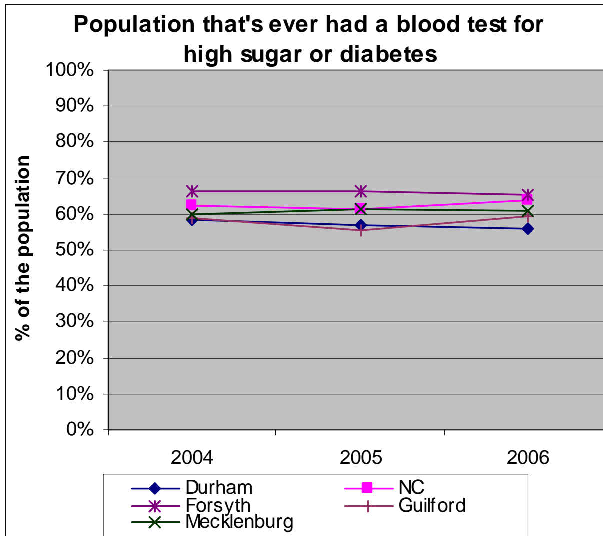
screening of adults and adolescents in health care settings in the United States. They also recommend that all pregnant women be screened for HIV unless the patient declines testing. This means that all healthcare providers should offer HIV tests to their patients in any healthcare encounter, whereas before there was a separate counseling, testing, and consent procedure that often only happened at the patient's request. In Durham, 46.8% of persons under 65 in the BRFSS survey have ever been tested for HIV.

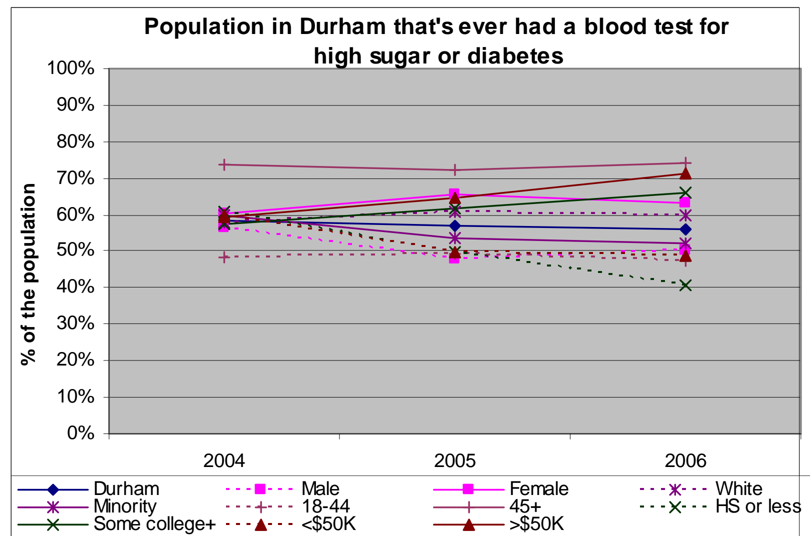




Data source: NC Behavioral Risk Factor Surveillance System (www.schs.state.nc.us/SCHS/brfss)

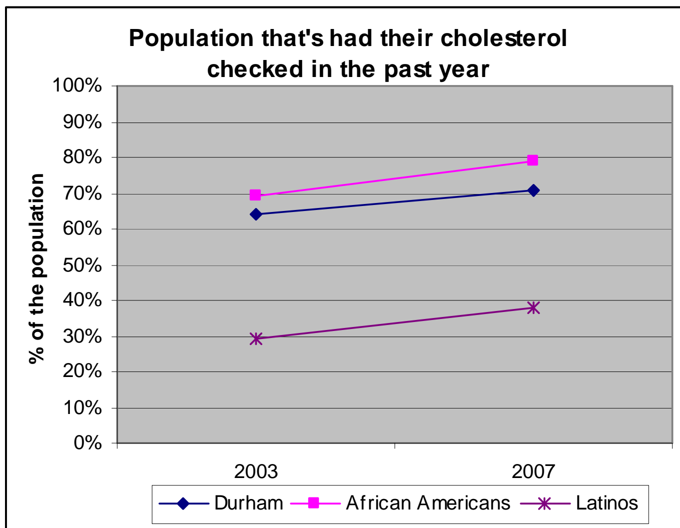
In 2006, 56.1% of Durham BRFSS respondents had had a blood test for high sugar or diabetes.

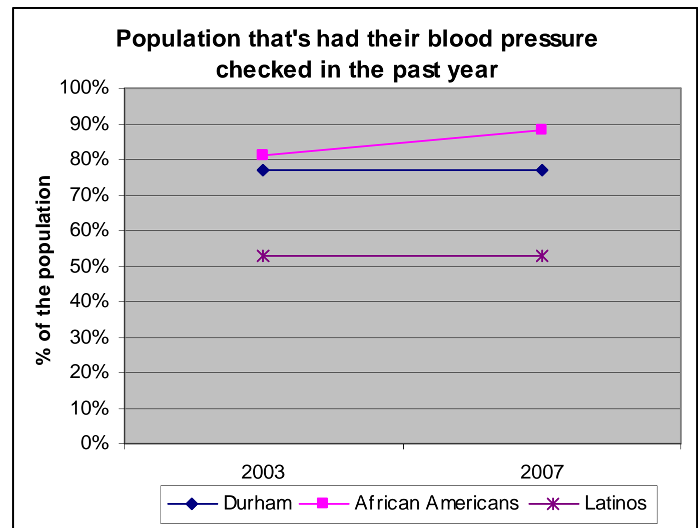




Data source: NC Behavioral Risk Factor Surveillance System (www.schs.state.nc.us/SCHS/brfss)

High blood cholesterol is one of the major risk factors for heart disease. High blood pressure can lead to strokes, heart disease, and kidney disease. The Durham County Health Assessment survey found in 2007 that 71% of adults surveyed had had their cholesterol checked in the past year. In addition, 77% have had their blood pressure checked in the past six months.





Data source: Durham County Health Assessment survey

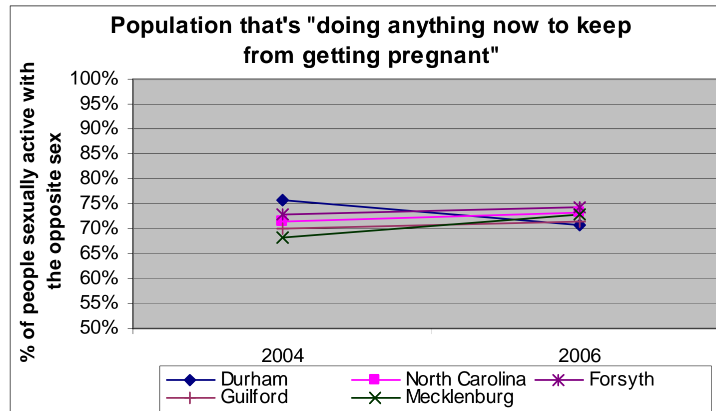
> "I know that my mom and daddy hardly ever went to a doctor. And it looks like now every time I turn around I have to go. I'm on a blood thinner so I have to go for my checkup. We hear all these words – cholesterol – my mom and daddy lived in the country, I don't even think they could pronounce the word. They weren't ignorant, you know, they were along with everyone else, but you know. When they tell you to come back, you feel like you better go. And I feel like that keeps a lot of people in line with the health, is trying to do what the doctor tells them."
>
> *- Durham County resident*

Reproductive health

Family planning

"Family planning" means a person knows when they want to have children and how they will prevent having children when they don't want them. In 2006, according to the BRFSS, 56.3% of Durham was sexually active and doing something to keep from getting pregnant.

> "I grew up where it was a bad thing to talk about sex. No matter what you were talking about, it was wrong… My parents, yeah, they were like, 'Don't talk about it,' hush hush, the birds and the bees. I was like, 'What do you mean, not to talk about it?' So I had a lot of mixed signals."
> *- Durham County resident*

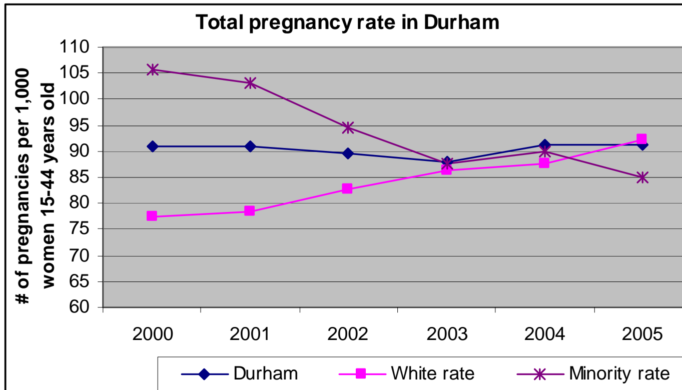


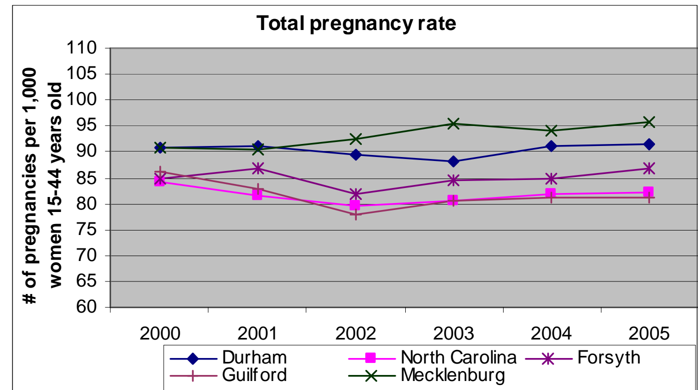
Data source: NC Behavioral Risk Factor Surveillance System (www.schs.state.nc.us/SCHS/brfss)
**Note: This question was only asked of non-pregnant women 18-50 years old and men 18-59 years old; the percentage is only taken from those who were sexually active and who did not have a same sex partner.*

The BRFSS also asked about number of sexual partners in the past year and whether or not a condom was used during the last sexual intercourse. In Durham, 60% of respondents had one partner in the past 12 months (compared to 80.7% in NC), and 24.4% had had no partners. Of those who had sexual partners, 60.1% had used a condom during their last sexual intercourse.

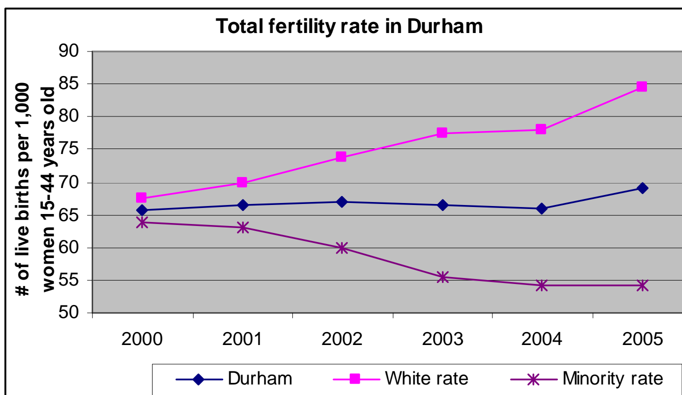
Unintended pregnancy is one that is either mistimed or unwanted at the time of conception. According to the CDC (www.cdc.gov/reproductivehealth/UnintendedPregnancy), "Unintended pregnancy is associated with an increased risk of morbidity for women, and with health behaviors during pregnancy that are associated with adverse effects. For example, women with an unintended pregnancy may delay prenatal care, which may affect the health of the infant." In the US, about half of all pregnancies are unintended. There is no data on the unintended pregnancy rate in Durham, but there is some information on North Carolina statewide. According to the Pregnancy Risk Assessment Monitoring System (www.schs.state.nc.us/prams) in 2005, 44.4% of pregnant women surveyed had wanted to be pregnant later (33.3%) or not at all (11.1%). Pregnancy unintendedness in NC is associated with mothers with lower income, African American race, and non-married status.

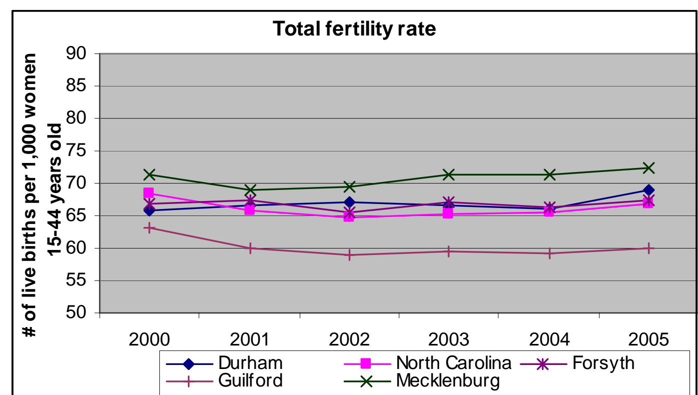
The total pregnancy rate is the number of pregnancies per 1,000 women of reproductive age (15-44 years old). Durham's rate in 2005 was 91.4 pregnancies per 1,000 women.



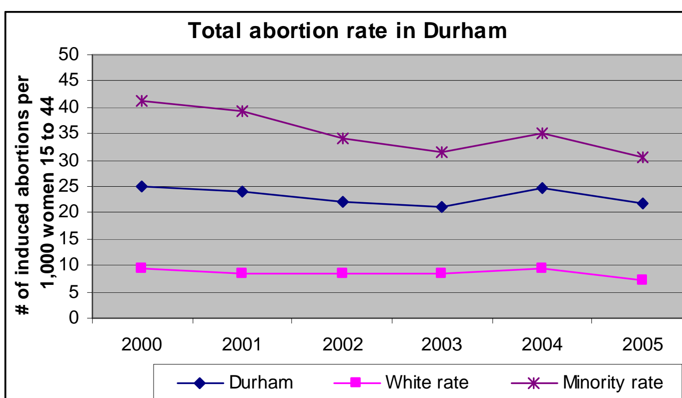


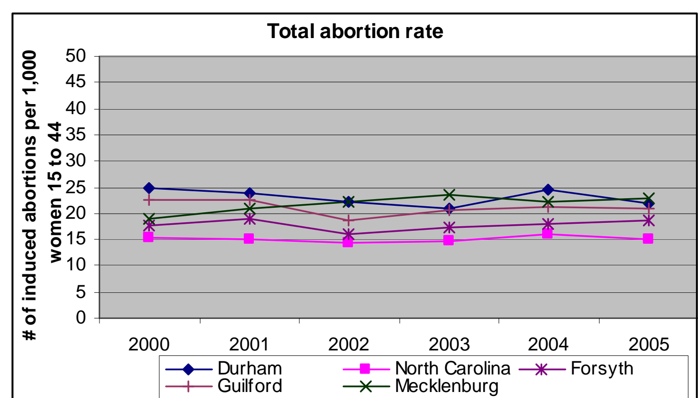
The fertility rate is the number of live births per 1,000 women of reproductive age. Durham's rate in 2005 was 69 live births per 1,000 women 15-44 years old.



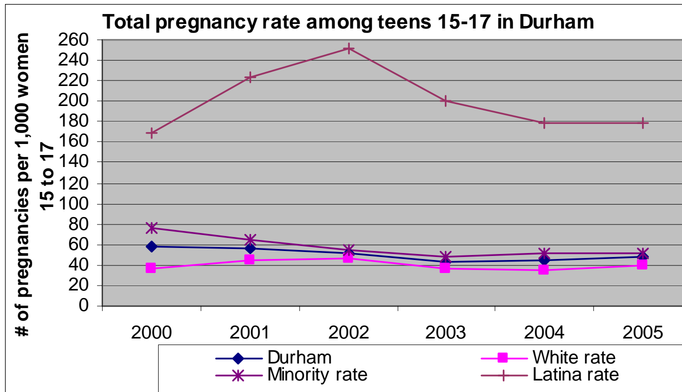


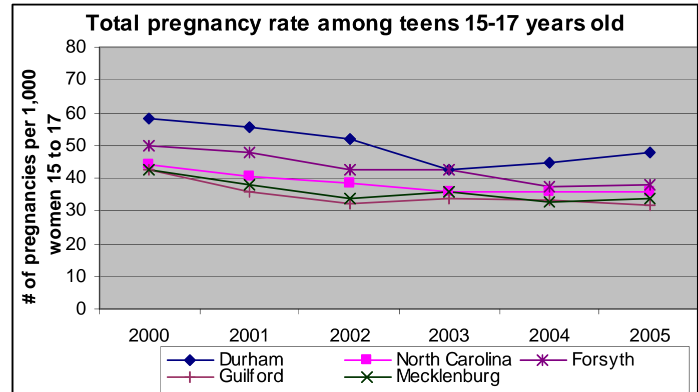
The abortion rate measures the number of induced abortions per 1,000 women of reproductive age. In Durham, in 2005, there were 21.9 abortions per 1,000 women ages 15-44.





The pregnancy rate among teenage girls 15-17 years old in Durham was 47.8 per 1,000 girls 15-17 years old. The rate for girls 15-19 years old was 64.7 per 1,000 teens of that age.





Data source: County Health Data Book, NC State Center for Health Statistics (www.schs.state.nc.us)

Teenage pregnancy has many implications, both to the family's physical health and social well-being. Physically, according to the March of Dimes, (www.marchofdimes.org), it results in an increased risk of premature delivery and low birthweight, leading causes of infant death. Teens are more likely than their older counterparts to engage in risk behaviors during pregnancy such as smoking or late or no prenatal care. They are at greater risk for pregnancy complications like anemia, high blood pressure, and maternal mortality.

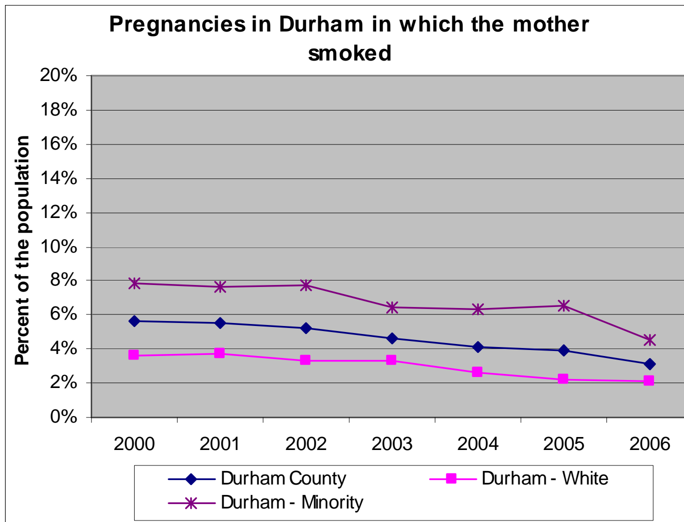
The Adolescent Pregnancy Prevention Coalition of NC (www.appcnc.org), in their November 2006 report, "By the Numbers: The public costs of teen childbearing in North Carolina," cited research showing the consequences of teen childbearing.

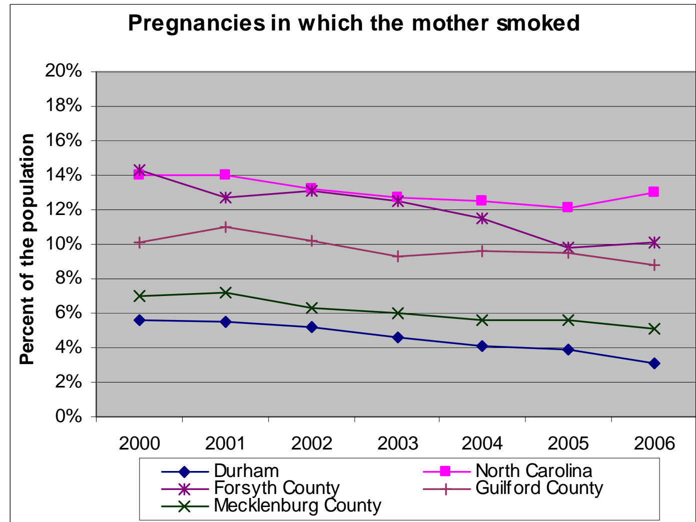
> "…compared to those who delay childbearing, teen mothers are more likely to drop out of school, remain unmarried, and live in poverty; their children are more likely to be born at low birth weight, grow up poor, live in single-parent households, experience abuse and neglect, and enter the child welfare system. Daughters of teen mothers are more likely to become teen parents themselves, and sons of teen mothers are more likely to be incarcerated" (p 2).

They found that the average annual cost to the public associated with a child born to a mother aged 17 or younger, due to the above consequences, was $3,868.

Pregnancy health

In Durham, 3.1% of mothers smoked during pregnancy in 2006.

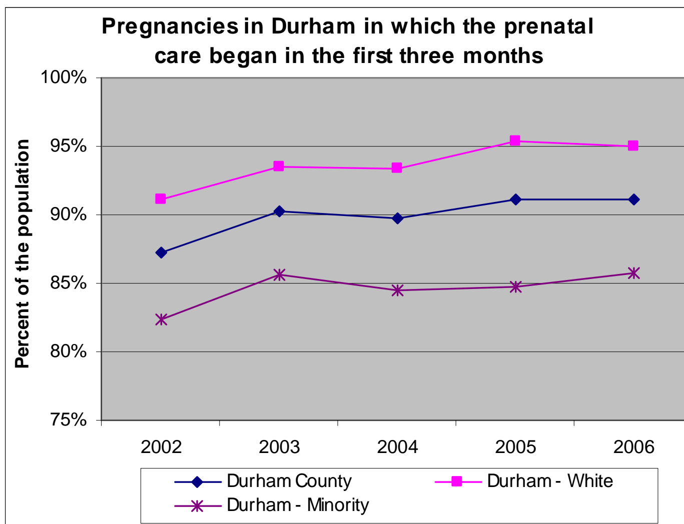


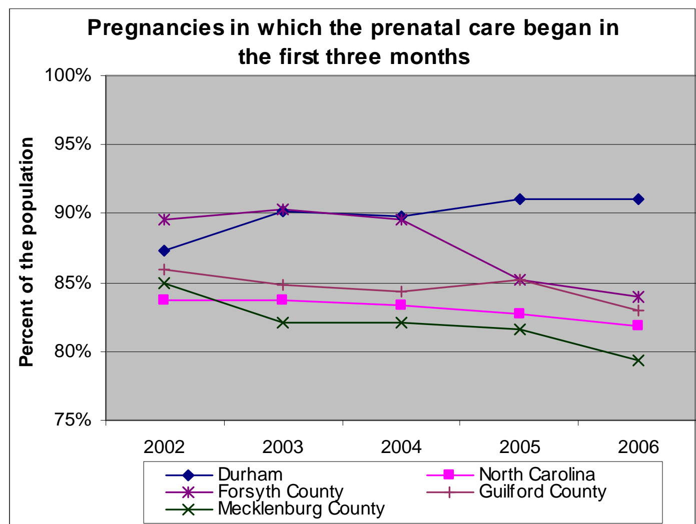


Data source: NC State Center for Health Statistics, BABY Book (http://www.schs.state.nc.us/SCHS/data/county.cfm)

Smoking during pregnancy nearly doubles the risk of low birthweight, and also raises the risk of preterm delivery (both of which are related to infant mortality and lifelong disabilities). It also affects pregnancy complications such as placental problems and premature rupture of membranes. Smoking during pregnancy also is associated with a higher risk of Sudden Infant Death Syndrome after the child is born (www.marchofdimes.org).

In Durham, 91.1% of mothers in 2006 initiated their prenatal care within the first trimester of their pregnancy.





Data source: NC State Center for Health Statistics, BABY Book (http://www.schs.state.nc.us/SCHS/data/county.cfm)

Prenatal care is important to monitor the progress of mother and baby, so that any problems can be identified before they become serious, if possible. The March of Dimes (www.marchofdimes.org) recommends that women contact a healthcare provider as soon as they think they are pregnant. According to the March of Dimes, "Women who see a health care provider regularly during pregnancy have healthier babies, are less likely to deliver prematurely, and are less likely to have other serious problems related to pregnancy."

There is not a great deal of pregnancy health data for Durham County, however, the Pregnancy Risk Assessment Monitoring System (www.schs.state.nc.us/SCHS/prams/) takes statewide information on pregnancies. In 2005 it found that 31.6% of women were taking a multivitamin the month before they became pregnant; women who were older, Caucasian, more highly educated, married, and with a higher income were more likely to be taking a multivitamin. The March of Dimes recommends every woman take a multivitamin with at least 400 mcg of Folic Acid every day before she becomes pregnant. Folic acid, if taken within the first weeks of pregnancy (usually before a woman realizes she is pregnant) has been found to greatly decrease birth defects of the spine (www.marchofdimes.com).

Before pregnancy, 36.7% of mothers in North Carolina were overweight or obese, which was more likely among mothers who were older, African American, and less educated. Maternal obesity is associated with adverse outcomes such as birth defects, labor and delivery complications, fetal and neonatal mortality, and maternal complications such as hypertension, gestational diabetes, and pre-eclampsia (www.marchofdimes.com/files/MP_MaternalObesity040605.pdf).

PRAMS also reports that in 2005, 40.3% of mothers in North Carolina are exclusively breastfeeding when their child is eight or more weeks old; breastfeeding rates in NC are associated with mothers of higher income and education levels. The American Academy of Pediatrics (AAP), American College of Obstetricians and Gynecologists, World Health Organization, and many other health organizations recommend exclusive breastfeeding for the first six months of life, citing breastmilk's many benefits to both infant and mother. For the baby, breastfeeding decreases its chance of infections and diarrhea, Sudden Infant Death Syndrome, diabetes (types I and II), overweight and obesity, asthma, cancers, and infant mortality; for the mother, breastfeeding often means less postpartum blood loss, earlier return to pre-pregnancy weight, and decreased risks of breast and ovarian cancers (American Academy of Pediatrics Section on Breastfeeding. "Breastfeeding and the Use of Human Milk." Pediatrics. 2005 Feb;115(2):496-506.).

Only 68% of mothers report laying their baby down on its back to sleep, with 16% placing them on their sides and 15.5% on their stomachs. African American and younger mothers are less likely to put their babies to sleep on their backs. The National Institute of Child Health and Human Development, AAP, and Maternal and Child Health Bureau have implemented the "Back to Sleep" campaign since 1994 to reduce infant deaths by placing babies on their backs when sleeping, after it was found that a prone position, along with other risk factors, was associated with Sudden Infant Death Syndrome, or SIDS (also known as "crib death") (http://www.nichd.nih.gov/sids/).

Motor vehicles

According to the NC Behavioral Risk Factor Surveillance System, 86.1% of Durham County always uses seatbelts when driving or riding in a car, and 91.2% of Durham County has not driven after drinking alcohol in the past 30 days.

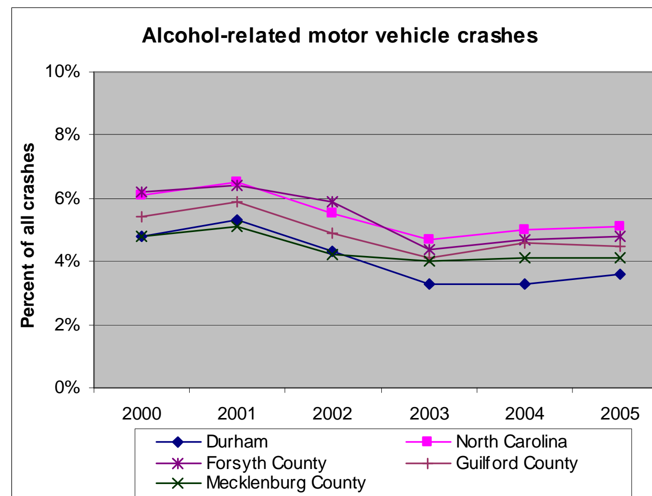
Population that always uses a seatbelt when driving or riding in a car	
Durham	86.1%
NC	86.7%
Forsyth	84.2%
Guilford	85.7%
Mecklenburg	84.3%

Population that has NOT driven after having perhaps too much to drink in the past 30 days	
Durham	91.2%
NC	96.6%
Forsyth	93.3%
Guilford	95.6%
Mecklenburg	95.0%

Data source: NC Behavioral Risk Factor Surveillance System (www.schs.state.nc.us/SCHS/brfss)

The Durham County Health Assessment survey found that in both 2003 and 2007, 99% of respondents have not driven after having too much alcohol. The percentage of people who never rode with a driver who had too much to drink in the past 30 days rose from 96% to 98% in 2007.

According to the "Report on Substance Use and Abuse in Durham County" (Page 41) (www.healthydurham.org) for Durham County residents during the years 2000-2004, motor vehicle accidents were the third leading cause of death for youth aged 0-19 (rate = 7.3), the second leading cause of death for individuals aged 20-39 (rate = 15.6) and the seventh leading cause of death for individuals aged 40-64 (rate = 13.8) (North Carolina State Center for Health Statistics, 2006). According to the North Carolina Division of Motor Vehicles, one-quarter of these fatal accidents involved alcohol (North Carolina Alcohol Facts, 2006). Approximately 300 injuries a year in Durham County are related to traffic accidents involving alcohol.



Data source: UNC Highway Safety Research Center, http://www.hsrc.unc.edu/ncaf/

Discussion

People's choices about their lifestyles and health habits have a great impact on their health. This is why public health education and clinical health counseling have focused on helping individuals make better choices abut their health behaviors over the past years. Lifestyles, as Evans and Stoddart pointed out, are an appealing target of healthcare and health promotion programs, because they are under the control of the individual. Thus influencing individuals' health behaviors is appealingly simple and potentially empowering to the individual.

However, as this assessment has pointed out, the determinants of health are many, as are the influences on individuals' behaviors. We all make our own choices about how to maintain our health, but we are heavily influenced by our social, physical and institutional environments. Evans and Stoddart used smoking as an example of this complexity,

> "Tobacco is not only toxic, but addictive, and addiction most commonly commences in childhood. Consequently the presumption that users rationally and voluntarily 'choose' smoking as a 'lifestyle' is particularly inappropriate. Furthermore, the observation that smoking behavior is very sharply graded by socioeconomic class undercuts the argument that it represents an individual choice, and indicates instead a powerful form of social conditioning" (p 44).

Another example of the interplay between choice and environment is that of physical activity. A locally headquartered national movement to design communities that encourage physical activity, Active Living by Design (www.activeliving.org), points out that the sprawl that characterizes most American communities today encourages driving, and discourages walking and biking. Another example is the Baby-Friendly Hospital Initiative, which increases breastfeeding rates among patients at hospitals that implement the "Ten Steps to Successful Breastfeeding" at their institutions. Personal choice is a powerful factor, but it is heavily influenced, and it can be difficult to change lifestyles without changing the environments in which they exist.

Initiatives and Resources in Durham

Substance use

- The Durham County Health Department has teen tobacco prevention and quit smoking programs in their Health Education Division. www.durhamcountync.gov/departments/phth/, 560-7600.
- 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, 560-7200.
- Durham Together for Resilient Youth is a coalition focused on reducing substance use among youth. 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.

Healthy weight

- The Durham County Health Department's Health Education and Nutrition Divisions have programs to help people improve their nutrition and physical activity. www.durhamcountync.gov/departments/phth/, 560-7600.
- Durham has three branches of the YMCA, with many organized programs that promote good health, strong families, confident children and better communities. www.ymcatriangle.org, 667-9622.
- Duke University Health System's Division of Community Health has health promotion programs throughout the Durham community. www.communityhealth.mc.duke.edu/, 681-3187.
- Durham's Parks and Recreation Department manages many local parks and recreational centers to help citizens discover, explore, and enjoy life through creative and challenging recreational choices that contribute to their physical, emotional, and social health. www.durhamnc.gov/departments/parks/, 560-4355.

Healthcare screenings

- Lincoln Community Health Center provides outpatient healthcare to the underserved population in Durham. www.lincolnchc.org, 956-4000.
- The Durham County Health Department provides clinical services in family planning, sexually transmitted infections, tuberculosis, immunizations, and dentistry. They also provide programs in community health, health education, environmental health, and nutrition. http://www.durhamcountync.gov/departments/phth/, 560-7600.

Family planning and pregnancy health

- The Durham County Health Department also has a family planning clinic and community health programs, and administers the Maternity Clinic at Lincoln Community Health Center. www.durhamcountync.gov/departments/phth/, 560-7600.
- Planned Parenthood of Central North Carolina offers family planning healthcare services. www.plannedparenthood.org/centralnc, 866-942-7762.
- Lincoln Community Health Center's maternity clinic includes "Baby Love," a prenatal maternity care coordination program, and the WIC nutrition program. http://www.durhamcountync.gov/departments/phth/, 956-4000.
- Duke University Medical Center / Teer House provides prenatal classes on prepared childbirth, breastfeeding, infant care and infant CPR taught by Lamaze certified childbirth instructors. www.dukehealth.org, 477-2644.

Conclusion and Next Steps

The findings from this 2007 Community Health Assessment suggest that Durham is poised to become not only a ***City of Medicine*** but also a ***Community of Health***. The work of the *Partnership for a Healthy Durham*, which is currently planning and implementing several far-reaching health initiatives, will be critical to bringing about this transition.

Several important issues that require further exploration were identified during the 2007 Community Health. They include:

- The mental health of Latino youth in Durham;
- The continuing increase in cancer rates and
- The possible relationship between gang activity, substance abuse and perceptions of safety in the City of Durham.

The next steps are to:

- Report to the many neighborhoods and organizations in Durham County in print and at public forums. This reporting will be coordinated by *The People's Clearing House* – a Committee of *The Partnership for a Healthy Durham*;
- Review/revise the priorities of the Partnership for a Healthy Durham in light of the assessment findings and

Develop Action Plans to be submitted to the State of North Carolina by June 1, 2008.

APPENDIX A: Glossary of Health Access Terms

APC - Ambulatory Payment Classification - The payment methodology developed by Medicare to group outpatients based on procedure or test performed, etc. Hospitals are then paid a set fee based on the APC.

Allowed Amount - Amount pre-determined by the health plan per procedure code used in determining the company's base fee schedule when negotiating with providers. Contracted providers may negotiate amounts above or below this amount depending upon their leverage.

Assignment - The provider will bill Medicare directly and will accept what Medicare recommends as 100% of payment. Medicare usually pays 80% of outpatient visits and the provider may still try to collect the remaining 20% of Medicare "allowable" from the patient. Not all providers "accept Medicare assignment" and can try to collect more than 100% of the Medicare rate.

BA - Benefits Administrator - A term commonly used to refer to the designated employee in the employer group who oversees employee benefits. While often a designated person in the human resources department of large companies, this could be the president of a small company.

BMI - Body Mass Index - A measure that demonstrates if a person's weight is appropriate to their height.

BRFSS - Behavioral Risk Factor Surveillance System – A telephone survey that tracks national health risks and sponsored by the Centers for Disease Control (CDC). Data can be obtained at the state and county level also.

COBRA - **Consolidated Omnibus Budget Reconciliation Act** - This is the federal law passed in 1985 that allows many people to pay to continue their health insurance coverage once they leave their job. There is currently an 18 month maximum.

Consumer-Driven Health Insurance - A product in which the individual pays a smaller premium each month and in return, the individual has a higher deductible and higher out of pocket expenses until catastrophic coverage begins. The product is called "consumer-driven" because it gives the individual the opportunity and responsibility to manage their health care costs. **HSA**s combined with **HDHP**s are consumer-driven products that are becoming more common.

CPT - **Current Procedural Terminology** - Billing codes used primarily by physicians to indicate the services and procedures they provided to the patient.

Community Health Action Plans - Each of the six committees of the Partnership for a Healthy Durham has created objectives and strategies for meeting their objectives by the year 2010.

COB - Coordination of Benefits - A system designed to eliminate duplication of benefits when an insured is covered under more than one group plan. Benefits under the two plans usually are limited to no more than 100 percent of the claim.

Discount Health Plans - A plan similar to a discount buying club that allows members to obtain a discount on services from a network of providers contracted with the discount plan for a monthly fee. Discount health plans are not insurance and are not regulated by the NC Department of Insurance.

DME - **Durable Medical Equipment** - Standard medical equipment generally used in an institutional setting that is appropriate for use in the home and can withstand repeated use. Often non-disposable equipment, such as wheelchairs, oxygen tanks, walkers, etc.

DNR - **Do Not Resuscitate** - An order that can be placed on a patient's chart so that no effort will be made to revive the patient in the event that their heart stops beating or they stop breathing.

DRG - **Diagnosis-Related Group** - The payment methodology developed by Medicare to group inpatients based on their clinical condition, age, other existing conditions, etc. into one of approximately 550 DRGs. Hospitals are then paid a set fee based on the DRG.

DSH - **Disproportionate Share** (frequently pronounced like "dish"). Payments that may be made to a hospital by Medicare and/or Medicaid if they treat a large percentage of Medicaid or charity care patients. Criteria for receiving

payments differ based on whether the payment is coming from Medicare or Medicaid. Medicare DSH payments are based on the proportion of patients served who are eligible both Medicaid and Medicare. At least 15% of a hospital's patient days must be for Medicaid patients in order to qualify. Medicaid has two different payments: one which is based on the proportion of Medicaid patients served (the hospital must serve at least 35% to qualify) and one that is based on the proportion of Medicaid and charity care patients served (criteria for this payment change from year-to-year based on the money available in the state budget).

ED - Emergency Department - Same as emergency room.

EMS - Emergency Medical Service - Including the ambulance services.

EMTALA - **Emergency Medical Treatment and Labor Act of 1986 -** The federal law that mandates that all patients who come to a hospital's emergency room must receive an appropriate medical screening regardless of their ability to pay. And, if they are to be transferred to another hospital, they must be stabilized first.

EOB - **Explanation of Benefits** - A statement from the insurance company sent to the member who filed a claim, giving specific details about how and why benefit payments were or were not made. It summarizes the charges submitted and processed, the amount allowed, the amount paid, and the amount still owed by the member (if any).

ERISA - **Employee Retirement Income Security Act** - A federal law passed in 1974 that exempts companies that self-insure their health plans from state insurance regulations and taxes.

FFS - **Fee for Service** - A model of providing health services based on negotiated fees.

Formulary - Drugs approved and paid for by an insurance plan.

FQHC - Federally Qualified Health Center - A healthcare facility that receives grants from the federal government and special pricing because it serves as a primary source of care for many uninsured (Lincoln Community Health Center is one; however, Lyon Park Clinic and Walltown Clinic are LCHC satellite clinics run by Duke).

HDHP - **High Deductible Health Plan** - A particular type of health plan that has a high deductible (sometimes called catastrophic coverage), but has also been qualified to be used in conjunction with a **healthcare savings account**, which may have income tax benefits.

HIPAA - Health Insurance Portability and Accountability Act of 1996 - The federal law which allows people to take their health insurance from one job to the next. The law also enacted strict privacy requirements on the sharing of patient information and strict information security rules for patient data contained on computers.

HMO - **Health Maintenance Organization -** A model for providing health services with negotiated fees that uses "managed care" or "gatekeepers" and networks of providers.

Hospitalist - A physician who specializes in treating patients in hospitals; typically their specialty is internal medicine and they do not have a separate practice in which they treat patients outside the hospital.

HSA - **Health Savings Account -** A savings account that allows people to save pre-tax dollars to use for health care expenses; typically offered in conjunction with a catastrophic health insurance plan. It is portable from employer to employer and unused funds roll over from year to year.

ICD9 - **International Classification of Diseases, Ninth Edition** - These are the codes used by hospital medical records personnel to record a patient's diagnoses and procedures in their medical record.

Indicators - Things that we can measure to see if change is occurring.

LME - Local Management Entity - The administrative structure for Durham's mental health services.

Medicaid - A federal/state health insurance program (that also has County funds in NC) for people who have very limited incomes and that meet certain criteria (pregnant, child, disabled or elderly, etc.).

Medicare - A federal health insurance program for people 65 or older, disabled or have end-stage kidney disease.

MCO - Managed Care Organization - A general term that refers to a health plan that controls costs by offering networks of providers and by engaging in a review of medical necessity under certain circumstances.

MEPS - Medical Expenditure Panel Survey - A nationally representative survey, cosponsored by the National Center for Health Statistics (NCHS), that collects detailed information on the health status, health care use and expenses, and health insurance coverage of individuals and families in the US.

PBM - Pharmacy Benefits Manager - An organization that processes and analyzes prescription drug benefits for a health plan's members. It may set up formularies, arrange for purchasing or contracting with drug manufacturers, or provide **Utilization Review** (**UR**) services to determine medical necessity.

PCP - Primary Care Provider - Some health maintenance organizations require an enrollee to see a primary care provider before obtaining a referral to a specialist.

POS - **Point of Service plan** - A type of health plan that limits costs by charging an enrollee less to see providers within a certain network. Enrollees are permitted to see providers outside the network, but the enrollee's share will be greater.

PPO - Preferred Provider Organization - A model of providing health services with negotiated fees via a network of providers or doctors.

Pre-existing Condition - Any physical and/or mental condition(s) of an insured that existed prior to the effective date of coverage. A pre-existing condition means a sickness or injury during the 12 months prior to the effective date (of coverage) for which medical care, treatment, diagnosis or advice was received or recommended, or the existence of symptoms which would cause an ordinarily prudent person to seek medical care, treatment, diagnosis or advice.

RBA - Results-Based Accountability - A system used by the city and county of Durham to encourage programming that produces "results" or improvements.

RBRVS - Resource Based Relative Value Scale - A method of calculating the allowed amount that a health plan will consider for a service which assigns a value to a procedure based on weighing the resources needed by the provider to provide the service.

Self-funded Plans - The term "self-funded" refers to the way in which an employer group finances the insurance plan for their employees. In self-funded, or "employer sponsored" plans, the employer group uses the combined contributions of the employer and employees to pay for medical expenses for its employees and assumes the administrative responsibilities of traditional insurance companies. Often employer groups operating a self-funded plan will hire a TPA to control costs and perform the administrative functions for them. Self-funded plans are not subject to state mandated benefits or restrictions and are covered under ERISA.

Specialty medical care - Services provided by medical specialists, such as cardiologists and dermatologists, who generally do not have first contact with patients

TPA - Third-Party Administrator - A service firm, not an insurance company, which maintains records regarding the persons covered on behalf of an insurer. **TPA**s can perform any or all of the following functions: underwriting, policy issuance, premium billing and collecting, general customer service and claims payment.

UCR - Usual, Customary and Reasonable - Health plans sometimes use this term to describe what they will pay toward a medical bill if a member goes to a provider that is not in-network. The amount paid by the plan is not based on what the provider charged. The member is then billed for the difference between what the health plan paid and the actual charges. This "balance billing" is in addition to the deductible and coinsurance the member is expected to pay.

Underwriting - The process by which an insurer assesses the health of an applicant and determines whether or not and on what basis it will issue an insurance policy.

Utilization Review - The process of assessing the delivery of medical services to determine if the care provided is appropriate, medically necessary, and of high quality. **UR** may include review of appropriateness of admissions, services ordered and provided, length of stay, and discharge practices, both on a concurrent and retrospective basis.

Appendix B: Acronyms-Health Care Agencies

AASC - Alliance of AIDS Services – Carolina - Serves the Triangle community through education and prevention programs and advocacy for those afflicted with and affected by HIV/AIDS.

ACRA - AIDS Community Residence Association - A Durham agency that provides diverse, supported housing options & compassionate care for persons living with HIV/AIDS.

AHRQ - Agency for Healthcare Research & Quality - A program of the US Dept. of Health and Human Services that provides practical health care information, research findings and data.

BCBS - Blue Cross/Blue Shield - A health insurance agency that in North Carolina cannot deny an individual policy to anyone who wants it and also provides group policies.

CAARE - A Durham agency to support, educate & empower the HIV/AIDS population.

CMS - Centers for Medicare and Medicaid Services - The national program under the US Dept. of Health and Human Services that oversees Medicare and Medicaid.

DCHD - Durham County Health Department - The official local public health agency that operates according to North Carolina General Statutes. The Department provides a wide range of services.

DCHN - Durham Community Health Network – A network of practices, along with DCHD & DSS, that provides free in-home patient education and support to Durham Medicaid patients. It is operated by Duke (Division of Community Health; funded by Medicaid.

DHHS - Department of Health & Human Services - There is a US Department and a Department in each state; NC DHHS oversees Medicaid, CHIP, Long Term Care and Group homes, etc.

DOI - Department of Insurance - The state agency that monitors health insurance plans for compliance with state regulations and approves rate adjustments.

DSS - Department of Social Services - The county agency that receives state and federal funding to administer numerous programs including Medicaid, CHIP, adult and child protective services, food stamp programs, etc.

DUHS - Duke University Health System - Includes DUMC, Durham Regional Hospital, Duke Health Raleigh Hospital, and many of the clinical practices associated with the hospitals.

DUMC - Duke University Medical Center - Includes faculty of Duke University affiliated with the School of Medicine, Nursing, etc.

HAC - Healthcare Access Committee - A committee of the Partnership for a Health Durham.

Healthy Carolinians - A statewide effort to help North Carolina reach “Healthy 2010” objectives for our State.

LATCH - Local Access to Coordinated Healthcare - A program run by DUHS that helps uninsured Durham residents navigate their health needs.

LCHC - Lincoln Community Health Center - A primary care facility that offers adult medicine, pediatrics, adolescent, dental, behavioral health, and prenatal care (a service of the Durham County Health Department) on a sliding scale basis.

Medicaid - A federal/state health insurance program (that also has County funds in NC) for people who have very limited incomes and that meet certain criteria (pregnant, child, disabled or elderly, etc.).

Medicare - A federal health insurance program for people 65 or older, disabled or have end-stage renal/kidney disease.

NC-CDHC - NC Committee to Defend Health Care - A statewide advocacy group that believes the access to healthcare should be a right in the United States.

NC Institute of Medicine - An independent, non-profit organization that serves as a non-political source of health policy analysis and advice in North Carolina.

NCOMH - NC Office of Minority Health & Health Disparities - Promotes and advocates for the elimination of health disparities among all racial and ethnic minorities and other underserved populations in North Carolina.

PDC - Private Diagnostic Clinics - Associated with Duke University Health System and Medical Center, but legally separate from either institution.

PPARx - Partnership for Prescription Assistance - A program supported by drug manufacturers to help non-Medicare individuals with limited incomes obtain primarily brand-name prescription drugs.

PUM - Presbyterian Urban Ministry - A Durham nonprofit that serves emergency financial assistance to residents in need.

PRIMA Health - An organized body of physicians that supports contract negotiations in the area.

SCHIP - State Children's Health Insurance Program - A federal and state program which is called NC Health Choice in NC for uninsured children up 19 years old.

SPA - Senior PHARM*Assist* - A Durham program to help older adults obtain and better manage needed medications.

SSA - Social Security Administration - Administers social security benefits to those eligible and also administers the low income subsidy application for Medicare drug benefits.

TROSA - Triangle Residential Options for Substance Abusers - Durham nonprofit that focuses on helping recovering drug and alcohol abusers to change their lives.

UMD - Urban Ministries of Durham - Provides food, clothing, shelter and supportive services to those in need.

WIA - Women in Action - A Durham nonprofit that provides financial assistance and mediation services to residents in need.

WIC - Women, Infants & Children - A federal program that safeguards the health of low-income women, infants, and children up to age 5 who are at nutritional risk by providing nutritious foods, information, and referrals.

Some web links for glossaries:

http://www.mnhcam.org/hcamgloss.asp

http://covertheuninsuredweek.org/glossary/

https://www.triwest.com/triwest/default.html?/triwest/unauth/content/tricare%5Fresources/

http://www.elderweb.com/glossary/