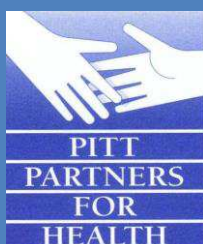


# Vidant Medical Center COMMUNITY HEALTH NEEDS ASSESSMENT 2012



## Acknowledgements

This document serves as the *2012 Pitt County Community Health Needs Assessment (CHNA)* for Vidant Medical Center. Our CHNA partners include the Pitt County Health Department, Pitt Partners for Health, and East Carolina University.

A special thank you is extended to the membership of Pitt Partners for Health, Pitt County's Healthy Carolinians Task Force. The Partnership is chaired by community member, Ann Huggins, and financially supported by Vidant Medical Center Community Health Programs. The group's membership is comprised of individuals from a variety of organizations and communities within Pitt County representing government, health care, the faith community, civic organizations and members of the general public. Pitt Partners for Health serves a critical role in assuring that the community has input into the collection and review of health status data, as well as the selection of health priorities for the county. The priorities recommended by Pitt Partners for Health are shared with the Pitt County Board of Health, the Vidant Medical Center Foundation and the Vidant Medical Center Board of Directors prior to these groups selecting priority health areas for their respective organizations/agencies.

The collaborators wish to acknowledge the participation of individuals from a number of groups throughout Pitt County who shared their knowledge, expertise and creative ideas for improving community health in Pitt County.

- Dr. John Morrow, Public Health Director, and Mr. Steve Lawler, President of Vidant Medical Center, hosted a key leaders meeting to solicit input on the problems and possible strategies to creating a healthier Pitt County. Approximately 30 key leaders participated including both formal and informal leaders from a number of organizations including Vidant Medical Center (vice-presidents – nursing, community health, pastoral services, etc.), City of Greenville (mayor), Town of Bethel (council member), Village of Simpson (mayor), Town of Farmville (mayor), County of Pitt (manager), United Way (interim director), Vidant Medical Center Foundation (executive director), Brody School of Medicine (dean and faculty) East Carolina University College of Nursing (dean), East Carolina University College of Health and Human Performance (dean), Pitt Community College (health sciences dean), Pitt County Sheriff, Area Health Education Center (executive director), Chamber of Commerce (president), Pitt County Development Commission, (executive director), Department of Social Services (director) and Pitt County Medical Society (executive director).
- The Association of Mexicans in North Carolina (AMEXCAN), led by Mr. Juvencio Peralta, provided a vital link between the needs of the immigrant population and the health care agencies/organizations within the community. Lay health leaders within this organization participated in a listening session designed to ensure that Latinos were given a voice in determining priority health concerns.
- The Vidant Medical Center School Health Program, led by Charla Holbrook, provided input on the needs of school-age children and their families.

- The Cornerstone Ministries, Lay Health Advisors Program, a network of more than 30 churches and led by Barbara Lee, has for more than 10 years collaborated with public health to identify and address the needs of African-Americans and others in Pitt County.
- The Community Care Plan of Eastern Carolina, led by Jim Baluss, provided input on the needs of the Medicaid clients that are served by this program.
- The Outreach Team of the Pitt County Health Department serves primarily women of childbearing age and children. The staff of this team was instrumental in helping the collaborators understand the issues and needs of the special populations they serve.
- The Pitt County Medical Society Executive Board provided physician perspectives to the health needs of populations in Pitt County.
- The Pitt County Schools allowed the Youth Risk Behavior Survey and High School Health Survey to be conducted within their middle and high schools. These surveys provided extremely valuable information on health behaviors, attitudes and perceptions of youth in Pitt County.
- The Greenville Youth Council, which has representation from each of the county's six high schools, and Youth Peer Leaders at a local high school, provided input on the needs of adolescents within Pitt County.
- Last, but not least, appreciation is expressed to the people within Pitt County who participated in the 2011 *Community Health Assessment* survey providing invaluable information regarding what concerned them the most and proposed action steps to make Pitt County a healthier community.

Pitt County is fortunate to have a number of resources to assist in the collection and analysis of data.

- The Department of Family Medicine, Brody School of Medicine at East Carolina University, under the direction of Dr. Doyle Cummings, assisted with the development and analysis of the 2011 telephone survey and the implementation and analysis of the Youth Risk Behavior Survey and High School Health Survey.
- The Center for Health Services Research and Development, Brody School of Medicine at East Carolina University, led by Dr. Chris Mansfield, compiled and assisted with the review of secondary data sets for the county.
- The Vidant Medical Center provided funding to conduct the 2011 Community Health Assessment telephone survey. The survey was conducted by the Center for Survey Research at East Carolina University under the direction of Mande Foushee Lancaster.
- The Vidant Health Strategic Development staff provided statistical information regarding emergency department use and an analysis of physician need in Pitt and surrounding counties.

Appreciation is also extended to Heather Ghosheh Paredes, an MPH candidate in the Department of Public Health at Brody School of Medicine, East Carolina University; Dr. Lauren Whetstone, Department of Family Medicine, Brody School of Medicine, East Carolina University; Jo Morgan, Pitt County Health Department; Amy Hattem, Pitt County Health Department; and Amy Thomas, Pitt County Health Department for their contributions to the collection and analysis of the data and the preparation of this report.

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## ***Purpose***

This document serves as the *2012 Pitt County Community Health Needs Assessment (CHNA)* for Vidant Medical Center. Our CHNA partners include the Pitt County Health Department, Pitt Partners for Health, and East Carolina University.

Every four years local health departments within North Carolina are required to conduct a community health assessment. In March of 2010, legislation was passed requiring not-for-profit hospitals to also conduct community health assessments. Pitt County also has a Healthy Carolinians Task Force, Pitt Partners for Health whose membership is comprised of citizens from throughout Pitt County. Members represent various townships, faith-based organizations, civic/not-for-profit agencies, as well as a number of health care organizations. The composition of the group provides an opportunity for the formal health care entities in Pitt County to network and jointly sponsor a number of initiatives with other organizations/individuals that are concerned with improving the health of the people of Pitt County. All three of these entities and East Carolina University collaborate to identify the community health needs in our county.

The purpose of this assessment is to examine the health status of the community in order to determine the health priorities for the next three to four years. The community health assessment process and findings represent the concerns of the public and is conducted in such a way as to involve various stakeholders including members of the community.

Action plans for addressing key community health priorities will be available beginning June 2012.

## ***Team Composition***

Representatives from the Pitt County Health Department, Vidant Medical Center, East Carolina University (ECU) Brody School of Medicine and Pitt Partners for Health jointly conducted the community health assessment. The group had several key tasks including: 1) identifying the types and sources of data to be collected; 2) determining the best method(s) for soliciting input from the community and other key stakeholders regarding health concerns; and 3) selecting strategies for communicating this information to the various stakeholders for the purpose of identifying priority health concerns. See Appendix A for list of team members.

## ***Process Overview***

One requirement for the community health assessment process is the collection of primary data from members of the community. Pitt County elected to conduct listening sessions with key leaders/stakeholders throughout the county, as well as conduct a community health opinion survey via telephone interviews. The community health opinion survey was adapted from the Community Assessment Guidebook, NC Division of Public Health. Additionally, the Youth Risk Behavior Survey and High School Health Survey were conducted with middle school and high school youth enrolled in Pitt County Schools.

Nine (9) listening sessions were held to ascertain community members' perception of health concerns and suggestions for improving health within the community. The telephone survey was a



random, digit dialed survey conducted by the ECU Center for Survey Research. A total of 352 telephone surveys were completed. A total of 1,845 middle school students participated in the Youth Risk Behavior Survey and 3,716 high school students participated in the Health School Health Survey.

A review of secondary data was conducted by examining county level health data primarily compiled by the NC State Center for Health Statistics. Examples of such data included leading causes of mortality, health care resource availability, and prevalence data from the Behavioral Risk Factor Surveillance Survey (BRFSS). Other resources were also utilized such as the East Carolina University Center for Health Services Research and Development, the Department of Family Medicine - Research Division, Vidant Medical Center Strategic Development Department and the Cecil G. Sheps Center for Health Services Research at the University of North Carolina-Chapel Hill.

It is well recognized that other factors within a community affect the health of a community. Demographic, educational, economic, and environmental data for the county were reviewed as well to determine the potential for impact on health status within the county.

Additionally where possible, Pitt County data were compared to data from eastern North Carolina, North Carolina and the United States. A review of data across several years was also conducted to determine trends in health status for Pitt County.

These data were compiled and formal presentations were made to Pitt Partners for Health at the October 2011 and November 2011 meetings. Members were given an additional month to review the data and ask questions. The data presentations were placed on the Pitt County Health Department's website so that members would have ample opportunity for additional review of the data prior to voting on priorities.

At the December 2011 meeting of Pitt Partners for Health, each member was given an opportunity to vote for the five (5) top health priorities. The health categories/priorities were based on the North Carolina 2020 Health Objectives. The voting results were compiled at the meeting and priorities were identified by utilizing a nominal group process. Members discussed the distribution of votes, as well as the opportunities for action/improvement within a proposed priority area. Priorities were selected based on this process. The Partnership identified priority health concerns for all of Pitt County, as well as identified which of these priorities the Partnership would address for the next four years.

In December 2011, the Vidant Medical Center Foundation also received a presentation of the data including Pitt Partners for Health's recommendation for priority health concerns. Following the presentation, the Foundation selected priorities for its 2012-2013 Community Benefits Program.

Members of the Pitt County Board of Health received the data presentation electronically prior to their January 2012 meeting. A review of the data was conducted at the January Board of Health meeting, as well as a review of the process undertaken to determine health priorities including the recommendations from Pitt Partners for Health. The Board identified priorities for the next four years.

From January – May 2012 committees will be formed around the priority areas adopted by Pitt Partners for Health and the Pitt County Board of Health for the purpose of developing action plans. These action plans will be used to guide the work of the committees for the next four years and serve as a basis for reporting status annually toward addressing the priorities identified in this community health assessment process. Health status reports will be made available annually to Pitt Partners, the Board of Health, Vidant Medical Center and its Foundation Community Benefits Program, as well as to the general public in the form of publications and/or presentations.

### ***Outcomes***

***Pitt Partners for Health*** recommended the following as priority health areas for 2012 – 2015:

- Chronic Diseases (including heart disease, stroke, cancer, diabetes)\*
- Physical Activity/Nutrition/Healthy Weight\*
- Injury Prevention/Violence\*
- Access to Care/Transportation
- STDs/Unintended Pregnancies
- Mental Health
- Tobacco Use

An asterisk (\*) denotes the priority areas that Vidant Medical Center and Pitt Partners for Health will focus on in years 2012-15.

The ***Vidant Medical Center Foundation*** selected the following as priority health areas for community benefit funding for 2012-13:

- Access to Care
- Chronic Disease Prevention & Management
- Nutrition/Physical Activity

The ***Pitt County Board of Health*** selected the following health priorities for 2012-15:

- Communicable Disease Control to include sexually transmitted diseases, infectious diseases and foodborne illness
- Infant Mortality and Unintended Pregnancies
- Risk Factor Reduction to include tobacco use, physical activity and nutrition
- Chronic Disease to include cardiovascular disease and diabetes

## ***County Overview***

Pitt County was formed in 1760 and has a land area of approximately 656 square miles. Greenville, the county seat, is centrally located in the county. The county serves the largest concentration of population and industry in the eastern portion of North Carolina.

Pitt County is a rapidly growing, well-diversified employment and service center for eastern North Carolina. As one of the fastest growing centers in the State, Pitt County now ranks as the 14<sup>th</sup> most populous county in North Carolina and the seventh (7<sup>th</sup>) fastest growing county in North Carolina.<sup>1</sup>

Greenville is the home to East Carolina University and notably the Brody School of Medicine. Major employers in the area include Vidant Medical Center, East Carolina University, DSM, NACCO, Alliance One International, ASMO, Attends Healthcare Products, and TRC, Inc.<sup>2</sup> As a university community with a strong business and manufacturing base, the area is characterized by an expanding, highly productive, multi-skilled labor force; a diversified economic base; a low cost of living; an excellent educational system; a large regional health care complex; cultural and recreational opportunities; and a financially sound and progressive local government.

Located on the coastal plain, the county is in the eastern part of North Carolina, approximately 90 miles east of the capital city of Raleigh and 75 miles from the Atlantic Ocean. The Tar River runs through the center of the county. The land generally slopes toward the east and is level with low rolling hills in the west. The temperatures average from a daily high of 73 degrees to a daily low of 50 degrees. The average precipitation is 47 inches of rainfall with only occasional accumulations of snowfall each year.<sup>3</sup>

## ***Demographics***

### ***Population Estimates***

According to the 2010 US Census, Pitt County's population is 168,148. From April 2000 - April 2010, Pitt County's population increased 25.7%.<sup>4</sup> By 2017, Pitt County's population is estimated to be 200,000.<sup>5</sup>

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<sup>1</sup> NC Office of State Budget and Management. Certified 2010 County Estimates. Available at [http://www.osbm.state.nc.us/ncosbm/facts\\_and\\_figures/socioeconomic\\_data/population\\_estimates/county\\_estimates.shtm](http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates/county_estimates.shtm) 9/22/11.

<sup>2</sup> Pitt County Development Commission. Major Employers. Available at <http://locateincarolina.com/major-employers/> 2/13/12.

<sup>3</sup> County of Pitt, NC. Annual Budget, Fiscal Year 2011-12, Financial Services. Available at <http://www.pittcountync.gov/depts/finance/budget/2011-2012/introduction.pdf> 2/13/12.

<sup>4</sup> NC Office of State Budget and Management. Certified 2010 County Estimates. Available at [http://www.osbm.state.nc.us/ncosbm/facts\\_and\\_figures/socioeconomic\\_data/population\\_estimates/county\\_estimates.shtm](http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates/county_estimates.shtm) 9/22/11.

There are 10 incorporated towns/cities within Pitt County. See Table 1 below for breakdown of populations by municipality. The City of Greenville is the largest municipality. Approximately 23% of the county's population resides outside of a municipal corporate limit or extra-territorial jurisdiction.

**Table 1: Municipal Population, Pitt County (2010 U.S. Census)<sup>6</sup>**

<b>Municipality</b>	<b>Corporate Limits (square miles)</b>	<b>Population within Corporate Limits (2010 Census)</b>	<b>Extra Territorial Jurisdiction (ETJ) (square miles)</b>	<b>Number of Structures within Extra Territorial Jurisdiction</b>	<b>Planning Jurisdiction Population Estimate*</b>
Ayden	3.42	4,932	13.30	712	1,467
Bethel	1.06	1,577	7.02	145	299
Falkland	0.23	96	4.42	151	311
Farmville	3.06	4,654	9.99	333	686
Fountain	0.92	427	6.82	195	402
Greenville	35.17	84,554	31.24	5,457	11,247
Grifton	1.97	2,617	15.08	719	1,482
Grimesland	0.68	441	4.10	347	715
Simpson	0.37	416	4.33	1,357	2,797
Winterville	4.50	9,269	6.27	439	905
<b>Subtotal</b>	<b>51.38</b>	<b>108,983</b>	<b>102.57</b>	<b>9,855</b>	<b>20,311</b>
<b>Pitt County</b>		<b>168,148</b>			<b>38,854**</b>

\* ETJ Population estimates are based on number of structures within each ETJ multiplied by 0.90 (2010 U.S. Census occupancy rate) multiplied by 2.29 (2009 American Community Survey Average Household Size).

\*\* Estimated population within Pitt County Planning Jurisdiction calculated as total population minus populations within municipal corporate limits and ETJs.

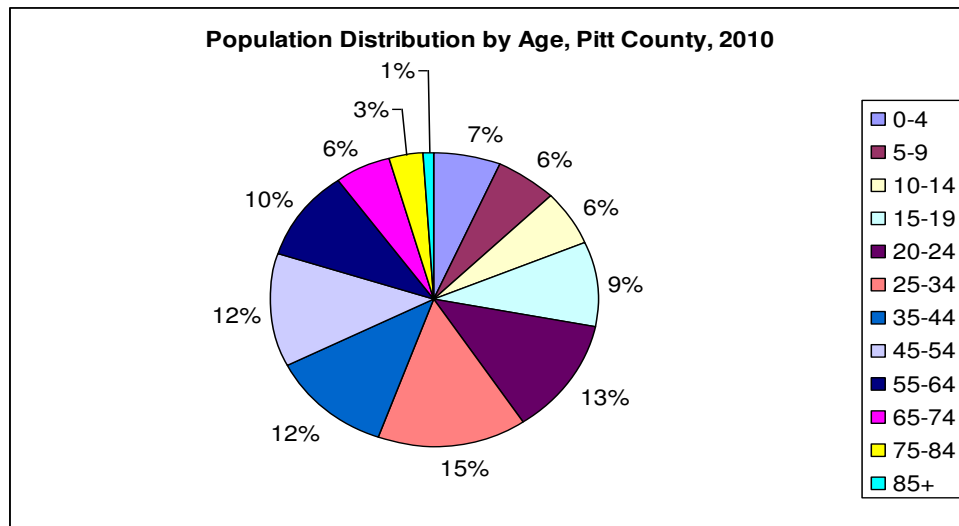
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<sup>5</sup> NC Office of State Budget and Management. Annual County Population Totals, 2010-2019  
[http://www.osbm.state.nc.us/ncosbm/facts\\_and\\_figures/socioeconomic\\_data/population\\_estimates/demog/countytotals\\_2010\\_2019.html](http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates/demog/countytotals_2010_2019.html) 9/22/11.

<sup>6</sup> 2010 U.S. Census, Pitt County Planning Department, October 2011.

### *Age Distribution*

Pitt County's distribution of population by age is depicted in the graph below.<sup>7</sup> Approximately 20% of the population is school-aged children and 10% of the population is age 65 and over. Approximately 47% of the population is male and 53% is female.



### *Race and Ethnicity*

The distribution of race in Pitt County is quite different when compared to North Carolina. In Pitt County, 59% of residents are white and 34% are African-American. Asian, American Indian, Alaska Native, Native Hawaiian or persons reporting two or more races represent the remaining population. In North Carolina, 68.5% of the population is white and 21.5% are African American. According to the 2010 US Census, nearly 10,000 people in Pitt County (5.5% of population) indicated they are of Hispanic origin. North Carolina's percent population reporting they are of Hispanic origin is 8.4% compared to 16.3% of the US population.<sup>8</sup> Based on data available from various Pitt County Health Department clinics, Pitt County's percent population of Hispanic or Latino is under reported in the US Census.

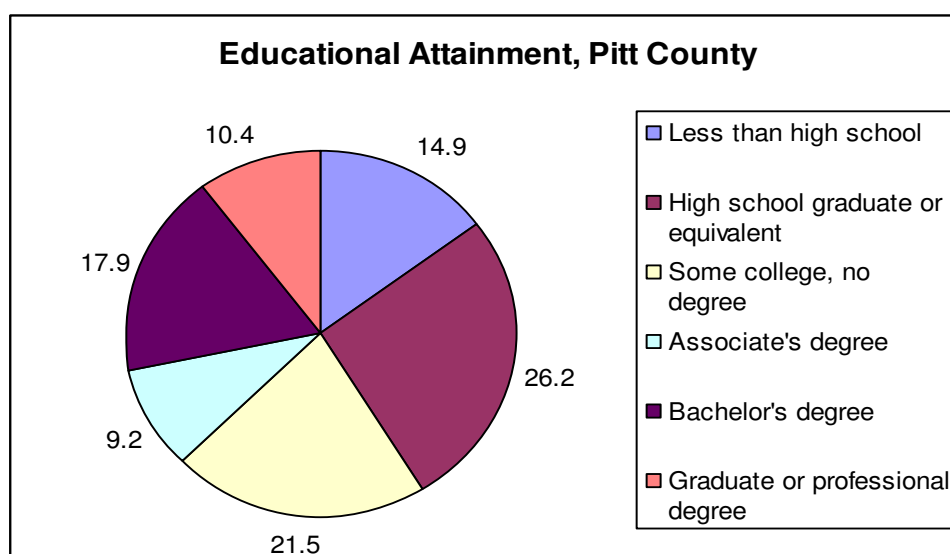
### *Education*

The following graph depicts the educational attainment of Pitt County's population age 25 years and older. According to the latest five year estimates, 14.9% Pitt County's population age 25 and older have not completed high school or received an equivalency diploma compared to 16.4% of NC's population. Pitt County has a slightly higher percentage of adults (28.2%) who report having a

<sup>7</sup> US Census Bureau. American Fact Finder, Pitt County, North Carolina, <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml> 10/10/2011.

<sup>8</sup>US Census Bureau. State and County QuickFacts, Pitt County, North Carolina. Available at <http://quickfacts.census.gov/qfd/states/37/37147.html> 9/26/2011.

bachelor's degree or higher compared to North Carolina adults (26.1%).<sup>9</sup> This is likely due to the presence of East Carolina University and a number of large employers who require college degrees for many of their positions.



Pitt County is served by a public school system, as well as many excellent private parochial and non-parochial schools. Advanced educational opportunities within the county are also available.

One public school system serves Pitt County and its municipalities. The district is comprised of 35 schools and one pre-K center. Student enrollment for 2011 – 2012 is 23,386. According to the latest information available from Pitt County Schools, graduation rates improved in all of the district's six high schools and the district experienced an overall increase of 6.0%. Pitt County Schools experienced a 25.1% reduction in the number of students dropping out of school during the 2009-10 school year.<sup>10</sup>

There are 13 private schools in Pitt County. The enrollment for 2010-2011 was 1,846 students. There were also 557 home schools reported for Pitt County in 2010-2011.<sup>11</sup> Pitt County children are also enrolled in private schools in neighboring counties, but data are not available to indicate the number of children enrolled from the county.

East Carolina University (ECU) remains the third largest university within the University of North Carolina system. ECU had a 2011 fall enrollment of 27,386 students. Nearly 22% (6,061) of the students were enrolled in distance learning programs. Sixty (60) percent of students are females and 40 percent are males. More than 20 percent of students are minorities, and 12 percent are from out

<sup>9</sup> US Census Bureau, American Fact Finder, Selected Social Characteristics in the United States, 2006-2010 American Community Survey 5-Year Estimates. Available at: <http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk> .

<sup>10</sup> Pitt County Schools, Office of Public Information, November 2011.

<sup>11</sup> NC Department of Administration, Division on Non-Public Education. Available at: <http://www.ncdnpe.org/> .

of state.<sup>12</sup> The university offers 16 doctoral degree programs, four (4) first professional degree programs, 76 master's degree programs and 102 bachelor's degree programs. The students' potential, combined with the promise of expanding services such as the East Carolina Heart Institute and the School of Dental Medicine, help ECU make an extraordinary difference in the region and beyond.<sup>13</sup>

For the past two years, Pitt Community College (PCC) has had an enrollment of over 8,000 students – spring 2011 (8,482) and spring 2012 (8,187). This represents an increase of more than 25% over the past five years. Of the 58 community colleges, PCC is ranked among the top 10 largest systems in North Carolina. PCC's educational programs and services are focused to meet the needs of local communities for higher academic education, employment skills, basic education skills, job retraining, personal growth and development, community workplace literacy, and community and economic development.<sup>14</sup> Pitt Community College is recognized for preparing Pitt County and Eastern North Carolina residents in areas of health care and medical administration, as well as in other areas such as fine arts, public services, sciences, construction and industrial technology. The college also provides enrichment through continuing education programs in areas of business, computer technology, cosmetology, health care, adult HS/GED, human resource development and others. Community services allow students to work collaboratively with community members to provide assistance to area residents.<sup>15</sup>

### ***Economic Characteristics***

#### ***Income and Poverty***

For the period 2006-2010, Pitt County's per capita income was \$21,935. Pitt County's percent population living in poverty is 23.9% compared to 15.5% for North Carolina.<sup>16</sup> More than one in four Pitt County children under 18 years of age live in poverty.<sup>17</sup> According to Pitt County Schools, 64% of children enrolled in Pitt County Schools for the 2011-12 school years are eligible for free or reduced price meal benefits.<sup>18</sup> While Pitt County is considered to be "resource rich" compared to neighboring counties, the County's percent population living in poverty is similar to neighboring counties as illustrated in the following graph.<sup>19</sup>

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<sup>12</sup> East Carolina University, Fall 2011 Preliminary Enrollment Figures. Institutional Planning, Assessment, and Research, February 2012.

<sup>13</sup> East Carolina University News Services, February 2012.

<sup>14</sup> Pitt Community College, Office of Enrollment Management and Registrar, February 2012.

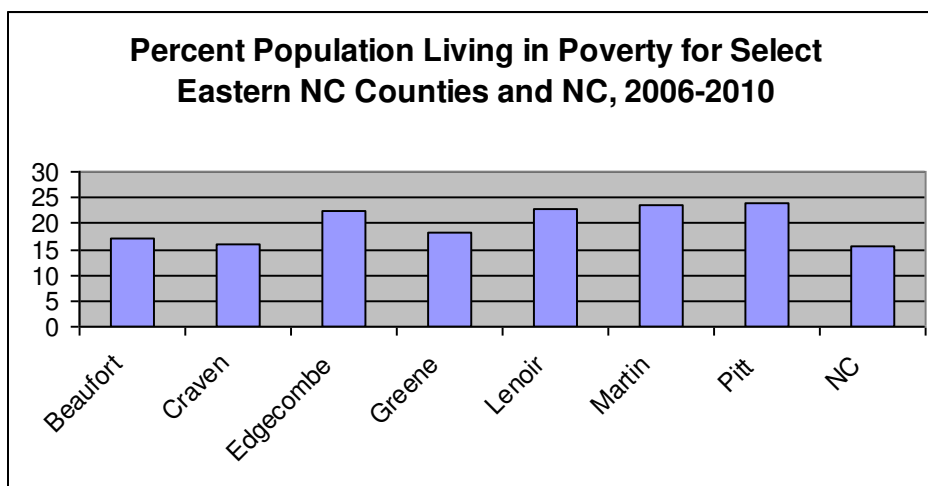
<sup>15</sup> Pitt Community College-2012: <http://www.pittcc.edu/>, February 2012.

<sup>16</sup> US Census Bureau. State and County QuickFacts. Available at <http://quickfacts.census.gov/qfd/states/37/37147.html>.

<sup>17</sup> Economic Research Service, US Department of Agriculture. Available at <http://www.ers.usda.gov/Data/povertyrates/>.

<sup>18</sup> Pitt County Schools, Child Nutrition Program, February 2012.

<sup>19</sup> US Census Bureau. State and County QuickFacts. Available at <http://quickfacts.census.gov/>.



Food and Nutrition Services is a federal food assistance program that helps eligible low-income families buy the food they need for a nutritionally adequate diet.<sup>20</sup> According to Pitt County Department of Social Services, there were 15,385 Pitt County households (32,887 individuals) receiving food and nutrition services as of December 2011.<sup>21</sup>

The Pitt County Health Department administers the Women, Infants and Children's Supplemental Food and Nutrition Program (WIC), a federal program aimed at providing nutrition education and counseling, supplemental nutritious foods and breastfeeding education and support for qualified women and children from birth to age 5 years. In addition to having an identified health need, the WIC Program requires participants to meet income eligibility requirements. There are currently 4,908 individuals enrolled in WIC in Pitt County.<sup>22</sup>

Parents who meet eligibility criteria may also receive assistance from the Subsidized Child Care Program to help pay a portion of their child care bill for children between the ages of 0-9 years. As of December 2011, there were 1,531 Pitt County children whose parents were receiving payment for child care and another 1,499 children were on a waiting list to receive this service.<sup>23</sup>

### *Employment*

Pitt County's unemployment rate for 2011 was estimated at 10.1% compared to 10.0% for the State and 10.3% for the Eastern Partnership. The percentage of persons unemployed has doubled since 2006. The highest unemployment rates for Pitt County for the past two years were reported in June, July and August of 2011.<sup>24</sup>

<sup>20</sup>NC Department of Health and Human Services, NC Division of Social Services, <http://www.ncdhhs.gov/dss/foodstamp/index.htm>.

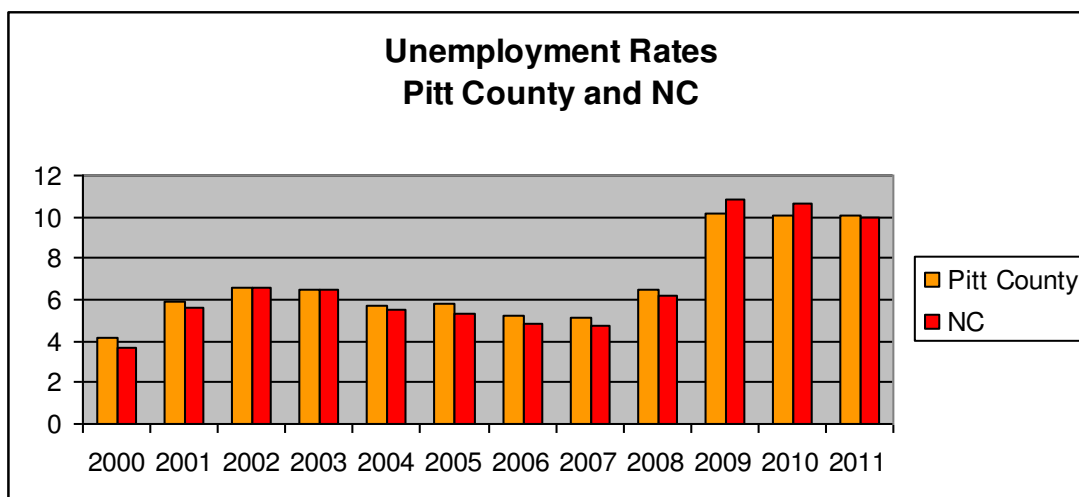
<sup>21</sup>Pitt County Department of Social Services 2011 End of Month Participant Report.

<sup>22</sup> Pitt County Health Department, WIC Program, January 2012.

<sup>23</sup>2011 Pitt County Department of Social Services Day Care Reimbursement Report.

<sup>24</sup> The Employment Security Commission of North Carolina. Labor Market Information. Available at <http://eslmi40.esc.state.nc.us/ThematicLAUS/clfasp/startCLFSAAY.asp> 02/15/12.





Pitt County is a rapidly growing, well-diversified employment and service center for eastern North Carolina. Manufacturing employment accounts for one in 12 jobs, government for one in 3.3, and health care/social services for one in 4.2. There are 14 manufacturing operations employing more than 100 employees with four of these employers employing more than 500. Major manufacturing products include chemicals (chiefly pharmaceuticals), machinery, fabricated metal products and transportation equipment. Three non-manufacturing employers each employ more than 2,500 employees – Vidant Medical Center, East Carolina University and Pitt County Schools.<sup>25</sup>

### *Agriculture*

Agriculture continues to play an important role in Pitt County's economy. According to 2007 data, Pitt County has 435 farms, totaling 171,525 acres. In 2002, Pitt County reported 448 farms, totaling 185,776 acres. The average farm size is 394 acres. The average age of the Pitt County farmer is 55.2 years. Among North Carolina counties in 2010, Pitt County was ranked as a top 10 producer of the following: hogs – 10<sup>th</sup>; all tobacco – 10<sup>th</sup>; cotton - 6<sup>th</sup>; and peanuts - 3<sup>rd</sup>.<sup>26</sup>

### *Transportation*

Access to the area is provided by an east-west Interstate-quality freeway, a north-south four-lane highway, two railroads, and three commercial airports. An international airport is within a two hour drive and Interstate-95 is within 30 miles of Pitt County. Thirty-one (31) motor freight carriers provide regular service to the area, with four operating terminals within the county. Three major deep water ports—Wilmington, NC, Morehead City, NC, and Norfolk, VA—are within 120 miles of the area.

<sup>25</sup> Pitt County Development Commission. Pitt County Major Employers. Available at <http://www.locateincarolina.com/>.

<sup>26</sup> North Carolina Department of Agriculture and Consumer Services. Agriculture Statistics. Available at <http://www.ncagr.com/stats/>

The county has approximately 1800 linear miles of public roads and highways. Major expansion, improvement and maintenance of primary and secondary highway thoroughfares fall under the responsibilities of the State Department of Transportation.

The Pitt-Greenville Airport is just under a 900-acre municipal facility, owned jointly by Pitt County and the City of Greenville and located adjacent to the Greenville Industrial Park in the northwest portion of Greenville. The Airport is a non-hub regional (commuter) airport currently served by US Air Express, with round trips daily to its hub in Charlotte. In addition to airline activity, the airport serves as the portal of entry for a myriad of corporate and business aircraft. Other services utilizing the airport include air ambulance and air freight companies.

Daily rail service is provided to the County by CSX Transportation and Norfolk-Southern Railway, two of the nation's largest railroad systems. Interconnecting in Greenville, these systems allow for the transport of freight shipments to and from such cities as Atlanta, New Orleans, Miami, St. Louis, Chicago, Detroit, Philadelphia and Pittsburgh. A local shortline railroad, Carolina Coastal Railway, serves agricultural and industrial facilities in eastern NC.

The county is served by two publicly subsidized transit systems—one that is operated by the City of Greenville and the other sponsored by Pitt County. The City of Greenville operates a bus system within its corporate limits. The county operates Pitt Area Transit as a department of county government with an appointed advisory board to oversee the operation of this agency and general public transportation.<sup>27</sup> A number of private companies exist within Pitt County that offer transportation services.

### ***Crime and Violence***

As illustrated in the chart below, index crime rates for Pitt County have decreased since 2008. This is true of both violent crime rates, as well as property crime rates.

#### **Index Crime Rates, Pitt County (2007-2010)**

Rates per 100,000 Population

<b>Year</b>	<b>Index Crime Rates</b>	<b>Violent Crime Rates</b>	<b>Property Crime Rates</b>
2007	5,976.4	678.0	5,289.4
2008	6,028.0	650.7	5,377.3
2009	5,509.7	627.9	4,881.8
2010	4,955.9	544.1	4,411.8

Source: North Carolina Department of Justice, 2010 Annual Summary Report, <http://crimereporting.ncdoj.gov/reports.aspx>

However, when viewing crime rates by types of crime, murder, rape and arson demonstrated an increase from 2008-2010. Robbery, aggravated assault, burglary, larceny and motor vehicle theft has

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<sup>27</sup>Pitt County Government. Pitt County Profile, Pitt County 2011-12 Budget Book, Financial Services. Pitt County Development Commission.

demonstrated a steady decline during that same period.<sup>28</sup> Based upon cause of death recorded on death certificates for 2006-2010, Pitt County had 73 deaths to homicides (murder).<sup>29</sup>

## Crime Rates in Pitt County (2007-2010)

Rates per 100,000 Population

Year	Violent Crime Rates				Property Crime Rates			
	Murder	Rape	Robbery	Aggravated Assault	Burglary	Larceny	Arson	Motor Vehicle Theft (MVT)
2007	9.5	26.6	221.0	420.8	1,589.9	3,420.6	30.0	287.8
2008	4.6	15.8	195.8	434.4	1,695.5	3,406.9	14.5	274.9
2009	8.4	21.3	173.2	425.0	1,667.8	3,031.1	22.5	182.9
2010	7.6	20.2	157.3	358.9	1,409.1	2,854.2	18.3	148.5

Source: North Carolina Department of Justice, 2010 Annual Summary Report, <http://crimereporting.ncdoj.gov/reports.aspx>

### *Sexual and Physical Violence*

In 2010, 1.0% of Pitt County respondents indicated having been forced to have sex or do sexual things with a stranger within the past 12 months, as compared to 2009 when 3.9% of respondents indicating a similar situation, and 2007 when 6.5% accounted for the same thing.<sup>30</sup>

In 2010, 13.7% of Pitt County residents reported being pushed, hit, slapped, kicked or physically hurt by a stranger. This was reported by 17.6% of male and 7.9% of female respondents. During this same period, 10.8% of individuals reported this event occurring at the hands of a partner or ex-partner, of which 16.7% were female respondents and 6.8% were male respondents.<sup>31</sup>

During the 2004-2009 period, the North Carolina violent death reporting system, which reports by location of occurrence rather than area of residence, reported 149 violent deaths from injuries sustained in Pitt County of which 134 were Pitt County residents. Of the 134 Pitt County deaths, 72 (48%) were due to suicides, 71 homicides (48%), one (1) from legal interventions, one (1) from unintentional firearm death and four (4) deaths due to undetermined intent.<sup>32</sup>

<sup>28</sup> North Carolina Department of Justice, 2010 Annual Summary Report, <http://crimereporting.ncdoj.gov/reports.aspx>.

<sup>29</sup> North Carolina State Center for Health Statistics, Data for Homicides by County, 2006-2010.

<sup>30</sup> Behavioral Risk Factor and Surveillance Survey, Available at: <http://www.schs.state.nc.us/SCHS/brfss/>, January 2012.

<sup>31</sup> Behavioral Risk Factor and Surveillance Survey, Available at: <http://www.schs.state.nc.us/SCHS/brfss/2010/pitt/topics.html#forcedst>.

<sup>32</sup> Information obtained through a summary released by the North Carolina Injury and Prevention Branch of NCDHHS.gov, available at: <http://www.injuryfreenc.ncdhhs.gov/DataSurveillance/NC-VDRS%20Pitt%20Co.%20Fact%20Sheet%202004-2009.pdf>.

The following information was summarized for Pitt County by the NC Injury and Prevention Branch of the NC Department of Health and Human Services for 2004-2009:

- ✓ Suicide ratio was 3.4 times higher in males than females.
- ✓ Homicide ratio was 3.1 times higher in males than females.
- ✓ Suicide victims were more likely to be white (13.2/100,000) than black (1.5/100,000).
- ✓ Blacks had higher homicide rates (16.5/100,000) than whites (3.5/100,000).
- ✓ Homicide rate was highest among individuals 25-34 years of age.
- ✓ Suicides were more common among individuals 55-64 years of age.
- ✓ Most homicides and suicides were committed using firearms.
- ✓ Forty-nine (49%) of people who committed suicides were characterized as being depressed.
- ✓ Females were more likely to have attempted suicidal actions than males.
- ✓ Arguments or conflicts were contributing factors for male homicides (63%).
- ✓ Intimate violence was the contributing factor in 61% of female homicides.

In 2010, the North Carolina Department of Justice reported a total of 207 sex offenders residing in Pitt County.<sup>33</sup> This compared to 136 offenders in Nash County, 170 offenders in Wayne County, 122 offenders in Wilson County and 104 offenders in Sampson County (peer counties to Pitt County).

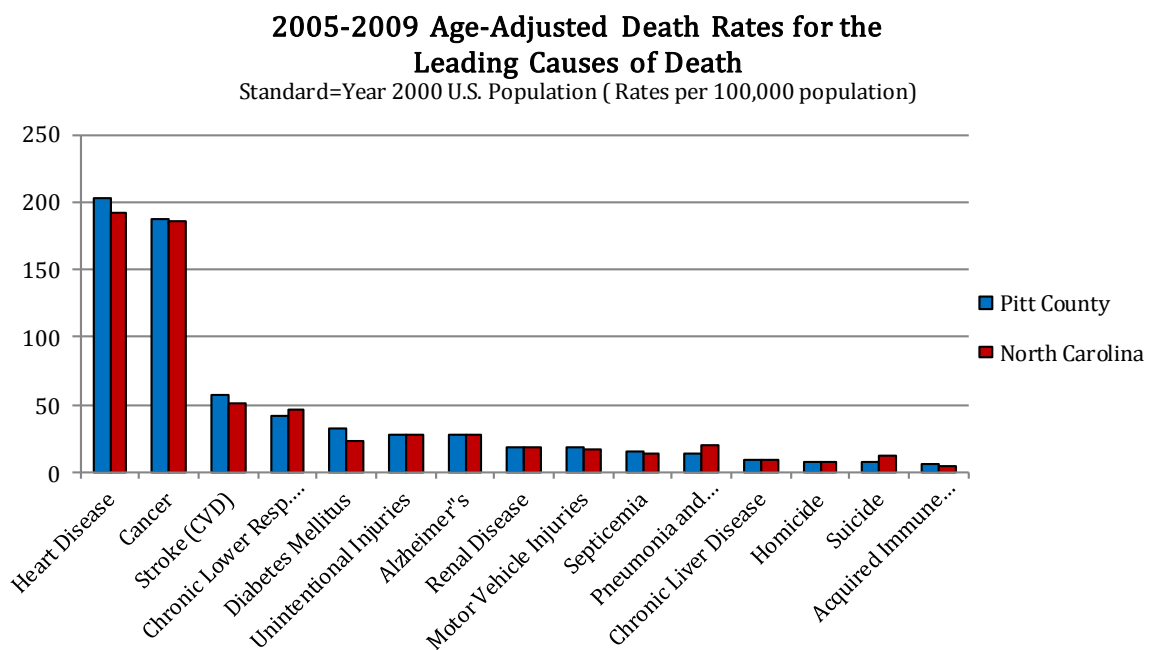
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<sup>33</sup> North Carolina Department of Justice: Offender Statistics by county. Available at: <http://sexoffender.ncdoj.gov/stats.aspx>

## Community Health Status

### Leading Causes of Death

A comparison of the leading causes of death for all ages in Pitt County and North Carolina are illustrated in the graph below. From 2005-2009, Pitt County's total mortality rates for heart disease, cancer, stroke, diabetes mellitus, renal disease, motor vehicle injuries (MVI), septicemia, and homicide surpassed those of North Carolina. The state exceeds Pitt County's death rates for chronic lower respiratory disease, unintentional injuries, Alzheimer's disease, pneumonia and influenza, and suicide. This same pattern was observed during 2000-2004.<sup>34</sup>



Source: NC Center for Health Statistics

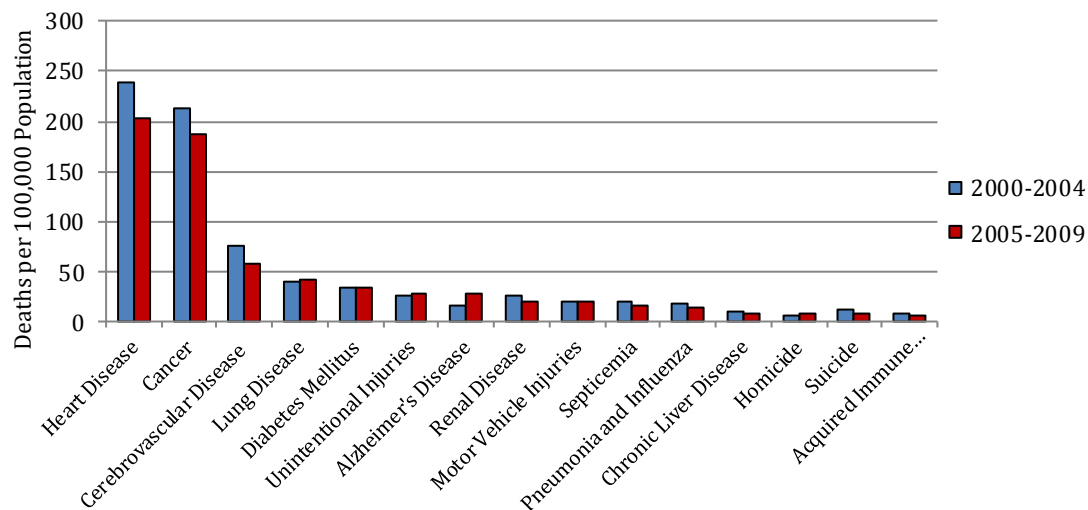
However, the 2005-2009 Pitt County mortality rates due to heart disease, cancer, stroke, diabetes, renal disease, MVI, and septicemia have declined as compare to these same causes of death in Pitt County for 2000-2004.<sup>35</sup> See following graph.

<sup>34</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC Resident Race and Sex-Specific Age-Adjusted Death Rate. Available at <http://www.schs.state.nc.us/SCHS/data/databook/>.

<sup>35</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC Resident Race and Sex-Specific Age-Adjusted Death Rate. Available at <http://www.schs.state.nc.us/SCHS/data/databook/>.

### Age-Adjusted Death Rates for Leading Causes of Death in Pitt County

Standard= year 2000 US Population, rates per 100,000 Population



Source: NC DHHS State Center for Health Statistics

### The Five Leading Causes of Death in Pitt County by Race and Gender, 2005-2009

	*White Male	African American Male	*White Female	*African American Female
1	Heart Disease (242.0)	Cancer (355.3)	Heart Disease (154.3)	Cancer (181.3)
2	Cancer (205.8)	Heart Disease (310)	Cancer (140.7)	Heart Disease (161.8)
3	Chronic Lower Respiratory Disease (58.0)	Cerebrovascular Disease (88.4)	Cerebrovascular Disease (46.2)	Cerebrovascular Disease (82.9)
4	Cerebrovascular Disease (42.3)	Diabetes Mellitus (60.1)	Chronic Lower Respiratory Disease (39.7)	Diabetes Mellitus (65.2)
5	Motor Vehicle Injuries (41.8)	Chronic Lower Respiratory Disease (55.0)**	Alzheimer's Disease (36.2)	Renal Disease (30.6)

\* These remain the same leading causes of death since 2004-2007

\*\*AA Male #5 changed from motor vehicle injuries (2004-2007), which ranks in seventh place for 2005-2009/ close behind for 2005-2009 was Renal Disease (54.8)

When analyzing the data by race and gender for all age groups for 2005-2009, as seen in the table above, the five leading causes of death for white males, white females and African American females continue to be ranked in the same order as compared to 2004-2007. The only difference seen was among the African American male population where chronic lower respiratory disease has moved up to rank as the fifth leading cause of death for this population contrary to 2004-2007, when motor vehicle injuries ranked fifth.<sup>36</sup>

<sup>36</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC Resident Race and Sex-Specific Age-Adjusted Death Rate. Available at <http://www.schs.state.nc.us/SCHS/data/databook/>.

When considering the Pitt County death rates among the population less than 75 years of age, which is an indicator for premature mortality, these rates vary.<sup>37</sup> Deaths occurring prior to 75 years of age has been used as an indicator for premature mortality because the average life expectancy in Pitt County is 76.5 (2006-2008 estimates).<sup>38</sup> As the following tables demonstrate, heart disease is the leading cause of death for all ages; however, cancer is the leading cause of death among individuals less than 75 years of age. This same pattern is also evident when this age population is stratified by race and gender.

### **Pitt County Leading Causes of Death, Age <75 Compared to All Ages, 2005-2009**

Age <75	ALL AGES
1. Malignant Neoplasms-cancer	1. Heart Disease
2. Heart Disease	2. Malignant Neoplasms-cancer
3. Cerebrovascular Disease	3. Cerebrovascular Disease
4. Unintentional Motor Vehicle Injuries	4. Chronic Lower Respiratory Disease
5. Diabetes Mellitus	5. Diabetes Mellitus
6. All Other Unintentional Injuries	6. All Other Unintentional Injuries
7. Chronic Lower Respiratory Disease	7. Alzheimer's Disease
8. Conditions Originating in the Perinatal Period	8. Nephritis, Nephrotic Syndrome and Nephrosis
9. Homicide	9. Unintentional Motor Vehicle Injuries
10. Nephritis, Nephrotic Syndrome and Nephrosis	10. Septicemia

Source: Center for Health Services, Research and Development, ECU

From 2005-2009, unintentional motor vehicle injuries, suicide and all other unintentional injuries continue to be among the top five leading causes of death for white males less than 75 years of age. During this same period, unintentional motor vehicle injuries and homicide ranked among the top five leading causes of death for non-white males, contrary to 2001-2005 when HIV disease and certain conditions originating in the perinatal period were among the five leading causes of death in this group. Cerebrovascular disease (stroke) has continued to rank as the fourth leading cause of death for this group since 2001.<sup>39</sup>

### **Pitt County Leading Causes of Death, Age < 75 Years, 2005-2009**

White Males <75	Non-White Males <75
1. Malignant Neoplasms –cancer, all	1. Malignant Neoplasms - cancer, all
2. Heart Disease	2. Heart Disease
3. All Other Unintentional Injuries	3. Unintentional Motor Vehicle Injuries
4. Unintentional Motor Vehicle Injuries	4. Cerebrovascular Disease
5. Suicide	5. Homicide
6. Chronic Lower Respiratory Diseases	6. Diabetes Mellitus
7. Diabetes Mellitus	7. Conditions Originating in the Perinatal Period
8. Cerebrovascular Disease	8. All Other Unintentional Injuries
9. Chronic Liver Disease and Cirrhosis	9. HIV Disease
10. Conditions Originating in the Perinatal Period	10. Chronic Lower Respiratory Diseases

Source: Center for Health Services, Research and Development, ECU

<sup>37</sup> East Carolina University, Center for Health Services Research and Development. Special data files prepared for Pitt County, September 2011.

<sup>38</sup> North Carolina Division of Public Health, State Center for Health Statistics. Life expectancy in North Carolina 2006-2008 by state and county <http://www.epi.state.nc.us/SCHS/data/lifexpectancy/>.

<sup>39</sup> East Carolina University, Center for Health Services Research and Development. Special data files prepared for Pitt County, September 2011.

Cancer and heart disease continue to be the leading causes of death in the female population less than 75 years of age since 2001-2005. Among white females age less than 75 years, chronic lung disease continues to rank as the third leading cause of death. For 2005-2009, Alzheimer's disease has become the 10<sup>th</sup> leading cause of death for white females less than 75 years of age. Stroke and diabetes rank as the third and fourth leading causes of death in African-American women less than age 75 years. Additionally, deaths from diseases of the liver, hypertension and HIV are leading causes of death among African-American women age less than 75 years.<sup>40</sup>

### **Pitt County Leading Causes of Death, Ages < 75 Years, (2005-2009)**

WHITE FEMALES <75	NON-WHITE FEMALES <75
1. Malignant Neoplasms – cancer, all	1. Malignant Neoplasms
2. Heart Disease	2. Heart Disease
3. Chronic Lower Respiratory Diseases	3. Cerebrovascular Disease
4. Unintentional Motor Vehicle Injuries	4. Diabetes Mellitus
5. All Other Unintentional Injuries	5. Conditions Originating in the Perinatal Period
6. Cerebrovascular Disease	6. Nephritis, Nephrotic Syndrome, and Nephrosis
7. Diabetes Mellitus	7. Congenital Anomalies
8. Chronic Liver Disease and Cirrhosis	8. Essential (Primary) Hypertension and Hypertensive Renal Disease
9. Suicide	9. HIV Disease
10. Alzheimer's Disease	10. Septicemia

Source: Center for Health Services, Research and Development, ECU

### *Heart Disease*

Despite declining mortality rates, as observed in the next graph, heart disease continues to be the leading cause of death in Pitt County accounting for 22.76% of all age-adjusted five-year period (2005-2009) deaths for the county. Pitt County has a 5.5% greater five-year death rate when compared to that of North Carolina and a 7.5% greater rate when compared to that of Nash County.

As observed during 2000-2004, males, both white and African-American, continue to have the highest rates of mortality due to heart disease in Pitt County. However, a closer look at race and sex-specific age-adjusted five year period death rates demonstrate a decrease in rates for all groups from 2000-2004 to 2005-2009.<sup>41</sup>

<sup>40</sup> East Carolina University, Center for Health Services Research and Development. Special data files prepared for Pitt County, September 2011.

<sup>41</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC Resident Race and Sex-Specific Age-Adjusted Death Rate. Available at <http://www.schs.state.nc.us/SCHS/data/databook/>.



Age-Adjusted Heart Disease Mortality Rate, **Pitt County** and **Eastern North Carolina**  
(Rates per 100,000 Population)

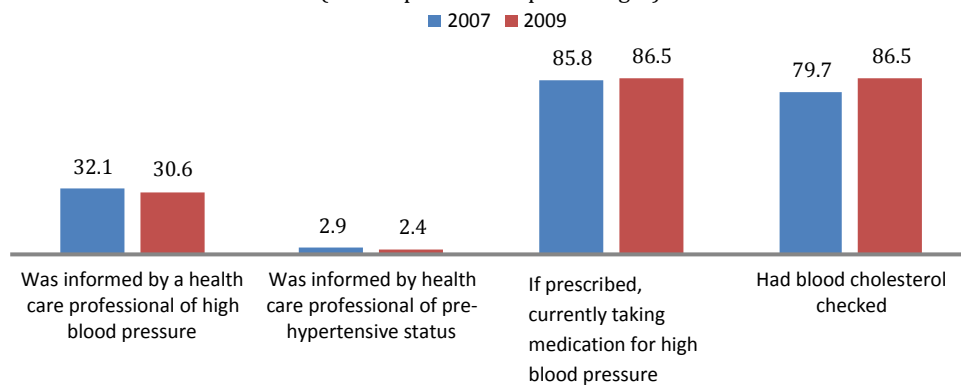


Source: Center for Health Services Research and Development, ECU-NC Data Explorer

A review of the data obtained from the Behavior Risk Factor Surveillance System (BRFSS) indicates that in 2010, 10.5% of Pitt County individuals reported having a history of any type of cardiovascular disease compared to 7.6% in 2009.<sup>42</sup>

### Hypertension and Cholesterol Awareness, Pitt County, NC

(results provided in percentages)



When looking at the two major risk factors for heart disease, hypertension and elevated cholesterol, the table above compares combined responses for Pitt County men and women for 2007 with responses in 2009. A further analysis of the data by gender found that in 2009 31.8 % of men and 29.6% of women were told they had high blood pressure. During this period, 88.9% of men and 84.4% of women who were prescribed medication reported having taken their medications for high blood pressure. This differs somewhat from 2007, when 27.4% of men and 36.9% of women were

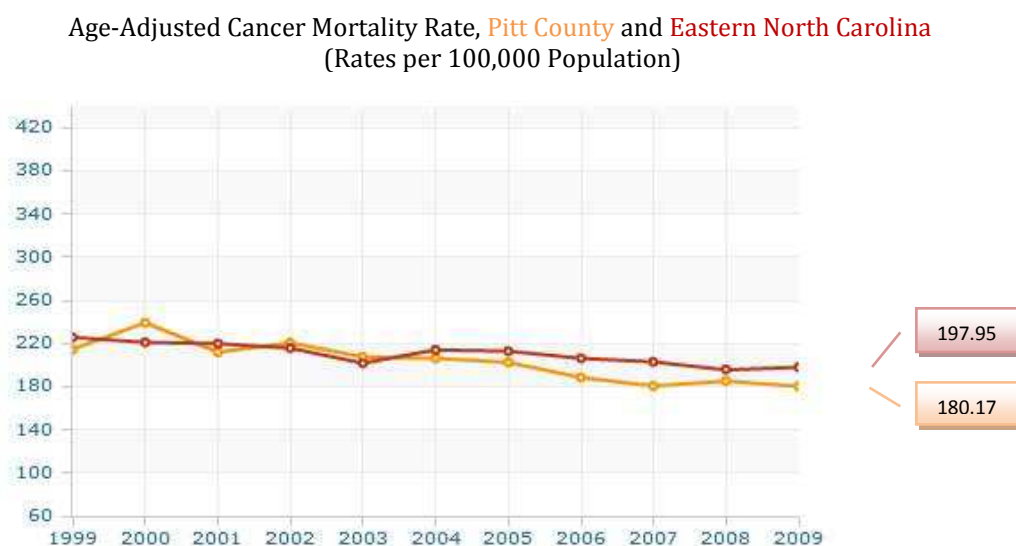
<sup>42</sup> North Carolina Division of Public Health, State Center for Health Statistics. Behavioral Risk Factor Surveillance System (BRFSS), 2010 Results. Available at <http://www.schs.state.nc.us/SCHS/brfss/2010/pitt>.

told they had the condition, during which time 84.2% of men and 87.0% of women who were prescribed medication reported taking the required medications for high blood pressure.<sup>43</sup>

In 2009, 86.5% of Pitt County residents reported having their blood cholesterol checked as compared to 79.7% in 2007. For 2007 and 2009, whites were more likely (87.3% and 90.6%, respectively) to have ever had their blood cholesterol checked as compared to other racial groups (67.4% and 79.3%, respectively).<sup>44</sup>

## Cancer

Cancer continues to be the second leading cause of death for all populations as well as the leading cause of death for populations less than 75 years of age for 2005-2009. It is the number one leading cause of death among Pitt County residents between the ages of 40-84 years of age. However, Pitt County has demonstrated a steady decline in age-adjusted cancer death rates since 1999 as seen in the graph below. Since 2004, Pitt County cancer death rates continue to remain lower than the rates for Eastern North Carolina.



Source: Center for Health Services Research and Development, ECU-NC Data Explorer

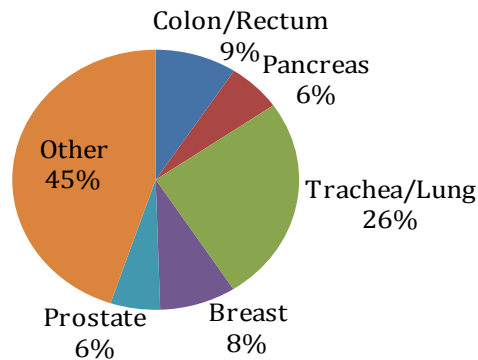
Lung, colon/rectal, breast, prostate and pancreatic cancer continue to make up more than half (55%) of the all deaths due to cancer for 2005-2009.<sup>45</sup>

<sup>43</sup> North Carolina Division of Public Health, State Center for Health Statistics. Behavioral Risk Factor Surveillance System (BRFSS), 2007 and 2009 Results. Available at <http://www.schs.state.nc.us/SCHS/brfss/>.

<sup>44</sup> North Carolina Division of Public Health, State Center for Health Statistics. Behavioral Risk Factor Surveillance System (BRFSS), 2007 and 2009 Results. Available at <http://www.schs.state.nc.us/SCHS/brfss/>.

<sup>45</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC Resident Race and Sex-Specific Age-Adjusted Death Rate. Available at <http://www.schs.state.nc.us/SCHS/data/databook/>.

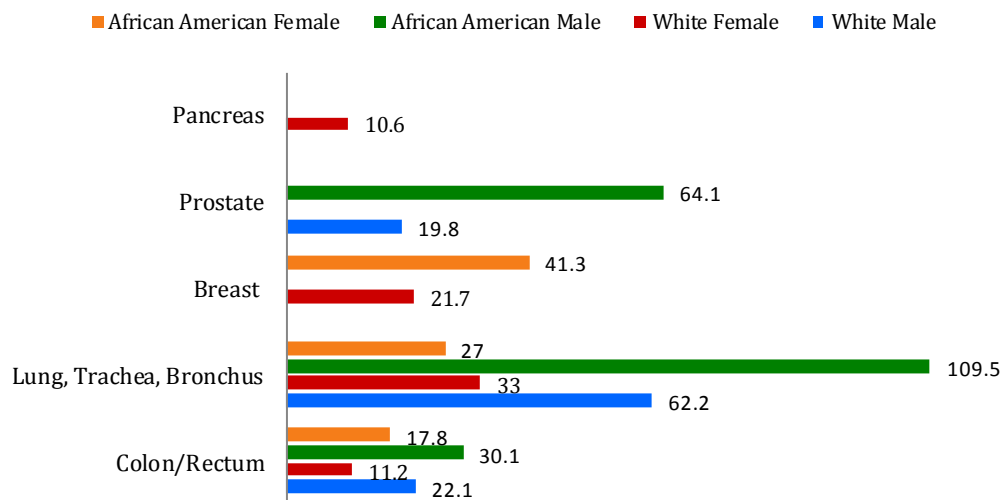
## Reported Cases of Cancer by Type (2005-2009) Pitt County, NC



Source: NC DHHS State Center for Health Statistics/2011 County Health Data Book

A review of cancer deaths by race and sex for the major cancer types follows. Note that data were only available for white females for pancreatic cancer deaths due to an insufficient number of reported deaths for all other race and gender specific groups in the population.

### 2005-2009 Race and Sex-Specific Age-Adjusted Cancer Death Rates, Pitt County (Rates per 100,000, Standard=year 2000 US population)



Source: National Center for Health Statistics/2011-County Health Data Book

The African- American male population continues to demonstrate the highest prevalence of death due to prostate, lung and colon/rectal cancer. However, deaths rates due to colon/rectal and lung cancer for this same population have decreased since 2000-2004 (from 45.2 to 30.1 and 115.1 to 109.5, respectively).<sup>46</sup>

<sup>46</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC Resident Race and Sex-Specific Age-Adjusted Death Rate. Available at <http://www.schs.state.nc.us/SCHS/data/databook/>.

During 2005-2009, colon/rectum cancer accounted for 9% of all cancer types in adults. Due to a lack of sufficient self-reported data, data from eastern North Carolina (ENC) were used to report compliance with colon cancer screening. The US Preventive Services Task Force recommends regular screening for colorectal cancer beginning at age 50<sup>47</sup>. In 2010, only 41.3% of individuals over the age of 50 living in eastern North Carolina had reported performing a home kit blood stool test. Close to 70% of individuals reported having a sigmoidoscopy or a colonoscopy, as compared to 75.7% in 2008.<sup>48</sup>

Lung cancer is the leading cause of cancer in Pitt County. The death rate due to lung cancer is tremendously high among the African American male population (rate of 109.5), as depicted in previous graph, and nearly two times higher than in white males. Smoking continues to be the leading risk factor for developing lung cancer. See *Other Health Status Data* for a review of information on smoking behaviors.

Death rates due to breast cancer in white females have decreased since 2000-2004 (from 26.0 to 21.7), contrary to death rates for African American females which have demonstrated an increase since 2000-2004 (from 30.7 to 41.3).<sup>49</sup>

In 2010, 84.2% of Pitt County women age 40 years and over reported having a mammogram, (87.9% of white women and 77.9% of other racial backgrounds). This compared to 2008 when 84.0% of Pitt County women reported having a mammogram, (85.9% of white women and 79.3% women of other racial backgrounds). During this time, nearly two of every 10 (16.8%) women over the age of 50, living in ENC, reported not having a mammogram performed during the two years prior. When looking at this same age group of women by racial background, other minorities (31.5%) were least likely to have the procedure performed when compared to whites (17.3%) and African Americans (12.9%). In 2010, 94.6% of women living in Pitt County reported having a clinical breast exam.<sup>50</sup>

The following chart illustrates the projected new cancer cases and deaths for select sites for North Carolina and Pitt County for 2011. For both Pitt County and North Carolina, breast cancer is projected to have the highest number of new cases for 2011 among the four sites listed, whereas, lung cancer is projected to have the highest number of deaths.<sup>51</sup>

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<sup>47</sup>Centers for disease Control and Prevention. Guidelines: Prevention of Colon Cancer. [http://www.cdc.gov/cancer/colorectal/basic\\_info/screening/guidelines.htm](http://www.cdc.gov/cancer/colorectal/basic_info/screening/guidelines.htm) .

<sup>48</sup> North Carolina Division of Public Health, State Center for Health Statistics. Behavioral Risk Factor Surveillance System (BRFSS), 2008 and 2010 Results. . Available at <http://www.schs.state.nc.us/SCHS/brfss/> .

<sup>49</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC Resident Race and Sex-Specific Age-Adjusted Death Rate. Available at <http://www.schs.state.nc.us/SCHS/data/databook/> .

<sup>50</sup> North Carolina Division of Public Health, State Center for Health Statistics. Behavioral Risk Factor Surveillance System (BRFSS), 2008 and 2010 Results. Available at <http://www.schs.state.nc.us/SCHS/brfss/> .

<sup>51</sup> North Carolina Division of Public Health, State Center for Health Statistics. Projected New Cancer Cases and Deaths for Selected Sites by County, 2011. Available at <http://www.schs.state.nc.us/SCHS/CCR/proj11co.pdf> .

## Projected New Cancer Cases and Deaths for North Carolina and Pitt County-2011 (Selected Sites)

	Projected New Cases		Projected Deaths	
	North Carolina	Pitt County	North Carolina	Pitt County
Total	51,690	732	19,146	264
Lung/ bronchus	7,991	110	5,934	81
Breast	8,507	124	1,350	19
Prostate	7,679	105	994	13
Colon/ rectum	4,858	68	1,663	23

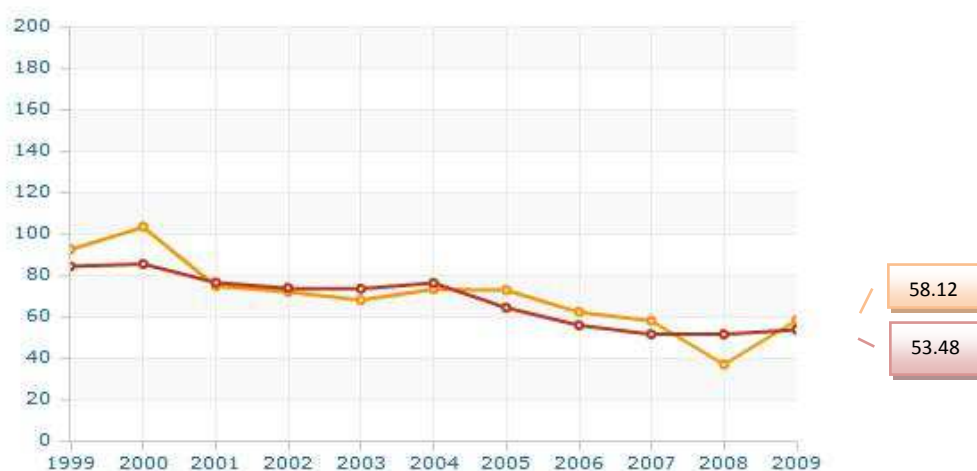
Source: NCCSHS/ Central Cancer Registry

### Cerebrovascular Disease(Stroke)

Cerebrovascular disease or stroke continues to be the third leading cause of death in Pitt County for all age groups. African American men and women continue to demonstrate the highest prevalence of stroke when compared to whites. During 2005-2009, the total death rates due to stroke (57.4) decreased for all race and sex-specific groups when compared to 2000-2004 (76.1). Stroke is the third leading cause of death among Pitt County residents 40-84 years of age.<sup>52</sup>

During 2005-2009, Pitt County demonstrated a 13.7% greater death rate due to stroke as compared to North Carolina and a 9.5% greater rate when compared to Nash County.<sup>53</sup>

Age-Adjusted Cerebrovascular Mortality Rate, Pitt County and Eastern North Carolina  
(Rates per 100,000 population)



Source: Center for Health Services Research and Development, ECU-NC Data Explorer

<sup>52</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC Resident Race and Sex-Specific Age-Adjusted Death Rate. Available at <http://www.schs.state.nc.us/SCHS/data/databook/>.

<sup>53</sup> North Carolina Healthy Carolinians, CHA resources: calculations worksheet phase3. <http://www.healthycarolinians.org/assessment/resources/survey.aspx>.

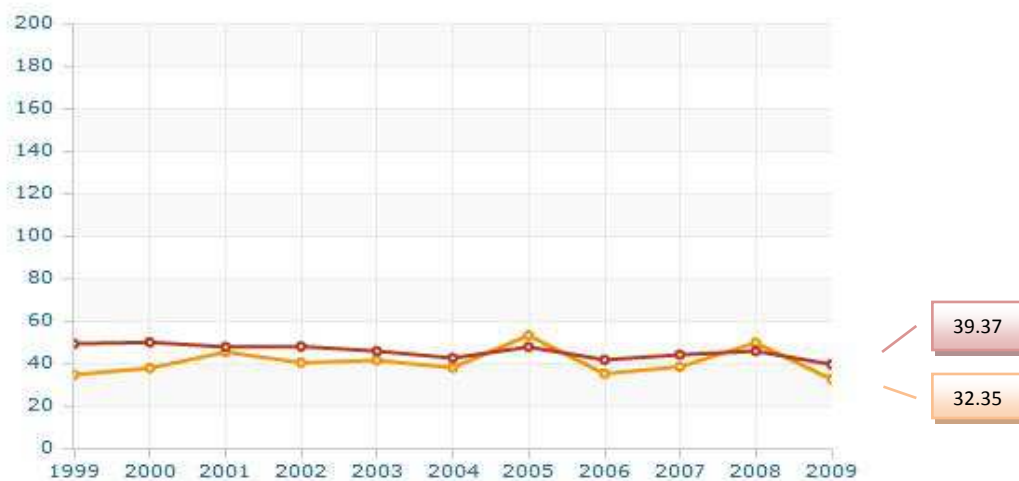
### *Chronic Lower Respiratory Disease*

Total age-adjusted death rates due to chronic lower respiratory disease, also referred to as chronic lung disease or COPD, continue to slightly fluctuate over the years. Total death rates due to COPD (41.4) for 2005-2009 have increased since 2000-2004 (40.1). However, total age-adjusted death rates due to COPD for Pitt County (41.4) continue to be lower than those for the North Carolina (47.0). Death rates continue to be highest among white (58.0) and African American (55.0) males. Chronic lung disease is the fourth leading cause of death among white females of all age groups for 2005-2009.<sup>54</sup> Among all individuals <75 years of age, chronic lung disease is the seventh leading cause of death and the third leading cause of death among white females of this age group. COPD is the fourth leading cause of death among Pitt County residents 65-84 years of age.<sup>55</sup>

#### Age-Adjusted Mortality Rate due to **Chronic Lower Respiratory Disease**

**Pitt County** and **Eastern North Carolina**

(rates per 100,000 population)



Source: Center for Health Services Research and Development, ECU-NC Data Explorer

### *Diabetes Mellitus*

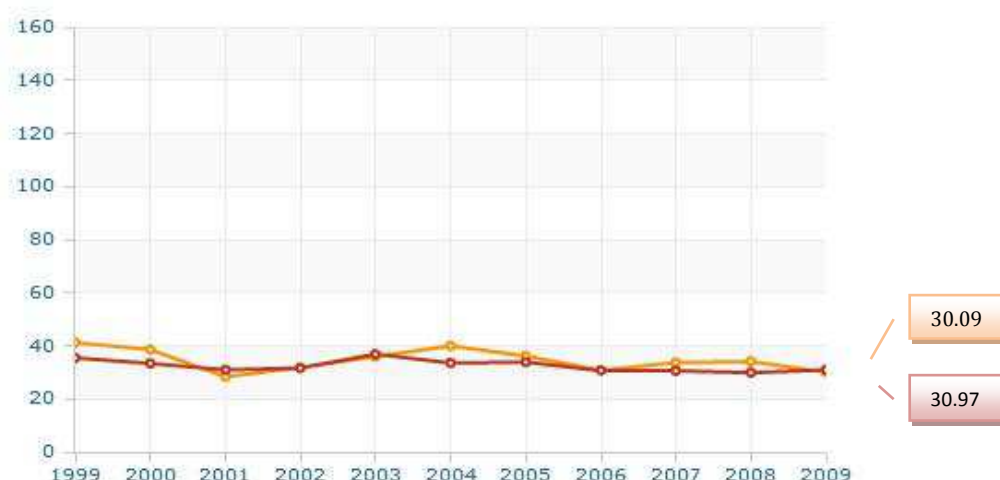
Death rates due to diabetes demonstrate a steady decline. Nonetheless, diabetes continues to be the fifth leading cause of death in Pitt County for all age groups, as well as the fifth leading cause of premature mortality among Pitt County residents. There is a 39.0% greater prevalence of mortality due to diabetes in Pitt County (32.8) when compared to North Carolina (23.6). Mortality due to diabetes continues to be a tremendous problem among our minority populations with death rates

<sup>54</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC Resident Race and Sex-Specific Age-Adjusted Death Rate. Available at <http://www.schs.state.nc.us/SCHS/data/databook/>.

<sup>55</sup> East Carolina University, Center for Health Services Research and Development. Special data files prepared for Pitt County, September 2007 and September 2011.

highest among African American males (60.1) and females (65.2), making it the fourth leading cause of death for each of these groups.<sup>56</sup>

Age-Adjusted **Diabetes Mellitus** Mortality Rate, **Pitt County** and **Eastern North Carolina**  
(Rates per 100,000 population)



Source: Center for Health Services Research and Development, ECU-NC Data Explorer

A review of BRFSS reveals that:

- In 2010, 7.4% of adults in Pitt County reported being told they had diabetes compared to 7.6% in 2009.
- Over 1/3 (34.5%) of individuals in ENC who were told they had diabetes were between 30-50 years of age, similar to that reported in 2009 (35.9%). Due to small reporting numbers for Pitt County, data is not available for comparison.
- For African Americans residing in ENC, 43.5 % reported they were between the ages of 30-50 years when they were told they had diabetes, and 32.8% were between 50-60 years of age.
- Less than half (48.6%) of adults in ENC who have diabetes report they have attended a course/class in how to manage their diabetes compared to 53.7% of North Carolina adults with diabetes. Data are not available for Pitt County adults with diabetes.
- In 2010, 68.4% of adults with diabetes in ENC reported having a hemoglobin A1C test performed two to four times in a 12 month period, compared to 67.7% in 2009.<sup>57</sup>

According to the American Diabetes Association Standards for Medical Care released in 2011, hemoglobin A1C testing should be performed routinely in all patients with diabetes. The test should

<sup>56</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC Resident Race and Sex-Specific Age-Adjusted Death Rate. Available at <http://www.schs.state.nc.us/SCHS/data/databook/>.

<sup>57</sup> North Carolina Division of Public Health, State Center for Health Statistics. Behavioral Risk Factor Surveillance System (BRFSS), 2009 and 2010 Results. Available at <http://www.schs.state.nc.us/SCHS/brfss/>.

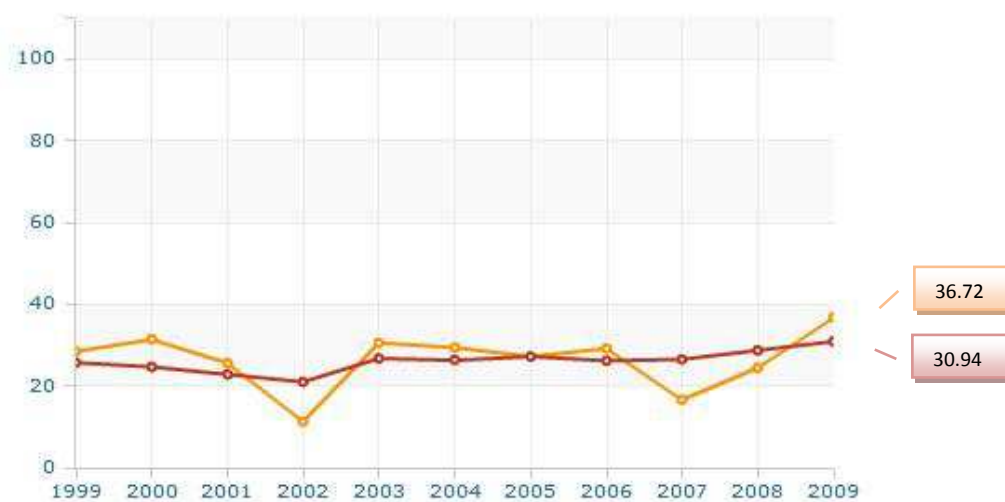
be done at least two times a year in patients who are meeting their glycemic goals, and quarterly in patients not meeting their goals.<sup>58</sup>

### *Unintentional Injuries*

Unintentional injuries is the sixth leading cause of death for all ages in Pitt County since 2001. Since 2007, Pitt County has demonstrated a rise in death due to unintentional injuries. However, it continues to be the fourth leading cause of death among all individuals less than 75 years of age. For 2005-2009, it was the third leading cause of premature mortality in white males, with the highest prevalence of death for all ages found among white males (41.8). This rate has risen since 2000-2004, when the death rate was 30.8.

Death rates for African American males in Pitt County showed a decline from 2000-2004 (from 42.5 to 29.0). On the contrary, death rates for African American females for 2005-2009 increased compared to 2000-2004 (from 10.7 to 17.1).<sup>59</sup>

Age-Adjusted Mortality Rate due to other **Unintentional Injuries**, **Pitt County** and **Eastern North Carolina**  
(Rates per 100,000 population)



Source: Center for Health Services Research and Development, ECU-NC Data Explorer

<sup>58</sup> Standards of Medical Care in Diabetes-2010. Diabetes Care, January 2011, vol 34 Suppl. 1 (S11-S61). Also at [http://care.diabetesjournals.org/content/33/supplement\\_1/](http://care.diabetesjournals.org/content/33/supplement_1/).

<sup>59</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC Resident Race and Sex-Specific Age-Adjusted Death Rate. Available at <http://www.schs.state.nc.us/SCHS/data/databook/>.



The following three charts illustrate the leading causes of injury death, injury hospitalizations and injury ED visits by age group for Pitt County during 2007-2009.

#### Leading Causes of Injury Death by Age Group, Pitt County (2007-2009)

All age groups	Ages: 0-14	Ages: 15-34	Ages: 35-64
MVT*, unintentional Poisoning, unintentional, fall Firearm (Assault) Firearm (self-inflicted) Unspecified, unintentional	MVT* Unspecified, assault; Poisoning	MVT*, unintentional Firearm (assault) Poisoning (unintentional) Firearm (self-inflicted) Fall (unintentional)	MVT* (unintentional) Poisoning (Unintentional) Firearm (self-inflicted) Firearm (assault) Suffocation (self-inflicted)
*MVT – Motor Vehicle Trauma			

Source: NC Department of Health and Human Services

<http://www.injuryfreenc.ncdhhs.gov/DataSurveillance/Top5TablesByCountyallages2007-2009c.pdf>,  
(January 2012).

#### Leading Causes of Injury Hospitalization by Age Group, Pitt County (2007-2009)

All age groups	Ages: 0-14	Ages: 15-34	Ages: 35-64
Fall (unintentional) MVT (unintentional) Poisoning (self-inflicted) Poisoning (unintentional) Unspecified (unintentional)	Fall (unintentional) MVT (unintentional) Poisoning (unintentional) Natural/Environ (unintentional) Fire/burn (unintentional)	Poisoning (self-inflicted) MVT (unintentional) Fall (unintentional) Poisoning (unintentional) Cut/pierce (self-inflicted)	Fall (unintentional) MVT (unintentional) Poisoning (self-inflicted) Poisoning (unintentional) Poisoning (undetermined) MVT (unintentional)

Source: NC Department of Health and Human Services

<http://www.injuryfreenc.ncdhhs.gov/DataSurveillance/Top5TablesByCountyallages2007-2009c.pdf>,  
(January 2012).

#### Leading Causes of Injury ED Visits by Age Group, Pitt County (2007-2009)

All age groups	Ages: 0-14	Ages: 15-34	Ages: 35-64
Fall (unintentional) MVT (unintentional) Struck (unintentional) Overexertion (unintentional) Cut/pierce (Unintentional)	Fall (unintentional) Struck (unintentional) MVT (unintentional) Other spec/class (unintentional)	MVT (unintentional) Fall (unintentional) Struck (unintentional) Overexertion (unintentional) Cut/pierce (Unintentional)	Fall (unintentional) MVT (unintentional) Overexertion (unintentional) Struck (unintentional) Cut/pierce (Unintentional)

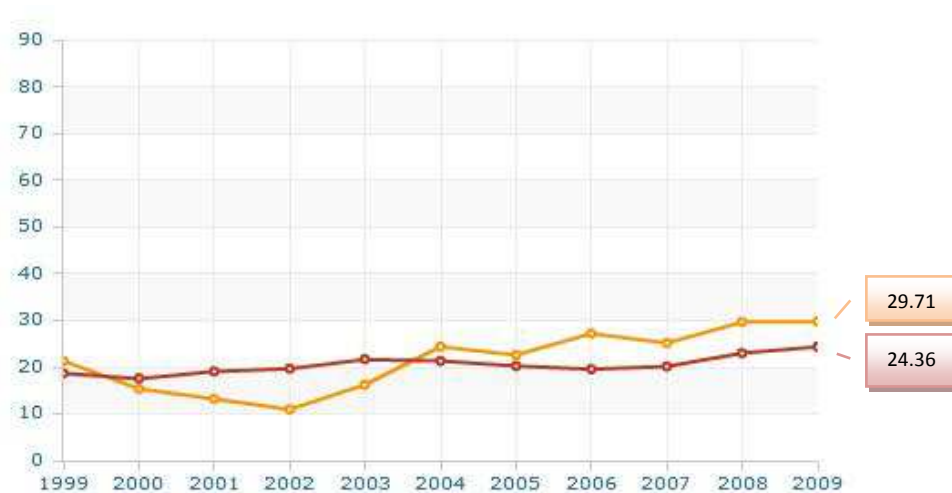
Source: NC Department of Health and Human Services

<http://www.injuryfreenc.ncdhhs.gov/DataSurveillance/Top5TablesByCountyallages2007-2009c.pdf>,  
(January 2012).

## Alzheimer's Disease

Pitt County death rates due to Alzheimer's disease have demonstrated a steady increase since 2002 as illustrated in the graph below. Also, death rates in Pitt County have been slightly higher than those of eastern North Carolina since 2004. Death due to Alzheimer's is now the seventh leading cause of death in all age groups, up from its position as 10<sup>th</sup> leading cause of death for 2001-2005. During 2005-2009, Alzheimer's became the fifth leading cause of death for white females of all ages (36.2), demonstrating an increase since 2000-2004 when death rates for this same group were 19.0. Death due to Alzheimer's is now the 10<sup>th</sup> leading cause of premature mortality (age <75 years) among white females residing in Pitt County and the sixth leading cause of death among residents 65-84 years of age.<sup>60</sup>

Age-Adjusted Mortality Rate due to **Alzheimer's disease**, **Pitt County** and **Eastern North Carolina**  
(rates per 100,000 population)



Source: Center for Health Services Research and Development, ECU-NC Data Explorer

## Kidney Disease

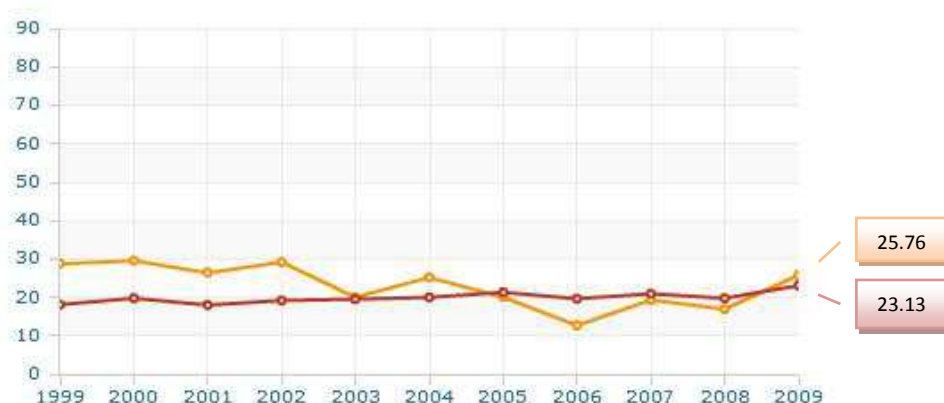
In Pitt County death due to kidney related diseases (nephritis, nephrotic syndrome and nephrosis) has moved from the sixth leading cause of death for 2000-2004 (25.7) to the eighth leading cause of death for 2005-2009 (19.2). It is the seventh leading cause of death among Pitt County residents 65-84 years of age and the sixth leading cause of death in residents older than 85 years. As illustrated in the graph, death rates in eastern North Carolina have remained somewhat stable over the past 10 years, contrary to the rates for Pitt County which appear to show an upward rise since 2006, and remain higher than rates for North Carolina for 2005-2009.

For 2005-2009, death rates due to kidney disease in Pitt County continue to remain highest among the African American population, with rates almost two times higher in African American males

<sup>60</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC Resident Race and Sex-Specific Age-Adjusted Death Rate. Available at <http://www.schs.state.nc.us/SCHS/data/databook/>.

(54.8) than in females (30.6).<sup>61</sup> In Pitt County, kidney disease is the 10<sup>th</sup> leading cause of premature mortality for males and females of all races and is the sixth leading cause of death among African American females less than 75 years of age.<sup>62</sup>

Age-Adjusted Mortality rates due to **Kidney Disease, Pitt County** and **Eastern North Carolina**  
(Rates per 100,000 population)



Source: Center for Health Services Research and Development, ECU-NC Data Explorer

### *Motor Vehicle Injuries*

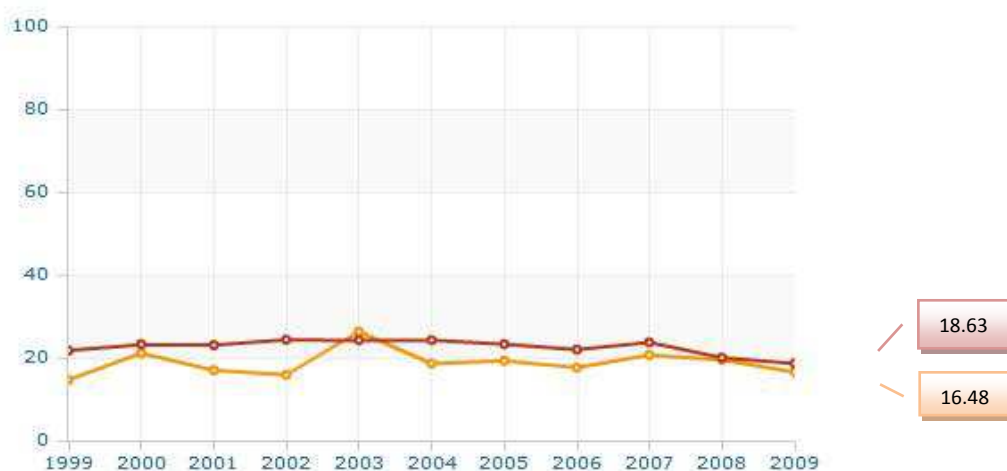
Death due to motor vehicle injuries in Pitt County has fallen to the ninth leading cause of death for 2005-2009, however rates continue to be slightly higher than rates for North Carolina (a rate of 18.8 for Pitt County compared to a rate of 17.6 for NC). Death rates due to motor vehicle injuries for Pitt County have remained somewhat stable for the past decade and, as illustrated by the graph, continue to be lower than rates for eastern North Carolina. In Pitt County, rates are highest among African American males (41.7), being more than 1.5 times higher than that of white males (26.9), and lowest among African American females. For Pitt County, death due to motor vehicle injuries is the fourth leading cause of premature mortality, standing as the second leading cause of death for 0-19 year olds and as the leading cause of death for 20-39 year olds for 2005-2009.<sup>63</sup>

<sup>61</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC Resident Race and Sex-Specific Age-Adjusted Death Rate. Available at <http://www.schs.state.nc.us/SCHS/data/databook/>.

<sup>62</sup> East Carolina University, Center for Health Services Research and Development. Special data files prepared for Pitt County, September 2011.

<sup>63</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC Resident Race and Sex-Specific Age-Adjusted Death Rate. Available at <http://www.schs.state.nc.us/SCHS/data/databook/>.

### Age-Adjusted Mortality Rate due to **Motor Vehicle Injuries**, **Pitt County** and **Eastern North Carolina** (rates per 100,000 population)



Source: Center for Health Services Research and Development, ECU-NC Data Explorer

### *Septicemia*

Pitt County's tenth leading cause of death is septicemia. Due to changes in disease control and behavioral risk factors, this is the only infectious disease currently in the top ten causes of death for Pitt County compared to three infectious diseases in the top ten a decade ago (septicemia, pneumonia/influenza and HIV/AIDS)<sup>64</sup>. Septicemia is caused by the spread of microorganisms and their toxins through the bloodstream. The public often refers to this infection as "blood poisoning." The mortality rate for septicemia in Pitt County in 2009 was slightly less than that for eastern NC and the state of North Carolina as a whole. Death rates in Pitt County are approximately one and a half to two times higher among African Americans compared to whites<sup>65</sup>.

### Age-Adjusted **Septicemia** Mortality Rate, **Pitt County** and **Eastern North Carolina** (rates per 100,000 population)



Source: Center for Health Services Research and Development, ECU-NC Data Explorer

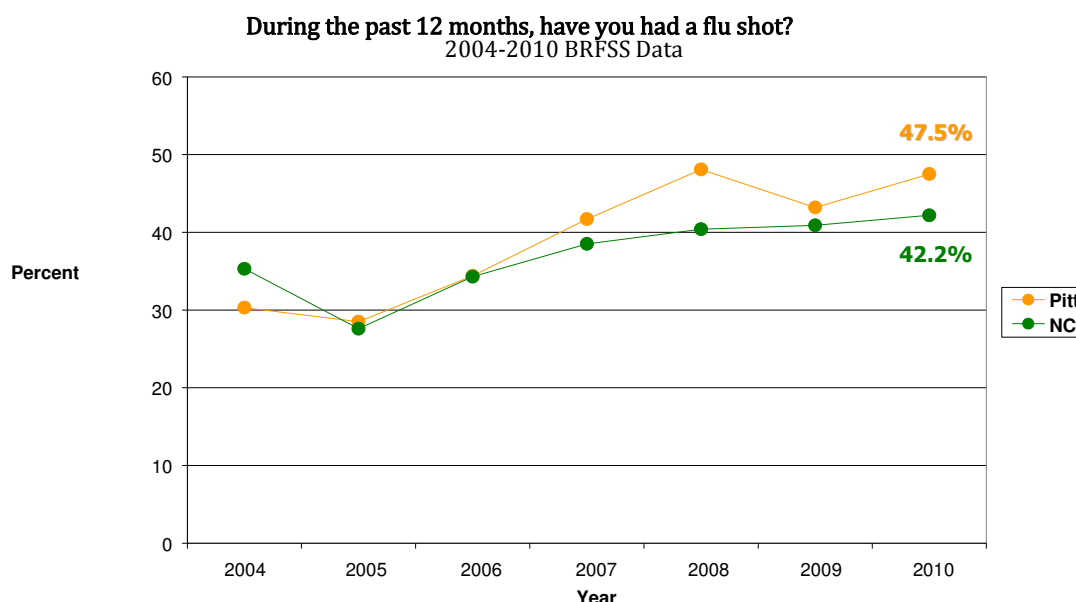
<sup>64</sup>North Carolina Division of Public Health, State Center for Health Statistics. 1994-1998 Race- Sex-Specific Age-Adjusted Rates. Available at <http://www.schs.state.nc.us/SCHS/data/databook/1999/Mortality.xls>.

<sup>65</sup>North Carolina Division of Public Health, State Center for Health Statistics. 2005-2009 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County. Available at <http://www.schs.state.nc.us/SCHS/data/databook/CD21B%20racespecificsexspecific%20rates.rtf>.

## *Pneumonia and Influenza (Flu)*

Though traditionally one of the top ten causes of death for Pitt County, pneumonia and influenza (P&I) has fallen to the 11th leading cause of death in Pitt County for all ages. It remains the ninth leading cause of death for those 0-19 years of age and the seventh leading cause of death for those 85+ years of age<sup>66</sup>. In the past decade, the rate of flu and pneumonia has decreased by over half from 34.0 for 1994-1998 to 13.2 for 2006-2010<sup>67, 68</sup>. The rate of mortality is higher among African Americans compared to whites and higher among males compared to females<sup>69</sup>.

Influenza is a vaccine preventable disease. Starting in 2010, flu vaccines have been recommended by the CDC for all persons over the age of six months, but especially for those at high risk of complications from the flu. According to the North Carolina Behavioral Risk Factor Surveillance System (BRFSS), the percentage of Pitt County residents receiving their flu shot has increased over the past few years, recently surpassing the state rate. However, this percentage can continue to be improved in order to ensure that the most vulnerable populations, to include our young children and older adults, are protected from developing complications due to influenza.<sup>70</sup>



<sup>66</sup>North Carolina Division of Public Health, State Center for Health Statistics. 2005-2009 Ten Leading Causes of Death by County of Residence and Age Group. Available at

<http://www.schs.state.nc.us/SCHS/data/databook/CD13%20lead%20causes%20of%20death%20by%20age.rtf>.

<sup>67</sup>North Carolina Division of Public Health, State Center for Health Statistics. 1994-1998 Race-

Sex-Specific Age-Adjusted Rates. Available at

<http://www.schs.state.nc.us/SCHS/data/databook/1999/Mortality.xls>.

<sup>68</sup>North Carolina Division of Public Health, State Center for Health Statistics. 2004-2008 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County. Available at

<http://www.schs.state.nc.us/schs/data/databook/CD21B%20racespecificsexspecific%20rates.rtf>

<sup>69</sup>North Carolina Division of Public Health, State Center for Health Statistics. 2005-2009 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County. Available at

<http://www.schs.state.nc.us/SCHS/data/databook/CD21B%20racespecificsexspecific%20rates.rtf>.

<sup>70</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC BRFSS Annual Survey Results. (<http://www.schs.state.nc.us/SCHS/brfss/results.html>).

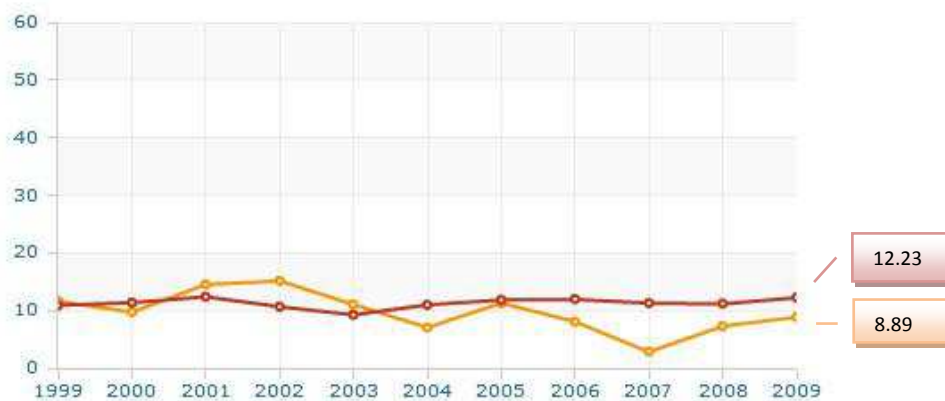
## Other Leading Causes of Death

### Suicide

For 2005-2009, suicide is the 14<sup>th</sup> leading cause of death among Pitt County residents, and continues to occur largely among white males. Death rates for 2009 were about 1.4 times lower in Pitt County than in eastern North Carolina.<sup>71</sup>

For 2005-2009, suicide was the fifth leading cause of premature death among white males and the ninth leading cause of premature death among white females. Death due to suicide ranks 10th for residents 0-19 years of age, sixth for residents 20-39 years of age and in eighth for residents 40-64 years of age.<sup>72</sup>

Age-Adjusted Mortality Rates due to **Suicide**, **Pitt County** and **Eastern North Carolina**  
(Rates per 100,000 population)



Source: Center for Health Services Research and Development, ECU-NC Data Explorer

### HIV Disease

HIV disease continues to be a top ten leading cause of death for persons in Pitt County 20-64 years of age<sup>73</sup> and is especially significant for black males, with the mortality rate more than 3.5 times that of the overall population<sup>74</sup>. HIV/AIDS data is reviewed further in the Communicable Disease section of this document.

<sup>71</sup> North Carolina Healthy Carolinians, CHA resources: calculations worksheet phase3.

<http://www.healthycarolinians.org/assessment/resources/survey.aspx>

<sup>72</sup> North Carolina Division of Public Health, State Center for Health Statistics. NC Resident Race and Sex-Specific Age-Adjusted Death Rate. Available at <http://www.schs.state.nc.us/SCHS/data/databook/>

<sup>73</sup> North Carolina Division of Public Health, State Center for Health Statistics. 2005-2009 Ten Leading Causes of Death by County of Residence and Age Group. Available at

<http://www.schs.state.nc.us/SCHS/data/databook/CD13%20lead%20causes%20of%20death%20by%20age.rtf>.

<sup>74</sup> North Carolina Division of Public Health, State Center for Health Statistics. 2005-2009 Race-

Specific and Sex-Specific Age-Adjusted Death Rates by County. Available at

<http://www.schs.state.nc.us/SCHS/data/databook/CD21A%20racesexspecific%20rates.rtf>.

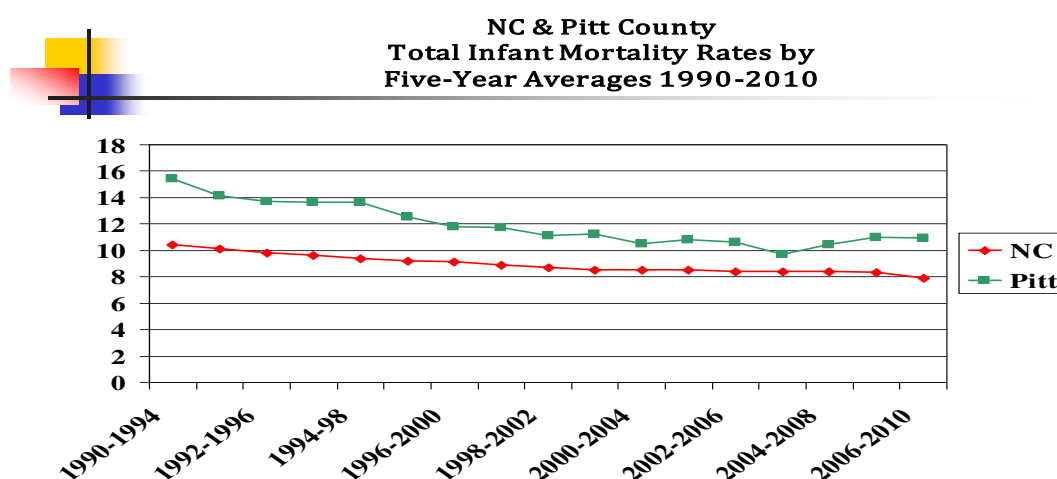
## Maternal and Child Health

### Infant Mortality

Infant mortality is the death of an infant prior to his/her first birthday. Prematurity, birth before 37 weeks gestation, is a leading cause of infant mortality in Pitt County. Pitt County's total infant mortality rate in 2010 was 9.3 per thousand live births as compared to North Carolina's total infant mortality rate of 7.0 per thousand live births. Although Pitt County's 2010 total infant mortality rate was higher than North Carolina's total infant mortality rate, Pitt County's rate declined by 10.5% from 2009 to 2010. The rate also declined slightly between the 2005-2008 period and the 2006-2010 period based upon five-year averages<sup>75</sup>.

The disparity between races continues among Pitt County babies. While Pitt County's 2010 total infant mortality rate declined, Pitt County's African American infant mortality rate rose from 16.5 per thousand live births in 2009 to 19.5 per thousand live births in 2010. In comparison, North Carolina's African American infant mortality rate declined from 14.1 per thousand live births in 2009 to 12.7 per thousand live births in 2010.<sup>76</sup>

In past years, North Carolina has reported infant deaths in only two categories (white and minority). In 2010, the State began reporting infant birth and infant mortality data as follows: 1) White Non-Hispanic; 2) African American Non-Hispanic; 3) Other Non-Hispanic; and 4) Hispanic, making it difficult to compare current categories of racial breakdown data to past categories of racial breakdown data<sup>77</sup>. However, comparison of total infant mortality rates is feasible. From the 1990-2010 period, Pitt County's total infant mortality rate declined by 29% as compared to North Carolina's decline of 24% during this same period based upon five-year averages.



<sup>75</sup>North Carolina Division of Public Health, State Center for Health Statistics. Infant Mortality Statistics. Available at <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm>.

<sup>76</sup>North Carolina Division of Public Health, State Center for Health Statistics. Infant Mortality Statistics. Available at <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm>.

<sup>77</sup>North Carolina Division of Public Health, State Center for Health Statistics. Infant Mortality Statistics. Available at <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm>.



While Pitt County has seen improvements in infant mortality, low birth weight continues to be a factor affecting birth outcomes. From 2005-2009, 11.2% of Pitt County births were low weight as compared to 9.1% for North Carolina. For this same period, 14.8% of Pitt County's minority births were low weight as compared to 13.6% for North Carolina. Among white births, 8.4% were low weight as compared to 7.4% for North Carolina from 2005-2009<sup>78</sup>.

The percent of Pitt County mothers who smoke while pregnant rose only slightly from 9.5% from 2004-2008 to 9.6% from 2005-2009, but remained lower than North Carolina. In comparison, the percent of North Carolina mothers who smoked while pregnant declined slightly from 11.5% from 2004-2008 to 11.0% from 2005-2009<sup>79</sup>.

From 2005-2009, 13.5% of Pitt County births (excluding first pregnancies) were defined as short interval (6 months or less from last delivery to conception) as compared to 12.9% for North Carolina. This presents an ongoing opportunity for family planning and interconception counseling<sup>80</sup>.

The percent of first time moms in Pitt County rose from 34.0% in 2008 to 36.4% in 2009. The percent of first time North Carolina moms remained constant between 2008 (33.6%) and 2009 (33.7%). The percent of first time Pitt County moms who received Medicaid rose from 32.3% in 2008 to 36.6% in 2009 while the percent of first time North Carolina moms who received Medicaid declined from 33.3% in 2008 to 32.6 in 2009<sup>81</sup>. The percent of out of wedlock Pitt County births rose from 47.0% in 2008 to 49.0% in 2009. The percent of out of wedlock births among Pitt County moms also rose from 45.9% in the 2004-2008 period to 46.9% in the 2005-2009 period. In comparison, Pitt County's percent of out of wedlock births remains higher than North Carolina's percent of out of wedlock births of 42.3% in 2009 and 40.8% from 2005-2009<sup>82</sup>.

C-Sections among Pitt County residents increased from 27.2% in 2008 to 29.0% in 2009. There was also a very slight increase of C-Sections among Pitt County residents from 28.8% in the 2004-2008 period to 29.0% during the 2005-2009. In comparison, Pitt County's percent of C-Sections remained lower than North Carolina's percent of 31.7% in 2009 and 30.9% from 2005-2009<sup>83</sup>.

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<sup>78</sup> North Carolina Division of Public Health, State Center for Health Statistics, 2011 County Health Data Book, North Carolina Community Health Assessment Process, NC Resident Births 2005-2009: Number and Percent Low Birth Weight Births By Race. Available at: <http://www.schs.state.nc.us/SCHS/data/databook> .

<sup>79</sup> North Carolina Division of Public Health, State Center for Health Statistics, 2011 County Health Data Book, North Carolina Community Health Assessment Process, NC Resident Births 2005-2009: Number of Births to Mothers Who Smoked Prenatally. Available at: <http://www.schs.state.nc.us/SCHS/data/databook> and North Carolina Division of Public Health, State Center for Health Statistics, Selected Vital Statistics for 2008 and 2004-2008 and 2005-2009, Available at: <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm> .

<sup>80</sup> North Carolina Division of Public Health, State Center for Health Statistics. 2011 County Health Data Book, North Carolina Community Health Assessment Process, 2005-2009 NC Live Births By County of Residence: Number With Interval From Last Delivery to Conception of Six Months or Less and Percent of All Birth Excluding 1<sup>st</sup> Pregnancies. Available at: <http://www.schs.state.nc.us/SCHS/data/databook> .

<sup>81</sup> North Carolina Division of Public Health, State Center for Health Statistics. 2011 County Health Data Book, North Carolina Community Health Assessment Process, NC Resident Births: Parity By Medicaid Status and County of Residence, 2008, 2009. Available at: <http://www.schs.state.nc.us/SCHS/data/databook> .

<sup>82</sup> North Carolina Division of Public Health, State Center for Health Statistics, Selected Vital Statistics for 2008 and 2004-2008 and 2009 and 2005-2009. Available at: <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm> .

<sup>83</sup> North Carolina Division of Public Health, State Center for Health Statistics, Selected Vital Statistics for 2008 and 2004-2008 and 2009 and 2005-2009. Available at: <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm> .



## Child Deaths

Thirty-three (33) Pitt County children age less than 18 years died in 2009. More than one third (36%) were due to perinatal conditions. For the period 2005-2009, 2.2% of North Carolina's child deaths occurred among Pitt County children. During this period, forty-one percent (41%) of Pitt County child deaths were due to perinatal conditions, followed by illnesses (15%), birth defects (14%), motor vehicle accidents (12%) and sudden infant death syndrome (8%). (See table for numbers of all causes of Pitt County child deaths). There have been no Pitt County child deaths due to suicide since 2004. Seventy-two percent (72%) of the child deaths between 2005-2009 were among children less than age one, 7.3% were among children ages 1-4, 7% were among children ages 5-9, 7% were among children ages 10-14 and 10% were among children age 15-17<sup>84</sup>.

### Number of Infant and Child Deaths in Pitt County

Period/Year Pitt County	Total	Birth Defects	Perinatal Conditions	SIDS	Illnesses	Motor Vehicle	Bicycle	Fire Flame	Drowning	Falls	Poison	Other Injuries	Homicide	Suicide	All Other
2005-2009	178	25	73	14	27	22	0	1	1	1	1	1	6	0	6
2009	33	5	12	4	8	2	0	0	0	0	0	0	0	0	2

Source: State Center for Health Statistics, <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm>

### Number of Infant and Child Deaths in North Carolina

Period/Year NC	Total	Birth Defects	Perinatal Conditions	SIDS	Illnesses	Motor Vehicle	Bicycle	Fire Flame	Drowning	Falls	Poison	Other Injuries	Homicide	Suicide	All Other
2005- 2009	7895	1093	2776	531	1501	697	21	77	128	15	82	250	298	135	291
2009	1486	224	531	98	278	114	1	8	28	5	15	35	36	35	78

Source: State Center for Health Statistics, <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm>

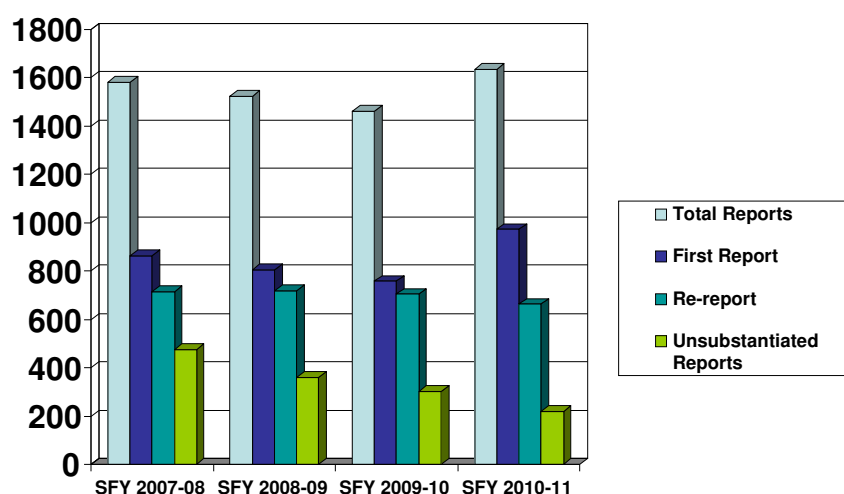
## Child Abuse and Neglect

The total number of reports of abuse and neglect increased among North Carolina and Pitt County children from SFY 2007/2008 to SFY 2010/2011. (Note: Rates are not available, therefore, the increase in population is not taken into account.) The number of Pitt County children who were reported as abused/neglected for the first time also increased during this same timeframe as compared to a decrease among North Carolina first reports. The number of Pitt County re-reports (children who had been reported during previous years) decreased as compared to an increase among North Carolina re-reports during this same timeframe. During SFY 2010/2011, just over half (51.7%) of Pitt County total reports of child abuse and neglect were male and the majority of all reports occurred among children ages 0-5 years (41.5%), followed by children ages 6-12 years (37.6%), children ages 13-17 years (19.8%), and ages unknown (0.47%), all which compared similarly to North Carolina. The majority (61.7%) of Pitt County total reports were African American as compared to North Carolina where the majority of total reports were white (54.3%). Only 13.3% of all Pitt County reports were unsubstantiated.<sup>85</sup>

<sup>84</sup> North Carolina Division of Public Health, State Center for Health Statistics, Child Deaths. Available at: <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm>

<sup>85</sup> Duncan, D.F., Kum, H.C., Flair, K.A., and Stewart, C.J. (2011). Management Assistance for Child Welfare, Work First, and Food & Nutrition Services in North Carolina. Retrieved 1/10/12, from University of North Carolina at Chapel Hill Jordan Institute for Families website. URL: <http://ssw.unc.edu/ma/>

## Reports of Child Abuse and Neglect for Pitt County



Source: University of North Carolina at Chapel Hill, Jordan Institute for Families. Available at <http://ssw.unc.edu/ma/>

### *Childhood Lead Poisoning*

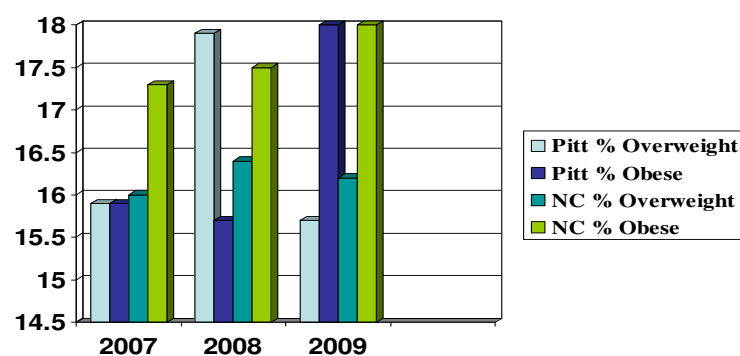
The number of Pitt County children ages six months to six years with confirmed blood lead levels of 10-19 micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ) and confirmed levels  $\geq 20$  ( $\mu\text{g}/\text{dL}$ ) has decreased from 2007 to 2009. In 2007, seven (7) Pitt County children were confirmed with elevated blood lead levels  $\geq 10$  ( $\mu\text{g}/\text{dL}$ ); in 2008, six (6) children and in 2009, three (3) children. One of these 16 children had a blood level  $\geq 20$  ( $\mu\text{g}/\text{dL}$ ) during the 2007-2009 period<sup>86</sup>.

<sup>86</sup> North Carolina Department of Health and Human Services, Children's Environmental Health Branch, Lead Poisoning Prevention Program, Surveillance Data Tables. Available at: [http://www.deh.enr.state.nc.us/Children\\_Health/Lead/lead.html](http://www.deh.enr.state.nc.us/Children_Health/Lead/lead.html).

### *Child Overweight*

Pitt County continues to place much focus on the impending complications of childhood overweight and obesity. A significant number of resources and partnerships among various health care providers in the county have been devoted to battling this problem. There have been slight fluctuations in the percent of Pitt County children ages 2 years – 18 years who are identified as either overweight or obese. In 2007, 15.9% of Pitt County children ages 2 years – 18 years were overweight and 15.9% were obese. In 2008, 17.9% were overweight; 15.9% were obese and in 2009, 15.7% were overweight and 18.0% were obese<sup>87</sup>.

**Pitt County and North Carolina  
Percent Overweight and Obese Children Ages 2 Years – 18 Years**



Source: <http://www.eatsmartmovemorenc.com/Data/ChildAndYouthData.html>

### *Child Dental Health*

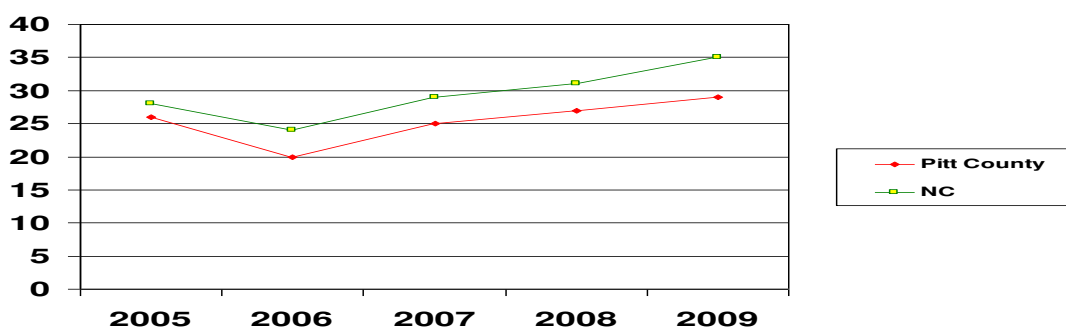
The percent of Medicaid eligible Pitt County and North Carolina children ages 0-5 years receiving dental services continues to increase. Pitt County Medicaid eligible children ages 0-5 years who received dental services increased from 26.0 % in 2005 to 29.0% in 2009. In comparison, the percent of North Carolina Medicaid eligible children ages 0-5 years who received dental services increased from 28.0% in 2005 to 35.0% in 2009.<sup>88</sup> As a result, both Pitt County and North Carolina experienced a decrease in the percentage of kindergartners with untreated tooth decay between 2005-2008. Although up slightly between 2007 and 2008, the percent of Pitt County kindergartners with untreated tooth decay decreased from 24.0% in 2004 to 17.0% in 2008. In comparison, the percent of North Carolina kindergartners with untreated tooth decay decreased from 22.0% in 2004 to 17.0% in 2008.<sup>89</sup>

<sup>87</sup> Eat Smart, Move More, 2007, 2008, 2009 NC-NPASS Data on Childhood Obesity, County Specific BMI for Ages 12-18. Available at: <http://www.eatsmartmovemorenc.com/Data/ChildAndYouthData.html>

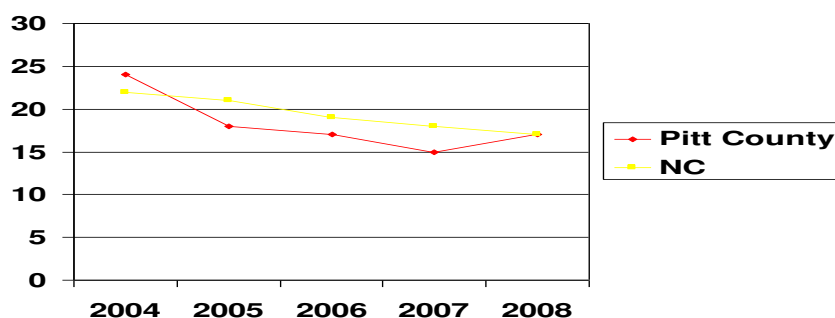
<sup>88</sup> North Carolina Division of Public Health, State Center for Health Statistics, CATCH-NC Portal, Indicator Fact Sheet: % of Medicaid Eligibles Receiving Dental Services Age 0-5. Available at: <http://www.ncpublichealthcatch.com/ReportPortal/design/view.aspx>.

<sup>89</sup> North Carolina Division of Public Health, State Center for Health Statistics, CATCH-NC Portal, Indicator Fact Sheet: % of Kindergartners With Untreated Tooth Decay. Available at: <http://www.ncpublichealthcatch.com/ReportPortal/design/view.aspx>.

**Percent of Medicaid Eligibles Age 0-5 Years Receiving Dental Services  
2005-2009**



**Percent of Pitt County and North Carolina Kindergarteners With Untreated Tooth Decay  
2004-2008**



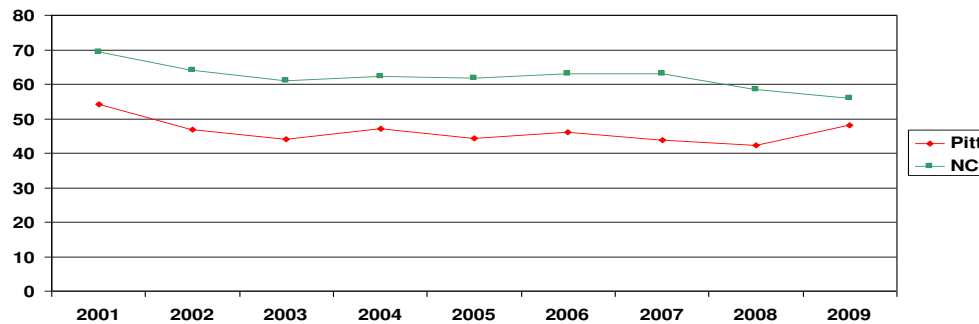
### *Adolescent Pregnancy*

North Carolina's 2009 adolescent pregnancy rate of 56.0 per one thousand girls age 15-19 years demonstrates a steady decline over the past decade. Pitt County's adolescent pregnancy rate among this same age group was 48.2 in 2009, indicating a slight rise. Though up slightly, Pitt County's adolescent pregnancy rate among girls age 15-19 years has declined 19% since 2001. In 2009, Pitt County's adolescent pregnancy ranking was 74 out of 100 North Carolina counties (1 being the highest rate and 100 the lowest). There has also been a decline in Pitt County's repeat adolescent pregnancies since 2006. In 2006, 29.8 % of Pitt County's adolescent pregnancies were repeat pregnancies compared to 25% in 2009.<sup>90</sup>

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<sup>90</sup> Adolescent Pregnancy Prevention Coalition of North Carolina. Available at:  
<http://appcnc.org/statistics/archived-stats> .

**Adolescent Pregnancy Rate  
Pitt County and NC by Year  
Rates per 1000 15-19 year old girls**



Source: Adolescent Pregnancy Prevention Coalition of North Carolina, available at: <http://appcnc.org/statistics/archived-stats>

## ***Other Health Status Data***

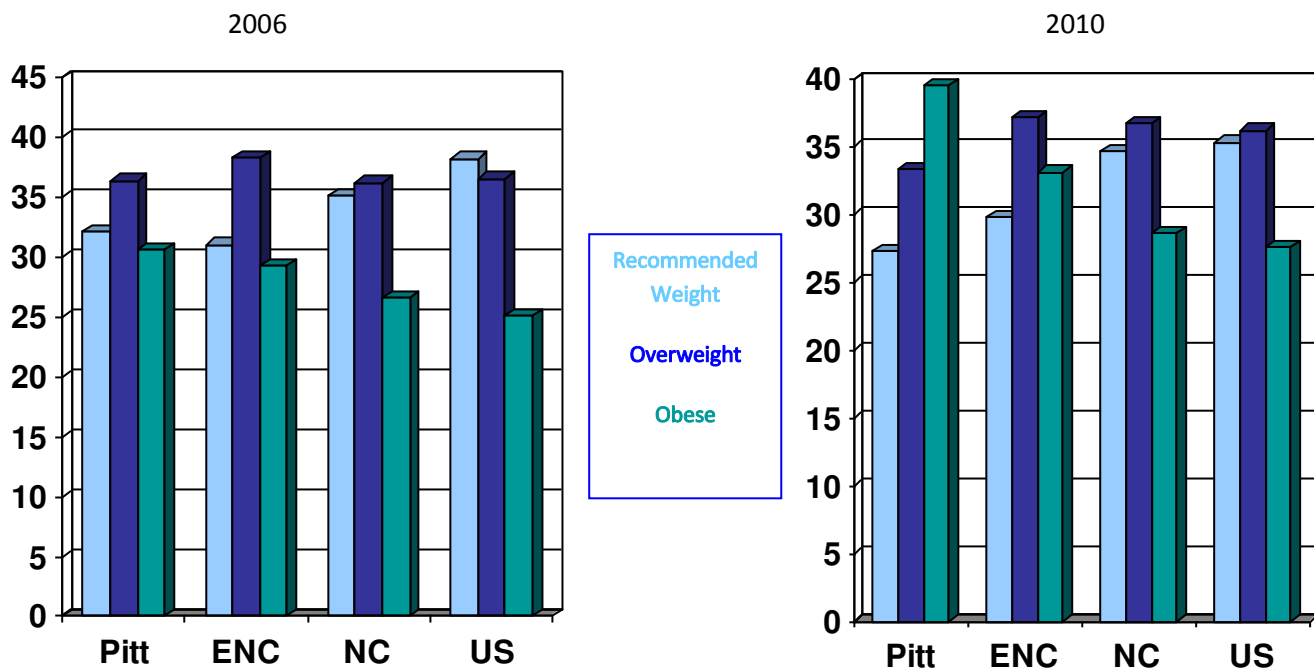
### ***Adult Obesity and Physical Inactivity***

Obesity and physical inactivity have been shown to contribute to the leading causes of mortality including heart disease, some cancers, stroke and diabetes. The graphs below show a comparison of weight categories for adults in Pitt County, eastern North Carolina (ENC), North Carolina (NC) and the United States (US) for 2006 and 2010. The percent population reporting they are within recommended ranges for weight has declined for all groups since 2006. Less than 30% of Pitt County's adults reported that they were within the recommended weight for height in 2010. The percent population reporting they are overweight or obese increased from 2006 to 2010. This same trend is observed for eastern North Carolina, North Carolina (NC) and the United States (US).<sup>91, 92</sup>

<sup>91</sup> North Carolina Division of Public Health, State Center for Health Statistics. Behavioral Risk Factor Surveillance System (BRFSS) Calendar Year 2006 and 2010 Results. 2010 results available at <http://www.schs.state.nc.us/SCHS/brfss/2010/pitt/rf1.html>.

<sup>92</sup> Centers for Disease Control, National Center for Chronic Disease and Prevention and Health Promotion. Behavioral Risk Factor Surveillance System (BRFSS), Prevalence Data, Nationwide (States and DC) – 2006 and 2010. 2010 results available at <http://apps.nccd.cdc.gov/BRFSS/list.asp?cat=OB&yr=2010&qkey=4409&state=All>.

## Percent of Adults at Recommended Weight, Overweight, and Obese, Pitt County, ENC, NC, and US, 2006 and 2010



Less than one in five Pitt County adults reports eating five or more servings of fruits or vegetables daily. More than one in four adults report consuming four or more meals per typical week from a fast food restaurant. By comparison, only about 10% of ENC and NC adults report eating four or more meals per week from fast food restaurants.<sup>93</sup>

Increasing access to healthy foods has been a priority within Pitt County for the past two years. In an attempt to better understand the availability of healthy foods in the county, the Pitt County Health Department worked with ECU Department of Public Health and the Pitt County Planning Department to identify the location of grocery stores, supermarkets and convenience stores. This map is provided in Appendix B. As you can see from the map, the more rural areas of the county have limited access to grocery stores and supermarkets.

In 2009, 42.3% of Pitt County adults reported they met the physical activity recommendations defined as moderate activity for 30 minutes or more at least five days per week. This is an increase from 2005 in which 37.3% of Pitt County adults report they met the recommendation. By comparison, 45% of adults in ENC, 46.4% of adults in NC, and 51% of adults in the US report they meet the physical activity recommendations.<sup>94, 95</sup>

<sup>93</sup> North Carolina Division of Public Health, State Center for Health Statistics. Behavioral Risk Factor Surveillance System (BRFSS) Calendar Year 2009. Results available at <http://www.schs.state.nc.us/SCHS/brfss/2009/pitt/topics.html>

<sup>94</sup> North Carolina Division of Public Health, State Center for Health Statistics. Behavioral Risk Factor Surveillance System (BRFSS) Calendar Year 2009 Results. Available at <http://www.schs.state.nc.us/SCHS/brfss/2009/pitt/RFPAREC.html>

Pitt County has a number of parks and recreation opportunities within the county. Pitt County Community Schools and Recreation collaborated with Pitt County Planning Department to inventory recreation facilities within local municipalities. See Appendix B for a map of the parks within the Pitt County and location of schools that provide access to opportunities for physical activity. Pitt County is fortunate to have a joint use agreement that allows school facilities to be used by community members when not otherwise in use.

### *Smoking*

Smoking has long been associated with many of the leading causes of mortality including heart disease, cancer, stroke and chronic lower respiratory disease. In 2010, more than one in five (21.5%) Pitt County adults were current smokers compared to 17.8% in 2006.<sup>96</sup> In 2011, 42% of Pitt County adults surveyed indicated they were exposed to secondhand smoke. Homes were identified as the most common place for exposure.<sup>97</sup> While Pitt County has reported an increase in the percent of current smokers (17.8% in 2006 to 21.5% in 2010), eastern NC, NC and the United States have reported decreases in the percent population smoking from 2006 – 2010. Eastern NC fell from 23.5% adults reporting being current smokers in 2006 to 20.8% in 2010; NC fell from 22.1% in 2006 to 19.8% in 2010; the US fell from 20.1% in 2006 to 17.2%.<sup>98, 99</sup>

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<sup>95</sup> Centers for Disease Control, National Center for Chronic Disease and Prevention and Health Promotion. Behavioral Risk Factor Surveillance System (BRFSS), Prevalence Data, Nationwide (States and DC) – 2009. Available at <http://apps.nccd.cdc.gov/BRFSS/list.asp?cat=PA&yr=2009&qkey=4418&state=All> .

<sup>96</sup> North Carolina Division of Public Health, State Center for Health Statistics. Behavioral Risk Factor Surveillance System (BRFSS), 2010 Results. Available at <http://www.schs.state.nc.us/SCHS/brfss/>

<sup>97</sup> Pitt County Community Health Assessment phone survey, Fall 2011.

<sup>98</sup> North Carolina Division of Public Health, State Center for Health Statistics. Behavioral Risk Factor Surveillance System (BRFSS) Calendar Year 2006 and 2010 Results. Results available at <http://www.schs.state.nc.us/SCHS/brfss/> .

<sup>99</sup> Centers for Disease Control, National Center for Chronic Disease and Prevention and Health Promotion. Behavioral Risk Factor Surveillance System (BRFSS), Prevalence Data, Nationwide (States and DC) – 2006 and 2010. 2010 results available at <http://apps.nccd.cdc.gov/BRFSS/display.asp?cat=TU&yr=2010&qkey=4394&state=UB>.

## Mental Health

The following table provides hospitalization data for mental disorders and substance abuse for SFY 1996-1998. While outdated, it depicts the elevated rates of hospitalizations due to the mentioned disorders by Pitt County residents when compared to overall rates for North Carolina residents.

**North Carolina and Pitt County Hospitalizations for Mental Disorders and Substance Abuse (SFY 1996-1998)**

Residents	Hospitalizations for Mental Disorders		Hospitalizations for alcohol and drug related disorders	
	Number	Rate (per 10,000 population)	Number	Rate (per 10,000 population)
North Carolina	581,222	260.6	281,708	126.3
Pitt County	11,160	301.4	6,232	168.3

\*Represents all hospitalizations with any listed diagnosis of mental disorder (ICD-9CM)

Source: North Carolina State Center for Health Statistics, [www.schs.state.nc.us/SCHS/data/databook/1999/](http://www.schs.state.nc.us/SCHS/data/databook/1999/), (January 2012)

**Use of Mental Health Facilities, Substance Abuse Centers and Related Area Programs  
Pitt County Residents (number of residents), 2008 and 2009**

State Psychiatric Hospitals		State Mental Retardation Centers		NC Alcohol and Drug Treatment Centers		Mental Health Programs	
2008	2009	2008	2009	2008	2009	2008	2009
206	127	11	40	239	292	5,449	7,057

Source: Log Into North Carolina Database (LINC) for Pitt County, <http://linc.state.nc.us> (January 2012)

Original data obtained from the State Agency data: Department of Health and Human Services

The previous chart on the use of mental health facilities and related health programs demonstrate that the use of State Psychiatric Hospitals by Pitt County residents decreased by almost 40% between 2008 and 2009, whereas the utilization increased for state mental health centers (3.6 fold), substance abuse centers (1.2 fold) and mental health area programs (1.3 fold). This may further explain the slight reduction in the admissions to local emergency departments with mental disorders for Pitt County residents as depicted below. Between 2006-2008, emergency visits due to mental disorders by Pitt County residents demonstrated a 1.2 fold decrease, contrary to an over 46% increase in averaged rates by peer county residents. During this same period, there was a 1.2 fold increase in state rates. (Note - multiple admissions by the same patient are counted multiple times.)<sup>100</sup>

<sup>100</sup> Log Into North Carolina Database (LINC) for Pitt County, <http://linc.state.nc.us> (January 2012). Original data obtained from the State Agency data: Department of Health and Human Services



**Pitt County, Peer County and NC State Comparison of Emergency Visits for Mental Disorders (2006-2008)**

Year	Pitt County (number)	Pitt County Rate (per 10,000)	Peer County (average)*	Peer County Rate (per 10,000)*	State (Number)	State Rate (per 10,000)
2006	2,581	180.1	414	47.6	106,517	122.2
2007	2,319	159.4	748	85.8	124,052	139.8
2008	2,307	154.6	900	103.0	130,922	144.3

Source: NC CATCH, Available at: <http://www.ncpublichealthcatch.com/ReportPortal/design/view.aspx>, (Jan. 2012)

\*Peer counties were selected based on: % of population less than 18 years old, % of population over 64 years old, % of non-white population, % of families with children (<18) living below poverty level and the total population size, and not based on proximity.

Pitt County peer counties include Nash, Sampson, Wayne and Wilson.

**Admissions to Local Emergency Departments with a Mental Health/Developmental Disability/Substance Abuse Diagnosis for Pitt County Residents (Fiscal Year)**

Fiscal Year	Admissions with a primary diagnosis MH/DD/SA		Admissions with any diagnosis of MH/DD/SA	
	Number of admissions	Rate per 10,000	Number of admissions	Rate per 10,000
2007-2008	N/A	N/A	5,220	349.4
2008-2009	2,062	132.9	4,287	276.3
2009-2010*	694	43.6	2,241	140.6

Source: Community Hospital Emergency Department Admissions for Persons Diagnosed with Mental Illness, Developmental Disabilities or Substance Abuse Disorder, Statistics and Publications *Reports Regarding LMEs and Providers: Emergency Department Admissions End of the year reports* Available at: <http://www.ncdhhs.gov/mhddsas/statspublications/Reports/lmes-providers/EDAdmissions>, (January 2012)

\* Fiscal Year 2009-2010 only includes data from April 1-June 30, 2010

In the 2009 Overview and Analysis report of NC DETECT Emergency Department Visit Data released by the UNC Department of Emergency Medicine, the regional comparison demonstrated that patients residing in the coastal plain area had the highest substance abuse/dependence and alcohol intoxication/withdrawal (SAD/AIW) rates of visits (14.3/1,000 person-years), with the rate for the male population (17.1/1,000 person years) being two times that of the female population (8.9/1,000 person years).<sup>101</sup> This information continues to be of great concern since the report released in 2008 demonstrated similar findings.<sup>102</sup>

When considering the admission rates to local emergency departments with a diagnosis of MH/DD/SA for individuals residing in Pitt County, as illustrated in the previous chart, rates of admission appear to have been decreasing over the past four years. Nonetheless, it is important to note that rates for FY 2009-2010 only include data collected from April 1-June 30, 2010.

<sup>101</sup> The UNC Department of Emergency Medicine Carolina Center for Health Informatics Report Overview and Analysis of NC DETECT Emergency Department Visit Data: 2009. Available at: [http://www.ncdetect.org/FINAL\\_2009NCDETECT\\_ANNUALREPORT\\_BLACKANDWHITE.pdf](http://www.ncdetect.org/FINAL_2009NCDETECT_ANNUALREPORT_BLACKANDWHITE.pdf), (January 2012)

<sup>102</sup> The UNC Department of Emergency Medicine Carolina Center for Health Informatics Report NC DETECT Emergency Department Data: 2008. Available at: <http://www.ncdetect.org/NCD%202008%20AnnualRep%20Final%20Color%202010July.pdf> (January 2012)

In the summer and fall of 2011, a telephone survey was conducted which captured feedback from 352 Pitt County residents. Of the self-reported chronic diseases, 24% of respondents reported suffering depression/anxiety and 4% mental illness. When asked their opinion about the major health issues for community residents, 40% reported drug and alcohol abuse and 15% reported Alzheimer's disease/dementia as major concerns. When asked about community needs for improving the health of family, friends and neighbors, 12% indicated a need for improving mental health care and 11% indicated the need to improve drug/alcohol treatment and services. Finally, when questioned about who they would recommend that people see for mental health, drug or alcohol abuse counseling, 35% recommended doctors, 27% recommended counselors or therapists and 16% recommended minister/religious groups for counseling.<sup>103</sup>

Between June-October 2011, a series of listening sessions were conducted. Substance abuse, which included tobacco, drug and alcohol use and behavioral health, which included depression, anxiety, stress and sleep deprivation, emerged as two of the major health concerns verbalized by the participants. Substance abuse was the leading health concern for the peer educators in a local high school. Substance abuse was also referred to as one of many current barriers hindering the opportunity to improve health care for the community.<sup>104</sup>

During 2011, the Center for Disease Control and Prevention's Youth Risk Behavior Survey was administered to 1845 Pitt County middle school students. Results revealed that cocaine use (3.0%), use of prescription drugs without authorized prescription (3.7%), first time marijuana use (9.1%) and frequent use of marijuana (11.4%) have decreased since 2009. Nonetheless, sniffing glue and or inhaling paint continues to be a concern (13.4%).<sup>105</sup>

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<sup>103</sup> Pitt County Community Health Assessment phone survey, Fall 2011.

<sup>104</sup> Pitt County Listening Sessions conducted by Pitt County Health Department, Fall 2011.

<sup>105</sup> 2011 Pitt County Youth Risk Behavior Survey. Research Division, Department of Family Medicine, Brody School of Medicine, East Carolina University.

## Communicable Diseases

### HIV Disease\*

Based upon the average rate of HIV disease for 2008-2010, Pitt County is ranked as having the 15th highest rate of HIV disease in the State<sup>106</sup>, which is an increase over the 2004-2006 ranking of 23<sup>rd</sup><sup>107</sup>. The County's three-year average HIV rate is 19.8 per 100,000 population which is above the State's three year average rate of 17.6 per 100,000 population. As of 12/31/10, a cumulative total of 504 people with HIV disease were living in Pitt County, representing 2% of all cases in NC.

For the eastern NC, almost 75% of the cases of HIV disease diagnosed in 2010 were among males; likewise, almost 75% of the total cases were in African Americans. The highest rates of HIV disease diagnosed in the eastern NC in 2010 for males was among 20-24 year olds (52.1 cases/100,000) and for females was among 25-29 year olds (17.4 cases/100,000). The most identified mode of exposure/transmission for males was men who have sex with men (MSM) at 49% and for females was heterosexual contact at 38%<sup>108</sup>.

\*HIV disease includes all newly diagnosed HIV infected individuals by the date of first diagnosis regardless of status (HIV or AIDS).

**HIV Disease Cases: 10 Year Trend**



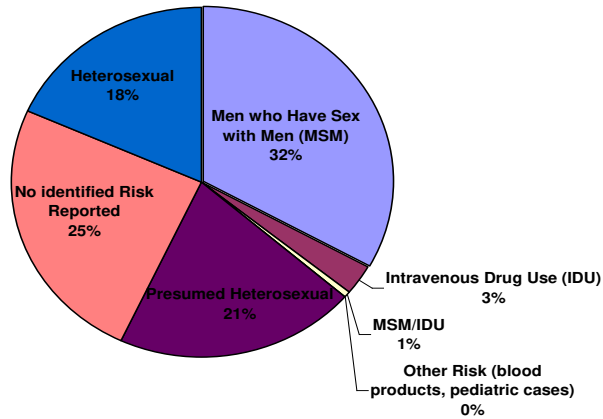
Source: North Carolina Division of Public Health, Communicable Disease Branch. HIV/STD Surveillance Report.

<sup>106</sup> NC Division of Public Health, Communicable Disease Branch. 2010 HIV/STD Surveillance Report. Available at <http://www.epi.state.nc.us/epi/hiv/pdf/std10rpt.pdf>.

<sup>107</sup> NC Division of Public Health, Communicable Disease Branch. 2005 HIV/STD Surveillance Report. Available at <http://www.epi.state.nc.us/epi/hiv/stats.html>.

<sup>108</sup> NC Division of Public Health, Communicable Disease Branch. 2010 HIV/STD Surveillance Report. Available at <http://www.epi.state.nc.us/epi/hiv/pdf/std10rpt.pdf>.

### HIV Disease by Mode of Transmission for Eastern North Carolina, 2010



Source: North Carolina Division of Public Health, Communicable Disease Branch. 2010 HIV/STD Surveillance Report.

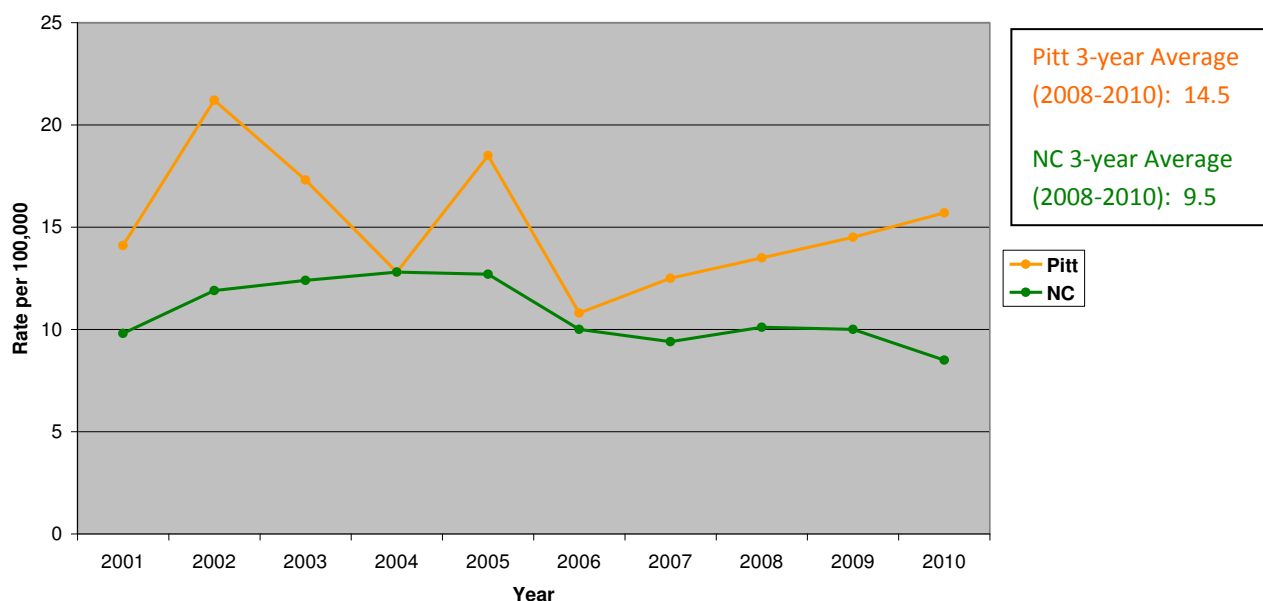
### *AIDS*

Pitt County has the ninth highest rate of AIDS in the State, based on the 2008-2010 average, which is considerably higher than the county's 26<sup>th</sup> ranking for 2004-2006<sup>109</sup>. Though the county's three year average AIDS rate of 14.5 per 100,000 population has not increased much since that time period, North Carolina's AIDS rate of 9.5 per 100,000 population has decreased by almost a quarter during the same time period. As of 12/31/10, a cumulative total of 264 people with AIDS reside in Pitt County, representing 2.6% of all cases in NC<sup>110</sup>.

<sup>109</sup> NC Division of Public Health, Communicable Disease Branch. 2005 HIV/STD Surveillance Report. Available at <http://www.epi.state.nc.us/epi/hiv/stats.html>.

<sup>110</sup> NC Division of Public Health, Communicable Disease Branch. 2010 HIV/STD Surveillance Report. Available at <http://www.epi.state.nc.us/epi/hiv/pdf/std10rpt.pdf>

### AIDS Cases: 10 Year Trend



Source: North Carolina Division of Public Health, Communicable Disease Branch. HIV/STD Surveillance Report.

### Chlamydia

Chlamydia is a sexually transmitted disease (STD). Pitt County has chlamydia case rates that are more than double that of North Carolina. The average annual number of cases in Pitt County has risen from about 900 cases per year from 2004-2006<sup>111</sup> to almost 1500 cases per year from 2008-2010<sup>112</sup>. Though the state has seen moderate increases in chlamydia rates over the past few years, increases in eastern NC and Pitt County have been much more substantial. In fact, seven of the top ten counties with the highest chlamydia rates in 2010 were in northeastern NC, with Pitt County being the third highest in the state. In eastern NC in 2010, 46.6% of cases were in black females with the highest rate of disease being observed in females aged 15-24 years of age<sup>113</sup>.

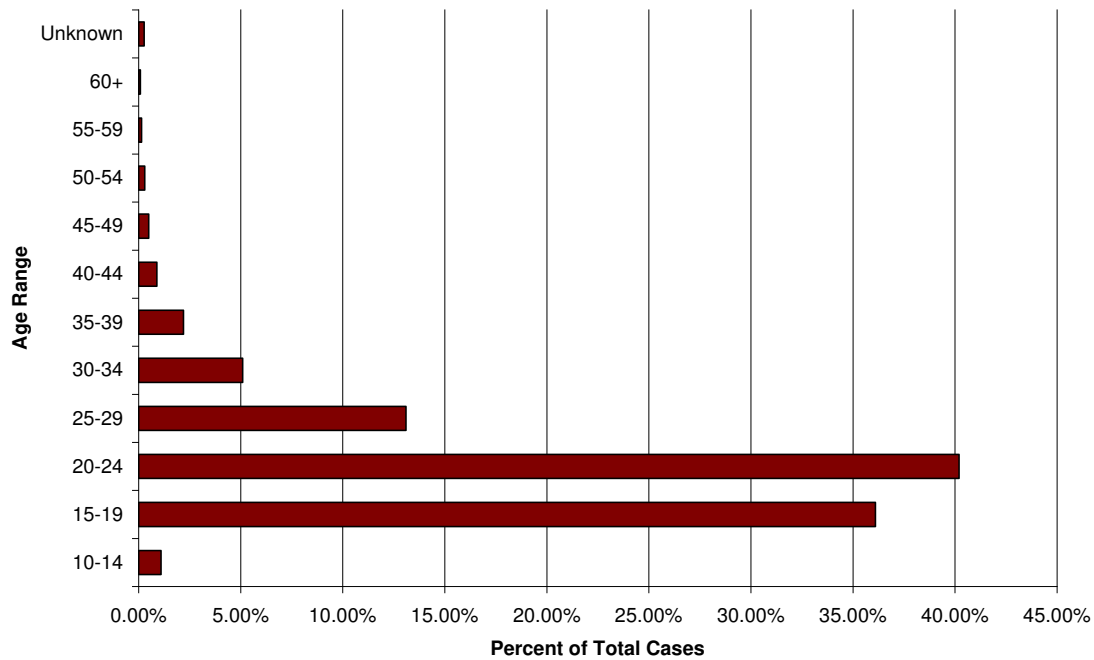
Many believe that an increase in the number of tests performed has led to an increased number of cases of this disease. However, it is not clear why Pitt County's rate so far exceeds the State's rate.

<sup>111</sup> NC Division of Public Health, Communicable Disease Branch. 2005 HIV/STD Surveillance Report. Available at <http://www.epi.state.nc.us/epi/hiv/stats.html>.

<sup>112</sup> NC Division of Public Health, Communicable Disease Branch. 2010 HIV/STD Surveillance Report. Available at <http://www.epi.state.nc.us/epi/hiv/pdf/std10rpt.pdf>.

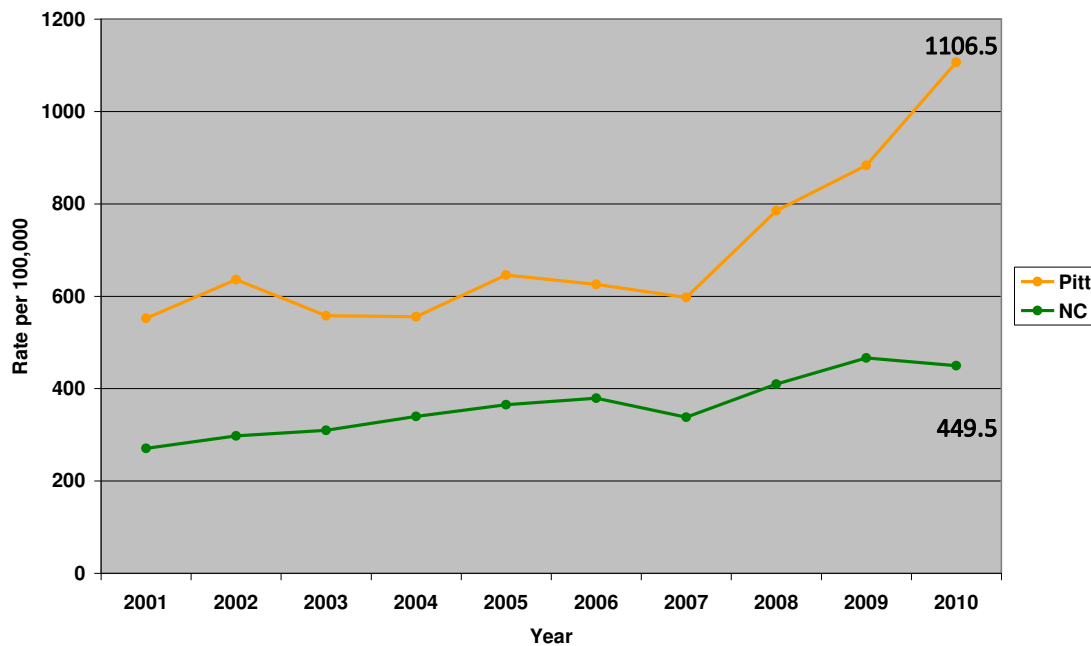
<sup>113</sup> NC Division of Public Health, Communicable Disease Branch. 2010 HIV/STD Surveillance Report. Available at <http://www.epi.state.nc.us/epi/hiv/pdf/std10rpt.pdf>

### Chlamydia Case Rates by Age in Eastern NC, 2010



Source: North Carolina Division of Public Health, Communicable Disease Branch. HIV/STD Surveillance Report.

### Chlamydia Cases: 10 Year Trend

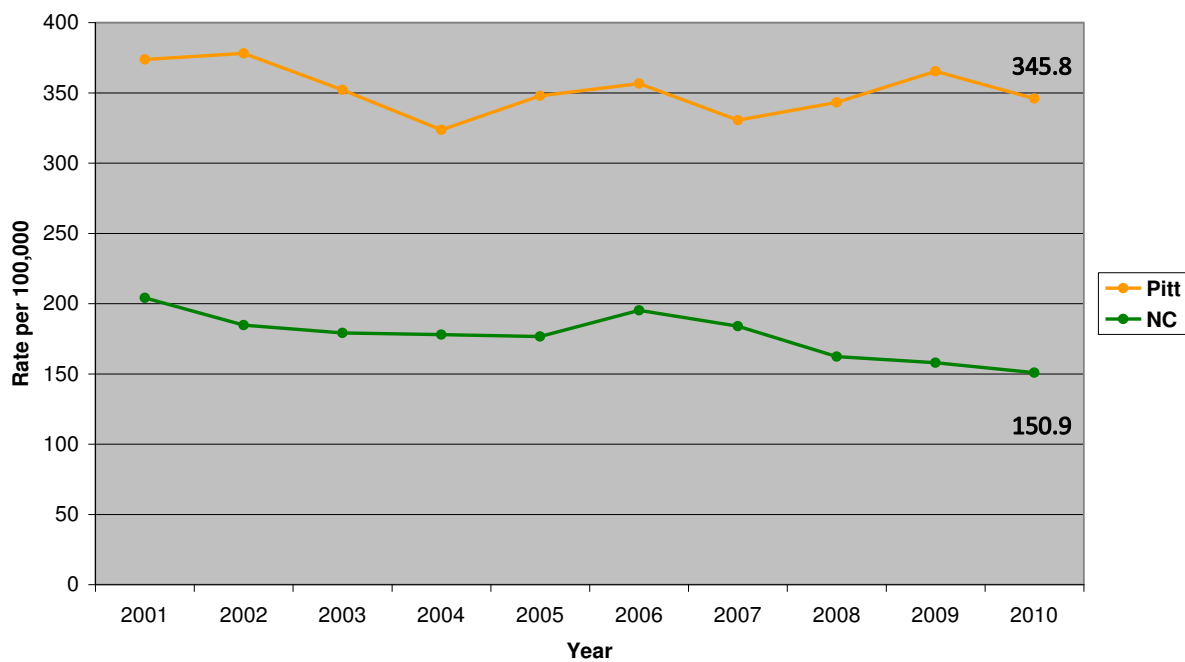


Source: North Carolina Division of Public Health, Communicable Disease Branch. HIV/STD Surveillance Report.

## Gonorrhea

Pitt County's rate of gonorrhea, another STD, exceeds the state's rate as well. Pitt's annual rate is now twice as high as North Carolina's rate of gonorrhea. The county averages about 540 cases per year. In Pitt County, a dip in cases was seen in 2007 and 2010, while the state has had a steady decline in cases every year since 2006. Once again, the highest rates of gonorrhea in the state are in eastern NC, including Pitt County. In eastern NC, the rates of gonorrhea in females is 1.35 times higher than in males and the rate in African Americans is over 2.5 times that of any other race/ethnicity. Like that of chlamydia, the highest rates of infection are in the 15-24 year old age group<sup>114</sup>.

**Gonorrhea Cases: 10 Year Trend**



Source: North Carolina Division of Public Health, Communicable Disease Branch. HIV/STD Surveillance Report.

## Syphilis

Syphilis rates throughout North Carolina had fallen significantly until 2003. Pitt County experienced its largest percent decrease (84%) from 2000 to 2001. In 1999 and 2000, Pitt County averaged 20 cases per year with a decrease down to an average of three cases per year from 2001-2006<sup>115</sup>. However, cases are increasing across the state and Pitt County has averaged eight cases per year since 2007.

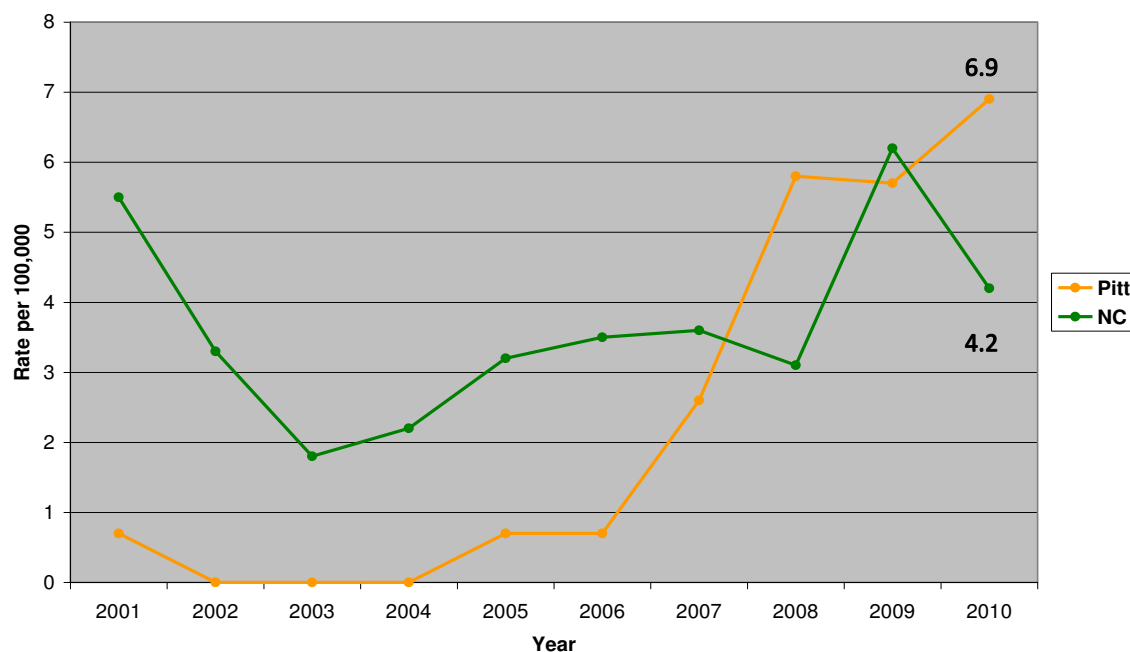
<sup>114</sup> NC Division of Public Health, Communicable Disease Branch. 2010 HIV/STD Surveillance Report. Available at <http://www.epi.state.nc.us/epi/hiv/pdf/std10rpt.pdf>.

<sup>115</sup> NC Division of Public Health, Communicable Disease Branch. 2005 HIV/STD Surveillance Report. Available at <http://www.epi.state.nc.us/epi/hiv/stats.html>.

Syphilis is the only STD where eastern NC is not the leader in infection rates. The piedmont region of NC currently has the highest syphilis rates in the state. Though the increased rate of syphilis has been noticed across all demographic groups, the rate of infection in males in eastern NC is now almost 4.5 times that for females.

Also, 89% of cases in eastern NC were in African Americans. Persons at highest risk for infection in eastern NC are those in their 30s<sup>116</sup>. Compared to syphilis demographics from a decade ago, syphilis cases today are increasing most significantly in the male, African American, MSM, and young populations<sup>117</sup>.

**Primary/Secondary Syphilis Cases: 10 Year Trend**



Source: North Carolina Division of Public Health, Communicable Disease Branch. HIV/STD Surveillance Report.

### *Tuberculosis (TB)*

Tuberculosis is thought by many to be a disease of the past. However, the prevention and control of this communicable disease continues to be a public health priority. Through aggressive control measures including directly observed therapy, Pitt County and North Carolina have experienced decreases in the number of cases reported annually. Pitt County's tuberculosis rate has decreased since 1999. From 2006-2010, Pitt County averaged just under seven cases of TB per year. Pitt County's rate of tuberculosis has been slightly higher than the State's since 2007. While over a third

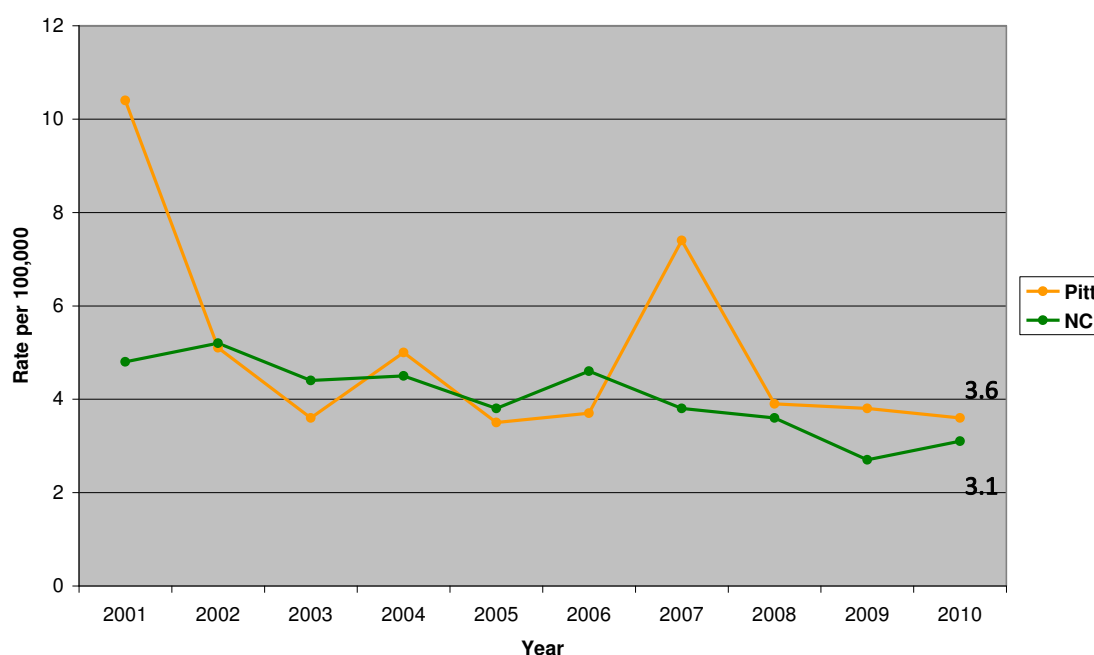
<sup>116</sup> NC Division of Public Health, Communicable Disease Branch. 2010 HIV/STD Surveillance Report. Available at <http://www.epi.state.nc.us/epi/hiv/pdf/std10rpt.pdf>.

<sup>117</sup> NC Division of Public Health, Communicable Disease Branch. Special Report: Syphilis Morbidity, 2009. Available at <http://epi.publichealth.nc.gov/hiv/pdf/NCsyphilisMorbidity2009.pdf>.



of NC's TB cases since 2005 have been in the foreign-born, less than 10% of Pitt County's TB cases were in this population during the same time period<sup>118</sup>.

### Tuberculosis Cases: 10 Year Trend



Source: North Carolina Division of Public Health, Communicable Disease Branch. Tuberculosis Statistics for NC.

### *Vaccine Preventable Diseases*

Children are required to receive vaccinations for ten communicable diseases during their childhood. These include measles, mumps, rubella, Hepatitis B, diphtheria, tetanus, pertussis (whooping cough), Hemophilus influenzae B, polio, and varicella (chickenpox). Since 2006, Pitt County has reported cases of Hepatitis B (acute and chronic) and pertussis.<sup>119</sup>

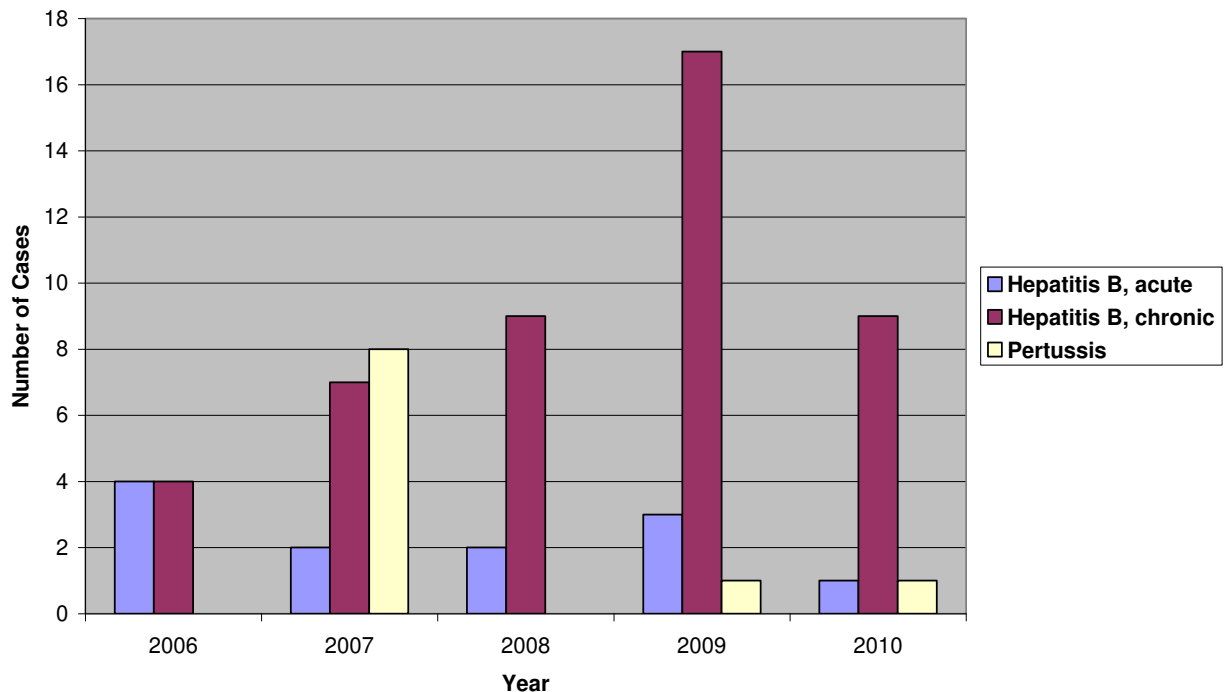
Outbreaks of pertussis have become common in recent years across the county. A large number of pertussis cases were reported in 2007 in Pitt County due to a small local outbreak. Research shows that pertussis immunity from vaccination wanes over time so children are now revaccinated prior to entering the 6<sup>th</sup> grade and adults are encouraged to get the Tdap vaccine, which includes a pertussis booster, at their next tetanus vaccination.

Influenza is a vaccine preventable disease as well. More detailed information on influenza in Pitt County can be found earlier in this report.

<sup>118</sup> NC Division of Public Health, Communicable Disease Branch. 2005 & 2009 Tuberculosis Statistics for NC. Available at <http://epi.publichealth.nc.gov/tb/data.html>.

<sup>119</sup> NC Division of Public Health, Electronic Disease Surveillance System Report.

### Vaccine Preventable Disease Cases Pitt County 2006-2010



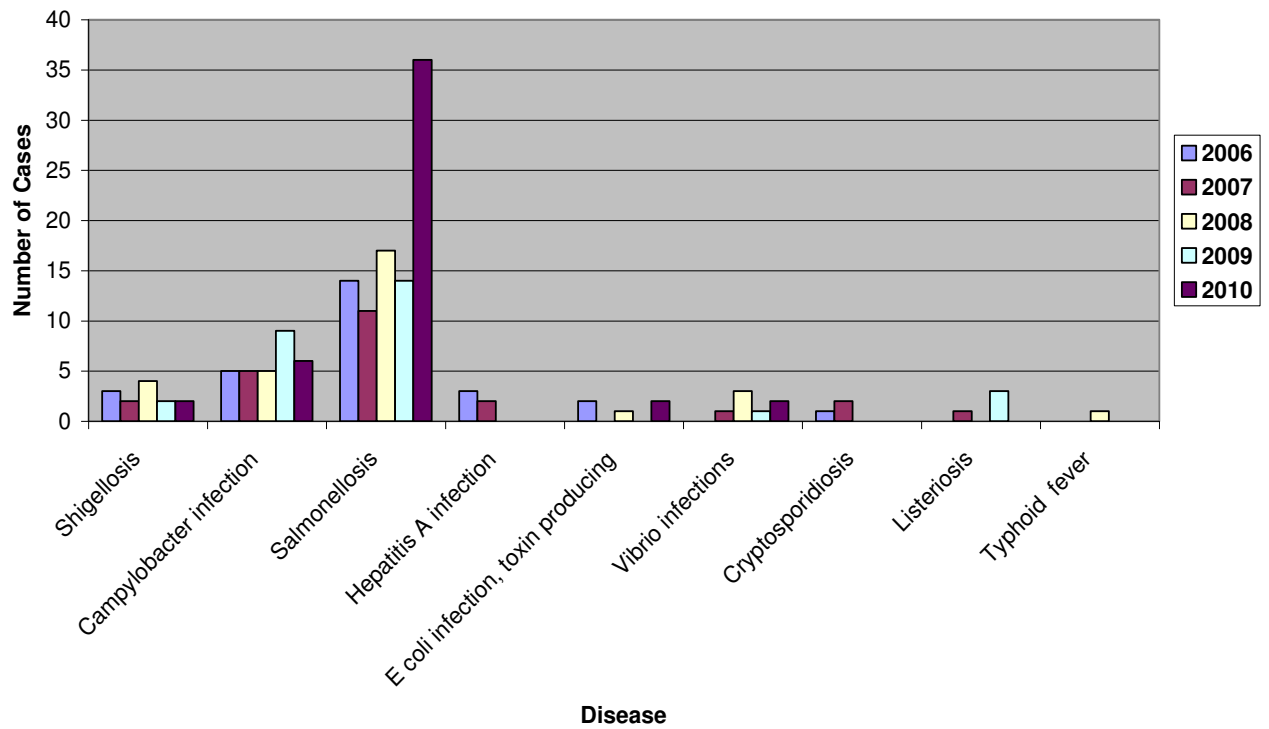
Source: Pitt County Health Department, North Carolina Electronic Disease Surveillance System.

### Foodborne Diseases

Large nationwide outbreaks of foodborne illnesses have garnered significant media attention over the past few years, such as a salmonellosis outbreak related to peanut butter in 2009 and botulism in canned chili in 2007. Pitt County has not reported a local foodborne outbreak since 2006, but regularly has sporadic, non-outbreak related cases of potential\* foodborne illness every year. Salmonellosis is the most common reportable foodborne illness in Pitt County, averaging about 15 cases per year. Thirty-six (36) cases of Salmonella were reported in the county in 2010.<sup>120</sup> Though most of these cases were isolated or sporadic cases, three were associated with an outbreak in a childcare facility. (\*For many diseases that can be transmitted by contaminated food (foodborne), transmission can also occur via contaminated water, infected wounds, or through contact with infected feces. Therefore, all reported cases of these diseases may not necessarily be foodborne in nature, but most likely are.)

<sup>120</sup> NC Division of Public Health, Electronic Disease Surveillance System Report.

### Potentially Foodborne Illness Confirmed Cases in Pitt County, 2006-2010



Source: Pitt County Health Department, North Carolina Electronic Disease Surveillance System.

## *Environmental Health*

### *Water Quality*

There are 14 community water systems in Pitt County. The primary water source type for five (5) of these systems is groundwater (water from wells). Pitt County's largest system, serving more than 50% of the population, uses surface water from the Tar River and has several wells for supplemental use. Additionally, four (4) Pitt County townships receive approximately 75% of their daily demand from a system that uses surface water from the Neuse River. There are two (2) transient non-community water systems in Pitt County that do not consistently serve the same people (e.g. churches, campgrounds, etc).<sup>121</sup>

Public water systems in North Carolina are monitored by the Division of Water Resources, Public Water Supply Section within the NC Department of Environment and Natural Resources. The Environmental Protection Agency (EPA) establishes water quality standards and requires that water systems periodically monitor for bacteria and a variety of compounds including, nitrate/nitrite, synthetic organic compounds (e.g. pesticides, fertilizers), volatile organic compounds (e.g. benzene, cleaning solutions), inorganic compounds, lead and copper. Water systems are required to submit evidence of their test results to ensure that EPA water quality standards are met. If any of these tests exceed the EPA action level, the water system must correct the problem and return to compliance with EPA water quality standards or provide alternative water supply to its customers.<sup>122</sup> Currently, water systems are required to annually provide a *Consumer Confidence Report* to all of their customers detailing the results of water quality monitoring and actions taken to correct problems.

There were no data found to indicate that any particular water system within Pitt County had ongoing water quality issues. While testing for various compounds, metals, and bacteria has revealed from time to time a specific area of concern for a water system, these problems were resolved. Consumers can review the results of water quality monitoring for their specific water system by visiting <https://www.pwss.enr.state.nc.us/NCDWW/>.

Beginning July 2008, a statewide rule required local health departments to regulate private drinking water wells to ensure and protect the quality of drinking water. The Health Department staff is required to determine the location of the well, inspect the installation of the well and sample the water from the well.<sup>123</sup>

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<sup>121</sup> US Environmental Protection Agency. Safe Drinking Water Information System (SDWISA)

<sup>122</sup> North Carolina Department of Environment and Natural Resources, Public Water Supply Section, Division of Water Resources, February 2012.

<sup>123</sup> Pitt County Health Department, Environmental Health Division.

## Air Quality

The North Carolina Division of Air Quality within the North Carolina Department of Environment and Natural Resources monitors ambient (outdoor) air quality throughout North Carolina. There are two air quality monitors at the Pitt County Agricultural Center in Greenville. One monitor measures ozone and the other measures fine particles. The NC Division of Air Quality utilizes the Air Quality Color Code Guide (see below) to alert the public of air quality issues related to ozone and fine particles. Air pollution levels within the range of orange, red, purple or maroon are considered exceeding the Environmental Protection Agency (EPA) standard. Pitt County had three days in 2011 that exceeded the federal ozone standard, but the three-year average that the EPA uses to determine compliance (or attainment) was well below the standard. For this same time period, North Carolina had 26 days statewide that exceeded the ozone standard. Most of these locations were in the Charlotte metro area, and all of these days were Code Orange. By comparison, in 2002, North Carolina had 78 days statewide that exceeded the ozone standard and 12 of those days were Code Red.<sup>124</sup>

Smoke from several large wildfires caused high levels of fine particles across much of Eastern North Carolina during the late spring and summer of 2011. Areas downwind of the fires typically experienced particle pollution in the Code Orange, Red and Purple range. Smoke from the fires caused locally high levels of particle pollution in the Greenville area on a few days, but the three-year average that the EPA uses to determine compliance was well below the standard.

Air Quality Index Levels of Health Concern	Numerical Value	Meaning
Green/Good	0-50	Air quality is considered satisfactory, and air pollution poses little or no risk.
Yellow/Moderate	51-100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Orange/Unhealthy for Sensitive Groups	101-150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Red/Unhealthy	151-200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Purple/Very Unhealthy	201-300	Health alert: everyone may experience more serious health effects.
Maroon/Hazardous	> 300	Health warnings of emergency conditions. The entire population is more likely to be affected.

<sup>124</sup> North Carolina Department of Environment and Natural Resources, Division of Air Quality, Public Information Officer. February 2012.

Air quality is an important public health issue. Even low levels of ozone can cause irritation and inflammation of the respiratory tract. Children and adults with asthma and other respiratory conditions are particularly affected by poor air quality and often times have to take additional precautions such as staying indoors or limiting outdoor physical exertion. For public health reasons, North Carolina has taken additional measures to improve air quality. Auto emissions account for about one-third of the ozone-forming emissions across the state. While North Carolina began auto emissions testing as early as the 1980s in nine urban counties, the General Assembly expanded this requirement in 1999 to other counties based on the population, number of vehicles, and commuting patterns. Pitt County began automobile emissions testing in January 2005. Also in 2002, the legislature passed the Clean Smokestacks Act. This Act requires coal-burning power plants to reduce their emissions of harmful air pollutants (nitrogen oxide and sulfur dioxide) by 75% over a 10 year period.<sup>125</sup>

As Pitt County's population continues to grow, it will be increasingly important for public health to keep abreast of potential air quality hazards associated with the county's growth.

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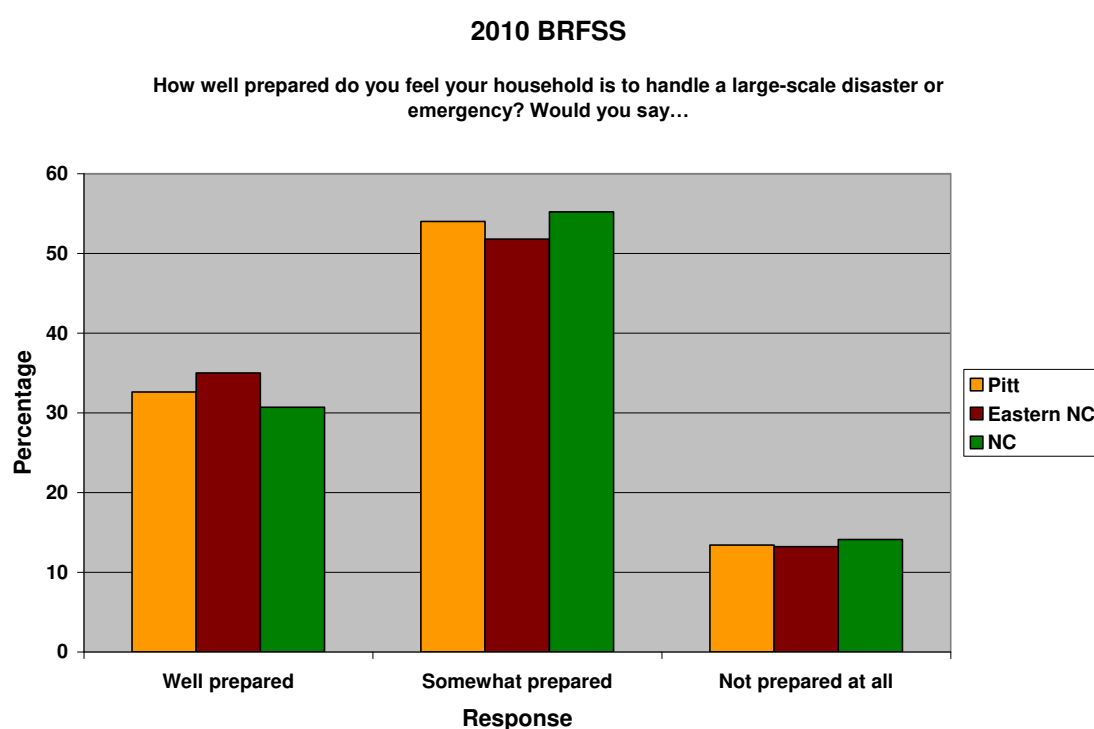
<sup>125</sup> North Carolina Environment and Natural Resources, Division of Air Quality. Available at <http://daq.state.nc.us/motor/inspect/> and [www.ncair.org](http://www.ncair.org).

## Emergency Preparedness

Weather events such as hurricanes and severe storms impact Pitt County regularly. Like other communities, Pitt County has the potential to be affected by a host of other disasters such as chemical accidents, disease outbreaks (e.g. 2009 H1N1 flu pandemic), or even bio- or agro-terrorism. Almost always, disasters have a large health component where persons lose access to services or are put at risk for injury or acute disease. Therefore, it is very important for Pitt County citizens to prepare themselves for emergencies and disasters and for officials to understand the level of preparedness for the county.

Overall, data indicate that Pitt County citizens have a level of preparedness that is equal to, and for some indicators slightly greater than, that of NC residents as a whole and those of Eastern NC.<sup>126</sup>

According to the 2010 Behavioral Risk Factor Surveillance Study (BRFSS), almost one third of Pitt County residents reported that their household was “well prepared” to handle a large-scale disaster or emergency. Most residents (54%) reported that they were “somewhat prepared.” Responses were similar for different age, gender, race, education, and income breakdowns and similar to that of NC and eastern NC.<sup>127</sup>



<sup>126</sup> 2010 BRFSS, NC Center for Health Statistics:  
<http://www.schs.state.nc.us/SCHS/brfss/2010/pitt/topics.html#gp> .

<sup>127</sup> 2010 BRFSS, NC Center for Health Statistics:  
<http://www.schs.state.nc.us/SCHS/brfss/2010/pitt/topics.html#gp> .

In the 2011 Community Health Assessment phone survey, when asked what health screenings or education/information services are needed in your community, 15% of Pitt County residents reported “emergency preparedness,” indicating a need for further education programs and services in this area.<sup>128</sup>

### *Supplies*

Emergency management agencies suggest that all households have a stockpile of certain supplies at home in case of an emergency. Asked if their household had a three day supply for everyone in the house, 65.5% of Pitt County residents responded “yes” for water, 86.3% for non-perishable food, and 84.8% for prescription medication. For all three types of supplies, Pitt County residents reported “yes” more often than NC or Eastern NC residents. There was very little variation among demographic groups for supplies, but persons with a high school education or less were significantly more likely to have an emergency supply of water compared to those with higher education.<sup>129</sup>

Eighty-one percent (81%) of Pitt County residents reported that their household had a working battery-operated radio and working batteries for their use if the electricity went out, compared to 77.2% for NC. A greater percent, 95.4%, reported that they had a flashlight.<sup>130</sup>

### *Planning*

In an emergency, pre-planning for elements like communication and evacuation are essential. Additionally, information on planning methods employed by residents assists emergency response officials in targeting messages, information and education.

Pitt County residents responded that, in a large-scale disaster or emergency, their main method or way of communicating with friends and family would overwhelmingly be by cell phone. This response did not vary significantly within any specific demographic group.<sup>131</sup>

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<sup>128</sup> Pitt County Community Health Assessment phone survey, Fall 2011.

<sup>129</sup> Pitt County Community Health Assessment phone survey, Fall 2011.

<sup>130</sup> 2010 BRFSS, NC Center for Health Statistics:

<http://www.schs.state.nc.us/SCHS/brfss/2010/pitt/topics.html#gp> .

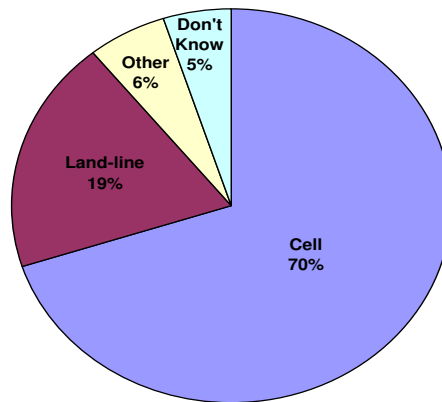
<sup>131</sup> 2010 BRFSS, NC Center for Health Statistics:

<http://www.schs.state.nc.us/SCHS/brfss/2010/pitt/topics.html#gp> .



### 2010 BRFSS, Pitt County

In a large-scale disaster or emergency, what would be your main method or way of communicating with relatives and friends?



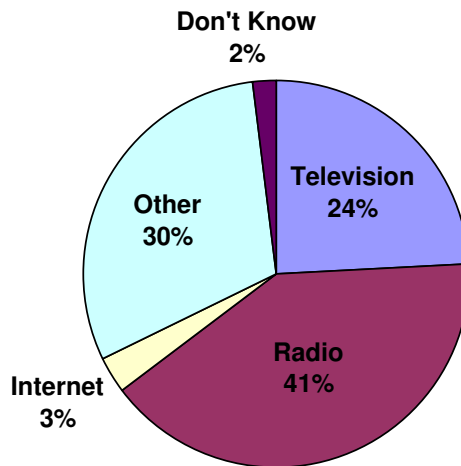
Asked what their main method or way of getting information from authorities in a large-scale disaster or emergency, most Pitt County residents reported radio, but a large percent also reported television and “other.” Significantly fewer Pitt County residents responded “don’t know” compared to NC and eastern NC.<sup>132</sup>

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<sup>132</sup> 2010 BRFSS, NC Center for Health Statistics:  
<http://www.schs.state.nc.us/SCHS/brfss/2010/pitt/topics.html#gp>

## 2010 BRFSS, Pitt County

What would be your main method or way of getting information from authorities in a large-scale disaster or emergency?



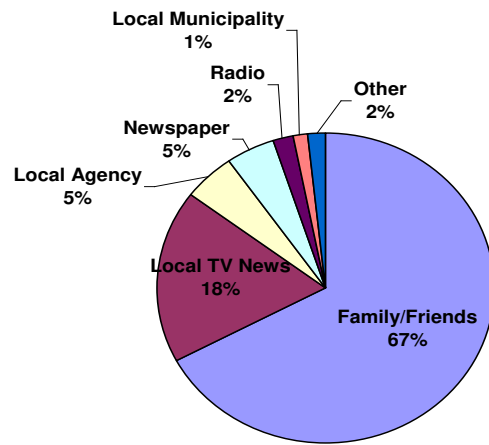
There were some significant differences in responses for Pitt County residents within demographic breakdowns for methods of getting information. A significantly larger percent of persons aged 45+ years compared to those 18-44 years of age reported use of television while persons with an education of some college or more were more likely to report use of the internet compared to those with less education. Persons with a household income of \$50,000 or more were more likely to report use of the radio compared to those with less income. Significantly more non-white persons, persons with a high school or less education, and persons with a household income of < \$50,000 reported using “other” methods of communication.<sup>133</sup> Though the BRFSS does not detail what “other” could mean, internal surveys conducted by the Pitt County Health Department during the 2011 Hurricane Irene response for persons seeking emergency assistance from the Department of Social Services found that 68% of persons got their information on where to get assistance from family and friends, suggesting that this is a critical source of information for citizens.<sup>134</sup>

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<sup>133</sup> 2010 BRFSS, NC Center for Health Statistics:  
<http://www.schs.state.nc.us/SCHS/brfss/2010/pitt/topics.html#gp>

<sup>134</sup> Pitt County Health Department, 2011 Hurricane Irene Assistance Center Information Survey, September 2011.

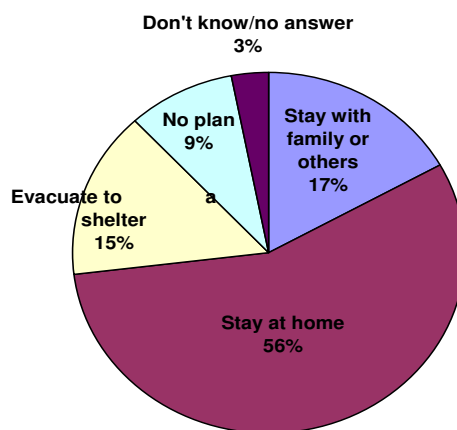
**2011 Hurricane Irene FEMA/DSS Assistance Center, Pitt County**  
**How did you and your family find out about this Assistance Center?**



When asked in the 2011 Community Health Assessment phone survey what their household's primary disaster plan would be during a severe storm or other emergency, over 50% of Pitt County residents reported that they would stay at home while almost 10% indicated that they had no plan at all. Fifteen percent (15%) reported that they would go to a community shelter<sup>135</sup>.

**2011 Community Health Assessment Phone Survey, Pitt County**

**During a severe storm or other emergency, what is your household's primary disaster plan?**

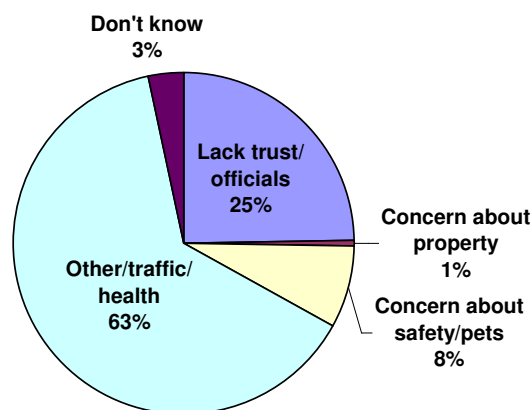


<sup>135</sup> Pitt County Community Health Assessment Phone Survey, Fall 2011.

While over 90% of Pitt County residents reported that if public authorities announced a mandatory evacuation from their community due to a large-scale disaster or emergency they would evacuate, over 83% reported that their household does not have a written disaster evacuation plan for how they will leave their home in case of a large-scale disaster or emergency that requires evacuation. White persons compared to non-white were significantly more likely to report that they did not know/were not sure if they would evacuate if asked to by authorities. Of those who reported that they would not evacuate, most reported the reason as being related to other, traffic jams or inability to get out, health problems or lack of mobility and lack of trust in public officials<sup>136</sup>.

## 2010 BRFSS, Pitt County

What would be the main reason you might not evacuate if asked to do so?\*



The 2011 Community Health Assessment phone survey also asked Pitt County residents how they would evacuate in an emergency. Over 75% reported that they would evacuate in their own vehicle and 10% would rely on a friend/relative. No persons reported that they did not have a way to evacuate such as a lack of transportation<sup>137</sup>.

### Other

All households are highly recommended to have both a working carbon monoxide detector and smoke detector. When asked on the 2011 Community Health Assessment phone survey, over half of Pitt County residents reported that they had both types of detectors. Thirty-four percent (34%)

<sup>136</sup> 2010 BRFSS, NC Center for Health Statistics:  
<http://www.schs.state.nc.us/SCHS/brfss/2010/pitt/topics.html#gp>

<sup>137</sup> Pitt County Community Health Assessment Phone Survey, Fall 2011.

reported that they only had a smoke detector, one percent (1%) a carbon monoxide detector only, and 10% of citizens reported that they had neither type of detector in their household<sup>138</sup>.

Pitt County Emergency Management maintains a Special Medical Needs Registry that encourages Pitt County residents to voluntarily sign-up if they have special medical needs whereby they could need extra assistance during an emergency. People with special medical needs include individuals who would need assistance with medical care or personal care during evacuations and sheltering because of physical or mental impairments. The level of care required for these individuals would go beyond the basic first aid level of care that is available in general public shelters. Because this registry is voluntary, it is assumed to include only a small proportion of the people in the county who are eligible. It is unknown how many persons may actually be eligible in the county and what their needs would be. The 2011 Community Health Assessment phone survey asked if any person in their household qualified as “special needs”. Sixteen percent (16%) of people indicated a condition for which someone in their household would qualify for the registry<sup>139</sup>. Of people who said yes:

- 27% indicated they had a severe respiratory problem that required a power source or ambulatory bag
- 27% were people with diabetes requiring insulin
- 27% had a physical or mental condition that required daily medical supervision
- 16% were someone who required wound care or help with injections on a daily basis
- 8% were dependent on airway suctioning
- 8% required tube feeding
- 0% indicated need for IV therapy

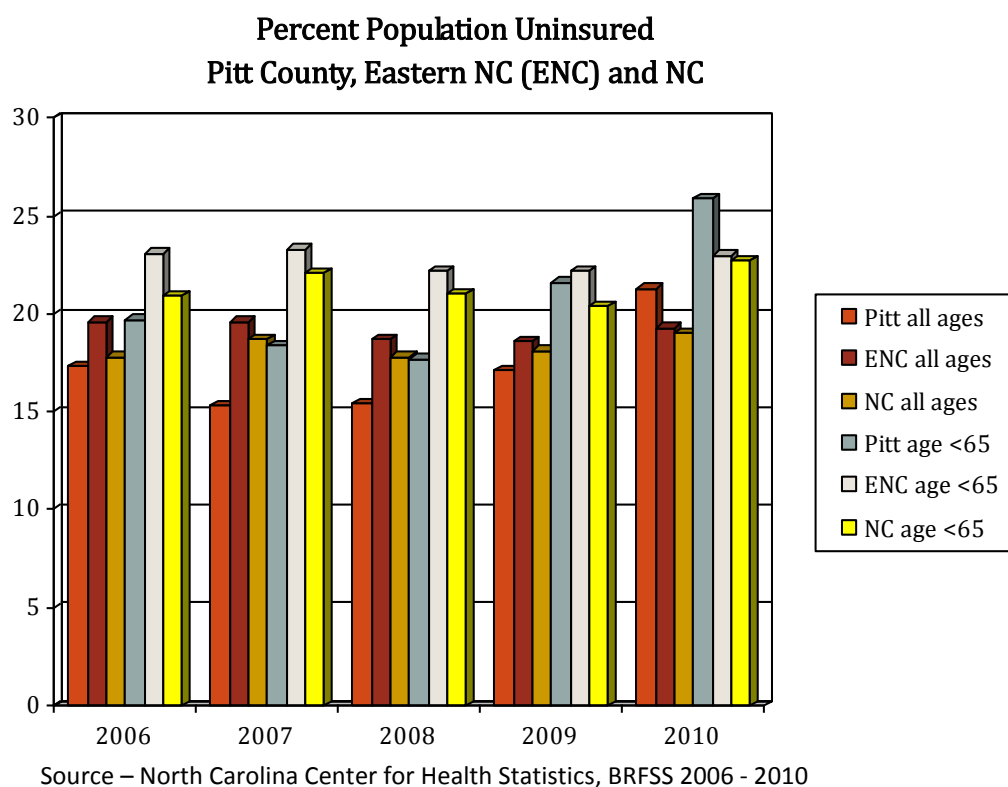
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<sup>138</sup> Pitt County Community Health Assessment Phone Survey, Fall 2011.

<sup>139</sup> Pitt County Community Health Assessment Phone Survey, Fall 2011.

## Access to Care

The following chart compares percent population uninsured for Pitt County, eastern NC and North Carolina. Since 2007 Pitt County's percent population who are uninsured has increased for all ages and significantly for adults age less than 75 years.<sup>140</sup> More than 25% of the adults in Pitt County age less than 65 years report they are uninsured. The percent population uninsured has increased as the unemployment in the county has increased.



Medicaid is a health insurance program for low-income individuals and families who cannot afford health care costs. Medicaid serves low-income parents, children, seniors, and people with disabilities.<sup>141</sup> For those who meet income and other eligibility criteria, Medicaid provides medical coverage for infants and children, families with dependent children, pregnant women and men and women who are in need of family planning services.<sup>142</sup> Medicaid for Aged, Blind and Disabled is designed for individuals who are age 65 or older, blind, or disabled and meet income and other eligibility requirements.<sup>143</sup> SSI is a federal income supplement program funded by general tax revenues designed to help aged, blind and disabled people who have little or no income and

<sup>140</sup> NC State Center for Health Statistics, Behavior Risk Factor Survey, 2006, 2007, 2008, 2009, 2010.

<sup>141</sup> NC Department of Health and Human Services, Division of Medical Assistance, <http://www.ncdhhs.gov/dma/medicaid/index.htm>.

<sup>142</sup> NC Department of Health and Human Services, Division of Medical Assistance, <http://www.ncdhhs.gov/dma/medicaid/index.htm>.

<sup>143</sup> NC Department of Health and Human Services, Division of Medical Assistance, <http://www.ncdhhs.gov/dma/medicaid/index.htm>.

provides cash to meet basic needs for food clothing and shelter.<sup>144</sup> The Work First Family Assistance program provides parents with training and other services to help them become employed and self-sufficient.<sup>145</sup>

According to Pitt County Department of Social Services, 27,372 Pitt County individuals were enrolled in all Medicaid services as of December 2011.<sup>146</sup> These individuals were enrolled as follows:

<b>Medicaid Service</b>	<b>Number of Pitt County Residents Who Receive Each Medicaid Service</b>
Family and Children's Medicaid	16,729
Medicaid for the Aged, Blind, Disabled	3,713
Supplemental Security Income (SSI) Recipients also Receiving Medicaid	5,718
Work First Family Assistance	1,212
	<b>Total Medicaid Recipients = 27,372</b>

Pitt County Department of Social Services also reported that 2,307 children were enrolled in the NC Health Choice Program as of December 2011.<sup>147</sup> The NC Health Choice program is a free or reduced cost health care program for children who do not qualify for Medicaid but meet other income eligibility criteria. This program helps to reduce the number of uninsured children in NC to help them receive health care services.<sup>148</sup>

### Emergency Department Visits

Vidant Health Strategic Development reviewed emergency department visits for fiscal year 2011. Below is a list of the top ten diagnoses for the emergency department for fiscal year 2011. Nearly 14,000 visits were made to the emergency department for these 10 diagnoses. Also presented in the following chart are the top diagnoses from the emergency department that resulted in admissions. A review of pediatric visits showed that acute upper respiratory infection, followed by ear infections and viral infections were the top three reasons for pediatric visits to the emergency department.<sup>149</sup>

<sup>144</sup> Social Security Online, Social Security Income Homepage, <http://www.socialsecurity.gov/ssi/index.htm>

<sup>145</sup> NC Department of Health and Human Services, NC Division of Social Services, <http://www.ncdhhs.gov/dss/workfirst/>

<sup>146</sup> Pitt County Department of Social Services 2011 Income Maintenance Report.

<sup>147</sup> Pitt County Department of Social Services 2011 Income Maintenance Report

<sup>148</sup> NC Department of Health and Human Services, Division of Medical Assistance <http://www.ncdhhs.gov/dma/healthchoice/>.

<sup>149</sup> Vidant Health Strategic Development, FY11 Top Vidant Emergency Department Visits by Principal Diagnosis, Fall 2011.

## FY11 Top Diagnosis Codes for Vidant Emergency Department

Diagnosis ALL Populations	Visits	Diagnosis ALL Populations resulting in Admissions	Visits
• URINARY TRACT INF NOS	2,040	• SEPTICEMIA NOS	370
• Upper Respiratory Infections	1,626	• PNEUMONIA, ORGANISM NOS	304
• HEADACHE	1,601	• URINARY TRACT INF NOS	219
• LUMBAGO (Back pain)	1,518	• CEREB ART OCCL W INFARCT	214
• DENTAL DISORDER NOS	1,369	• AC ON CHRON SYS HRT FAIL	201
• CHEST PAIN NEC	1,343	• CHEST PAIN NEC	198
• CHEST PAIN NOS	1,204	• ACUTE RENAL FAILURE NOS	196
• ABDOMINAL PAIN-SITE NEC	1,122	• SUBEND INFARCT-INITIAL	177
• OTITIS MEDIA NOS	1,014	• ATRIAL FIBRILLATION	170
• PAIN IN LIMB	987		

Source: Vidant Health Strategic Development



## *Health Care Resources*

Pitt County relies on a number of health care resources to meet the health needs of the community. These resources include Vidant Medical Center (formerly known as Pitt County Memorial Hospital), East Carolina University, East Carolina Heart Institute, Pitt County Health Department, James D. Bernstein Community Health Center and many private practice physicians and dentists. Many of these resources located in Pitt County also provide services to counties throughout eastern North Carolina. A *2011 Medical Directory* can also be found at [www.reflector.com](http://www.reflector.com).

*Vidant Medical Center*, formerly Pitt County Memorial Hospital (PCMH), is the flagship of Vidant Health. Vidant Health, formerly University Health Systems of Eastern Carolina (UHS), is a regional health system serving 1.4 million people in 29 counties throughout eastern North Carolina. The mission of the Vidant Medical Center is “to enhance the quality of life for the people and communities we serve, touch and support.” Vidant Medical Center is fully accredited by the Joint Commission for the Accreditation of Healthcare Organizations (JCAHO). Vidant Medical Center is an 861-bed academic medical center that offers the following specialized services: <sup>150</sup>

- Behavioral Health Services (BHS) - Provides inpatient psychiatric treatment of acute mental illnesses for adults, older adults (Geriatric Psych), adults with medical issues (Psych - Med) and adults with intellectual disabilities (MI/MR). The four BHS units total 52-beds and provide safe, secure and structured environments.
- Cancer Care - Provides comprehensive cancer services through prevention, screening and early detection programs and services.
- Children’s Hospital - Tertiary care facility in eastern North Carolina designed especially for pediatric patients.
- Community Care Plan of Eastern Carolina - A partnership involving hospitals, physicians, health departments, social agencies, and the Brody School of Medicine. Provides case management and coordination of care to Medicaid enrollees in the region.
- East Carolina Endoscopy Center - A joint venture with ECU Physicians. Offers endoscopic procedures to diagnose and treat gastrointestinal conditions.
- East Carolina Heart Institute at Vidant Medical Center - Offers diagnostic and interventional medical and surgical services. Surgeons here have pioneered minimally invasive surgical techniques, including robotic-assisted procedures.
- Gamma Knife® Center - Surgery without a knife for treating a range of conditions, including tumors that affect the brain.

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<sup>150</sup> Vidant Medical Center Community Health Programs and Vidant Health Strategic Development. February 2012.

- Vidant Cardiopulmonary Rehabilitation - A rehabilitation/intervention program that uses exercise, diet and lifestyle changes to help patients who have a history of cardiovascular and pulmonary disease or who are at risk for developing problems.
- Kidney Transplant Services - Surgeons, nephrologists, nurses, social workers and counselors oversee an active waiting list that yields roughly 70 transplants per year.
- Leo W. Jenkins Cancer Center - A collaboration between Vidant Health and East Carolina University to provide cancer diagnostic and treatment services.
- Lifeline® - A personal emergency response system for your home that dispatches an ambulance, police or fire departments and calls family or neighbors if you need help.
- Minor Emergency Department - An extension of the Vidant Medical Center emergency department, Vidant Medical Center provides convenient, walk-in care for patients with injuries and illnesses that are not life-threatening.
- Orthopedic Services - Offers joint replacement, spine and sports medicine surgery plus rehabilitation for a variety of musculoskeletal injuries.
- Pain Management Center - Provides evaluation and treatment services for patients with chronic pain. A collaborative effort of Vidant Medical Center, East Carolina Pain Consultants and the Brody School of Medicine at East Carolina University.
- Pastoral Services - Facilitates and enhances the spiritual dimension of healing for patients, families and staff throughout the system.
- Vidant Medical Center Stroke Care - The only primary stroke center east of I-95, as certified by the Joint Commission. Provides prompt treatment, administering the clot busting drug tPA when appropriate, and regional education to help prevent stroke.
- Rehabilitation Center - The center has the distinction of being one of a few medical centers in North Carolina with 11 CARF accredited programs for children and adults. Offers a wide range of integrated acute rehabilitation services, a 75-bed inpatient rehab facility and multiple outpatient rehabilitation programs. Also home to the only clinic for amyotrophic lateral sclerosis (ALS) patients in eastern North Carolina.
- Robotic Surgery - Provides experts in robot-assisted surgeries.
- Sleep Center - Diagnoses and treats disorders that interfere with natural sleep in adult and pediatric patients.
- Vidant Surgicenter - An accredited, freestanding ambulatory surgery facility serving patients who need same-day or overnight surgical care.

- Trauma and Critical Care - The region's only Level 1 trauma center; includes emergency and critical care surgery, intensive care and rehabilitation services. Emergency room transports provided by EastCare air and ground services.
- Vidant Home Health and Hospice - Provides health care for patients in the comfort of their homes as well as care and support for terminally ill patients and their families. Medicare-certified. Hospice care also available at the Service League of Greenville Inpatient Hospice.
- Weight Loss Surgery - Designated as a Bariatric Surgery Center of Excellence (BSCOE) by the Surgical Review Corporation (SRC) on behalf of the American Society for Metabolic and Bariatric Surgery (ASMBS). Offers gastric bypass, gastric sleeve, and gastric banding procedures along with promoting wellness programs for lifetime weight management.
- Women's Center - Provides birthing rooms, traditional labor and delivery services, breastfeeding support, post-partum follow-up and educational programs.
- Wound Healing Center - Provides specialized care, including hyperbaric oxygen therapy, for a variety of chronic wounds such as those caused by diabetes, infection and injury.
- Vidant Wellness Center - A 52,000-square foot, fully equipped wellness center. Provides a range of exercise, nutrition and weight loss activities and programs to promote healthy lifestyles in adults and children, as well as aftercare programs for patients transitioning from the hospital or rehabilitation. Memberships are available to the community. More than 600 scholarships were awarded last year for memberships and programs. Also includes an outpatient nutrition clinic that provides medical nutrition therapy and weight management to adults and children and Optifast medical weight loss to adults.

In 1995, when Vidant Medical Center was an independent public hospital, executive and board leadership declared a new and significant commitment to community health. Moving outside the traditional boundaries of an acute care hospital, dedicated resources were charged with establishing partnerships, identifying health needs and initiating new programs to improve health status. The unique, innovative and targeted programs have reached thousands of individuals in a myriad of ways that would not have otherwise been possible. Combined with programs funded by hospital operations, programs supported through joint grant applications to major governmental and philanthropic agencies and other collaborative initiatives, Vidant Medical Center has demonstrated leadership in addressing health status in Pitt County and the region.

Community Health Programs is a service provided by Vidant Medical Center to help our community members achieve a healthier, brighter future. These programs draw on the expert resources of the medical center and community to improve health and quality of life in our county.

(1) School Health - providing 20 RN case managers to all public schools in the County;

(2) Pediatric Asthma - a community-based case management program that has reduced hospital and emergency department admissions by 68% and 41%, respectively;

(3) Pitt Partners for Health, Vidant Medical Center provides administrative support to Pitt Partners for Health, a Healthy Carolinians certified program with 200 members. The Task Force is comprised of representatives from throughout Pitt County who work collaboratively with other health care providers and community members to identify and address the priority health concerns for the County;

(4) Seniors Program - enriching the lives of older adults through health promotion; and

(5) Eastern Carolina Injury Prevention (ECIPP) - a 20-year program in conjunction with the Brody School of Medicine that is a key component of the PCMH Level I Trauma Center designation. ECIPP was instrumental in achieving the bicycle helmet law for children in NC, and over the past year has assisted Vidant Medical Center to significantly reduce falls with harm.

In addition to these established programs, Vidant Medical Center sponsors or partners in multiple offerings to provide health screenings and education for a variety of chronic medical conditions including hypertension, diabetes, heart disease, and cancer.

The Community Benefits and Health Initiatives Grants Program at Vidant Medical Center was established in 1998. The goals of the grants program are to provide financial and technical support to organizations for programs that promote chronic disease prevention and management, early detection of chronic illnesses, health education, and direct healthcare services.

*Pitt County Health Department* is one of 85 local health departments in North Carolina. Its mission is to protect, promote and assure the health of the people in Pitt County. The health department is responsible for assessing the health of the community by monitoring health status and diagnosing and investigating health problems and health hazards in the community; assuring that needed health services are available in the community; enforcing laws and regulations that protect health and ensure safety; and advocating for policies that support the health of the public. The health department operates a variety of preventive health services in the area of women's and children's health and communicable disease control. Clinic services are available for maternal health, family planning, WIC (Women's, Infants and Children), immunizations, STDs and other communicable diseases. Case management and coordination services are available to support women and children such as child care coordination for children (CC4C), pregnancy care management, Family Nurse Partnership, childbirth education, breastfeeding promotion and child care health consultation. Environmental health services include: food, lodging, institutional and public swimming pool inspections; on-site sewage disposal program, private drinking water program, mosquito management; migrant camp inspections; and investigation of lead poisoning. The Health Department also manages a mobile dental clinic, *Smile Safari*, to ensure that the dental needs of the uninsured or underinsured children are met. The clinic rotates throughout the Pitt County School system during the school year and is located at the Boys and Girls Club in Pitt County during the summer months.<sup>151</sup>

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<sup>151</sup> Pitt County Health Department, Health Education Division.

*Pitt Partners for Health (PPH)* was established as a certified Healthy Carolinians Task Force in 1995. It is a community partnership with representatives from churches, businesses and human service agencies. PPH's function is to collaboratively respond to the compelling needs of Pitt County residents through assessment, resource identification and development, citizen advocacy, comprehensive planning and coordination of health intervention and prevention strategies. Over the past three years PPH has formed subcommittees to address six priority areas: cancer; nutrition and physical activity; diabetes, cardiovascular disease and stroke; older adult health; substance abuse; and injury prevention.<sup>152</sup>

*Martin/Pitt Partnership for Children*, the local Smart Start agency, is committed to making meaningful and measurable investments in the quality of life for young children and families in education, health and support services. The Martin/Pitt Partnership for Children funds programs that aid in that commitment.<sup>153</sup> The funded activities include:

- Assuring Better Child Health and Development (ABCD)- Works with health care providers to ensure children are receiving developmental screenings.
- Child Care Health Consultants- Works with child care providers to promote effective health and safety practices in child care through technical assistance and training.
- Nurse Family Partnership- Offers support to first-time, at-risk moms through home visits and other supports throughout pregnancy until the child turns two-years old.
- ChildLinks- A resource and referral agency that provides free child care referrals to parents as well as offers training for child care providers and provides access to early childhood resources.
- Family and Community Resources- Offers early childhood information to parents and fosters awareness of the Smart Start initiative and the Martin/Pitt Partnership for Children.
- Parents as Teachers- Offers parenting support through positive parent-child interactions, home visits and child development information.
- Child Care Subsidy- Assists eligible families with child care through subsidies available at the Department of Social Services.
- QUEST- Works with child care facilities to promote quality child care.
- WAGES- offers salary supplements to early childhood staff who obtain higher education levels and remain in their current child care setting.
- Program Evaluation and Monitoring- Ensures MPPFC's accountability via an outcome-based evaluation and monitoring system.

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<sup>152</sup> Pitt Partners for Health, Community Health Programs, Vidant Medical Center, 2012, <http://www.vidanthealth.com/medicalcenter/servicesDetail.aspx?id=5881>.

<sup>153</sup> Martin/Pitt Partnership for Children-2012, Information provided from the 2010-2011 Annual Report. Available at: <http://www.mppfc.dreamhosters.com/>.

- Parent-to-Parent- Offers one-on-one family support services to parents of children with special needs.

*Child Care-* In Pitt County there are 159 child care facilities consisting of 87 child care centers and 72 family child care homes. There are 3,649 children (birth to 5 years of age) enrolled in licensed Pitt County child care. There are 734 child care employees in Pitt County. <sup>154</sup>

*Pitt County Department of Social Services (DSS)* is a multi-program, human services organization which is mandated by Federal and State Law to provide assistance and counseling to citizens of Pitt County who qualify for these services. Programs range from health care, food assistance and emergency assistance. DSS strives to protect children and the elderly. Pitt County DSS provides the following services and programs: income maintenance; child support enforcement; emergency assistance; crisis intervention programs; food and nutrition services; Medicaid for adult, family and children, Medicaid transportation; work first family assistance and employment services; child and adult protective services; and prevention services. <sup>155</sup>

*East Carolina Heart Institute* serves as a primary research, teaching, and treatment facility. The Institute provides a patient -centered approach for the treatment of patients of all ages through a state of the art outpatient center at East Carolina University; along with a 120 patient bed, Level I Trauma center Heart Hospital, with operating rooms for robotic surgery and 13 interventional labs at Vidant Medical Center. <sup>156</sup>

*East Carolina University (ECU)* is known for preparing skilled health professionals. These individuals work in collaboration with private health care professionals and community leaders to meet the needs of the communities they serve. ECU prides itself in the colleges and schools (Brody School of Medicine, College of Allied Health Sciences, College of Health and Human Performance, College of Nursing, School of Dental Medicine) located just steps from Vidant Medical Center. ECU prepares students for careers in Medicine, Nursing, Biostatistics, Health Services and Information Management, Occupational Therapy, Physical Therapy, Rehabilitation, Public Health and is now beginning its first year in preparing students in Dental Medicine. Patient care is provided through ECU Physicians, Leo W. Jenkins Cancer Center, Student Health Services, located conveniently at the ECU main campus, and Vidant Medical Center. Research opportunities are also available in areas of Neuroscience, Robotic Surgery, Pulmonary-Critical Care and Sleep, Pediatric Healthy Weight, Microbiology and Immunology and Cardiovascular Sciences, just to mention a few. All of these available resources are also beneficial in providing a teaching and learning environment which is essential for improving the quality of care of the people in Pitt County. <sup>157</sup>

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<sup>154</sup> Martin/Pitt Partnership for Children-2012, Information provided from the 2010-2011 Annual Report. Available at: <http://www.mppfc.dreamhosters.com/>.

<sup>155</sup> Pitt County Department of Social Services. Available at: <http://www.pittcountync.gov/depts/dss/mission/>, January 2012.

<sup>156</sup> East Carolina Heart Institute-2011: <http://www.eastcarolinaheartinstitute.com/>.

<sup>157</sup> East Carolina University, Division of Health Sciences-2011: <http://www.ecu.edu/dhs/>.

*Brody School of Medicine* at East Carolina University provides health care resources to serve the many insured, uninsured and underinsured individuals living in Pitt County as well as in neighboring communities throughout eastern North Carolina. Patient care is provided through a vast array of clinical disciplines ranging from primary care services to other medical specialties, along with various other wellness programs and services.<sup>158</sup>

*School of Dental Medicine* at East Carolina University is the newest addition to the health care disciplines at ECU. The School is beginning the process of providing improved access to dental care to the people in Pitt County, as well as many rural areas and underserved populations in Eastern North Carolina. Dental services will be provided locally at the training facility and through the Community Service Learning Centers, which will serve as operating clinical facilities.<sup>159</sup>

*Emergency Medical Services* - Pitt County has a robust Emergency Medical Services (EMS) system that is a conglomerate of agencies ranging from private, non-profit emergency paramedic units, to municipal and local government sponsored advanced life support responders, but also includes private for profit non-emergency providers as well as a hospital based specialty care transport program. This multitude of providers works in conjunction to meet the variable needs and demands of a thriving urban, sub-urban and rural community on a day to day basis. Pitt County is resource-rich in terms of number of stations, types and amounts of equipment, and a highly skilled workforce. Pitt County has numerous Paramedic-level staff in addition to EMT Intermediate and Basic Staff and has numerous Advanced Life Support (ALS) vehicles, which provide the highest level of pre-hospital EMS care available in NC. EMS squads in Pitt County include: Ayden EMS, Bell Arthur EMS, Eastern Pines EMS, Falkland EMS, Farmville EMS, Fountain EMS, Grifton EMS, Pitt County EMS- Bethel Station, Pitt County EMS- Pactolus Station, Pitt County EMS - Staton House Station, and Winterville EMS. In addition, the City of Greenville maintains Greenville Fire and Rescue, the largest EMS provider in the county.<sup>160</sup>

*Urgent Care Facilities* - As of 2011, there are six urgent care facilities located in Greenville, the heart of Pitt County.

*Federally Qualified or Community Health Centers* - The James D. Bernstein Community Health Center located in Greenville is a federally qualified health center operated by Greene County Health Care, Inc. The center provides medical and dental care to adults and children with minimal or no insurance on a sliding fee scale. An on-site pharmacy is also available offering medicines at reduced cost to the clients. Within the center is an education facility operated by Pitt Community College which offers curriculum, continuing education, and community programs this setting enables the college to be more accessible to residents in the North Greenville/Pitt County area. Several other adult and pediatric health care facilities are also available outside of Pitt County, which serve those Pitt County residents living in proximity to them. These include the Kinston Community Health

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<sup>158</sup>East Carolina University, Brody School of Medicine: <http://www.ecu.edu/med/> .

<sup>159</sup> East Carolina University, School of Dental Medicine-2011: <http://www.ecu.edu/dentistry/> .

<sup>160</sup> Pitt County Government, Emergency Management Services, Fall 2011 .

Center in Lenoir County and four other available community health centers located in Greene County.<sup>161</sup>

*Pitt County Free Clinics* - Two clinics are available in Greenville. The Greenville Community Shelter Clinic is operated by medical students and physicians from the Brody School of Medicine at ECU. Another free clinic is located in Grimesland, NC and also relies on volunteers.<sup>162</sup>

*Licensed Pharmacies in Pitt County* – According to the NC Board of Pharmacies, pharmacies are located in most of the municipal towns within the county: two in Ayden; one in Bethel; four in Farmville; thirty-eight (38) in Greenville; one in Grifton; one in Simpson; and four in Winterville. There are three municipalities in Pitt County (Falkland, Fountain and Grimesland) without pharmacies as of October 2011.<sup>163</sup>

*Suppliers of DME (Durable Medical Equipment)*: There is one in Farmville, 17 in Greenville, and one in Winterville.<sup>164</sup>

*Real Crisis Center* provides confidential counseling assistance to Pitt County residents 24 hours a day. Services are provided by telephone, as walk-ins or through on-site crisis teams. Problems addressed by the center include: suicide, discrimination, mourning, pregnancy, marriage, domestic violence, loneliness, family issues, financial issues, school-related issues, depression, job problems, sexual assault, just to mention a few. Real crisis also has an info-line service which provides information on over 1,000 agencies and services available in Pitt County.<sup>165</sup>

*Renal Dialysis Centers* - There are two in Greenville: ECU Dialysis and Greenville Dialysis Center; and one in Ayden: Ayden Dialysis Center.

*Home Health Care and Hospice Care*<sup>166</sup>: There are 12 home care providers in Greenville, only one of which is Medicare certified, and one in Ayden. There are four Hospice Care providers in Pitt County, all of which are Medicare certified; three are located in Greenville and one in Farmville.

*Ophthalmologists* - There are four located in Greenville.

*Area Dentists who accept Medicaid* – Twenty (20) dentists are located in Greenville; two in Bethel; one in Winterville; and one in Farmville.<sup>167</sup>

*Health Choice Dental Providers* - Eight providers are located in Greenville, one in Bethel and one in Winterville.<sup>168</sup>

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<sup>161</sup> Greene County Health Care Inc and Pitt County Health Department Resource Directory.

<sup>162</sup> NC Association of Free Clinics, revised 05/2011, [http://www.ncfreeclinics.org/Getting\\_Help\\_from\\_a\\_Clinic.aspx](http://www.ncfreeclinics.org/Getting_Help_from_a_Clinic.aspx).

<sup>163</sup> North Carolina Board of Pharmacies, Pharmacy database search (data updates daily) search date: October 26, 2011, <http://www.ncbop.org/index.html>.

<sup>164</sup> North Carolina Board of Pharmacies, Pharmacy database search (data updates daily) search date: October 26, 2011, <http://www.ncbop.org/index.html>.

<sup>165</sup> Real Crisis Intervention, Search date: 10/26/2011, <http://www.realcrisis.org/>.

<sup>166</sup> North Carolina Home Health Care and Hospice Care directory, search date: 10/26/2011, <http://www.homeandhospicecare.org/directory/homecare/pitt.html>.

<sup>167</sup> NC Division of Medical Assistance: <http://www.ncdhhs.gov/dma/dental/dentalprov.htm>.



*Chiropractors* - As of 2011, there are 24 licensed chiropractors in Pitt County: one in Ayden; two in Farmville; 16 in Greenville; two in Grimesland; one in Simpson; and two in Winterville.<sup>169</sup>

### *Health Care Providers*

According to the *2011 ENC Critical County Assessment* prepared by Vidant Health Strategic Development, Pitt County has the smallest need for additional physicians when compared to other ENC counties. The physician needs analysis performed by Vidant Health indicated that there is a surplus of 36.2 primary care physicians, 73.8 medical specialists, and 129.1 surgical specialists for Pitt County, with the only evident deficit being of general surgeons (11.4).<sup>170</sup> However, this data can be misleading in that people from throughout eastern NC visit Pitt County for their health care needs. Nonetheless, the majority of physicians are located in Greenville, leaving people from neighboring counties with a lack of physicians seeking primary and specialized care in Greenville or other areas. The tables below provide data on the type and number of health care professionals in Pitt County and North Carolina.<sup>171</sup>

### **North Carolina Health Professions Data System-2010 Total and Primary Care Physicians-2010**

	Total Physicians	Total Primary Care	Family Practice	General Practice	Internal Medicine	OB/GYN	Pediatrics	Other Specialty	Federal
Pitt County	738	298	68	2	118	39	71	440	15
North Carolina	20,752	9,017	2,802	97	3,314	1,069	1,735	11,735	800

### **Health Professionals per 10,000 Population**

	Total Physicians	Total Primary Care	Dentists	Pharmacists	Registered Nurses	Nurse Practitioners	Certified Nurse Midwives	Physician Assistants	Occupational Therapists	Optometrists	Psychologists
Pitt County	43.6	17.6	3.8	11.9	199.5	8.5	3.8	6.8	5.0	1.2	3.0
North Carolina	21.7	9.4	4.4	9.1	97.3	3.8	1.2	3.8	2.7	1.1	2.1

### **Other Health Professionals - 2010**

	Chiropractors	Dentists	Dental Hygienists	Occupational Therapists	Occupational Therapists Assistants	Optometrists	Pharmacists	Podiatrists	Psychologists
Pitt County	18	64	61	85	42	20	202	8	50
North Carolina	1,556	4,178	5,278	2,545	1,151	1,025	8,755	271	1,978

When considering the 2010 data from the North Carolina Health Professions Data System, there has been an increase (83) in the total number of physicians for Pitt County since 2006. This has been

<sup>168</sup> NC Division of Medical Assistance: <http://www.ncdhhs.gov/dma/dental/dentalprov.htm>.

<sup>169</sup> North Carolina Board of Chiropractors Examiners, search date 10/26/2011, <http://www.ncchiroboard.com/>

<sup>170</sup> Vidant Medical Center Medical Staff Support Office. Fall 2011.

<sup>171</sup> Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. North Carolina Health Professions Data System: <http://www.shepscenter.unc.edu/hp/prof2010.htm>.

largely in the areas of primary care (36), internal medicine (15), pediatrics (13), federal (12) and other specialties (47). (\*Note - *numbers in between ( ) denote increase in number of physicians from 2006 to 2010.*)

## ***Review of Primary Data***

In addition to the collection and review of secondary data from a variety of sources, several approaches to collect information from members of the community were initiated throughout the past year. Some of the findings from this data has been reported in previously sections of this document. Vidant Medical Center and Pitt County Health Department sponsored a key leaders breakfast to solicit input on the most compelling health needs in the county. More than 30 leaders representing government, health care, education, business, civic and faith communities met to discuss opportunities to collaborate for a healthier Pitt County. Additional listening sessions were held with groups throughout the county who are responsible for providing care to underserved populations within Pitt County. Each of the groups was asked to rate the “quality of life” in Pitt County using a scale of 1-5 with a score of 5 indicating they strongly agreed with the statement. The table below indicates the compiled responses from the key leaders group and the listening sessions.

**Quality of Life Survey Results for Participants of Listening Sessions<sup>172</sup>**

Indicators	All groups (n = 114)	Percent who agree or strongly agree
Good healthcare	4.12	87.5
Good place to raise children	3.85	71.9
Good place to grow old	3.78	70.0
Plenty of economic opportunity	3.30	47.4
Safe place to live	3.30	51.7
Help for people in time of need	3.65	66.7
Clean air	3.97	81.4
Clean water	4.11	88.6

## ***Telephone Survey***

A telephone survey was conducted in the summer and fall of 2011, with a total of 352 individuals participating. *See Appendix C for survey.* Approximately 58% of the respondents were white and 34% were African-American. About 50% of the respondents were age 40-64 years and an additional 30% were age 65 years and older. Nearly 75% of the respondents were female. Only 11% of the respondents had less than a high school education, while 42% of the respondents had a bachelor’s degree or higher. Just under one-third of respondents were employed, 36% were retired and about 10% were unemployed. Eighty-four percent (84%) of the respondents reported they were a primary

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<sup>172</sup> Research Division, Department of Family Medicine, East Carolina University, November 2011.

care-taker for a child(ren) under the age of 18 years. A summary of the findings from the telephone survey can be found in the following tables.<sup>173</sup>

Respondents were asked to rate the quality of life in Pitt County.

#### Quality of Life Survey Results for Telephone Survey Participants

Indicators	Average Score	Percent who agree or strongly agree
Good healthcare	4.07	86.4
Good place to raise children	3.81	75.4
Good place to grow old	3.79	77.9
Plenty of economic opportunity	3.06	46.0
Safe place to live	3.30	59.2
Help for people in time of need	3.55	66.0
Clean air	3.87	86.4
Clean water	3.87	85.6

Respondents were asked to identify the disease(s) they had been told they had. The following chart identifies the diseases most often reported by the respondents. Diseases that affect cardiovascular health were the most frequently reported by respondents.

#### Self-Reported Chronic Disease

Disease	% reporting diagnosis
High blood pressure	47
High cholesterol	37
Overweight/obesity	26
Depression/anxiety	24
Diabetes	18
Angina/heart disease	15

<sup>173</sup> Pitt County Community Health Assessment Phone Survey, Fall 2011. Research Division, Department of Family Medicine, Brody School of Medicine, East Carolina University.

Disease	% reporting diagnosis
Asthma	14
Osteoporosis	11
Cancer	9
Stroke	7
Mental illness	4
Lung disease	3

Regarding access to care, 90% of survey respondents reported they had a primary medical provider and of this group, 92% reported they were able to get an appointment within a reasonable time. Seventy-five percent (75%) of respondents reported they went to the doctor's office when they were sick; followed by 11% who reported they visited the hospital emergency room for sick care. More than one-fourth (28%) of the respondents reported they had been to the emergency room in the past 12 months. The most common reason for the visit(s) was serious injury (56%), followed by doctor's office not open (22%). Eighteen percent (18%) of respondents reported being admitted to the hospital in the last 12 months. The main reason for admission was heart (21%), followed by injury (16%). More than one in ten (11%) reported problems getting health care for themselves or a family member. The most common responses included problems getting access to a general doctor (51%) and problems with accessing a dentist (24%). Among those who had problems accessing care, the chief reasons identified were not having insurance (54%) and that their share of the cost was too high (16%). When asked about financial resources for a variety of needs, 18% of respondents indicated that they or a family member lacked funds for health insurance, followed by food (14%), medicine (13%), utilities (12%), transportation (10%) and home/shelter (6%).

The top health concerns identified for Pitt County by respondents are provided in the table below. Although mentioned, but with less frequency (i.e. by less than 10% of respondents) were mental health, asthma/lung disease, vehicle crashes and dental health.

Health issue (selected 3)	% respondents (sums to >100%)
Chronic disease	52
Obesity	42
Drug and alcohol abuse	40
Gangs and violence	33
Child abuse	20
Tobacco use	15
Alzheimer's disease/dementia	15
Teen pregnancy	12
HIV/AIDS	11

Respondents were asked to identify what they thought the community needed in order to improve the health of family, friends and neighbors. The responses are varied and provided in the chart below.

<b>Community Needs</b>	<b>% respondents</b>
More health services	25
Job opportunities	19
After school programs	18
Safe places to walk and play	17
Wellness services	15
Healthier food choices	14
Recreation facilities	14
Transportation	13
Mental health care	12
Drug/alcohol treatment, services	11
Positive teen activities	11
Tobacco free places	10
Elder care	10

Access to opportunities for physical activity and healthy eating has emerged as a key public health issue to combat poor eating behaviors and physical inactivity; two behaviors linked directly to the leading causes of chronic diseases. Survey respondents were asked if they had access to physical activity opportunities within their communities. The table below indicates that the majority of respondents indicated they had somewhere in their communities to be active. Almost 20% indicated they did not have access to these locations.

<b>Locations for walking and biking</b>	<b>% of respondents (totals &gt; 100%)</b>
Trails	45
Greenways	36
Bike paths	40
Walkways	43
Sidewalks	63
None of these	19

The table below identifies the locations that respondents indicated they used to engage in physical activity. The majority of respondents (50%) reported their home, while 20% of respondents indicated they did not exercise at all.

Location for physical activity of any kind	% of respondents
Park	10
Public recreation center	8
School facility	3
Private gym	13
Home	50
Do not exercise	20

When asked why they didn't exercise, responses included physically disabled, didn't like to exercise, no reason, not enough time, physical job, too tired, exercise was not important and didn't know.

Similarly, respondents were asked if they had access to fresh fruits and vegetables. Ninety-four (94%) of respondents said they have access to fresh fruits and vegetables. Based on participant responses, stores and farmers markets are the most common places for accessing fruits and vegetables. See following table.

Where Do You Get Fruits and Vegetables	% of respondents (sums to > 100)
Farmers' Market	38
Community Garden	4
Personal or family garden	11
Store	64

Finally participants were asked to what extent, if any, they thought access to things like grocery stores, bike lanes, walking trails, schools close to neighborhoods and convenient bus services impacted the health of people in communities. Sixty-eight (68%) of respondents felt these things impacted health a great deal and 24% felt they impacted health somewhat. Only 2% of respondents felt they had no impact at all on health.

### *Youth Risk Behavior Survey<sup>174</sup>*

The Youth Risk Behavior Survey (YRBS) was administered to 1,845 Pitt County middle schools students taking health/physical education courses in April/May 2011. The survey was adapted from the North Carolina YRBS and closely aligned with the Communities Putting Prevention to Work version developed by Centers for Disease Control. A script was provided to the classroom teachers with the same instructions across all grades and classrooms. Pitt County Schools granted their approval of the project and passive consent was obtained from parents. There were several reasons for non-participation including: lack of parental consent; child chose not to participate; child was absent from school the day the survey was administered; or the child was not in the class at the time. Questions focused largely on personal safety and violence related behavior, bullying, overweight, body weight, food and drink consumption, physical activity, tobacco, alcohol and other substance abuse and other risk behaviors. The survey has been conducted bi-annually since 1999. This survey, conducted every two years, is analyzed by faculty in the ECU Brody School of Medicine, Department of Family Medicine, Research Division.

#### Pitt County Middle Schools

(Results provided in percentages)

<b>n</b> (number of participants)	<b><u>2007</u></b> 2020	<b><u>2009</u></b> 1950	<b><u>2011</u></b> 1845
<b>Age:</b>			
11	12.7	11.5	12.3
12	28.8	28.9	31.0
13	29.6	33.2	33.7
14	21.9	23.1	20.8
15 or older	6.7	3.1	2.1
<b>Race:</b>			
White	38.5		41.0
Black or African American	44.9	39.7	39.5
Other	3.9	40.9	4.2
More than one race	12.8	4.3	15.3
*Hispanic or Latino	8.7	15.1	10.3
		9.8	

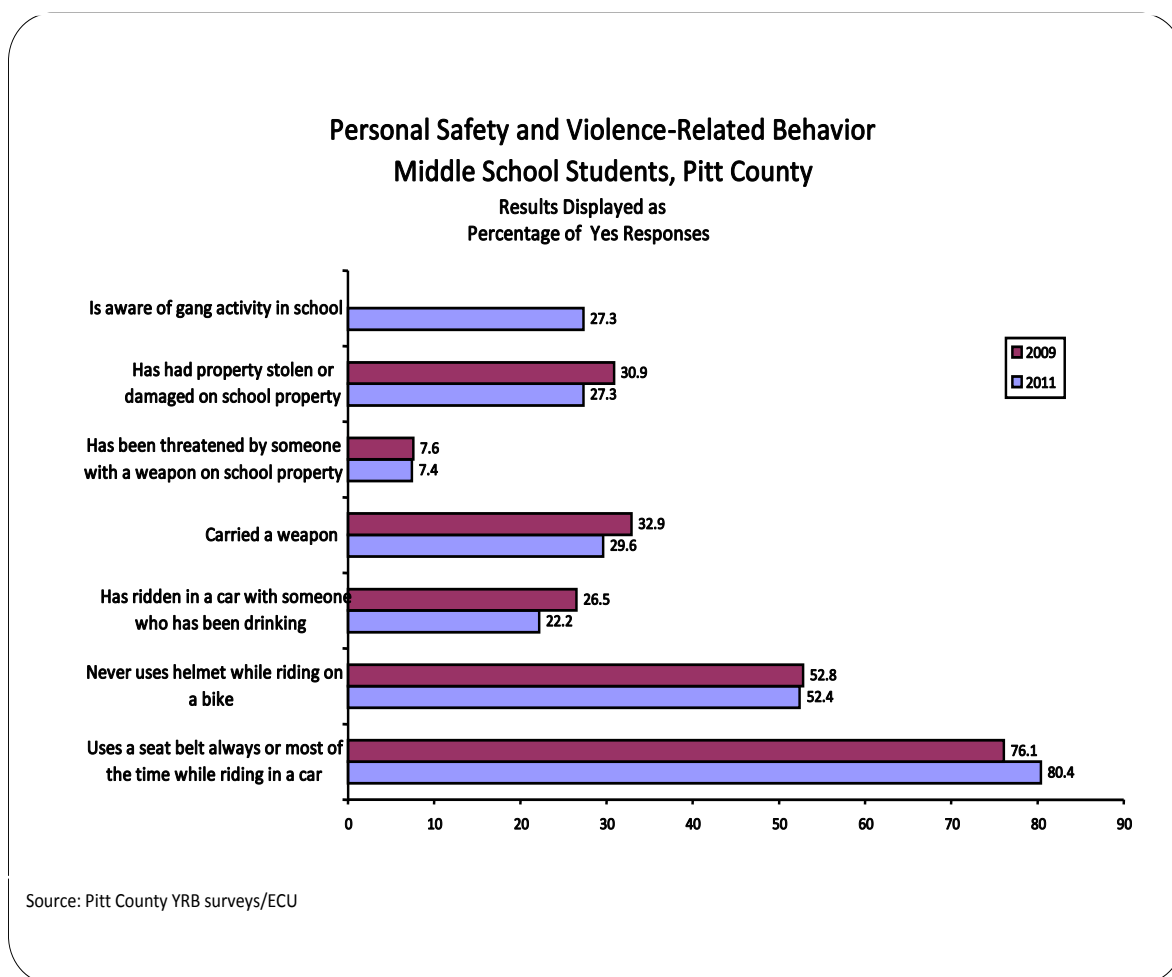
In 2011, 77% of the respondents were between 11-13 years of age. The participating student population was made up of 50.3% females, 41.0% white, 39.5% black or African American and 10.3% of Hispanic descent.

The following graph depicts the responses middle school students gave regarding personal safety and violence. When available, statistics from the 2007 and 2009 survey are also made available for comparison. In 2011, nearly 30% of students reported that they were aware of gang activity and had property stolen or damaged on school property. Nearly 30% of students reported that they had carried a weapon.

<sup>174</sup> Youth Risk Behavior Survey. Research Division, Department of Family Medicine, Brody School of Medicine, East Carolina University, Spring 2011.



Despite decades of promoting safety belt use, nearly 20% of students report they don't use a safety belt consistently while riding in a car. In fact, only 52.8% reported they always wear a seatbelt. More than 20% of students reported riding in a car with a driver who had been drinking.

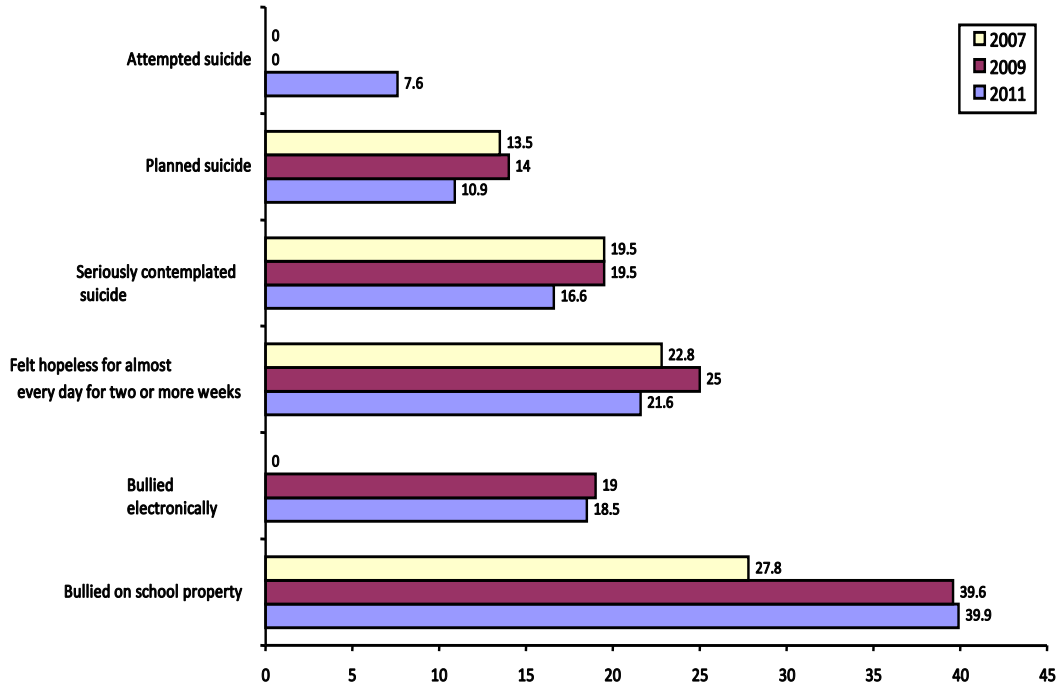


Just over seven percent (7%) or 136 students in Pitt County middle schools said they had tried to kill themselves. More than 20% said they felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities. Though disturbing, this is a reduction from 25% in 2009. Results also demonstrated that more students who were bullied than not bullied smoked cigarettes, drank alcohol or smoked pot in the last 30 days and were more likely to have thought about or planned suicide and to feel sad and hopeless.

Regarding bullying, nearly 75% of the students surveyed reported they had seen other students bullied at school and nearly 40% of students reported they personally had been bullied on school property. Just over 18% reported they had been electronically bullied (including being bullied through email, chat rooms, instant messaging, Web sites or texting). Nearly 22% (21.6) reported themselves as a victim of teasing or name calling because someone thought they were gay, lesbian or bisexual.

## Bullying and Suicide Pitt County Middle Schools

Results Displayed as  
Percentage of Yes Responses

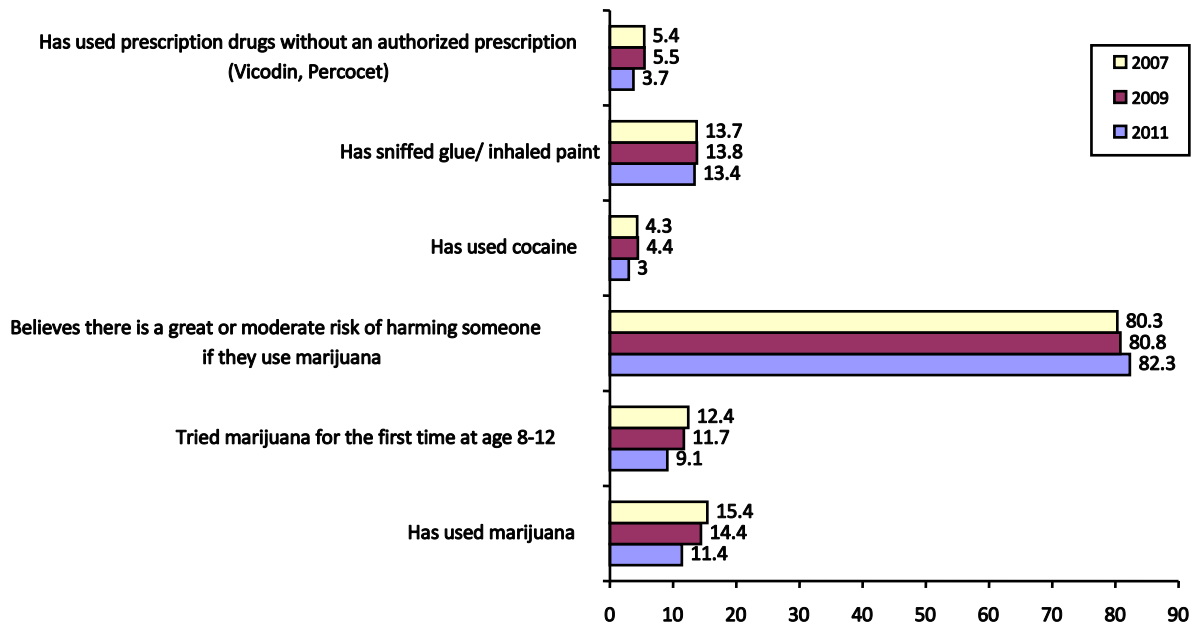


Source: Pitt County YRB surveys/ECU

About 30% reported that drugs are a problem at their school. A higher percentage of middle school students reported the experimental use of alcohol (25.6%), cigarettes (10%) and marijuana (11.4%) than current use. Statistics regarding reports of current use (used in the past 30 days) for each of these is as follows: alcohol (9.2%); cigarettes (5.2%) and marijuana (5%). More than 50% of middle school students who report current use of cigarettes identified friends, brothers or sisters as their source and over 34% reported they got alcohol most of the time at home with their parents' permission.

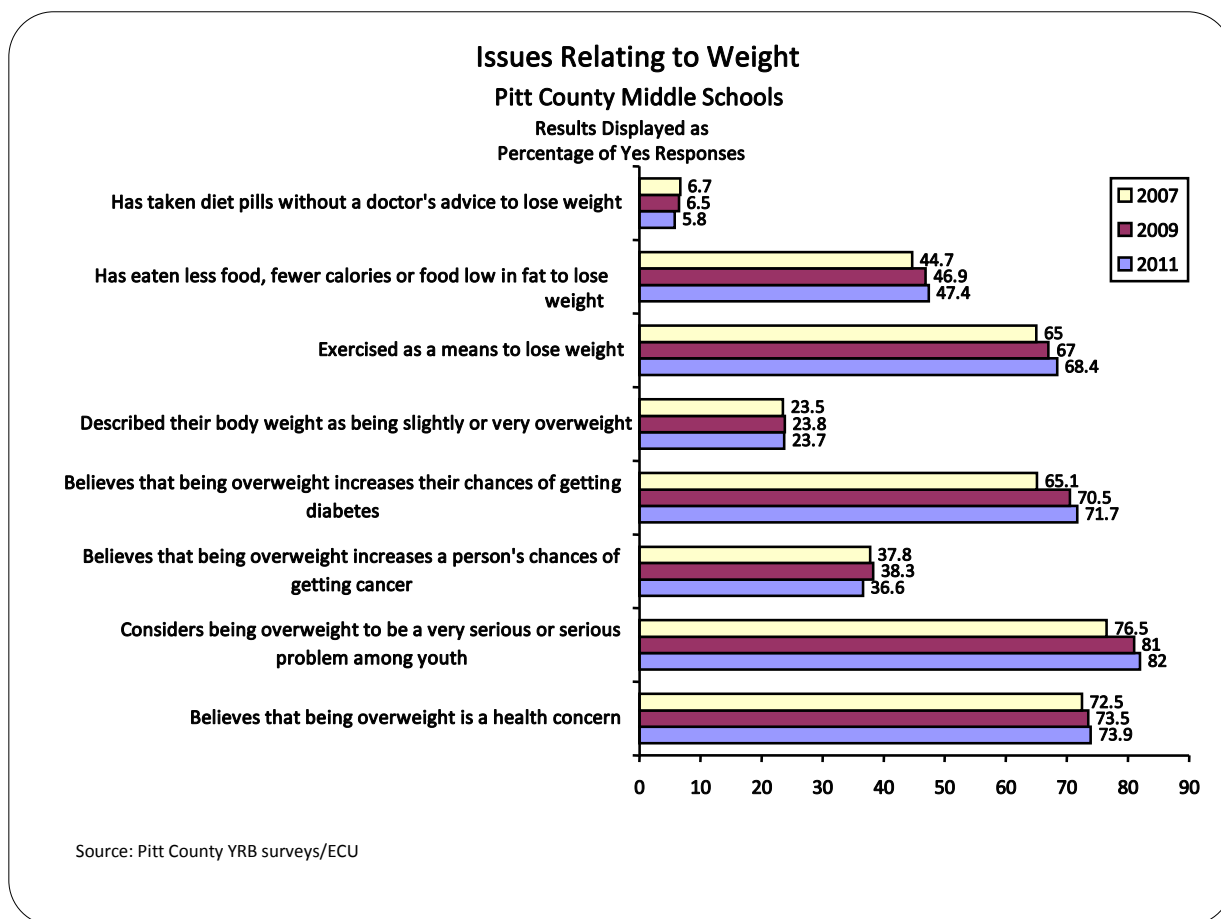
## Marijuana and Drug Use Pitt County Middle Schools

Results Displayed as Percentages of Yes Responses



Source: Pitt County YRB surveys/ECU

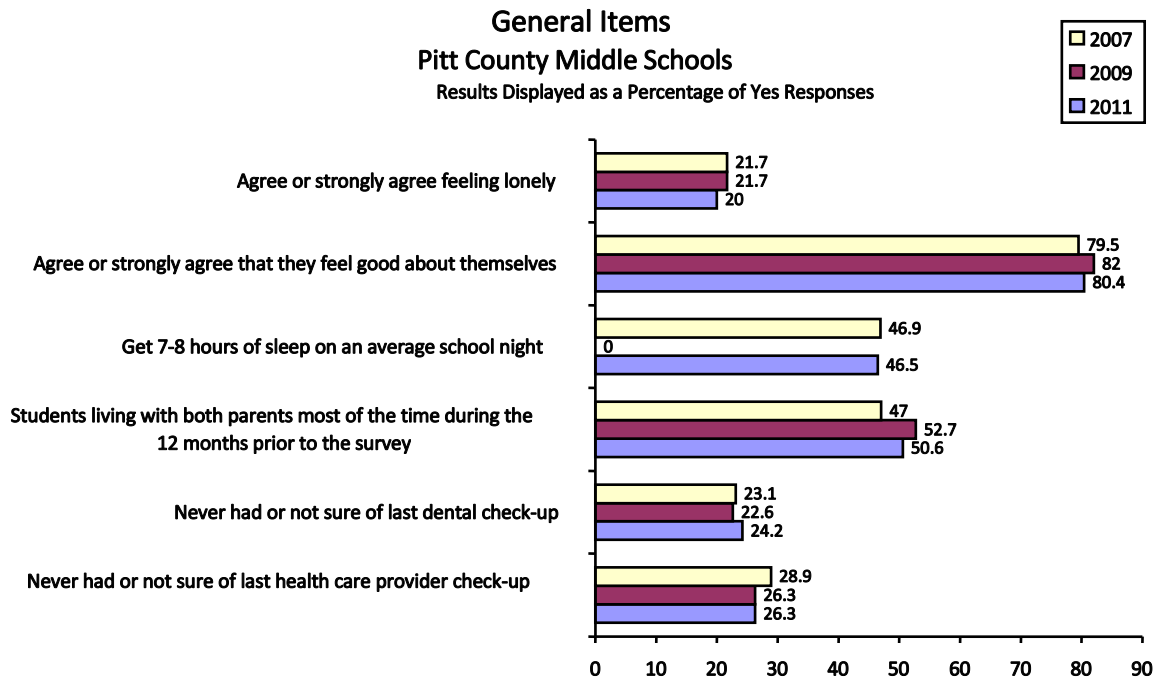
Students were asked a series of questions about body weight and risks of being overweight. Nearly one in four students described themselves as overweight and more than half (53.7%) described themselves as normal weight. About 45% of middle school students reported they were trying to lose weight. Students indicated ways that they have tried to lose weight. In addition to altering their diet and increasing their activity level as shown in the following chart, 20.1% have skipped meals, 17.6% have fasted, and 6.3% have vomited to lose weight.



Students participating in the survey were also asked questions about their frequency for certain eating behaviors and physical activity.

Middle School Nutrition and Physical Activity Behaviors – In the past 7 days...	% respondents
Ate fruit 2 or more times per day	69.6
Ate vegetables 3 or more times per day	28.3
Drank a soft drink or sweetened beverage 3 or more times per day	40.9
Drank at least one glass of milk per day	77.0
Ate breakfast every day	42.2
Ate dinner at home with family every day	34.6
Bought food or drink from a vending machine at school	40.3
Got 60 minutes of physical activity per day for all 7 days	35.0

Source: YRB surveys/ECU



Source: Pitt County YRB surveys/ECU

### *High School Health Survey<sup>175</sup>*

The High School Health Survey was administered to 3,716 Pitt County high school students during the students' advisory period in April/May 2011. As with the middle school YRBS surveys, Pitt County School's approval was obtained and passive parent consent was given. Questions focused on nutrition, physical activity, bullying and current substance abuse. Six local high schools participated in the survey, of which 53.1% of students were female, 47.1% were white, 46.7% were black, and 84.5% were between the ages of 13-17 years.

The percentage of high school students who reported seeing other students being bullied was less than middle school students (61% compared to 74%). Fewer high school students reported being bullied in the past 12 months compared to middle school students.

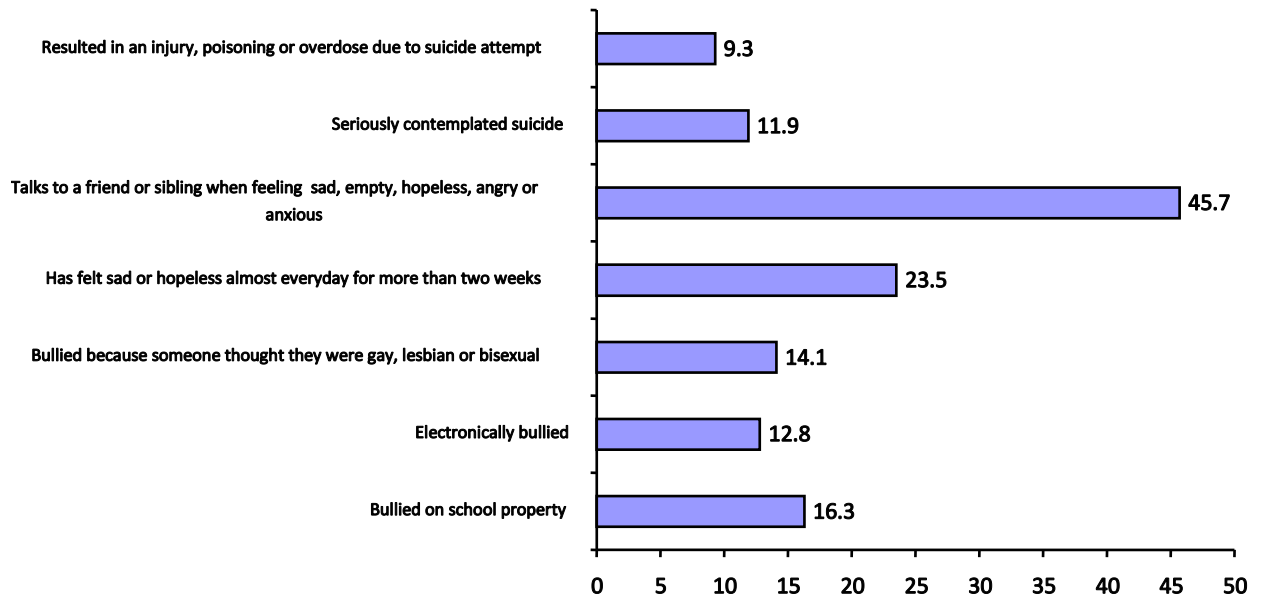
Middle school students were more likely to have thoughts and plans for suicide compared to high school students. However, just over 1 in 10 (11.4%) high school students reported they had seriously considered attempting suicide in the past year and 9.4% made a plan for how they would attempt suicide.

<sup>175</sup> High School Health Survey. Research Division, Department of Family Medicine, Brody School of Medicine, East Carolina University, Spring 2011.

## Bullying and Suicide-2011

### Pitt County High Schools

Results are Displayed as Percentages of Yes Responses



Source: Pitt County YRB surveys/ECU

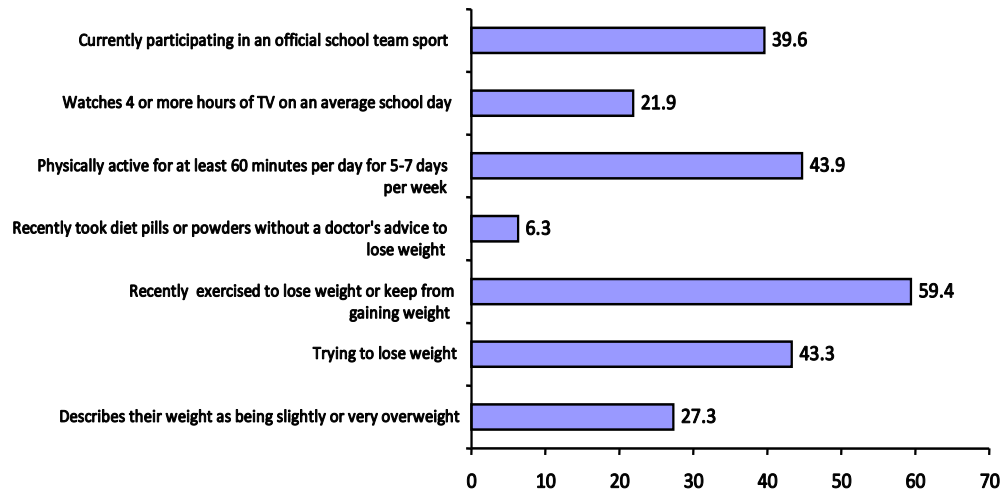
Students were asked about current substance use defined as use within the past 30 days. Responses are as follows: 33.3% reported drinking alcohol in the past 30 days; 23.1% smoking marijuana; and 17.5% using tobacco.

The following table shows high school student responses to questions related to physical activity and weight. Students indicated ways that they have tried to lose weight. In addition to those shown in the chart below (taking diet pills or powders and exercising), 38.7% have eaten less food, foods with fewer calories or foods low in fat and 5.9% have vomited to lose weight.

## Weight and Physical Activity - 2011

### Pitt County High Schools

Results are Displayed as  
Percentage of Yes Responses



Source: Pitt County YRB surveys/ECU

High School Nutrition and Physical Activity Behaviors – In the past 7 days...	% respondents
Ate fruit 2 or more times per day	15.9
Drank soda 3 or more times per day	14.7
Drank other sweetened beverages 3 or more times per day	17.4
Ate breakfast every day	34.3
Ate dinner at home with family every day	30.5
60 minutes of physical activity per day for 7 days	24.1

## *Listening Sessions<sup>176</sup>*

Nine (9) listening sessions were conducted between June and October of 2011. Groups were selected/recruited to participate based on their role in the community and ability to represent a number of population groups.

Below is a list of groups who participated, along with the dates the sessions were held:

- *Key Leaders (6/30/11)*
- *School Nurses (8/19/11)*
- *Medical Society Executive Board (8/30/11)*
- *Greenville Youth Council (9/26/11)*
- *Lay Health Advisors - Cornerstone Ministries (10/4/11)*
- *Pitt County Health Department Outreach Workers (10/4/11)*
- *Community Care Plan (10/10/11)*
- *AMEXCAN (Association of Mexicans in North Carolina) (10/15/11)*
- *Youth Peer Leaders - Area High School (10/17/11)*

Four main questions were asked of each group – 1) What are the major health problems/concerns in our community?; 2) What are the current assets within our community to address these problems/concerns?; 3) What are the barriers within our community that may impede progress toward addressing these problems/concerns; and 4) What should be our next steps to addressing these problems/concerns.

### **Method of analysis**

Detailed notes were taken by at least one person at each listening session. A thorough review was conducted of each transcribed report. The information was then evaluated based on the following four main categories: health problems; current assets in Pitt County to address the health problems; barriers to addressing the health problems; and suggested next steps to improving health for the people of Pitt County. These categories were based on questions used to conduct the listening sessions.

Two coders worked independently to identify emergent themes based on the initial four categories. A final code book was created and used to independently code the transcribed reports. See Appendix D for code book. Frequencies (counts) for each code were tabulated and final results were discussed by the evaluators/coders. The themes with greater than 10 counts were listed as issues of greatest importance under each category.

**Health Problems:** When participants were questioned about the major health problems for Pitt County residents, the following concerns emerged:

- Chronic Illnesses
- Access to Care

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<sup>176</sup> Analysis of 2011 Listening Sessions. Research Division, Department of Family Medicine, Brody School of Medicine, East Carolina University, Fall 2011.



- Substance Abuse (use of tobacco, drugs or alcohol)
- Behavioral Health (depression, anxiety, stress, sleep deprivation)

Thirteen (13) different themes were identified for this category. Those mentioned were most prevalent overall. Other themes that emerged for this category were physical activity, built environment, infectious disease, teen issues, parent/family issues, primary dental/health care, aging, financial, and education.

Of the major health problems identified by the participants,

- Chronic illnesses was the leading concern for:
  - ✓ Key leaders
  - ✓ Lay Health Advisors
  - ✓ Greenville Youth Council
  - ✓ Community Care Plan Group
- Access to Care was the leading concern for:
  - ✓ Medical Society Executive Board
  - ✓ AMEXCAN
- Both, chronic illness and access to care, were of equal concern for:
  - ✓ School Nurses
  - ✓ PCHD Outreach group
- Substance abuse was the major health concern for:
  - ✓ Youth Leaders at an area high school

The following *chronic illnesses* were identified by the participants as being the most prevalent health problems for Pitt County residents:

- Obesity
- Diabetes
- Cardiovascular disease
- Asthma/severe allergies
- Hypertension

The major concerns that emerged for the category *access to care* were as follows:

- Lack of follow-up by health care providers/negligence/ lack of professionalism
- Lack of access to care
- Lack of language appropriate services/information

Lack of access to care, as it may encompass a large group of concerns, was mentioned solely by participants with no further detail and was therefore categorized as a separate entity among the major concerns to access to care.

Other concerns related to this category are provided below. However, they were mentioned as concerns for individual groups, but did not rank high overall.

- ✓ transportation
- ✓ patient compliance with care
- ✓ long wait times/lengthy appointments and delays in help
- ✓ Lack of infrastructure/resources

- ✓ Need to train residents and physicians
- ✓ Lack of walk-in times for children
- ✓ Lack of health education
- ✓ Lack of employer respect of health care system
- ✓ Difficulty in navigating the system

**Current Assets to addressing health problems:** When participants were questioned about what they believe to be the current assets in Pitt County to address these major health problems, the following results emerged:

- Health resources – e.g. health resources or community plans which serve to provide health services, benefits or support to the community (Smile Safari, Prevent Blindness, Farmer’s Market)
- Health Facilities – e.g. health department, hospital, School of Medicine, Dental School, local clinics or mobile health services, Nursing School, home health, mental health facilities.
- Community Agencies – e.g. Intergenerational Center, after-school programs, Operation Sunshine, Little Willie Center, Boys and Girls Club, Hope Lodge.
- Schools – e.g. school resources or school faculty/staff, Pitt County Schools’ translators
- City and county agencies
- Other assets mentioned included the university at large, community members, faith-based organizations, recreational facilities, assistance programs, financial and culture/language.

**Current barriers to addressing the major health problems in Pitt County:** The following issues were reported as being major barriers to addressing the health problems in Pitt County: (\*these were the areas coded under each major theme)

- Resources – lack of available community resources including educational opportunities, recreational opportunities, availability of basic resources (water, electricity, gas), lack of staff, lack of daycares, safety issues
- Health Care – lack of accessibility to health care, lack of health insurance, lack of health care resources, lack of affordable health care, lack of follow-up care by health care providers, lack of adequate training of health professionals or difficulty in navigating the health system, lengthy appointments or long waiting times, or lack of trust in health care providers
- Financial - lack of financial resources as a barrier to health, such as issues related to money, loss of funded programs, unemployment, poverty, housing concerns
- Lack of Collaboration - the lack of adequate communication and collaboration among community members and their health care providers, no sense of community, lack of consistency among providers or the need for more coordination among community members as barriers to health
- Teen Issues - peer pressure, competitiveness in sports related activities, pressure to succeed, time management, school pressures, teen rebellion or social acceptability as barriers to a healthy lifestyle

**Key steps to improving health of people in Pitt County:** The following issues emerged as the key next steps for improving the health of Pitt County residents .

- *Advocacy*/educate community leaders - the need to better educate the community leaders, the general public and local officials about the available services or the urgency to promote health among the community, in other words, advocate for the general health needs of the community
- Availability of *health resources* – the need to provide additional health services to the community, such as clinics, health clinics with alternative hours of operation, improvement of health clinics in schools, reassessment of available services (ER, EMS), or qualified interpreters
- Improvement of integration of health in the *school* system – the need to provide additional school resources, such as healthy food choices, PE classes, nurses, educational programs related to addictions, or the use of staff/faculty for improving the health conditions of the community
- *Coordination of resources/Planning* - the need to assess available services in order to reduce their duplication, improve coordination and availability of community resources and the need for a more comprehensive plan and coordination of plans, clear vision, prioritization of activities or the need to make changes, the need to prepare adults for the workforce, enforcement of laws as a means for improving the health conditions of the community
- *Family*/Increase the opportunity for parental involvement - parents more involved in their children's activities, parent involvement in community programs, educational opportunities for parents
- Others - community leaders, faith-based organizations, transportation, city/county/state agencies, media, resources for teens

### ***Summary and Next Steps***

The following priorities were selected based upon a review of the data and input from the community. The priorities are as follows. (*Note: Each organization will address the priorities selected by their governing body.*)

As Pitt County's Healthy Carolinians Task Force, Pitt Partners for Health recommended the following priority health areas for 2012 – 2015. These recommended priorities will be shared with various organizations throughout Pitt County for the purpose of mobilizing the community around these issues. The community health priorities identified by **Pitt Partners for Health** are as follows:

- Chronic Diseases (including heart disease, stroke, cancer, diabetes)\*
- Physical Activity/Nutrition/Healthy Weight\*
- Injury Prevention/Violence\*
- Access to Care/Transportation
- STDs/Unintended Pregnancies
- Mental Health
- Tobacco Use

An asterisk (\*) denotes the priority areas that Pitt Partners for Health will focus on as an organization in years 2012-15.

The **Vidant Medical Center Foundation** selected the following as priority health areas for community benefit funding for 2012-13:

- Access to Care
- Chronic Disease Prevention & Management
- Nutrition/Physical Activity

The **Pitt County Board of Health** selected the following health priorities for 2012-15:

- Communicable Disease Control to include sexually transmitted diseases, infectious diseases and foodborne illness
- Infant Mortality and Unintended Pregnancies
- Risk Factor Reduction to include tobacco use, physical activity and nutrition
- Chronic Disease to include cardiovascular disease and diabetes

From January through May 2012, Pitt Partners for Health and Pitt County Health Department will be reviewing each of the priorities they have selected in more detail to create a plan of action to address each priority. It is apparent from the review of the data that disparities either by age, sex and/or race exist for many of the health priorities identified. This information will be used by committees to determine priority populations for the interventions that are proposed. The committees will focus on strategies that are likely to address one or more of the priority health issues identified. Both organizations will develop action plans by June 2012 using the template provided by the North Carolina Division of Public Health.

The Vidant Medical Center Board will receive a presentation regarding the 2011 Community Health Assessment in April 2012. Following this meeting, staff will work with the board to identify priorities and develop an implementation plan by September 2012.

Pitt County Health Department, Vidant Medical Center, Pitt Partners for Health and East Carolina University, Brody School of Medicine are working together to integrate plans by determining which organization is better positioned to assume leadership for the implementation of the various action strategies over the next several years. This process of integration will likely yield opportunities to strengthen partnerships throughout the county.

This report will be available to the public on the Health Department's website at [www.pittcountync.gov/depts/health/](http://www.pittcountync.gov/depts/health/). Additionally, Vidant Medical Center will publish this information on their website. Media coverage of the assessment findings has already occurred. A summary document will be prepared as well. Other opportunities will be explored to ensure that the assessment is available and utilized by a variety of organizations concerned with improving population health. Once developed, action plans/implementation plans will be available on the organizations' websites and shared with various stakeholders throughout Pitt County.

## ***Appendix A - 2011 Community Health Assessment Committee Membership***

<b>Member</b>	<b>Affiliation</b>	<b>Role</b>
Jo Morgan	Pitt County Health Department, Health Education Division	Facilitated committee meetings; compiled and analyzed secondary data sets; facilitated listening sessions; reported findings to PPH membership, Board of Health and Vidant Medical Center Foundation; supervised MPH graduate student assigned to CHA process; edited and compiled final CHA document for submission to partners.
Catherine Nelson	Vidant Medical Center, Community Health Programs	Secured funding for telephone survey; assisted with development of survey; provided input on process for priority selection; facilitated listening sessions; coordinated with other Vidant Medical Center staff to gather additional data.
Dr. Lauren Whetstone	East Carolina University, Brody School of Medicine, Department of Family Medicine, Research Division	Developed the telephone survey with input from committee members and analyzed responses; conducted the Youth Risk Behavior Survey and High School Health Surveys, as well as analyzed the data; served as note taker for listening sessions and co-developed code book for analysis of listening sessions; assisted with the review and editing of the final CHA document prior to submission.
Kristen Brooks	Pitt Partners for Health (PPH) Coordinator	Coordinated meetings of the PPH membership for purpose of reviewing health data and selecting priorities; served as note taker for listening sessions.
Ann Huggins	PPH Chair/Community Member	Facilitated PPH monthly steering committee meetings for purpose of providing input to staff on the CHA process and facilitated PPH membership meetings for purpose of reviewing data and selecting priorities.
Robin High	PPH Steering Committee; Chair – Nutrition and Physical Activity Subcommittee	Provided input on CHA process for gathering information and selecting priorities.
Mary Hall	PPH Steering Committee; Chair – Older Adult Health Subcommittee	Provided input on CHA process for gathering information and selecting priorities; served as note taker.

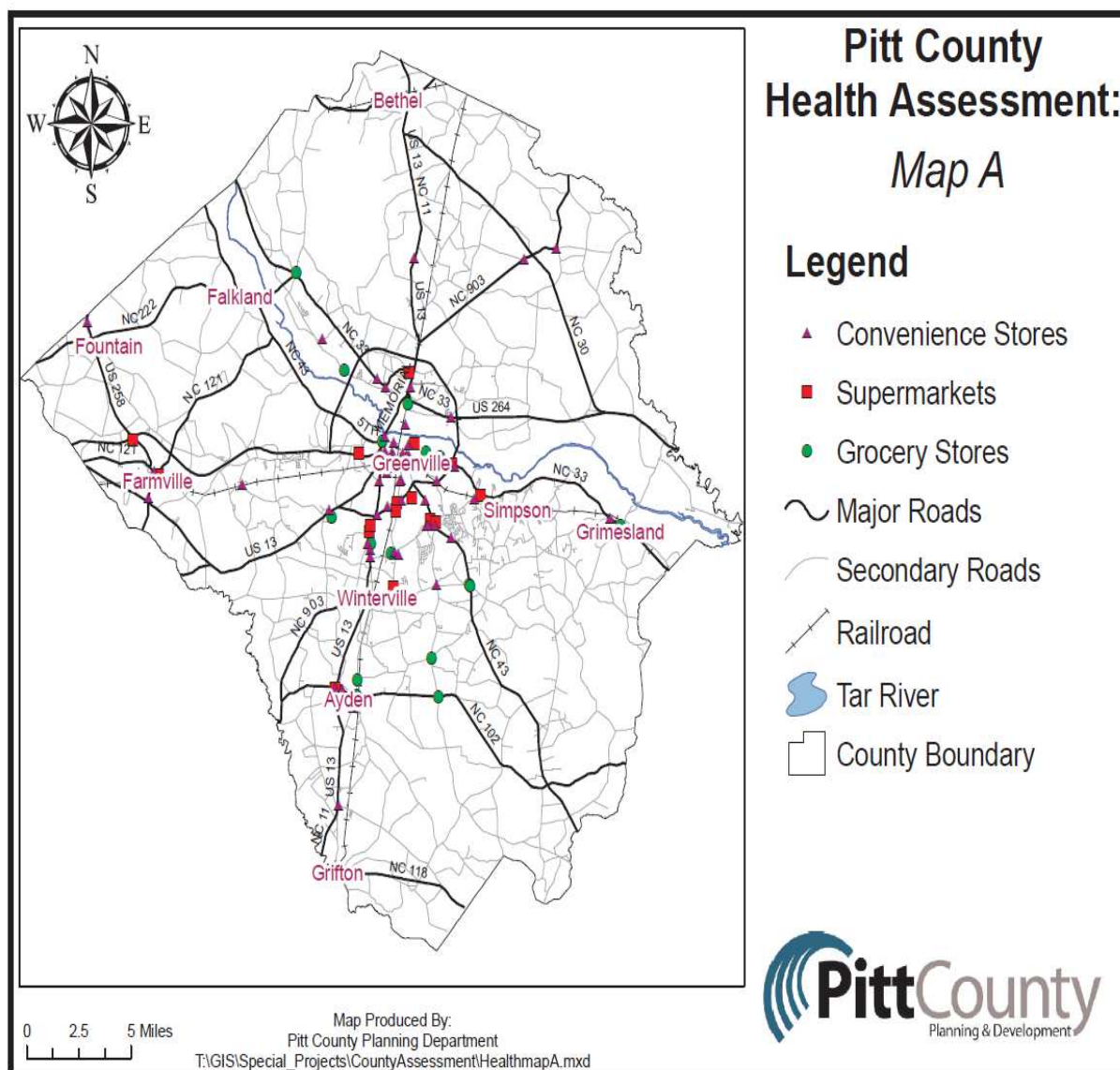
Jennifer Smith	PPH Steering Committee; Chair – Injury Prevention Subcommittee	Provided input on CHA process for gathering information and selecting priorities.
Liz Steele	PPH Steering Committee; Chair – Diabetes, Heart and Stroke Subcommittee	Provided input on CHA process for gathering information and selecting priorities.
Margaret Blackmon	PPH Steering Committee; Chair – Substance Abuse Subcommittee	Provided input on CHA process for gathering information and selecting priorities.
Peggy Gatlin	PPH Steering Committee - Community Member	Provided input on CHA process for gathering information and selecting priorities; organized and participated in listening sessions for lay health advisors.
Dr. Doyle Cummings	East Carolina University, Brody School of Medicine, Department of Family Medicine, Research Division	Participated in decisions regarding identifying best process for collecting primary data and facilitated priority selection among PPH members.
Colleen Fenlon-Coda	PPH Steering Committee – Cancer Subcommittee	Provided input on CHA process for gathering information and selecting priorities.
Heather Gosheh Paredes	East Carolina University, Brody School of Medicine, Department of Public Health, Masters in Public Health graduate student	Collected and compiled secondary data, conducted listening sessions and co-developed a code book for analysis of listening sessions, participated in meetings to determine method for selecting priorities, wrote initial drafts of several sections of CHA document.

The following table outlines the additional support provided throughout the CHA process.

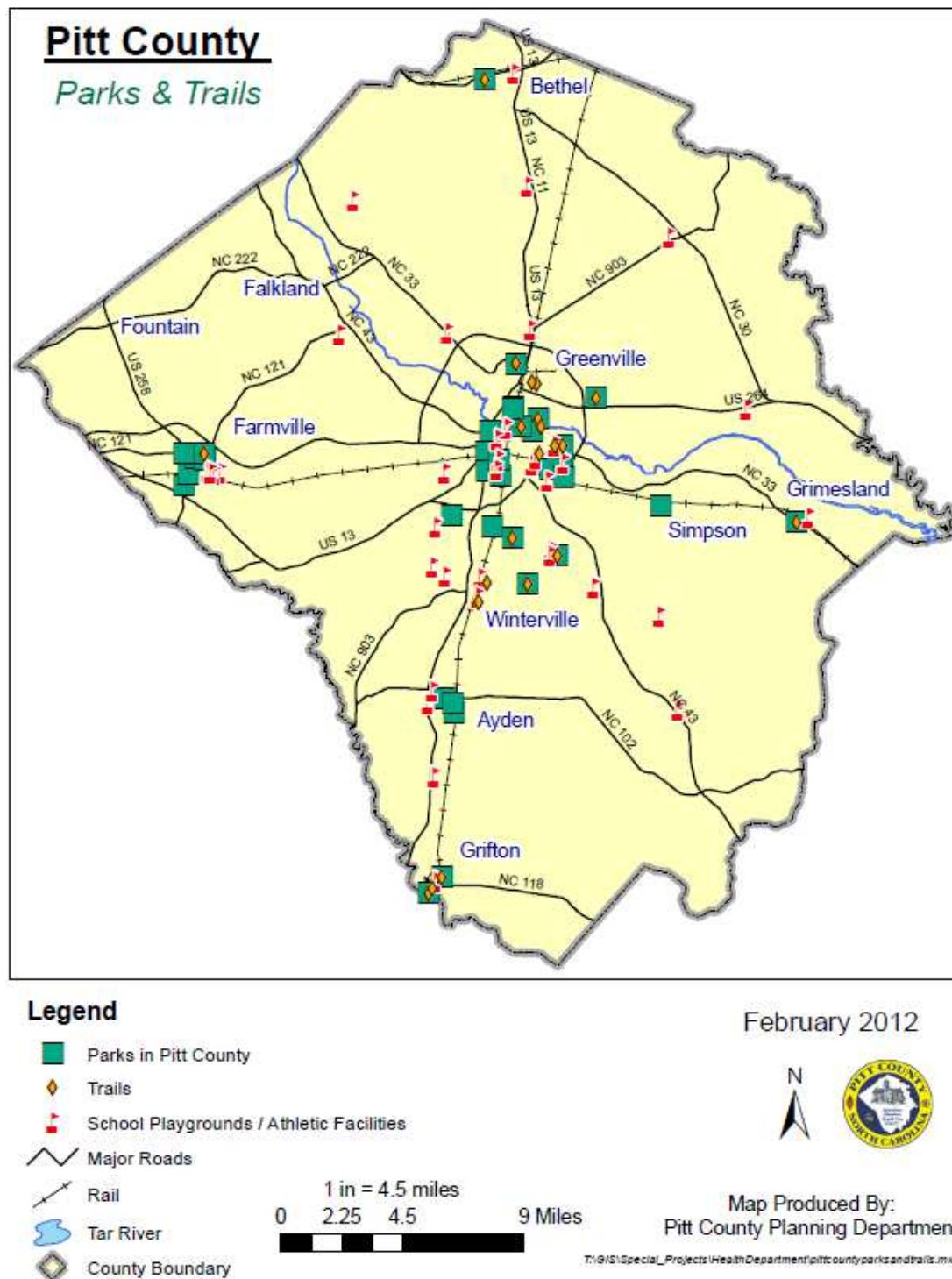
<b>Individual</b>	<b>Affiliation</b>	<b>Role</b>
Dr. Chris Mansfield	East Carolina University, Brody School of Medicine, Center for Health Services Research and Development	Shared resources developed by the Center to collect and report secondary data; provided guidance to MPH candidate serving on committee.
Amy Hattem	Pitt County Health Department, Health Education Division	Collected and compiled secondary data on women's and children's health issues; wrote these sections for CHA document.
Amy Belflower Thomas	Pitt County Health Department, Health Education Division	Collected and compiled secondary data on communicable disease issues and emergency preparedness; presented findings to the PPH partnership; wrote communicable disease and emergency preparedness sections for CHA document; collected primary data on how people in the county get information during an emergency.
Jeff Shovelin	Vidant Health Strategic Development	Compiled Vidant Medical Center emergency department data and shared results of market assessment and physician assessment with representatives of CHA committee.
Dr. Stephanie Jilcott Pitts	East Carolina University, Brody School of Medicine, Department of Public Health	Supervised MPH graduate students in the development of an inventory of supermarkets, grocery stores and convenience stores.
Alice Keene	Pitt County Government, Recreation and Parks	Completed an inventory of parks and other recreational opportunities located within municipalities and schools within Pitt County.
Eli Johnson	Pitt County Planning Department	Prepared map of supermarkets, grocery stores and convenience stores within county, as well as map of recreational opportunities.



## Appendix B – Access to Healthy Foods Map



## Appendix B - Parks and Trails Map



## Appendix C – 2011 Community Health Telephone Survey

Pitt County CHA telephone - FINAL

Q61 PLEASE FILL THIS OUT BEFORE YOU DIAL THE NUMBER!

Interviewer Name (1)

Phone Number (2)

Q1 Read the following section to each potential participant: Hello, my name is \_\_\_\_\_ and I am calling from ECU's Center for Survey Research. We are conducting a survey to learn more about the health and quality of life in Pitt County in order to address our major health and community issues. The survey should take no longer than 15 minutes and the information you give us will not be linked to you in any way.

Q2 Would you like to participate?

- ☐ Yes (1)
- ☐ No (If no, thank the person for their time) (2)

Q3 Do you live in Pitt County?

- ☐ Yes (1)
- ☐ No (if no, stop the survey and thank the person for their time) (2)

Q6 In this first section the questions are about quality of life. Please tell me your level of agreement with each of the following statements.

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
There is good healthcare in Pitt County. - Consider the cost and quality, number of options, and availability of healthcare in the county. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pitt County is a good place to raise children. -Consider the quality and safety of schools and child care programs, after school programs, and places to play in this county. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pitt County is a place to grow old. -Consider the County's elder-friendly housing, transportation to medical services, recreation, and services for the elderly. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is plenty of economic opportunity in Pitt County. -	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Consider the number of quality jobs, jobs training/higher education opportunities, and availability of affordable housing in the county. (4)					
Pitt County is a safe place to live. -Consider how safe you feel at home, in the workplace, in schools, at playgrounds, parks, and shopping centers in the county. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is plenty of help for people during times of need in Pitt county. - Consider social support in this county: neighbors, social support, faith community outreach, community organizations, and emergency monetary assistance. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pitt County generally has clean air. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pitt County generally has	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

clean water. (8)					
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Q7 Does your community have the following for biking, walking, or other activities?

- ☐ Trails (1)
- ☐ Greenways (2)
- ☐ Bike paths (3)
- ☐ Walkways (4)
- ☐ Sidewalks (5)
- ☐ None of the above (6)
- ☐ Not Sure/ Don't Know (7)
- ☐ Refused to Answer (8)

Answer If Does your community have the following for biki... Trails Is Selected And Does your community have the following for biki... Greenways Is Selected And Does your community have the following for biki... Bike paths Is Selected And Does your community have the following for biki... Walkways Is Selected And Does your community have the following for biki... Sidewalks Is Selected

Q8 How frequently do you use these?

- ☐ Daily (1)
- ☐ A few times per week (2)
- ☐ A few times per month (3)
- ☐ A few times a year (4)
- ☐ Less than a few times a year (5)
- ☐ Never (6)
- ☐ Don't Know/ Not sure (7)
- ☐ Refused to answer (8)

If Daily Is Selected, Then Skip To Do you have access to fresh fruits/ve...If A few times per week Is Selected, Then Skip To Do you have access to fresh fruits/ve...If Don't Know/ Not sure Is Selected, Then Skip To Do you have access to fresh fruits/ve...If Refused to answer Is Selected, Then Skip To Do you have access to fresh fruits/ve...

Q9 Why don't you use the trails, greenways, bike paths or sidewalks more often in your community?  
SELECT THE ANSWERS THAT BEST CORRESPONDS TO WHAT THE RESPONDENT SAYS. IF RESPONSE  
IS NOT INCLUDED IN THIS LIST, PLEASE CHECK "OTHER" AND WRITE IN WHAT THE RESPONDENT  
SAID. AFTER EACH ANSWER ASK RESPONDENT "IS THERE ANYTHING ELSE?"

- ☐ None available (1)
- ☐ It's too far away (2)
- ☐ It's too dangerous (3)
- ☐ I'm not interested in doing that (4)
- ☐ I work out in a gym and don't need to (5)
- ☐ Weather (6)
- ☐ They are in ill-repair (7)
- ☐ Don't know where they are located (8)
- ☐ Never thought about it (9)
- ☐ Don't own a bicycle (10)
- ☐ No time (11)
- ☐ Other: (12) \_\_\_\_\_
- ☐ Don't know/ Not sure (13)
- ☐ Refused (14)

Q10 Do you have access to fresh fruits and vegetables?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Don't know/ Not sure (3)

Q11 Where do you buy fresh fruits and vegetables? (Check all that apply)

- ☐ Farmers market (1)
- ☐ Community garden (2)
- ☐ Personal or family garden (3)
- ☐ Grocery store (4)
- ☐ Convenience store (5)
- ☐ Don't Know (6)

Q12 How much do things like being close to grocery stores, having bike lanes and walking trails, having convenient bus services, and having schools close to neighborhoods impact the health of a community's citizens?

- ☐ A great deal (1)
- ☐ Somewhat (2)
- ☐ Not at all (3)
- ☐ Don't Know (4)

Q13 These next questions are about your own personal health. Remember, the answers you give for this survey will not be linked to you in any way.

Q14 Where do you get most of your health-related information? Please choose only one.

- ☐ Friends and family (1)
- ☐ Doctor/ nurse (2)
- ☐ Employer/ work-site (3)
- ☐ Pharmacist (4)
- ☐ Church (5)
- ☐ Internet (6)
- ☐ TV, Radio (7)
- ☐ My child's school (8)
- ☐ Hospital (9)
- ☐ Health department (10)
- ☐ Help lines (11)
- ☐ Books/ magazines (12)
- ☐ Other: (13) \_\_\_\_\_



Q15 Have you ever been told by a doctor, nurse, or other health professional that you have any of the following health conditions?

	Yes (1)	No (2)	Don't know (3)	Refused to answer (4)
Asthma (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Depression or anxiety (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High blood pressure (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High cholesterol (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diabetes (not during pregnancy) (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Osteoporosis (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overweight/obesity (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angina/ heart disease (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cancer (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stroke (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lung disease (such as emphysema, chronic obstructive pulmonary disease, but NOT cancer) (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mental illness (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q16 Now I will ask about your fitness. During a normal week, other than in your regular job, how many times do you exercise or engage in physical activity that lasts at least a half an hour? .....If you exercise more than once a day, count each separate activity that lasts for at least a half hour to be one "time."

Number of times (1)

Q17 Where do you go to exercise or engage in physical activity? (Check all that apply)

- ☐ Park (1)
- ☐ Public recreation center (Greenville aquatics) (2)
- ☐ School facility (walking track at school) (3)
- ☐ Private gym (4)
- ☐ Home (5)
- ☐ Other: (6) \_\_\_\_\_
- ☐ Do not exercise (7)

Answer If Where do you go to exercise or engage in physical activit... Do not exercise Is Selected

Q18 What are the reasons you do not exercise during a normal week? (Mark only the ones they say. If they really can't think of one, then mark I don't know.)

- ☐ My job is physical or hard labor (1)
- ☐ Exercise is not important to me (2)
- ☐ I don't have access to a facility that has the things I need, like a pool, golf course, or a track (3)
- ☐ I don't have enough time to exercise (4)
- ☐ I would need child care and I don't have it (5)
- ☐ I don't know how to find exercise partners (6)
- ☐ I don't like to exercise (7)
- ☐ It costs too much to exercise (8)
- ☐ There is no safe place to exercise (9)
- ☐ I'm too tired to exercise (10)
- ☐ I'm physically disabled (11)
- ☐ I don't know (12)
- ☐ Other: (13) \_\_\_\_\_

Q19 Now I want to ask about eating fruits and vegetables.

Q20 Not counting lettuce or potato products, think about how often you eat fruits and vegetables in an average week. How many cups per week of fruits and vegetables would you say you eat? One piece of fruit equals one cup. (12 baby carrots equals a cup) (If you get questions about lettuce: Lettuce salad is the typical "house salad" with iceberg lettuce, or the salad mixes you get at the store or fast food restaurants, even if they have meat on top.) (If you get questions about potato products: Potato products are French fries, baked potatoes, hash browns, mashed potatoes... anything made from white potatoes.) (In case you get this question: For the purposes of this study, ketchup is not considered a vegetable.)

- ☐ Number of cups of fruit (1) \_\_\_\_\_
- ☐ Number of cups of vegetables (2) \_\_\_\_\_
- ☐ Number of cups of 100% fruit juice (3) \_\_\_\_\_
- ☐ Never eat fruit (4)
- ☐ Never eat vegetables (5)
- ☐ Never drink 100% fruit juice (6)

Q22 Now let's talk about secondhand smoke. Have you been exposed to secondhand smoke in the past year?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Don't know/ not sure (3)
- ☐ Refused to answer (4)

Answer If Now let's talk about secondhand smoke. Have you ... Yes Is Selected

Q23 If yes, where do you think you are exposed to secondhand smoke most often? (Check only one)

- ☐ Home (1)
- ☐ Workplace (2)
- ☐ Hospitals (3)
- ☐ Restaurants (4)
- ☐ Bars (5)
- ☐ School (6)
- ☐ Other: (7) \_\_\_\_\_

Q24 I am going to read a list of potential health issues. Please let me know what you consider to be the top 3 health issues. (Please select only three of the following responses)

- ☐ Asthma and lung disease (1)
- ☐ Chronic disease (i.e. cancer, diabetes, heart disease/stroke) (2)
- ☐ Child abuse (3)
- ☐ Dental health (4)
- ☐ Drug and alcohol abuse (5)
- ☐ Gangs and violence (6)
- ☐ Mental health (7)
- ☐ Obesity (8)
- ☐ Teen pregnancy (9)
- ☐ Tobacco use (10)
- ☐ Vehicle crashes (11)
- ☐ HIV and AIDS (12)
- ☐ Alzheimer's disease/ dementia (13)
- ☐ Other: (14) \_\_\_\_\_
- ☐ No answer given/ left blank (15)

Q26 Now we are going to talk about access to care and family health. Where do you go most often when you are sick? DO NOT read the options. Mark only the one they say. If they cannot think of one, read: Here are some possibilities.

- ☐ Doctor's office (1)
- ☐ Health department (2)
- ☐ Hospital/emergency room (3)
- ☐ Federally qualified health center, community health center (Bernstein) (4)
- ☐ Free clinic (Grimesland) (5)
- ☐ Urgent Care Center (6)
- ☐ Other: (7) \_\_\_\_\_

Q27 Do you have a primary medical provider? Do you have one place where you get most of your health care?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Don't Know/ not sure (3)

Answer If Do you have a primary medical provider, that is, do you h... Yes Is Selected

Q28 Are you able to get an appointment there within a reasonable time?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Don't know/ not sure (3)

Q29 In the past 12 months, did you go to the emergency room?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Don't know/ not sure (3)

Answer If In the past 12 months, did you go to the emergency room? Yes Is Selected

Q30 Why did you choose to go to the emergency room?

- ☐ No insurance (1)
- ☐ Doctor's office not open (2)
- ☐ Serious injury (3)
- ☐ Other (4) \_\_\_\_\_

Q31 In the past 12 months, have you been admitted to a hospital?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Don't know/ not sure (3)

Answer If In the past 12 months, have you been admitted to a hospital? Yes Is Selected

Q32 What was the main reason that you were admitted to the hospital?

- ☐ Heart (1)
- ☐ Cancer (2)
- ☐ Ear, Nose, Throat (3)
- ☐ GI (stomach illness) (4)
- ☐ Having a baby (5)
- ☐ Eyes (6)
- ☐ Orthopedics (bones and joints) (7)
- ☐ Urology (8)
- ☐ Neurology (9)
- ☐ Injury (10)
- ☐ Other: (11) \_\_\_\_\_

Q33 In the past 12 months, did you have a problem getting the health care you needed for you personally or for a family member from any type of health care provider, dentist, pharmacy, mental health or other facility?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Don't know/ not sure (3)

Answer If In the past 12 months, did you have a problem getting the... Yes Is Selected

Q34 What type of provider or facility did you or your family member have trouble getting health care from? You can choose as many of these as you like. If there was a provider that you tried to see but we do not have listed here, please tell me and I will write it in.

- ☐ Dentist (1)
- ☐ General doctor (2)
- ☐ Eye care/ optometrist/ ophthalmologist (3)
- ☐ Pharmacy/ prescriptions (4)
- ☐ Health department (5)
- ☐ Hospital (6)
- ☐ Urgent care center (7)
- ☐ Mental health counseling (8)
- ☐ Alcohol/ drug abuse counseling (9)
- ☐ Specialist: (What type?) (10) \_\_\_\_\_
- ☐ Other 1 (11) \_\_\_\_\_
- ☐ Other 2 (12) \_\_\_\_\_

Answer If In the past 12 months, did you have a problem getting the... Yes Is Selected

Q35 Which of these problems prevented you or your family member from getting the necessary health care? Again, choose as many of these as you like. If you had a problem that we do not have written here, please tell me and I will write it in.

- ☐ No health insurance (1)
- ☐ Insurance didn't cover what I/we needed (2)
- ☐ My/our share of the cost (deductible/co-pay) was too high (3)
- ☐ Doctor would not take my/our insurance or Medicaid (4)
- ☐ Hospital would not take my/our insurance (5)
- ☐ Pharmacy would not take my/our insurance or Medicaid (6)
- ☐ Dentist would not take my/our insurance or Medicaid (7)
- ☐ No way to get there (8)
- ☐ Didn't know where to go (9)
- ☐ Couldn't get an appointment (10)
- ☐ The wait was too long (11)
- ☐ Other: (12) \_\_\_\_\_

Q36 In the past 12 months, did you or any of your family members lack the funds for any of the following:

- ☐ Food (1)
- ☐ Health insurance (2)
- ☐ Home/ shelter (3)
- ☐ Utilities (i.e. Electricity, fuel, water) (4)
- ☐ Medicine (5)
- ☐ Transportation (6)
- ☐ No answer given/ left blank (7)
- ☐ Other: (8) \_\_\_\_\_

Q37 If a friend or family member needed counseling for a mental health or a drug or alcohol abuse problem, who is the first person you would tell them to talk to? DO NOT read the options. If they can't think of one... Here are some possibilities. Please choose one. Read the responses

- ☐ Counselor or therapist (mental health facility) (1)
- ☐ Support group (e.g., AA., Al-Anon) (2)
- ☐ School counselor (3)
- ☐ Doctor (4)
- ☐ Minister/ religious group (5)
- ☐ Don't know (6)
- ☐ Other: (7) \_\_\_\_\_

Q38 What does your community need to do to improve the health of your family, friends, and neighbors? Think about access to recreation, health care, counseling, youth and adult services. Read options only if none are suggested.

- ☐ More health services (1)
- ☐ After-school programs (2)
- ☐ Healthier food choices (3)
- ☐ Job opportunities (4)
- ☐ Mental health care and counseling (5)
- ☐ Recreation facilities (6)
- ☐ Transportation (7)
- ☐ Wellness services (8)
- ☐ Safe places to walk/play (9)
- ☐ Tobacco-free places (10)
- ☐ Drug or alcohol treatment programs or counseling, substance abuse services (11)
- ☐ Specialty practices (12)
- ☐ Positive teen activities (13)
- ☐ Elder care (14)
- ☐ More safe and affordable housing (15)
- ☐ Other: (16) \_\_\_\_\_
- ☐ No answer given/left blank (17)



Q39 What health screenings, education or information services are needed in your community?  
(Check all that apply) (Read the responses)

- ☐ Cancer (1)
- ☐ Cholesterol/blood pressure/diabetes (2)
- ☐ Dental screenings (3)
- ☐ Disease outbreaks (4)
- ☐ Substance abuse (5)
- ☐ Nutrition (6)
- ☐ Emergency preparedness (7)
- ☐ Eating disorders (8)
- ☐ Pregnancy prevention (9)
- ☐ Physical activity (10)
- ☐ Literacy (11)
- ☐ HIV/sexually transmitted diseases (12)
- ☐ Mental Health (including depression/anxiety) (13)
- ☐ Reckless driving/seat-belts/child car seats (14)
- ☐ Vaccinations/immunizations (15)
- ☐ Other: (16) \_\_\_\_\_
- ☐ No answer given (17)

Q40 Now we are going to discuss emergency preparedness. Does your household have working smoke and carbon monoxide detectors?

- ☐ Yes, smoke detectors only (1)
- ☐ Yes, both (2)
- ☐ Don't know/ not sure (3)
- ☐ Yes, carbon monoxide detectors only (4)
- ☐ No (5)
- ☐ Refused to answer (6)

Q41 During a severe storm or other emergency, what is your household's primary disaster plan?

- ☐ Stay with family or others (1)
- ☐ Stay at home (2)
- ☐ Evacuate to a shelter (3)
- ☐ No sheltering plan (4)
- ☐ Don't know/ no answer (5)

Q42 During a severe storm or other emergency, by which way would you most likely evacuate?

- ☐ Own car/truck (1)
- ☐ Friend or relative (2)
- ☐ Bus (3)
- ☐ Train (4)
- ☐ Taxi (5)
- ☐ Plane (6)
- ☐ Don't know/ no answer (7)
- ☐ I would not evacuate (8)

Q62 Pitt County has a voluntary Special Medical Needs Registry. Do you think anyone on your household may qualify as having special medical needs?

- ☐ Yes or not sure (1)
- ☐ No (2)

Answer If Pitt County has a voluntary Special Medical Needs Regis... Yes or not sure Is Selected

Q43 Do any of the following apply to you or someone in your household?

- ☐ Individual(s) with severe respiratory problems (oxygen or ventilator dependent) who require a power source and/or ambulatory bag (1)
- ☐ Individual(s) dependent on airway suctioning (tracheotomy) (2)
- ☐ Individual(s) on IV (intravenous) therapy (3)
- ☐ Individual(s) requiring tube feeding (4)
- ☐ Diabetic patients requiring assistance with insulin (5)
- ☐ Individual(s) requiring wound care or help with injections on a daily basis (6)
- ☐ Individual(s) with physical or mental conditions, including traumatic brain injury, who require daily medical supervision (7)

Q44 The next questions are general questions about you, which will only be reported as a summary of all answers given by survey participants.

Q45 How old are you? (Mark age category, but do not read them)

- ☐ 15-19 (1)
- ☐ 20-24 (2)
- ☐ 25-29 (3)
- ☐ 30-34 (4)
- ☐ 35-39 (5)
- ☐ 40-44 (6)
- ☐ 45-49 (7)
- ☐ 50-54 (8)
- ☐ 55-59 (9)
- ☐ 60-64 (10)
- ☐ 65-69 (11)
- ☐ 70-74 (12)
- ☐ 75-79 (13)
- ☐ 80-84 (14)
- ☐ 85 or older (15)
- ☐ Refused to answer (16)

Q46 (Only ask if you can't tell which on your own.) Gender:

- ☐ Male (1)
- ☐ Female (2)
- ☐ Refused to answer (3)

Q47 Are you of Hispanic, Latino, or Spanish origin?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Refused to answer (3)

Q48 What is your race? (Please check all that apply.)

- ☐ White or Caucasian (1)
- ☐ Black or African American (2)
- ☐ American Indian or Alaska Native (3)
- ☐ Asian (4)
- ☐ Native Hawaiian or other Pacific Islander (5)
- ☐ Other race not listed here (Write in race): (6) \_\_\_\_\_
- ☐ Refused to answer (7)

Q49 Do you speak a language other than English at home?

- ☐ Yes (please specify): (1) \_\_\_\_\_
- ☐ No (2)
- ☐ Refused to answer (3)

Q51 What is your marital status? (Read categories. Mark only one. No explanation needed for "other".)

- ☐ Never married/ single (1)
- ☐ Married (2)
- ☐ Unmarried partner (3)
- ☐ Divorced (4)
- ☐ Widowed (5)
- ☐ Separated (6)
- ☐ Other (If they elaborate, please fill in): (7) \_\_\_\_\_
- ☐ Refused to answer (8)

Q52 What is the highest level of education that you have finished? (Mark only one.)

- ☐ Less than 9th grade (1)
- ☐ 9-12th grade, no diploma (2)
- ☐ High school graduate (or GED equivalent) (3)
- ☐ Associate's Degree or Vocational Training (4)
- ☐ Some college (no degree) (5)
- ☐ Bachelor's degree (6)
- ☐ Graduate or professional degree (7)
- ☐ Other: (8) \_\_\_\_\_
- ☐ Refused to answer (9)

Q53 What was your total household income last year, before taxes? Let me know which category you fall into. (Read choices. Mark only one.)

- ☐ Less than \$10,000 (1)
- ☐ \$10,000 to \$14,999 (2)
- ☐ \$15,000 to \$24,999 (3)
- ☐ \$25,000 to \$34,999 (4)
- ☐ \$35,000 to \$49,999 (5)
- ☐ \$50,000 to \$74,999 (6)
- ☐ \$75,000 to \$99,999 (7)
- ☐ \$100,000 or more (8)
- ☐ Refused to answer (9)

Q54 How many people does this income support? If you are asked about child support: If you are paying child support but your child is not living with you, this still counts as someone living on your income.

Q55 What is your employment status? I will read a list of choices. Let me know which ones apply to you. (Read choices. Check all that apply.)

- ☐ Employed full-time (1)
- ☐ Employed part-time (2)
- ☐ Retired (3)
- ☐ Armed forces (4)
- ☐ Unemployed for one year or less (5)
- ☐ Unemployed for more than one year (6)
- ☐ Disabled; unable to work (7)
- ☐ Student (8)
- ☐ Homemaker (9)
- ☐ Self-employed (10)
- ☐ Refused to answer (11)

Q56 Are you the primary caregiver for: (Check all that apply) (Read the responses)

- ☐ Child under the age of 18 years (Includes step-children, grandchildren, or other relatives) (1)
- ☐ Disabled child (less than 18 years) (2)
- ☐ Disabled adult (18 years or older) (3)
- ☐ Senior adult (65 years or older) (4)
- ☐ Foster child (less than 18 years) (5)

Q57 Do you have access to the Internet?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Don't know/ not sure (3)
- ☐ Refused to answer (4)

Q58 Do you live within city or town limits?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Don't know/ not sure (3)
- ☐ Refused to answer (4)

Q59 What is your zip code? (Write only the first 5 digits)

Q60 These are all the questions that we have. Thank you so much for taking the time to complete this survey!

## Appendix D

### CODE BOOK: 2011-CHA Listening Sessions

H01	Chronic_ill	Anytime participants mention chronic illnesses, such as: stroke, asthma, cancer, hypertension, DM, Alzheimer's disease, allergies, kidney disease, obesity, heart disease
H02	Subst_abuse	Anytime participants mention the use of tobacco, drugs or alcohol as a major health problem for the community
H03	Phy_act	When participants mention exercise, physical activity, lack of physical activity, or lack of adequate nutrition as a major health issue for Pitt County
H04	Built_env	When participants mention the lack of recreational activities, sidewalks, green spaces or lack of sense of community as a major concern leading to health problems in Pitt County
H05	Infect_dis	Anytime participants mention infectious diseases as a health issue for the community
H06	Access_care	Anytime participants mention the lack of accessibility to health care, transportation, health insurance or follow-up by a physician or other health care providers, lack of available services in languages other than English, long waiting times as reasons leading to major health problems for the community
H07	Teen_issues	When the mention of teen issues, such as smoking, substance abuse, eating disorders or pregnancies are brought up as major health concerns in Pitt County
H08	Parent/fam	When participants comment on the lack of parenting skills, dysfunctional family settings as a major concern leading to health problems in Pitt County
H09	Behav_health	When participants mention behavioral health issues: depression, anxiety, stress, sleep deprivation as major health concerns for community members in Pitt County
H10	Care_dent/prim	When participants mention the lack of dental or primary care services as a health concern for the community
H11	Financial	Anytime participants mention financial burdens, unemployment or housing concerns as factors leading to their health problems
H12	Education	Anytime participants mention education or lifestyle education as contributing factors to health problems
H13	Aging	Anytime participants mention the needs of the elderly population as a health concern for the community
A01	Asset_HF	Anytime participants make mention of health facilities (Health Department, Hospitals, Brody School of Medicine, Dental school, local clinics or mobile health services, Nursing school, home health) as an asset for the community
A02	Asset_U	Anytime East Carolina University or another college located in Pitt County is mentioned as an asset for the community

A03	Asset_members	Anytime participants mention the community or its members (families, parents or other positive peer influences) as the driving workforce in the community
A04	Asset_faith	Anytime the participants mention faith-based organizations as an asset to the community
A05	Asset_REC	Anytime participants mention recreational facilities, PE classes, gyms, walking trails or other facilities which allow for recreational activities (such as the Boys and Girls Club)
A06	Asset_assist	Anytime participants mention rehabilitation centers, health-related assistance programs or food-related assistance programs, community services (law enforcement, teachers, interpreters)
A07	Asset_financ	Whenever participants mention financial assistance programs, such as sliding scale fees, payment plans, insurance coverage
A08	Asset_commagen	Anytime participants mention community agencies and organizations as an asset for the community of Pitt County
A09	Asset_HR	Anytime participants mention health resources or community plans which serve to provide health services, benefits or support to the community
A10	Asset_culture	Anytime participants mention something related to ethnicity, language or population diversity within the community as aspect that is beneficial to the community
A11	Asset_CCagen	Anytime participants mention city or county agencies as current positive assets which serve to address the health problems the community may have
A12	Asset_MH	Anytime participants mention mental health facilities as an asset for addressing the health problems within the community
A13	Asset_school	Whenever participants mention school resources or school faculty/staff as an asset for addressing the health problems in Pitt County
A14	Asset_transport	Anytime participants mention any means of transportation as an asset for addressing the health problems in Pitt County
B01	Bar_financ	Whenever participants mention lack of financial resources as a barrier to health, such as issues related to money, loss of funded programs, unemployment, poverty, housing concerns
B02	Bar_time	Anytime participants mention the lack of time for a healthy lifestyle,
B03	Bar_food	Anytime participants mention lack of available healthy food choices (food deserts), unhealthy foods or fast foods, cheap foods, soft drinks, vending machines as a barrier to health
B04	Bar_lang	Anytime participants mention language as a barrier to health care or other services, such as health illiteracy, lack of available information in Spanish, lack of interpreters or issues regarding culture or diversity as a barrier to having good quality health



B05	Bar_family	Anytime participants mention family issues, such as dysfunctional families, family chaos, lack of parenting skills, absent families or lack of family dynamics as barriers to health
B06	Bar_hcare	Whenever participants mention lack of accessibility to health care, lack of health insurance, lack of health care resources, lack of affordable health care, lack of follow-up care by health care providers, lack of adequate training of health professionals or difficulty in navigating the health system, lengthy appointments or long waiting times, or lack of trust in health care providers as barriers to adequate health care
B07	Bar_subst	Anytime participants mention substance abuse (alcohol, smoking, marijuana) or drug addictions as a barrier to health
B08	Bar_transport	Anytime participants mention the lack of transportation(personal or public) as a barrier to good health
B09	Bar_patient	Anytime participants mention lack of motivation to make lifestyle changes, lack of patient responsibility in taking action for their health (compliance with medications or follow-up visits to health care providers)
B10	Bar_collab	Anytime participants mention the lack of adequate communication and collaboration among community members and their health care providers, no sense of community, lack of consistency among providers or the need for more coordination among community members as barriers to health
B11	Bar_MH	Whenever participants mention the lack of mental health resources as a barrier to health
B12	Bar_teen	Whenever participants mention the peer pressure, competitiveness in sports related activities, pressure to succeed, time management, school pressures, teen rebellion or social acceptability as barriers to a healthy lifestyle
B13	Bar_resources	Whenever participants mention lack of available community resources [educational opportunities, recreational opportunities, availability of basic resources (water, electricity, gas), lack of staff, lack of daycares, safety issues]
N01	Next_plan	Anytime participants mention the need for a more comprehensive plan, coordination of plans, the need for a clear vision, prioritization of activities or the need to make changes, the need to prepare adults for the workforce, enforcement of laws as a means for improving the health conditions of the community
N02	Next_commladers	Anytime participants mention the need for more public participation and collaboration in community events, the need for interaction with fellow neighbors, and develop community leaders
N03	Next_coordin	Whenever the participants mention the need to assess the available services in order to reduce their duplication, improve coordination and availability of community resources
N04	Next_faith	Whenever the participants mention the need to get the faith-based organizations more involved in community projects, or build coalitions with these institutions in order to improve community collaboration

N05	Next_school	Whenever participants mention the need to provide additional school resources, such as healthy food choices, PE classes, nurses, educational programs related to addictions, or the use of staff/faculty for improving the health conditions of the community
N06	Next_health	Anytime participants comment on the need to provide additional health services to the community, such as clinics, health clinics with alternative hours of operation, improvement of health clinics in schools, reassessment of available services (ER, EMS), or qualified interpreters as the resources needed to improve the health in Pitt County
N07	Next_transport	Whenever the participants mention the need to improve public transportation services throughout city and neighboring towns throughout Pitt County
N08	Next_family	Anytime participants mention the need to get parents more involved in their children's activities, parent involvement in community programs, educational opportunities for parents
N09	Next_agencies	Anytime participants mention the need to improve services provided by city, county or state agencies
N10	Next_educate	Whenever the participants mention the need to better educate the community leaders, general public and local officials about the available services or the urgency to promote health among the community, in other words, advocate for the general health needs of the community as the means for improving health
N11	Next_media	Whenever participants mention the need to involve media as a means for improving health in the community
N12	Next_teens	Whenever participants mention the need to provide more opportunities or resources for teens (ex. Programs, health foods)
N13	Next_resources	Anytime participants mention the need to improve or provide additional resources (sidewalks, parks), motivational tools to become physically active, employment opportunities, direction for obtaining financial stability