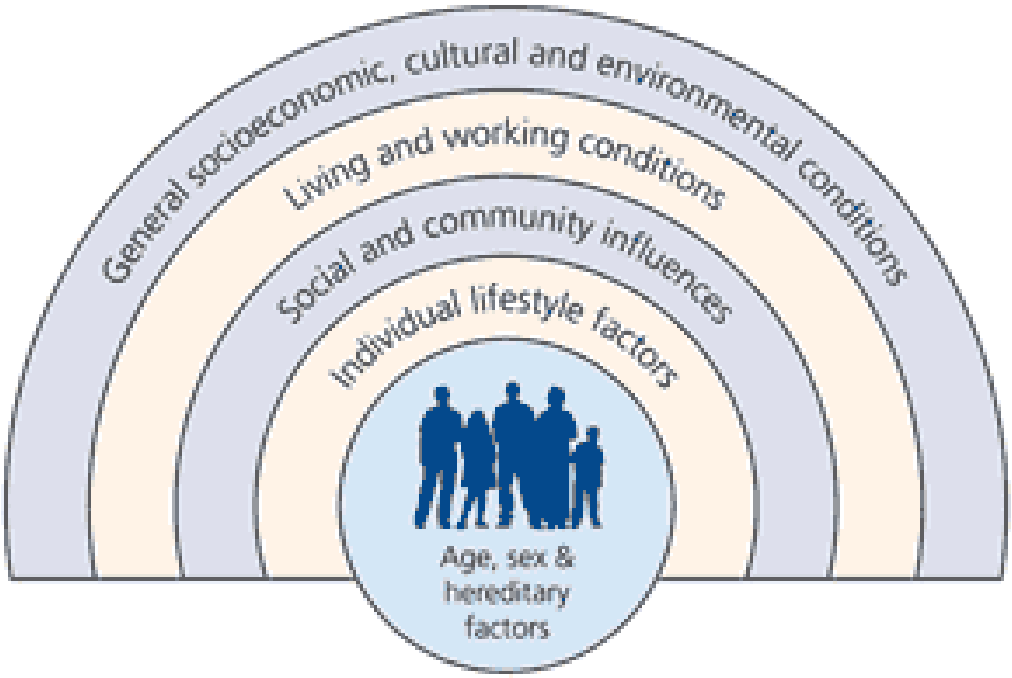
Determinants of Health



Determinants of Health

SOCIAL ENVIRONMENT

Education

Education is the Leading Health Indicator to address social determinants as a means to improve population health. Higher levels of education are associated with:

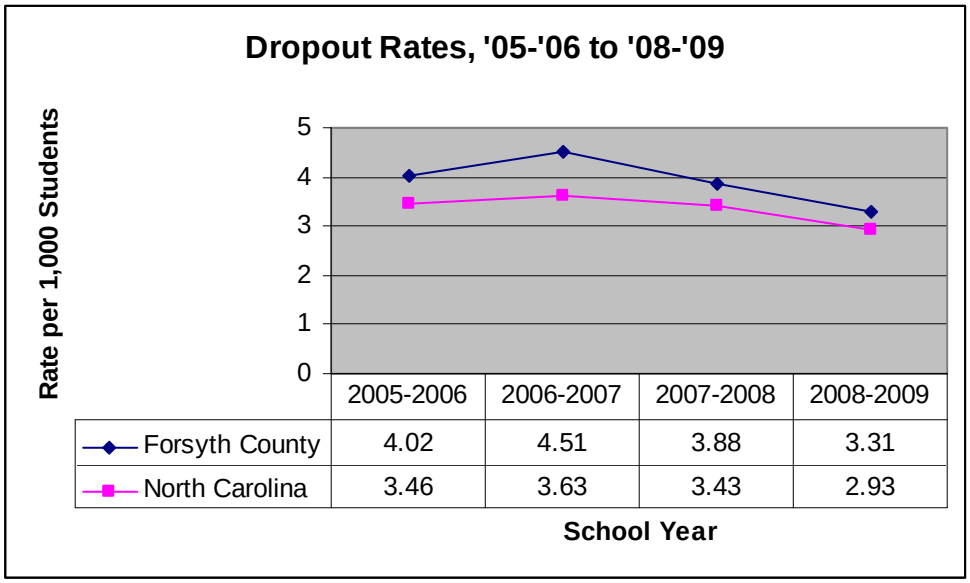
- Longer life expectancy
- Financial security
- Improved health and quality of life
- Health-promoting behaviors like getting regular physical activity, not smoking, and going for routine checkups and recommended screenings.

In 2009, the four year high school graduation rate was 72.7%.

Educational Attainment	
2010-11 Kindergarten - 12th Enrollment	53,627
2010 Average SAT score (1600 scale)	1,000
2010 Percent of Graduates taking SAT	60%
2008-09 Higher Education Total Enrollment	29,244

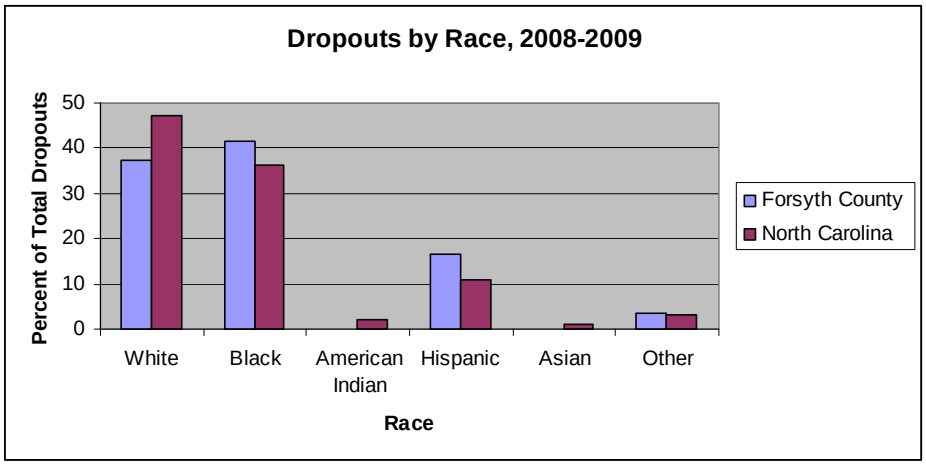
Source: Data from: Access NC http://accessnc.commerce.state.nc.us/EDIS/page1.html

High school drop-outs are five times more likely to live below the poverty line, earn 32% less on average than graduates, live nine years less, and are more likely to serve time in jail. In the 2005-2006 school year, drop out rates for grades 7th-13th decreased, although Forsyth County continued to have a higher dropout rate than North Carolina. The county and the state both saw increases in dropout rates in the 2006-2007 school year, but the rate declined the following two school years.



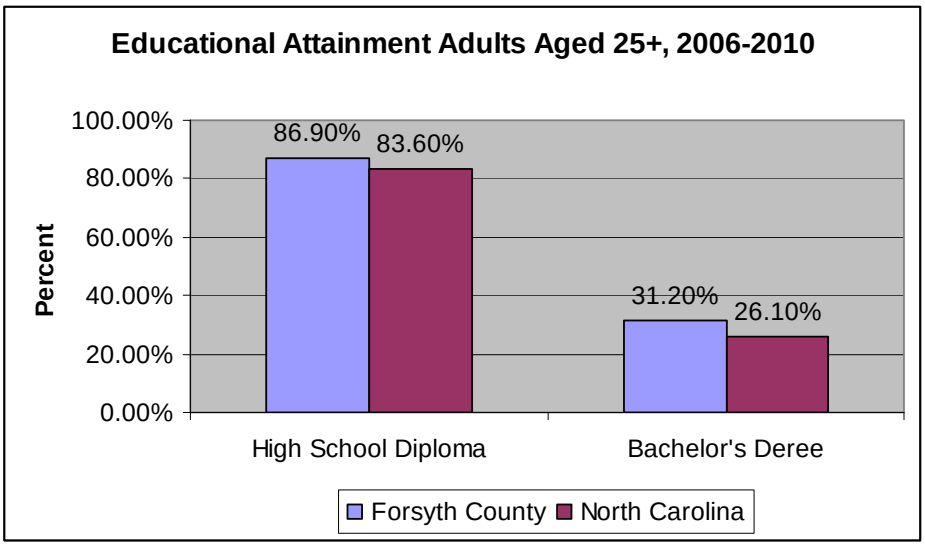
Source: Public Schools of North Carolina. Annual Reports. Dropout Reports

The percent of total dropouts (grades 7-13) who were white was lower in Forsyth County than in North Carolina, 37.5% versus 47.1%. American Indian and Asian students had lower dropout rates than the state as well; both were less than 1% for Forsyth County while it was 2% and 1% for the state respectively. Black, Hispanic and Other non-whites made up a higher percentage of dropouts in Forsyth County than the states. Black students made up 41.6% in Forsyth County and 36.3% in the state; Hispanic students made up 16.7% in the county and 10.8% in the state; and Other students made up 3.6% in the county and 3% in the state.



Source: Public Schools of North Carolina. Annual Reports. Dropout Reports.

For adults over 25 years of age, Forsyth County had higher educational attainment than the state. Forsyth County had 86.9% of adults with a high school diploma in comparison to North Carolina, which had 83.6% of adults with the same. Forsyth County also had 31.2% of adults who held a bachelor's degree in comparison to North Carolina's 26.1% who held a bachelor's degree.



Source: US Census Bureau. State and County Quick Facts

Families

Family Composition

In 2009 there were 142,191 households in the County. There were 90,648 families, with an average household size of 2.38 (1).

Family Violence

In Forsyth County there were over 7,519 domestic violence relation reports in 2008, with more than 1,100 restraining orders served. In 2009 294 women and children were stayed at the Family Services Shelter throughout the year. This is an increase of 10% from the 262 women and children who stayed at the shelter in 2007. Approximately 1 in 5 high school females reported being physically or sexually abused by a dating partner (2).

Care for the Elderly

Forsyth County is served by the Northwest Piedmont Area Agency on Aging which also serves Davie, Stokes, Surry, and Yadkin Counties. The mission is to assist older adults in achieving and maintaining quality of life by utilizing resources and services through advocacy, coordinating, planning and education (3).

Neighborhoods

Crime/Intentional Injuries

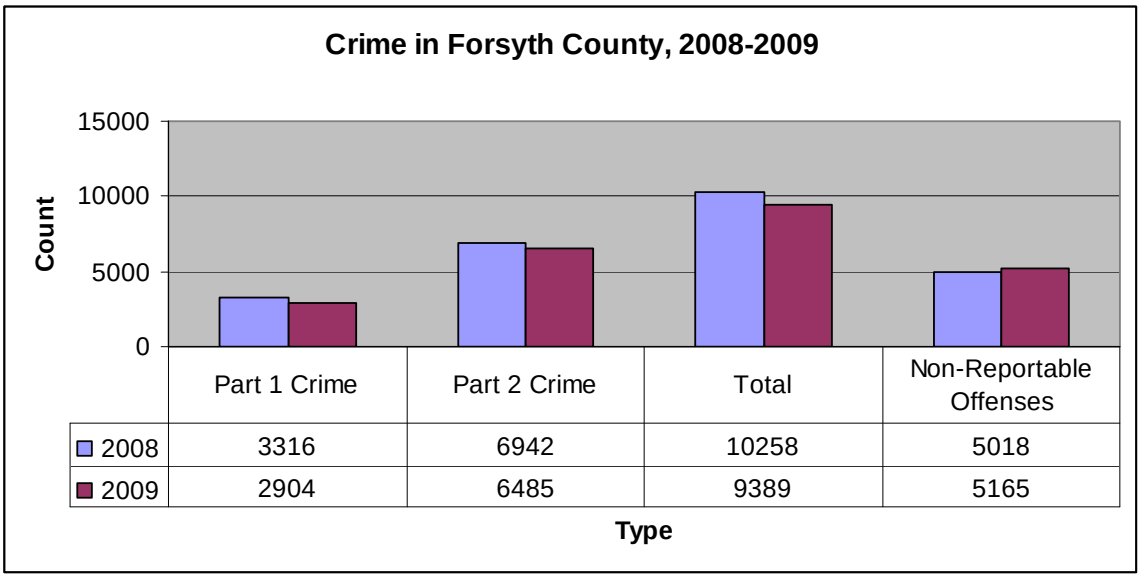
The Forsyth County Sheriff's Office 2009Annual Report revealed an overall decrease in crime. There was a 8.47% decrease in Part 1 and Part 2 Crime and an overall total decrease of 4.73% when including non-reportable offenses. Part 1 and Part 2 Crime includes (4):

Part 1:	**Part 2**	**Part 2**
Violent	*Other Crimes Against Persons*	Liquor Law Violations
Murder	Simple Assault	*White Collar Crime*
Rape	Sex Offenses	Forgery/Counterfeiting
Robbery	Offenses Against Family/ Children	Fraud
Aggravated Assault	*Public Disorder Crimes*	Embezzlement
Property	Disorderly Conduct	*All Other Crimes*
Burglary	Vandalism	Stolen Property
Larceny (Not Including from Motor Vehicle)	Prostitution/Gambling/ Pornography	Weapons
Larceny from Motor Vehicle	*Drug/Alcohol Offenses*	Traffic
Motor Vehicle Theft	Drug/Drug Equipment Violations	Miscellaneous Offenses
Arson	DWI	All Other Offenses

Crime by Part I and Part II Status

	2008	2009	Percent Change
Part 1 Crime	3,316	2,904	-12.42
Part 2 Crime	6,942	6,485	-6.58
Total	10,258	9,389	-8.47
Non-Reportable Offenses	5,018	5,165	2.93
Grand Total	15,276	14,554	-4.73

Source: Forsyth County Sheriff's Office. 2009Annual Report.



Source: Forsyth County Sheriff's Office. 2009Annual Report.

Religion/Social Support/Civic Engagement

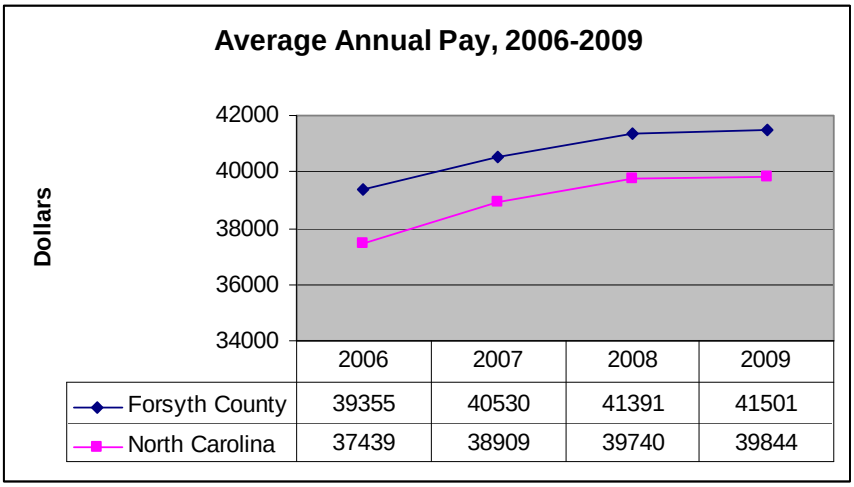
The National Center for Charitable Statistics revealed (5):

- 65 Private Foundations that had given $69,289,965 in grants
- 240 Clubs, Sports, and Other Mutual Benefit or Social Bonding Organizations
- 302 Congregations and Other Religious Organization

FINANCIAL/ECONOMIC FACTORS

Income/poverty Levels

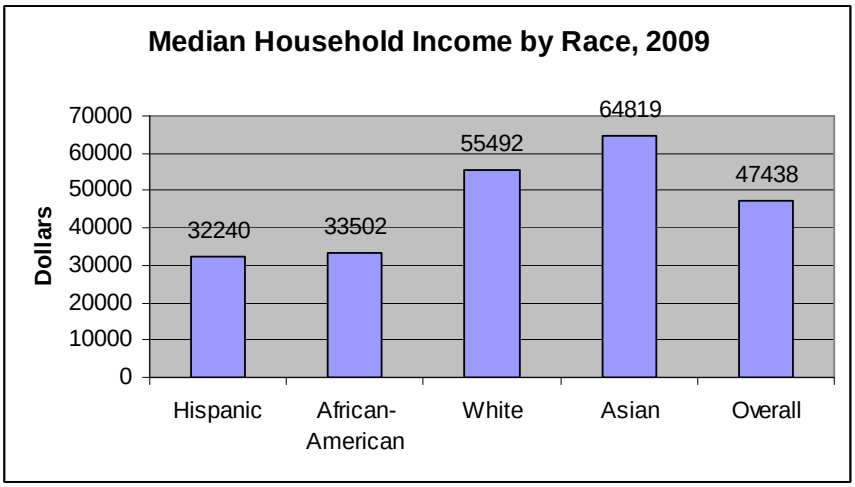
The average annual pay in Forsyth County rose going from $39,355 in 2006 to $41,501 in 2009. Forsyth County annual average pay was $1,711 higher on average than North Carolina from 2006-2010.



	2006	2007	2008	2009
Forsyth County	39355	40530	41391	41501
North Carolina	37439	38909	39740	39844

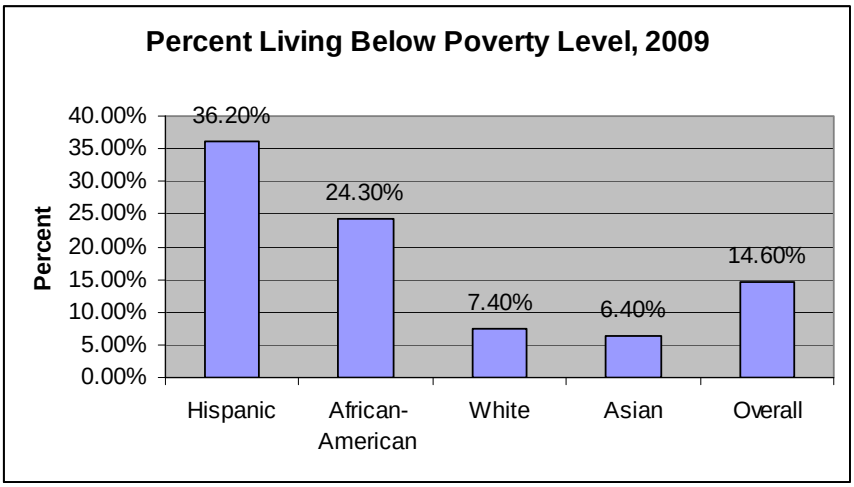
Source: Bureau of Labor Statistics. Databases, Tables, and Calculators.

Median Household income varied by race in 2009. Asians had the highest median household income at $64,819 while Hispanic household income was the lowest at $32,240. Hispanic and African-American median household income fell below the overall of $47,438 by approximately $14,000 while White and Asian households were at least $8,000.



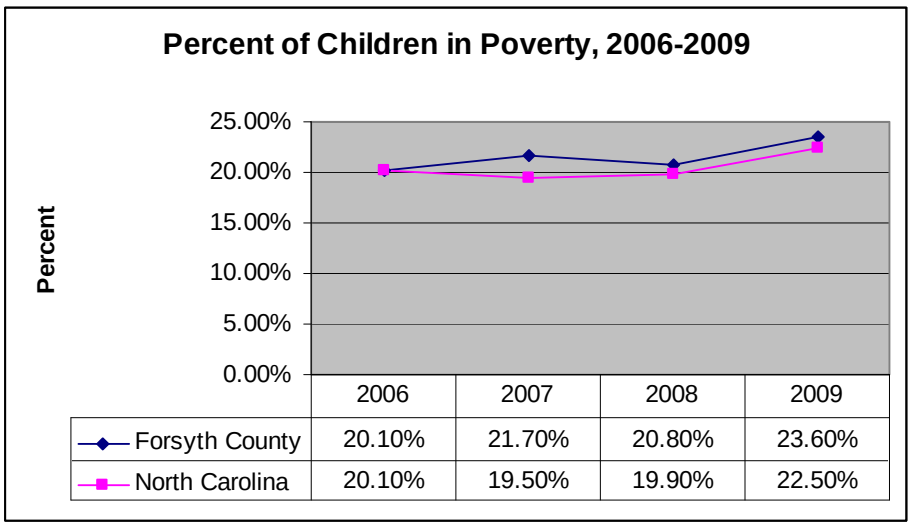
Source: Northwest Piedmont Council of Governments. Demographic and Income Profile.

The percent of the population living below poverty level in 2009 overall was 14.6%. Hispanic and African Americans had higher percentages of the population than the overall rate by approximately 10 percentage points while White and Asian populations were at least 7 percentage points lower.



Source: Northwest Piedmont Council of Governments. Demographic and Income Profile.

The percent of children in poverty increased slightly from 2006-2009. While Forsyth County started off the same, but in 2007 rose to a rate higher than the state's percentage of children in poverty.



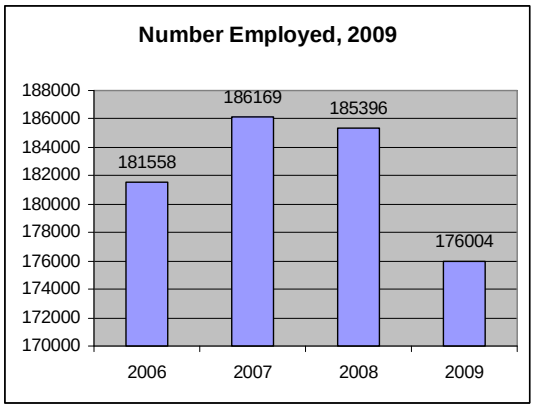
	2006	2007	2008	2009
Forsyth County	20.10%	21.70%	20.80%	23.60%
North Carolina	20.10%	19.50%	19.90%	22.50%

Source: Annie E. Casey Foundation Kids County Data Center. Percentage of XIX Eligible Receiving Dental Services.

The percent of the population living below poverty level in 2009 overall was 14.6%. Hispanic and African Americans had higher percentages of the population than the overall rate by approximately 10 percentage points while White and Asian populations were at least 7 percentage points lower.

Employment Rates

The number of Forsyth County residents employed fluctuated between 2006 and 2009, indicative of the economic downturn. The number employed increased from 2006-2007, saw a small decline in 2008, and then declined by almost 5%.



Source: Bureau of Labor Statistics.

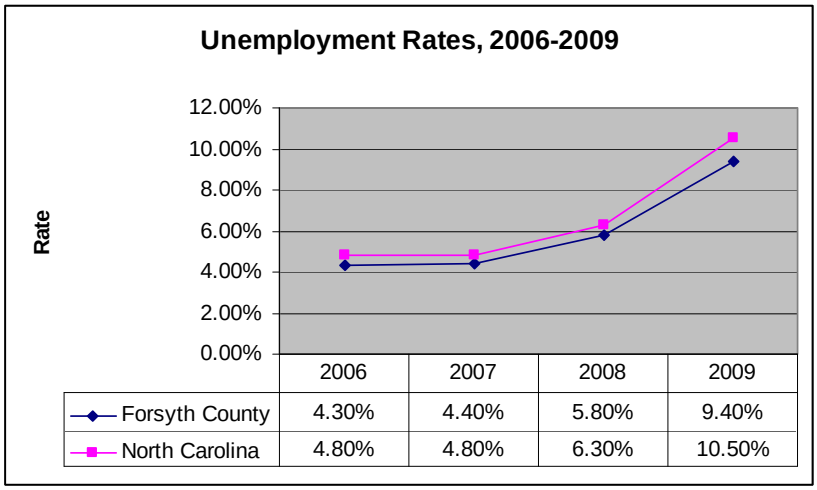
In 2009, the industries with the highest employment numbers were Health Care and Social Assistance, Manufacturing, Educational Services, Retail Trade, and Accommodation and Food Services according to the North American Industry Classification System

Industry	2009 Annual Employment
Health Care and Social Assistance	32,594
Manufacturing	20,614
Educational Services	19,509
Retail Trade	19,041
Accommodation and Food Services	14,612
Administrative and Waste Services	11,207
Finance and Insurance	9,540
Professional and Technical Services	7,466
Public Administration	7,180
Transportation and Warehousing	7,092
Construction	6,468
Wholesale Trade	5,489
Management of Companies and Enterprises	4,491
Other Services Ex. Public Admin	4,464
Arts Entertainment and Recreation	2,438
Real Estate and Rental and Leasing	1,963
Information	1,673
Unclassified establishments	250
Utilities	139
Agriculture Forestry Fishing & Hunting	79
Mining	31
Total Private Industry	**156,547**
Total All Industries	**176,260**

Source: NAICS. 2009 Employment and Wages.

Unemployment

Unemployment rates increased from 2006-2009. Forsyth County unemployment rates were slightly lower than the state. The unemployment rate more than doubled from 2006-2009. Unemployment increased by approximately 62% from 2008 to 2009.

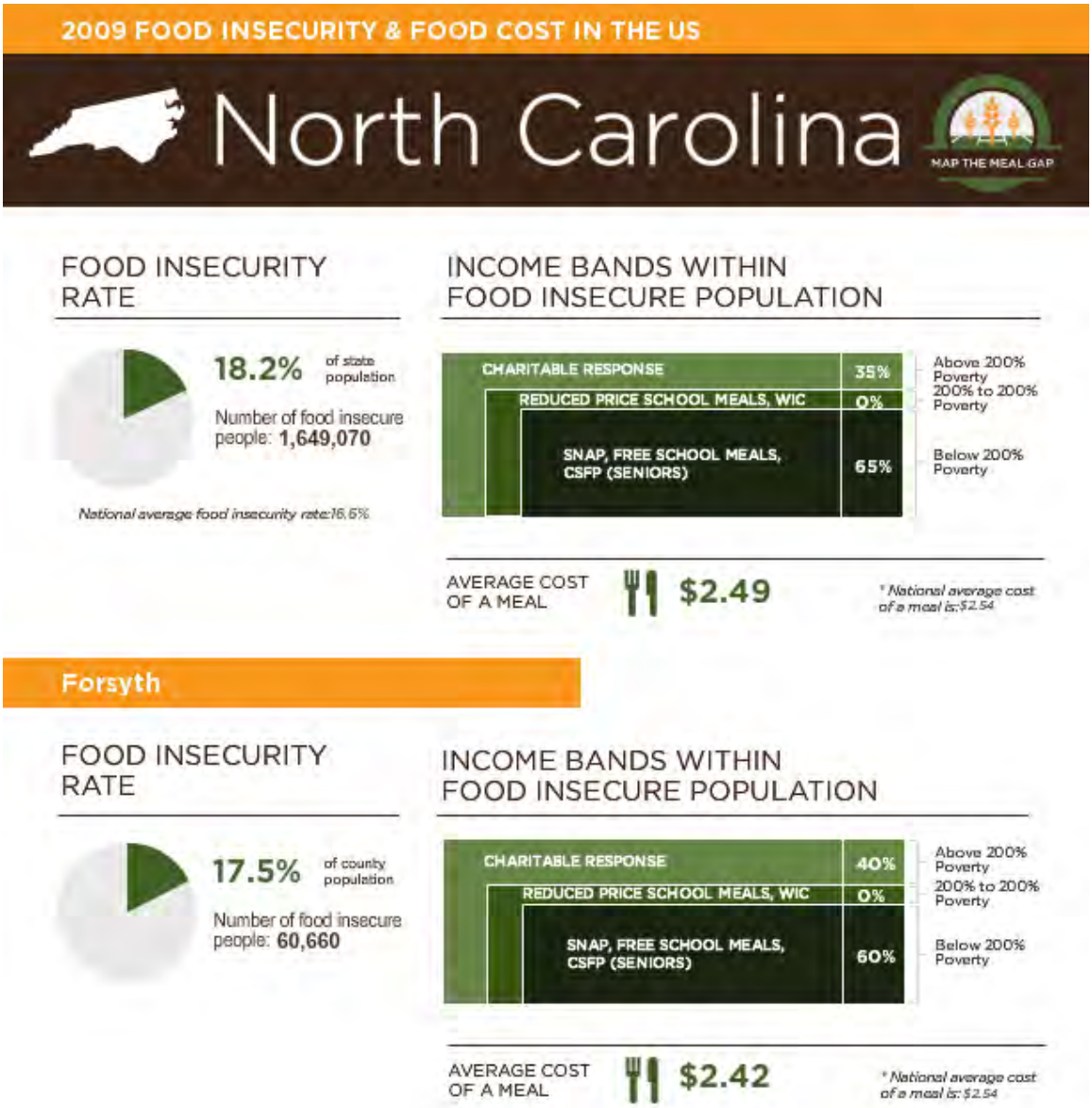


	2006	2007	2008	2009
Forsyth County	4.30%	4.40%	5.80%	9.40%
North Carolina	4.80%	4.80%	6.30%	10.50%

Source: Bureau of Labor Statistics.

Food Insecurity/Access to Healthy Foods

According to the USDA "food insecurity refers to the lack of access, at times, to enough food for an active, healthy life for all household members and limited or uncertain availability of nutritionally adequate foods. Food insecure households are not necessarily food insecure at all times. Food insecurity may reflect a household's need to make trade-offs between important basic needs, such as housing or medical bills, and purchasing adequate foods.(6)" The below image from Feeding America describes food insecurity and food cost in Forsyth County and North Carolina.

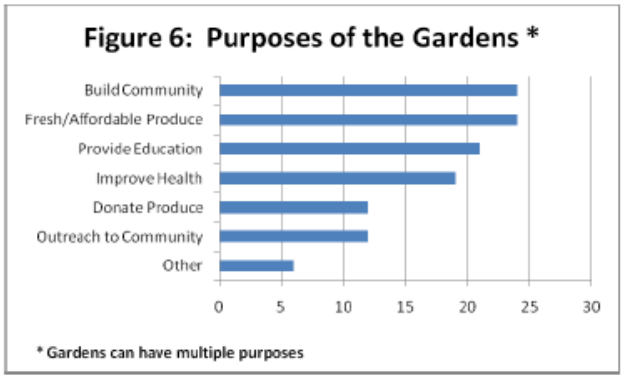


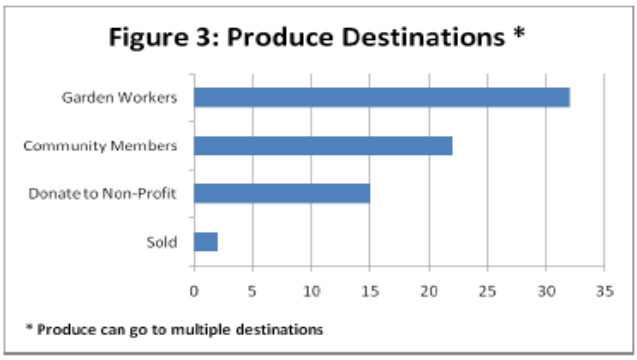
Source: Feeding America. Food Insecurity and Food Cost in the United States

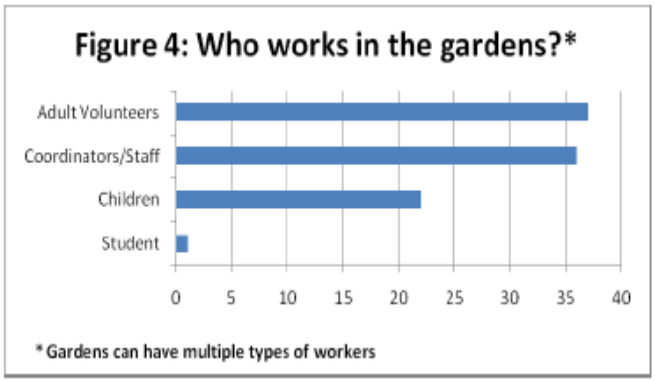
Community Gardening

Forsyth County is home to the country's first community garden beginning with the only known, well document colonial community garden in 1759. Both the 1759 Community Garden and the 1761 Medical Garden are located in Historic Bethabara Park. Currently, Forsyth County has at least 40 community gardens. At these community gardens, the public comes together to grow vegetables, fruits, herbs, healthy lifestyles and social capitals with gardens in neighborhoods, parks, urban centers, and churches (7).

During the summer 2010 an assessment on community gardens revealed 44 community gardens in Forsyth County located at schools, churches, public housing developments, and on private land. Of the gardens, 82% were within the city limits of Winston-Salem. The remaining gardens are located throughout the county with 2 in western, 2 in eastern, and 3 in northwestern areas of Forsyth County (8).



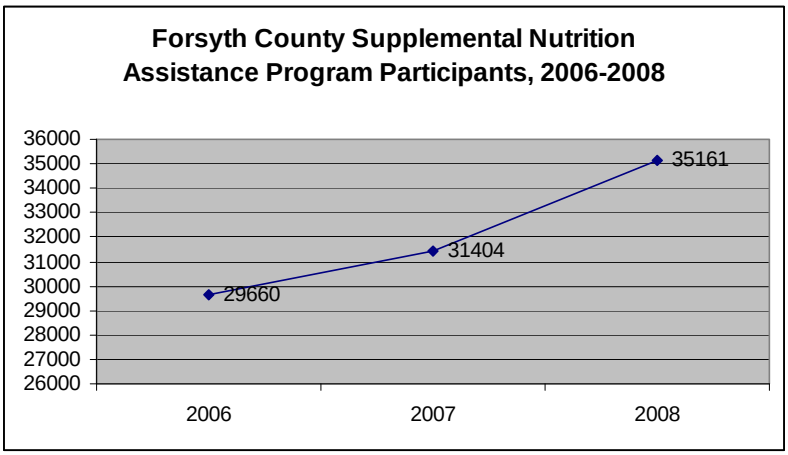




Source: Wake Forest University Translational Science Institute. Program in Community Engagement and Implementation. Report on Community Gardens and Farmers Markets in Forsyth County

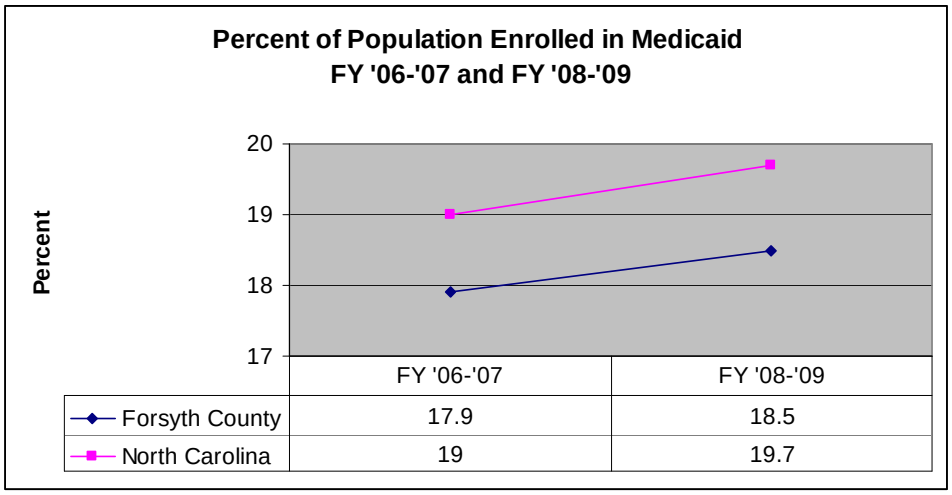
Financial Assistance

The number of participants of Supplemental Nutrition Assistance Program (formerly known as food stamps) increased by 5,501 participants from 2006 to 2008.



Source: USDA. Economic Research Service. SNAP Data System

The percent of the population enrolled in Medicaid increased by 3.4% from Fiscal Year 2006-2007 to Fiscal Year 2008-2009. North Carolina percentage increased 3.7% during the same time. The percent of population enrolled in Medicaid in Forsyth County is lower than the state percentage.



Source: NC State Center for Health Statistics. NC Health Statistics Pocket Guide-2009.

Transportation

Commuting to Work:

In Forsyth County, 19% of employees work outside of their county of residence (sill in NC), and 1% work outside their state of residence. 81% of Forsyth County residents work within the county.

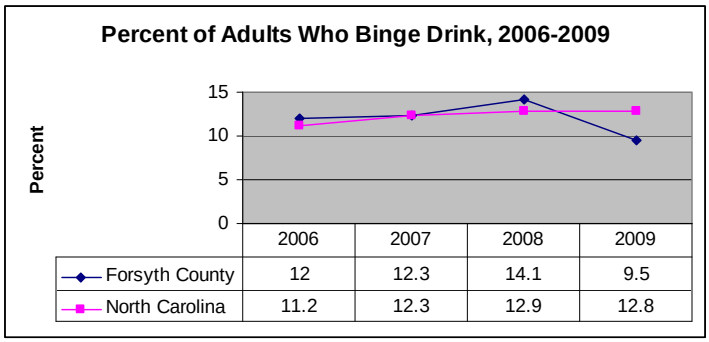
	Commuters	Percent by Residence
Worked in State/ County of Residence	119,233	81%
Worked in State/ Outside County of Residence	27,501	19%
Worked Outside State of Residence	1,104	1%

INDIVIDUAL BEHAVIOR

Portions of this section use the Behavior Risk Factor Surveillance Survey estimates of certain individuals are gauged as a reflection of community members' behaviors.

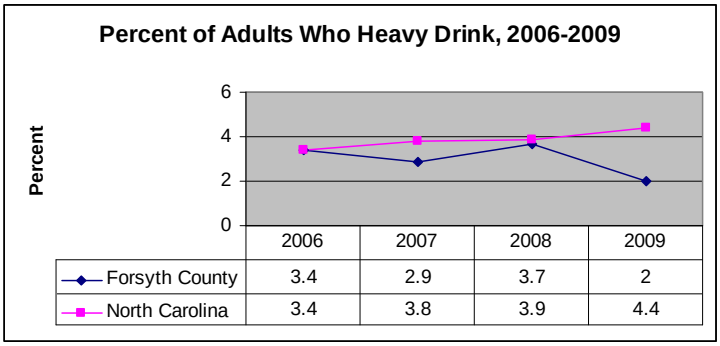
Substance Use (Tobacco, Alcohol, Illicit Drugs)

According to community members, the percent of adults who binge drink increased from 2006 to 2008, then decreased in 2009 to the lowest rate of 9.5%. The state saw an increase in the amount of adults who binge drink with, although it remained within a two percentage point range of the lowest rate in 2006.



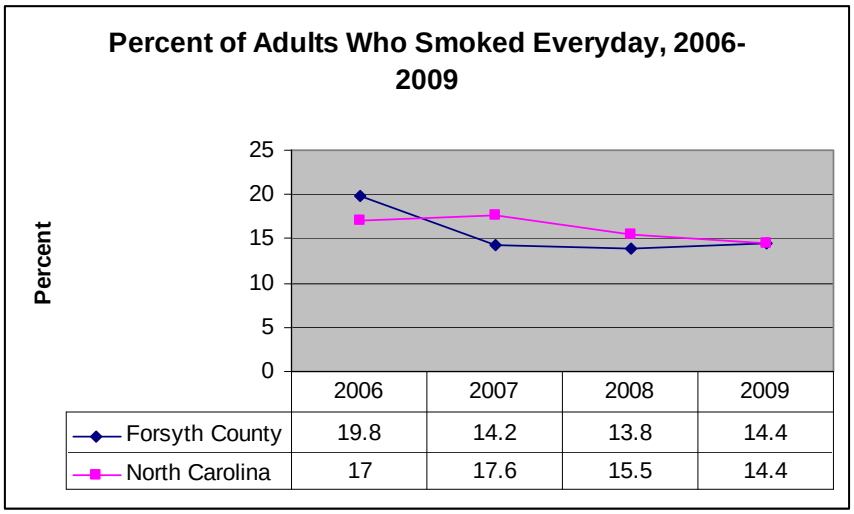
Source: NC State Center for Health Statistics.

Forsyth County saw similar trends for percent of adults who heavy drink. Although the county saw increases and decreases, the overall percent of adults who heavy drink decreased by 1.2 percentage points. North Carolina, in comparison, saw an increase of 1 percentage point by 2009, revealing an increasing trend.



Source: NC State Center for Health Statistics.

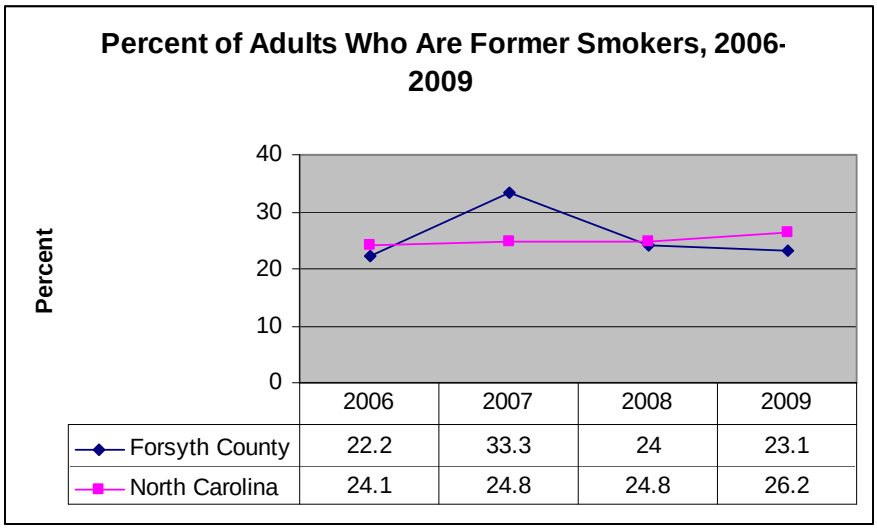
Tobacco use by adults in the county saw changes between 2006 and 2009. The percent of adults who smoked everyday was above the state in 2006. Reductions in the percent of adults who smoked everyday, saw declines earlier than the state, although by 2009, both Forsyth County and North Carolina had 14.4% of its population smoking everyday.



	2006	2007	2008	2009
Forsyth County	19.8	14.2	13.8	14.4
North Carolina	17	17.6	15.5	14.4

Source: NC State Center for Health Statistics.

The percent of adults who are former smokers increased for both Forsyth County and North Carolina. While Forsyth County saw a spike in the percent of adults who were former smokers in 2007, this percentage decreased in 2008 and again in 2009. North Carolina saw small but steady increases in the percent of adults who were former smokers.

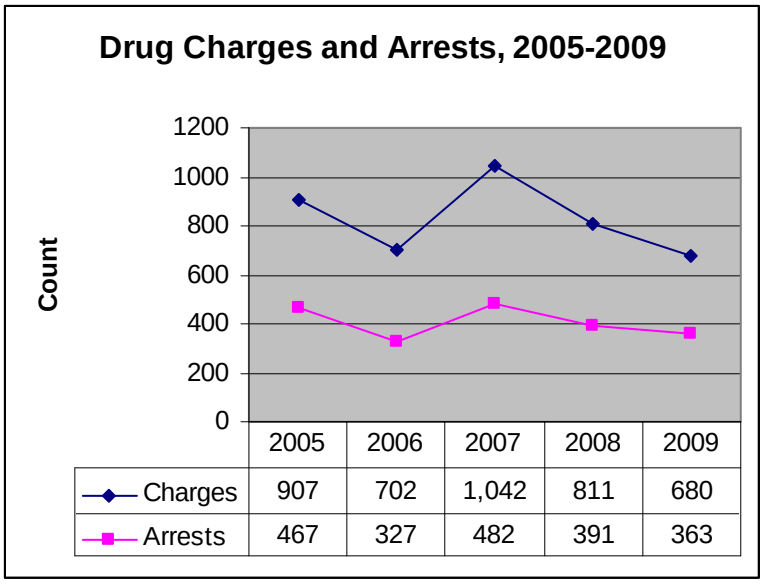


	2006	2007	2008	2009
Forsyth County	22.2	33.3	24	23.1
North Carolina	24.1	24.8	24.8	26.2

Source: NC State Center for Health Statistics.

Illicit Drugs

The number of drug charges and arrest can indicate drug use in the community. The overall number of drug charges in Forsyth County has fluctuated between 2005 and 2009. The peak number of both drug charges and arrests occurred in 2007, while 2008 and 2009 saw decreases in the number of charges and accounts, for the lowest during the period of time in 2009. The number of drug charges and drug arrests may be useful in estimating drug use in the county.



Source: Forsyth County Sheriff's Office. 2009Annual Report.

Drug Charges and Arrests from 2006 to 2009 varied based upon the type of drug. Between 2006 and 2009, the top drugs for drug charges were cocaine, marijuana, and other drug charges. Cocaine drug charges peaked in 2007 in the time period, and has seen declines in 2008 and 2009. Marijuana charges also peaked in 2007, with a decrease in 2008, and a slight increase in 2009. Other drug charges increased from 198 charges in 2006 to 416 in 2007, with decreases in both 2008 and 2009, for a total of 245 in 2009. In drug arrests by drugs, more individuals were arrested for marijuana than for cocaine or other drugs. Drug arrests, saw similar patterns in increases and decreases as drug charges, with peaks in 2007, with decreases for cocaine and other drugs, while marijuana saw a decrease in 2008 followed by an increase in 2009.

	Schedule 1 (Heroin)	Schedule II (Cocaine)	Schedule II (Vicodin)	Schedule IV (Valium)	Schedule V (Non-Prescription)	Schedule VI (Marijuana)	Other Drug Charges
2006	39	256	10	10	0	189	198
2007	44	281	6	14	0	281	416
2008	42	200	20	11	0	222	316
2009	36	137	10	27	1	224	245

Source: Forsyth County Sheriff's Office. 2009Annual Report. http://www.co.forsyth.nc.us/sheriff/Documents/annual_report09.pdf. (Accessed June 22, 2012).

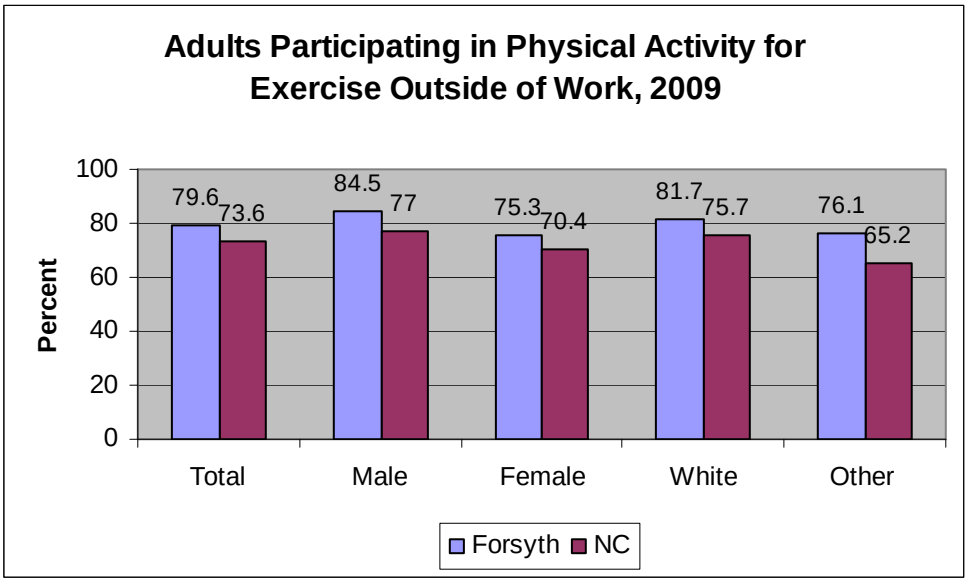
	Schedule 1 (Heroin)	Schedule II (Cocaine)	Schedule II (Vicodin)	Schedule IV (Valium)	Schedule V (Non-Prescription)	Schedule VI (Marijuana)	Other Drug Arrests
2006	12	91	3	8	0	142	71
2007	16	113	3	5	0	235	110
2008	17	80	8	6	0	152	128
2009	12	43	9	8	1	194	96

Source: Forsyth County Sheriff's Office. 2009Annual Report. http://www.co.forsyth.nc.us/sheriff/Documents/annual_report09.pdf.

Overweight/Obesity Rates

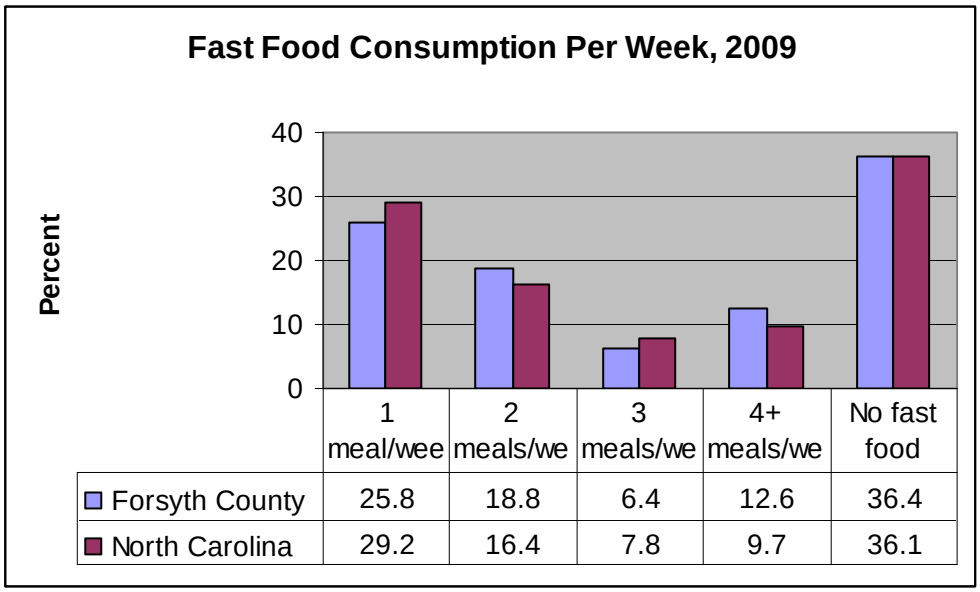
Physical Activity and Nutrition

The percent of adults who participated in physical activity outside of work in 2009 in Forsyth County was higher than the state for all groups.



Source: NC State Center for Health Statistics.

In Forsyth County 62.2% of residents consumed fast food one or none times in a week, this was lower than the state's percentage of 65.3%. Only 12.6% of residents ate fast food four or more times a week.

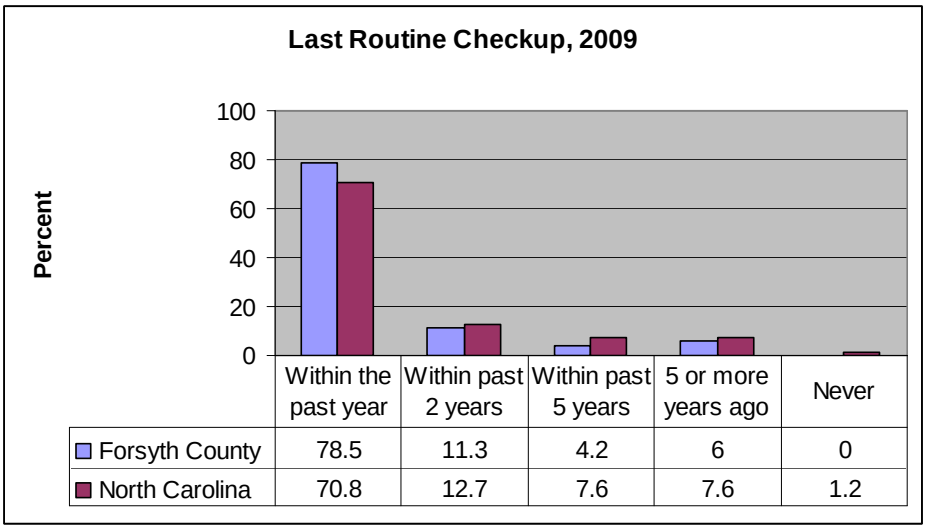


	1 meal/wee	2 meals/we	3 meals/we	4+ meals/we	No fast food
Forsyth County	25.8	18.8	6.4	12.6	36.4
North Carolina	29.2	16.4	7.8	9.7	36.1

Source: NC State Center for Health Statistics.

Health Screenings

Routine check-ups can be beneficial to health. A higher percentage of Forsyth County residents, 78.5%, stated they had a routine checkup in the past year than the state, 70.8%. Zero percent of Forsyth County residents reported that they never had a routine checkup, in comparison to 1.2% of North Carolina.

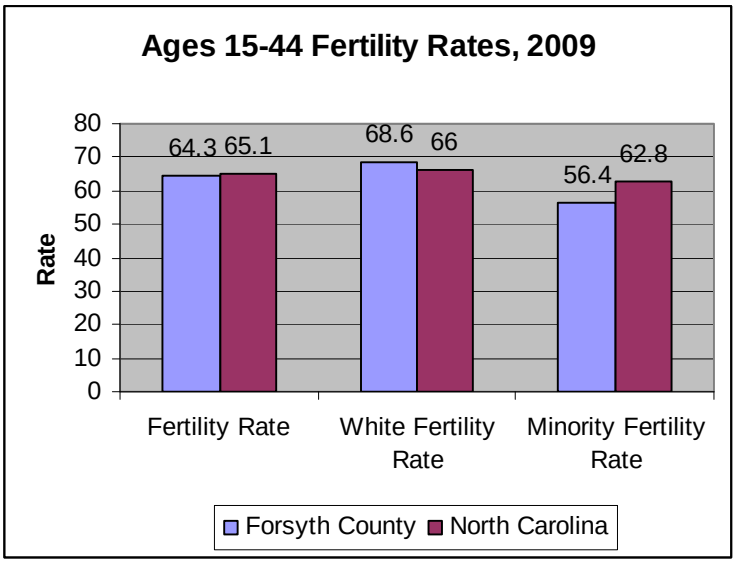


Source: NC State Center for Health Statistics.

Family Planning-Contraception, Pregnancy/Abortion/Fertility Rates

Fertility

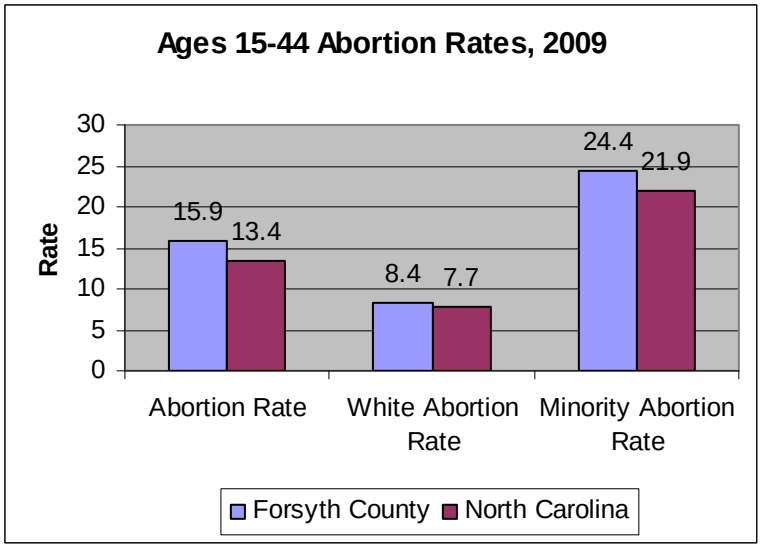
The overall fertility rate in Forsyth County was 64.3, similar to the state rate of 65.1. County fertility rates for whites and minority groups varies, with the white fertility rate at 68.6 in comparison to the minority fertility rate at 56.4. The white fertility rate was 2.6 more than the state's white fertility rates, while in comparison the minority fertility rate was 6.4 below the state's minority fertility rate.



Source: NC DHHS. Division of Public Health. NC Reported Pregnancies-2009.

Abortion

The abortion rate for Forsyth County was 15.9, 2.5 higher than the state abortion rate of 13.4. Both the white and minority abortion rates were higher than the state. The white abortion rate was 8.4. This was 0.7 higher than the states. The minority abortion rate was 24.4, 2.5 more than the state abortion rate for minorities.

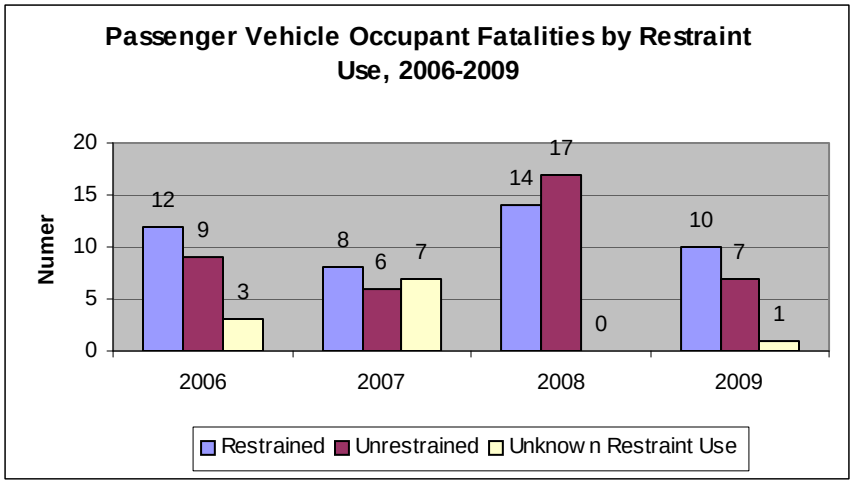


Source: NC DHHS. Division of Public Health. NC Reported Pregnancies-2009.

Motor Vehicle Injuries (Seat Belt Usage, Drinking and Driving)

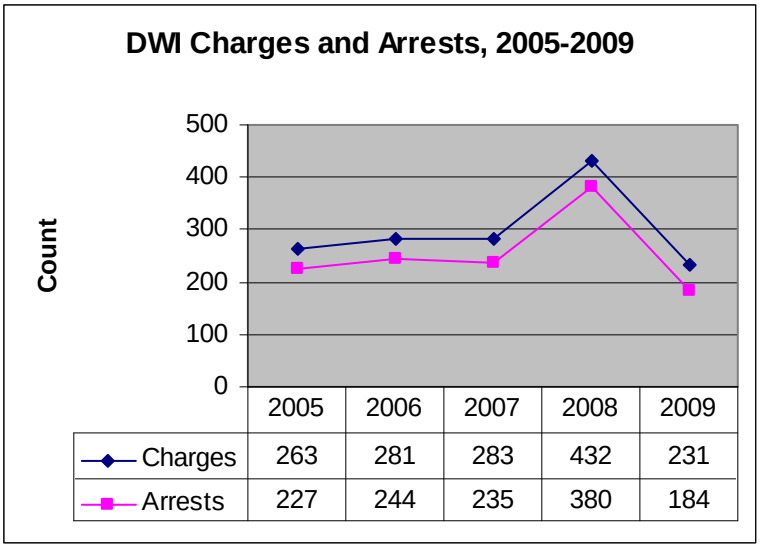
In between 2006 and 2009, motor vehicle fatalities have seen increases and decreases. The total fatality from all crashes, saw a peak of 38 in 2008, and then a low of 27 in 2009. In the majority of passenger vehicle occupant fatalities, most passengers were restrained in 2006, 2007, and 2009. In 2008, the majority of fatalities occurred in passengers who were unrestrained.

Source: US Department of Transportation. National Highway Traffic Safety Administration. Traffic Safety Facts. Forsyth County, NC 2006-2010.



Source: US Department of Transportation. National Highway Traffic Safety Administration. Traffic Safety Facts. Forsyth County, NC 2006-2010.

The number of Driving While Impaired (DWI) charges and arrests saw in increase in 2006 and remained constant in through 2007. Both DWI charges and arrests peaked in 2008 at 432 charges and 380 arrests then decreased to lows in 2009 at 231 charges and 184 arrests.



	2005	2006	2007	2008	2009
Charges	263	281	283	432	231
Arrests	227	244	235	380	184

Source: Forsyth County Sheriff's Office. 2009Annual Report.

Sources:

1. Northwest Piedmont Council of Governments. Demographic and Income Profile.
2. United Way Forsyth County. 2009 Annual Report.
3. Northwest Piedmont Council of Governments. Area Agency on Aging.
4. Forsyth County Sheriff's Office. 2009Annual Report.
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7. Forsyth County Cooperative Extension Service. Community Gardens.
8. Wake Forest University Translational Science Institute. Program in Community Engagement and Implementation. Report on Community Gardens and Farmers Markets in Forsyth County, 2010.
9. Access NC http://accessnc.commerce.state.nc.us/
10. Public Schools of North Carolina. Annual Reports. Dropout Reports
11. US Census Bureau. State and County Quick Facts
12. Annie E. Casey Foundation Kids County Data Center. Percentage of XIX Eligibles Receiving Dental Services.
13. Bureau of Labor Statistics.
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15. Feeding America. Food Insecurity and Food Cost in the United States
16. USDA. Economic Research Service. SNAP Data System
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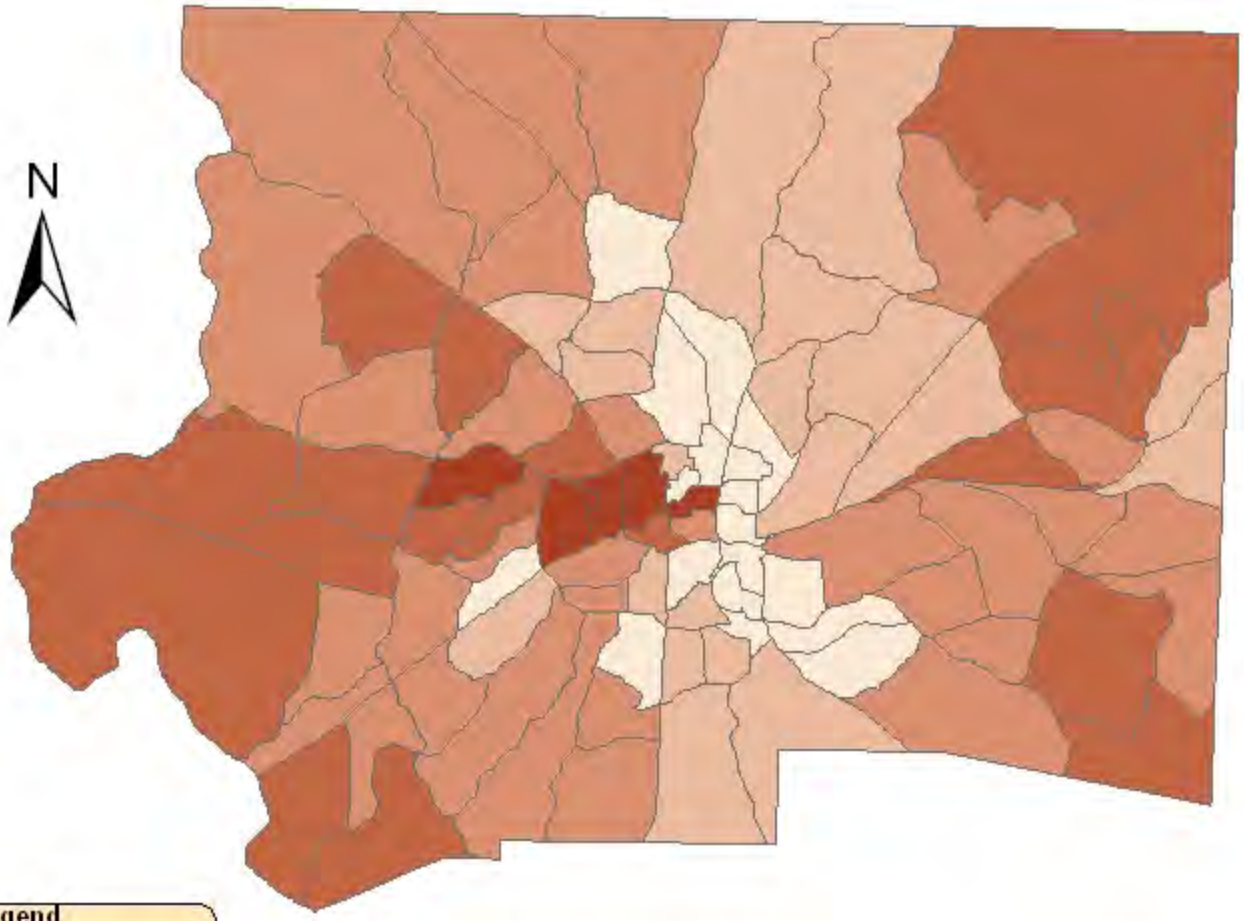
19. US Department of Transportation. National Highway Traffic Safety Administration. Traffic Safety Facts. Forsyth County, NC 2006-2010

Family Median Income
by Census Tracts, Forsyth County



Legend

2010 Census Data

Family Median Income

- 9,146.0 - 34,940.0
- 34,940.1 - 54,777.0
- 54,777.1 - 75,721.0
- 75,721.1 - 112,500.0
- 112,500.1 - 171,382.0

Forsyth County
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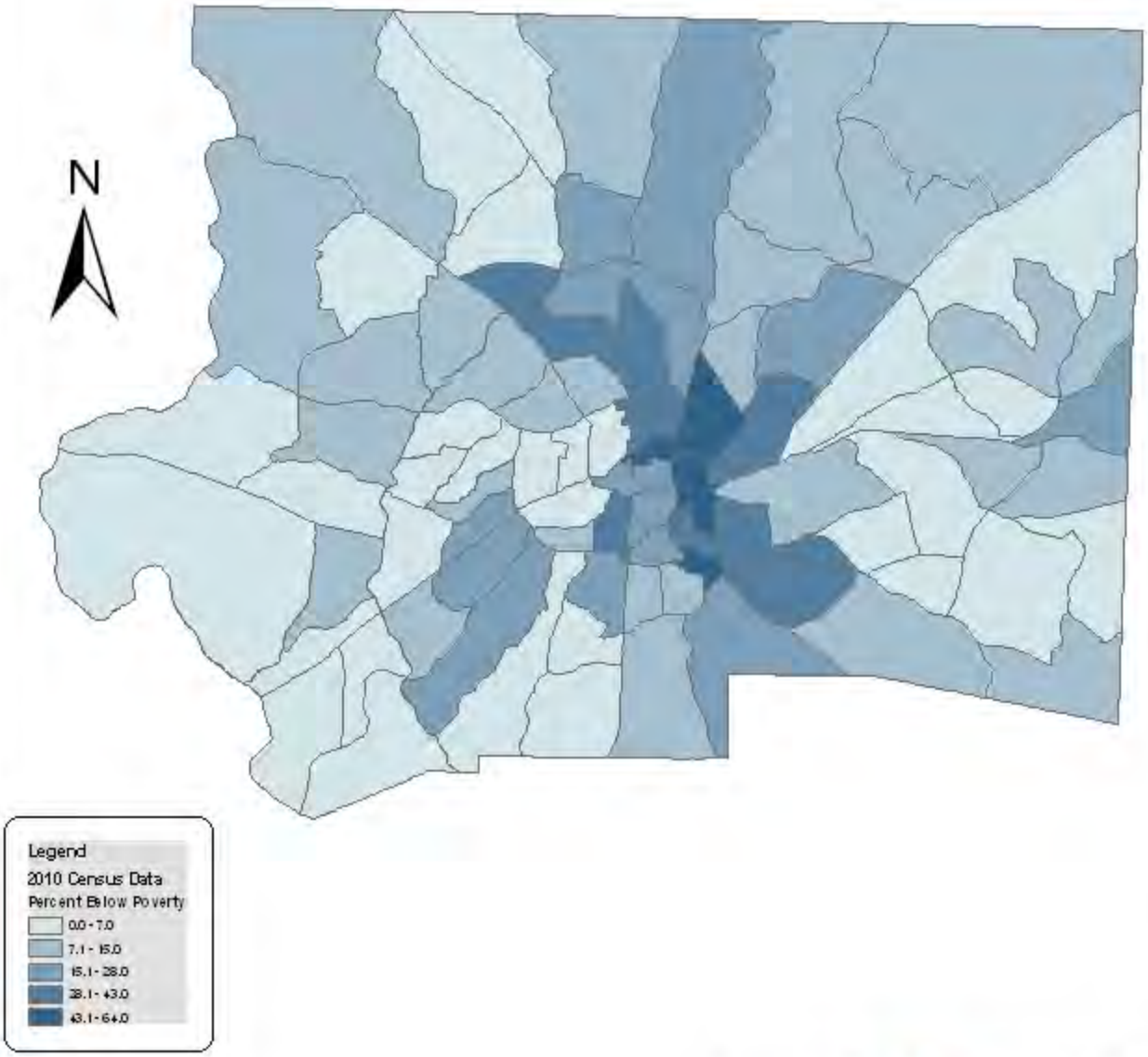
Percent Below Poverty Level: 2010 Census By Census Tracts, Forsyth County



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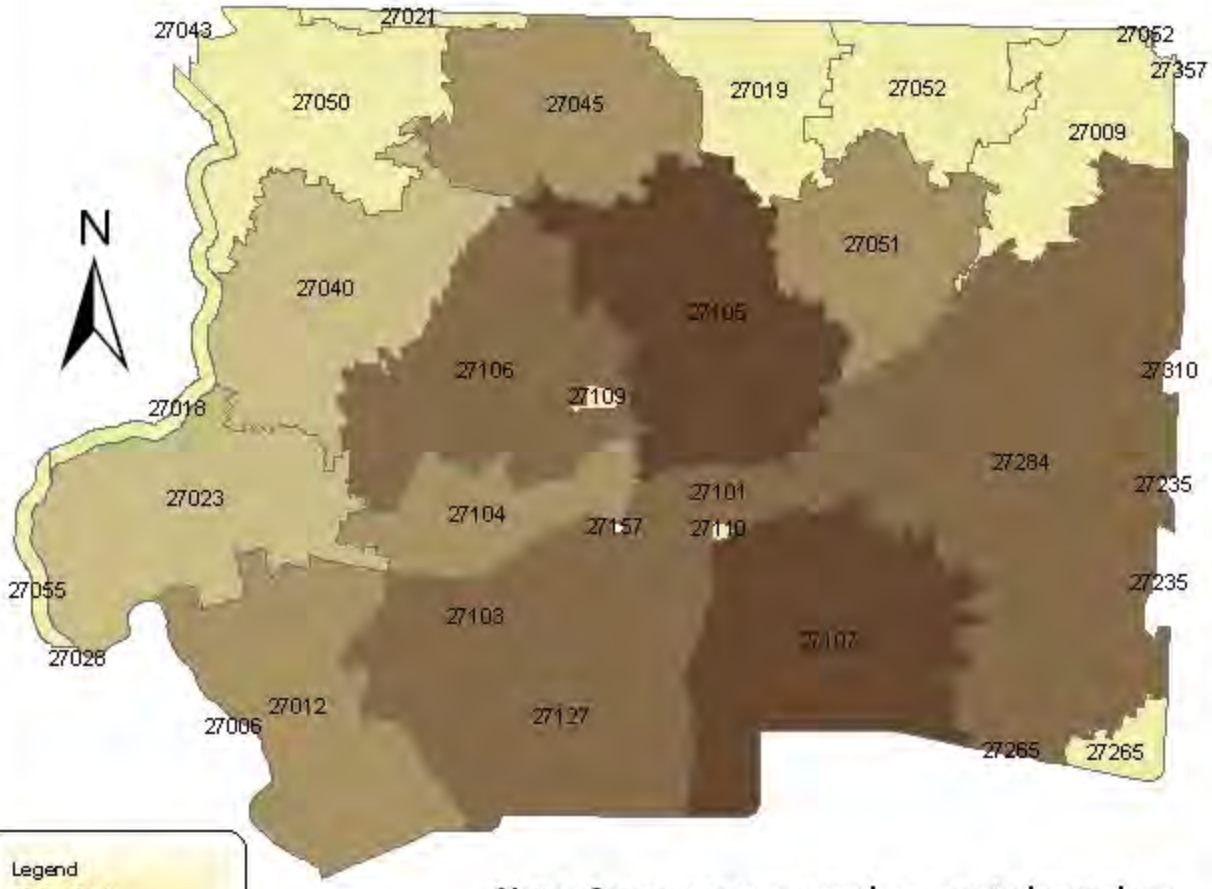
FY11 Forsyth County Medicaid Recipients by Census Zip Code.



Legend
FC Zip Code
FY11 Medicaid Recipients
3 - 282
283 - 547
548 - 1,854
1,855 - 4,341
4,342 - 8,955

Note: Some areas cross the county boundary and only a portion of those areas are displayed

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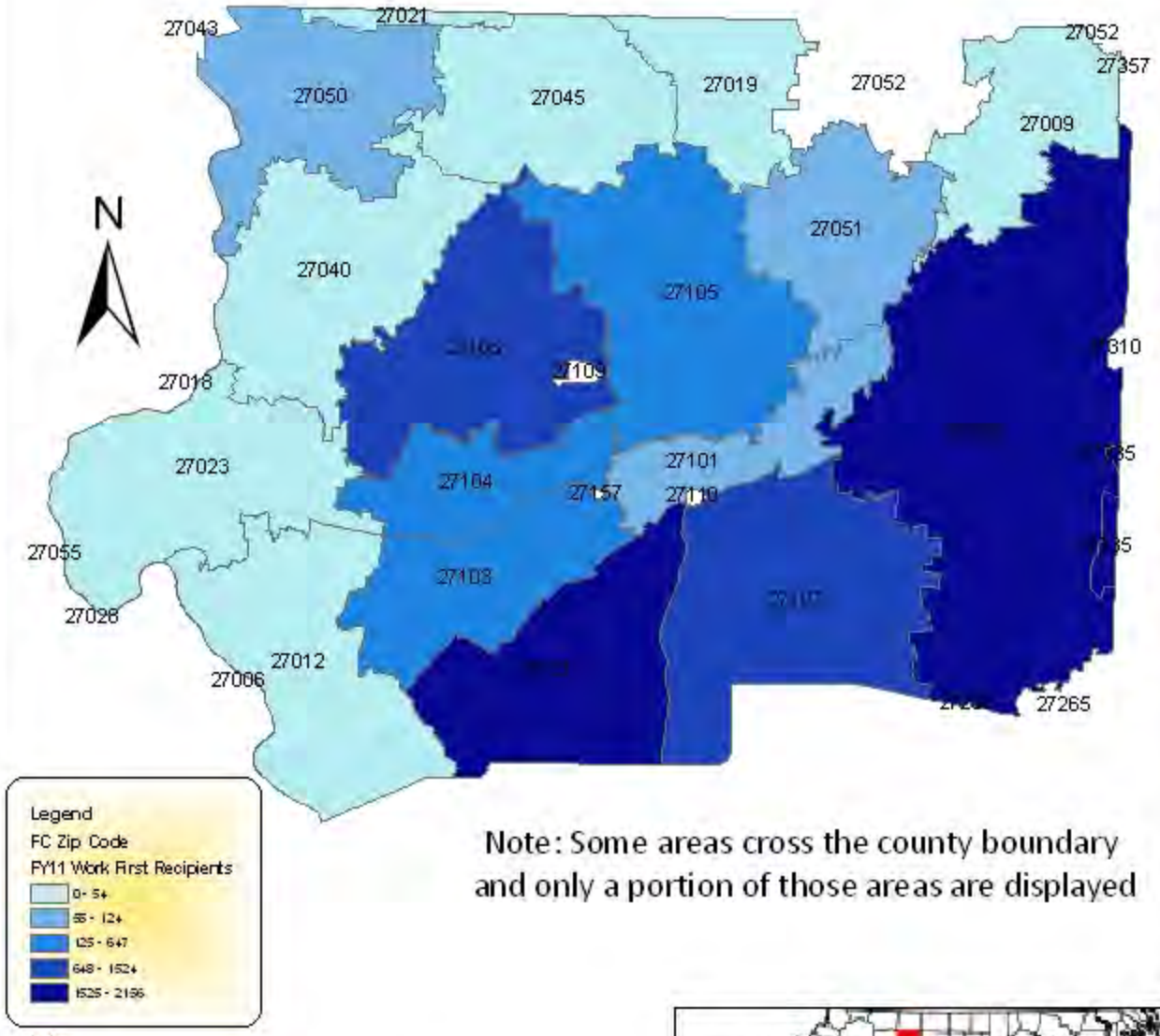
FY11 Forsyth County Work First Recipients by Census Zip Code



Note: Some areas cross the county boundary and only a portion of those areas are displayed

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