

# County Health Rankings & Roadmaps

A Healthier Nation, County by County

2013

## Forsyth County North Carolina

*\*With additional comments from the  
Forsyth County Department of Public Health*

## Introduction

Where we live matters to our health. The health of a community depends on many different factors, including the environment, education and jobs, access to and quality of healthcare, and individual behaviors. We can improve a community's health by implementing effective policies and programs. For example, people who live in communities with smoke-free laws are less likely to smoke or to be exposed to second-hand smoke, which reduces lung cancer risk. In addition, people who live in communities with safe and accessible park and recreation space are more likely to exercise, which reduces heart disease risk.

However, health varies greatly across communities, with some places being much healthier than others. And, until now, there has been no standard method to illustrate what we know about what makes people sick or healthy or a central resource to identify what we can do to create healthier places to live, learn, work and play.

We know that much of what influences our health happens outside of the doctor's office – in our schools, workplaces and neighborhoods. The *County Health Rankings & Roadmaps* program provides information on the overall health of your community and provides the tools necessary to create community-based, evidence-informed solutions. Ranking the health of nearly every county across the nation, the County Health Rankings illustrate **what we know** when it comes to what is making communities sick or healthy. The *County Health Roadmaps* show **what we can do** to create healthier places to live, learn, work and play. The Robert Wood Johnson Foundation collaborates with the University of Wisconsin Population Health Institute to bring this groundbreaking program to counties and states across the nation.

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### Guide to Our Web Site

To compile the *Rankings*, we selected measures that reflect important aspects of population health that can be improved and are available at the county level across the nation. Visit [www.countyhealthrankings.org](http://www.countyhealthrankings.org) to learn more. To get started and see data, enter your county or state name in the search box. Click on the name of a county or measure to see more details. You can: Compare Counties; Download data for your state; Print one or more county

[www.countyhealthrankings.org/north-carolina](http://www.countyhealthrankings.org/north-carolina)

The *County Health Rankings & Roadmaps* program includes the *County Health Rankings* project, launched in 2010, and the newer Roadmaps project that mobilizes local communities, national partners and leaders across all sectors to improve health. The program is based on this model of population health improvement:



In this model, health outcomes are measures that describe the current health status of a county. These health outcomes are influenced by a set of health factors. Counties can improve health outcomes by addressing all health factors with effective, evidence-informed policies and programs.

Everyone has a stake in community health. We all need to work together to find solutions. The *County Health Rankings & Roadmaps* serve as both a call to action and a needed tool in this effort.

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snapshots; or Share information with others via Facebook, Twitter, or Google+. To understand our methods, click on Learn about the Data and Methods. You can also take advantage of the Using the *Rankings* Data guide to help you explore the data and figure out more about what is driving your community's health. To learn about what you can do to improve health in your community, visit the *Roadmaps to Health* Action Center. Finally, you can learn what others are doing by reading Communities Stories and visiting the Project Showcase.

## County Health Roadmaps

The *Rankings* illustrate **what we know** when it comes to making people sick or healthy. The *County Health Rankings* confirm the critical role that factors such as education, jobs, income and the environment play in how healthy people are and how long we live.

The *County Health Roadmaps* mobilizes local communities, national partners and leaders across all sectors to improve health. The *County Health Roadmaps* show **what we can do** to create healthier places to live, learn, work and play. The Robert Wood Johnson Foundation collaborates with the University of Wisconsin Population Health Institute to bring this groundbreaking project to cities, counties and states across the nation.

The *Roadmaps* project includes grants to local coalitions and partnerships among policymakers, business, education, public health, health care, and community organizations; grants to national organizations working to improve health; recognition of communities whose promising efforts have led to better health; and customized technical assistance on strategies to improve health.

### Roadmaps to Health Community Grants

The *Roadmaps to Health* Community Grants provide funding for 2 years to state and local efforts among policymakers, business, education, healthcare, public health and community organizations working to create positive policy or systems changes that address the social and economic factors that influence the health of people in their community.

### Roadmaps to Health Partner Grants

RWJF is awarding *Roadmaps to Health* Partner Grants to national organizations that are experienced at engaging local partners and leaders and are able to deliver high-quality training and technical assistance, and committed to making communities healthier places to live, learn, work and play. Partner grantees increase awareness about the *County Health Rankings & Roadmaps* to their members, affiliates and allies. As of February 2013, RWJF has awarded partner grants to United Way Worldwide, National Business Coalition on Health, and National Association of Counties.

### RWJF Roadmaps to Health Prize

In February 2013, RWJF awarded the first *RWJF Roadmaps to Health* Prizes of \$25,000 to six communities that are working to become healthier places to live, learn, work and play. The *RWJF Roadmaps to Health* Prize is intended not only to honor successful efforts, but also to inspire and stimulate similar activities in other U.S. communities.



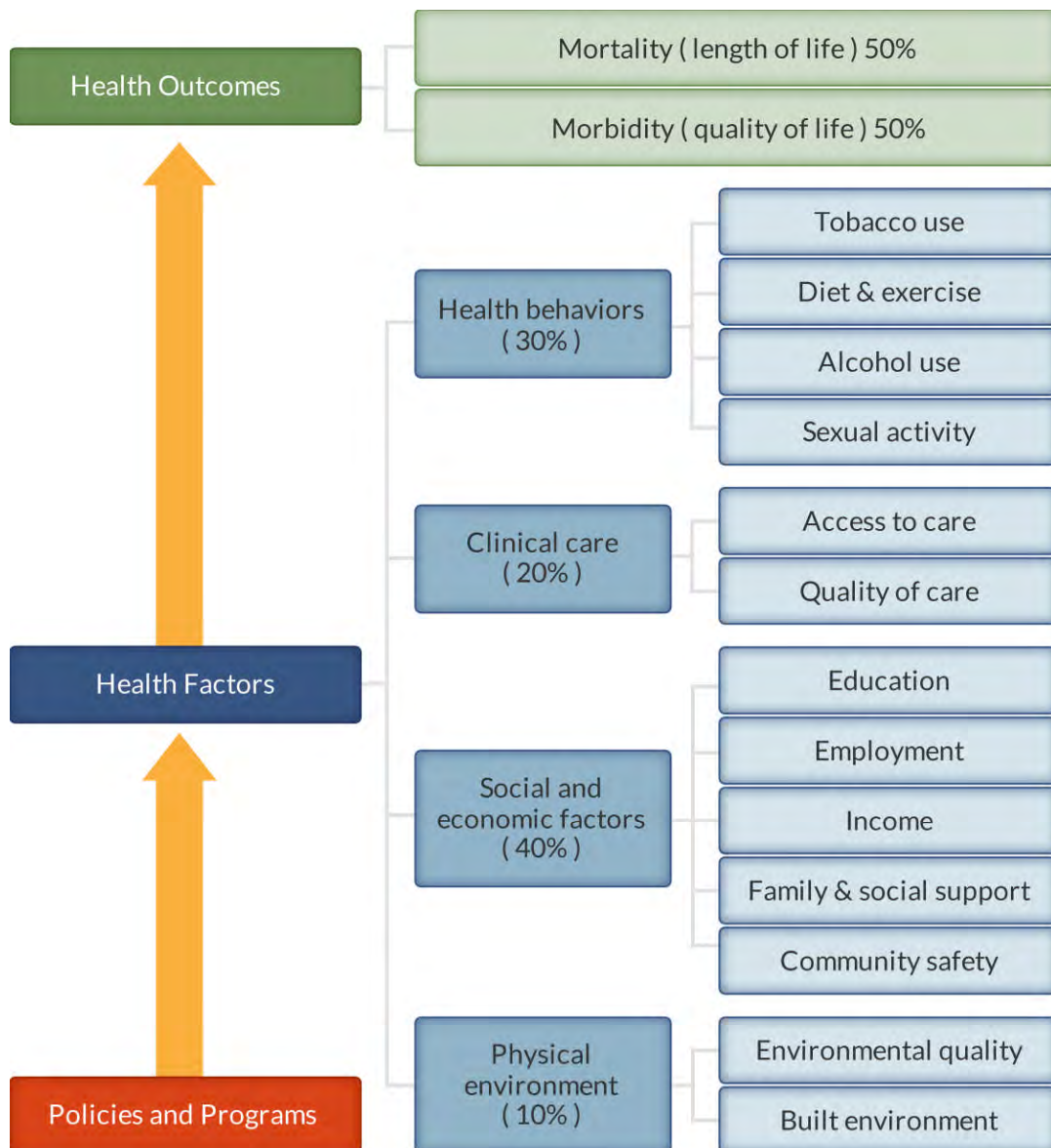
### Roadmaps to Health Action Center

The *Roadmaps to Health* Action Center, based at UWPHI, provides tools and resources to help groups working to make their communities healthier places. The Action Center website provides guidance on developing strategies and advocacy efforts to advance pro-health policies, offer opportunities for ongoing learning, and a searchable database of evidence-informed policies and programs focused on health improvement: *What Works for Health*. Action Center staff provide customized consultation via email and telephone to those seeking more information about how to improve health. Coaching, including possible on-site visits, is also available for communities who have demonstrated the willingness and capacity to address factors that we know influence how healthy a person is, such as education, income and family connectedness.

## County Health Rankings

The 2013 *County Health Rankings* report ranks North Carolina counties according to their summary measures of **health outcomes** and **health factors**. Counties also receive a rank for mortality, morbidity, health behaviors, clinical care, social and economic factors, and the physical environment. The figure below depicts the structure of the *Rankings* model; those having high ranks (e.g., 1 or 2) are estimated to be the “healthiest.”

Our summary **health outcomes** rankings are based on an equal weighting of mortality and morbidity measures. The summary **health factors** rankings are based on weighted scores of four types of factors: behavioral, clinical, social and economic, and environmental. The weights for the factors (shown in parentheses in the figure) are based upon a review of the literature and expert input, but represent just one way of combining these factors.



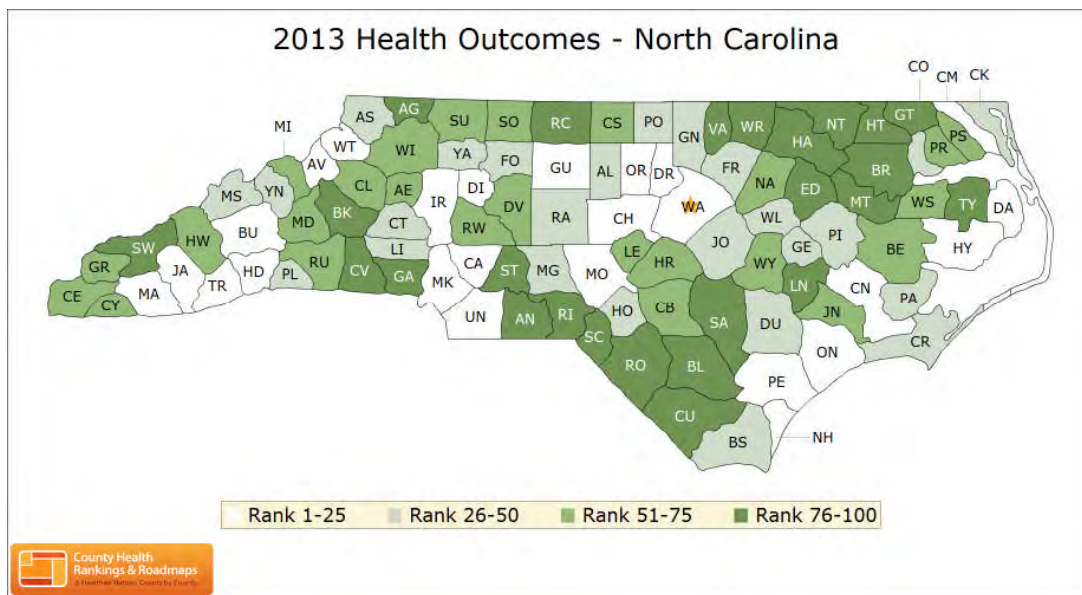
County Health Rankings model ©2012 UWPHI

The maps on this page and the next display North Carolina’s counties divided into groups by health rank. Maps help locate the healthiest and least healthy counties in the state. The lighter colors indicate better performance in the respective summary rankings. The green map shows the distribution of summary health

outcomes. The blue displays the distribution of the summary rank for health factors.

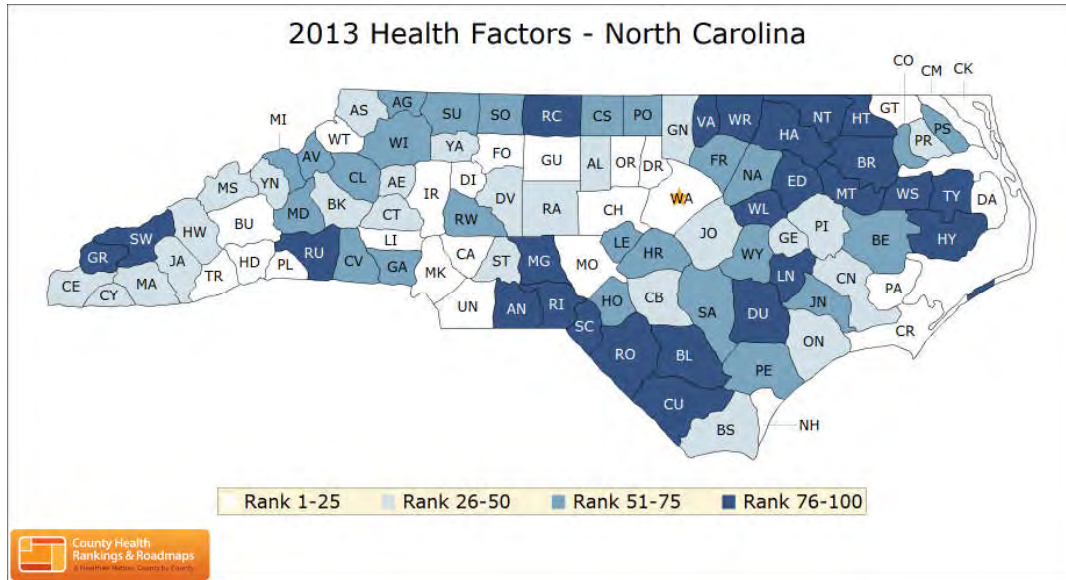
**Forsyth County** (abbreviated as FO on the state maps below), **ranked 28<sup>th</sup>** among the 100 in North Carolina counties with regard to health outcomes and ranked 24<sup>th</sup> with regard to health factors.

**HEALTH OUTCOMES**



County	Rank	County	Rank	County	Rank	County	Rank
Alamance	31	Cumberland	74	Johnston	30	Randolph	36
Alexander	58	Currituck	29	Jones	62	Richmond	89
Alleghany	79	Dare	7	Lee	51	Robeson	97
Anson	86	Davidson	56	Lenoir	94	Rockingham	78
Ashe	42	Davie	8	Lincoln	32	Rowan	68
Avery	22	Duplin	44	Macon	16	Rutherford	69
Beaufort	73	Durham	17	Madison	45	Sampson	80
Bertie	92	Edgecombe	88	Martin	91	Scotland	93
Bladen	98	<b>Forsyth</b>	<b>28</b>	McDowell	66	Stanly	82
Brunswick	37	Franklin	35	Mecklenburg	6	Stokes	65
Buncombe	19	Gaston	81	Mitchell	59	Surry	61
Burke	76	Gates	84	Montgomery	40	Swain	96
Cabarrus	10	Graham	63	Moore	11	Transylvania	14
Caldwell	70	Granville	46	Nash	60	Tyrrell	87
Camden	4	Greene	38	New Hanover	9	Union	5
Carteret	43	Guilford	13	Northampton	90	Vance	95
Caswell	57	Halifax	99	Onslow	25	Wake	1
Catawba	47	Harnett	53	Orange	2	Warren	85
Chatham	15	Haywood	55	Pamlico	34	Washington	54
Cherokee	72	Henderson	12	Pasquotank	52	Watauga	3
Chowan	41	Hertford	77	Pender	20	Wayne	64
Clay	67	Hoke	39	Perquimans	71	Wilkes	75
Cleveland	83	Hyde	18	Person	33	Wilson	49
Columbus	100	Iredell	21	Pitt	48	Yadkin	50
Craven	24	Jackson	23	Polk	26	Yancey	27

**HEALTH FACTORS**

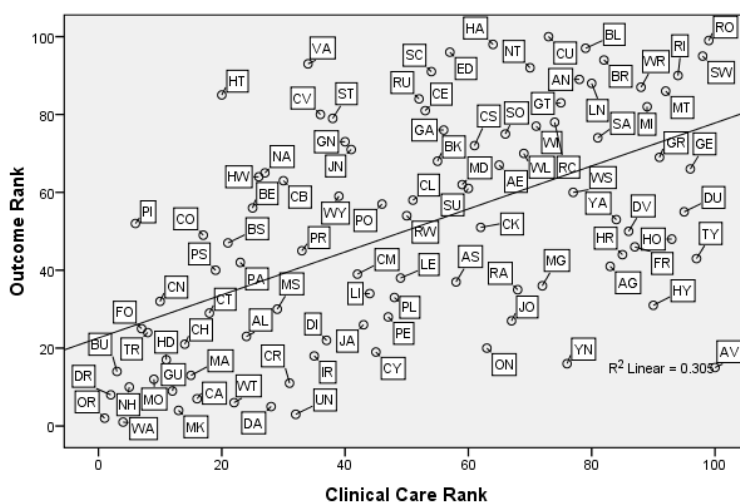


County	Rank	County	Rank	County	Rank	County	Rank
Alamance	45	Cumberland	50	Johnston	38	Randolph	39
Alexander	44	Currituck	14	Jones	65	Richmond	97
Alleghany	54	Dare	17	Lee	67	Robeson	100
Anson	89	Davidson	49	Lenoir	77	Rockingham	85
Ashe	47	Davie	23	Lincoln	25	Rowan	63
Avery	52	Duplin	76	Macon	26	Rutherford	83
Beaufort	69	Durham	15	Madison	27	Sampson	71
Bertie	90	Edgecombe	98	Martin	80	Scotland	99
Bladen	93	<b>Forsyth</b>	<b>24</b>	McDowell	70	Stanly	37
Brunswick	32	Franklin	58	Mecklenburg	12	Stokes	68
Buncombe	8	Gaston	61	Mitchell	53	Surry	51
Burke	48	Gates	21	Montgomery	81	Swain	91
Cabarrus	13	Graham	84	Moore	6	Transylvania	16
Caldwell	59	Granville	34	Nash	72	Tyrrell	86
Camden	5	Greene	46	New Hanover	9	Union	4
Carteret	22	Guilford	18	Northampton	94	Vance	96
Caswell	64	Halifax	95	Onslow	31	Wake	2
Catawba	28	Harnett	75	Orange	1	Warren	88
Chatham	10	Haywood	35	Pamlico	20	Washington	87
Cherokee	43	Henderson	7	Pasquotank	57	Watauga	3
Chowan	62	Hertford	79	Pender	56	Wayne	55
Clay	30	Hoke	74	Perquimans	33	Wilkes	73
Cleveland	66	Hyde	82	Person	60	Wilson	78
<b>Columbus</b>	92	<b>Iredell</b>	19	<b>Pitt</b>	40	<b>Yadkin</b>	41
Craven	29	Jackson	42	Polk	11	Yancey	36

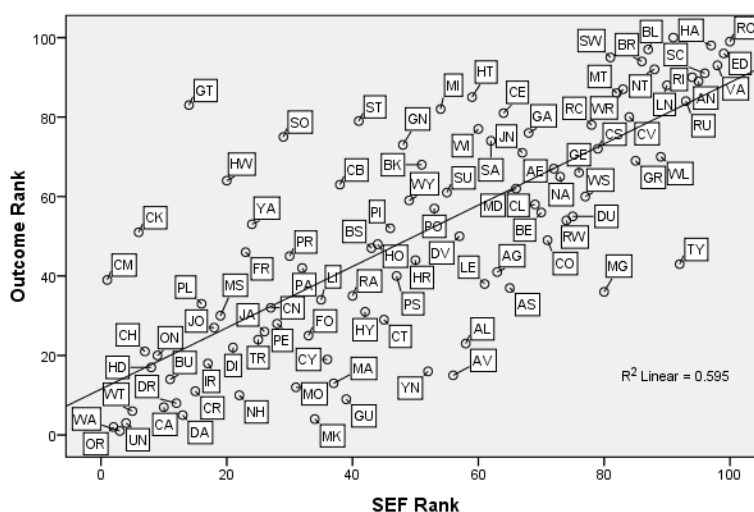
## Associations between Rankings

Below are two scatter-plots of the 100 North Carolina counties examining the relationship between health outcome ranks and social & economic factors (SEF) ranks and health outcome ranks and clinical care ranks. Each county is represented by a two letter code. There was a strong correlation between the outcomes and SEF ranks ( $R^2$ -squared value=0.595). As the value of the SEF rank increased (meaning as the rank became worse), the value of the outcome rank increased also (meaning that the outcome rank became worse). There was a slight correlation between the outcomes and clinical care ranks ( $R^2$ -squared value=0.305); which indicates that the presence of quality care services in the community does not necessarily result in better health for the whole community. However, the strongest predictors of better or poorer health status are better or poorer socioeconomic conditions respectively. Socioeconomic factors included in this study were education, unemployment rate, children in poverty, inadequate social support, homicide rate etc.

NC County Health Outcomes vs Clinical Care Rankings



NC County Health Outcomes vs Social & Economic Factors Rankings



## Snapshot 2013: Forsyth County Health Rankings

Counties receive two summary ranks: Health Outcomes and Health Factors. Each of these ranks represents a weighted summary of a number of measures.

**Health outcomes** represent how healthy a county is. The summary health outcomes ranking is based on measures of mortality and morbidity. The **mortality rank**, representing length of life, is based on a measure of premature death: the years of potential life lost prior to age 75. The **morbidity rank** is based on measures that represent health-related quality of life and birth outcomes. We combine four morbidity measures: self-reported fair or poor health, poor physical health days, poor mental health days, and the percent of births with low birthweight.

**Health factors** are what influences the health of the county. The summary health factors ranking is based on four factors: health behaviors, clinical care, social and economic, and physical environment factors. In turn,

each of these factors is based on several measures. **Health behaviors** include measures of smoking, diet and exercise, alcohol use, and sexual activity. **Clinical care** includes measures of access to care and quality of care. **Social and economic factors** include measures of education, employment, income, family and social support, and community safety. The **physical environment** includes measures of environmental quality and the built environment.

Below is a summary of findings comparing Forsyth County and the state of North Carolina to calculated target value for each factor. Sixteen (16) measures were better than state; Nine (9) measures were significantly worse than state (*Sexually transmitted Infections; low birth weight; child in poverty; inadequate social support; children in single-parent household; violent crime rate; access to recreational facilities; limited access to healthy foods; fast food restaurants*)

For more details on these measures, please visit <http://www.countyhealthrankings.org>

	Forsyth County	Error Margin	North Carolina	National Benchmark*	FC Rank (of100)
<b>Health Outcomes</b>					<b>28</b>
<b>Mortality</b>					<b>28</b>
<b>Premature Deaths</b> Years of potential life lost before age 75 per 100,000 population.(age-adjusted)	7,332	7,009-7,655	7,480	5,317	
<b>Morbidity</b>					<b>27</b>
<b>Poor or Fair Health</b> Percentage of adults reporting poor or fair health.(age-adjusted)	15%	13-17%	18%	10%	
<b>Poor Physical Health Days</b> Average number of physically unhealthy days reported in last 30 days.(age-adjusted)	3.0	2.7-3.3	3.6	2.6	
<b>Poor Mental Health Days</b> Average number of mentally unhealthy days reported in last 30 days.(age-adjusted)	3.1	2.7-3.5	3.4	2.3	
<b>Low Birthweight</b> Percentage of live births with of infants weighing < 2500g	10.3%	10.0-10.6%	9.1%	6.0%	
<b>Health Factors</b>					<b>24</b>
<b>Health Behaviors</b>					<b>15</b>
<b>Adult Smoking</b> Percentage of adults that report smoking at least 100 cigarettes and that they currently smoke	20%	18-22%	21%	13%	
<b>Adult Obesity</b> Percentage of adults that report a BMI > or = 30	26%	23-28%	29%	25%	
<b>Physical Inactivity</b> Percent of adults 20 and over reporting no leisure time physical activity	21%	19-24%	25%	21%	
<b>Excessive Drinking</b> Percentage of adults that report excessive drinking	13%	11-15%	13%	7%	
<b>Motor Vehicle Death Crash Rate</b> Motor vehicle crash deaths per 100,000 pop.	11	10-12	17	10	
<b>Sexually Transmitted Infection</b> Chlamydia rate per 100,000 pop.	771		441	92	



	<b>Forsyth County</b>	<b>Error Margin</b>	<b>North Carolina</b>	<b>National Benchmark*</b>	<b>FC Rank (of100)</b>
<b>Teen Birth Rate</b> Teen birthrate per 1,000 pop. among females ages 15-19	45	44-47	46	21	
<b>Clinical Care</b>					<b>11</b>
<b>Uninsured</b> % of pop. under age 65 without health insurance	19%	17-20%	19%	11%	
<b>Primary Care Provider</b> Ratio on population to Primary care providers.	1,021:1		1,480:1	1,067:1	
<b>Dentists</b> Ratio of Population to dentists	1,788:1		2,171:1	1,516:1	
<b>Preventable Hospital Stays</b> Hospitalization rate for ambulatory- care sensitive conditions per 1,000 Medicare enrollees	60	57-64	63	47	
<b>Diabetic Screening</b> % of diabetic Medicare enrollees that receive HbA1c screenings	88%	85-92%	88%	90%	
<b>Mammography screening</b> Percent of female Medicare enrollees having at least 1 mammogram in 2yrs (age 67-69)	68%	64-72%	69%	73%	
<b>Social &amp; Economic Factors</b>					<b>44</b>
<b>High School Graduation</b> Percent of 9th grade cohort that graduates in 4 years	81%		80%		
<b>Some College</b> Percent of adults age 25-44 with some post secondary education	63%	61-65%	62%	70%	
<b>Unemployment</b> Percent of pop. age 16+ unemployed but seeking work	10.0%		10.5%	5.0%	
<b>Children in Poverty</b> Percent of children under age 18 in poverty	28%	24-32%	25%	14%	
<b>Inadequate Social Support</b> % of adults without social/emotional support	18%	16-20%	21%	14%	
<b>Children in Single-Parent Households</b> % of children that live in household headed by single-parent	37%	35-40%	35%	20%	
<b>Violent Crime Rate</b> Violent crime rate per 100,000 pop.	625		441	66	
<b>Physical Environment</b>					<b>44</b>
<b>Daily Fine Particulate Matter</b> The average daily measure of fine particulate matter in micrograms per cubic meter(PM2.5) in a county	12.8	12.6-12.9	12.9	8.8	
<b>Drinking Water Safety</b> Percent of population exposed to water exceeding a violation limit during the past year	0%		3%	0%	
<b>Access to Recreational Facilities</b> Rate of recreational facilities per 100,000 pop.	14		11	16	
<b>Limited access to Healthy Foods</b> Percent of population who are low-income and do not live close to a grocery stores	12%		7%	1%	
<b>Fast Food Restaurants</b> Percent of all restaurants that are fast-food establishments	47%		49%	27%	

Note: \* 90<sup>th</sup> percentile, i.e., only 10% are better; Blank values reflect unreliable or missing data

Darker shade indicates worse than state values  
Lighter shade indicates better than state values.

## Forsyth County Rankings among Top Five (5) & Ten (10) NC Counties

NC County Rankings: Health Outcomes			
Top 5 Largest Counties		Top 10 Largest Counties	
Wake	1 <sup>st</sup>	Wake	1 <sup>st</sup>
		Union	5 <sup>th</sup>
Mecklenburg	6 <sup>th</sup>	Mecklenburg	6 <sup>th</sup>
		New Hanover	9 <sup>th</sup>
Guilford	13 <sup>th</sup>	Guilford	13 <sup>th</sup>
		Durham	17 <sup>th</sup>
<b>Forsyth</b>	<b>28<sup>th</sup></b>	Buncombe	19 <sup>th</sup>
		<b>Forsyth</b>	<b>28<sup>th</sup></b>
Cumberland	74 <sup>th</sup>	Cumberland	74 <sup>th</sup>
		Gaston	81 <sup>st</sup>

NC County Rankings: Health Factors			
Top 5 Largest Counties		Top 10 Largest Counties	
Wake	2 <sup>nd</sup>	Wake	2 <sup>nd</sup>
		Union	4 <sup>th</sup>
Mecklenburg	12 <sup>th</sup>	Buncombe	8 <sup>th</sup>
		New Hanover	9 <sup>th</sup>
Guilford	18 <sup>th</sup>	Mecklenburg	12 <sup>th</sup>
		Durham	15 <sup>th</sup>
<b>Forsyth</b>	<b>24<sup>th</sup></b>	Guilford	18 <sup>th</sup>
		<b>Forsyth</b>	<b>24<sup>th</sup></b>
Cumberland	50 <sup>th</sup>	Cumberland	50 <sup>th</sup>
		Gaston	61 <sup>st</sup>

NC County Rankings: Health Behaviors			
Top 5 Largest Counties		Top 10 Largest Counties	
Wake	2 <sup>nd</sup>	Wake	2 <sup>nd</sup>
		Mecklenburg	3 <sup>rd</sup>
Mecklenburg	3 <sup>rd</sup>	Buncombe	7 <sup>th</sup>
		New Hanover	8 <sup>th</sup>
Guilford	13 <sup>th</sup>	Union	9 <sup>th</sup>
		Durham	11 <sup>th</sup>
<b>Forsyth</b>	<b>15<sup>th</sup></b>	Guilford	13 <sup>th</sup>
		<b>Forsyth</b>	<b>15<sup>th</sup></b>
Cumberland	74 <sup>th</sup>	Gaston	53 <sup>rd</sup>
		Cumberland	74 <sup>th</sup>

NC County Rankings: Clinical Care			
Top 5 Largest Counties		Top 10 Largest Counties	
Wake	3 <sup>rd</sup>	New Hanover	2 <sup>nd</sup>
		Wake	3 <sup>rd</sup>
Mecklenburg	8 <sup>th</sup>	Buncombe	6 <sup>th</sup>
		Durham	7 <sup>th</sup>
<b>Forsyth</b>	<b>11<sup>th</sup></b>	Mecklenburg	8 <sup>th</sup>
		<b>Forsyth</b>	<b>11<sup>th</sup></b>
Guilford	12 <sup>th</sup>	Guilford	12 <sup>th</sup>
		Cumberland	24 <sup>th</sup>
Cumberland	24 <sup>th</sup>	Union	40 <sup>th</sup>
		Gaston	62 <sup>nd</sup>

NC County Rankings: Social and Economic Factors			
Top 5 Largest Counties		Top 10 Largest Counties	
Wake	4 <sup>th</sup>	Union	3 <sup>rd</sup>
		Wake	4 <sup>th</sup>
Guilford	29 <sup>th</sup>	Buncombe	15 <sup>th</sup>
		New Hanover	20 <sup>th</sup>
Mecklenburg	36 <sup>th</sup>	Guilford	29 <sup>th</sup>
		Durham	31 <sup>st</sup>
Cumberland	43 <sup>rd</sup>	Mecklenburg	36 <sup>th</sup>
		Cumberland	43 <sup>rd</sup>
<b>Forsyth</b>	<b>44<sup>th</sup></b>	<b>Forsyth</b>	<b>44<sup>th</sup></b>
		Gaston	57 <sup>th</sup>

NC County Rankings: Physical Environment			
Top 5 Largest Counties		Top 10 Largest Counties	
Wake	10 <sup>th</sup>	Wake	10 <sup>th</sup>
		Durham	15 <sup>th</sup>
Guilford	23 <sup>rd</sup>	Guilford	23 <sup>rd</sup>
		Mecklenburg	27 <sup>th</sup>
Mecklenburg	27 <sup>th</sup>	<b>Forsyth</b>	<b>44<sup>th</sup></b>
		New Hanover	48 <sup>th</sup>
<b>Forsyth</b>	<b>44<sup>th</sup></b>	Union	68 <sup>th</sup>
		Buncombe	74 <sup>th</sup>
Cumberland	91 <sup>st</sup>	Cumberland	91 <sup>st</sup>
		Gaston	93 <sup>rd</sup>

**Note:** Counties without Military bases: Durham, Forsyth, Guilford, Mecklenburg & Wake

## Summary Health Outcomes & Factors Rankings: North Carolina

The table below shows the health outcomes and health factor ranks for all 100 counties in North Carolina and Forsyth County is shown in **red**.

Each of these ranks represents a weighted summary of a number of measures. Health outcomes represent how healthy a county is while health factors are what influences the health of the county.

Rank	Health Outcomes	Rank	Health Factors	Rank	Health Outcomes	Rank	Health Factors
1	Wake	1	Orange	51	Lee	51	Surry
2	Orange	2	Wake	52	Pasquotank	52	Avery
3	Watauga	3	Watauga	53	Harnett	53	Mitchell
4	Camden	4	Union	54	Washington	54	Alleghany
5	Union	5	Camden	55	Haywood	55	Wayne
6	Mecklenburg	6	Moore	56	Davidson	56	Pender
7	Dare	7	Henderson	57	Caswell	57	Pasquotank
8	Davie	8	Buncombe	58	Alexander	58	Franklin
9	New Hanover	9	New Hanover	59	Mitchell	59	Caldwell
10	Cabarrus	10	Chatham	60	Nash	60	Person
11	Moore	11	Polk	61	Surry	61	Gaston
12	Henderson	12	Mecklenburg	62	Jones	62	Chowan
13	Guilford	13	Cabarrus	63	Graham	63	Rowan
14	Transylvania	14	Currituck	64	Wayne	64	Caswell
15	Chatham	15	Durham	65	Stokes	65	Jones
16	Macon	16	Transylvania	66	McDowell	66	Cleveland
17	Durham	17	Dare	67	Clay	67	Lee
18	Hyde	18	Guilford	68	Rowan	68	Stokes
19	Buncombe	19	Iredell	69	Rutherford	69	Beaufort
20	Pender	20	Pamlico	70	Caldwell	70	McDowell
21	Iredell	21	Gates	71	Perquimans	71	Sampson
22	Avery	22	Carteret	72	Cherokee	72	Nash
23	Jackson	23	Davie	73	Beaufort	73	Wilkes
24	Craven	24	<b>Forsyth</b>	74	Cumberland	74	Hoke
25	Onslow	25	Lincoln	75	Wilkes	75	Harnett
26	Polk	26	Macon	76	Burke	76	Duplin
27	Yancey	27	Madison	77	Hertford	77	Lenoir
28	<b>Forsyth</b>	28	Catawba	78	Rockingham	78	Wilson
29	Currituck	29	Craven	79	Alleghany	79	Hertford
30	Johnston	30	Clay	80	Sampson	80	Martin
31	Alamance	31	Onslow	81	Gaston	81	Montgomery
32	Lincoln	32	Brunswick	82	Stanly	82	Hyde
33	Person	33	Perquimans	83	Cleveland	83	Rutherford
34	Pamlico	34	Granville	84	Gates	84	Graham
35	Franklin	35	Haywood	85	Warren	85	Rockingham
36	Randolph	36	Yancey	86	Anson	86	Tyrrell
37	Brunswick	37	Stanly	87	Tyrrell	87	Washington
38	Greene	38	Johnston	88	Edgecombe	88	Warren
39	Hoke	39	Randolph	89	Richmond	89	Anson
40	Montgomery	40	Pitt	90	Northampton	90	Bertie
41	Chowan	41	Yadkin	91	Martin	91	Swain
42	Ashe	42	Jackson	92	Bertie	92	Columbus
43	Carteret	43	Cherokee	93	Scotland	93	Bladen
44	Duplin	44	Alexander	94	Lenoir	94	Northampton
45	Madison	45	Alamance	95	Vance	95	Halifax
46	Granville	46	Greene	96	Swain	96	Vance
47	Catawba	47	Ashe	97	Robeson	97	Richmond
48	Pitt	48	Burke	98	Bladen	98	Edgecombe
49	Wilson	49	Davidson	99	Halifax	99	Scotland
50	Yadkin	50	Cumberland	100	Columbus	100	Robeson

## Health Outcomes Sub Rankings: North Carolina

Rank	Mortality	Morbidity	Rank	Mortality	Morbidity
1	Wake	Wake	51	Pender	Chatham
2	Orange	Orange	52	Duplin	Pitt
3	Camden	Pender	53	Mitchell	Greene
4	Watauga	Pamlico	54	Brunswick	Beaufort
5	Union	Watauga	55	Person	Granville
6	Dare	Union	56	Jones	Swain
7	Chatham	Transylvania	57	Catawba	Yadkin
8	Davie	Moore	58	Lee	Ashe
9	Mecklenburg	Montgomery	59	Rowan	Madison
10	New Hanover	Craven	60	Wilson	Pasquotank
11	Cabarrus	Hyde	61	Cherokee	Mitchell
12	Avery	Macon	62	Stokes	Caldwell
13	Yancey	Henderson	63	Warren	Washington
14	Henderson	Guilford	64	Rutherford	Chowan
15	Guilford	Mecklenburg	65	Harnett	Jones
16	Durham	New Hanover	66	Surry	Stokes
17	Moore	Buncombe	67	Alleghany	Davidson
18	Buncombe	Iredell	68	Montgomery	Perquimans
19	Alamance	Person	69	Perquimans	Burke
20	Macon	Camden	70	Cumberland	Cumberland
21	Iredell	Durham	71	Caldwell	Alexander
22	Hyde	Cabarrus	72	Hertford	Haywood
23	Chowan	Brunswick	73	Wilkes	Anson
24	Transylvania	Jackson	74	Gates	Rockingham
25	Currituck	Polk	75	Nash	Rutherford
26	Jackson	Onslow	76	Wayne	Caswell
27	Onslow	Forsyth	77	Graham	Wilkes
28	Forsyth	Dare	78	Rockingham	Rowan
29	Johnston	Davie	79	Burke	Gaston
30	Polk	Johnston	80	Gaston	Hertford
31	Ashe	Duplin	81	Beaufort	Cherokee
32	Greene	Catawba	82	Pamlico	Cleveland
33	Madison	Nash	83	Clay	Bertie
34	Franklin	Currituck	84	Cleveland	Alleghany
35	Caswell	Wilson	85	Tyrrell	Edgecombe
36	Haywood	Avery	86	Edgecombe	McDowell
37	Lincoln	Lincoln	87	Northampton	Tyrrell
38	Granville	Randolph	88	Anson	Scotland
39	Craven	Harnett	89	Richmond	Richmond
40	Hoke	Carteret	90	Sampson	Martin
41	Yadkin	Sampson	91	Martin	Gates
42	Washington	Clay	92	Lenoir	Lenoir
43	Randolph	Hoke	93	Halifax	Robeson
44	Davidson	Graham	94	Vance	Northampton
45	Stanly	Franklin	95	Bladen	Vance
46	McDowell	Wayne	96	Scotland	Warren
47	Pitt	Lee	97	Bertie	Stanly
48	Alexander	Yancey	98	Robeson	Columbus
49	Pasquotank	Alamance	99	Columbus	Bladen
50	Carteret	Surry	100	Swain	Halifax

## Health Factors Sub Rankings: North Carolina

Rank	Health Behaviors	Clinical Care	Social & Economic Factors	Physical Environment
1	Orange	Orange	Orange	Alleghany
2	Wake	New Hanover	Camden	Carteret
3	Mecklenburg	Wake	Union	Perquimans
4	Watauga	Moore	Wake	Dare
5	Transylvania	Craven	Currituck	Gates
6	Henderson	Buncombe	Watauga	Yadkin
7	Buncombe	Durham	Chatham	Polk
8	New Hanover	Mecklenburg	Henderson	Orange
9	Union	Pitt	Cabarrus	Northampton
10	Moore	Pamlico	Onslow	Wake
11	Durham	<b>Forsyth</b>	Davie	Person
12	Polk	Guilford	Moore	Beaufort
13	Guilford	Catawba	Polk	Currituck
14	Avery	Pasquotank	Gates	Davidson
15	<b>Forsyth</b>	Nash	Buncombe	Durham
16	Macon	Beaufort	Iredell	Macon
17	Pamlico	Brunswick	Johnston	Brunswick
18	Clay	Chowan	Dare	Pitt
19	Greene	Haywood	Carteret	Watauga
20	Chatham	Transylvania	New Hanover	Chatham
21	Lincoln	Iredell	Lincoln	Greene
22	Gates	Carteret	Stokes	Pasquotank
23	Ashe	Macon	Madison	Guilford
24	Dare	Cumberland	Jackson	Martin
25	Cherokee	Stanly	Craven	Ashe
26	Yancey	Watauga	Franklin	Lenoir
27	Catawba	Alamance	Pamlico	Mecklenburg
28	Cabarrus	Cabarrus	Transylvania	Camden
29	Iredell	Henderson	Guilford	Pamlico
30	Graham	Chatham	Randolph	Moore
31	Madison	Vance	Durham	Surry
32	Mitchell	Madison	Avery	Davie
33	Camden	Hertford	Yadkin	Johnston
34	Burke	Cleveland	Perquimans	Wilson
35	Martin	Camden	Catawba	Granville
36	Wilson	Wayne	Mecklenburg	Sampson
37	Haywood	Dare	Davidson	Yancey
38	Currituck	Granville	Pender	Wayne
39	Davie	Burke	Stanly	Iredell
40	Granville	Union	Macon	Nash
41	Carteret	Lincoln	Hoke	Cabarrus
42	Washington	Cherokee	Brunswick	Stanly
43	Alexander	Caswell	Cumberland	Craven
44	Yadkin	Perquimans	<b>Forsyth</b>	<b>Forsyth</b>
45	Caswell	Clay	Yancey	Montgomery
46	Caldwell	Caldwell	Surry	Hertford
47	Brunswick	Onslow	Granville	Warren
48	Lenoir	Davie	Haywood	New Hanover
49	Tyrrell	McDowell	Pasquotank	Chowan
50	Randolph	Alexander	Clay	Transylvania

## Health Factors Sub Rankings: North Carolina

Rank	Health Behaviors	Clinical Care	Social & Economic Factors	Physical Environment
51	Chowan	Rowan	Alexander	Alexander
52	Lee	Polk	Harnett	Vance
53	Gaston	Edgecombe	Alamance	Hyde
54	Jackson	Currituck	Alleghany	Duplin
55	Pitt	Jones	Duplin	Mitchell
56	Surry	Randolph	Wayne	Wilkes
57	Hyde	Pender	Gaston	Clay
58	Alamance	Anson	Mitchell	Avery
59	Alleghany	Person	Burke	Swain
60	Stanly	Rutherford	Cherokee	Tyrrell
61	Perquimans	Wilson	Jones	Lee
62	McDowell	Gaston	Caldwell	Bertie
63	Davidson	Scotland	Person	Harnett
64	Hoke	Halifax	Rowan	Randolph
65	Anson	Warren	Sampson	Rowan
66	Sampson	Bertie	Pitt	Pender
67	Rowan	Gates	Ashe	Henderson
68	Rutherford	Northampton	Greene	Union
69	Montgomery	Lee	Caswell	Franklin
70	Jones	Jackson	Rockingham	Alamance
71	Duplin	Lenoir	Wilkes	Madison
72	Cleveland	Yancey	Cleveland	Jones
73	Person	Washington	Lee	Richmond
74	Cumberland	Surry	McDowell	Buncombe
75	Wilkes	Franklin	Hertford	Robeson
76	Craven	Columbus	Hyde	McDowell
77	Johnston	Johnston	Chowan	Washington
78	Onslow	Mitchell	Beaufort	Lincoln
79	Wayne	Wilkes	Montgomery	Cleveland
80	Beaufort	Davidson	Nash	Rockingham
81	Harnett	Ashe	Swain	Jackson
82	Pender	Montgomery	Rutherford	Graham
83	Nash	Stokes	Graham	Bladen
84	Warren	Yadkin	Lenoir	Rutherford
85	Columbus	Rockingham	Tyrrell	Halifax
86	Franklin	Greene	Martin	Haywood
87	Stokes	Bladen	Warren	Onslow
88	Richmond	Alleghany	Bertie	Scotland
89	Swain	Sampson	Bladen	Catawba
90	Hertford	Martin	Wilson	Anson
91	Bladen	Harnett	Columbus	Cumberland
92	Scotland	Hyde	Washington	Cherokee
93	Northampton	Graham	Anson	Gaston
94	Halifax	Tyrrell	Northampton	Columbus
95	Vance	Richmond	Richmond	Burke
96	Rockingham	Hoke	Halifax	Hoke
97	Edgecombe	Swain	Edgecombe	Caswell
98	Pasquotank	Duplin	Robeson	Caldwell
99	Bertie	Robeson	Vance	Stokes
100	Robeson	Avery	Scotland	Edgecombe

## 2013 County Health Rankings: Measures, Data Sources, and Years of Data

	Measure	Data Source	Years of Data
<b>HEALTH OUTCOMES</b>			
<b>Mortality</b>	Premature death	National Center for Health Statistics	2008-2010
<b>Morbidity</b>	Poor or fair health	Behavioral Risk Factor Surveillance System	2005-2011
	Poor physical health days	Behavioral Risk Factor Surveillance System	2005-2011
	Poor mental health days	Behavioral Risk Factor Surveillance System	2005-2011
	Low birthweight	National Center for Health Statistics	2004-2010
<b>HEALTH FACTORS</b>			
<b>HEALTH BEHAVIORS</b>			
<b>Tobacco Use</b>	Adult smoking	Behavioral Risk Factor Surveillance System	2005-2011
<b>Diet and Exercise</b>	Adult obesity	National Center for Chronic Disease Prevention and Health Promotion	2009
	Physical Inactivity		
<b>Alcohol Use</b>	Excessive drinking	Behavioral Risk Factor Surveillance System	2005-2011
	Motor vehicle crash death rate	National Center for Health Statistics	2004-2010
<b>Sexual Activity</b>	Sexually transmitted infections	National Center for HIV/AIDS, Viral Hepatitis, STD, and TB prevention	2010
	Teen birth rate	National Center for Health Statistics	2004-2010
<b>CLINICAL CARE</b>			
<b>Access to Care</b>	Uninsured adults	Small Area Health Insurance Estimates	2010
	Primary care provider rate	HRSA Area Resource File	2011-2012
	Dentists	HRSA Area Resource File	2011-2012
<b>Quality of Care</b>	Preventable hospital stays	Medicare/Dartmouth Institute	2010
	Diabetic screening	Medicare/Dartmouth Institute	2010
	Mammography screening	Medicare/Dartmouth Institute	2010
<b>SOCIAL AND ECONOMIC FACTORS</b>			
<b>Education</b>	High school graduation	Primarily state-specific sources, with National Center for Education Statistics	State-Specific
	Some College	American Community Survey	2007-2011
<b>Employment</b>	Unemployment	Bureau of Labor Statistics	2011
<b>Income</b>	Children in poverty	Small Area Income and Poverty Estimates	2011
<b>Family and Social</b>	Inadequate social support	Behavioral Risk Factor Surveillance System	2005-2010
	Children in Single-parent households	American Community Survey	2007-2011
<b>Community Safety</b>	Violent crime rate	Federal Bureau of Investigation	2008-2010
<b>PHYSICAL ENVIRONMENT</b>			
<b>Environmental Quality</b>	*Daily fine particulate matter	CDC WONDER Environmental Data	2008
	Drinking water safety	Safe Drinking Water Information System	FY 2012
<b>Built Environment</b>	Access to recreational facilities	Census County Business Patterns	2010
	Limited access to healthy foods	USDA Food Environment Atlas	2012
	Fast Food restaurants	Census County Business Patterns	2010

\* Not available for AK and HI.

## CREDITS

### **Report Authors**

University of Wisconsin-Madison  
School of Medicine and Public Health  
Department of Population Health Sciences  
Population Health Institute

Bridget Booske Catlin, PhD, MHSA  
Amanda Jovaag, MS  
Patrick Remington, MD, MPH

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Burness Communications  
Anna Graupner, MPH  
Kate Konkle, MPH  
Karen Odegaard, MPH  
Jan O'Neill, MPA  
Angela Russell, MS  
Julie Willems Van Dijk, PhD, RN

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Abbey Cofsky, MPH – Senior Program Officer  
Michelle Larkin, JD, MS, RN – Assistant Vice-President and Deputy Director, Health Group  
James S. Marks, MD, MPH – Senior Vice President and Group Director, Health Group  
Joe Marx – Senior Communications Officer

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## County Health Rankings & Roadmaps

A Healthier Nation, County by County

