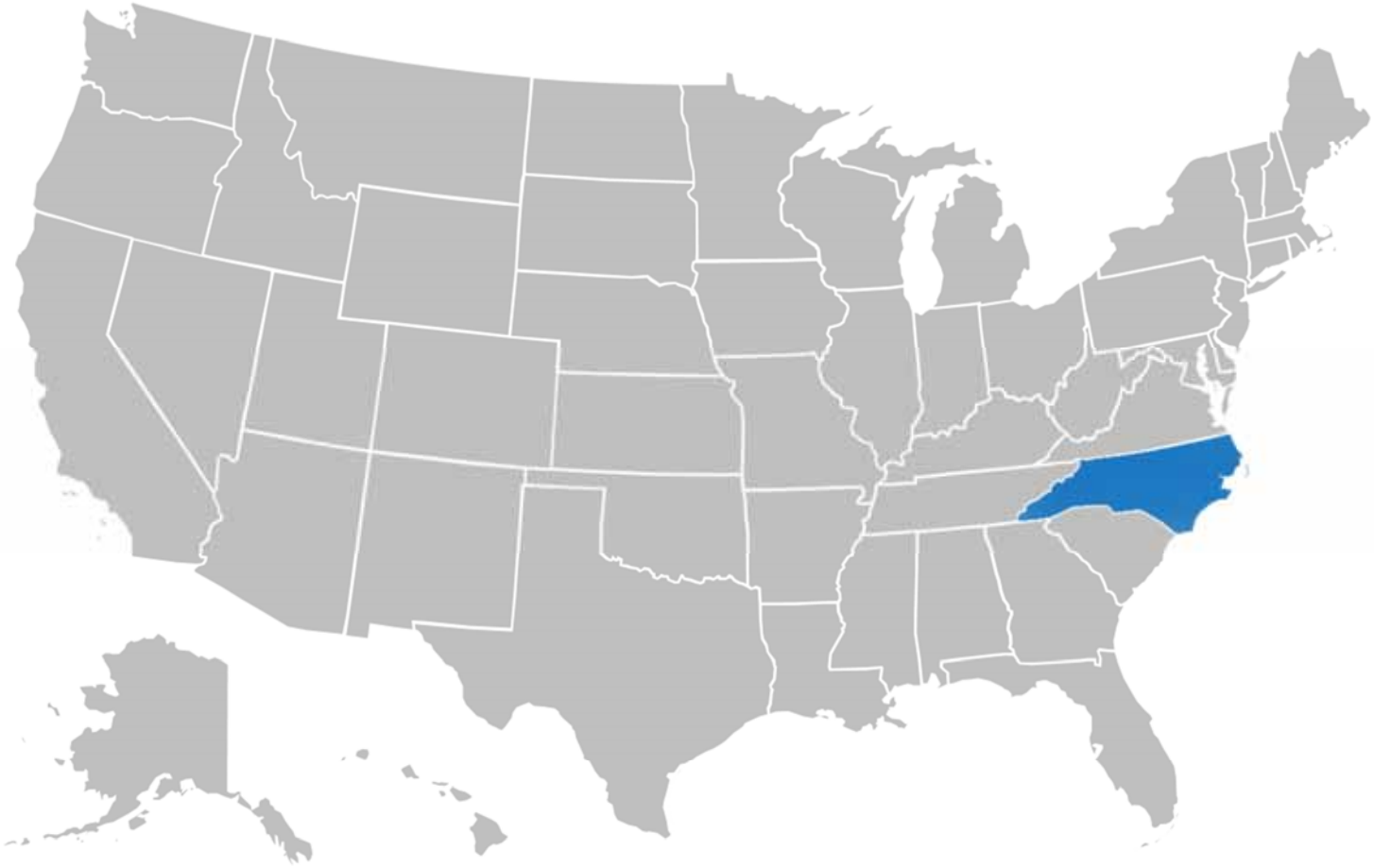
County Health Rankings & Roadmaps

Building a Culture of Health, County by County

A Robert Wood Johnson Foundation program

North Carolina



2018 County Health Rankings Report

A collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute.

University of Wisconsin Population Health Institute
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Support provided by
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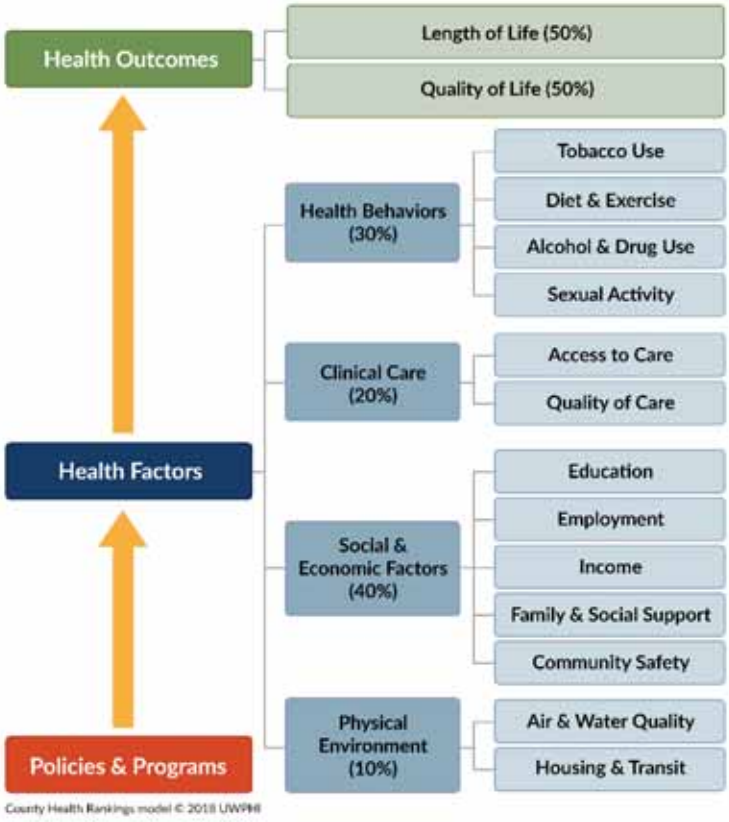
Introduction

Ranking the health of nearly every county in the nation (based on the model to the right), County Health Rankings & Roadmaps (CHR&R) illustrates what we know when it comes to what is keeping people healthy or making them sick and shows what we can do to create healthier places to live, learn, work and play. CHR&R brings actionable data, evidence, guidance and stories to communities to make it easier for people to be healthy in their neighborhoods, schools and workplaces.



Our country has achieved significant health improvements over the past century. We have benefited from progress in automobile safety, better workplace standards, good schools and medical clinics, and reductions in smoking and infectious diseases. But when you look closer, there are significant differences in health outcomes according to where we live, how much money we make or how we are treated. The data show that not everyone has benefited in the same way from these health improvements. There are fewer opportunities and resources for better health among groups that have been historically marginalized including people of color, people living in poverty, people with physical or mental disabilities, LGBTQ persons, and women.

This report explores the size and nature of health differences by place and race/ethnicity in North Carolina and how state and community leaders can take action to create environments where all residents have the opportunity to live their healthiest lives. Specifically, this report will help illuminate:

1. What health equity is and why it matters
2. Differences in health outcomes within the state by place and racial/ethnic groups
3. Differences in health factors within the state by place and racial/ethnic groups
4. What communities can do to create opportunity and health for all

The Robert Wood Johnson Foundation (RWJF) collaborates with the University of Wisconsin Population Health Institute (UWPHI) to bring this program to cities, counties, and states across the nation.

What Is Health Equity?

We live in a nation that prides itself on being a land of opportunity - a place where everyone has a fair chance to lead the healthiest life possible regardless of where we live, how we are treated, or the circumstances we were born into; this is the prospect of health equity. However, this is not always our reality. More often the choices we make depend on the opportunities we have, such as a quality education, access to healthy foods and living in safe, affordable housing in crime-free neighborhoods. These opportunities are not the same for everyone.

Health disparities emerge when some groups of people have more access to opportunities and resources over their lifetime and across generations. For example, when children live in families with higher incomes, they typically experience stable housing in safer neighborhoods, have access to better-resourced and higher quality schools, and are better prepared for living wage jobs leading to upward economic mobility and good health. When children live in families with lower incomes and do not have access to these same opportunities, they face challenges to gaining a foothold on the ladder to economic security that helps them thrive.

Why Does It Matter?

Population projections indicate that our nation's youth are increasingly more racially and ethnically diverse. A healthy beginning is essential to a healthy future for our children and our nation.

Yet, child poverty rates remain high with nearly one in five living in poverty. And, in the majority of U.S. counties, rates for Black or Hispanic children are even higher than rates for White children.

Investing in the health and well-being of ALL young people now and in years to come is vital to our nation's future success and prosperity.

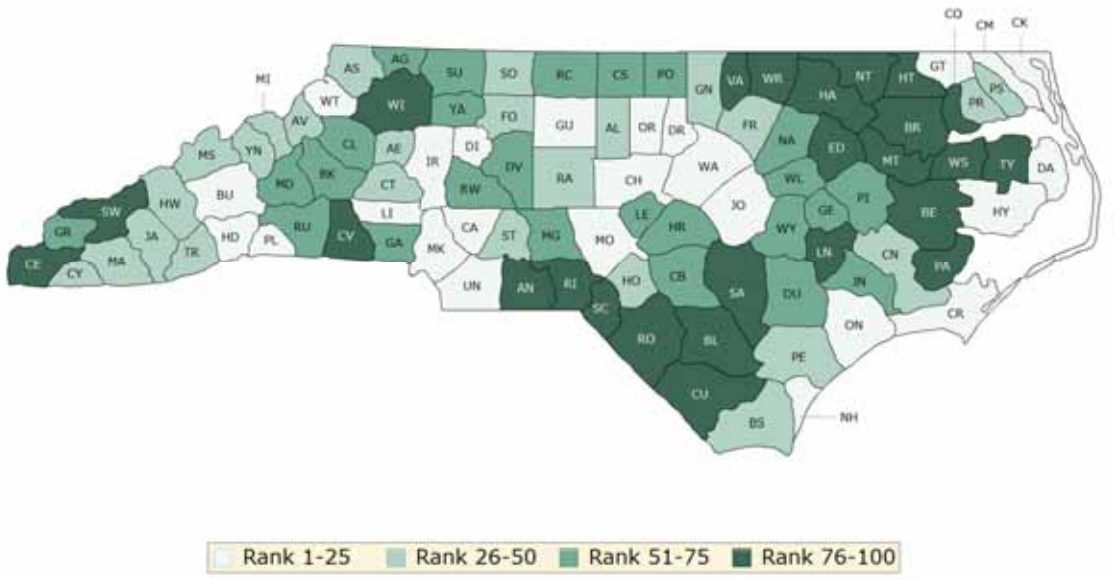
Differences in opportunity do not come about on their own or because of the actions of individuals alone. Often, they are the result of policies and practices at many levels that have created deep-rooted barriers to good health, such as unfair bank lending practices, school funding based on local property taxes, and policing and prison sentencing. The collective effect is that a fair and just opportunity to live a long and healthy life is not a reality for everyone. Now is the time to change how things are done.

Achieving health equity means reducing and ultimately eliminating unjust and avoidable differences in health and in the conditions and resources needed for optimal health by improving the health of marginalized groups, not by worsening the health of others. Our progress toward health equity will be measured by how health disparities change over time. This report provides data on differences in health and opportunities in North Carolina that can help identify where action is needed to achieve greater equity and offers information on how to move from data to action.

Differences in Health Outcomes within States by Place and Racial/Ethnic Groups

How Do Counties Rank for Health Outcomes?

Health outcomes in the County Health Rankings represent measures of how long people live and how healthy people feel. Length of life is measured by premature death (years of potential life lost before age 75) and quality of life is measured by self-reported health status (% of people reporting poor or fair health and the number of physically and mentally unhealthy days within the last 30 days) and the % of low birth weight newborns. Detailed information on the underlying measures is available at **countyhealthrankings.org**



The green map above shows the distribution of North Carolina's **health outcomes**, based on an equal weighting of length and quality of life. The map is divided into four quartiles with less color intensity indicating better performance in the respective summary rankings. Specific county ranks can be found in the table on page 12 at the end of this report.

How Do Health Outcomes Vary by Race/Ethnicity?

Length and quality of life vary not only based on where we live, but also by our racial/ethnic background. In North Carolina there are differences by race/ethnicity in length and quality of life that are masked when we only look at differences by place. The table below presents the five underlying measures that make up the Health Outcomes Rank. Explore the table to see how health differs between the healthiest and the least healthy counties in North Carolina, and among racial/ethnic groups.

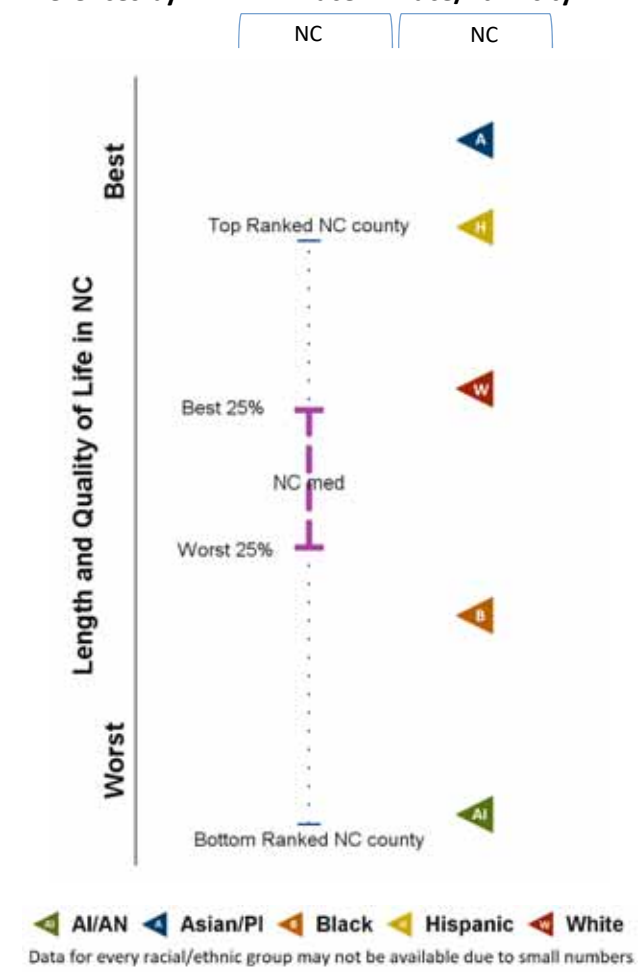
Differences in Health Outcome Measures among Counties and for Racial/Ethnic Groups in North Carolina

	Healthiest NC County	Least Healthy NC County	AI/AN	Asian/PI	Black	Hispanic	White
Premature Death (years lost/100,000)	4,500	12,100	10,200	2,900	9,900	3,600	7,100
Poor or Fair Health (%)	13%	29%	33%	12%	20%	33%	14%
Poor Physical Health Days (avg)	2.9	5.4	5.6	2.2	3.6	3.7	3.5
Poor Mental Health Days (avg)	3.6	5.4	6.7	3.0	3.8	2.2	4.2
Low Birthweight (%)	8%	12%	11%	9%	14%	7%	7%

American Indian/Alaskan Native (AI/AN), Asian/Pacific Islander (Asian/PI)

N/A = Not available. Data for all racial/ethnic groups may not be available due to small numbers

Health Outcomes in North Carolina



AI/AN -American Indian/Alaskan Native/Native American
Asian/PI - Asian/Pacific Islander

The graphic to the left compares measures of length and quality of life by place (Health Outcomes ranks) and by race/ethnicity. To learn more about this composite measure, see the technical notes on page 13.

In North Carolina, **measures of length and quality of life** indicate:

- American Indians/Alaskan Natives are most similar in health to those living in the least healthy quartile of counties.
- Asians/Pacific Islanders are healthier than those living in the top ranked county.
- Blacks are most similar in health to those living in the least healthy quartile of counties.
- Hispanics are healthier than those living in the top ranked county.
- Whites are most similar in health to those living in the healthiest quartile of counties.

(Quartiles refer to the map on page 4.)

Across the US, values for measures of length and quality of life for Native American, Black and Hispanic residents are regularly worse than for Whites and Asians. For example, even in the healthiest counties in the US, Black and American Indian premature death rates are about 1.5 times higher than White rates. Not only are these differences unjust and avoidable, they will also negatively impact our changing nation's future prosperity.

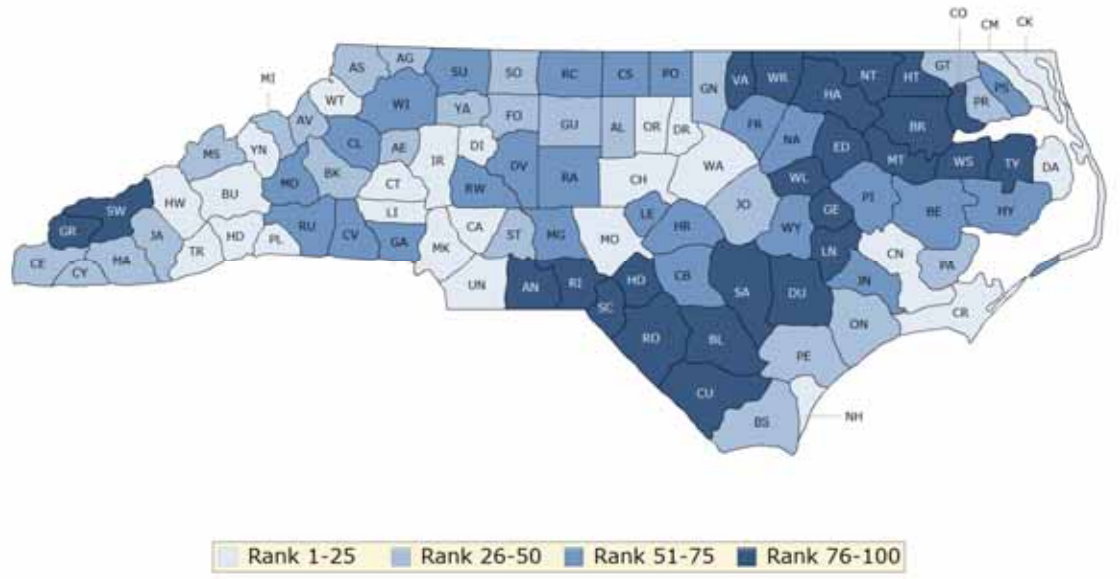
Changing the Course in Kansas City

A decade ago, public health officials identified an 8-year gap in life expectancy between the city's White and Black populations. Segregation and discrimination over the past century fueled this disparity, but community residents and city leaders joined forces to tackle tough conversations on race, stem the violence, increase educational opportunities, improve access to care and ensure economic justice. Today the disparity in life expectancy has been reduced to 6.9 years. Learn more at rwjf.org/prize.

Differences in Health Factors within States by Place and Racial/Ethnic Groups

How Do Counties Rank for Health Factors?

Health factors in the County Health Rankings represent the focus areas that drive how long and how well we live, including health behaviors (tobacco use, diet & exercise, alcohol & drug use, sexual activity), clinical care (access to care, quality of care), social and economic factors (education, employment, income, family & social support, community safety), and the physical environment (air & water quality, housing & transit).



The blue map above shows the distribution of North Carolina's **health factors** based on weighted scores for health behaviors, clinical care, social and economic factors, and the physical environment. Detailed information on the underlying measures is available at **countyhealthrankings.org.** The map is divided into four quartiles with less color intensity indicating better performance in the respective summary rankings. Specific county ranks can be found in the table on page 12.

What are the Factors That Drive Health and Health Equity?

Health is influenced by a range of factors. However, social and economic factors, like connected and supportive communities, good schools, stable jobs, and safe neighborhoods, are foundational to achieving long and healthy lives. These social and economic factors also influence other important drivers of health and health equity. Social and economic factors impact our ability to make healthy choices, afford medical care or housing, and even manage stress leading to serious health problems. The choices we make are based on the choices we have.

Across the nation, there are meaningful differences in social and economic factors among counties and among racial/ethnic groups. Even within counties, policies and practices marginalize many racial and ethnic groups, keeping them from resources and supports necessary to thrive. Limited access to opportunities is what creates disparities in health, impacting how well and how long we live.

How Do Social and Economic Opportunities for Health Vary in North Carolina?

Social and economic factors vary depending on where we live and by our racial/ethnic background. The following four data graphics illustrate differences among counties and by racial/ethnic groups in social and economic opportunities for health in North Carolina. These graphics show that it is important to explore differences by place and race/ethnicity in order to tell a more holistic story about the health of your community.

This report explores state-wide data. To dive deeper into your county data, visit Use the Data at www.countyhealthrankings.org

Consider these questions as you look at the data graphics throughout this report:

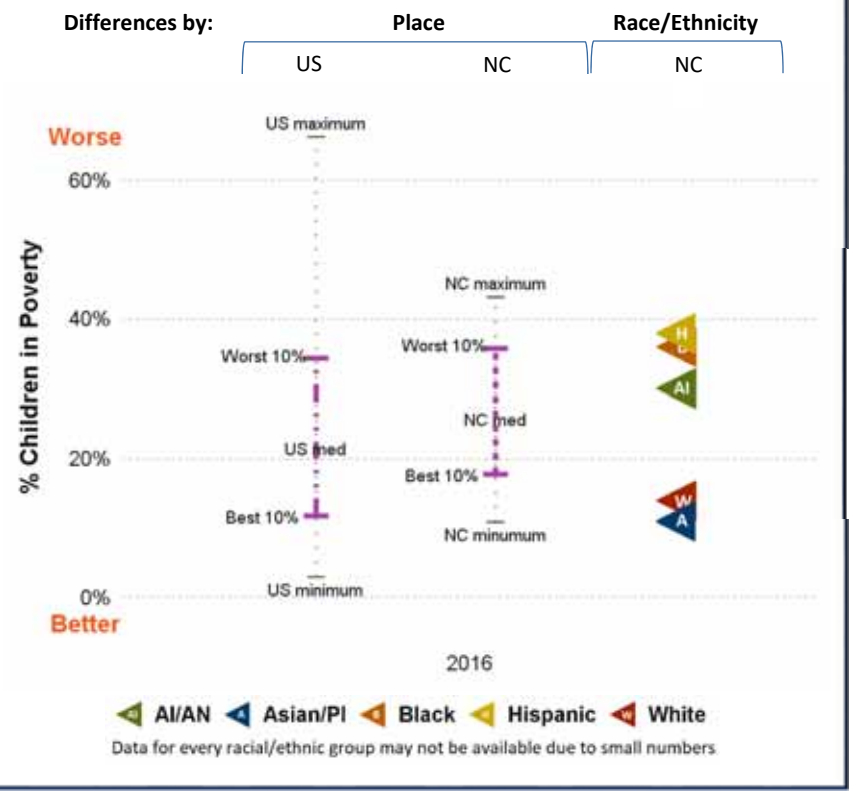
- What differences do you see among counties in your state?
- What differences do you see by racial/ethnic groups in your state?
- How do counties in your state compare to all U.S. counties?
- What patterns do you see? For example, do some racial/ethnic groups fare better or worse across measures?

Children in Poverty

Poverty limits opportunities for quality housing, safe neighborhoods, healthy food, living wage jobs, and quality education. As poverty and related stress increase, health worsens.

The graphic to the right shows:

- In North Carolina, 22% of children are living in poverty compared to the U.S. rate of 20%.
- Children in poverty rates among North Carolina counties range from 11% to 43%.
- Children in poverty rates among racial/ethnic groups in North Carolina range from 11% to 38%.



US and state values and the state minimum and maximum can be found in the table on page 14

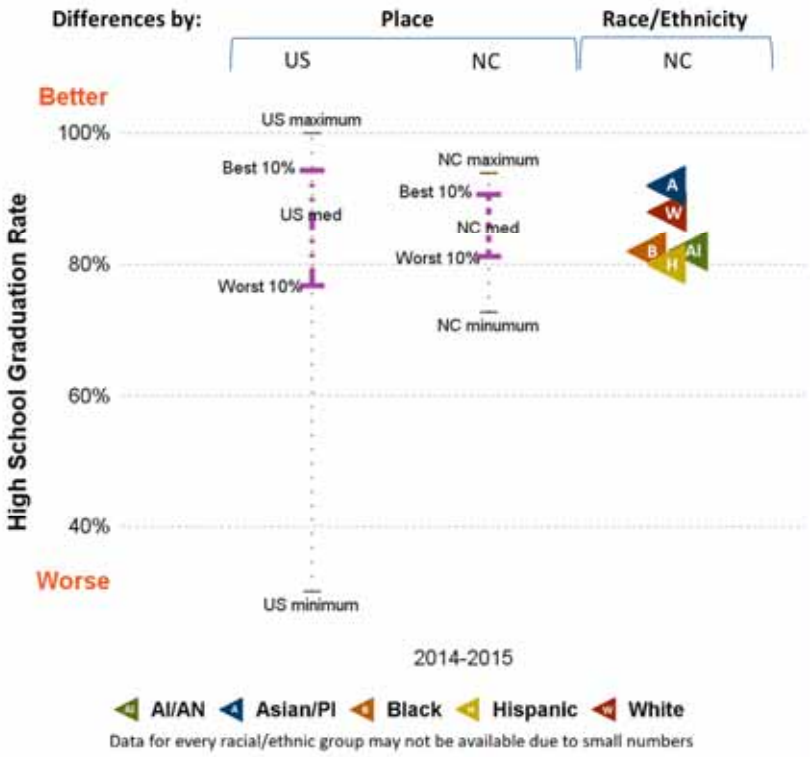
American Indian/Alaskan Native/Native American (AI/AN) Asian/Pacific Islander (Asian/PI)

High School Graduation

Higher rates of educational achievement are linked to better jobs and higher incomes resulting in better health. Education is also connected to lifespan: on average, college graduates live nine years longer than those who didn't complete high school.

The graphic to the right shows:

- North Carolina's high school graduation rate is 86% compared to the U.S. rate of 83%.
- High school graduation rates among North Carolina counties range from 73% to 94%.
- High school graduation rates among racial/ethnic groups in North Carolina range from 80% to 92%.



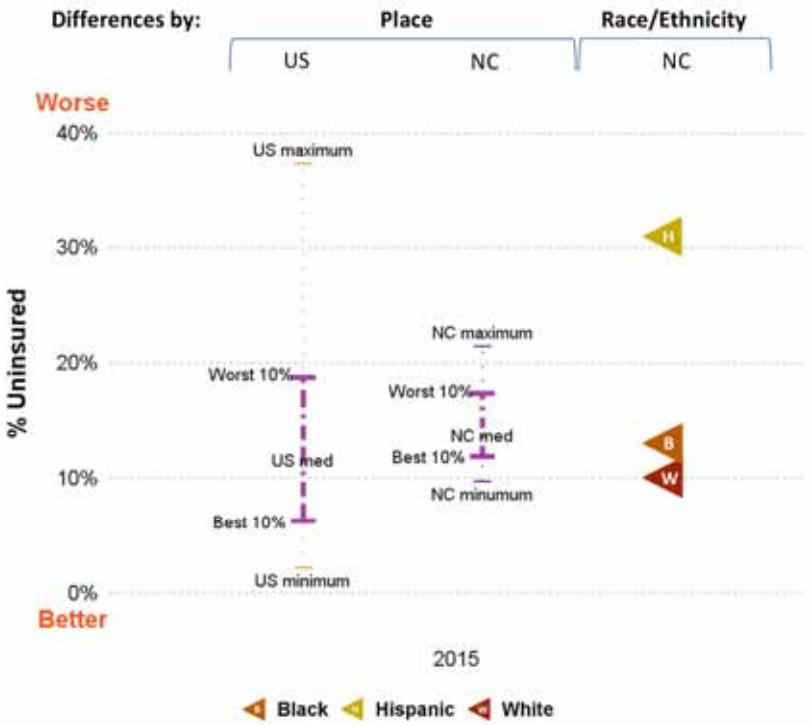
Data for every racial/ethnic group may not be available due to small numbers

Health Insurance

Health insurance helps individuals and families access needed primary care, specialists, and emergency care. Those without insurance are often diagnosed at later, less treatable disease stages and at higher costs than those with insurance.

The graphic to the right shows:

- The uninsured rate in North Carolina is 13% compared to the U.S. rate of 11%.
- Uninsured rates among North Carolina counties range from 10% to 21%.
- Uninsured rates among racial/ethnic groups in North Carolina range from 10% to 31%.



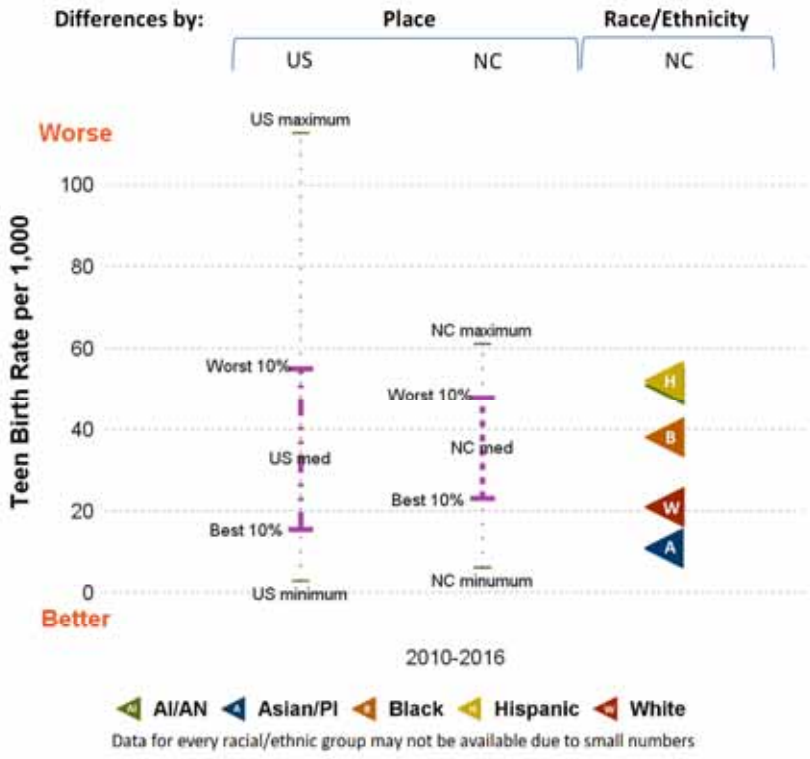
Data for Asians and Native Americans are not available for this measure

Teen Births

Teenage motherhood is more likely to occur in communities with fewer opportunities for education or jobs. Teen mothers are less likely to complete high school and face challenges to upward economic mobility. In turn, their children often have fewer social and economic supports and worse health outcomes.

The graphic to the right shows:

- The teen birth rate in North Carolina is 29 births per 1,000 female population, ages 15-19, compared to the U.S. rate of 27 per 1,000.
- Teen birth rates among North Carolina counties range from 6 to 61 per 1,000.
- Teen births for racial/ethnic groups in North Carolina range from 11 to 52 per 1,000.



US and state values and the state minimum and maximum can be found in the table on page 14

American Indian/Alaskan Native/Native American (AI/AN) Asian/Pacific Islander (Asian/PI)

Spartanburg County Closing the Gap

Community leaders in Spartanburg County, SC took a good hard look at their data in 2008 and discovered they had the worst teen birth rate in the whole state. Deciding to face this issue head on, they brought together teens, providers, parents, and partners to create solutions - a warm welcoming teen center, accessible and respectful reproductive health care, and open discussions about sexuality. Recent data show improvements - rates have receded by 50% from 2010 to 2016 for all 15-19 year olds. And while disparities in teen births among racial/ethnic groups in SC continue, the gap has closed for teen births among Black and White females in Spartanburg County (in 2016, 23.3 per 1,000 and 23.9 per 1,000, respectively). Learn more at rwjf.org/prize.

What Communities Can Do to Create Opportunity and Health for All

This report shows some of the differences in opportunity for people in North Carolina based on where they live and their race or ethnicity. But how can you turn this information into action? Below are some evidence-informed approaches to consider as your community moves forward:

Invest in education from early childhood through adulthood to boost employment and career prospects

- Strengthen parents' skills, including ways to foster children's learning and development in home and community settings
- Undertake policy initiatives to improve pre-K-12 education in the classroom, school, district or state level, focusing on raising school attendance and high school graduation rates
- Implement community and school-based supports that will improve access to and quality of early childhood care and education, beginning in infancy
- Offer alternative learning models and technology to help students develop social and work-ready skills
- Support higher education opportunity for all through college application assistance and financial aid

Increase or supplement income and support asset development in low income households

- Increase public and private sector wages and offer benefits for low-income earners through living wages and paid leave
- Expand elibigility for earned-income tax credits and increase credit amount
- Assist parents by expanding refundable child care tax credits and increasing child care subsidies

Ensure that everyone has adequate, affordable health care coverage and receives culturally competent services and care

- Make health care services accessible and available in community, school, and clinical settings, including medical, dental, vision, mental health care, and long-term care
- Increase access to sex education and contraceptives in school, clinic, and community settings
- Increase patients' health-related knowledge via efforts to simplify health education materials, improve patient-provider communication, and increase literacy
- Provide culturally-sensitive care coordination and system navigation, including language interpretation and care tailored to patients' norms, beliefs, and values

Foster social connections within communities and cultivate empowered and civically engaged youth

- Establish positive relationships among youth and adult mentors and provide youth with leadership opportunities in schools, community groups, and local governments
- Create safe places to convene, such as community centers, with activities, programs, and supportive technologies for all ages and abilities
- Support information sharing, collaboration and networking to inform decision-making using social media and in-person approaches

To learn more about specific strategies that can support your work, visit **What Works for Health,** a living resource of evidence-informed policies and programs to make a difference locally. You can search for policies and programs that have been tested or implemented in communities like yours, or adapt strategies that have been tested elsewhere but seem like a good 'fit'. You can also learn about each strategy's likely impact on disparities.
Visit countyhealthrankings.org/whatworks

Communities Driving Local Change

We can work together to reshape the policies, programs, and practices that have marginalized some and, without action, will perpetuate health disparities. We can create environments where people are treated fairly, where everyone has a voice in decisions that affect them, and where all have a chance to succeed.

The 35 RWJF Culture of Health Prize winners are prime examples of making this a reality. For examples of how several communities, such as the below are cultivating a shared belief in good health for all, visit www.rwjf.org/prize.

- Columbia Gorge Region, OR/WA
- Richmond, VA
- Chelsea, MA
- Santa Monica, CA

Moving With Data to Action

County Health Rankings & Roadmaps offers a range of community supports including data, evidence, guidance and stories to support communities moving from awareness to action. Visit our website to learn more – **countyhealthrankings.org.**

- CHR&R provides a snapshot of a community's health and a starting point to explore ways to improve health and increase health equity. Use the Data will help you learn more about the data and find other sources as you begin to assess your needs and resources and focus on what's important.

- Our Partner Center helps changemakers in all sectors make connections and leverage collective power to put ideas into action.

- Our Action Center provides step-by-step guidance to help communities assess their needs, drive local policy and systems changes, and evaluate the impacts of their health improvement efforts. Our team of community coaches are available to communities across the nation to guide local collaborations and individuals to accelerate learning and action.

Guidance in the Action Center focuses on areas like:

- Working together is at the heart of making meaningful change. When people share a vision and commitment to improve health, it can yield better results than working alone. CHR&R's Work Together guide can help you build and sustain partnerships that reflect the diversity of your community. Together you can identify the challenges and solutions that can make a difference.

- Taking time to choose policies and programs that have been shown to work and that are a good fit for your community will maximize your chances of success. CHR&R's Choose Effective Policies & Programs guide can help you explore and select strategies to address priority issues.

- Once you have decided what you want to do, the next step is to make it happen. CHR&R's guide to Act on What's Important can help your community build on strengths, leverage available resources, and respond to unique needs.

- What you say and how you say it can motivate people to take the right action at the right time. CHR&R's Communicate guide can help you to develop strategic messages and deliver those messages effectively.

2018 County Health Rankings for the 100 Ranked Counties in North Carolina

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

Stay Up-To-Date with County Health Rankings & Roadmaps

For the latest updates on our Rankings, community support, RWJF Culture of Health Prize communities, and more visit countyhealthrankings.org/news. You can see what we're featuring on our webinar series, what communities are doing to improve health, and how you can get involved!

Technical Notes and Glossary of Terms

What is health equity? What are health disparities? And how do they relate?

Health equity means that everyone has a fair and just opportunity to be as healthy as possible. This requires removing obstacles to health such as poverty and discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care.

Health disparities are differences in health or in the key determinants of health such as education, safe housing, and discrimination, which adversely affect marginalized or excluded groups.

Health equity and health disparities are closely related to each other. Health equity is the ethical and human rights principle or value that motivates us to eliminate health disparities. Reducing and ultimately eliminating disparities in health and its determinants of health is how we measure progress toward health equity.

Braveman P, Arkin E, Orleans T, Proctor D, and Plough A. What is Health Equity? And What Difference Does a Definition Make? Robert Wood Johnson Foundation. May 2017

How do we define racial/ethnic groups?

In our analyses by race/ethnicity we define each category as follows:

- Hispanic includes those who identify themselves as Mexican, Puerto Rican, Cuban, Central or South American, other Hispanic, or Hispanic of unknown origin.
- American Indian/Alaskan Native includes people who identify themselves as American Indian or Alaskan Native and do not identify as Hispanic. This group is sometimes referred to as Native American in the report.
- Asian/Pacific Islander includes people who identify themselves as Asian or Pacific Islander and do not identify as Hispanic.
- Black includes people who identify themselves as black/African American and do not identify as Hispanic.
- White includes people who identify themselves as white and do not identify as Hispanic.

All racial/ethnic categories are exclusive so that one person fits into only one category. Our analyses do not include people reporting more than one race, as this category was not measured uniformly across our data sources.

We recognize that “race” is a social category, meaning the way society may identify individuals based on their cultural ancestry, not a way of characterizing individuals based on biology or genetics. A strong and growing body of empirical research provides support for the notion that genetic factors are not responsible for racial differences in health factors and very rarely for health outcomes.

How did we compare county ranks and racial/ethnic groups for length and quality of life?

Data are from the same data sources and years listed in the table on page 15. The mean and standard deviation for each health outcome measure (premature death, poor or fair health, poor physical health days, poor mental health days, and low birthweight) are calculated for all ranked counties within a state. This mean and standard deviation are then used as the metrics to calculate z-scores, a way to put all measures on the same scale, for values by race/ethnicity within the state. The z-scores are weighted using CHR&R measure weights for health outcomes to calculate a health outcomes z-score for each race/ethnicity. This z-score is then compared to the health outcome z-scores for all ranked counties within a state; the identified-score calculated for the racial/ethnic groups is compared to the quartile cut-off values for counties with states. You can learn more about calculating z-scores on our website under Rankings Methods.

How did we select evidence-informed approaches?

Evidence-informed approaches included in this report represent those backed by strategies that have demonstrated consistently favorable results in robust studies or reflect recommendations by experts based on early research. To learn more about evidence analysis methods and evidence-informed strategies that can make a difference to improving health and decreasing disparities, visit What Works for Health.

Technical Notes:

- In this report, we use the terms disparities, differences, and gaps interchangeably.
- We follow basic design principles for cartography in displaying color spectrums with less intensity for lower values and increasing color intensity for higher values. We do not intend to elicit implicit biases that “darker is bad”.
- In our graphics of state and U.S. counties we report the median of county values, our preferred measure of central tendency for counties. This value can differ from the state or U.S. overall values.

2018 County Health Rankings for North Carolina: Measures and National/State Results

Measure	Description	US	NC	NC Minimum	NC Maximum
HEALTH OUTCOMES					
Premature death	Years of potential life lost before age 75 per 100,000 population	6,700	7,300	4,500	12,100
Poor or fair health	% of adults reporting fair or poor health	16%	18%	13%	29%
Poor physical health days	Average # of physically unhealthy days reported in past 30 days	3.7	3.6	2.9	5.4
Poor mental health days	Average # of mentally unhealthy days reported in past 30 days	3.8	3.9	3.4	5.4
Low birthweight	% of live births with low birthweight (< 2500 grams)	8%	9%	6%	13%
HEALTH FACTORS					
HEALTH BEHAVIORS					
Adult smoking	% of adults who are current smokers	17%	18%	14%	27%
Adult obesity	% of adults that report a BMI ≥ 30	28%	30%	23%	41%
Food environment index	Index of factors that contribute to a healthy food environment, (0-10)	7.7	6.4	4.1	8.5
Physical inactivity	% of adults aged 20 and over reporting no leisure-time physical activity	23%	24%	17%	33%
Access to exercise opportunities	% of population with adequate access to locations for physical activity	83%	76%	19%	100%
Excessive drinking	% of adults reporting binge or heavy drinking	18%	17%	12%	23%
Alcohol-impaired driving deaths	% of driving deaths with alcohol involvement	29%	31%	0%	64%
Sexually transmitted infections	# of newly diagnosed chlamydia cases per 100,000 population	478.8	647.4	92.2	1,201.5
Teen births	# of births per 1,000 female population ages 15-19	27	29	6	61
CLINICAL CARE					
Uninsured	% of population under age 65 without health insurance	11%	13%	10%	21%
Primary care physicians	Ratio of population to primary care physicians	1,320:1	1,420:1	10,210:1	530:1
Dentists	Ratio of population to dentists	1,480:1	1,830:1	13,320:1	470:1
Mental health providers	Ratio of population to mental health providers	470:1	460:1	7,640:1	160:1
Preventable hospital stays	# of hospital stays for ambulatory-care sensitive conditions per 1,000 Medicare enrollees	49	49	23	96
Diabetes monitoring	% of diabetic Medicare enrollees ages 65-75 that receive HbA1c monitoring	85%	89%	45%	93%
Mammography screening	% of female Medicare enrollees ages 67-69 that receive mammography screening	63%	68%	53%	81%
SOCIAL AND ECONOMIC FACTORS					
High school graduation	% of ninth-grade cohort that graduates in four years	83%	86%	73%	94%
Some college	% of adults ages 25-44 with some post-secondary education	65%	66%	28%	81%
Unemployment	% of population aged 16 and older unemployed but seeking work	4.9%	5.1%	3.8%	9.4%
Children in poverty	% of children under age 18 in poverty	20%	22%	11%	43%
Income inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	5	4.8	3.5	7.4
Children in single-parent households	% of children that live in a household headed by a single parent	34%	36%	21%	71%
Social associations	# of membership associations per 10,000 population	9.3	11.5	6.6	28.2
Violent crime	# of reported violent crime offenses per 100,000 population	380	342	62	707
Injury deaths	# of deaths due to injury per 100,000 population	65	68	35	127
PHYSICAL ENVIRONMENT					
Air pollution – particulate matter	Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5)	8.7	9.1	7.2	10.7
Drinking water violations	Indicator of the presence of health-related drinking water violations. Yes - indicates the presence of a violation, No - indicates no violation.	NA	NA	No	Yes
Severe housing problems	% of households with overcrowding, high housing costs, or lack of kitchen or plumbing facilities	19%	17%	11%	28%
Driving alone to work	% of workforce that drives alone to work	76%	81%	67%	90%
Long commute – driving alone	Among workers who commute in their car alone, % commuting > 30 minutes	35%	31%	17%	62%

2018 County Health Rankings: Ranked Measure Sources and Years of Data

	Measure	Source	Years of Data
HEALTH OUTCOMES			
Length of Life	Premature death	National Center for Health Statistics – Mortality files	2014-2016
Quality of Life	Poor or fair health	Behavioral Risk Factor Surveillance System	2016
	Poor physical health days	Behavioral Risk Factor Surveillance System	2016
	Poor mental health days	Behavioral Risk Factor Surveillance System	2016
	Low birthweight	National Center for Health Statistics – Natality files	2010-2016
HEALTH FACTORS			
HEALTH BEHAVIORS			
Tobacco Use	Adult smoking	Behavioral Risk Factor Surveillance System	2016
Diet and Exercise	Adult obesity	CDC Diabetes Interactive Atlas	2014
	Food environment index	USDA Food Environment Atlas, Map the Meal Gap	2015
	Physical inactivity	CDC Diabetes Interactive Atlas	2014
	Access to exercise opportunities	Business Analyst, Delorme map data, ESRI, & U.S. Census Files	2010 & 2016
Alcohol and Drug Use	Excessive drinking	Behavioral Risk Factor Surveillance System	2016
	Alcohol-impaired driving deaths	Fatality Analysis Reporting System	2012-2016
Sexual Activity	Sexually transmitted infections	National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention	2015
	Teen births	National Center for Health Statistics – Natality files	2010-2016
CLINICAL CARE			
Access to Care	Uninsured	Small Area Health Insurance Estimates	2015
	Primary care physicians	Area Health Resource File/American Medical Association	2015
	Dentists	Area Health Resource File/National Provider Identification file	2016
	Mental health providers	CMS, National Provider Identification file	2017
Quality of Care	Preventable hospital stays	Dartmouth Atlas of Health Care	2015
	Diabetes monitoring	Dartmouth Atlas of Health Care	2014
	Mammography screening	Dartmouth Atlas of Health Care	2014
SOCIAL AND ECONOMIC FACTORS			
Education	High school graduation	EDFacts	2014-2015
	Some college	American Community Survey	2012-2016
Employment	Unemployment	Bureau of Labor Statistics	2016
Income	Children in poverty	Small Area Income and Poverty Estimates	2016
	Income inequality	American Community Survey	2012-2016
Family and Social Support	Children in single-parent households	American Community Survey	2012-2016
	Social associations	County Business Patterns	2015
Community Safety	Violent crime	Uniform Crime Reporting – FBI	2012-2014
	Injury deaths	CDC WONDER mortality data	2012-2016
PHYSICAL ENVIRONMENT			
Air and Water Quality	Air pollution – particulate matter*	Environmental Public Health Tracking Network	2012
	Drinking water violations	Safe Drinking Water Information System	2016
Housing and Transit	Severe housing problems	Comprehensive Housing Affordability Strategy (CHAS) data	2010-2014
	Driving alone to work	American Community Survey	2012-2016
	Long commute – driving alone	American Community Survey	2012-2016

*Not available for AK and HI.

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Suggested citation: University of Wisconsin Population Health Institute. County Health Rankings 2018.

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Robert Wood Johnson Foundation