

Madison County 2015 Community Health Assessment

1/11/2016



MADISON COUNTY COMMUNITY HEALTH ASSESSMENT

ACKNOWLEDGEMENTS

This document was developed by Madison County Health Department, in partnership with Madison Community Health Consortium and Mission Hospital as part of a local community health (needs) assessment process. We would like to thank and acknowledge several agencies and individuals for their contributions and support in conducting this health assessment:

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WNC**HEALTHY**IMPACT

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MADISON COUNTY 2015 CHA EXECUTIVE SUMMARY

Purpose and Process

Community Health Assessment (CHA) is the foundation for improving and promoting the health of Madison County residents. The role of the CHA is to identify factors that affect health and determine the availability of resources to adequately address those factors. The process involves the collection and analysis of a large range of secondary data as well as primary data and involves a team composed of representatives from a broad range of health and human service and other organizations as well as community partners and residents.

Madison County is included in Mission Hospitals community for the purposes of community health improvement and investment, and as such Mission Hospital was a key partner in the 2015 local level assessment process.

As part of WNC Healthy Impact, the consulting team compiled a core set of secondary data for Madison County. This data was then compared to the data collected in the 2012 assessment to look for similarities and differences.

Primary data was also collected in a community survey via telephone. 200 community members completed the random-sample survey. In addition, to solicit input from key informants who have a broad interest in the health of the community, a key informant online survey was also implemented. A total of 32 community stakeholders took part in the survey.

The Madison County Health Department, Madison Community Health Consortium, and the Madison County community was engaged in the health assessment process via local data interpretation and priority setting.

Data Summary

Community

The natural beauty of Madison County is one of its greatest assets. Madison County offers 288,800 scenic acres (452 square miles) of beautiful mountains and fertile valleys. With whitewater rafting, snow skiing, the Appalachian Trail, scenic byways and a hot natural mineral spring, Madison County is rich in outdoor recreational opportunities. Nearly 73% of the county is forest land and nearly 25% of the county acreage is managed by the U.S. Forest Service.

In addition to the natural beauty, Madison County is defined by its rural nature. Approximately 79% of the roads throughout the county are paved at this time. Nine miles of Interstate 26 follows the eastern side of the county into Tennessee. There are three municipalities located in the county; Mars Hill, Marshall, and Hot Springs.

Poverty issues are a concern for this rural, mountainous county. The percentage of people with incomes below the poverty level in Madison County was 17.3% (US Census). More than 64% of children attending school receive free or reduced meals.

Madison County has long been a county of many family farms where burley tobacco has been the major crop. The number of tobacco farms has dropped significantly from 3,255 farms in 1993 to 12 farms in 2012 generating a little under 1 million dollars in revenue. Madison County was the number one producer of burley tobacco in the state of North Carolina for about 100 years. However, reliance on tobacco production has decreased as local farmers explore new alternatives to farming in Madison County.

As of 2010, there were 20,764 people living in Madison County. There were more than 8000 households in the county. The county is predominantly Caucasian (96.5%) while small percentages of the population are Black, American Indian, Hispanic and Asian. Males comprise 49% of the population while females total 51%. Nearly 18% of the population in Madison County in 2010 was 65 years of age and older. By 2030 projections estimate there will be more than 6,200 persons age 65+ in Madison County, roughly 29% of total population in the county. (US Census)

As Madison County changes, it is important to preserve the mountain traditions, culture and environment. This can be a challenge as young people move away from this rural county and non-natives relocate here instead. Fortunately, many individuals recognize the need and work hard to promote our strong mountain values and culture.

Assets include a wide range of civic groups, such as the Rotary Club and the Lion's Club that are active in the county. Local community centers provide opportunities for neighbors to convene for meals and activities. The local fire departments receive much volunteer support from auxiliary groups in the community. There are at least 100 churches in the county with the majority being Baptist affiliations.

Health Outcomes

Some areas have shown improvement since our 2012 assessment.

- Substantiated reports of child abuse have decreased on average since 2006.
- Between 2006 and 2013, the number of residents served annually by the Area Mental Health Program increased overall.
- Over an 8-year period the number of residents served annually in State Psychiatric Hospitals decreased.
- Between the 2012 and 2015 assessment periods there was improvement in mortality rates for four of the nine leading causes of death, with the largest improvement being cancer.

Other areas have emerged as issues to watch.

- From 2009-2013, over half of grandparents living with their minor-aged grandchildren also were financially responsible for them.
- Mortality attributable to heart disease, chronic lower respiratory disease, stroke, Alzheimer's disease and kidney disease increased in the past three years.

Populations at risk

While Americans as a group are healthier and living longer, segments of the population continue to suffer poor health status. Within Madison County, health disparate groups include the unemployed, the uninsured/underinsured, the aging population and those without a high school education.

Health Priorities

During the 2015 Community Health Assessment process WNC Healthy Impact assisted with gathering both primary and secondary data via various sources including a phone and key informant survey. This data was then reviewed locally by the CHA team to identify areas of significance. The following criteria was used for reviewing data; indicator not trending in the desired direction, indicator notably different from WNC or NC, health disparities, and significant/emerging community concern. The CHA team was able to identify nine areas of concern. These nine areas were then prioritized to 6 and then to 3 by using a ranking tool in which each member of the Madison Community Health Consortium ranked the areas based on relevance, impact fullness, and feasibility. The three priority areas for 2015 are:

Health Priority 1

Substance Use

Health Priority 2

Mental Health

Health Priority 3

Healthy Weight

Next Steps

The 2015 Madison Community Health Assessment will be shared with the Madison County Board of Health and Board of Commissioners. The report will also be available on the health department website, the WNC Healthy Impact website, and in the public libraries. The Madison Community Health Consortium and Mission Hospital will be instrumental in reviewing the report and assisting with development of action plans to address the identified health priorities over the next three years.

CHAPTER 1 – COMMUNITY HEALTH ASSESSMENT PROCESS

Purpose

Community health assessment (CHA) is an important part of improving and promoting the health of county residents. **Community-health assessment is a key step in the ongoing community health improvement process.**

A community health assessment (CHA), which is both a process and a product, investigates and describes the current health indicators and status of the community, what has changed, and what still needs to change to reach a community's desired health-related results.

Definition of Community

Community is defined as "county" for the purposes of the North Carolina Community Health Assessment Process. Madison county is included in Mission Hospitals community for the purposes of community health improvement, and as such they were key partner in this local level assessment.



WNC Healthy Impact

WNC Healthy Impact is a partnership between hospitals and health departments in western North Carolina to improve community health. As part of a larger, and continuous, community health improvement process, these partners are collaborating to conduct community health (needs) assessments across western North Carolina www.WNCHealthyImpact.com. Our county and partner hospitals are involved in this regional/local vision and collaboration. Participating counties include: Buncombe, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania and Yancey.

Data Collection

The set of data reviewed for our community health assessment process is comprehensive, though not all of it is presented in this document. Within this community health assessment product we share a general overview of health and influencing factors then focus more on priority health issues identified through this collaborative process. Our assessment also highlights some of our community strengths and resources available to help address our most pressing issues.

Core Dataset Collection

The data reviewed as part of our community's health assessment came from the WNC Healthy Impact regional core set of data and additional local data compiled and reviewed by our local CHA team. WNC Healthy Impact's core regional dataset includes secondary (existing) and primary (newly collected) data compiled to reflect a comprehensive look at health. The following data set elements and collection are supported by WNC Healthy Impact data consulting team, a survey vendor, and partner data needs and input:

- A comprehensive set of publically available secondary data metrics with our county compared to the sixteen county WNC region as "peer"
- Set of maps accessed from Community Commons and NC Center for Health Statistics
- Telephone survey of a random sample of adults in the county
- Email key-informant survey

See [Appendix A](#) for details on the regional data collection methodology.

Health Resources Inventory

An inventory of available resources of our community was conducted through reviewing a subset of existing resources currently listed in the 2-1-1 database for our county as well as working with partners to fill in additional information. Where gaps were identified, we partnered with 2-1-1 to fill in or update this information when applicable. See [Chapter 7](#) for more details related to this process.

Community Input & Engagement

Including input from the community is an important element of the community health assessment process. Our county included community input and engagement in a number a ways:

- Partnership on conducting the health assessment process
- Through primary data collection efforts (survey and key informant interviews)
- In the identification and prioritization of health issues

In addition, community engagement is an ongoing focus for our community and partners as we move forward to the collaborative action planning phase of the community health improvement process. Partners and stakeholders with current efforts or interest related to priority health issues will continue to be engaged. We also plan to work together with our partners to help assure programs and strategies in our community are developed and implemented with community members and partners.

At-Risk & Vulnerable Populations

Throughout our community health assessment process and product, our team was focused on understanding general health status and related factors for the entire population of our county as well as the groups particularly at risk for health disparities or adverse health outcomes. In particular, for the purposes of the overall community health assessment, we aimed to understand variability in health outcomes and access of medically underserved, low-income, minority, and others experiencing health disparities.

CHAPTER 2 – MADISON COUNTY

Location and Geography

Madison County offers 288,800 scenic acres (452 square miles) of beautiful mountains and fertile valleys. With whitewater rafting, snow skiing, snow tubing, the Appalachian Trail, scenic byways and a hot natural mineral spring, Madison County is rich in outdoor recreational opportunities. Nearly 73% of the county is forest land and nearly 25% of the county acreage is managed by the U.S. Forest Service. Madison, ranking 53 in size among North Carolina's 100 counties, is located 15 miles north of Asheville on the North Carolina/Tennessee border of the Smoky Mountains of Appalachia. The terrain is steep to gently rolling, with elevations ranging from 1,280 feet to 5,516 feet, the lowest running along the French Broad River into Tennessee. The diverse topography of Madison County, with several peaks over 5,000 feet in elevation and the low French Broad River Valley, provides for spectacular scenic visits. More than 15,000 acres of the county are located in the Pisgah National Forest.

The Appalachian Trail runs along much of the northern border of the county. In addition to the natural beauty, Madison County is defined by its rural nature. There are a little more than 20,000 residents. Approximately 79% of the roads throughout the county are paved at this time. Nine miles of Interstate 26 follows the eastern side of the county into Tennessee. This was the first stretch of interstate in North Carolina to be designated a scenic byway.

There are three municipalities located in the county: Mars Hill, Marshall, the county seat, and Hot Springs.

Mars Hill is home to Mars Hill University which is one of the few universities in the nation to have a competitive clogging team that offers scholarships. Due to the presence of the college, residents of the town and county enjoy a variety of cultural, intellectual and entertainment offerings than would usually be found in a town of its size.

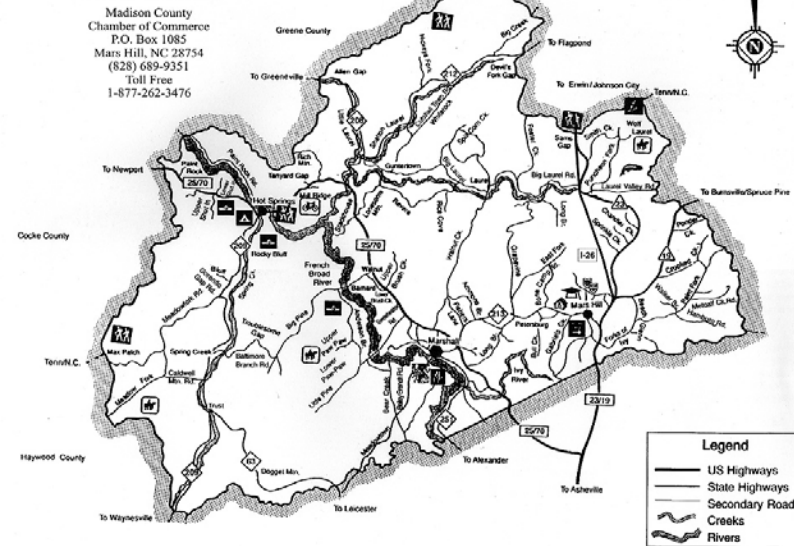
The county seat of Marshall is experiencing a revitalization effort that has led to extensive renovations of old buildings and a greater appreciation for the uniqueness of its architecture. The Madison County Arts Council sponsors many programs and events throughout the year. Buildings that housed Marshall Elementary and Marshall High School, public schools that were erected on an island in the French Broad River, have been renovated for artists, their studios and galleries.

Hot Springs is the smallest town in the county. It is located in the Pisgah National Forest where the Appalachian Trail intersects with the French Broad River. Outdoor recreation is abundant in the area with activities such as rafting, kayaking, and backpacking. In addition, Hot Springs boasts the Hot Springs Resort and Spa which is known for its natural, mineral-rich springs and offers private tubs for soaking.

Madison County has a single public school system that is comprised of three elementary schools, one middle school, high school, and early college. There are approximately 2600 students in the school system. Mars Hill University, a private Liberal Arts University, was founded in 1856. The university has reorganized into three schools: Education and Leadership; Business and Community Service; and Arts and Science. In 2015 the RN to BSN program was added with the traditional BSN program beginning in Fall 2016. The Madison Campus of Asheville-Buncombe Technical Community College, located in Marshall, offers training in tailored trade and technical classes, and industrial training.

MADISON COUNTY

North Carolina



History

In 1783 the newly formed Government of the United States of America opened the land west of the Blue Ridge Mountains. Most of the land was granted to veterans of the Revolutionary War. One of the first known settlers to Madison County was Samuel Davidson in 1784. He was soon killed by the Cherokee Indians. A number of the early settlers were from Scotland and chose this place because it was more like their homeland. Many of their ways and customs still thrive in these beautiful mountains.

At first, they followed the Indian trails and the many streams that line the hollows. Later, they moved along the wagon road from Virginia and Tennessee over Sams Gap and along the old gravel stagecoach road by the French Broad River, known as the Buncombe Turnpike.

The Buncombe Turnpike was completed along the French Broad River through Hot Springs (called Warm Springs at the time) in 1828, connecting Tennessee and Kentucky to the east coast. It was the superhighway of the South at the time. Madison County is home to some of the finest fiddlers and "pickers" and is known for its traditional mountain music. It is also a center for handmade arts and crafts and is rich in historical sites. Many of the sites are located along the former Drovers Trail, the primary route from Tennessee farms to South Carolina markets. Farmers drove thousands of horses,

cattle, hogs, and other livestock to markets in Charleston and Augusta on the Turnpike and stopped in Hot Springs to take the waters along the way until the railroad first appeared in 1882.

The advent of the railroad ended this trade, but built up Hot Springs as a resort for the wealthy seeking cool mountain air and restoration in the mineral baths. Recognizing the potential for tourism, James Patton of Asheville bought the springs in 1831 and by 1837 had built the 350-room Warm Springs Hotel with thirteen tall columns commemorating the first colonies. Because of its size and grandeur, it was called Patton's White House. Its dining room could seat 600 people. In the hotel's ballroom, the second largest in the state, Frank Johnson, son of President Andrew Johnson, met his bride, Bessie Rumbough, daughter of the hotel owner. In 1884, the hotel burned.

Rebuilt in 1886, the Mountain Park Hotel was one of the most elegant resorts in the country during its heyday. It consisted of the 200-room hotel, a barn and stables, a spring house, and a bath house of sixteen marble pools, surrounded by landscaped lawns with croquet and tennis courts. The Mountain Park Hotel established the first organized golf club in the Southeast with a nine-hole course. This hotel burned in 1920, never to be rebuilt.

The railroad also opened up the county to logging companies, and several communities such as Runion and Stackhouse, had flourished during the days of the lumber mills. These communities are now long gone.

The large area of land that is now Madison County was a part of Rutherford and Burke counties. Buncombe was carved off partly from these counties in 1792 and covered what is now eleven counties. These counties were sliced off from Buncombe a few at a time. Between 1792 and 1851, Madison was a part of Buncombe County.

Madison County was formed in 1851 and was named for President James Madison. The county seat of Marshall (originally called Lapland) was named for U.S. Chief Justice John Marshall. Mars Hill University was founded in 1856 and sits on its original site. The university's name (which became the town's name) comes from "Mars' hill" mentioned in the Bible, in Acts 17:22. On this site, Paul preached to the Athenians about Jesus and the resurrection.

Some of the pioneer families of Madison County include: Absolem Buckner; Garrett Ramsey; David and Rachel Davis; Thomas Ramsey; Colston Hagan; and James Marion Payne. These mountain people were proud people, free and self-sufficient. Their word was their bond and they disliked government handouts. They cultivated a strong sense of family and the importance of a hard day's work. These attributes have carried over to the present. A couple of mountain sayings include: "Beware of the man whose overalls show more wear on the seat than the front"; and "A man's never so tired he can't lift a hand to wave 'hello'".

When the railroad lost ground to automobile transportation, Madison County settled back into isolation from the forces developing the rest of the United States. The state found it too expensive to build roads in the mountains until the early 1960s, when road building in Appalachia received

greater priority. Recently, major road improvements were made along several routes, including improvements on Highway 25-70 and the upgrading of U.S. Highway 23 to Interstate I-26.

As Madison County changes, it is important to preserve the mountain traditions, culture and environment. This can be a challenge as young people move away from this rural county and non-natives relocate here instead. Fortunately, many individuals recognize the need and work hard to promote our strong mountain values and culture.

Population

Understanding the growth patterns and age, gender, and racial/ethnic distribution of the population in Madison County will be keys in planning the allocation of health care resources for the county in both the near and long term.

General Population Characteristics 2010 US Census

County	Total Population (2010)	% Males	% Females	Median Age*	% Under 5 Years Old	% 5-19 Years Old	% 20 - 64 Years Old	% 65 Years and Older
Madison	20,764	49.5	50.5	43.3	4.5	18.7	59.1	17.7
WNC (Regional) Total	759,727	48.5	51.5	44.7	n/a	n/a	n/a	n/a
State Total	9,535,483	48.7	51.3	37.4	6.6	20.2	60.2	12.9

The Madison County population has a slightly higher proportion of females than males. The median age of (43.3 years) is 1.4 years “younger” than WNC regional average but 5.9 years “older” than the NC average. Madison County has lower proportions of “younger persons” and higher proportions of the “older persons” than NC as a whole.

POPULATION DISTRIBUTION BY RACE/ETHNICITY 2010 US CENSUS

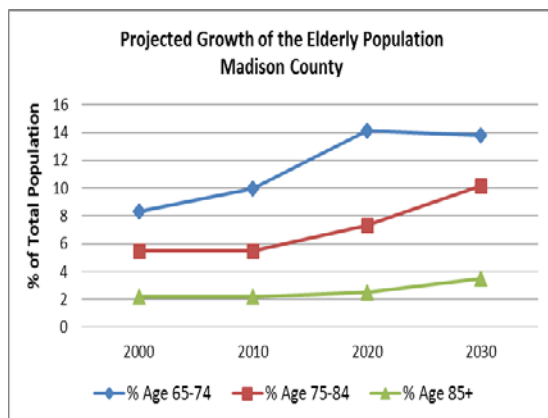
County	Total Population (2010)	White	Black or African American	American Indian, Alaskan Native	Asian	Native Hawaiian, Other Pacific Islander	Some Other Race	Two or More Races	Hispanic or Latino (of any race)
		%	%	%	%	%	%	%	%
Madison	20,764	96.5	1.2	0.2	0.3	0.0	0.5	1.3	2.0
WNC (Regional) Total	759,727	89.3	4.2	1.5	0.7	0.1	2.5	1.8	5.4
State Total	9,535,483	68.5	21.5	1.3	2.2	0.1	4.3	2.2	8.4

Madison County has significantly lower proportions of all minority racial and ethnic groups than the WNC region and NC as a whole.

PERCENT POPULATION GROWTH			
DECADE	MADISON COUNTY	WNC REGION	STATE OF NC
2000-2010	5.4	13.0	15.6
2010-2020	5.3	6.7	10.7
2020-2030	3.2	6.1	9.5

Sources: US Census Bureau and NC Office of State Budget and Management

The modest rate of growth in Madison County is expected to slow over the next two decades, to a rate lowest among comparators by 2030.



Sources: US Census Bureau and NC Office of State Budget and Management

The population in each major age group age 65 and older in Madison County will increase between 2010 and 2030. The proportion of the population age 75-84 will increase by 85%, and the population age 85 and older will increase by 59%, in the period 2010-2030.

By 2030 projections estimate that there will be more than 6,200 persons age 65+ in Madison County.

CHAPTER 3 – A HEALTHY MADISON

Elements of a Healthy Community

When key informants were asked to describe what elements they felt contributed to a health community in our county, they reported:

- Quality Health Care
- Access to Health Care
- Affordable Health Care
- Good Education
- Access to Preventative Health Care

During our collaborative action planning efforts and next steps, we will further explore these concepts and the results our community has in mind.

Community Assets

We also asked key informants to share some of the assets or “gems” they thought were important in our community. They shared the following information and ideas:

- Natural Environment
- Sense of Community
- People
- Low Key Living
- Safe Place to Live

Strong sense of community and
collaboration across sectors...
Community/Business Leader

CHAPTER 4 – SOCIAL & ECONOMIC FACTORS

Income

Income allows families and individuals to purchase health insurance and medical care, but also provides options for healthy lifestyle choices. Poor families and individuals are most likely to live in unsafe homes and neighborhoods, often with limited access to healthy foods, employment options, and quality schools.

Adults in the highest income brackets are healthier than those in the middle class and will live, on average, more than six years longer than those with the lowest incomes.

The ongoing stress and challenges associated with poverty can lead to health damage, both physical and mental. Chronic illness is more likely to affect those with the lowest incomes, and children in low income families are sicker than their high income counterparts. Low income mothers are more likely than higher income mothers to have pre-term or low birth weight babies, who are at higher risk for chronic diseases and behavioral problems.

Income inequality is a measure of the divide between the poor and the affluent. Income inequality in our communities affects how long and how well we live and is particularly harmful to the health of poorer individuals. Income inequality within US communities can have broad health impacts, including increased risk of mortality, poor health, and increased cardiovascular disease risks.

Source: County Health Rankings, <http://www.countyhealthrankings.org/our-approach/health-factors/income>

In Madison County:

2009-2013 Median Household Income = \$38,598

up \$18 since 2006-2010

\$289 below WNC average

\$7,736 below NC average

Source: US Census Bureau

Economy/unemployment was one of the top three county issues in most need of improvement.

Source: 2015 PRC Community Health Survey

Employment

Work provides not only income, but also benefits such as health insurance, paid sick leave, and workplace wellness programs that, together, support opportunities for healthy choices.

These opportunities, however, are greater for higher wage earners - usually those with more education. The estimated 10 million workers who are part of the "working poor" face many challenges: they are less likely to have health insurance and access to preventive care than those with higher incomes, and are more likely to work in hazardous jobs. Working poor parents may not be able to afford quality child care, and often, lack paid leave to care for their families and themselves.

Those who are unemployed face even greater challenges to health and well-being, including lost income and, often, health insurance. Racial and ethnic minorities and those with less education, often already at-risk for poor health outcomes, are most likely to be unemployed.

Source: County Health Rankings, <http://www.countyhealthrankings.org/our-approach/health-factors/employment>

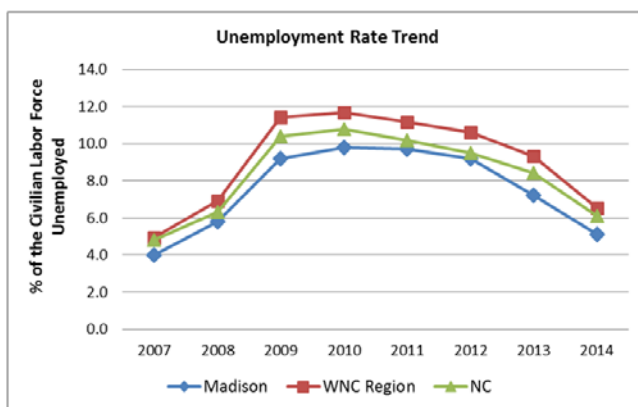
As of 2013, the three employment sectors in Madison County with the largest proportions of workers (and average weekly wages) were:

Educational Services: 22.93% of workforce (\$599)

Health Care and Social Assistance: 15.40% of workforce (\$520)

Public Administration: 12.53% of workforce (\$611).

Source: NC Employment Security Commission



Source: NC Department of Commerce

Education

More schooling is linked to higher incomes, better employment options, and increased social supports that, together, support opportunities for healthier choices.

Higher levels of education can lead to a greater sense of control over one's life, which is linked to better health, healthier lifestyle decisions, and fewer chronic conditions. Education is also connected to lifespan: on average, college graduates live nine more years than high school dropouts.

Parental education is linked to children's health and educational attainment. Stress and poor health early in life, common among those whose parents have lower levels of education, is linked to decreased cognitive development, increased tobacco and drug use, and a higher risk of cardiovascular disease, diabetes, depression, and other conditions.

Source: County Health Rankings, <http://www.countyhealthrankings.org/our-approach/health-factors/education>

Compared to the WNC Region average, Madison County has:

7% *higher* percentage of persons in the population over age 25 having only a high school diploma or equivalent (2009-2013 Estimate)

12% *lower* percentage of persons in the population over age 25 having a Bachelor's degree or higher (2009-2013 Estimate)

4% *lower* overall HS graduation rate (for 4-year cohort of 9th graders entering school in SY 2010-2011 and graduating in SY2013-2014 or earlier)

Sources: US Census Bureau and Public Schools of North Carolina

Education was one of the top three county issues in most need of improvement. Source: 2015 PRC Community Health Survey

Community Safety

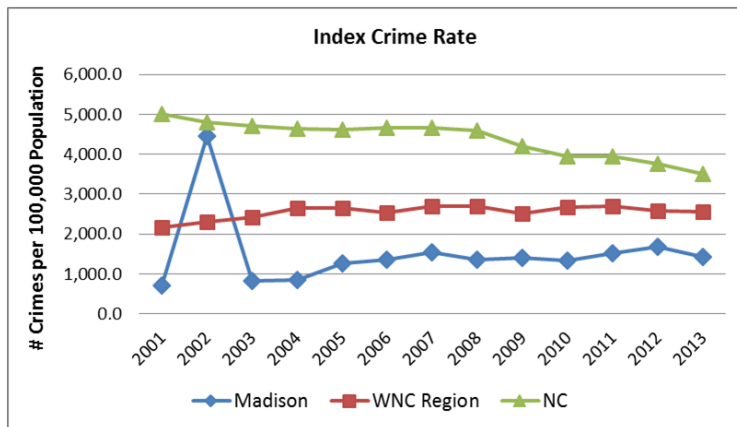
Community safety reflects not only violent acts in neighborhoods and homes, but also injuries caused unintentionally through accidents.

In 2013, more than 6.1 million violent crimes such as assault, robbery, and rape, were committed. Each year, 18,000 children and adults are victims of homicide and more than 1,700 children die from abuse or neglect. Children in unsafe circumstances can suffer post-traumatic stress disorder and the

chronic stress associated with living in unsafe neighborhoods can accelerate aging and harm health. Unsafe neighborhoods can cause anxiety, depression, and stress, and are linked to higher rates of pre-term births and low birth weight babies, even when income is accounted for. Fear of violence can keep people indoors, away from neighbors, exercise, and healthy foods. Companies may be less willing to invest in unsafe neighborhoods, making jobs harder to find.

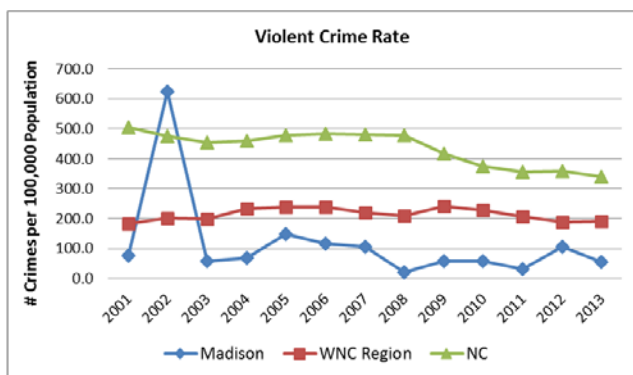
Source: County Health Rankings, <http://www.countyhealthrankings.org/our-approach/health-factors/community-safety>

Index crime is the sum of all violent and property crime. The index crime rate in Madison County was lowest among comparators throughout the period cited except for 2002.



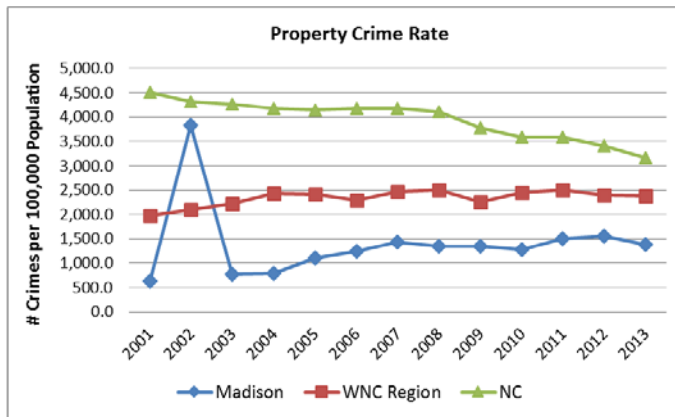
Source: NC Department of Justice

Violent crime includes murder, forcible rape, robbery, and aggravated assault. The violent crime rate in Madison County was lowest among comparators throughout the period cited except for 2002, when the local rate was the highest.



Source: NC Department of Justice

Property crime includes burglary, arson, and motor vehicle theft. The property crime rate in Madison County was lowest among comparators throughout the period cited except for 2002.



Source: NC Department of Justice

In FY2013-2014, 155 persons in Madison County were identified as victims of sexual assault.

The single most frequently reported specific type of sexual assault in Madison County during the period was adult survivor of child sexual assault (28%). Regionally, the most frequently reported type was adult survivor of child sexual assault (23%); statewide the most frequently reported type was child sexual offense (26%).

State-wide and region-wide the most commonly reported offender was a relative. In Madison County as well the most common offender was a relative. Source: NC Department of Administration, Council for Women

Housing

Housing structures can protect us from extreme weather and provide safe environments for families and individuals to live, learn, grow, and form social bonds. However, houses and apartments can also be unhealthy or unsafe environments.

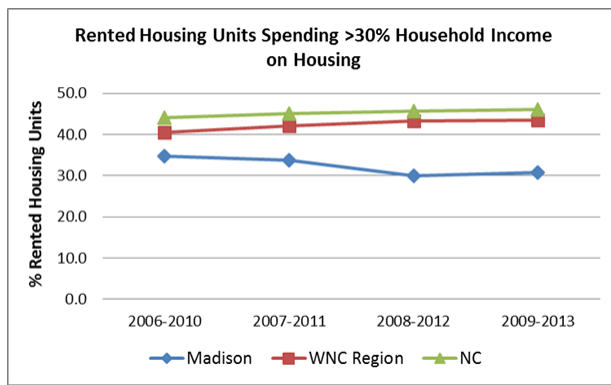
Housing is also a substantial expense, reflecting the largest single monthly expenditure for many individuals and families. Quality housing is not affordable for everyone, and those with lower incomes are most likely to live in unhealthy, overcrowded, or unsafe housing conditions.

Source: County Health Rankings, <http://www.countyhealthrankings.org/our-approach/health-factors/housing-transit>

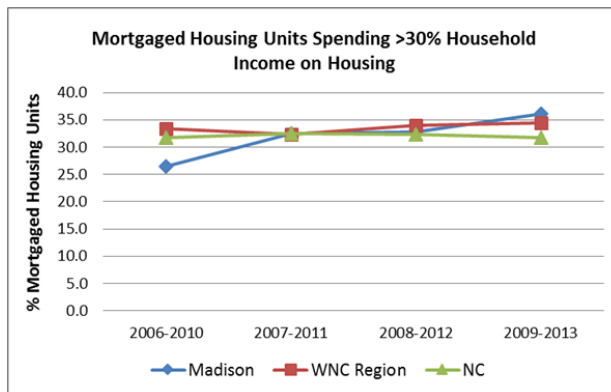
One measure of economic burden in a community is the percent of housing units spending more than 30% of household income on housing.

In Madison County in 2009-2013, a smaller proportion of renters but a higher proportion of mortgage holders spent >30% of household income on housing than the WNC or NC average.

The proportion of Madison County mortgagees spending above the 30% threshold increased 37% between 2006-2009 and 2009-2013.



Source: US Census Bureau



Source: US Census Bureau

Family & Social Support

Social support stems from relationships with family members, friends, colleagues, and acquaintances. Social capital refers to the features of society that facilitate cooperation for mutual benefit, such as interpersonal trust and civic associations. Individual social support and cohesive, capital-rich communities help to protect physical and mental health and facilitate healthy behaviors and choices.

Socially isolated individuals have an increased risk for poor health outcomes. Individuals who lack adequate social support are particularly vulnerable to the effects of stress, which has been linked to cardiovascular disease and unhealthy behaviors such as overeating and smoking in adults, and obesity in children and adolescents.

Residents of neighborhoods with low social capital are more likely to rate their health status as fair or poor than residents of neighborhoods with more social capital, and may be more likely to suffer anxiety and depression. Neighborhoods with lower social capital may be more prone to violence than those with more social capital and often have limited community resources and role models. Socially isolated individuals are more likely to be concentrated in communities with limited social capital.

Individuals with higher educational attainment and higher status jobs are more likely to have greater social support than those with less education and lower incomes. Adults and children in single-parent households, often at-risk for social isolation, have an increased risk for illness, mental health problems and mortality, and are more likely to engage in unhealthy behaviors than their counterparts.

Source: County Health Rankings, <http://www.countyhealthrankings.org/our-approach/health-factors/family-and-social-support>

"Always" or "Usually" Get Needed Social/Emotional Support
("Always" and "Usually" Responses; Madison County)

2012	Madison	75.5%	WNC	80.6%
2015	Madison	83.1%	WNC	79.3%

Source: PRC Community Survey

In the 5-year period from 2009-2013, an estimated 253 Madison County grandparents living with their minor-aged grandchildren also were financially responsible for them.

Over the same period there were an estimated 8,207 households in Madison County, 1,951 of them with children under 18 years of age.

Among the households with minor-age children, 68% were headed by a married couple. An additional 22% were headed by a female single parent, and 10% were headed by a male single parent.

Minor-Age Children Living with Grandparents and in Single-Parent Households, 2009-2013

County	# Grandparents Living with Own Grandchildren (<18 Years)	Grandparent Responsible for Grandchildren (under 18 years)*		# Total Households	Family Household Headed by Married Couple (with children under 18 years)		Family Household Headed by Male (with children under 18 years)		Family Household Headed by Female (with children under 18 years)	
		Est. #	%		Est. #	%**	Est. #	%**	Est. #	%**
Madison	494	253	51.2	8,207	1,330	16.2	201	2.4	420	5.1
WNC (Regional) Total	15,007	8,142	54.3	316,799	49,395	15.6	6,133	1.9	17,711	5.6
State Total	206,632	100,422	48.6	3,715,565	706,106	19.0	84,199	2.3	293,665	7.9

Source: US Census Bureau

CHAPTER 5 – HEALTH DATA FINDINGS SUMMARY

Mortality

People in Madison County have lower mortality than the population statewide only for cancer among the nine leading causes of death for which there are stable county rates.

- **Color**
 - **Red** indicates a “worse than” or negative difference
 - **Green** indicates a “better than” or positive difference

Leading Causes of Death: Overall

Age-Adjusted Rates (2009-2013)	Madison No. of Deaths	Madison Mortality Rate	Rate Difference from NC
1. Diseases of the Heart	268	189.9	+11.7%
2. Cancer	210	143.8	-17.0%
3. Chronic Lower Respiratory Disease	84	59.5	+29.1%
4. Cerebrovascular Disease	73	50.8	+16.2%
5. Alzheimer’s Disease	47	32.6	+12.8%
6. All Other Unintentional Injuries	39	31.7	+8.2%
7. Pneumonia and Influenza	31	22.3	+24.6%
8. Nephritis, Nephrotic Syndrome, Nephrosis	27	20.2	+14.8%
9. Suicide	18	16.0	+31.1%
10. Septicemia	20	14.3	+3.6%
11. Diabetes Mellitus	18	12.5	-42.4%
12. Unintentional Motor Vehicle Injuries	11	12.1	-11.7%
13. Chronic Liver Disease and Cirrhosis	18	10.9	+14.7%
14. Homicide	5	5.1	-12.1%
15. AIDS	1	0.9	-79.3%

Source: NC State Center for Health Statistics

Life expectancy is the average number of additional years that someone at a given age would be expected to live if current mortality conditions remained constant throughout their lifetime. For persons born in 2011-2013, life expectancy among comparator jurisdictions is longest overall and among men, women, and white persons in Madison County. Life expectancy for African Americans is longest in NC as a whole.

Life Expectancy at Birth for Persons Born in 2011-2013

County	Overall	Sex		Race	
		Male	Female	White	African-American
Madison	79.1	76.5	81.6	78.9	n/a
WNC (Regional) Arithmetic Mean	77.7	75.3	80.2	77.9	75.2
State Total	78.2	75.7	80.6	78.8	75.9

Source: NC State Center for Health Statistics

Between the 2012 and 2015 assessment periods there was improvement in mortality rates for four of the nine leading causes of death in Madison County for which there were stable county rates. Mortality attributable to heart disease, CLRD, stroke, Alzheimer's disease and kidney disease increased in the past three years.

- **Color**
 - **Red** indicates a "worse than" or negative difference
 - **Green** indicates a "better than" or positive difference

Leading Causes of Death: Time Comparison

Madison County Rank by Descending Overall Age-Adjusted Rate (2009-2013)-	Rank 2006-2010	Rank Change 2006-2010 to 2009-2013	% Rate Change 2006-2010 to 2009-2013
1. Diseases of the Heart	2	+1	+5.5%
2. Cancer	1	-1	-26.1%
3. Chronic Lower Respiratory Disease	3	nc	+5.5%
4. Cerebrovascular Disease	4	nc	+4.1%
5. Alzheimer's Disease	6	+1	+21.2%
6. All Other Unintentional Injuries	5	-1	-7.6%
7. Pneumonia and Influenza	7	nc	-15.8%
8. Nephritis, Nephrotic Syndrome, Nephrosis	10	+2	+17.4%
9. Suicide	12	+3	n/a
10. Septicemia	9	-1	-25.1%
11. Diabetes Mellitus	11	nc	-17.2%
12. Unintentional Motor Vehicle Injuries	8	-4	-41.0%
13. Chronic Liver Disease and Cirrhosis	13	nc	n/a
14. Homicide	14	nc	n/a
15. AIDS	12	nc	n/a

Source: Sheila Pfaender, Public Health Consultant; based on data from NC State Center for Health Statistics

Madison County mortality rates have decreased over time for three of the four major site-specific cancers, but increased for colorectal cancer.

Incidence rates have increased for breast cancer and colorectal cancer. Both of these site-specific cancers are subjects for periodic community screening efforts and therefore increased surveillance may be contributing to increases in incidence.

Site-Specific Cancer Trends
Madison County
Incidence: 1999-2003 to 2008-2012
Mortality: 2002-2006 to 2009-2013

Cancer Site	Parameter	Overall Trend Direction
Lung Cancer	Incidence	▼
	Mortality	▼
Prostate Cancer	Incidence	▼
	Mortality	▼
Breast Cancer	Incidence	▲
	Mortality	▼
Colorectal Cancer	Incidence	▲
	Mortality	▲

Source: Sheila Pfaender, Public Health Consultant; based on data from NC State Center for Health Statistics

Health Status & Behaviors

Building on the work of America's Health Rankings, the Robert Wood Johnson Foundation, collaborating with the University of Wisconsin Population Health Institute, supports a project to develop health rankings for the counties in all 50 states.

Each state's counties are ranked according to health outcomes and the multiple health factors that determine a county's health. Each county receives a summary rank for its health outcomes and health factors, and also for four different specific types of health factors: health behaviors, clinical care, social and economic factors, and the physical environment.

Below is a list of the parameters considered in each of the health outcome and health factor categories:

Health Outcomes – Mortality	Social and Economic Factors
Premature death	High school graduation
Morbidity	Some college
Poor or fair health	Unemployment
Poor physical health days	Children in poverty
Poor mental health days	Inadequate social support
Low birth weight	Children in single-parent households
Health Factors	Violent crime rate
Health Behaviors	Physical Environment
Adult smoking	Air pollution – particulate matter days
Adult obesity	Air pollution – ozone days
Physical inactivity	Access to recreational facilities
Excessive drinking	Limited access to healthy foods
Motor vehicle death rate	Fast food restaurants
Sexually transmitted infections	
Teen birth rate	
Clinical Care	
Uninsured	
Primary care physicians	
Preventable hospital stays	
Diabetic screening	
Mammography screening	

According to *County Health Rankings* (2014) for NC, Madison County was ranked 38th overall among the 100 NC counties.

Madison County health outcomes rankings out of 100 (where 1 is best):

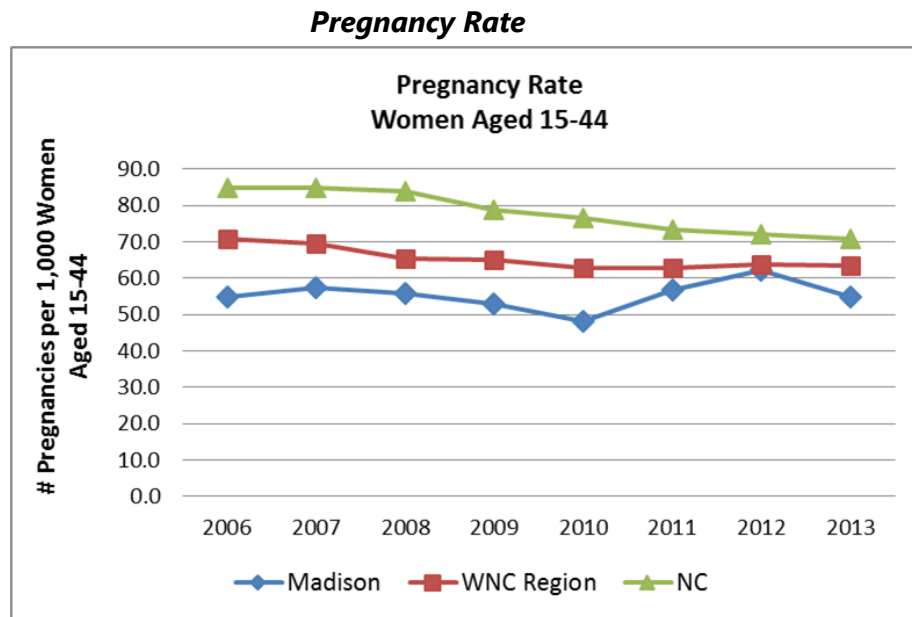
- 33rd in length of life
- 54th for quality of life

Madison County **health factors** rankings out of 100 (where 1 is best):

- 31st for health behaviors
- 34th for clinical care
- 24th for social and economic factors
- 86th for physical environment

The total pregnancy rates in WNC and NC have fallen overall since 2007, but appear to have stabilized recently.

The total pregnancy rate in Madison County was more variable, first falling then rising briefly before falling again. This may be attributed to the growing older population and the decreasing younger population in the county.



Source: NC State Center for Health Statistics

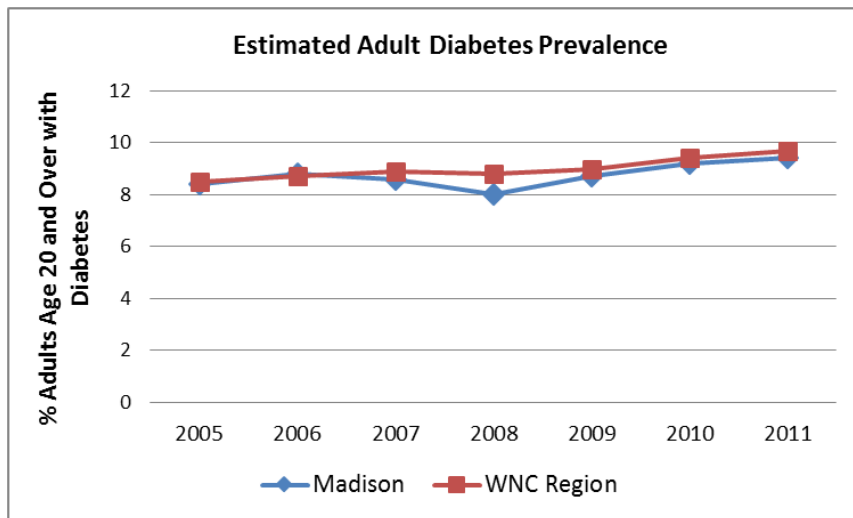
Madison County can boast higher percentages of early prenatal care than its comparators in every period cited (2005-2013) except 2011 and falling low birth rates.

Source: NC State Center for Health Statistics, Baby Book

However, the infant mortality rate in Madison County appears to be increasing. It should be noted, however, that all infant mortality rates in Madison County are unstable, based on small and varying numbers of events.

Source: NC State Center for Health Statistics

The average self-reported prevalence of Madison County adults with diabetes was 8.7% in the period from 2005 - 2011. Over the same period the WNC average was 9.0%. Prevalence of self-reported adult diabetes has been rising over time in both WNC and Madison County.

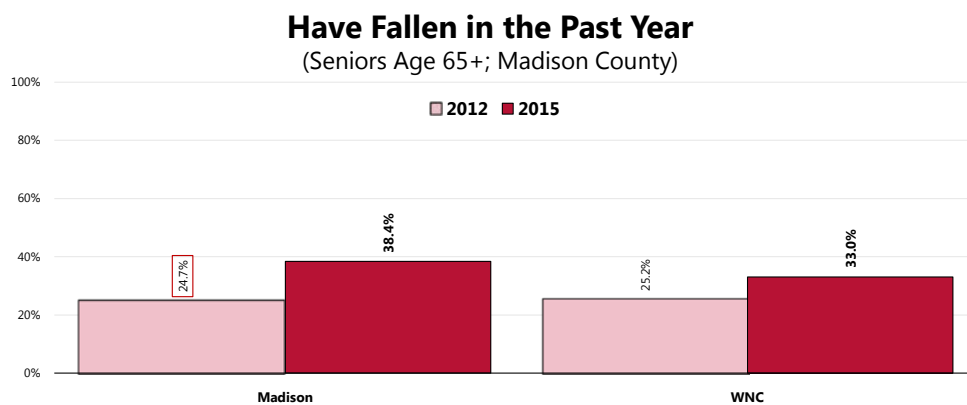


Source: Centers for Disease Control and Prevention, via BRFSS

From 2011 through 2013, 12 Madison County residents died as a result of an unintentional fall. Of the 12 fall-related deaths, 11 (92%) occurred in the population age 65 and older and 5 (42%) occurred in the population age 85 and older.

Source: NC State Center for Health Statistics

In addition, 38.4% of Madison County Seniors age 65 and older stated they had fallen in the past 12 months.



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 88]
 Notes: • Asked of those respondents age 65+.
 • Percentages outlined in red reflect sample sizes deemed unreliable (n<50).

Substantiated reports of child abuse in Madison County have decreased since 2006.

County	Reports Substantiated**					Child Abuse Homicides***						
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2011	2012
Madison	154	118	85	80	93	0	0	0	0	0	0	0
WNC (Regional) Total	2,273	1,958	1,754	1,449	1,512	4	1	2	1	0	4	2
State Total	20,340	14,966	12,429	11,252	11,300	34	25	33	17	19	24	28

Source: Annie E. Casey Foundation KIDS COUNT Data Center

The average number of decayed, missing, or filled teeth discovered among kindergartners screened in Madison County decreased from 2.35 per child in 2009 to 2.03 per child in 2013. This continues to be higher than the state average of 1.54

Source: North Carolina Oral Health Section, County Level Summary (2012-2013)

Between 2006 and 2013, the number of Madison County residents served annually by the Area Mental Health Program increased overall from 840 to 1,921 (▲ 129%)

Over the same 8-year period the number of Madison County residents served annually in State Psychiatric Hospitals decreased from 46 to 1 (▼ 98%).

During the same 8-year period a total of 115 Madison County residents were served in NC State Alcohol and Drug Abuse Treatment Centers (ADATCs), with the number varying considerably but averaging 14 persons annually.

Source: NC Office of State Budget and Management, State Data Center, Log Into North Carolina (LINC)

Mental Health was reported as a "major problem" by key informants. Top concerns were lack of resources, access barriers, and lack of providers

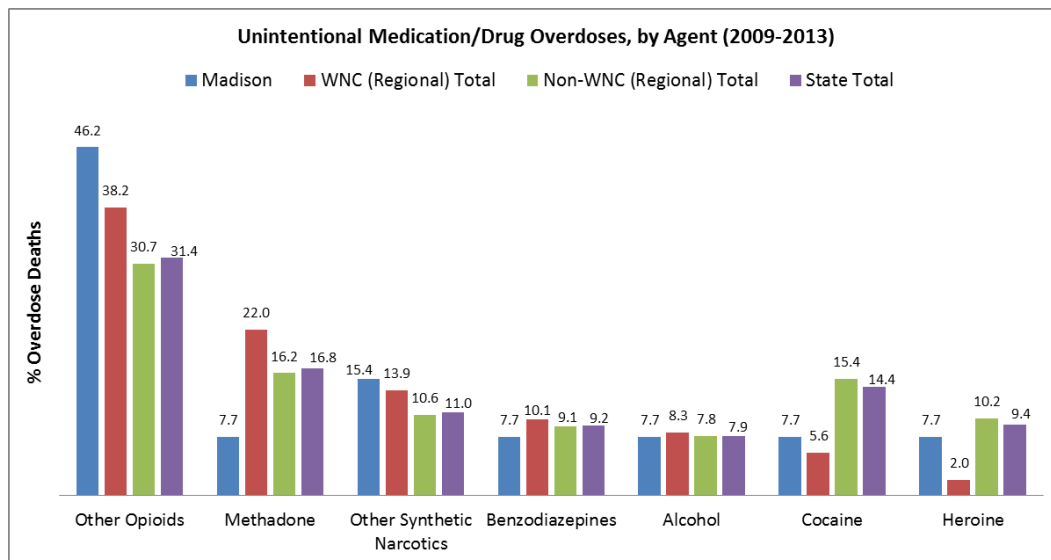
Source: PRC Key Informant Survey, Madison County 2015

Of the 11 unintentional poisoning deaths in Madison county (2009-2013), 11 (100%) were due to medication or drug overdoses.

Sources: NC State Center for Health Statistics and NC DPH, Chronic Disease and Injury Section, Injury and Violence Prevention Branch

"Other Opioids" caused the highest proportion of drug overdose deaths (46.2%) in Madison County in the period 2009-2013. "Other opioids" could include: hydrocodone (e.g., Vicodin), oxycodone (e.g., OxyContin, Percocet), morphine (e.g., Kadian, Avinza), codeine, and related drugs.

Benzodiazepines could include anti-anxiety medications, sleeping pills, anti-seizure drugs, muscle relaxers (e.g., Xanax, Klonopin, Valium, Rohypnol, Ativan, among many others). Other synthetic narcotics could include: bath salts, synthetic marijuana, incense, air fresheners, things known as "designer drugs".



Source: NC DPH, Chronic Disease and Injury Section, Injury and Violence Prevention Branch

The percentage of Binge Drinkers (single occasion- 5+ drinks men, 4+ women) increased from 2012.

Source: PRC Community Survey, Madison County 2015

The percentage of individuals that reported ever sharing a prescription medication with someone else is slightly higher than the WNC rate.

Source: PRC Community Survey, Madison County 2015

Substance Abuse was reported as a “major problem” by key informants. Top concerns were prevalence/incidence, self-medicating, current laws, poverty, crime, lack of education

Source: PRC Key Informant Survey, Madison County 2015

Key informants most often identified methamphetamines or other amphetamines, alcohol, and opioid analgesics as the most problematic substances abused in Madison County.

Source: PRC Key Informant Survey, Madison County 2015

Clinical Care & Access

The percent uninsured adults age 18-64 in Madison County, WNC and NC increased between 2009 and 2010 but have decreased since.

The WNC Region had the highest percent uninsured among comparators in both age groups in every year cited.

In all comparator jurisdictions the age group 0-18 has a significantly lower percentage of uninsured than the adult age group, due at least partly to their inclusion in NC Health Choice.

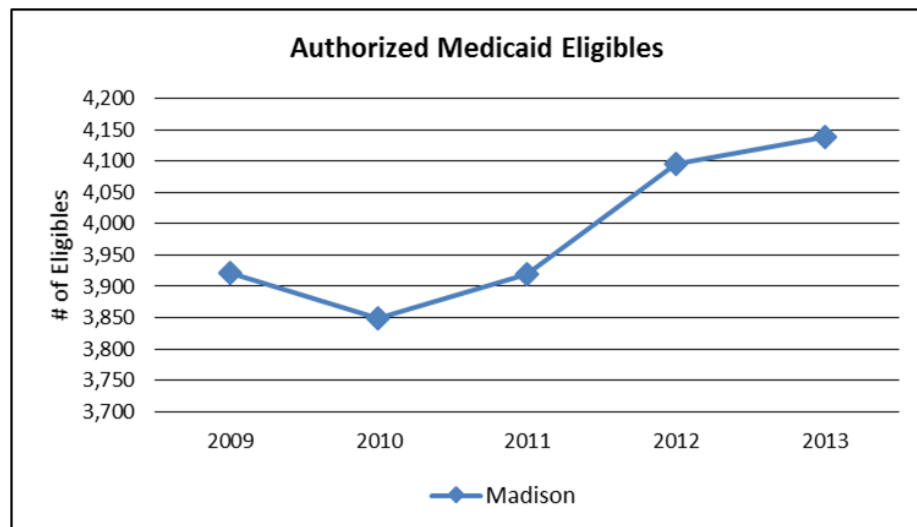
Percent of Population Without Health Insurance, by Age Group

County	2009		2010		2011		2012		2013	
	0-18	18-64	0-18	18-64	0-18	18-64	0-18	18-64	0-18	18-64
Madison County	9.4	22.8	8.2	23.3	6.9	22.5	8.1	22.9	6.9	21.4
WNC Region	9.9	24.2	9.7	26.0	9.1	25.2	9.3	25.4	8.6	25.0
State of NC	8.7	21.9	8.3	23.5	7.9	23.0	7.9	23.4	6.9	22.5

Source: US Census Bureau

The total number of people in Madison County eligible for Medicaid decreased between 2009 and 2010 before increasing every year between 2010 and 2013.

Madison County Medicaid-Eligibles, 2009-2013



Source: NC Division of Medical Assistance

In 2012 Madison County had the lowest ratio among comparators in every category of active health professional cited.

The national ratios were highest among comparators for physicians, primary care physicians, and dentists. The state ratios were highest among comparators for registered nurses and pharmacists.

Number of Active Health Professionals per 10,000 Population

County	2012				
	Physicians	Primary Care Physicians	Dentists	Registered Nurses	Pharmacists
Madison County	5.19	5.19	1.89	31.14	5.0
WNC (Regional) Arithmetic Mean	14.29	6.84	3.61	76.94	7.97
State Ratio	22.31	7.58	4.51	99.56	10.06
National Ratio (date)	23.0 (2011)	8.1 (2011)	5.3 (2012)	91.6 (2012)	9.1 (2012)

Sources: Cecil G. Sheps Center for Health Services Research, US Census Bureau, and US Bureau of Labor Statistics

Data in the county-level Data Workbook indicate that as of 2012 there were 7 certified nurse practitioners and 4 physician assistants among the county's active health professionals. Indicating that these professions help to fill the gap in primary health care services.

At Risk Populations

While Americans as a group are healthier and living longer, segments of the population continue to suffer poor health status. Within Madison County, at risk populations include the unemployed, the uninsured/underinsured, the aging, and those without a high school education.

The geographic layout of the county and a lack of transportation services are disadvantages that add to the health inequities experienced by such groups. Lower income and fixed income families are less likely to have access to transportation and other health resources. Adults with less than a high school education are more likely to be unemployed and experience low health literacy. Not only are individuals less likely to visit a doctor, they are less likely to understand the information given to them. Interventions must consider the county's societal conditions, health behaviors of disparate groups, and their access to health care in order to positively affect health outcomes.

CHAPTER 6 – PHYSICAL ENVIRONMENT

Clean air and water support healthy brain and body function, growth, and development. Air pollutants can harm our health and the environment.

Air pollution is associated with increased asthma rates and can aggravate asthma, emphysema, chronic bronchitis, and other lung diseases, damage airways and lungs, and increase the risk of premature death from heart or lung disease.

Improper medicine disposal, chemical, pesticide, and microbiological contaminants in water can lead to poisoning, gastro-intestinal illnesses, eye infections, increased cancer risk, and many other health problems.

By adopting and implementing various strategies to improve and protect the quality of their air and water, communities like Madison County can support healthy people and environments. (County Health Rankings, <http://www.countyhealthrankings.org/our-approach/healthfactors>)

Air Quality

Outdoor Air Quality

The Air Quality Index (AQI) is an information tool to advise the public. The AQI describes the general health effects associated with different pollution levels, and public AQI alerts (often heard as part of local weather reports) include precautionary steps that may be necessary for certain segments of the population when air pollution levels rise into the unhealthy range. The AQI measures five air pollutants and converts the measures to a number on a scale of 0-500, with 100 representing the National Air Quality Standard. An AQI level in excess of 100 on a given day means that a pollutant is in the unhealthy range that day; an AQI level at or below 100 means a pollutant is in the satisfactory range.

The Environmental Protection Agency reports AQI for nine of the 16 counties in the WNC region, however Madison County is not among those. The data below shows that there were no days rated very unhealthy or unhealthy in 2014. Only 1 day was rated unhealthy for sensitive groups. of the 2014 mean of 181 days in WNC with an assigned AQI, 157 had good air quality and 24 had moderate air quality.

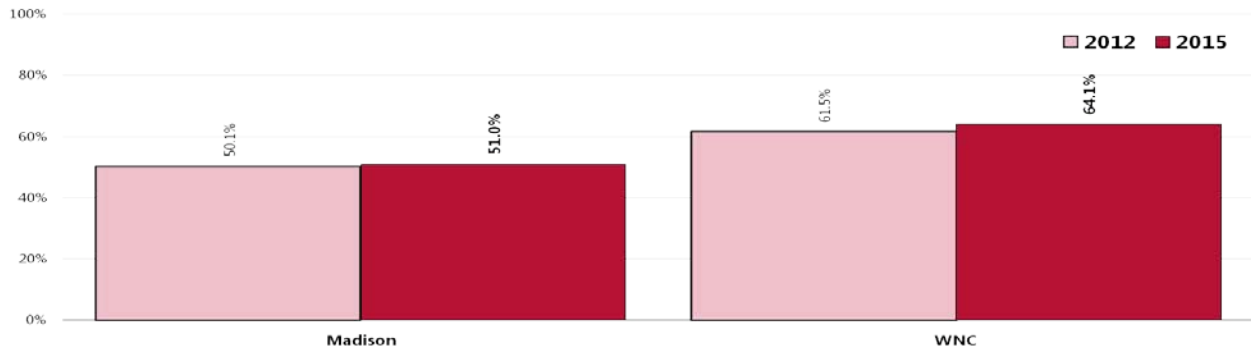
Air Quality Index Summary (2014)

County	No. Days with AQI	Number of Days When Air Quality Was:					Number of Days When Air Pollutant Was:					
		Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy	Very Unhealthy	CO	NO2	O3	SO2	PM2.5	PM10
Madison	No report											
WNC (Regional) Total	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
WNC (Regional) Arithmetic Mean	181	157	24	1	n/a	n/a	n/a	n/a	139	n/a	122	n/a
State Total	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: Annual statistics for 2014 are not final until May 1, 2015.

1 - *Air Quality Index Reports, 2014*. United States Environmental Protection Agency Air Data: http://www.epa.gov/airdata/ad_rep_aqi.html

Believe It Is Important That Public Walking/Biking Trails Are 100% Tobacco-Free ("Strongly Agree" and "Agree" Responses)



Sources: 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 50]

Notes: Asked of all respondents.

Includes "very important" and "somewhat important" responses.

Toxic Chemical Releases

The US Toxic Releases Inventory (TRI) program, created in 1986 as part of the Emergency Planning and Community Right to Know Act, is the tool the EPA uses to track these releases. Approximately 20,000 industrial facilities are required to report estimates of their environmental releases and waste generation annually to the TRI program office. These reports do not cover all toxic chemicals, and they omit pollution from motor vehicles and small businesses.

Madison County ranks 83rd among the state's 86 ranked counties.

Toxic Release Inventory (TRI) Summary (2012)

County	Total On- and Off-Site Disposal or Other Releases, In Pounds	County Rank (of 86 reporting) for Total Releases	Compounds Released in Greatest Quantity	Quantity Released, In Pounds	Releasing Facility	Facility Location
Madison	0	83	Diisocyanates	0	Dynamic Systems Inc.	Leicester
			Phenol	0	Honeywell Sensing & Control	Mars Hill
WNC (Regional) Total	6,416,482					
WNC (Regional) Arithmetic Mean	493,576					
State Total						
NC County Average	0					

1 - TRI Release Reports: Chemical Reports, 2013 (Released October, 2014). US EPA TRI Explorer, Release Reports, Chemical Reports: http://iaspub.epa.gov/triexplorer/tri_release.chemical

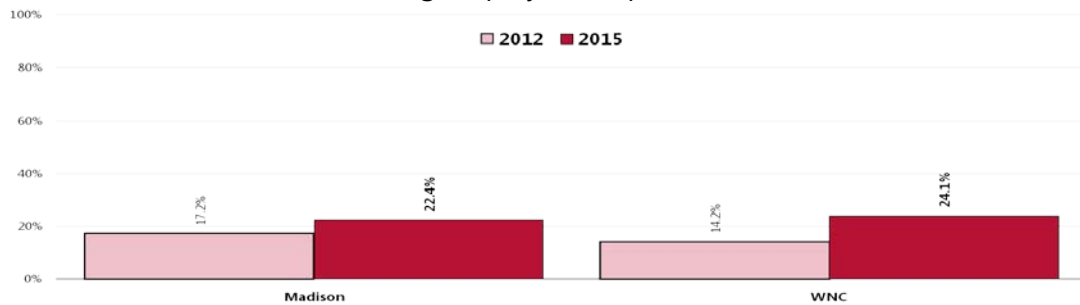
Indoor Air Quality

Tobacco smoking has long been recognized as a major cause of death and disease, responsible for hundreds of thousands of deaths each year in the U.S. Smoking is known to cause lung cancer in humans, and is a major risk factor for heart disease. However, it is not only active smokers who suffer the effects of tobacco smoke. In 1993, the EPA published a risk assessment on passive smoking and concluded that the widespread exposure to environmental tobacco smoke (ETS) in the US had a serious and substantial public health impact (US Environmental Protection Agency, 2011).

ETS is a mixture of two forms of smoke that come from burning tobacco: side stream smoke (smoke that comes from the end of a lighted cigarette, pipe, or cigar) and mainstream smoke (smoke that is exhaled by a smoker). When non-smokers are exposed to secondhand smoke it is called involuntary smoking or passive smoking. Non-smokers who breathe in secondhand smoke take in nicotine and other toxic chemicals just like smokers do. The more secondhand smoke that is inhaled, the higher the level of these harmful chemicals will be in the body (American Cancer Society, 2011).

Survey respondents were asked about their second-hand smoke exposure in their workplace. Specifically, they were asked, "During how many of the past 7 days, at your workplace, did you breathe the smoke from someone who was using tobacco?" In 2012, 17.2% of Madison respondents reported that they had breathed someone else's cigarette smoke at work, in 2015, that number increased to 22.4%.

**Have Breathed Someone Else's
Cigarette Smoke at Work in the Past Week**
(Among Employed Respondents)



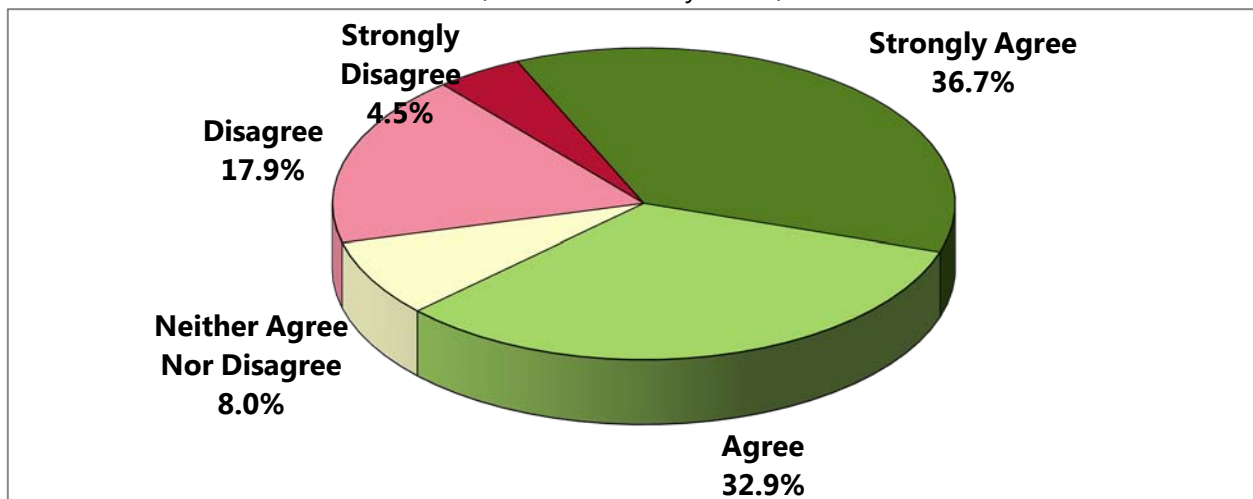
Sources: PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 49]

Notes: Asked of employed respondents.

In order to evaluate community members' perceptions about environmental tobacco smoke, survey respondents were given a series of two statements regarding smoking in public places and asked whether they "strongly agree," "agree," "neither agree nor disagree," "disagree" or "strongly disagree" with each statement. The statements were: "I believe it is important for government buildings and grounds to be 100% tobacco-free," and, "I believe it is important for parks and public walking/biking trails to be 100% tobacco free."

**"I believe it is important for government
buildings and grounds to be 100% tobacco-free."**

(Madison County, 2015)



Sources: 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 52]

Notes: Asked of all respondents.

Water

The source from which the public gets its drinking water is a health issue of considerable importance. Water from all municipal and most community water systems is treated to remove harmful microbes and many polluting chemicals, and is generally considered to be “safe” from the standpoint of public health because it is subject to required water quality standards. Municipal drinking water systems are those operated and maintained by local governmental units, usually at the city/town or county level. Community water systems are systems that serve at least 15 service connections used by year-round residents or regularly serves 25 year-round residents. This category includes municipalities, but also subdivisions and mobile home parks. In February 2014, a regional mean of 55% of the WNC population was being served by community water systems and 33.1% in Madison County (WNC Healthy Impact Data Workbook). The remaining presumably were being served by wells or by some other source, such as springs, creeks, rivers, lakes, ponds or cisterns.

Radon

Radon is a naturally occurring, invisible, odorless gas that comes from soil, rock and water. It is a radioactive decay product of radium, which is in turn a decay product of uranium; both radium and uranium are common elements in soil. Radon usually is harmlessly dispersed in outdoor air, but when trapped in buildings it can be harmful. Most indoor radon enters a home from the soil or rock beneath it, in the same way air and other soil gases enter: through cracks in the foundation, floors, hollow-block walls, and openings around floor drains, heating and cooling ductwork, pipes, and sump pumps. The average outdoor level of radon in the air is normally so low that it is not a problem (NC Department of Environment and Natural Resources).

Radon may also be dissolved in water as it flows over radium-rich rock formations. Dissolved radon can be a health hazard, although to a lesser extent than radon in indoor air. Homes supplied with drinking water from private wells or from community water systems that use wells as water sources generally have a greater risk of exposure to radon in water than homes receiving drinking water from municipal water treatment systems. This is because well water comes from ground water, which has much higher levels of radon than surface waters. Municipal water tends to come from surface water sources which are naturally lower in radon, and the municipal water treatment process itself tends to reduce radon levels even further (NC Department of Environment and Natural Resources).

There are no immediate symptoms to indicate exposure to radon. The primary risk of exposure to radon gas is an increased risk of lung cancer (after an estimated 5-25 years of exposure). Smokers are at higher risk of developing radon-induced lung cancer than non-smokers. There is no evidence that other respiratory diseases, such as asthma, are caused by radon exposure, nor is there evidence that children are at any greater risk of radon-induced lung cancer than are adults (NC Department of Environment and Natural Resources).

Elevated levels of radon have been found in many counties in NC, but the highest levels have been detected primarily in the upper Piedmont and mountain areas of the state where the soils contain

the types of rock (gneiss, schist and granite) that have naturally higher concentrations of uranium and radium (NC Department of Environment and Natural Resources). Eight counties in NC historically have had the highest levels of radon, exceeding, on average, 4 pCi/L (pico curies per liter). These counties are Alleghany, Buncombe, Cherokee, Henderson, Mitchell, Rockingham, Transylvania and Watauga, five of which are in the WNC region.

According to one recent assessment, the regional mean indoor radon level for the 16 counties of WNC was 4.1 pCi/L, over three times the national indoor radon level of 1.3 pCi/L. According to this same source, the level for Madison County was 2.9 pCi/L, over twice the national indoor radon level (WNC Healthy Impact Data Workbook).

Access to Healthy Food & Places

Good nutrition is essential for health. Insufficient nutrition can hinder growth and development. Excessive calorie consumption, however, can lead to overweight and obesity, especially when paired with too little physical activity. Inadequate physical activity itself also contributes to increased risk of a number of conditions including coronary heart disease, diabetes, and some cancers.

Healthy food and regular exercise are important to health. American adults walk less than adults in any other industrialized country. As of 2013, 29 million Americans lived in a food desert, without access to affordable, healthy food. Those with lower education levels, already at-risk for poor health outcomes, frequently live in food deserts.

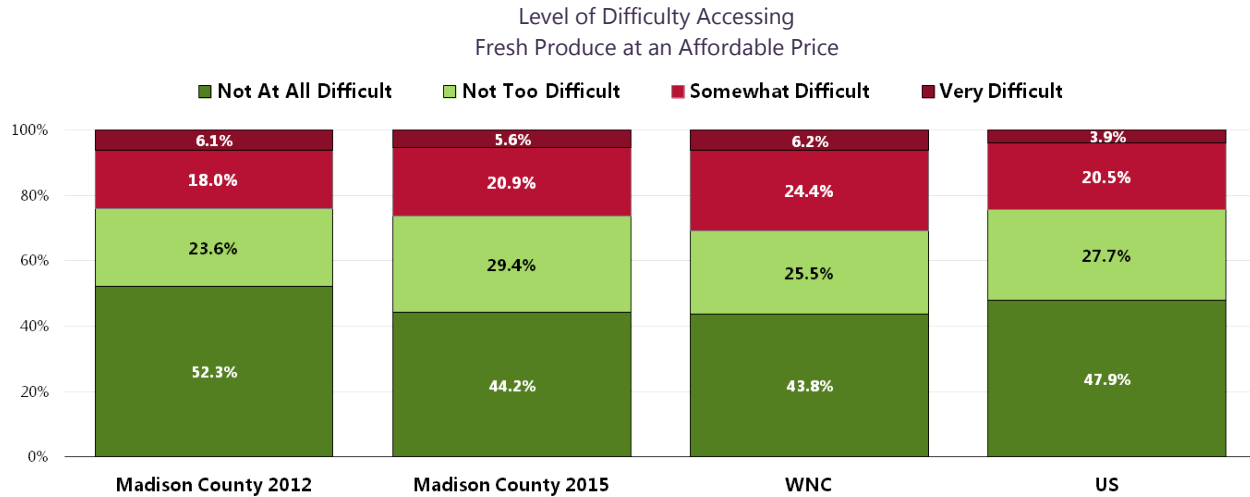
More than two-thirds of all American adults and approximately 32% of children and adolescents are overweight or obese. Obesity is one of the biggest drivers of preventable chronic diseases in the US. Being overweight or obese increases the risk for many health conditions, including type 2 diabetes, heart disease, stroke, hypertension, cancer, Alzheimer's disease, dementia, liver disease, kidney disease, osteoarthritis, and respiratory problems.

Unhealthy food intake and insufficient exercise have economic impacts for individuals and communities. Current estimates for obesity-related health care costs in the US range from \$147 billion to nearly \$210 billion annually, and productivity losses due to job absenteeism cost an additional \$4 billion each year.

Increasing opportunities for exercise and access to healthy foods in neighborhoods, schools, and workplaces can help children and adults eat healthy meals and reach recommended daily physical activity levels. (County Health Rankings, <http://www.countyhealthrankings.org/our-approach/healthfactors>)

Survey respondents in Madison County were asked, "How difficult is it for you to access fresh produce at an affordable price?" Those who found it not at all difficult and very difficult decreased

from 2012 to 2015. However, those who found it not too difficult and somewhat difficult increased during this same period.



Sources: 2015 PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 66]
2013 PRC National Health Survey, Professional Research Consultants, Inc.

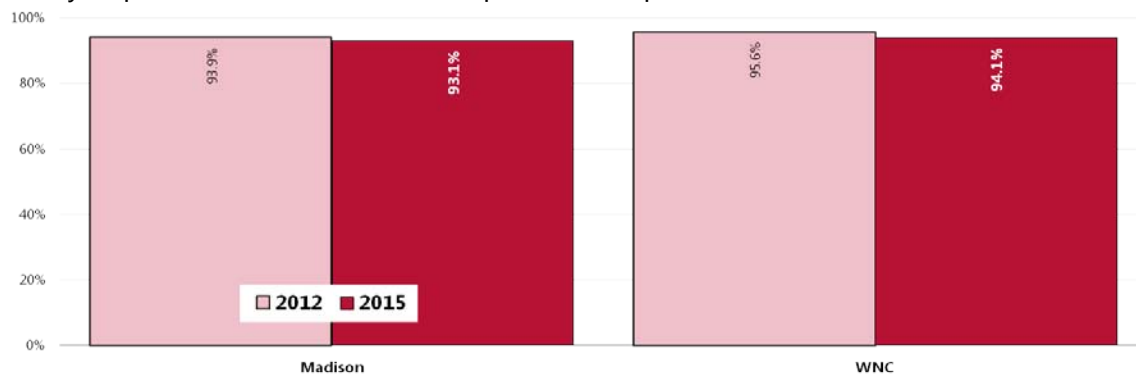
Notes: Asked of all respondents.

There were a total of 81 recreation and fitness facilities in the 16 WNC counties in 2007. This number was reported to have dropped by 26, to a total of 55, in 2009, a decrease of 32%. In Madison County the number of recreational and fitness facilities fell from 1 to 0 over the same period (WNC Healthy Impact Data Workbook).

Survey respondents were asked whether they feel it is important for community organizations to explore ways to increase the public's access to physical activity spaces during off-times.

Believe It Is Important That Community Organizations Make Physical Activity Spaces Available for Public Use After Hours

("Very Important" and "Somewhat Important" Responses)



Sources: PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 77]

Notes: Asked of all respondents.

CHAPTER 7- HEALTH RESOURCES

Health Resources

Process

The process used to review health resources available to meet community needs in Madison County consisted of reviewing the 2-1-1 datasets that WNC Healthy Impact provided to our CHA team. Our team also reported back any gaps to 2-1-1, so that (2-1-1) can continue to serve as the updated resource list accessible via phone and web 24/7 to our residents.

Findings

There is no hospital located in Madison County. The Madison County Health Department offers WIC, immunizations, child health, dental services, family planning, maternity care, BCCCP, health education, community outreach, employee health services and more.

There is one private non-profit medical practice, the Hot Springs Health Program, with four offices located throughout the county. They provide primary health care by a staff of family medicine, internal medicine, and pediatric physicians. They also manage a home health and hospice program along with an in-home rehabilitation program for Madison County residents.

The Madison County Emergency Medical Services offers ambulance transportation from all points in the county. Emergency medical helicopter transport is available from Mission Hospitals in Asheville. The hospital also manages the county's emergency medical services.

There are now three dental offices in the county. The dental clinic at the health department has increased access to care for low income individuals. Mental health services are available through RHA.

Optical and chiropractic services are also available. There is one fitness center in the county. Walking trails can be found across the county. The county has two licensed nursing home facilities, one retirement home, and several group homes.

Resource Gaps

Some resource gaps that were identified by key informants include; affordable health care, specialty and urgent care, indoor/outdoor recreation facilities, affordable healthy foods, alcohol and drug treatment, geriatric services, mental health services, and transportation.

These identified gaps relate directly to our priority health areas. Lack of affordable healthy foods and indoor/outdoor recreation facilities contribute to obesity and lead to the occurrence of many chronic diseases. Having access to mental health and substance abuse services for residents when they are needed as well as affordable health care services is essential for health improvement in our community. Specialty and urgent care services are also lacking in Madison County, forcing residents to travel to Buncombe County or Tennessee to receive the care they need. Traveling out of the

county is often difficult due to affordability and limited transportation options. The need for more geriatric services is increasing in Madison County as the aging population is also increasing.

CHAPTER 8 – IDENTIFICATION OF HEALTH PRIORITIES

Health Issue Identification

Process

To identify the significant health issues in our community, our key partners reviewed data and discussed the facts and circumstances of our community. We used the following criteria to identify significant health issues:

- County data deviates notably from the region, state or benchmark
- Significant disparities exist
- Data reflects a concerning trend related to burden, scope or severity
- Surfaced as a priority community concern

Identified Issues

The following health issues were surfaced through the above process:

- Healthy Weight: increase the incidence of healthy weight for all ages
- Substance Use: prevent substance abuse and misuse for all ages
- Mental Health: improve access to mental health services for all ages
- Child Health: decrease child abuse and increase children's oral health
- Chronic Disease: improve access to preventative care and treatment of chronic disease
- Elderly Population: improve access to services for those age 65 and older
- Falls Among Older Adults: reduce falls among older adults
- Social Determinants of Health: improve social determinants of health
- Tobacco Use and Secondhand Smoke Exposure: reduce tobacco use and secondhand smoke exposure

Priority Health Issue Identification

Process

During our group process, the following criteria were used to select priority health issues of focus for our community over the next three years:

- Criteria 1 – Indicator not trending in the desired direction
- Criteria 2 – Notably different from meaningful comparator (WNC region and NC)
- Criteria 3 – Health Disparity
- Criteria 4 – Significant/emerging community concern

Identified Priorities

The following priority health issues are the final community-wide priorities for our county that were selected through the process described above:

- [Priority 1](#) – Healthy Weight

Nearly one-fourth of children ages 5-13 are obese (BMI \geq 95)

Source: Madison County BMI Assessments 2009-2015

The average self-reported prevalence of Madison County adults considered “obese” on the basis of height and weight (BMI > 30) was 27.7% in the period from 2005 - 2011. Over the same period the WNC average prevalence was 27.1%. The prevalence of adult obesity has been increasing in both WNC and Madison County, but at a higher rate in the county.

Source: Centers for Disease Control and Prevention, via BRFSS

According to County Health Rankings (2014) for NC, Madison County was ranked 38th overall among the 100 NC counties. Madison County health factors rankings out of 100 (where 1 is best): 86th for physical environment

Sources: America’s Health Rankings and County Health Rankings and Roadmaps websites

The percentage of individuals reporting difficulty accessing fresh produce at an affordable price is increased in 2015.

Source: PRC Community Survey, Madison County 2015

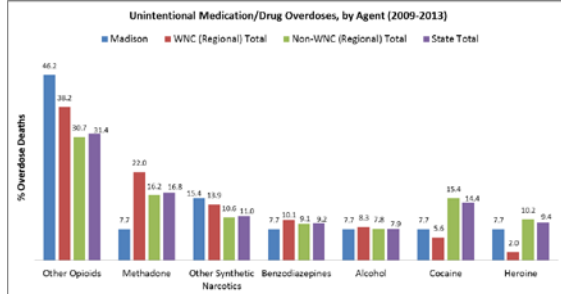
2012-2015 Over 93% of residents surveyed responded it is important to increase physical activity spaces for public use after hours.

Source: PRC Community Survey, Madison County 2015

Nutrition, Physical Activity & Weight was reported as a “major problem” by key informants. Top concerns were access to affordable healthy foods, culture, affordable/safe opportunities for physical activity, lack of education, lifestyle choices

Source: PRC Key Informant Survey, Madison County 2015

- [Priority 2](#) – Substance Use



Source: NC DPH, Chronic Disease and Injury Section, Injury and Violence Prevention Branch

Other Opioids” caused the highest proportion of drug overdose deaths (46.2%) in Madison County in the period 2009-2013. "Other opioids" could include: hydrocodone (e.g., Vicodin), oxycodone (e.g., OxyContin, Percocet), morphine (e.g., Kadian, Avinza), codeine, and related drugs. Benzodiazepines could include anti-anxiety medications, sleeping pills, anti-seizure drugs, muscle relaxers (e.g., Xanax, Klonopin, Valium, Rohypnol, Ativan, among many others). Other synthetic narcotics could include: bath salts, synthetic marijuana, incense, air fresheners, and things known as “designer drugs”.

Of the 11 unintentional poisoning deaths in the county in that period, 11 (100%) were due to medication or drug overdoses.

The percentage of Binge Drinkers (single occasion- 5+ drinks men, 4+ women) is increased from 2012.

Source: PRC Community Survey, Madison County 2015

The percentage of individuals that reported ever sharing a prescription medication with someone else is slightly higher than the WNC rate.

Source: PRC Community Survey, Madison County 2015

Substance Abuse was reported as a “major problem” by key informants. Top concerns were prevalence/incidence, self-medicating, current laws, poverty, crime, lack of education.

Source: PRC Key Informant Survey, Madison County 2015

- [Priority 3](#) – Mental Health

Between 2006 and 2013, the number of Madison County residents served annually by the Area Mental Health Program increased overall from 840 to 1,921

Over the same 8-year period the number of Madison County residents served annually in State Psychiatric Hospitals decreased from 46 to 1

During the same 8-year period a total of 115 Madison County residents were served in NC State Alcohol and Drug Abuse Treatment Centers (ADATCs), with the number varying considerably but averaging 14 persons annually.

Source: NC Office of State Budget and Management, State Data Center, Log Into North Carolina (LINC)

Mental Health was reported as a “major problem” by key informants. Top concerns were lack of resources, access barriers, and lack of providers.
Source: PRC Key Informant Survey, Madison County 2015

PRIORITY ISSUE #1 HEALTHY WEIGHT



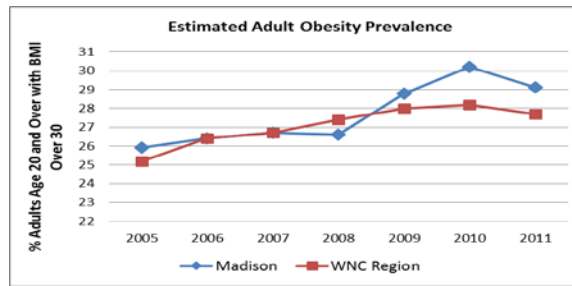
Obesity prevention for children has been a priority issue for several years in Madison County. There has been a history of collaboration with community partners to identify and implement strategies within schools and the community to provide nutrition and physical activity education to school age children. Collaborative strategies have included annual BMI assessments for K-5 students at health fairs, partnership with the School Health Advisory Council to develop a healthy snack procedure which was adopted and approved by the school board in the fall of 2013, along with support and promotion of other county and community agency programs that also implement physical activity and nutrition education programs for children and youth. The 2015 CHA data revealed a need to also include adult focused prevention strategies as well to reach the desired community outcomes for all citizens. Overweight and obesity pose significant health concerns for both children and adults. They are risk factors for a range of chronic diseases, including heart disease and type 2 diabetes. Rural areas experience higher rates of obesity and overweight than the nation as a whole, yet many rural communities do not have the resources to address this critical health concern. Rural healthcare facilities are less likely to have nutritionists, dietitians, or weight management experts available. Rural areas may lack exercise facilities and infrastructure to encourage physical activity. Access to healthy and affordable food is also limited in many rural communities. To address these challenges, rural communities can develop programs and services that help residents learn about and adopt healthy habits to control their weight. As a community, we must commit to creating an environment that helps residents of all ages make healthy choices and take responsibility for decisions that support good health in our homes, neighborhoods, schools, and workplaces.

Data Highlights

Health Indicators

Adult Obesity

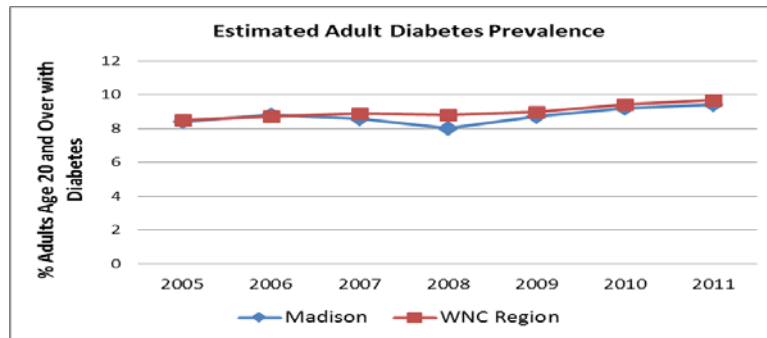
The average self-reported prevalence of Madison County adults considered "obese" on the basis of height and weight (BMI > 30) was 27.7% in the period from 2005 - 2011. Over the same period the WNC average prevalence was 27.1%. The prevalence of adult obesity has been increasing in both WNC and Madison County, but at a higher rate in the county.



Source: Centers for Disease Control and Prevention, via BRFSS

Adult Diabetes

The average self-reported prevalence of Madison County adults with diabetes was 8.7% in the period from 2005 - 2011. Over the same period the WNC average was 9.0%. Prevalence of self-reported adult diabetes has been rising over time in both WNC and Madison County.



Source: Centers for Disease Control and Prevention, via BRFSS

The prevalence of borderline or pre-diabetes is increased from 2012 for Madison County and WNC

2012	Madison 7.6%	WNC 7.6%	
2015	Madison 11.1%	WNC 12.2%	US 5.8%

Source: PRC Community Survey, Madison County 2015

Child Obesity

Nearly one-fourth of children ages 5-13 are obese (BMI \geq 95).

Source: Madison County BMI Assessments 2009-2015

BMI data showed there has been fluctuation in the number of students overweight (85th percentile) but the percent comparison from 2009 -2015 is basically the same and remains higher than the state which is 31%. There has been an increase in the students in the upper 95th percentile (obese) category over the same time period.

Strong science exists supporting the health benefits of eating a healthful diet and maintaining a healthy body weight. Diet and body weight are related to health status. Good nutrition is important to the growth and development of children. A healthful diet also helps individuals reduce their risks for many health conditions, including: overweight and obesity; malnutrition; iron-deficiency anemia; heart disease; high blood pressure; type 2 diabetes; and some cancers.

Madison County Leading Causes of Death: Overall

- **Color**

- **Red** indicates a “worse than” or negative difference
- **Green** indicates a “better than” or positive difference

Age-Adjusted Rates (2009-2013)	Madison No. of Deaths	Madison Mortality Rate	Rate Difference from NC
1. Diseases of the Heart	268	189.9	+11.7%
2. Cancer	210	143.8	-17.0%
3. Chronic Lower Respiratory Disease	84	59.5	+29.1%
4. Cerebrovascular Disease	73	50.8	+16.2%
5. Alzheimer’s Disease	47	32.6	+12.8%

Source: NC State Center for Health Statistics

According to this data, people in Madison County have lower mortality than the population statewide only for cancer among of the five leading causes of death for which there are stable county rates.

Heart Problems, Mental/Depression, and Fracture/Bone/Joint Injury were the top three self reported health problems among those reporting activity limitations.

Source: PRC Community Survey, Madison County 2015

Understanding the Issue

Prevention efforts to change diet and weight should address individual behaviors, as well as the policies and environments that support these behaviors in settings such as schools, worksites, healthcare organizations, and communities. The greatest share of the key informants surveyed during 2015 in Madison County characterized Nutrition, Physical Activity, and Weight as a “major problem”. Top concerns included access to affordable healthy foods, culture, affordable/safe opportunities for physical activity, lack of education, lifestyle choices, lack of resources, and obesity.

Increased physical activity and improved nutrition are among the many factors that can help individuals reach and maintain a healthy weight. (Healthy NC 2020)

In Madison County, the percentage of individuals reporting difficulty accessing fresh produce at an affordable price is increased in 2015. Source: PRC Community Survey, Madison County 2015

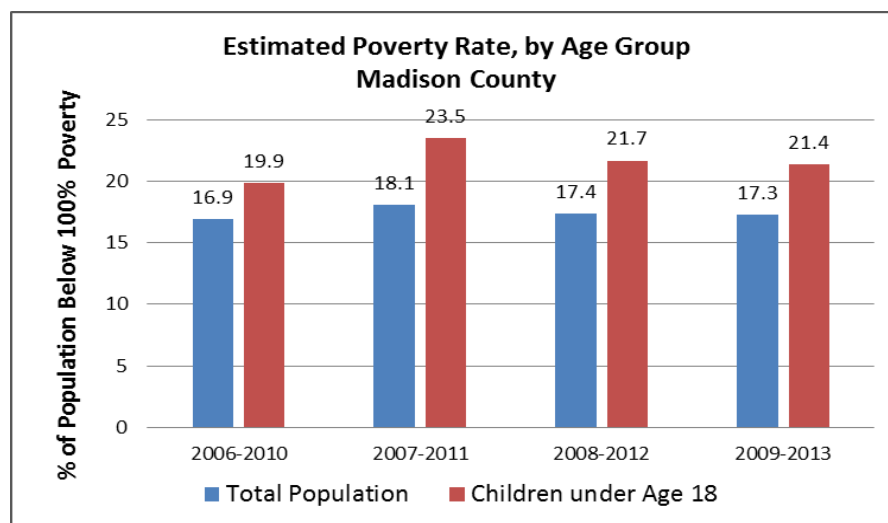
In addition, Nutrition, Physical Activity & Weight was reported as a “major problem” by key informants surveyed in Madison County 2015. Top key informant concerns were: access to affordable healthy foods, culture, affordable/safe opportunities for physical activity, lack of education, lifestyle choices. Source: PRC Key Informant Survey, Madison County 2015

2012-2015 Over 93% of residents surveyed responded it is important to increase physical activity spaces for public use after hours Source: PRC Community Survey, Madison County 2015

Specific Populations At-Risk

Poverty and Age

In Madison County as in much of NC, children suffer significantly and disproportionately from poverty. In Madison County the estimated poverty rate among children under age 18 ranged from between 18% to 30% higher than the overall rate throughout the period cited. Almost two-thirds of children in school receive free or reduced meals.



Source: US Census Bureau

In WNC and NC the total poverty rate increased 2006-2013. The total poverty rate in Madison County decreased in each of the two most recent periods. The total poverty rate in Madison County was the highest among comparators in every period cited except the last. It is interesting to note that Madison County was one of only few WNC counties that actually saw a decrease in poverty in the period cited. Regardless of the trend, the endpoint – 17.3% poverty – is significant. While the poverty rate is decreased slightly, it remains a factor to consider when developing community strategies to increase access to healthy foods and physical activity opportunities. Source: Us Census Bureau

Family Composition

In the 5-year period from 2009-2013, an estimated 253 Madison County grandparents living with their minor-aged grandchildren also were financially responsible for them. With the projected growth over the next two decades of the population in Madison over the age of 65, these numbers may increase. This family composition presents financial challenges to access healthier food options in some cases due to fixed incomes. Over the same period there were an estimated 8,207 households in Madison County, 1,951 of them with children under 18 years of age. Among the households with minor-age children, 68% were headed by a married couple. An additional 22% were headed by a female single parent, and 10% were headed by a male single parent. Source: US Census Bureau

Health Resources available/needed

According to County Health Rankings (2014) for NC, Madison County was ranked 38th overall among the 100 NC counties. Madison County health factors rankings out of 100 (where 1 is best): 86th for physical environment Sources: America's Health Rankings and County Health Rankings and Roadmaps websites One fitness center is located in Mars Hill only. There are some walking trails across the county and there is ongoing discussion with the public school system to establish a formal joint use agreement to allow the general public to utilize outside tracks and trails at the schools. Due to the geography of Madison County, people are isolated because of the rugged terrain in many areas. Consideration needs to be given to make resources available in multiple areas of the county. *Eat Smart /Move More/ Weigh Less* classes have been offered in the community in partnership with NC Cooperative Extension and Madison County Health Department staff. Classes were well attended, however due to budget changes and staff availability this program may not be offered as often in the future. There is continued partnership with *WNC Healthy Kids* to promote the *5-2-1 almost none* message with children during school health fairs, on materials for parents, and in other outreach efforts in the community. The *It's OK to Play* campaign was implemented in the fall of 2014 to increase access to safe places for children to be physically active. A total of 8 community centers, town and county parks, and churches have participated. *Steps for Health* nutrition education curriculum is provided by NC Cooperative Extension staff annually to 3rd graders.

Additional resources needed to address this priority issue include increased funding to support existing and future evidence based programs that focus on education about the connection between healthy eating and physical activity to chronic disease prevention as well as funds to enhance and build sidewalks or greenways in other areas of the county. Increased community education is needed for all age groups to increase knowledge of basic nutrition issues, and ongoing issues with overweight and obesity.

PRIORITY ISSUE #2 MENTAL HEALTH



Mental health and physical health are closely connected. Mental illnesses, such as depression and anxiety, affect people's ability to participate in health-promoting behaviors. In turn, problems with physical health, such as chronic diseases, can have a serious impact on mental health and decrease a person's ability to participate in treatment and recovery. Access to comprehensive, quality health care services is important for the achievement of health equity and

for increasing the quality of a healthy life for everyone. It impacts: overall physical, social, and mental health status; prevention of disease and disability; detection and treatment of health conditions; quality of life; preventable death; and life expectancy. Changes in Western North Carolina include the late 2013 consolidation of Western Highlands Network with Smoky Mountain Center which follows a one provider model. Addressing Mental Health is complex and will require the collaborative planning, action, and coordination of multiple partners in our community. Access to preventative mental health services has been a priority issue in Madison for a number of years. The Mental Health Committee of the Madison Community Health Consortium was formed in 2008 and has played an important role in promoting dialogue between area mental health providers to identify community issues and concerns needing to be addressed in Madison County. Members work to improve access to preventative mental health services with strategies to increase the community awareness of services offered and available while also collaborating to share information among providers, identify service gaps and facilitate collaboration to address identified gaps. While capacity building among behavioral health providers has been very successful, the desired result for the community has not yet been reached. The community must continue to combine resources to help in meeting this critical need.

Data Highlights

Health Indicators

Trend: Persons Served in Area Mental Health Programs (2006 through 2013)

Between 2006 and 2013, the number of Madison County residents served annually by the Area Mental Health Program increased overall from 840 to 1,921 (▲ 129%) No clear pattern of service utilization is apparent from this data and may represent either increased community awareness of area mental health programs or increasing need to access these programs.

County	# Persons Served in Area Mental Health Programs							
	2006	2007	2008	2009	2010	2011	2012	2013
Madison	840	844	590	665	1,133	1,290	1,284	1,921
WNC (Regional) Total	30,952	31,271	28,380	24,527	28,453	29,742	33,258	31,290
WNC (Regional) Arithmetic Mean	1,935	1,954	1,774	1,533	1,778	1,859	2,079	1,956
State Total	322,397	315,338	306,907	309,155	332,796	360,180	315,284	306,080

Source: NC Office of State Budget and Management, State Data Center

Over the same 8-year period the number of Madison County residents served annually in State Psychiatric Hospitals decreased from 46 to 1 (▼ 98%).

County	# Persons Served in NC State Psychiatric Hospitals							
	2006	2007	2008	2009	2010	2011	2012	2013
Madison	46	47	43	35	13	7	0	1
WNC (Regional) Total	1,509	1,529	1190	818	564	355	27	27
WNC (Regional) Arithmetic Mean	94	96	74	51	35	22	2	2
State Total	18,292	18,498	14,643	9,643	7,188	5,754	4,572	3,964

Source: NC Office of State Budget and Management, State Data Center

Understanding the Issue

The 2015 PRC Community survey self reported information regarding poor mental health days, access to social/emotional support, and mental health care or counseling has improved since 2012. However, it is important to note mental health issues can be exacerbated by unemployment, family stress, housing problems, etc.

The percentage of Madison County residents self reporting of >7 Days of Poor Mental Health in the Past Month is decreased from 2012 Source: PRC Community Survey, Madison County 2015

The percentage of Madison County residents reporting "Always" or "Usually" Get Needed Social/Emotional Support is increased from 2012 Source: PRC Community Survey, Madison County 2015

The percentage of individuals reporting being Unable to Get Needed

Mental Health Care or Counseling in the Past Year is decreased from 2012 Source: PRC Community Survey, Madison County 2015

The greatest share of key informants surveyed in Madison County 2015 characterized Mental Health as a "major problem". Top key informant concerns included lack of local resources, access barriers, lack of providers, prevalence/incidence, environment/family, and cost. Concerns regarding lack of resources were many people of all ages are receiving treatment, or need

treatment and are not able to get what they need. Lack of mental health treatment leads to increase in violence, crime and instability in homes and workplaces

PRC Key Informant Survey Madison County 2015 Other Health Provider/Community/Business Leader

Specific Populations At-Risk

Individuals with Medicare experience access barriers to mental health services. In addition, there are no choices in providers for the Medicaid population. This may be contributed to the lack of additional behavioral health providers in Madison County and the local LME, Smoky Mountain Center, single provider model for service.

Health Resources available/needed

The Mental Health Committee of the Madison Community Health Consortium was formed in 2008 and has played an important role in promoting dialogue between area mental health providers to identify community issues and concerns needing to be addressed in Madison County. Members collaborate for a media campaign each May to increase awareness of behavioral health and substance abuse services. In 2015, members worked with local clerk of court and magistrates to organize a community forum with speakers from local LME, behavioral health providers and hospital to assist in educating the community about how to navigate behavioral health services. There are very few private providers since Smoky Mountain Center (SMC) model is to contract with only a single provider for all services. There are a variety of trainings that are available from SMC for both community and agencies which is a great resource. Community members and staff at Madison Middle School received Youth Mental Health First Aid training in 2015 which educates individuals on warning signs of behavioral health issues and training to connect with services. Due to the geography challenges of Madison County, there is ongoing need to have more services available throughout the county as transportation is often a barrier for individuals to access existing services.

PRIORITY ISSUE #3 SUBSTANCE USE



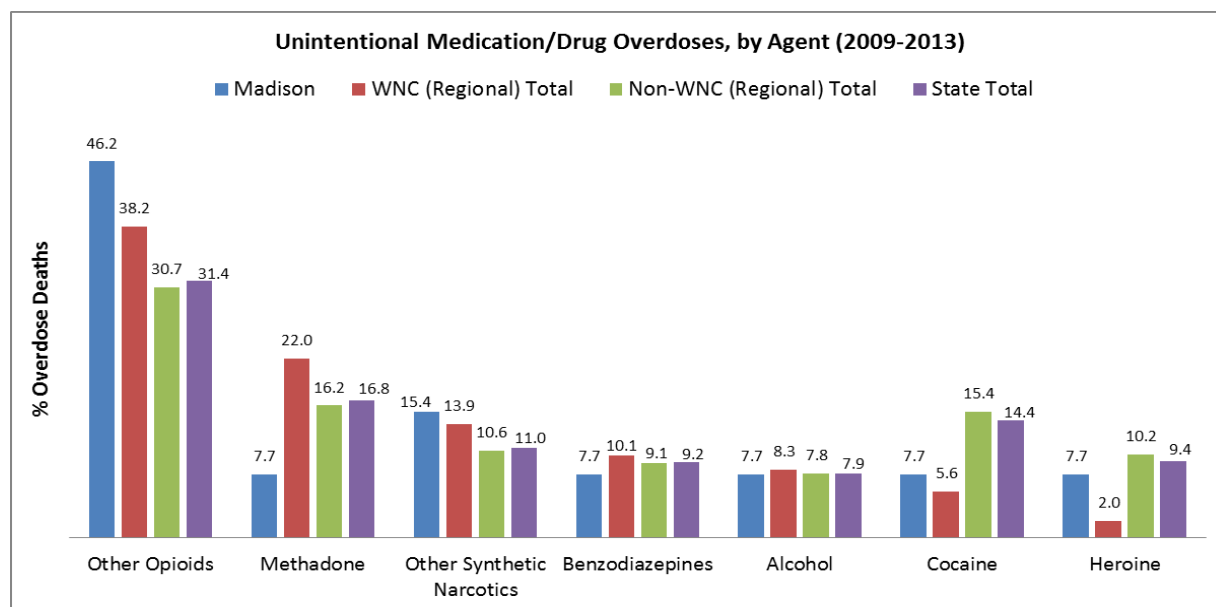
Substance use and abuse are major contributors to death and disability in North Carolina. Addiction to drugs and/or alcohol is a chronic health problem. People who suffer from abuse or dependence are at risk for premature death, injuries and disability. Prevention of misuse and abuse of substances is critical. In addition, substance use and misuse can have adverse consequences for families, communities, and society. There has been increasing community concern in Madison County about substance use and

misuse. In 2014 the Madison Substance Awareness Coalition formed with two year grant funding from Wake Forest School of Medicine and the North Carolina Coalition Initiative (NCCI) to survey and identify community strategies to reduce substance use and misuse of prescription medication. There has been capacity built with multiple sectors in the community including law enforcement, health department, local health providers, faith community, etc. Through both the NCCI and 2015 Community Health Assessment data results, it is clear there are increasing focus areas around substance use and the need for additional strategies in multiple levels of the community.

Data Highlights

Health Indicators

Unintentional Medication/Drug Overdoses



Of the 11 unintentional poisoning deaths in the county in that period, 11 (100%) were due to medication or drug overdoses. "Other Opioids" caused the highest proportion of drug overdose deaths (46.2%) in Madison County in the period 2009-2013. Methadone is a synthetic opioid usually associated with treatment for drug abuse. "Other opioids" could include: hydrocodone (e.g., Vicodin), oxycodone (e.g., OxyContin, Percocet), morphine (e.g., Kadian, Avinza), codeine, and related drugs. Benzodiazepines could include anti-anxiety medications, sleeping pills, anti-seizure drugs, muscle relaxers (e.g., Xanax, Klonopin, Valium, Rohypnol, Ativan, among many others). Other synthetic narcotics could include: bath salts, synthetic marijuana, incense, air fresheners, things known as "designer drugs".

Source: NC DPH, Chronic Disease and Injury Section, Injury and Violence Prevention Branch

The percentage of individuals that reported ever sharing a prescription medication with someone else is slightly higher than the WNC rate Source: PRC Community Survey, Madison County 2015

A total of 115 Madison County residents were served in NC State Alcohol and Drug Abuse Treatment Centers (ADATCs) from 2006 to 2013 with the number varying considerably but averaging 14 persons annually.

County	# Persons Served in NC Alcohol and Drug Treatment Centers							
	2006	2007	2008	2009	2010	2011	2012	2013
Madison	19	13	13	9	22	13	13	13
WNC (Regional) Total	664	604	774	751	921	861	805	830
WNC (Regional) Arithmetic Mean	42	38	48	47	58	54	50	52
State Total	4,003	3,733	4,284	4,812	4,483	4,590	4,265	4,343

Source: NC Office of State Budget and Management, State Data Center

Tobacco Use

The percentage of current smokers reported (includes regular and occasional smokers) is slightly increased from 2012 Source: PRC Community Survey, Madison County 2015

Individuals reporting exposure to someone else's cigarette smoke at work in the past week is increased from 2012 Source: PRC Community Survey, Madison County 2015

Almost 70% of survey respondents believe it is important for government buildings and grounds to be 100% tobacco-free Source: PRC Community Survey, Madison County 2015

Self reported use of E-Cigarettes is slightly higher the WNC rate Source: PRC Community Survey, Madison County 2015

Individuals reporting current use of smokeless tobacco products is decreased from 2012 but remains higher than the WNC rate Source: PRC Community Survey, Madison County 2015

Understanding the Issue

The greatest share of key informants characterized Substance Abuse as a "major problem" in Madison County. Among those rating this issue as a major concern, the greatest barriers to accessing substance abuse treatment as prevalence/incidence, self-medicating, poverty, crime, lack of treatment facilities/programs and prevalence of overdose. Concerns regarding prevalence/incidence focus on Madison County's history of substance use struggles. Like many rural NC counties, prescription drug misuse and trafficking has become a major issue. Additionally, only one treatment provider is currently allowed to provide substance abuse treatment; RHA. Source: PRC Key Informant Survey Madison County 2015 Other Health Provider Theft Report from Madison County Sheriff's Office 2014 revealed 93% of all thefts in Madison County involved drugs. More than ½ of these thefts involved prescription medication; whether stealing drugs, stealing money or items to pawn for drugs or found with drugs on their person. This same statistic is what keeps child protective services busy and what also fuels poor health and mental health. Many of the folks abusing substances are doing so due to untreated mental health which creates a viscous circle. Source: PRC Key Informant Survey Madison County 2015 Social Service Provider

Tobacco Use was reported as a "major problem" by key informants. Top concerns included culture, prevalence/incidence, lack of resources & education, and addiction Source: PRC Key Informant Survey, Madison County 2015

Many factors influence tobacco use, disease, and mortality. Risk factors include race/ethnicity, age, education, and socioeconomic status. Significant disparities in tobacco use exist geographically; such disparities typically result from differences among states in smoke-free

protections, tobacco prices, and program funding for tobacco prevention (DHHS, 2010). Madison County has a long history of farming tobacco as a main source of income and the culture here does not encourage smoking cessation and addiction is hard to break.

Specific Populations At-Risk

Low-income, uneducated and unemployed individuals are frequently at risk for developing substance use issues. According to the Madison County Drug Screening Report for 2013-2014, there was a 17% increase in positive drug screens for individuals referred by the Department of Social Services. Youth and adults are at risk a at risk populations for tobacco use by smoking or using smokeless tobacco and also exposure to second hand smoke.

Health Resources available/needed

Madison Substance Awareness Coalition formed October 2014 with representatives from law enforcement, pharmacy, health providers, social services, schools, public health, and faith community through grant funding from NC Coalition Initiative. Current community strategies are focused on educating the community about prescription medication safety related to safe storage, not sharing medication, and proper disposal at permanent drop boxes in the community. Funding for this initiative ends spring of 2016 and additional funding will be needed to continue these projects in the community. The Madison County Health Department has offered tobacco cessation programs to prenatal clients over the past three years and in 2015 implemented a Freedom From Smoking class in the community. Also, there has been tobacco education provided in the school system. These tobacco prevention and cessation programs are grant funded yearly and received decreased funding for 2015-2016 grant cycle. School administration has requested tobacco cessation programs with middle and high school students if future funding can be obtained.

CHAPTER 9 - NEXT STEPS

Sharing Findings

The 2015 Madison County Community Health Assessment will be shared with the Madison County Board of Health and Madison County Board of Commissioners. The Madison Community Health Consortium, and Mission Health will be instrumental in reviewing the report and assisting with development of action plans to address the identified health priorities over the next three years. In addition, Madison County, along with our partners in WNC Healthy Impact, will move forward with information in this Community Health Assessment to collaborative action planning and determining how we can most effectively impact health in western North Carolina. Dissemination of this CHA report will include making all reports publicly available on the Madison County Health Department website, the WNC Healthy Impact website, and at

local libraries.

Collaborative Action Planning

Collaborative action planning with hospitals and other community partners will result in the creation of a community-wide plan that outlines what will be aligned, supported and/or implemented to address the priority health issues identified through this assessment process. There are current Mental Health and Substance Awareness action teams that will participate in community planning in those areas. A Healthy Weight action team is forming with members from former Child Health and Community Health committees along with volunteers from other agencies and organizations.

Appendices

Appendix A – Data Collection Methods & Limitations

Appendix B – Secondary Data Profile

- 2ndary Data Summary

Appendix C – County Maps

Appendix D – Survey Findings

- WNC Healthy Impact Survey Instrument
- Community Health Survey Results

Appendix E – Key-Informant Survey Findings

APPENDIX A - DATA COLLECTION METHODS & LIMITATIONS

Secondary Data from Regional Core

Secondary Data Methodology

In order to learn about the specific factors affecting the health and quality of life of residents of WNC, the WNC Healthy Impact data workgroup and consulting team identified and tapped numerous secondary data sources accessible in the public domain. For data on the demographic, economic and social characteristics of the region sources included: the US Census Bureau; Log Into North Carolina (LINC); NC Office of State Budget and Management; NC Department of Commerce; Employment Security Commission of NC; NC Department of Public Instruction; NC Department of Justice; NC Division of Medical Assistance; and the Cecil B. Sheps Center for Health Services Research. The WNC Healthy Impact consultant team made every effort to obtain the most current data available *at the time the report was prepared*. It was not possible to continually update the data past a certain date; in most cases that end-point was August 2015.

The principal source of secondary health data for this report was the NC State Center for Health Statistics (NC SCHS), including its County Health Data Books, Behavioral Risk Factor Surveillance System, Vital Statistics unit, and Cancer Registry. Other health data sources included: NC Division of Public Health (DPH) Epidemiology Section; NC Division of Mental Health, Developmental Disabilities and Substance Abuse Services; National Center for Health Statistics; NC DPH Nutrition Services Branch; UNC Highway Safety Research Center; and NC DETECT. Because in any CHA it is instructive to relate local data to similar data in other jurisdictions, throughout this report representative county data is compared to like data describing the 16-county region and the state of NC as a whole. The WNC regional comparison is used as “peer” for the purposes of this assessment. Where appropriate and available, trend data has been used to show changes in indicators over time.

Environmental data was gathered from sources including: US Environmental Protection Agency; US Department of Agriculture, and NC Radon Program.

It is important to note that this report contains data retrieved **directly** from sources in the public domain. In some cases the data is very current; in other cases, while it may be the most current available, it may be several years old. Note also that the names of organizations, facilities, geographic places, etc. presented in the tables and graphs in this report are quoted exactly as they appear in the source data. In some cases these names may **not** be those in current or local usage; nevertheless they are used so readers may track a particular piece of information directly back to the source.

Data Definitions

Reports of this type customarily employ a range of technical terms, some of which may be unfamiliar to many readers. Health data, which composes a large proportion of the information

included in this report, employs a series of very specific terms which are important to interpreting the significance of the data. While these technical health data terms are defined in the report at the appropriate time, there are some data caveats that should be applied from the onset.

Error

First, readers should note that there is some error associated with every health data source. Surveillance systems for communicable diseases and cancer diagnoses, for instance, rely on reports submitted by health care facilities across the state and are likely to miss a small number of cases, and mortality statistics are dependent on the primary cause of death listed on death certificates without consideration of co-occurring conditions.

Age-adjusting

Secondly, since much of the information included in this report relies on *mortality* data, it is important to recognize that many factors can affect the risk of death, including race, gender, occupation, education and income. The most significant factor is age, because an individual's risk of death inevitably increases with age. As a population ages, its collective risk of death increases; therefore, an older population will automatically have a higher overall death rate just because of its age distribution. At any one time some communities have higher proportions of "young" people, and other communities have a higher proportion of "old" people. In order to compare mortality data from one community with the same kind of data from another, it is necessary first to control for differences in the age composition of the communities being compared. This is accomplished by *age-adjusting* the data. Age-adjustment is a statistical manipulation usually performed by the professionals responsible for collecting and cataloging health data, such as the staff of the NC State Center for Health Statistics (NC SCHS). It is not necessary to understand the nuances of age-adjustment to use this report. Suffice it to know that age-adjusted data are preferred for comparing most health data from one population or community to another and have been used in this report whenever available.

Rates

Thirdly, it is most useful to use *rates* of occurrence to compare data. A rate converts a raw count of events (deaths, births, disease or accident occurrences, etc.) in a target population to a ratio representing the number of same events in a standard population, which removes the variability associated with the size of the sample. Each rate has its own standard denominator that must be specified (e.g., 1,000 women, 100,000 persons, 10,000 people in a particular age group, etc.) for that rate.

While rates help make data comparable, it should be noted that small numbers of events tend to yield rates that are highly unstable, since a small change in the raw count may translate to a large change in rate. To overcome rate instability, another convention typically used in the presentation of health statistics is *data aggregation*, which involves combining like data gathered over a multi-year period, usually three or five years. The practice of presenting data that are aggregated avoids the instability typically associated with using highly variable year-by-year data, especially for measures consisting of relatively few cases or events. The calculation is

performed by dividing the sum number of cases or deaths in a population due to a particular cause over a period of years by the sum of the population size for each of the years in the same period. Health data for multiple years or multiple aggregate periods is included in this report wherever possible. Sometimes, however, even aggregating data is not sufficient, so the NC SCHS recommends that rates based on fewer than 20 events—whether covering an aggregate period or not—be considered *unstable*. In fact, in some of its data sets the NC SCHS no longer calculates rates based on fewer than 20 events. To be sure that unstable data do not become the basis for local decision-making, this report will highlight and discuss primarily rates based on 20 or more events in a five-year aggregate period, or 10 or more events in a single year. Where exceptions occur, the text will highlight the potential instability of the rate being discussed.

Regional arithmetic mean

Fourthly, sometimes in order to develop a representative regional composite figure from 16 separate county measures the consultants calculated a *regional arithmetic mean* by summing the available individual county measures and dividing by the number of counties providing those measures. It must be noted that when regional arithmetic means are calculated from *rates* the mean is not the same as a true average rate but rather an approximation of it. This is because most rates used in this report are age adjusted, and the regional mean cannot be properly age-adjusted.

Describing difference and change

Fifthly, in describing differences in data of the same type from two populations or locations, or changes over time in the same kind of data from one population or location—both of which appear frequently in this report—it is useful to apply the concept of *percent* difference or change. While it is always possible to describe difference or change by the simple subtraction of a smaller number from a larger number, the result often is inadequate for describing and understanding the *scope* or *significance* of the difference or change. Converting the amount of difference or change to a percent takes into account the relative size of the numbers that are changing in a way that simple subtraction does not, and makes it easier to grasp the meaning of the change. For example, there may be a rate of for a type of event (e.g., death) that is one number one year and another number five years later. Suppose the earlier figure is 12.0 and the latter figure is 18.0. The simple mathematical difference between these rates is 6.0. Suppose also there is another set of rates that are 212.0 in one year and 218.0 five years later. The simple mathematical difference between these rates also is 6.0. But are these same simple numerical differences really of the same significance in both instances? In the first example, converting the 6 point difference to a percent yields a relative change factor of 50%; that is, the smaller number increased by half, a large fraction. In the second example, converting the 6 point difference to a percent yields a relative change factor of 2.8%; that is, the smaller number increased by a relatively small fraction. In these examples the application of percent makes it very clear that the difference in the first example is of far greater degree than the difference in the second example. This document uses percentage almost exclusively to describe and highlight degrees of difference and change, both positive (e.g., increase, larger than, etc.) and negative (e.g., decrease, smaller than, etc.)

Data limitations

Some data that is used in this report may have inherent limitations, due to the sample size, its geographic focus, or its being out-of-date, for example, but it is used nevertheless because there is no better alternative. Whenever this kind of data is used, it will be accompanied by a warning about its limitations.

Gaps in Available Information

There was a change in the format of women who smoke while pregnant was collected which did not allow for accurate comparison with 2012 data.

WNC Healthy Impact Survey (Primary Data)

Survey Methodology

Survey Instrument

To supplement the secondary core dataset, meet additional stakeholder data needs, and hear from community members about their concerns and priorities, a community survey, *2015 WNC Healthy Impact Survey* (a.k.a. 2015 PRC Community Health Survey), was developed and implemented in 16 counties across western North Carolina. The survey instrument was developed by WNC Healthy Impact's data workgroup, consulting team, and local partners, with assistance from Professional Research Consultants, Inc. (PRC). Many of the questions are derived from the Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS), as well as other public health surveys; other questions were developed specifically for WNC Healthy Impact to address particular issues of interest to communities in western North Carolina. Each county was given the opportunity to include three additional questions of particular interest to their county, which were asked of their county's residents.

Inc.

Professional Research Consultants,



The geographic area for the regional survey effort included 16 counties: Buncombe, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania and Yancey counties.

Sample Approach & Design

To ensure the best representation of the population surveyed, a telephone interview methodology (one that incorporates both landline and cell phone interviews) was employed. The primary advantages of telephone interviewing are timeliness, efficiency and random-selection capabilities.

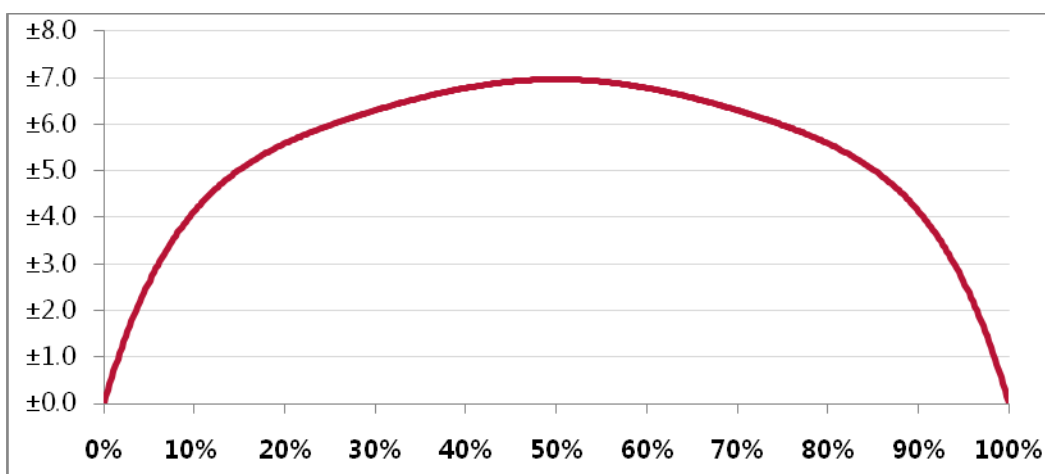
The sample design used for this regional effort consisted of a stratified random sample of 3,300 individuals age 18 and older in Western North Carolina, with 200 from our county. All administration of the surveys, data collection and data analysis was conducted by Professional

Research Consultants, Inc. (PRC). The interviews were conducted in either English or Spanish, as preferred by respondents.

Sampling Error

For our county-level findings, the maximum error rate at the 95% confidence level is $\pm 6.9\%$).

**Expected Error Ranges for a Sample of 200
Respondents at the 95 Percent Level of Confidence**



Note: • The "response rate" (the percentage of a population giving a particular response) determines the error rate associated with that response. A "95 percent level of confidence" indicates that responses would fall within the expected error range on 95 out of 100 trials.

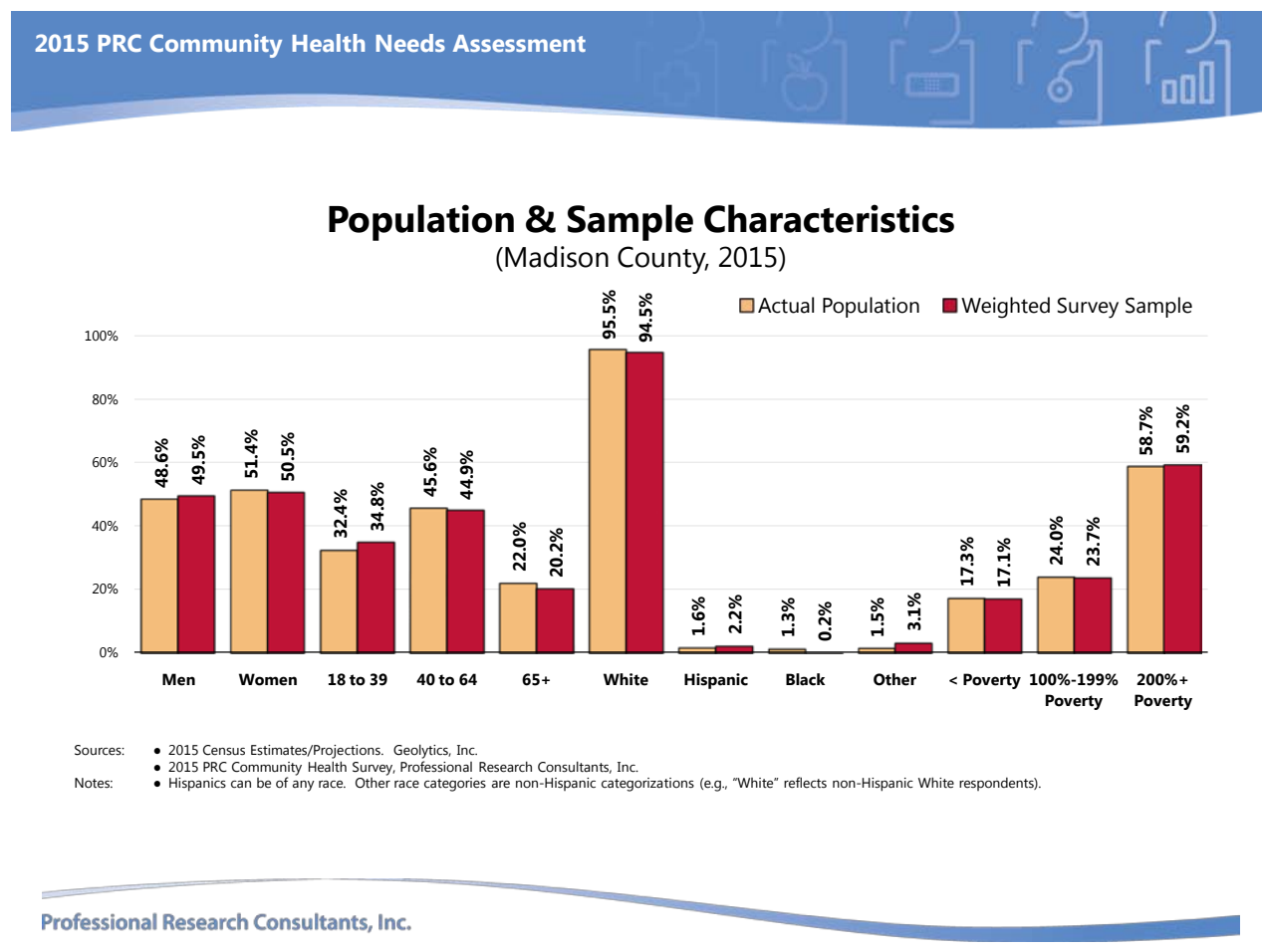
Examples:

- If 10% of the sample of 200 respondents answered a certain question with a "yes," it can be asserted that between 5.8% and 14.2% ($10\% \pm 4.2\%$) of the total population would offer this response.
- If 50% of respondents said "yes," one could be certain with a 95 percent level of confidence that between 43.1% and 56.9% ($50\% \pm 6.9\%$) of the total population would respond "yes" if asked this question.

Sample Characteristics

To accurately represent the population studied, PRC worked to minimize bias through application of a proven telephone methodology and random-selection techniques. And, while this random sampling of the population produces a highly representative sample, it is a common and preferred practice to apply post-stratification weights to the raw data to improve this representativeness even further. Specifically, once the raw data are gathered, respondents are examined by key demographic characteristics (namely gender, age, race, ethnicity, and poverty status) and a statistical application package applies weighting variables that produce a sample which more closely matches the population for these characteristics. Thus, while the integrity of each individual's responses is maintained, one respondent's responses may contribute to the whole the same weight as, for example, 1.1 respondents. Another respondent, whose demographic characteristics may have been slightly oversampled, may contribute the same weight as 0.9 respondents. In order to determine WNC regional estimates, county responses were weighted in proportion to the actual population distribution so as to appropriately represent Western North Carolina as a whole.

The following chart outlines the characteristics of the survey sample for our county by key demographic variables, compared to actual population characteristics revealed in census data. Note that the sample consisted solely of area residents age 18 and older.



Poverty descriptions and segmentation used in this report are based on administrative poverty thresholds determined by the US Department of Health & Human Services. These guidelines define poverty status by household income level and number of persons in the household (e.g., the 2015 guidelines place the poverty threshold for a family of four at \$23,050 annual household income or lower). In sample segmentation: "very low income" refers to community members living in a household with defined poverty status; "low income" refers to households with incomes just above the poverty level, earning up to twice the poverty threshold; and "mid/high income" refers to those households living on incomes which are twice or more the federal poverty level.

The sample design and the quality control procedures used in the data collection ensure that the sample is representative. Thus, the findings may be generalized to the total population of community members in the defined area with a high degree of confidence.

Benchmark Data

North Carolina Risk Factor Data

Statewide risk factor data are provided where available as an additional benchmark against which to compare local survey findings; these data are reported in the most recent *BRFSS (Behavioral Risk Factor Surveillance System) Prevalence and Trend Data* published by the Centers for Disease Control and Prevention and the US Department of Health & Human Services.

Nationwide Risk Factor Data

Nationwide risk factor data, which are also provided in comparison charts where available, are taken from the *2013 PRC National Health Survey*; the methodological approach for the national study is identical to that employed in this assessment, and these data may be generalized to the US population with a high degree of confidence.

Healthy People 2020

Healthy People provides science-based, 10-year national objectives for improving the health of all Americans. The Healthy People initiative is grounded in the principle that setting national objectives and monitoring progress can motivate action. For three decades, Healthy People has established benchmarks and monitored progress over time in order to:

- Encourage collaborations across sectors.
- Guide individuals toward making informed health decisions.
- Measure the impact of prevention activities.



Healthy People 2020 is the product of an extensive stakeholder feedback process that is unparalleled in government and health. It integrates input from public health and prevention experts, a wide range of federal, state and local government officials, a consortium of more than 2,000 organizations, and perhaps most importantly, the public. More than 8,000 comments were considered in drafting a comprehensive set of Healthy People 2020 objectives.

Survey Administration

With more than 700 full- and part-time interviewers who work exclusively with healthcare and health assessment projects, PRC uses a state-of-the-art, automated CATI interviewing system that assures consistency in the research process. Furthermore, PRC maintains the resources to conduct all aspects of this project in-house from its headquarters in Omaha, Nebraska, assuring the highest level of quality control.

Interviewing Protocols and Quality Assurance

PRC's methods and survey administration comply with current research methods and industry standards. To maximize the reliability of research results and to minimize bias, PRC follows a number of clearly defined quality control protocols. PRC uses a telephone methodology for its

community interviews, in which the respondent completes the questionnaire with a trained interviewer, not through an automated touch-tone process.

Before going into the field in the latter half of February, PRC piloted 30 interviews across the region with the finalized survey instrument. After this phase, PRC corrected any process errors that were found, and discussed with the consulting team any substantive issues that needed to be resolved before full implementation.

PRC employs the latest CATI (computer-aided telephone interviewing) system technology in its interviewing facilities. The CATI system automatically generates the daily sample for data collection, retaining each telephone number until the Rules of Replacement are met. Replacement means that no further attempts are made to connect to a particular number, and that a replacement number is drawn from the sample. To retain the randomness of the sample, telephone numbers drawn for the sample are not discarded and replaced except under very specific conditions.

Interviewing for this study took place primarily during evening and weekend hours (Eastern Time: Monday-Friday 5pm-9pm; Saturday 10am-4pm; Sunday 2pm-9pm). Some daytime weekday attempts were also made to accommodate those for whom these times might be more convenient. Up to five call attempts were made on different days and at different times to reach telephone numbers for which there is no answer. Systematic, unobtrusive electronic monitoring is conducted regularly by supervisors throughout the data collection phase of the project.

Cell Phones

Cell phone numbers were integrated into the sampling frame developed for the interviewing system for this project. Special protocols were followed if a cell phone number was drawn for the sample to ensure that the respondent lives in the area targeted and that (s)he is in a safe place to talk (e.g., not while driving). Using this dual-mode approach yielded a sample comprised of 6% cell phone numbers and 94% landline numbers. While this proportion is lower than actual cell phone penetration, it is sufficient in supplementing demographic segments that might otherwise be undersampled in a landline-only model, without greatly increasing the cost of administration.

Minimizing Potential Error

In any survey, there exists some degree of potential error. This may be characterized as sampling error (because the survey results are not based on a complete census of all potential respondents within the population) or non-sampling error (e.g., question wording, question sequencing, or through errors in data processing). Throughout the research effort, Professional Research Consultants makes every effort to minimize both sampling and non-sampling errors in order to assure the accuracy and generalizability of the results reported.

Noncoverage Error. One way to minimize any effects of underrepresentation of persons without telephones is through poststratification. In poststratification, the survey findings are

weighted to key demographic characteristics, including gender, age, race/ethnicity and income (see above for more detailed description).

Sampling Error. Sampling error occurs because estimates are based on only a sample of the population rather than on the entire population. Generating a random sample that is representative and of adequate size can help minimize sampling error. Sampling error, in this instance, is further minimized through the strict application of administration protocols. Poststratification, as mentioned above, is another means of minimizing sampling error.

Measurement Error. Measurement error occurs when responses to questions are unduly influenced by one or more factors. These may include question wording or order, or the interviewer's tone of voice or objectivity. Using a tested survey instrument minimizes errors associated with the questionnaire. Thorough and specific interviews also reduce possible errors. The automated CATI system is designed to lessen the risk of human error in the coding and data entry of responses.

Information Gaps

While this assessment is quite comprehensive, it cannot measure all possible aspects of health in the community, nor can it adequately represent all possible populations of interest. It must be recognized that these information gaps might in some ways limit the ability to assess all of the community's health needs.

For example, certain population groups (such as the homeless, institutionalized persons, or those who only speak a language other than English or Spanish) are not represented in the survey data. Other population groups (for example, pregnant women, lesbian/gay/bisexual/transgender residents, undocumented residents, and members of certain racial/ethnic or immigrant groups) might not be identifiable or might not be represented in numbers sufficient for independent analyses.

In terms of content, this assessment was designed to provide a comprehensive and broad picture of the health of the overall community. However, there are certainly a great number of medical conditions that are not specifically addressed.

Online Key Informant Survey (Primary Data)

Online Survey Methodology

Purpose and Survey Administration

To solicit input from key informants (i.e., those individuals who have a broad interest in the health of the community) an Online Key Informant Survey was implemented. A list of recommended participants from our county was provided to PRC by WNC Healthy Impact along with those of other participating counties; this list included names and contact information for physicians, public health representatives, other health professionals, social service providers, and a variety of other community leaders. Potential participants were chosen because of their ability to identify primary concerns of the populations with whom they work, as well as of the community overall.

Key informants were contacted by email, introducing the purpose of the survey and providing a link to take the survey online; reminder emails were sent as needed to increase participation.

Online Survey instrument

In the online survey, respondents had the chance to explain what view as most needed to create a healthy community, and how they feel that environment and social determinants impact health. Key informants were also asked to specifically rate the degree to which various health issues are a problem in our county; follow-up questions asked them to describe why they identify problem areas as such, and how these might be better addressed.

Participation

In all, 32 community stakeholders took part in the Online Key Informant Survey for our county, as outlined below:

Local Online Key Informant Survey Participation		
Key Informant Type	Number Invited	Number Participating
Community/Business Leader	28	18
Other Health Provider	14	7
Physician	2	2
Public Health Representative	3	3
Social Service Provider	3	2

Through this process, input was gathered from several individuals whose organizations work with low-income, minority populations, or other medically underserved populations.

Online Survey Limitations

The Online Key Informant Survey was designed to gather input from participants regarding their opinions and perceptions of the health of the residents in the area. Thus, these findings are based on perceptions, not facts.

To collect this data, purposive sampling (i.e., a type of non-probability sampling which targets a specific group of people) was used. Unlike the random sampling technique employed in the telephone survey, the purpose is not to make generalizations or statistical inferences from the sample to the entire population, but to gather in-depth insights into health issues from a group of individuals with a specific perspective.

***2015
Madison County
Community Health
Assessment***

Summary of Secondary Data

August 25, 2015

Purpose of the Community Health Assessment

- Describe the health status of the community.
- Create a report that will serve as a resource for the Madison County Health Department, local hospitals, and other community organizations.
- Provide direction for the planning of disease prevention and health promotion services and activities.

Contributing Viewpoints

Secondary Data	Citizen and Stakeholder Opinion
<ul style="list-style-type: none">-Demographic-Socioeconomic-Health-Environmental	<ul style="list-style-type: none">-Community health survey



We Take Special Notice When...

- Madison County statistics deviate from North Carolina or regional statistics, or some other “norm”.
- Trend data show significant changes over time.
- There are significant age, gender, or racial disparities.

Definitions and Symbols

- **Arrows**

- Arrow up (▲) indicates an increase.
- Arrow down (▼) indicates a decrease.

- **Color**

- **Red** indicates a “worse than” or negative difference
- **Green** indicates a “better than” or positive difference
- **Blue** indicates a likely unstable rate or difference based on a small number of events; figures in blue should be used with great caution.

- **Bold Type**

- Indicates the higher value of a pair, or the highest value among several.

Data Caveats

- Data citations presented among these slides are basic and rudimentary. Complete citations are available in the associated WNC Healthy Impact Data Workbook from which this data was derived.
- Most secondary data in this presentation originated from authoritative sources in the public domain (e.g., US Census Bureau, US EPA, NC State Center for Health Statistics).
- All secondary data was mined at a point in time in the recent past, and may not represent present conditions. Numbers, entity names, program titles, etc. that appear in the data may no longer be current.

Demographic Data



General Population Characteristics

- The Madison County population has a slightly higher proportion of females than males.
- The median age of the Madison County population (43.3 years) is 1.4 years “younger” than WNC regional average but 5.9 years “older” than the NC average.
- Madison County has lower proportions of “younger persons” and higher proportions of the “older persons” than NC as a whole.

General Population Characteristics 2010 US Census

County	Total Population (2010)	% Males	% Females	Median Age*	% Under 5 Years Old	% 5-19 Years Old	% 20 - 64 Years Old	% 65 Years and Older
Madison	20,764	49.5	50.5	43.3	4.5	18.7	59.1	17.7
WNC (Regional) Total	759,727	48.5	51.5	44.7	n/a	n/a	n/a	n/a
State Total	9,535,483	48.7	51.3	37.4	6.6	20.2	60.2	12.9



Minority Populations

- Madison County has significantly lower proportions of all minority racial and ethnic groups than the WNC region and NC as a whole.

Population Distribution by Race/Ethnicity 2010 US Census

County	Total Population (2010)	White	Black or African American	American Indian, Alaskan Native	Asian	Native Hawaiian, Other Pacific Islander	Some Other Race	Two or More Races	Hispanic or Latino (of any race)
		%	%	%	%	%	%	%	%
Madison	20,764	96.5	1.2	0.2	0.3	0.0	0.5	1.3	2.0
WNC (Regional) Total	759,727	89.3	4.2	1.5	0.7	0.1	2.5	1.8	5.4
State Total	9,535,483	68.5	21.5	1.3	2.2	0.1	4.3	2.2	8.4



Population Growth

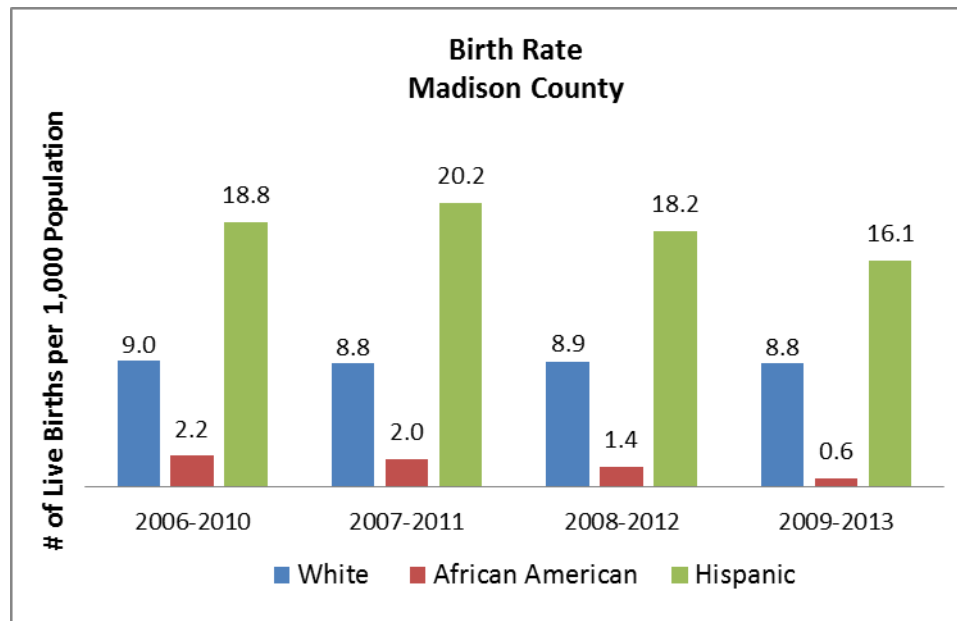
- The modest rate of growth in Madison County in the period 2000-2010 is expected to slow over the next two decades, to a rate lowest among comparators by 2030.

Percent Population Growth			
Decade	Madison County	WNC Region	State of NC
2000-2010	5.4	13.0	15.6
2010-2020	5.3	6.7	10.7
2020-2030	3.2	6.1	9.5



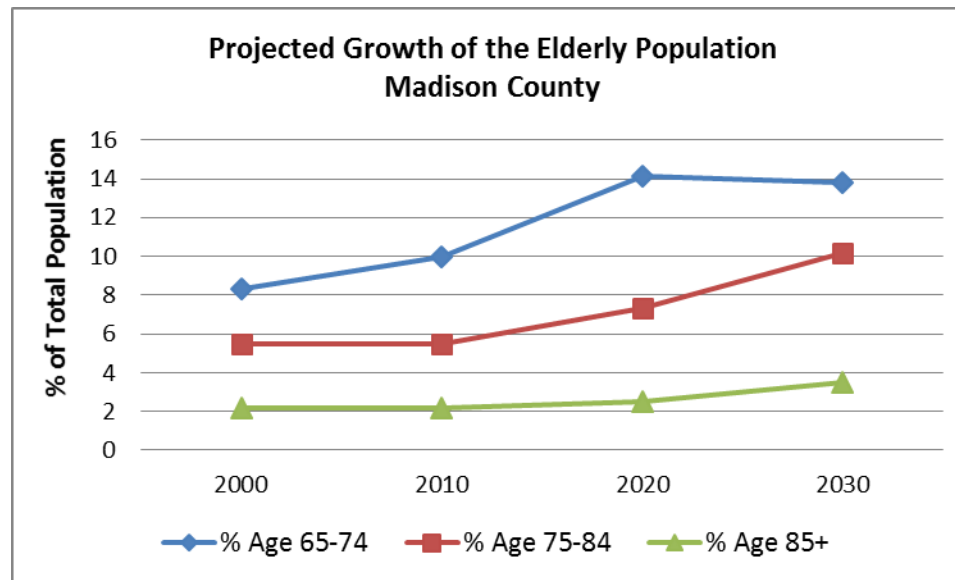
Birth Rate

- The birth rate among Hispanics in Madison County has been significantly higher than the comparable rate among other racial groups. Birth rates among African American and Hispanic population groups in the county appear to be falling, but the birth rate among whites appears to be stable.



Growth of the Elderly Population

- The population in each major age group age 65 and older in Madison County will increase between 2010 and 2030.
- The proportion of the population age 75-84 will increase by 85%, and the population age 85 and older will increase by 59%, in the period 2010-2030.
- By 2030 projections estimate that there will be more than 6,200 persons age 65+ in Madison County.



Family Composition

- In the 5-year period from 2009-2013, an estimated 253 Madison County grandparents living with their minor-aged grandchildren also were financially responsible for them.
- Over the same period there were an estimated 8,207 households in Madison County, 1,951 of them with children under 18 years of age.
- *Among the households with minor-age children, 68% were headed by a married couple. An additional 22% were headed by a female single parent, and 10% were headed by a male single parent.*

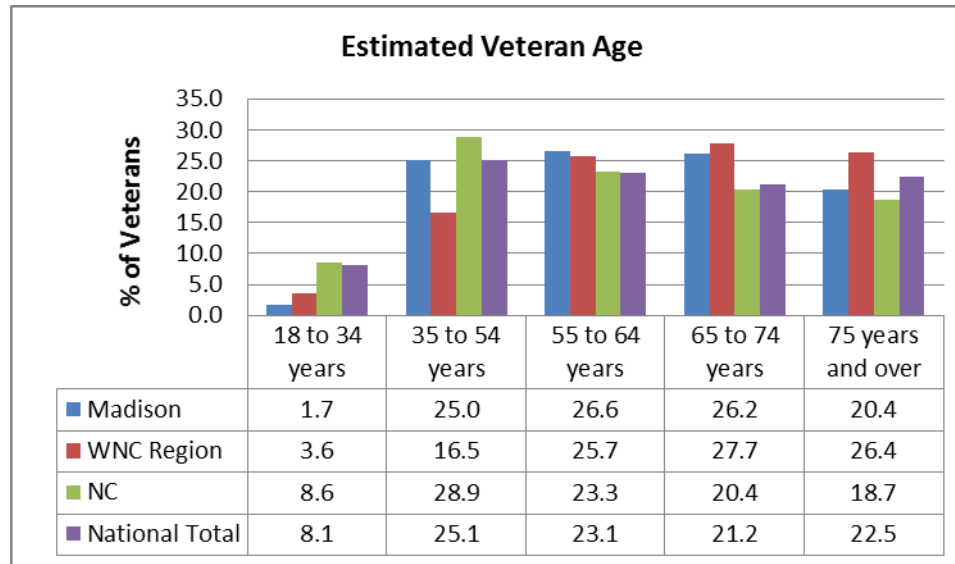
Minor-Age Children Living with Grandparents and in Single-Parent Households, 2009-2013

County	# Grandparents Living with Own Grandchildren (<18 Years)	Grandparent Responsible for Grandchildren (under 18 years)*		# Total Households	Family Household Headed by Married Couple (with children under 18 years)		Family Household Headed by Male (with children under 18 years)		Family Household Headed by Female (with children under 18 years)	
		Est. #	%		Est. #	%**	Est. #	%**	Est. #	%**
Madison	494	253	51.2	8,207	1,330	16.2	201	2.4	420	5.1
WNC (Regional) Total	15,007	8,142	54.3	316,799	49,395	15.6	6,133	1.9	17,711	5.6
State Total	206,632	100,422	48.6	3,715,565	706,106	19.0	84,199	2.3	293,665	7.9



Military Veterans

- Madison County has a higher proportion of veterans in the 55-64 age groups than the regional, state or national average.



Foreign-Born Population

- Of the estimated 775 foreign-born residents of Madison County in the 2009-2013 period, the largest proportion (30.8%) entered the US *before* 1990.
- Of the 239 foreign-born residents settling in Madison County prior to 1990, 61 (26%) were not US citizens when they arrived.
- Of the estimated 8,207 households in Madison County in the 2009-2013 period, 61 (1%) were categorized as having limited skill in speaking English.

Urban-Rural Population

- The proportion of Madison County categorized as “rural” decreased by 9% between 2000 and 2010. Still, a much higher proportion of Madison County is “rural” than is WNC or NC as a whole.

Urban/Rural Population

County	2000 Census		2010 Census	
	% Urban	% Rural	% Urban	% Rural
Madison County	0.0	100.0	9.4%	90.6
WNC Region	41.6	58.4	46.8	53.2
NC	46.7	53.3	66.1	33.9

Homeless Population

- An annual point-in-time census of the homeless population has not been conducted in Madison County since 2009.

Educational Achievement

- Compared to the **WNC Region average**, Madison County has:
 - **7% higher** percentage of persons in the population over age 25 having only a high school diploma or equivalent (2009-2013 Estimate)
 - **12% lower** percentage of persons in the population over age 25 having a Bachelor's degree or higher (2009-2013 Estimate)
 - **4% lower** overall HS graduation rate (for 4-year cohort of 9th graders entering school in SY 2010-2011 and graduating in SY2013-2014 or earlier)

Socioeconomic Data

Income

In Madison County:

- 2009-2013 Median Household Income = \$38,598
 - ▲ \$18 since 2006-2010
 - \$289 **below** WNC average
 - \$7,736 **below** NC average
- 2009-2013 Median Family Income = \$49,806
 - ▼ \$32 since 2006-2010
 - \$1,255 **above** WNC average
 - \$7,122 **below** NC average

Household: all people in a housing unit sharing living arrangements; may or may not be related

Family: householder and people living in household related by birth, marriage or adoption.

All families are also households; not all households are families.

Employment

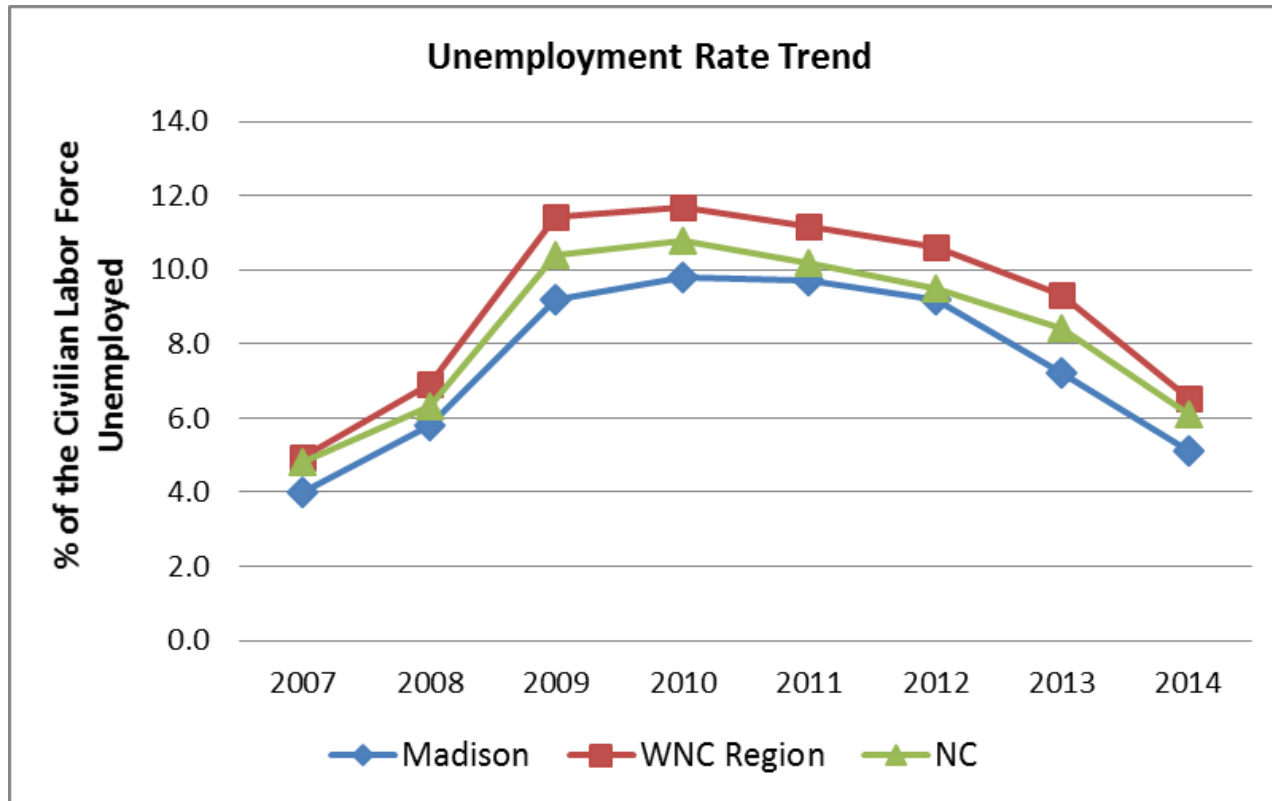
- As of 2013, the three employment sectors in Madison County with the largest proportions of workers (and average weekly wages) were:
 - Educational Services: 22.93% of workforce (\$599)
 - Health Care and Social Assistance: 15.40% of workforce (\$520)
 - Public Administration: 12.53% of workforce (\$611).

Region-wide in 2013 the largest employment sector was Health Care and Social Assistance (18.37%) at an average weekly wage of \$655 per employee. Statewide the largest employment sector also was Health Care and Social Assistance (14.48%) at an average weekly wage of \$859.



Annual Unemployment Rate

- Throughout the period cited, the unemployment rate in Madison County was the lowest among the comparator jurisdictions.





Poverty

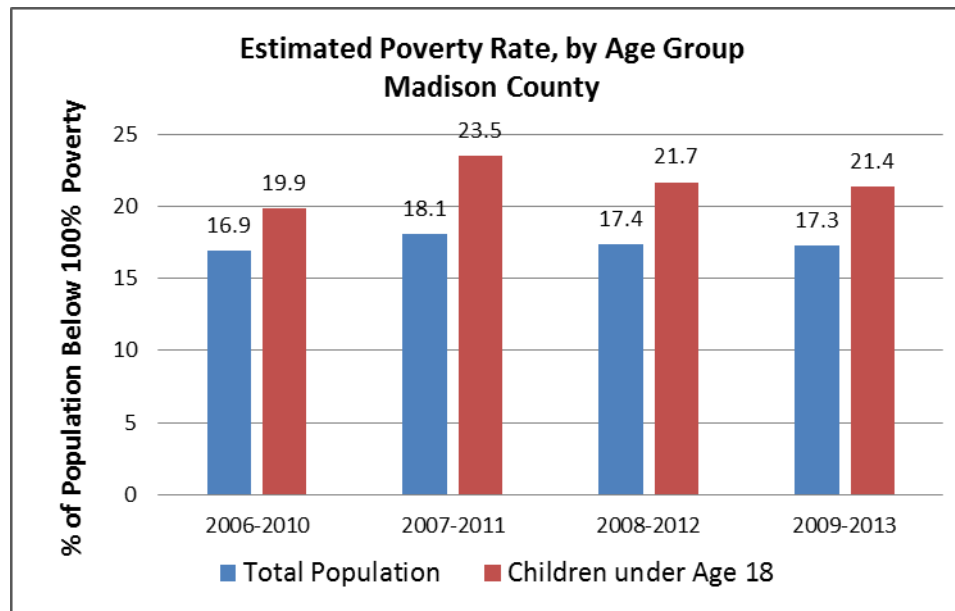
- In WNC and NC the total poverty rate increased in each period cited. The total poverty rate in Madison County decreased in each of the two most recent periods.
- The total poverty rate in Madison County was the highest among comparators in every period cited except the last.

Estimated Poverty Rate

County	Percent Total Population Below 100% Poverty Level			
	2006-2010	2007-2011	2008-2012	2009-2013
Madison County	16.9	18.1	17.4	17.3
WNC Region	15.7	16.1	16.9	18.0
State of NC	15.5	16.1	16.8	17.5

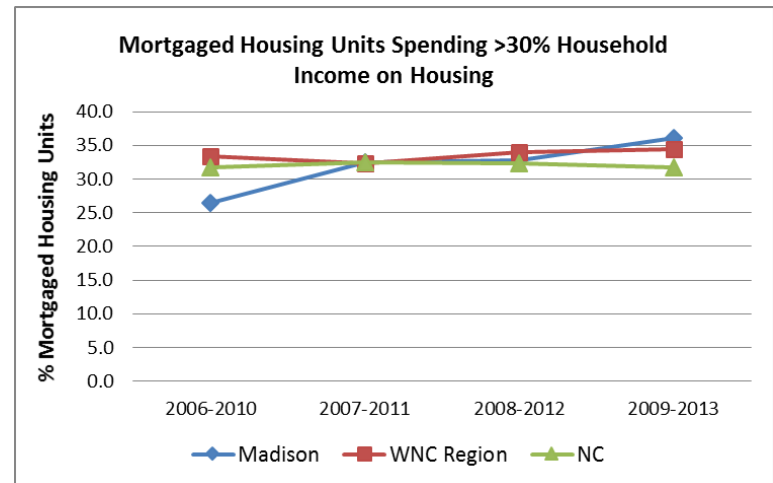
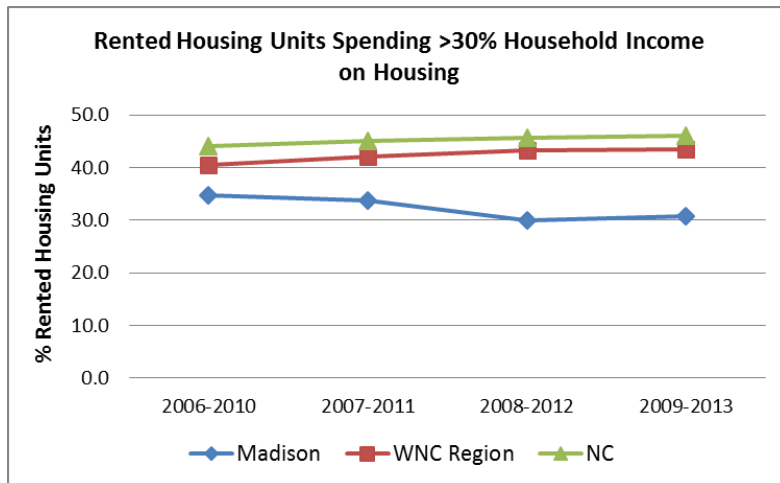
Poverty and Age

- In Madison County as in much of NC, children suffer significantly and disproportionately from poverty.
- In Madison County the estimated poverty rate among children under age 18 ranged from between 18% to 30% higher than the overall rate throughout the period cited.



Housing Costs

- One measure of economic burden in a community is the percent of housing units spending more than 30% of household income on housing.
- In Madison County in 2009-2013, a smaller proportion of renters but a higher proportion of mortgage holders spent >30% of household income on housing than the WNC or NC average.
- The proportion of Madison County mortgagees spending above the 30% threshold increased 37% between 2006-2009 and 2009-2013.

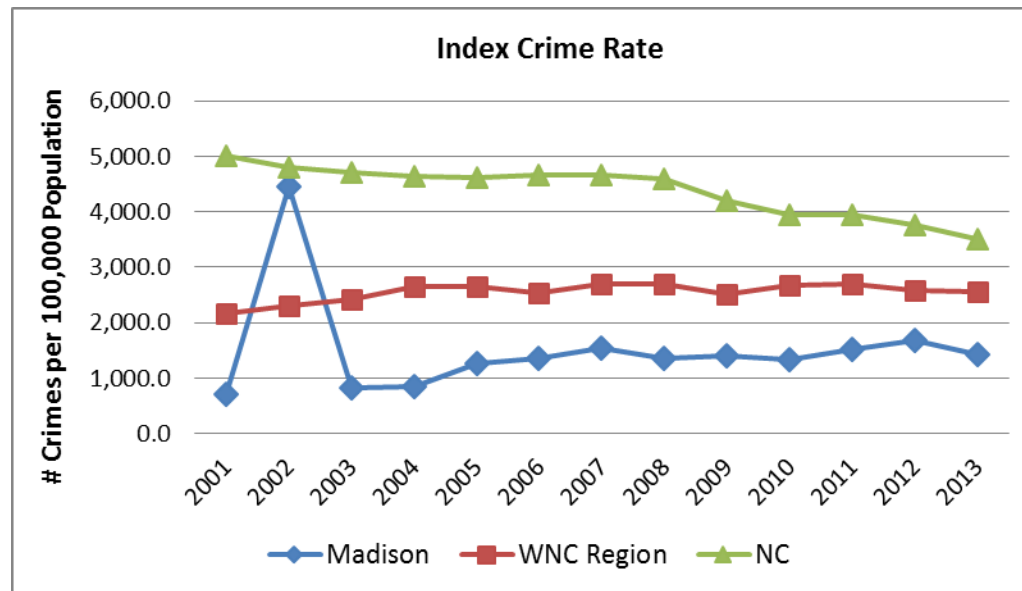


Crime and Safety

Index Crime

- Index crime is the sum of all violent and property crime. The index crime rate in Madison County was lowest among comparators throughout the period cited except for 2002.

Index Crime Rate Trend

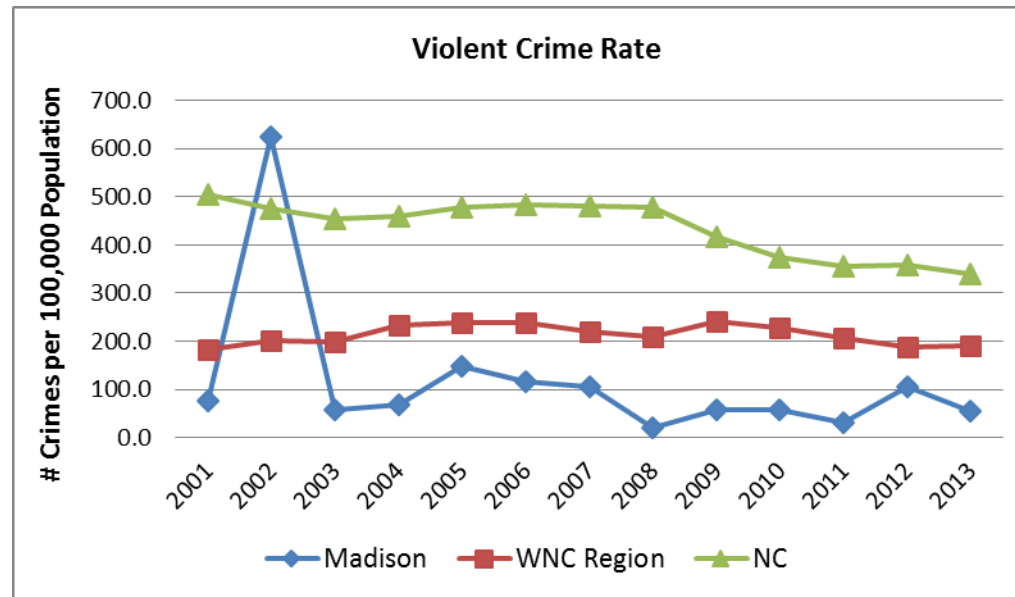


Crime and Safety

Violent Crime

- Violent crime includes murder, forcible rape, robbery, and aggravated assault. The violent crime rate in Madison County was lowest among comparators throughout the period cited except for 2002, when the local rate was the highest.

Violent Crime Rate Trend

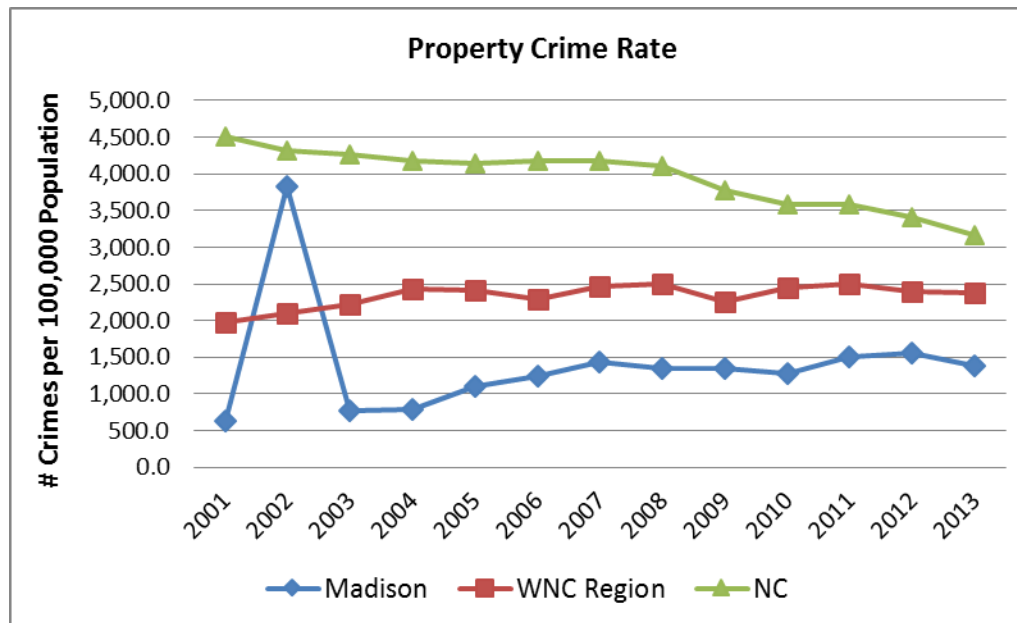


Crime and Safety

Property Crime

- Property crime includes burglary, arson, and motor vehicle theft. The property crime rate in Madison County was lowest among comparators throughout the period cited except for 2002.

Property Crime Rate Trend



Crime and Safety

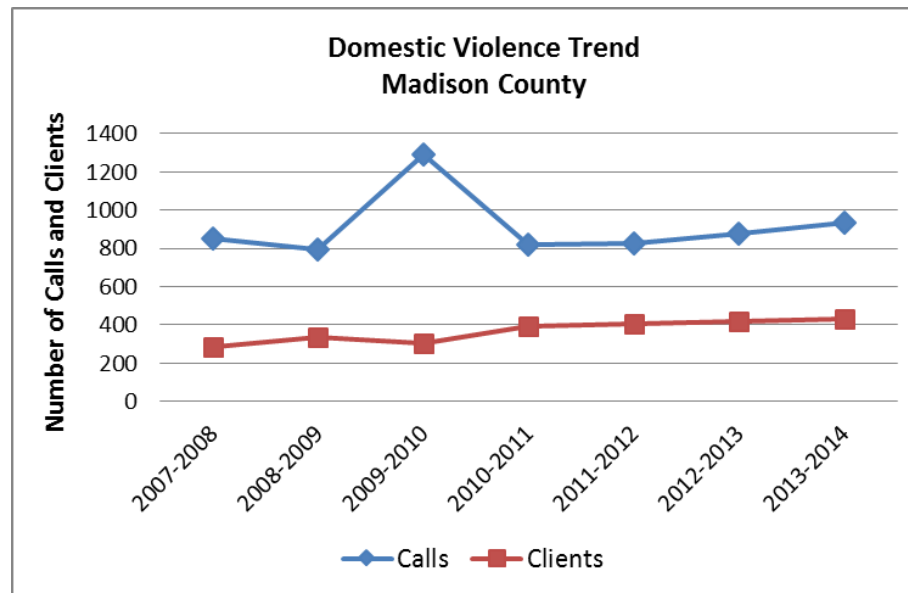
Sexual Assault

- In FY2013-2014, 155 persons in Madison County were identified as victims of sexual assault.
- The single most frequently reported specific type of sexual assault in Madison County during the period was adult survivor of child sexual assault (28%). Regionally, the most frequently reported type was adult survivor of child sexual assault (23%); statewide the most frequently reported type was child sexual offense (26%).
- State-wide and region-wide the most commonly reported offender was a relative. In Madison County as well the most common offender was a relative.

Crime and Safety

Domestic Violence

- The number of calls in Madison County dealing with domestic violence ranged from a low of 792 in 2008-2009 to a high of 1,289 in 2009-2010.
- The number of Madison County domestic violence clients remained relatively stable over the period cited, averaging 367 per year.



Crime and Safety

Child Abuse

- Substantiated reports of child abuse in Madison County have decreased significantly since 2006.
- Between 2006 and 2012 there were no child abuse homicides in the county.

Substantiated Child Abuse Reports and Child Abuse Homicides

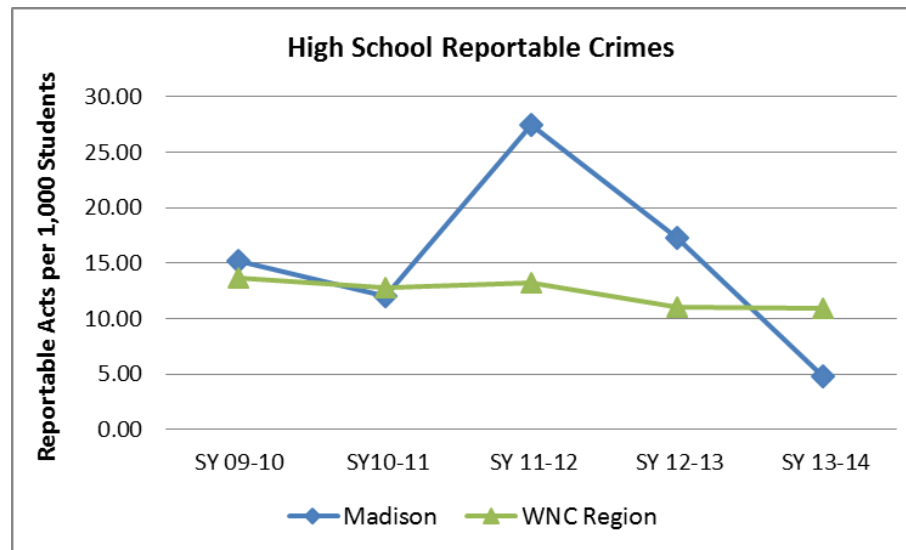
County	Reports Substantiated**					Child Abuse Homicides***						
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2011	2012
Madison	154	118	85	80	93	0	0	0	0	0	0	0
WNC (Regional) Total	2,273	1,958	1,754	1,449	1,512	4	1	2	1	0	4	2
State Total	20,340	14,966	12,429	11,252	11,300	34	25	33	17	19	24	28



Juvenile Crime

High School Reportable Crime

- While the regional high school crime rate appeared relatively stable over the period cited, the rate of reportable crimes in Madison County Schools was erratic, due likely to relatively small and highly variable numbers of events.



Health Resources



Health Insurance

- The percent uninsured adults age 18-64 in Madison County, WNC and NC increased between 2009 and 2010 but have decreased since.
- The WNC Region had the highest percent uninsured among comparators in both age groups in every year cited.

Percent of Population *Without* Health Insurance, by Age Group

County	2009		2010		2011		2012		2013	
	0-18	18-64	0-18	18-64	0-18	18-64	0-18	18-64	0-18	18-64
Madison County	9.4	22.8	8.2	23.3	6.9	22.5	8.1	22.9	6.9	21.4
WNC Region	9.9	24.2	9.7	26.0	9.1	25.2	9.3	25.4	8.6	25.0
State of NC	8.7	21.9	8.3	23.5	7.9	23.0	7.9	23.4	6.9	22.5

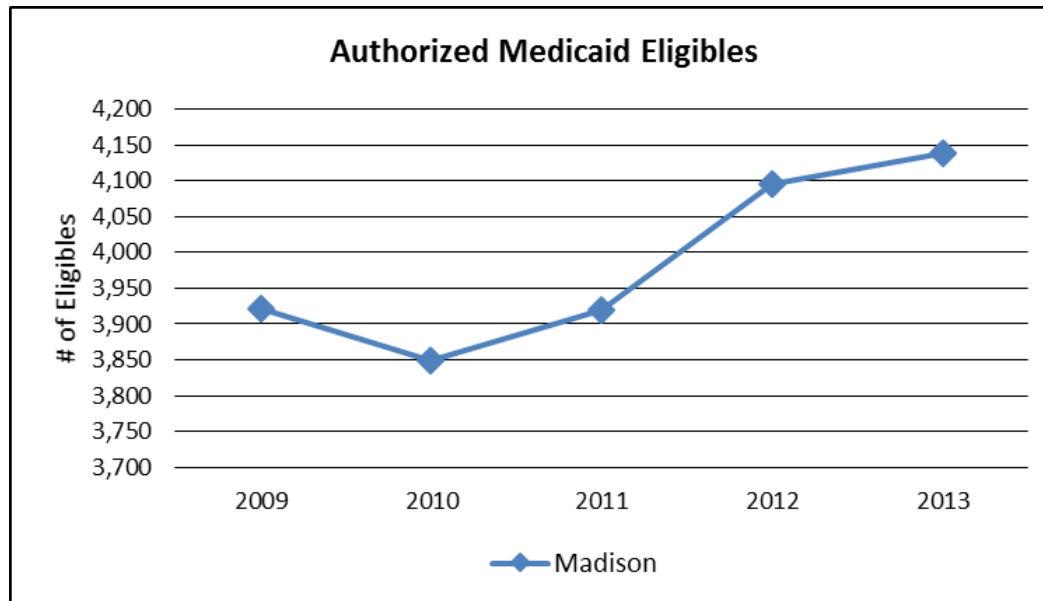
- In all comparator jurisdictions the age group 0-18 has a significantly lower percentage of uninsured than the adult age group, due at least partly to their inclusion in NC Health Choice.



Medicaid Eligibility

- The total number of people in Madison County eligible for Medicaid decreased between 2009 and 2010 before increasing every year between 2010 and 2013.

Madison County Medicaid-Eligibles, 2009-2013





Health Care Practitioners

- In 2012 Madison County had the lowest ratio among comparators in every category of active health professional cited.
- The national ratios were highest among comparators for physicians, primary care physicians, and dentists. The state ratios were highest among comparators for registered nurses and pharmacists.

Number of Active Health Professionals per 10,000 Population

County	2012				
	Physicians	Primary Care Physicians	Dentists	Registered Nurses	Pharmacists
Madison County	5.19	5.19	1.89	31.14	5.0
WNC (Regional) Arithmetic Mean	14.29	6.84	3.61	76.94	7.97
State Ratio	22.31	7.58	4.51	99.56	10.06
National Ratio (date)	23.0 (2011)	8.1 (2011)	5.3 (2012)	91.6 (2012)	9.1 (2012)

Health Statistics

Health Rankings

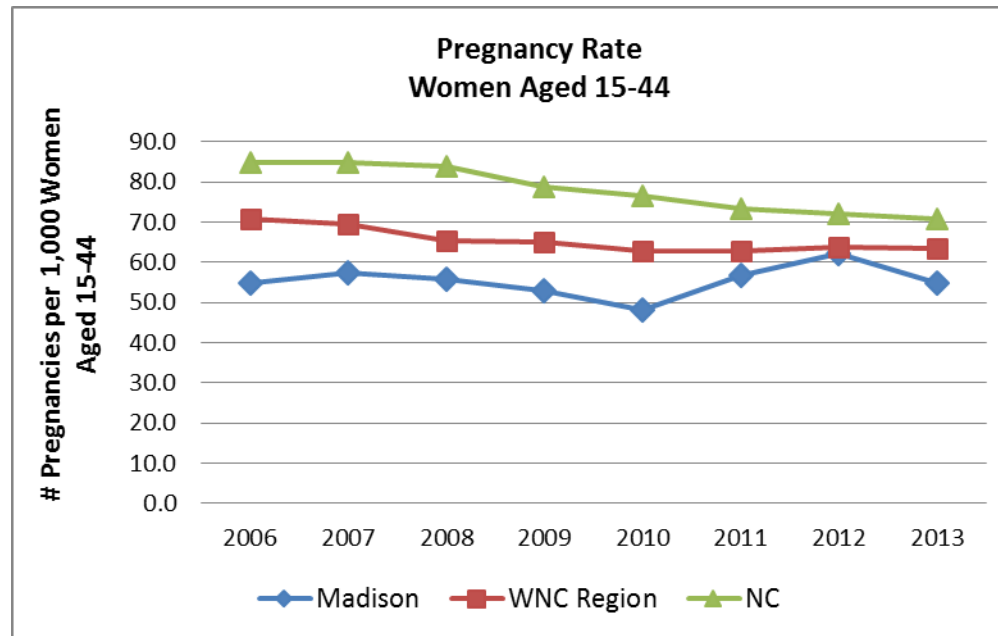
- According to *America's Health Rankings* (2013)
 - NC ranked 35th overall out of 50 (where 1 is “best”)
- According to *County Health Rankings* (2014) for NC, Madison County was ranked 38th overall among the 100 NC counties.
 - Madison County ***health outcomes*** rankings out of 100 (where 1 is best):
 - 33rd in length of life
 - 54th for quality of life
 - Madison County ***health factors*** rankings out of 100 (where 1 is best):
 - 31st for health behaviors
 - 34th for clinical care
 - 24th for social and economic factors
 - 86th for physical environment

Maternal and Infant Health

Pregnancy Rate

Pregnancies per 1,000 Women Age 15-44

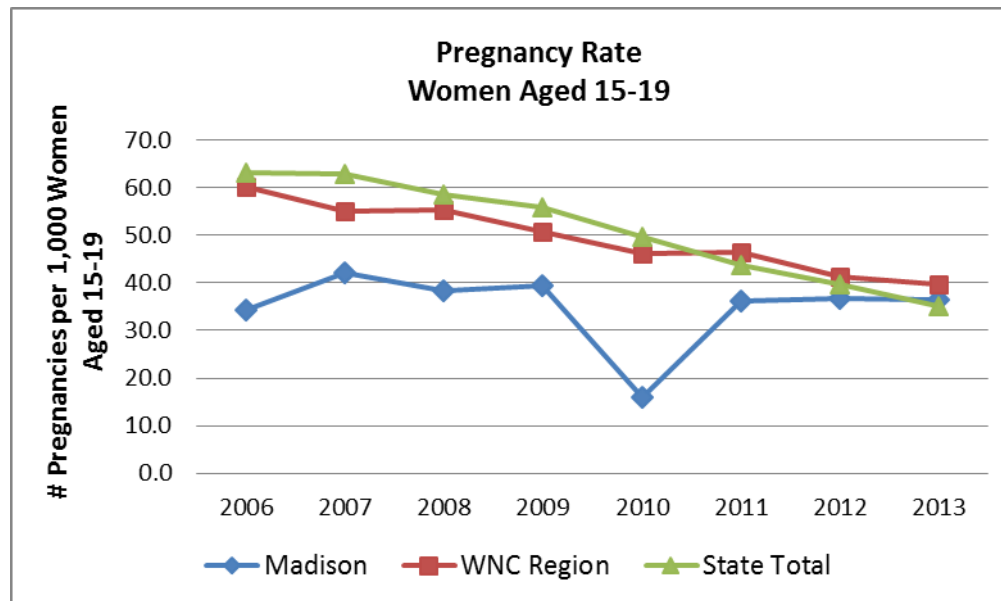
- The total pregnancy rates in WNC and NC have fallen overall since 2007, but appear to have stabilized recently.
- The total pregnancy rate in Madison County was more variable, first falling then rising briefly before falling again.



Pregnancy Rate

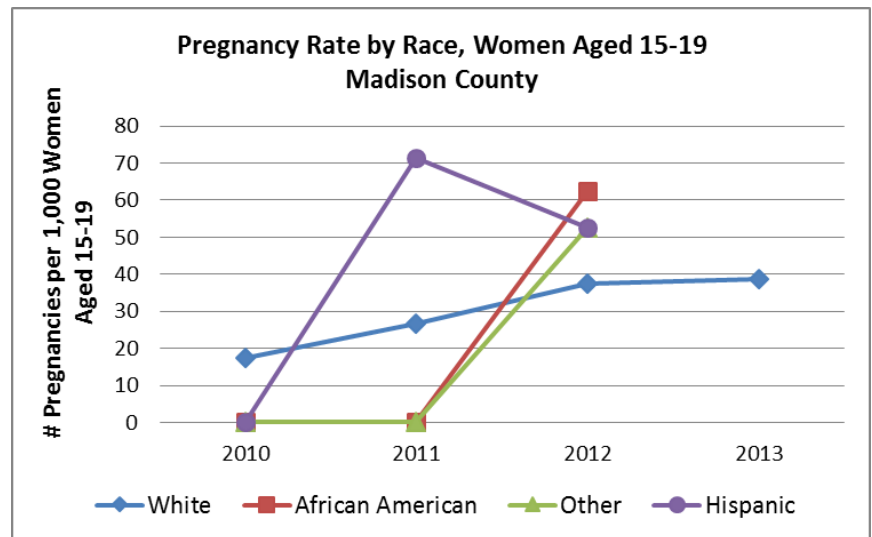
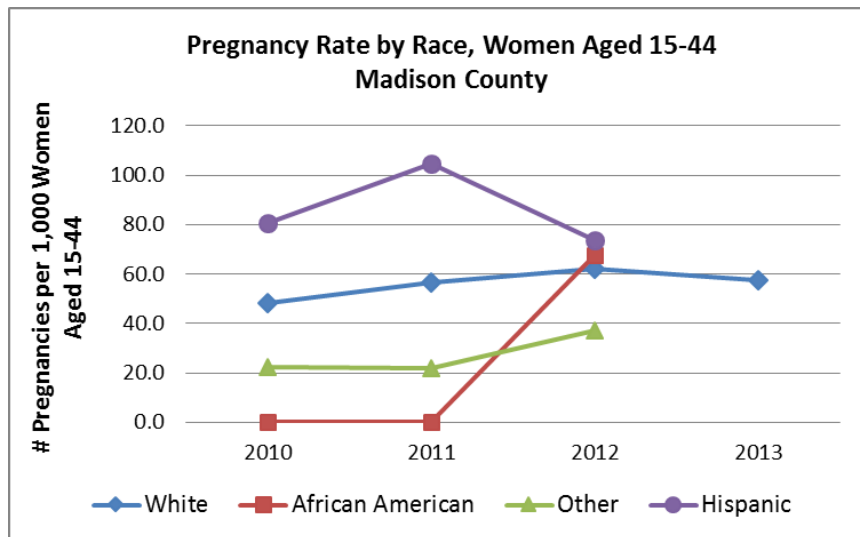
Pregnancies per 1,000 women Age 15-19 (Teens)

- The teen pregnancy rates in WNC and NC have fallen significantly since 2007, and appear to be falling still in both.
- The teen pregnancy rate in Madison County has been relatively static, except for a sudden, temporary decrease in 2010.



Pregnancy Rate By Race/Ethnicity

- Among Madison County women age 15-44 and teens age 15-19 the racially stratified pregnancy rates for all groups except whites are unstable due to small and variable numbers of events.





Pregnancy Risk Factors

Smoking During Pregnancy

- The percentage of Madison County women who smoked during pregnancy decreased significantly overall between 2008 and 2013, while comparable percentages for the region and the state did not change significantly over the same period. (Note that several of the Madison County figures are unstable due to small numbers of events.)
- Among comparators, Madison County had the highest proportion of pregnant women who smoked in 2009.

County	Percent of Births to Mothers Who Smoked While Pregnant					
	2008	2009	2010	2011	2012	2013
Madison County	18.4	20.7	n/a	4.9	6.4	8.0
WNC Region	20.3	19.1	n/a	20.1	19.2	19.4
State of NC	10.4	11.0	n/a	10.9	10.6	10.3

Pregnancy Risk Factors

Prenatal Care

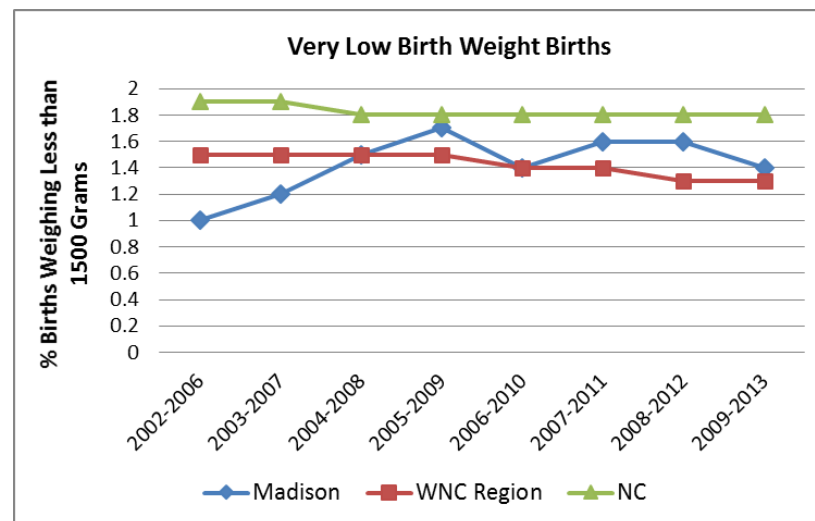
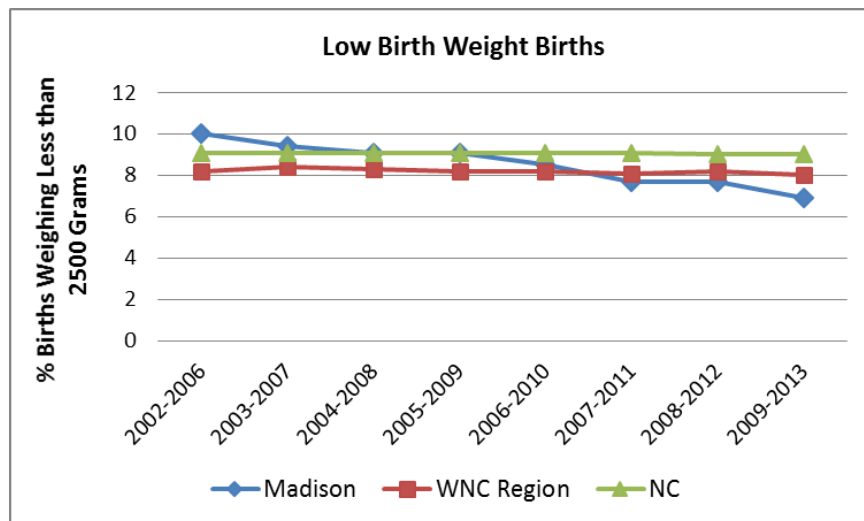
- The percentage of women in all three jurisdictions who received early prenatal care decreased significantly between after 2010.
- Madison County had higher percentages of early prenatal care than its comparators in every period cited except 2011.

County	Percent of Pregnancies Receiving Prenatal Care in 1 st Trimester					
	2008	2009	2010	2011	2012	2013
Madison County	96.4	95.7	n/a	72.5	87.6	82.4
WNC Region	84.5	84.0	n/a	75.6	76.5	75.5
State of NC	82.0	83.3	n/a	71.2	71.3	70.3

Pregnancy Outcomes

Low Birth Weight Births

- Throughout most of the period cited, the highest rates of low birth weight (<5.5 lb.) and very low birth weight (<3.3 lb.) births among the comparators occurred at the state level.
- Rates of low birth weight births appear relatively stable in WNC and NC, but appear to be falling in Madison County. Very low birth weight births in Madison County are variable and unstable, due to small and varying numbers of events.

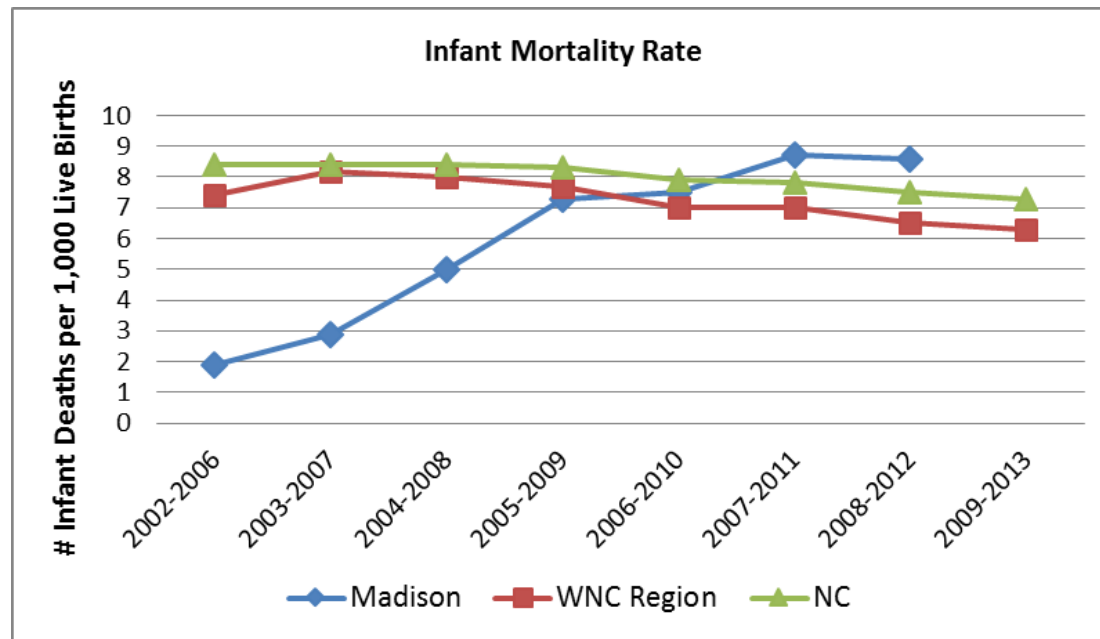




Pregnancy Outcomes

Infant Mortality

- The infant mortality rate in Madison County appears to be increasing. It should be noted, however, that all infant mortality rates in Madison County are unstable, based on small and varying numbers of events. Racially stratified rates also are unstable.



Abortion

- **Women Age 15-44**

- The number of pregnancies per 1,000 Madison County women in this age group that ended in abortion ranged from 4.3 to 6.8 over the period cited. Note, however, that all rates for the period were based on small numbers of events, or were suppressed.

- **Women Age 15-19 (Teens)**

- The number of pregnancies per 1,000 Madison County women in this age group that ended in abortion ranged from 1.4 to 9.0 over the period cited. Note, however, that all rates for the period were unstable or suppressed.

Mortality

Life Expectancy

- For persons born in 2011-2013, life expectancy among comparator jurisdictions is longest overall and among men, women, and white persons in Madison County. Life expectancy for African Americans is longest in NC as a whole.

Life Expectancy at Birth for Persons Born in in 2011-2013

County	Overall	Sex		Race	
		Male	Female	White	African-American
Madison	79.1	76.5	81.6	78.9	n/a
WNC (Regional) Arithmetic Mean	77.7	75.3	80.2	77.9	75.2
State Total	78.2	75.7	80.6	78.8	75.9



Leading Causes of Death: Overall

Age-Adjusted Rates (2009-2013)	Madison No. of Deaths	Madison Mortality Rate	Rate Difference from NC
1. Diseases of the Heart	268	189.9	+11.7%
2. Cancer	210	143.8	-17.0%
3. Chronic Lower Respiratory Disease	84	59.5	+29.1%
4. Cerebrovascular Disease	73	50.8	+16.2%
5. Alzheimer's Disease	47	32.6	+12.8%
6. All Other Unintentional Injuries	39	31.7	+8.2%
7. Pneumonia and Influenza	31	22.3	+24.6%
8. Nephritis, Nephrotic Syndrome, Nephrosis	27	20.2	+14.8%
9. Suicide	18	16.0	+31.1%
10. Septicemia	20	14.3	+3.6%
11. Diabetes Mellitus	18	12.5	-42.4%
12. Unintentional Motor Vehicle Injuries	11	12.1	-11.7%
13. Chronic Liver Disease and Cirrhosis	18	10.9	+14.7%
14. Homicide	5	5.1	-12.1%
15. AIDS	1	0.9	-79.3%



Leading Causes of Death: Gender Comparison

Madison County Rank by Descending Overall Age-Adjusted Rate (2009-2013)	Rate Among Males	Rate Among Females	% Male Rate Difference from Females
1. Diseases of the Heart	238.1	152.4	+56.2%
2. Cancer	177.7	120.0	+48.1%
3. Chronic Lower Respiratory Disease	75.8	49.7	+52.2%
4. Cerebrovascular Disease	57.1	45.5	+25.5%
5. Alzheimer's Disease	n/a	35.8	n/a
6. All Other Unintentional Injuries	50.0	n/a	n/a
7. Pneumonia and Influenza	n/a	n/a	n/a
8. Nephritis, Nephrotic Syndrome, Nephrosis	n/a	n/a	n/a
9. Suicide	n/a	n/a	n/a
10. Septicemia	n/a	n/a	n/a
11. Diabetes Mellitus	n/a	n/a	n/a
12. Unintentional Motor Vehicle Injuries	n/a	n/a	n/a
13. Chronic Liver Disease and Cirrhosis	n/a	n/a	n/a
14. Homicide	n/a	n/a	n/a
15. AIDS	n/a	n/a	n/a

Leading Causes of Death: Race Comparison

- Stable, racially and ethnically stratified mortality rates for Madison County are not available.



Leading Causes of Death: Time Comparison

Madison County Rank by Descending Overall Age-Adjusted Rate (2009-2013)-	Rank 2006-2010	Rank Change 2006-2010 to 2009-2013	% Rate Change 2006-2010 to 2009-2013
1. Diseases of the Heart	2	+1	+5.5%
2. Cancer	1	-1	-26.1%
3. Chronic Lower Respiratory Disease	3	nc	+5.5%
4. Cerebrovascular Disease	4	nc	+4.1%
5. Alzheimer's Disease	6	+1`	+21.2%
6. All Other Unintentional Injuries	5	-1	-7.6%
7. Pneumonia and Influenza	7	nc	-15.8%
8. Nephritis, Nephrotic Syndrome, Nephrosis	10	+2	+17.4%
9. Suicide	12	+3	n/a
10. Septicemia	9	-1	-25.1%
11. Diabetes Mellitus	11	nc	-17.2%
12. Unintentional Motor Vehicle Injuries	8	-4	-41.0%
13. Chronic Liver Disease and Cirrhosis	13	nc	n/a
14. Homicide	14	nc	n/a
15. AIDS	12	nc	n/a

Leading Causes of Death – By Age

Age Group	Rank	Cause of Death in Madison County (2009-2013)
00-19	1	Conditions originating in the perinatal period
	2	Motor vehicle injuries; SIDS
	3	All other unintentional injuries
20-39	1	All other unintentional injuries
	2	Diseases of the heart; motor vehicle injuries; suicide
	3	Cancer (all sites); kidney disease; homicide
40-64	1	Cancer (all sites)
	2	Diseases of the heart
	3	Chronic lower respiratory disease
65-84	1	Cancer (all sites)
	2	Diseases of the heart
	3	Chronic lower respiratory disease
85+	1	Diseases of the heart
	2	Cerebrovascular disease
	3	Cancer (all sites)



Mortality Trends, 2002-2006 to 2009-2013

Leading Cause of Death in Madison County	Overall Trend Direction
1. Diseases of the Heart	▼
2. Cancer	▼
3. Chronic Lower Respiratory Disease	▲
4. Cerebrovascular Disease	▼
5. Alzheimer's Disease	▼
6. All Other Unintentional Injuries	▲
7. Pneumonia and Influenza	▼
8. Nephritis, Nephrotic Syndrome, Nephrosis	▲
9. Suicide	▲
10. Septicemia	▼▼
11. Diabetes Mellitus	▲
12. Unintentional Motor Vehicle Injuries	▼
13. Chronic Liver Disease and Cirrhosis	▲
14. Homicide	▼
15. AIDS	▲



Site-Specific Cancer Trends

Madison County

Incidence: 1999-2003 to 2008-2012

Mortality: 2002-2006 to 2009-2013

Cancer Site	Parameter	Overall Trend Direction
Lung Cancer	Incidence	▼
	Mortality	▼
Prostate Cancer	Incidence	▼
	Mortality	▼
Breast Cancer	Incidence	▲
	Mortality	▼
Colorectal Cancer	Incidence	▲
	Mortality	▲

Injury Mortality

Unintentional Falls

- From 2011 through 2013, 12 Madison County residents died as a result of an unintentional fall.
- Of the 12 fall-related deaths, 11 (92%) occurred in the population age 65 and older.
- Of the 12 fall-related deaths, 5 (42%) occurred in the population age 85 and older.



Injury Mortality

Unintentional Poisoning

- In the period 2009-2013, 11 Madison County residents died as a result of unintentional poisoning, with a corresponding age-adjusted mortality rate of 6.5 deaths per 100,000 population, the lowest rate among the comparators.
- Of the 11 unintentional poisoning deaths in the county in that period, 11 (100%) were due to medication or drug overdoses, with a corresponding mortality rate of 6.5, the lowest rate among the comparators.

County	Unintentional Poisoning Deaths for Select Locations and Percent that are Medication/Drug Overdoses (2009-2013)*			Rate of Unintentional Medication/Drug Overdose Deaths (2009-2013)**	
	#	Rate per 100,000 NC Residents	% that are Medication/Drug Overdoses	#	Rate per 100,000 NC Residents
Madison	11	6.5	100.0	11	6.5
WNC (Regional) Total	560	14.8	90.0	506	13.3
Non-WNC (Regional) Total	4,749	10.7	91.0	4320	9.7
State Total	5,309	11.0	90.9	4826	10.0

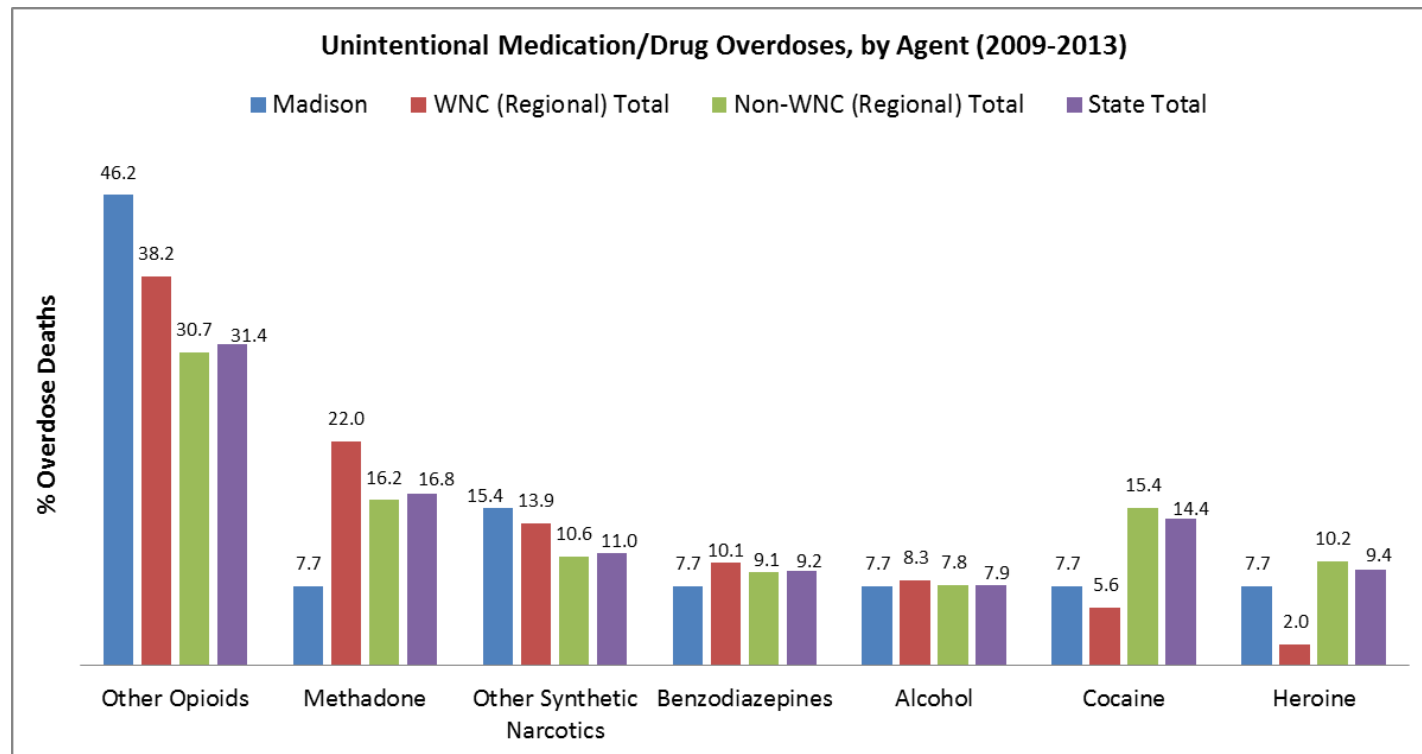
- * Codes Used: cdeath1 = X40-X49
- ** Codes Used: cdeath1 = X40-X44



Injury Mortality

Unintentional Medication/Drug Overdoses

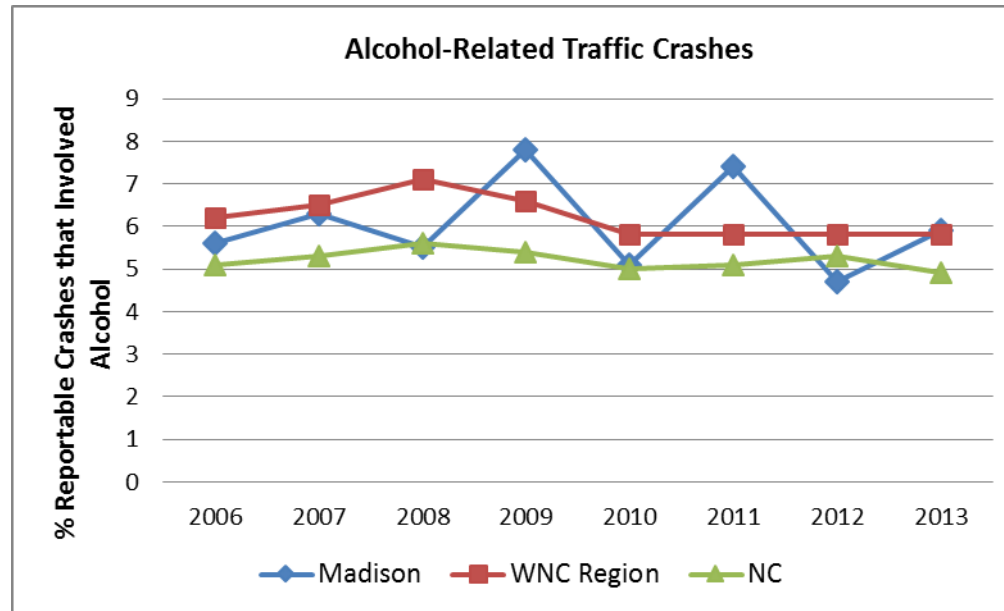
- “Other Opioids” caused the highest proportion of drug overdose deaths (46.2%) in Madison County in the period 2009-2013.



Vehicular Injury

Alcohol-Related Motor Vehicle Crashes

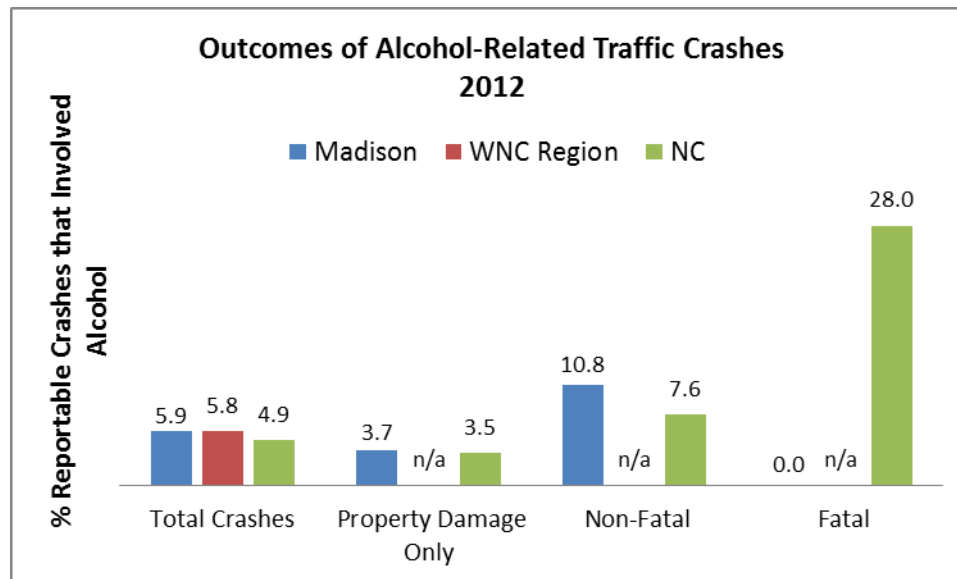
- Over the period 2006 through 2013 an annual average of 6.0% of all traffic crashes in Madison County were alcohol-related. Note that the percent is erratic due to small and varying numbers of events. The highest average proportion among comparator jurisdictions (6.2%) occurred in the WNC region.



Vehicular Injury Mortality

Alcohol-Related Motor Vehicle Crashes

- In 2012, no *fatal* traffic crashes in Madison County were alcohol-related.

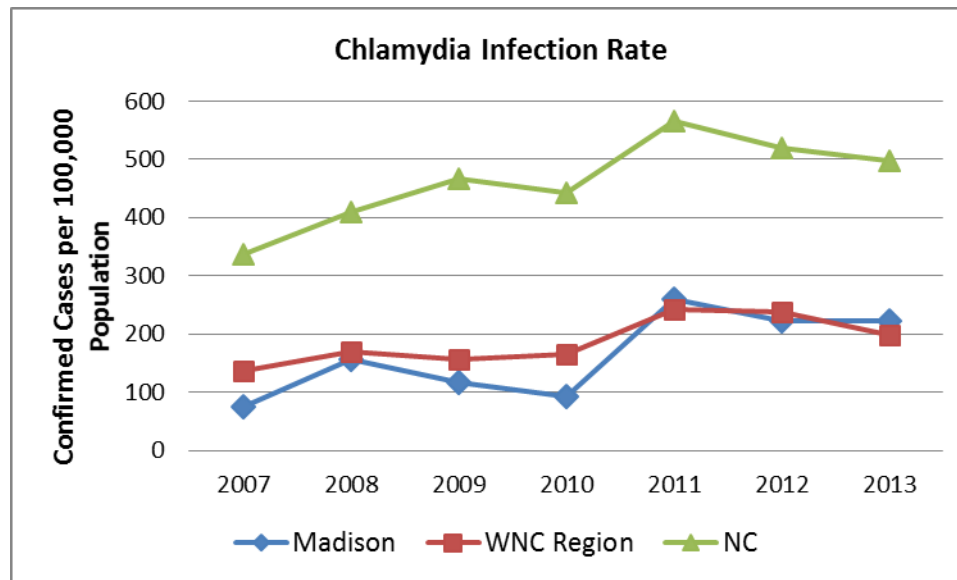


Morbidity

Sexually Transmitted Infections

Chlamydia

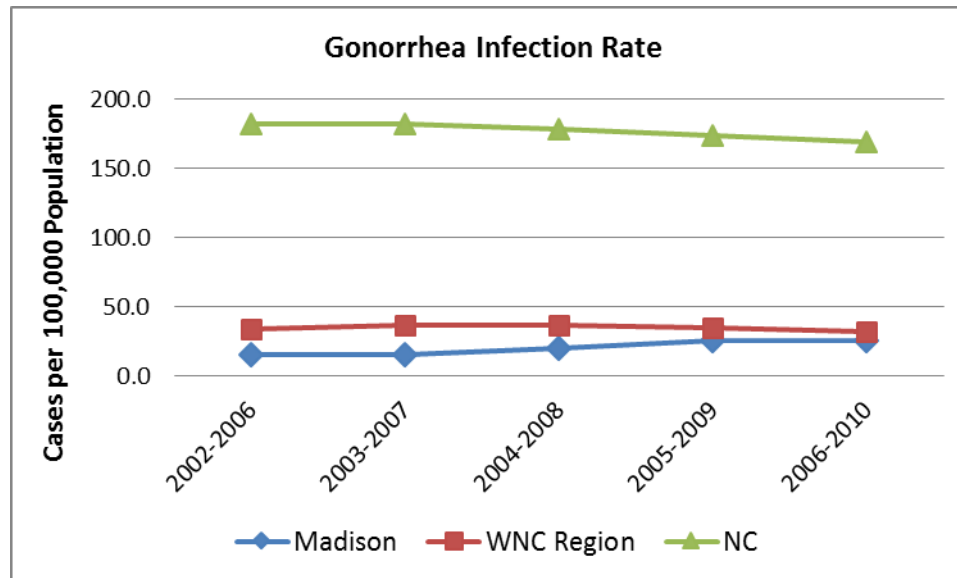
- The chlamydia infection rate in Madison County was the lowest rate among the comparators throughout most of the period cited. The state rate was the highest.



Sexually Transmitted Infections

Gonorrhea

- The gonorrhea infection rate in Madison County was the lowest among the comparators throughout the period cited. The state rate was the highest.



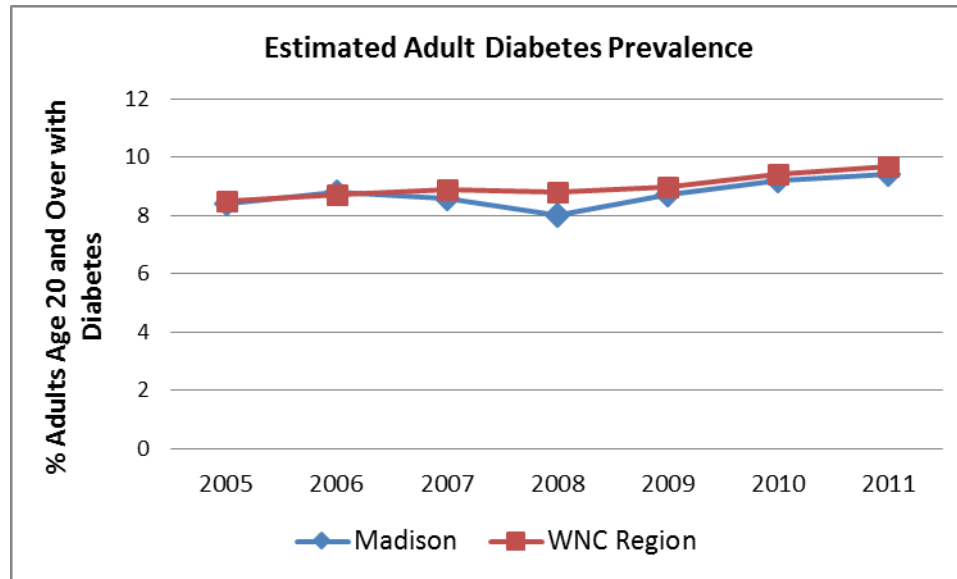
Sexually Transmitted Infections

HIV

- HIV infection rates in Madison County over the period 2004-2006 through 2006-2010 all were unstable.

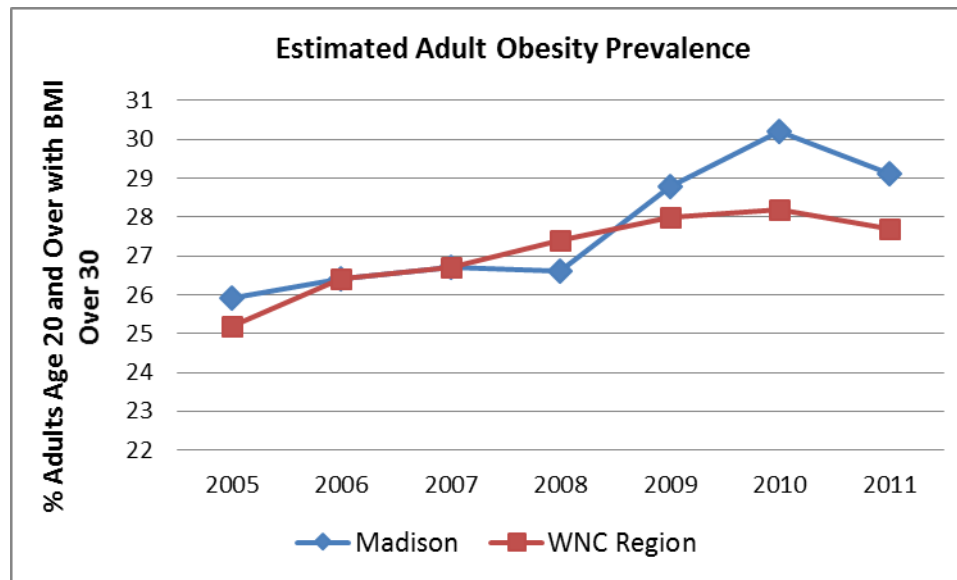
Adult Diabetes

- The average self-reported prevalence of Madison County adults with diabetes was 8.7% in the period from 2005 - 2011.
- Over the same period the WNC average was 9.0%.
- Prevalence of self-reported adult diabetes has been rising over time in both WNC and Madison County.



Adult Obesity

- The average self-reported prevalence of Madison County adults considered “obese” on the basis of height and weight ($BMI > 30$) was 27.7% in the period from 2005 - 2011.
- Over the same period the WNC average prevalence was 27.1%.
- The prevalence of adult obesity has been increasing in both WNC and Madison County, but at a higher rate in the county.



Child Obesity

- There is very limited data on the prevalence of childhood obesity in Madison County.
- While there is NC-NPASS data for Macon County children seen in health department WIC and child health clinics, the number of participants is insufficient to yield stable percentages in any age group.



Mental Health

- Between 2006 and 2013, the number of Madison County residents served annually by the **Area Mental Health Program** *increased* overall from 840 to 1,921 (▲ 129%).
- Over the same 8-year period the number of Madison County residents served annually in **State Psychiatric Hospitals** *decreased* from 46 to 1 (▼ 98%).
- During the same 8-year period a total of **115** Madison County residents were served in **NC State Alcohol and Drug Abuse Treatment Centers (ADATCs)**, with the number varying considerably but averaging **14** persons annually.

Inpatient Hospital Utilization

- In 2012 the highest proportions of hospital discharges in Madison County were for:
 - Cardiovascular and circulatory diseases : 17%
 - Heart disease: 12%
 - Cerebrovascular disease: 3%
 - Respiratory diseases: 11%
 - Pneumonia and influenza: 4%
 - COPD (excluding asthma): 4%
 - Asthma: 0.7%
 - Other Diagnoses (including mental disorders): 10%
 - Pregnancy and childbirth: 10%
 - Injuries and poisonings: 10%



Ambulatory Care Sensitive Hospital Discharge Rates, 2013

(AHRQ PQI Definitions; Discharges per 100,000 Population)

Diagnosis	Madison	NC
All specified PQI (Prevention Quality Indicator) conditions	1,400.8	1,438.5
All chronic conditions	824.0	906.0
Diabetes: short-term complications	70.6	94.4
Diabetes: long-term complications	105.9	113.0
Diabetes: uncontrolled	5.9	13.7
Diabetes: amputations	0.0	19.1
COPD/Asthma: ages 40+	410.9	413.5
Asthma: ages 18-39	18.0	40.1
Hypertension	23.5	54.9
Heart failure	335.5	339.6
Angina	0.0	9.7
Pneumonia	370.8	267.5
Urinary tract infection	129.5	155.0
Dehydration	76.5	109.9
Appendix perforation/abscess	444.4	433.2
Acute care discharges	576.8	532.5

Environment

Air Quality

- **Air Quality Index (AQI) Summary, Madison County, 2014**
 - **AQI Measurements**
 - Unavailable; there is no air quality monitoring station in Madison County.



Air Quality

- **Toxic Release Inventory (TRI), Madison County, 2013**

- **TRI Releases**

- Madison County ranks 83rd highest among the 86 NC counties reporting TRI releases.
- In 2013 there were no TRI releases recorded for Madison County. (For comparison, New Hanover County had the highest level of releases in the state: 5.2 million pounds.)
- The Madison County manufacturing facilities that customarily report TRI releases are Dynamic Systems, Inc. in Leicester and Honeywell Sensing and Control in Mars Hill. The TRI chemicals customarily released by these two facilities are diisocyanates and phenol.



Air Quality

- **Radon**

- Western North Carolina has the highest radon levels in the state.
- The arithmetic mean indoor radon level for the 16 counties of the WNC region is 4.1 pCi/L, **3.2 times** the average national indoor radon level of 1.3 pCi/L.
- In Madison County, the current average indoor radon level is 2.9 pCi/L, **29% lower** than the regional mean, but **2.2 times** the average national level.



Water Quality

- **Madison County Drinking Water Systems**
February, 2014
 - **Community Water Systems**
 - Include municipalities, subdivisions and mobile home parks
 - Community water systems in Madison County serve an estimated 6,874 people, or 33% of the 2010 county population.
 - The fraction of the Madison County population served by a community water system is 40% **lower** than the average for the WNC region and NC as a whole.

Water Quality

- **National Pollutant Discharge Elimination System (NPDES) Permits in Madison County (2015)**
 - There are at present 10 permits issued in Madison County that allow municipal, domestic, or commercial facilities to discharge products of water/wastewater treatment and manufacturing into waterways.
 - 4 are small, municipal wastewater treatment facilities
 - 1 is a water treatment plant
 - 5 are domestic wastewater producers

Solid Waste

- **Solid Waste Disposal Rates**

- 2013-14 Per-Capita Disposal Rate

- Madison County = 0.48 tons (▼ 30% since 1991-1992)
 - NC = 0.93 tons (▼ 13% since 1991-1992)

- **Landfill Capacity**

- The Madison County Municipal Solid Waste/Construction and Demolition Landfill has a remaining capacity, by volume, adequate for 31 years of additional use at the present fill rate.

Rabies

- The most common animal host for rabies in the WNC region and NC as a whole is raccoons.
- There was one case of animal rabies (in a bat) reported for Madison County in the period 2010 through 2014.

Animal Rabies Cases, 2010 through 2014

County	Number of Cases						Most Common Host
	2010	2011	2012	2013	2014	Total	
Madison	0	0	0	0	1	1	Bat (1/1)
WNC (Regional) Total	14	20	19	17	8	78	Raccoon (40/78)
State Total	397	429	431	380	352	1,989	Raccoon (1010/1989)



Madison County Maps

Community Health Assessment
2015



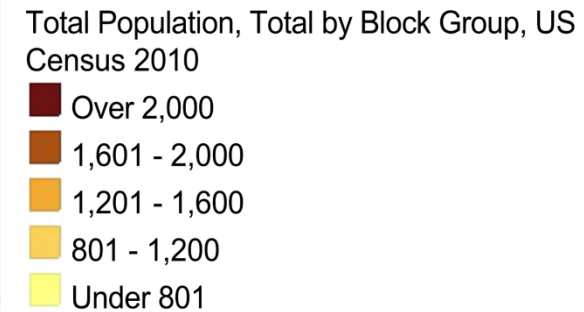
Why use maps?

- To show variation across the county (or a lack of it)
 - Using only one number or statistic to describe the entire county can hide variation across communities. Maps can show if communities are different.
- To show vulnerable populations
 - Mapping demographic information can show us where our most vulnerable populations live.
- To show masked associations
 - Maps can show where specific factors occur simultaneously.



Maps are one piece of the data puzzle

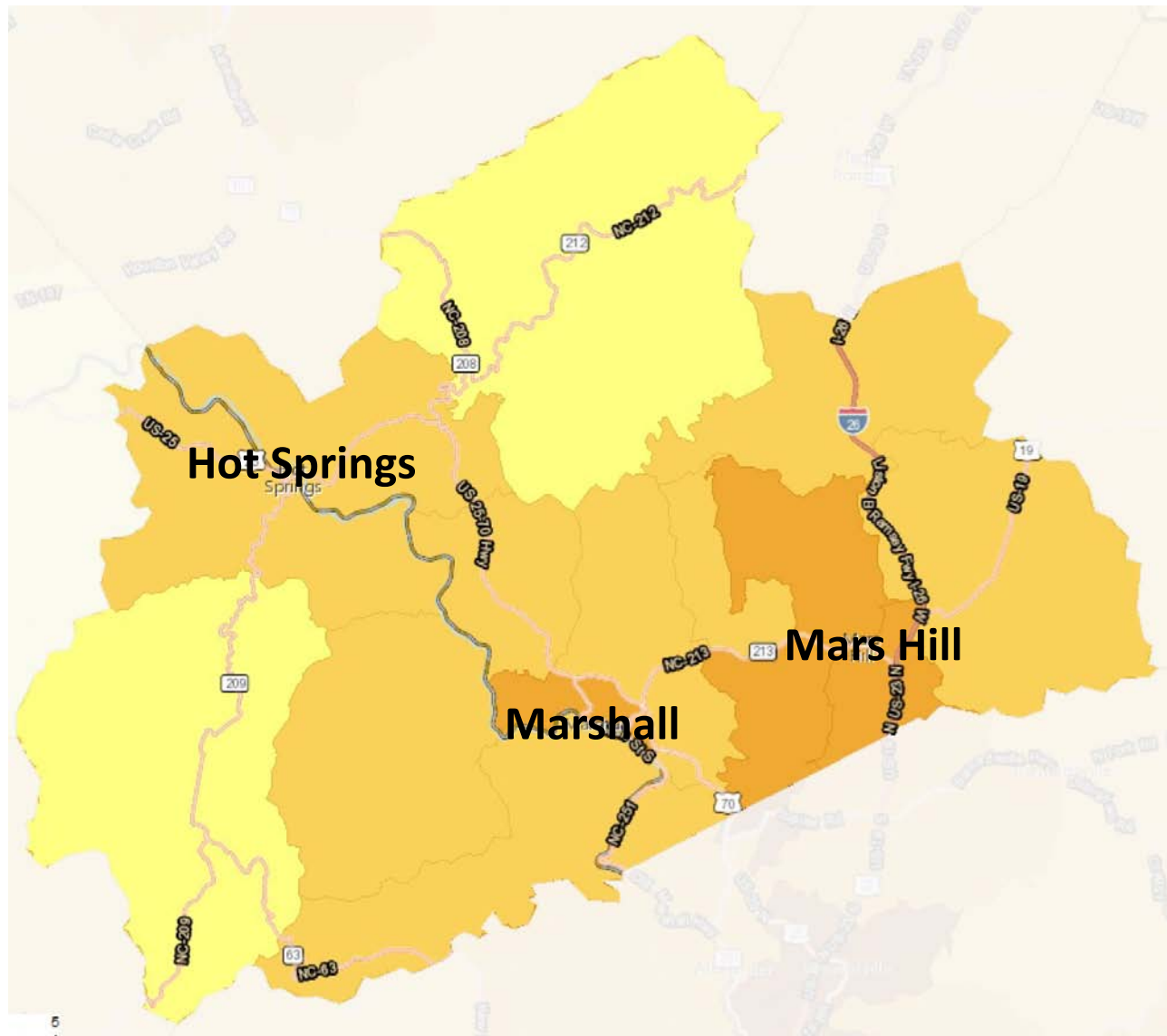
- Maps can be misleading and are best used to highlight which communities to investigate further.
 - Reliability of data decreases as it is cut into smaller and smaller pieces. Therefore, maps of census tract data have greater margins of error than county statistics.
- Maps should be supported by talking with community members or service providers specific to the community of interest to learn more about the community's needs and opportunities.



Map produced with Community Commons



Population Density of Madison County



Total Population, Density (Persons per Sq Mile) by Block Group, US Census 2010

- Over 2,000
- 400.1 - 2000
- 100.1 - 400.0
- 20.1 - 100.0
- Under 20.1

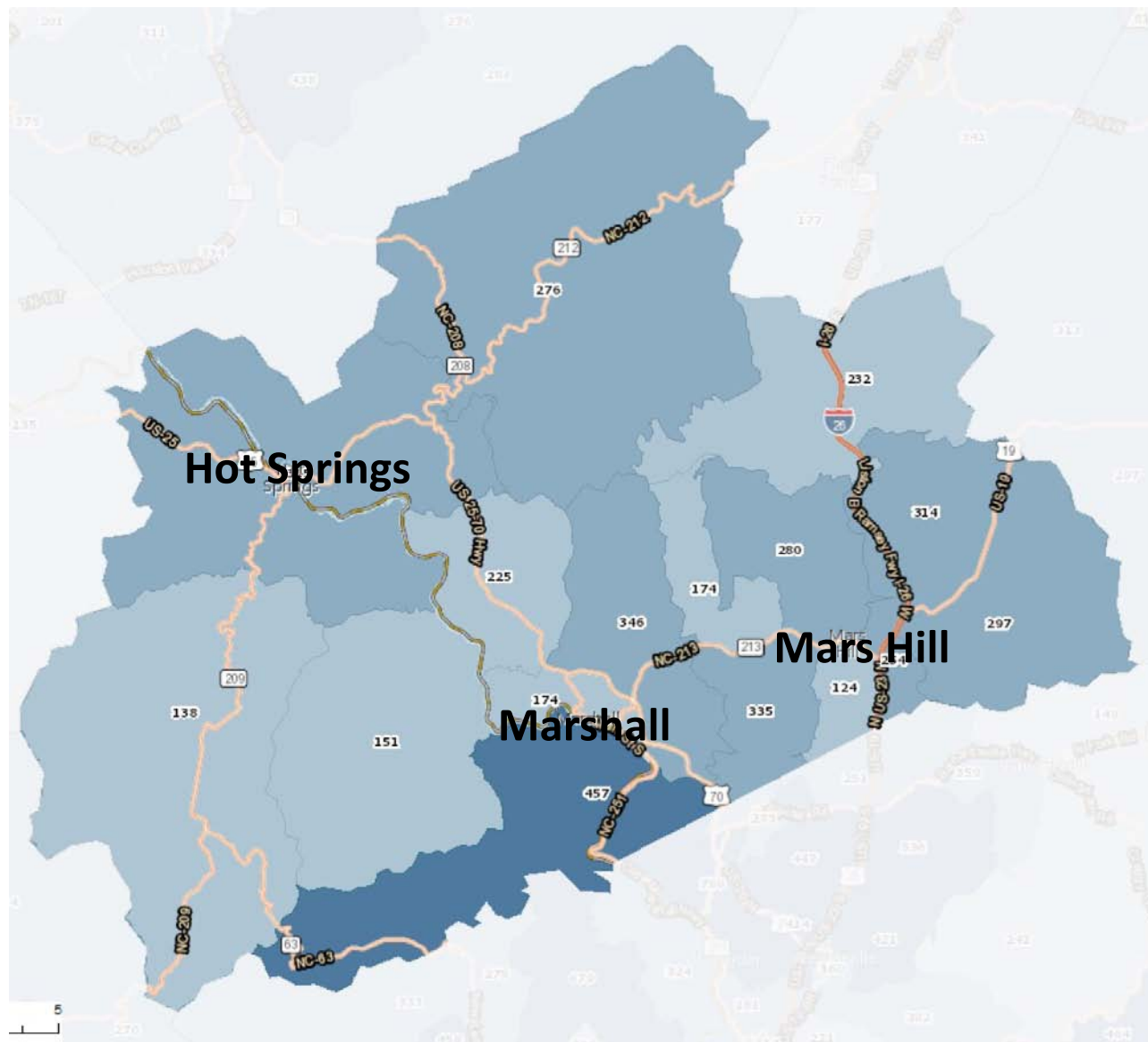
Source: US Census 2010

Geographic Unit: Block Group

Map produced with Community Commons



Population of Children (Age 0-17) in Madison County



Population Age 0-17, Total by Block Group,
US Census 2010

- Over 400
- 251 - 400
- 101 - 250
- Under 101
- No Population or No Data

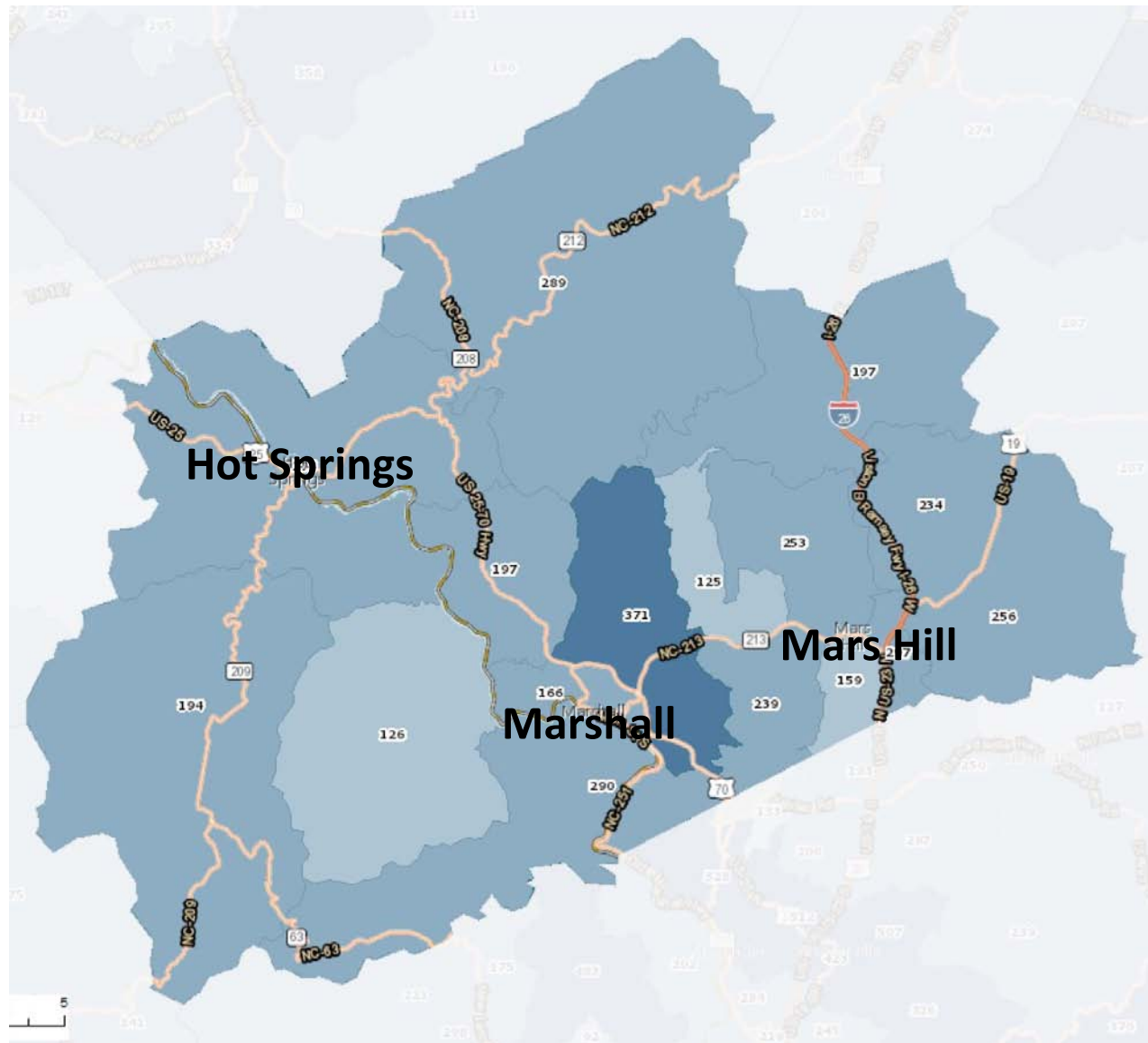
Source: US Census 2010

Geographic Unit: Block Group

Map produced with Community Commons



Population of Older Adults (Age 65+) in Madison County



Population Age 65+, Total by Block Group,
US Census 2010

- Over 320
- 161 - 320
- 81 - 160
- Under 81
- No Population or No Data

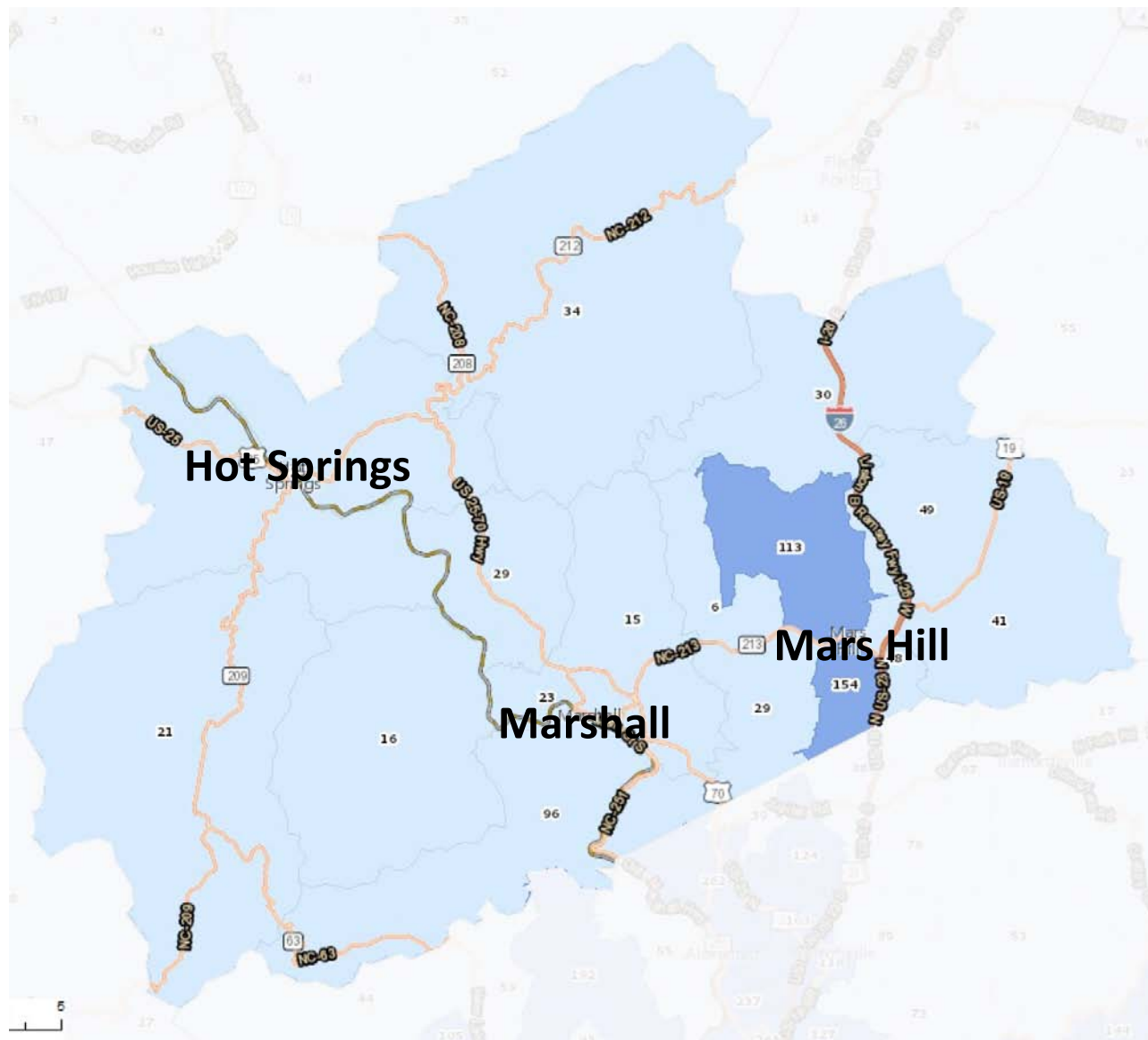
Source: US Census 2010

Geographic Unit: Block Group

Map produced with Community Commons



Population of Ethnic and Racial Minorities in Madison County



Population, All Minority, Total by Block Group,
US Census 2010

- Over 600
- 301 - 600
- 101 - 300
- Under 101
- No Population or No Data

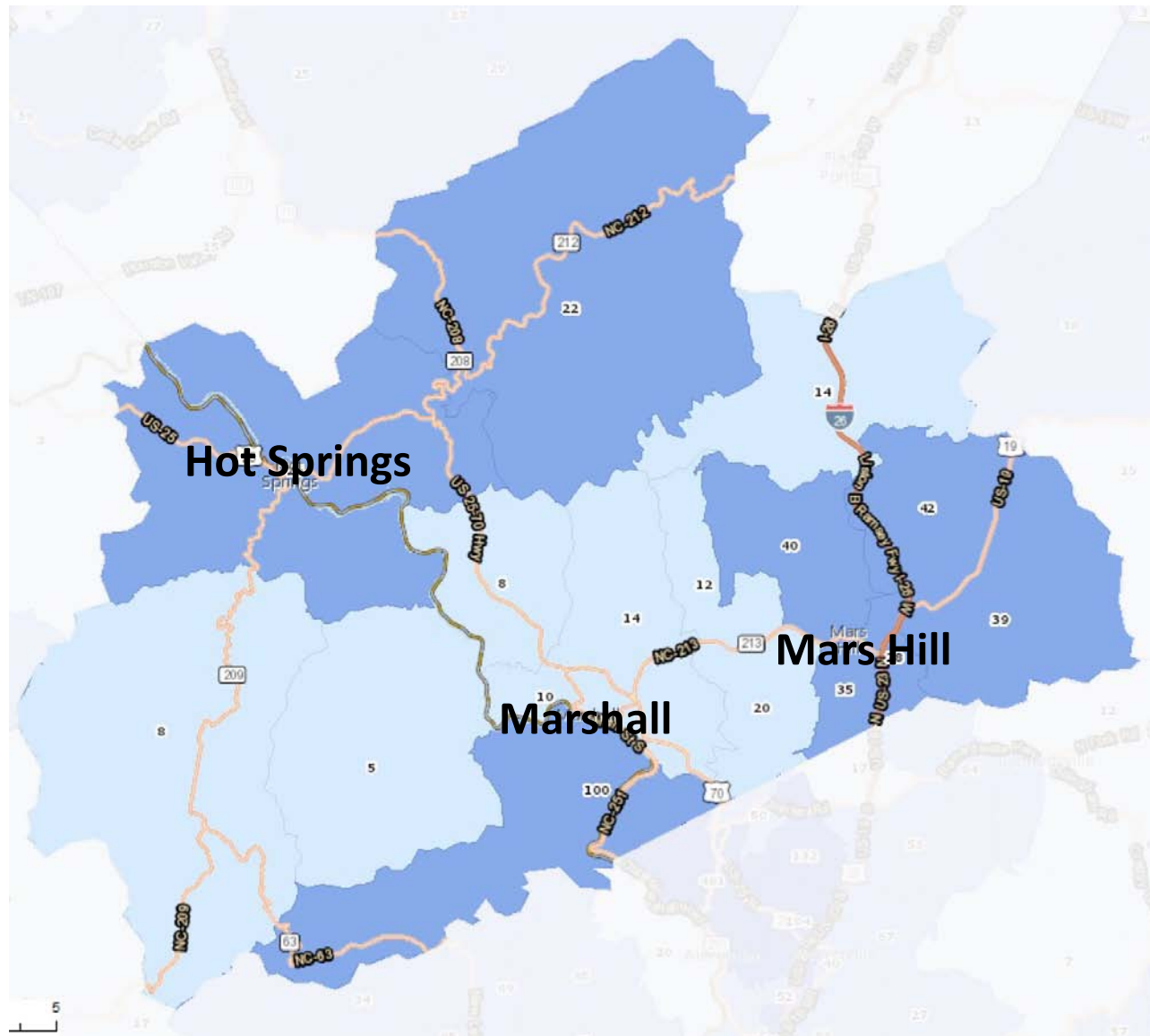
Source: US Census 2010

Geographic Unit: Block Group

Map produced with Community Commons



Population of Hispanics and Latinos in Madison County



Population, Hispanic or Latino, Total by Block Group, US Census 2010

- Over 500
- 101 - 500
- 21 - 100
- Under 21
- No Population or No Data

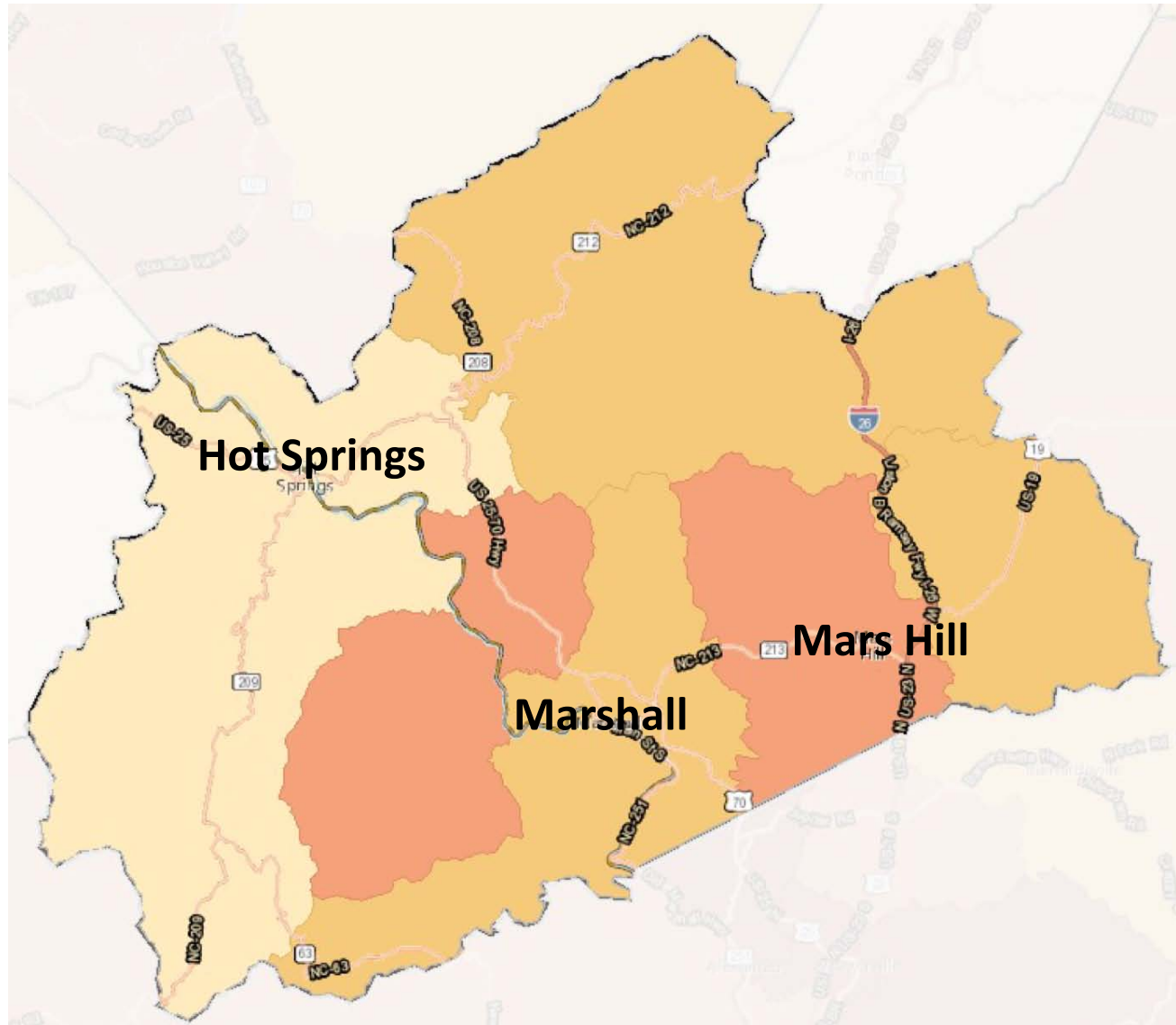
Source: US Census 2010

Geographic Unit: Block Group

Map produced with Community Commons



Percent of the Population (25+) with a High School Diploma or Higher in Madison County



Population with a High School Diploma or Higher, Percent by Tract, ACS 2009-13

- Over 89.0%
- 82.1 - 89.0%
- 75.1 - 82.0%
- Under 75.1%
- No Data or Data Suppressed

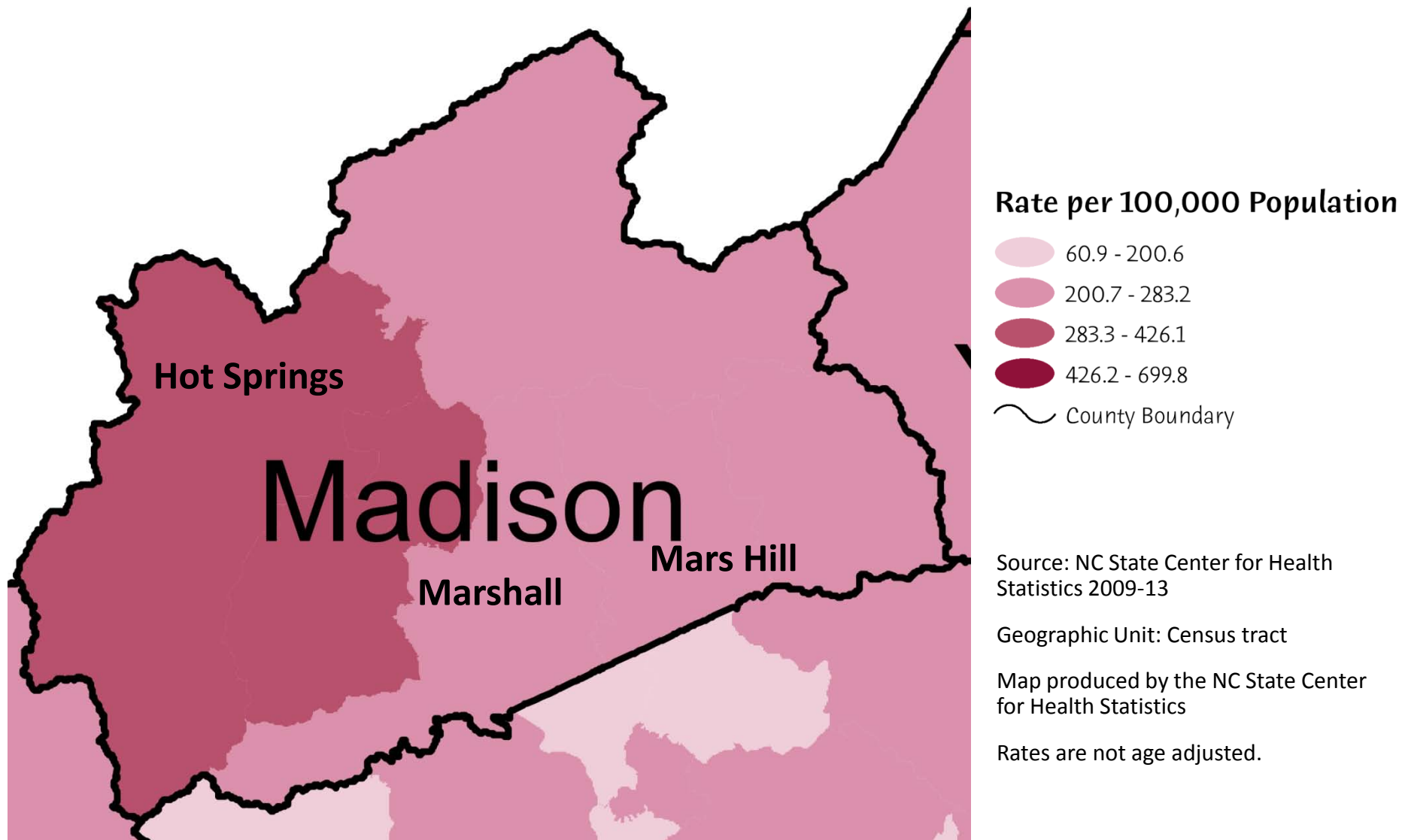
Source: American Community Survey 2009-13

Geographic Unit: Census tract

Map produced with Community Commons

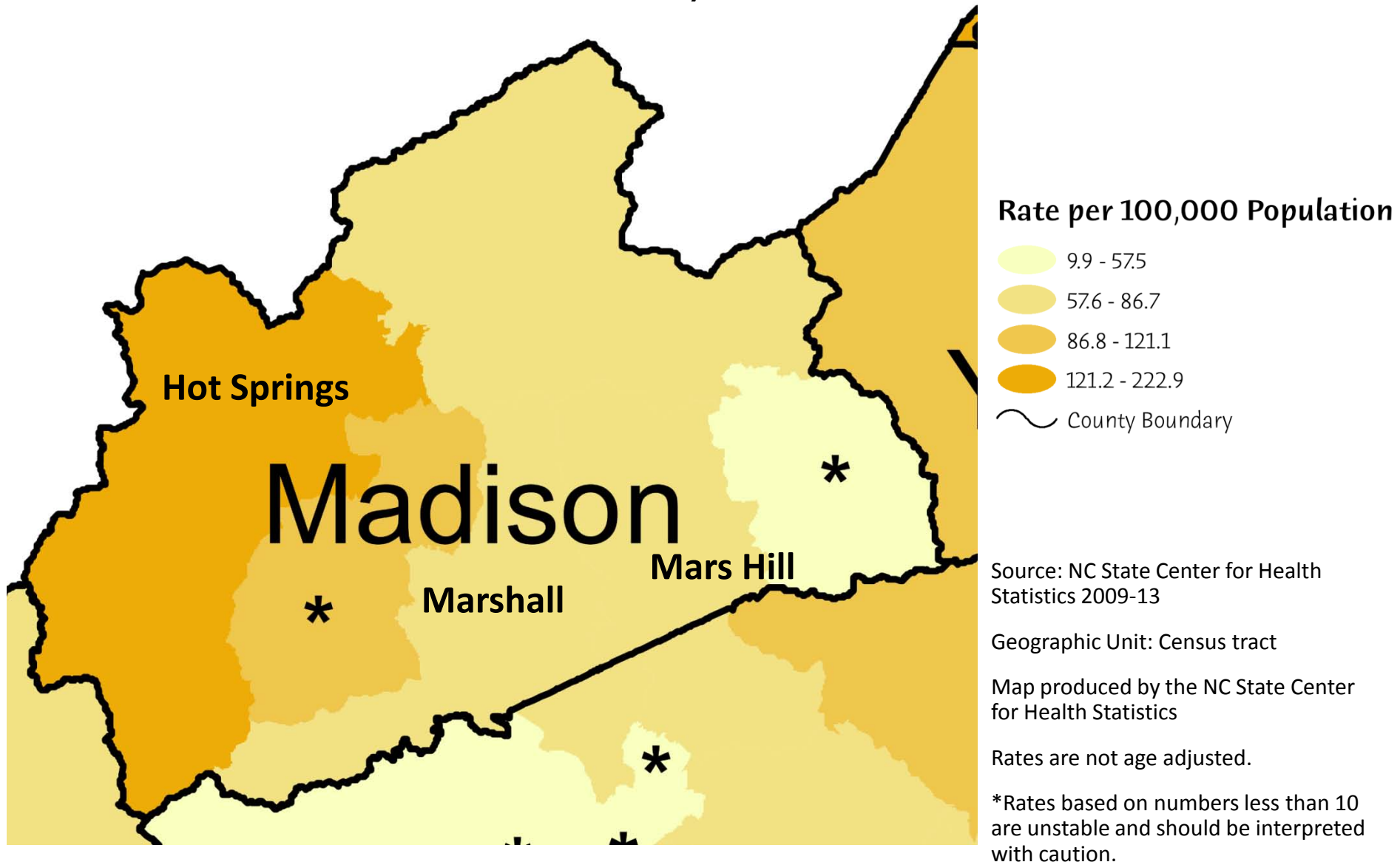


Madison County Heart Disease Mortality Rates 2009-2013



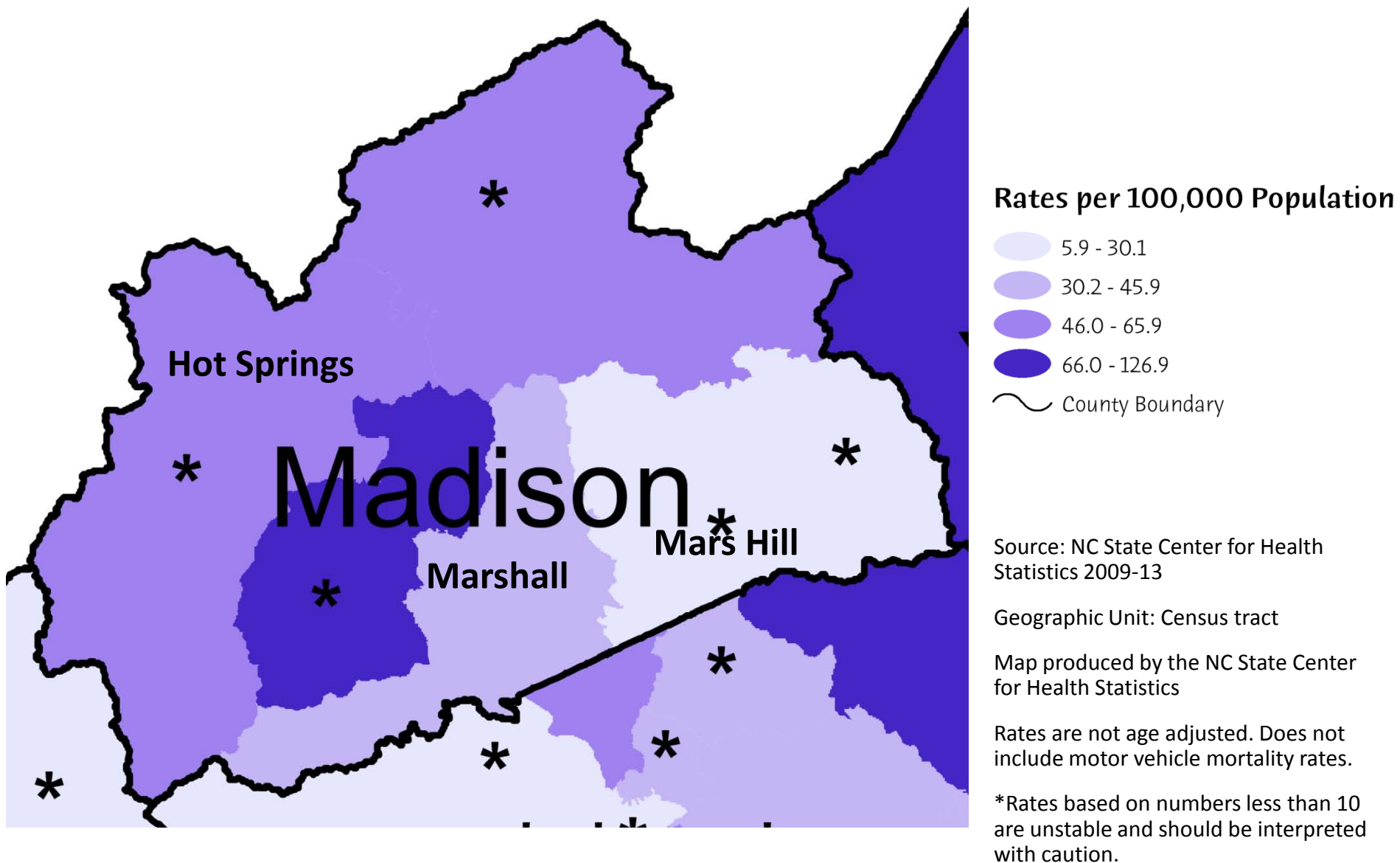


Madison County Chronic Lower Respiratory Diseases Mortality Rates 2009-2013



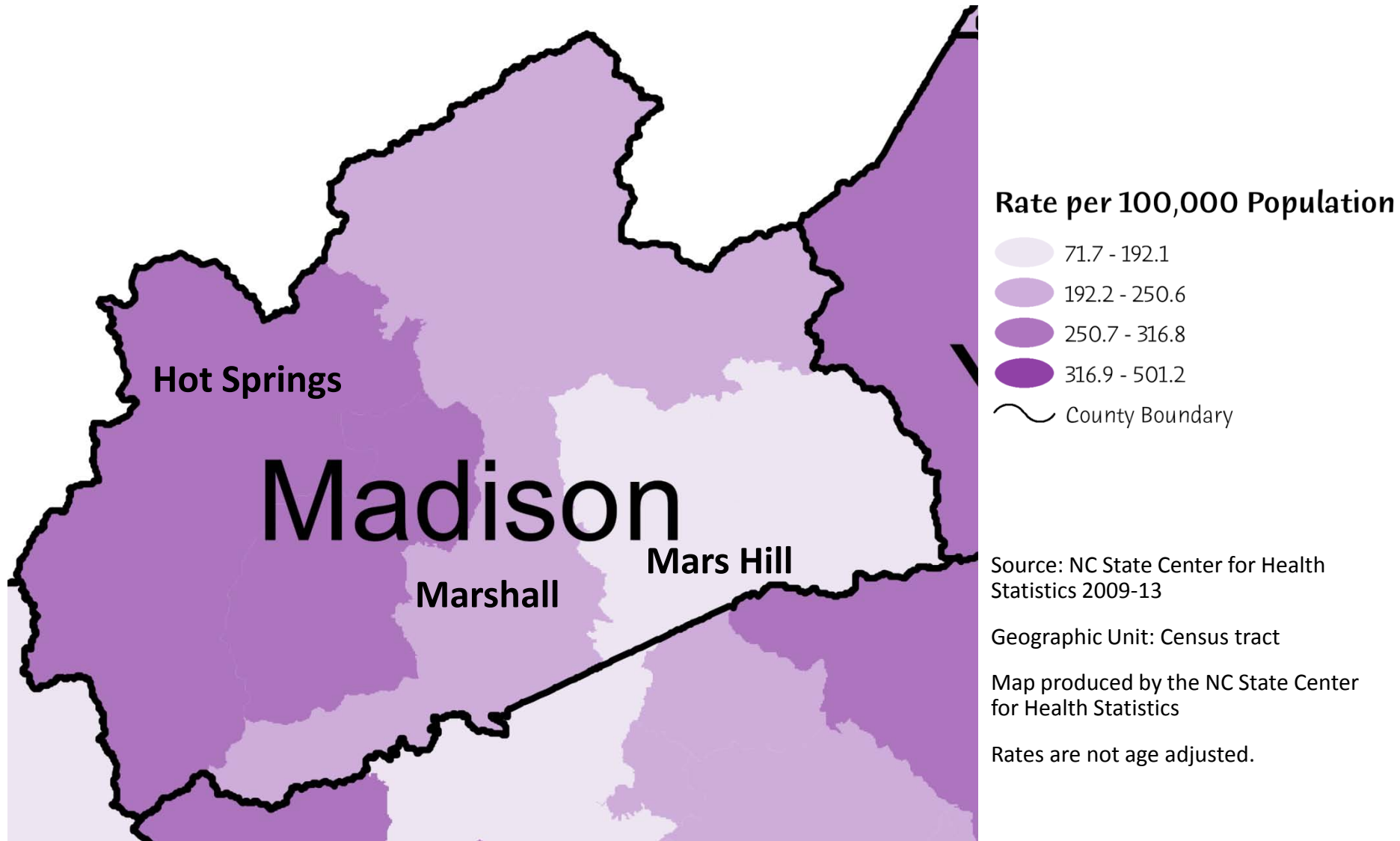


Madison County Other Unintentional Injuries Mortality Rates 2009-2013



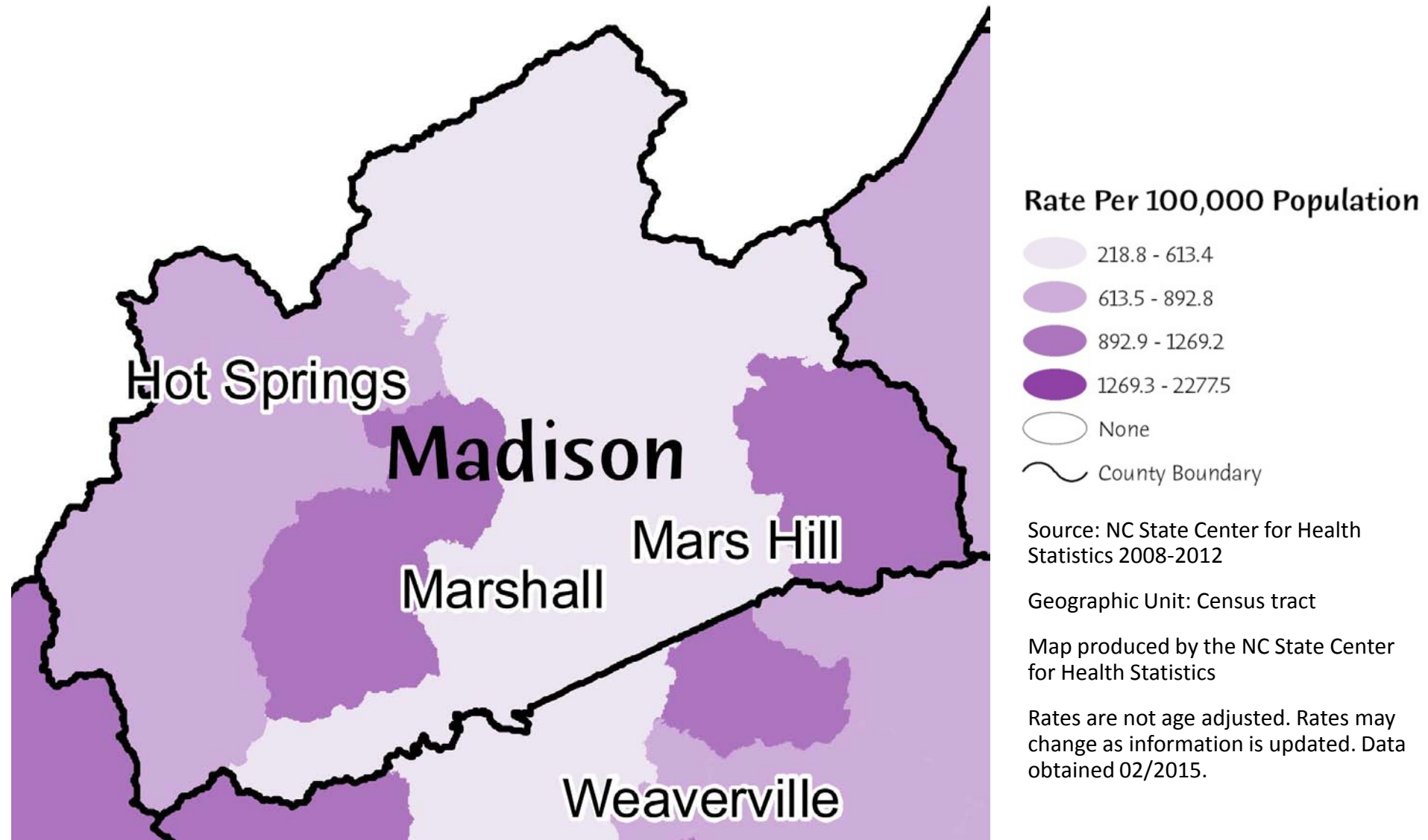


Madison County All Cancers Mortality Rates 2009-2013





Madison County All Cancer Incidence Rates 2008-2012





Madison County Lung and Bronchus Cancer Incidence Rates 2008-2012



Rate per 100,000 Population

- 32.5 - 76.4
- 76.5 - 121.5
- 121.6 - 200.9
- 201.0 - 450.2

None

County Boundary

Source: NC State Center for Health
Statistics 2008-2012

Geographic Unit: Census tract

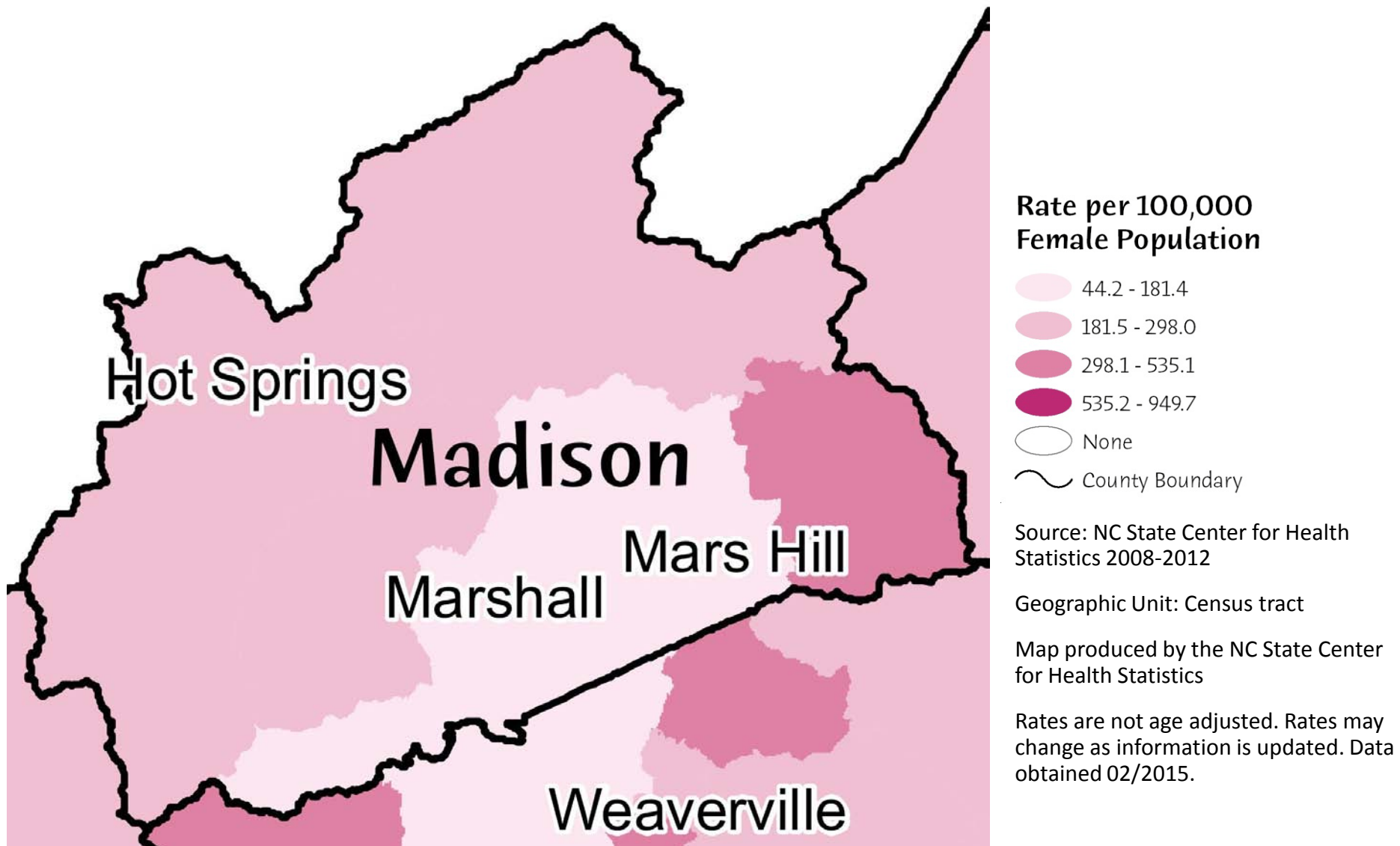
Map produced by the NC State Center
for Health Statistics

Rates are not age adjusted. Rates may
change as information is updated. Data
obtained 02/2015.

*Rates based on numbers less than 10
are unstable and should be interpreted
with caution.

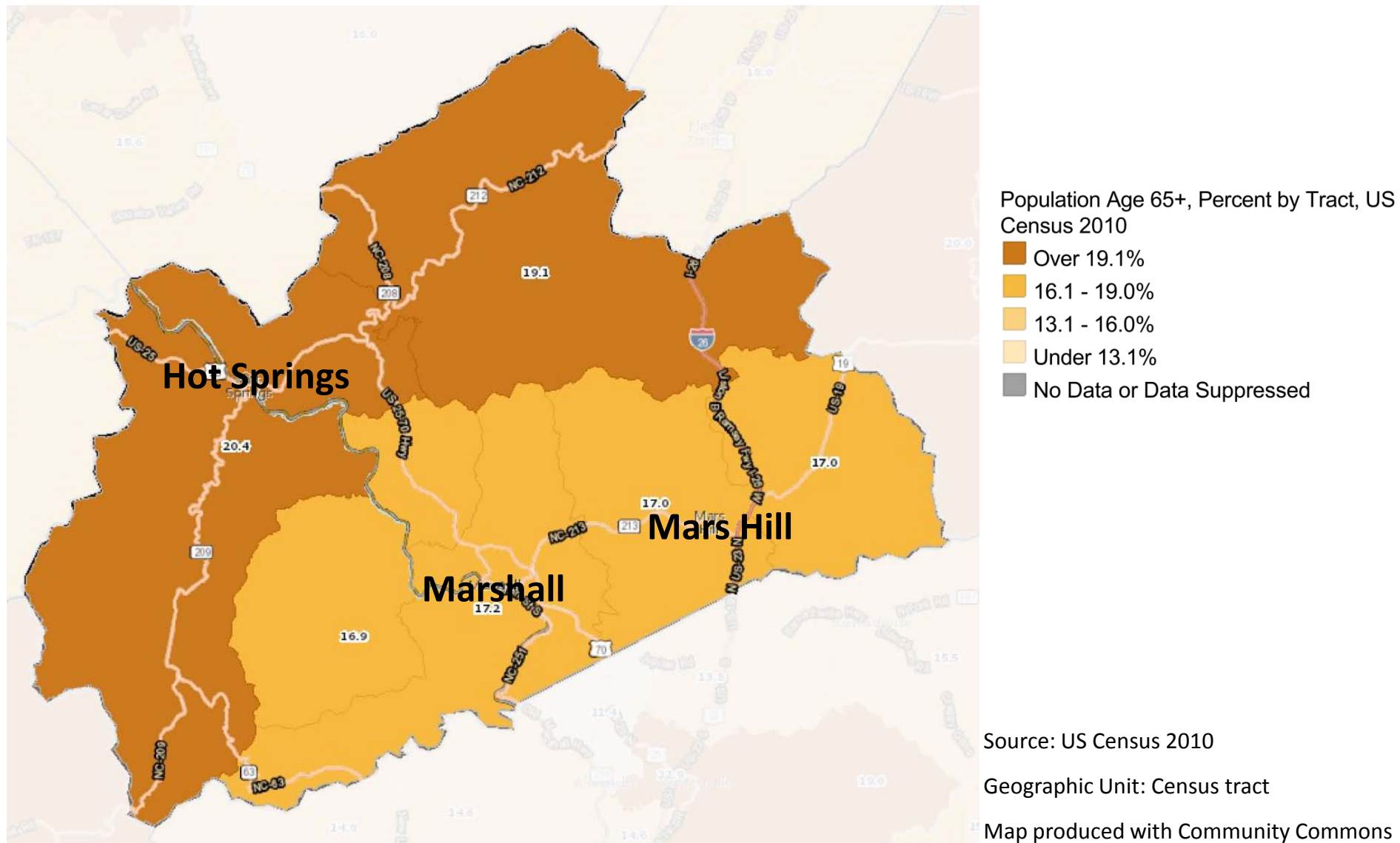


Madison County Breast Cancer Incidence Rates 2008-2012





Percent of the Population of Older Adults (Age 65+) in Madison County





Date: _____
Interviewer: _____
Interviewer
ID: _____

2015-0080-02

Professional Research Consultants, Inc.

**WESTERN NORTH CAROLINA HEALTHY IMPACT
2015 Community Health Needs Assessment
Asheville, North Carolina**

Hello, this is _____ with Professional Research Consultants. %hospname have asked us to conduct a survey to study ways to improve the health of your community.

1. In order to randomly select the person I need to talk to, I need to know how many adults 18 and over live in this household?
- One
Two
Three
Four
Five
Six or More

2. Would you please tell me which county you live in?

- Buncombe County
- Cherokee County
- Clay County
- Graham County
- Haywood County
- Henderson County
- Jackson County
- McDowell County
- Macon County
- Madison County
- Mitchell County
- Polk County
- Rutherford County
- Swain County
- Transylvania County
- Yancey County
- All Others

NOTE: If Q2 is "All Others", THANK & TERMINATE.

3. Zip Code.

This survey may be recorded for quality assurance.

4. Gender of Respondent. (Do Not Ask - Just Record)

- Male
- Female

5. First I would like to ask, overall, how would you describe your county as a place to live?
Would you say it is:

- Excellent
- Very Good
- Good
- Fair
- or Poor
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

6. What is the ONE THING that needs the most improvement in your county?

- (SKIP to 7)

[Don't Know/Not Sure]

[Refused]

[Nothing]
- (SKIP to 7)

Animal Control
- (SKIP to 7)

Availability of Employment
- (SKIP to 7)

Better/More Health Food Choices
- (SKIP to 7)

Child Care Options
- (SKIP to 7)

Counseling/Mental Health/Support Groups
- (SKIP to 7)

Culturally Appropriate Health/Support Groups
- (SKIP to 7)

Elder Care Options
- (SKIP to 7)

Healthy Family Activities
- (SKIP to 7)

Higher Paying Employment
- (SKIP to 7)

More Affordable Health Care
- (SKIP to 7)

More Affordable/Better Housing
- (SKIP to 7)

Number of Health Care Providers
- (SKIP to 7)

Positive Teen Activities
- (SKIP to 7)

Recreational Facilities (Parks, Trails, Community Ctrs)
- (SKIP to 7)

Road Maintenance
- (SKIP to 7)

Road Safety
- (SKIP to 7)

Safe Places to Walk/Ride Bike for Commuting
- (SKIP to 7)

Safe Places to Walk/Ride Bike for Recreation
- (SKIP to 7)

Services for Disabled People
- (SKIP to 7)

Transportation Options
- (SKIP to 7)

Other (Specify)

7. Would you say that, in general, your health is:

- Excellent
- Very Good
- Good
- Fair
- or Poor
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

8. Was there a time in the past 12 months when you needed medical care, but could not get it?

- (SKIP to NOTE before 10)

Yes
- (SKIP to NOTE before 10)

No
- (SKIP to NOTE before 10)

[Not Applicable]
- (SKIP to NOTE before 10)

[Don't Know/Not Sure]
- (SKIP to NOTE before 10)

[Refused]
- [Terminate Interview]

9. What was the MAIN reason you did NOT get this needed medical care?

- [Don't Know/Not Sure]
- [Refused]
- Cost/No Insurance
- Didn't Accept My Insurance
- Distance Too Far
- Inconvenient Office Hours/Office Closed
- Lack of Child Care
- Lack of Transportation
- Language Barrier
- No Access for People With Disabilities
- Too Long of Wait for Appointment
- Too Long of Wait in Waiting Room
- Other (Specify)

NOTE: If Q2 is "Henderson County", ASK Q10.

If Q2 is "Polk County", SKIP to 11.

If Q2 is "Macon County", SKIP to 13.

All Others, SKIP to READ BOX before 14.

HENDERSON COUNTY

10. Was there a time in the past 12 months when you needed a prescription medicine, but did not get it because you could not afford it?

- Yes
- No
- [Not Applicable]
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

POLK COUNTY

11. Is there any health care service for which you feel the need to leave the local area to receive care?

- (SKIP to READ BOX before 14)
- (SKIP to READ BOX before 14)
- (SKIP to READ BOX before 14)
- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

POLK COUNTY

12. What would you say is the MAIN reason you feel the need to leave the local area for care?

- [Don't Know/Not Sure]
- [Refused]
- [ZZ1]
- Better Care Available Elsewhere
- Convenience
- Doctor's Recommendation
- Long Wait for Appointments
- Service Not Available in This Area
- Other (Specify)

NOTE: SKIP to READ BOX before 14.

MACON COUNTY

13. IF there is any health care service for which you feel the need to leave Macon County, what would you say is the main reason you feel the need to leave the county to get care?

- [Don't Know/Not Sure]
- [Refused]
- [No Need to Leave Macon County for Care]
- Better Care Available Elsewhere
- Convenience
- Doctor's Recommendation
- Long Wait for Appointments
- Service Not Available in This Area
- Other (Specify)

The next questions are about access to health care services.

NOTE: If Q2 is "Haywood County", ASK Q14.
All Others, SKIP to 16.

HAYWOOD COUNTY

14.

Please tell me your level of agreement or disagreement with the following two statements. The first statement is:

Considering cost, quality, and availability of services, there is good access health care in my county. Do you:
- Strongly Agree

Agree

Neither Agree Nor Disagree

Disagree

or Strongly Disagree

[Not Applicable]

[Don't Know/Not Sure]

[Refused]

[Terminate Interview]

HAYWOOD COUNTY

15.

The next statement is:

I am usually able to get an appointment for the health care services I need when I need them. Do you:
- Strongly Agree

Agree

Neither Agree Nor Disagree

Disagree

or Strongly Disagree

[Not Applicable]

[Don't Know/Not Sure]

[Refused]

[Terminate Interview]
16.

Is there a particular place that you usually go to if you are sick or need advice about your health?
- (SKIP to NOTE before 18)

(SKIP to NOTE before 18)

(SKIP to NOTE before 18)

Yes

No

[Don't Know/Not Sure]

[Refused]

[Terminate Interview]

17. What kind of place is it:

(SKIP to NOTE before 18)

A Doctor's Office

(SKIP to NOTE before 18)

Health Department or Public Health Clinic

(SKIP to NOTE before 18)

Community Health Center

(SKIP to NOTE before 18)

An Urgent Care/Walk-In Clinic

(SKIP to NOTE before 18)

A Hospital Emergency Room

(SKIP to NOTE before 18)

A Military or Other VA Healthcare Facility

(SKIP to NOTE before 18)

Indian Health Services

or Some Other Place

(SKIP to NOTE before 18)

[Don't Know/Not Sure]

(SKIP to NOTE before 18)

[Refused]

[Terminate Interview]

IVAR17A. What kind of place do you go to?

[Don't Know/Not Sure]

[Refused]

Other (Specify) _____

NOTE: If Q2 is "Swain County", ASK Q18.

All Others, SKIP to 19.

SWAIN COUNTY

18. In the past 12 months, have you or someone in your household used the Swain County Health Department for any type of service?

Yes

No

[Don't Know/Not Sure]

[Refused]

[Terminate Interview]

19. A routine checkup is a general physical exam, not an exam for a specific injury, illness or condition. About how long has it been since you last visited a doctor for a routine checkup?

Within the Past Year (Less Than 1 Year Ago)

Within the Past 2 Years (1 Year But Less Than 2 Years Ago)

Within the Past 5 Years (2 Years But Less Than 5 Years Ago)

5 or More Years Ago

[Never]

[Don't Know/Not Sure]

[Refused]

[Terminate Interview]

20. When was the last time you had an eye exam in which the pupils were dilated? This would have made you temporarily sensitive to bright light.

- Within the Past 2 Years (Less Than 2 Years Ago)
- 2 or More Years Ago
- [Never]
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

21. About how long has it been since you last visited a dentist or a dental clinic for any reason? This includes visits to dental specialists, such as orthodontists.

- (SKIP to 23)

Within the Past Year (Less Than 1 Year Ago)

Within the Past 2 Years (1 Year But Less Than 2 Years Ago)

Within the Past 5 Years (2 Years But Less Than 5 Years Ago)

5 or More Years Ago

[Never]

[Don't Know/Not Sure]

[Refused]

[Terminate Interview]

NOTE: If Q2 is "Transylvania County", ASK Q22.

All Others, SKIP to 23.

TRANSYLVANIA COUNTY

22. What is the MAIN reason you have NOT visited a dentist or dental clinic in the past year?

- [Don't Know/Not Sure]
- [Refused]
- Cost/No Insurance
- Didn't Accept My Insurance
- Distance Too Far
- Inconvenient Office Hours/Office Closed
- Lack of Child Care
- Lack of Transportation
- Language Barrier
- No Access for People With Disabilities
- Too Long a Wait For an Appointment
- Too Long a Wait in Waiting Room
- Other (Specify)

23. Now I would like to ask you about some specific medical conditions.

Have you ever suffered from or been diagnosed with COPD, or Chronic Obstructive Pulmonary Disease, including Bronchitis or Emphysema?

- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

Has a doctor, nurse or other health professional EVER told you that you had any of the following: [+*so+](Insert Qs in BOLD)[+*se+]?

24. A Heart Attack, Also Called a Myocardial Infarction, OR Angina OR Coronary Heart Disease

- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

25. A Stroke

- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

(End of Rotate)

26. Have you ever been told by a doctor, nurse, or other health professional that you had asthma?

- (SKIP to 28)

(SKIP to 28)

(SKIP to 28)
- Yes
 - No
 - [Don't Know/Not Sure]
 - [Refused]
 - [Terminate Interview]

27. Do you still have asthma?

- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

28. Have you ever been told by a doctor that you have diabetes?

- Yes
- (SKIP to 29) No
- (SKIP to 29) [Yes, but Female Told Only During Pregnancy]
- (SKIP to 29) [Pre-Diabetes or Borderline Diabetes]
- (SKIP to 29) [Don't Know/Not Sure]
- (SKIP to 29) [Refused]
- [Terminate Interview]

29. Have you had a test for high blood sugar or diabetes within the past three years?

- Yes
- (SKIP to 31) No
- (SKIP to 31) [Don't Know/Not Sure]
- (SKIP to 31) [Refused]
- [Terminate Interview]

NOTE: If Q28 is "[Pre-Diabetes or Borderline Diabetes]", Force Q30 to "Yes"/"Sí" and SKIP to 31.

All Others, CONTINUE.

SCRIPTING NOTE: If Q28 is "[Yes, But Female Told Only During Pregnancy]", Insert "Other than during pregnancy, have"/"Sin contar el embarazo, ¿le ha dicho" as '+temp20+'. All Others, Insert "Have"/"¿Le ha dicho".

30. '+temp20+' you ever been told by a doctor or other health professional that you have pre-diabetes or borderline diabetes?

- Yes
- (SKIP to 32) No
- (SKIP to 32) [Don't Know/Not Sure]
- (SKIP to 32) [Refused]
- [Terminate Interview]

31. Are you currently taking action to help lower or control your high blood sugar, such as taking natural or conventional medicines or supplements, changing your diet, or exercising?

- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

32. Have you ever been told by a doctor, nurse or other health care professional that you had high blood pressure?

	Yes
(SKIP to 34)	No
(SKIP to 34)	[Don't Know/Not Sure]
(SKIP to 34)	[Refused]
	[Terminate Interview]

33. Are you currently taking any action to help control your high blood pressure, such as taking medication, changing your diet, or exercising?

	Yes
	No
	[Don't Know/Not Sure]
	[Refused]
	[Terminate Interview]

34. About how long has it been since you last had your blood pressure taken by a doctor, nurse or other health professional?

	Within the Past 2 Years (Less Than 2 Years Ago)
	Within the Past 5 Years (2 Years But Less Than 5 Years Ago)
	5 or More Years Ago
	[Never]
	[Don't Know/Not Sure]
	[Refused]
	[Terminate Interview]

35. Blood cholesterol is a fatty substance found in the blood. Have you ever been told by a doctor, nurse, or other health care professional that your blood cholesterol is high?

	Yes
(SKIP to 37)	No
(SKIP to 37)	[Don't Know/Not Sure]
(SKIP to 37)	[Refused]
	[Terminate Interview]

36. Are you currently taking any action to help control your high cholesterol, such as taking medication, changing your diet, or exercising?

	Yes
	No
	[Don't Know/Not Sure]
	[Refused]
	[Terminate Interview]

37. About how long has it been since you last had your blood cholesterol checked?

- Within the Past 5 Years (Less Than 5 Years Ago)
- 5 or More Years Ago
- [Never]
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: If Q2 is "Cherokee County", "Clay County", "Graham County", or "Swain County", ASK Q38.

All Others, SKIP to NOTE before 39.

CHEROKEE, CLAY, GRAHAM, AND SWAIN COUNTIES

38. Do you feel existing community resources or services for chronic diseases such as diabetes, heart disease, and COPD are:

- More Than Sufficient
- Sufficient
- Insufficient
- or Not Available
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: If All Qs: Q23, Q24, Q25, Q26, Q28, Q30, Q32, AND Q35 are ALL "No", "Don't Know/Not Sure", or "Refused", SKIP to 40.

All Others, CONTINUE with SCRIPTING NOTE before 39.

39. Previously you had mentioned that you have suffered from or been diagnosed with (the following medical condition(s)):

'+temp23+' '+temp24+' '+temp25+' '+temp26+' '+temp28+' '+temp30+' '+temp32+' '+temp35+'.

Has any health provider ever helped you connect to a community resource such as classes or coaching to help you learn more about or manage (this/these) conditions?

- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

40. What is your age?

18 to 110
[Don't Know/Not Sure]
[Refused]

NOTE: If Q4 is "Male", SKIP to NOTE before 42.

If Q4 is "Female", CONTINUE.

41. A mammogram is an x-ray of each breast to look for cancer. How long has it been since you had your last mammogram?

Within the Past Year (Less Than 1 Year Ago)
Within the Past 2 Years (1 Year But Less Than 2 Years Ago)
Within the Past 3 Years (2 Years But Less Than 3 Years Ago)
Within the Past 5 Years (3 Years But Less Than 5 Years Ago)
5 or More Years Ago
[Never]
[Don't Know/Not Sure]
[Refused]
[Terminate Interview]

NOTE: If Q2 is "Madison County" AND Q40 is 50 Years of Age or Older, ASK Q42.
If Q2 is "Madison County" AND Q40 is 49 Years of Age or Younger, "Don't Know/Not Sure", or "Refused", SKIP to 45.

If Q2 is "Henderson County", SKIP to 44.

All Others, SKIP to 45.

MADISON COUNTY

42. Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems. How long has it been since your last sigmoidoscopy or colonoscopy?

Within the Past Year (Less Than 1 Year Ago)
Within the Past 2 Years (1 Year But Less Than 2 Years Ago)
Within the Past 3 Years (2 Years But Less Than 3 Years Ago)
Within the Past 5 Years (3 Years But Less Than 5 Years Ago)
Within the Past 10 Years (5 Years But Less Than 10 Years Ago)
10 or More Years Ago
[Never]
[Don't Know/Not Sure]
[Refused]
[Terminate Interview]

MADISON COUNTY

43. A blood stool test is a test that may use a special kit at home to determine whether the stool contains blood. How long has it been since you had your last blood stool test?

Within the Past Year (Less Than 1 Year Ago)
Within the Past 2 Years (1 Year But Less Than 2 Years Ago)
Within the Past 3 Years (2 Years But Less Than 3 Years Ago)
Within the Past 5 Years (3 Years But Less Than 5 Years Ago)
5 or More Years Ago
[Never]
[Don't Know/Not Sure]
[Refused]
[Terminate Interview]

NOTE: SKIP to 45.

HENDERSON COUNTY

44. The next question is about violence in relationships with an intimate partner. By an intimate partner, I mean any current or former spouse, boyfriend, or girlfriend. Someone you were dating, or romantically or sexually intimate with, would also be considered an intimate partner. This information will help us to better understand the problem of violence in relationships. This is a sensitive topic. Remember, you do not have to answer any question you do not want to.

Has an intimate partner hit, slapped, pushed, kicked, or hurt you in any way within the PAST 12 MONTHS?

Yes
No
[Don't Know/Not Sure]
[Refused]
[Terminate Interview]

45. The next questions are about tobacco use. Do you NOW smoke cigarettes "Every Day," "Some Days," or "Not At All"?

Every Day
Some Days
Not At All
[Don't Know/Not Sure]
[Refused]
[Terminate Interview]

46. Do you currently use chewing tobacco, snuff, or snus (pronounced "snoose"; rhymes with goose) "Every Day," "Some Days," or "Not At All"?
- Every Day
Some Days
Not At All
[Don't Know/Not Sure]
[Refused]
[Terminate Interview]

47. The next question is about electronic cigarettes, also known as e-cigarettes. These are battery-operated devices that simulate traditional cigarette smoking, but do not involve the burning of tobacco. The cartridge or liquid "e-juice" used in these devices produces vapor and comes in a variety of flavors.
- Do you NOW smoke electronic cigarettes "Every Day," "Some Days," or "Not At All"?
- Every Day
Some Days
Not at All
[Don't Know/Not Sure]
[Refused]
[Terminate Interview]

NOTE: If Q2 is "McDowell County" or "Rutherford County", ASK Q48.

All Others, SKIP to SCRIPTING NOTE before 49.

MCDOWELL AND RUTHERFORD COUNTIES

48. Please tell me if you believe the following statement is true or false: Most electronic cigarettes contain nicotine. Do you feel this statement is:
- True
or False
[Don't Know/Not Sure]
[Refused]
[Terminate Interview]
49. During how many of the past 7 days, at your workplace, did you breathe the smoke from someone '+temp44+' who was using tobacco?
- (INTERVIEWER: Code "Not Applicable" as 8.)
- 0 to 7/8
[Don't Know/Not Sure]
[Refused]

50. Please tell me your level of agreement or disagreement with the '+temp50+' I am going to read about smoking.

The '+temp50a+' is: I believe it is important for PARKS and PUBLIC WALKING and BIKING TRAILS in my county to be 100% tobacco free. Do you:

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- or Strongly Disagree
- [Not Applicable]
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: If Q2 is "McDowell County" or "Rutherford County", ASK Q51.

If Q2 is "Madison County", SKIP to 52.

If Q2 is "Henderson County", SKIP to 53.

If Q2 is "Cherokee County", "Graham County", or "Macon County", SKIP to 54.

All Others, SKIP to 55.

MCDOWELL AND RUTHERFORD COUNTIES

51. The next statement is: I believe there should be a local law in my county that prohibits the use of tobacco in all indoor public places. Do you:

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- or Strongly Disagree
- [Not Applicable]
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: SKIP to 55.

MADISON COUNTY

52. The next statement is: I believe it is important for GOVERNMENT BUILDINGS AND GROUNDS to be 100% tobacco free. Do you:

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- or Strongly Disagree
- [Not Applicable]
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: SKIP to 55.

HENDERSON COUNTY

53. The next statement is: I believe it is important for GOVERNMENT BUILDINGS AND GROUNDS in Henderson County to be 100% SMOKE free. Do you:

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- or Strongly Disagree
- [Not Applicable]
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: SKIP to 55.

CHEROKEE, GRAHAM, AND MACON COUNTIES

54. The next statement is: I believe it is important for ALL PUBLIC PLACES to be 100% tobacco free. Do you:

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- or Strongly Disagree
- [Not Applicable]
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

55. The next few questions are about alcohol use. Keep in mind that one drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor.

During the past 30 days, on how many days did you have at least one drink of any alcoholic beverage such as beer, wine, a malt beverage, or liquor?

(NOTE: A 40-ounce beer would count as 3 drinks, or a cocktail drink with 2 shots would count as 2 drinks.)

- 1 to 30
- (SKIP to 58) 0
- (SKIP to 58) [Don't Know/Not Sure]
- (SKIP to 58) [Refused]

56. On the day(s) when you drank, about how many drinks did you have on the average? (If "None", PROBE)

- 1 to 10
- [Don't Know/Not Sure]
- [Refused]

57. (If Respondent is MALE, Read:) Considering all types of alcoholic beverages, how many TIMES during the past 30 days did you have 5 or more drinks on an occasion?

(If Respondent is FEMALE, Read:) Considering all types of alcoholic beverages, how many TIMES during the past 30 days did you have 4 or more drinks on an occasion?

- 0 to 30
- [Don't Know/Not Sure]
- [Refused]

58. During the past 30 days, have you taken a prescription drug that was not prescribed to you?

- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

59. Have you ever given your prescription medication to anyone else to use?

- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: If Q2 is "McDowell County", "Mitchell County", or "Yancey County", ASK Q60.
If Q2 is "Jackson County", SKIP to 61.
If Q2 is "Swain County", SKIP to 62.
All Others, SKIP to 63.

MCDOWELL, MITCHELL, AND YANCEY COUNTIES

60. Do you keep your medicine in a locked place so that no one else can access it?

- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: SKIP to 63.

JACKSON COUNTY

61. If you or someone you knew needed substance abuse counseling, would you know where to refer them?

- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: SKIP to 63.

SWAIN COUNTY

62. To what degree has your life been negatively affected by YOUR OWN or SOMEONE ELSE's substance abuse issues, including alcohol, prescription, and other drugs? Would you say:

- A Great Deal
- Somewhat
- A Little
- or Not at All
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

63. Now I would like you to think about the food you ate during the past week.

About how many 1-cup servings of fruit did you have in the past week? For example, one apple equals 1 cup.

- 0 to 100
- [Don't Know/Not Sure]
- [Refused]

64. And, NOT counting lettuce salad or potatoes, about how many 1-cup servings of vegetables did you have in the past week? For example, 12 baby carrots equal 1 cup.

- 0 to 100
- [Don't Know/Not Sure]
- [Refused]

NOTE: If Q2 is "Jackson County", ASK Q65.

All Others, SKIP to 66.

JACKSON COUNTY

65. Packaged foods have labels with nutritional facts, providing consumers with information about calories, serving size, and nutritional content. In general, how would you rate your understanding of the nutrition information on food labels? Would you say:

- Excellent
- Very Good
- Good
- Fair
- or Poor
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

66. How difficult is it for you to buy fresh produce like fruits and vegetables at a price you can afford? Would you say:

- Very Difficult
- Somewhat Difficult
- Not Too Difficult
- or Not At All Difficult
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: If Q2 is "Rutherford County", ASK Q67.

If Q2 is "Mitchell County" or "Yancey County", SKIP to 68.

If Q2 is "Jackson County", SKIP to 69.

If Q2 is "Transylvania County", SKIP to 70.

If Q2 is "Buncombe County", SKIP to 71.

All Others, SKIP to READ BOX before 73.

RUTHERFORD COUNTY

67. How often in the past 12 months would you say you were worried or stressed about having enough money to buy nutritious meals? Would you say you were worried or stressed:

- Always
- Usually
- Sometimes
- Seldom
- or Never
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: SKIP to READ BOX before 73.

MITCHELL AND YANCEY COUNTIES

68. In the last 12 months, did you or someone in the household cut the size of your meals or skip meals because there wasn't enough money for food?

- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

JACKSON, MITCHELL AND YANCEY COUNTIES

69. Now I am going to read a statement that people have made about their food situation. Please tell me whether this statement was "Often True," "Sometimes True," or "Never True" for you in the past 12 months.

The statement is: I worried about whether our food would run out before we got money to buy more.

Was this statement:

- Often True
- Sometimes True
- or Never True
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: SKIP to READ BOX before 73.

TRANSYLVANIA COUNTY

70. How reliable is your access to clean drinking water? Would you say:

- Always Reliable
- Sometimes Reliable
- Rarely Reliable
- or Never Reliable
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: SKIP to 72.

BUNCOMBE COUNTY

71. How often in the past 12 months would you say you were worried or stressed about having enough money to pay your rent or mortgage? Would you say you were worried or stressed:

- Always
- Usually
- Sometimes
- Seldom
- or Never
- [Not Applicable]
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

BUNCOMBE AND TRANSYLVANIA COUNTIES

72. How often do you have trouble finding transportation to places you would like to go? Would you say:

- Always
- Often
- Sometimes
- Rarely
- or Never
- [Not Applicable]
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

The next questions are about physical activity.

73. During the past month, other than your regular job, did you participate in any physical activities or exercises, such as running, calisthenics, golf, gardening, or walking for exercise?

- (SKIP to 77)

(SKIP to 77)

(SKIP to 77)
- Yes

No

[Don't Know/Not Sure]

[Refused]

[Terminate Interview]

74. The next questions ask about vigorous and moderate physical activity. Vigorous activities cause large increases in breathing or heart rate, while moderate activities cause small increases in breathing or heart rate.

Now, thinking about when you are not working, how many days per week or per month do you do VIGOROUS activities for at least 20 minutes at a time, such as running, aerobics, heavy yard work, or anything else that causes large increases in breathing and heart rate?

- DAYS PER WEEK

DAYS PER MONTH

(SKIP to 75)

(SKIP to 75)

(SKIP to 75)

(SKIP to 75)
- [No Vigorous Activity]

[Unable To Do Vigorous Activity]

[Don't Know/Not Sure]

[Refused]

[Terminate Interview]

75. And on how many days per week or per month do you do MODERATE activities for at least 30 minutes at a time, such as brisk walking, bicycling, vacuuming, gardening, or anything else that causes some increase in breathing or heart rate?

- DAYS PER WEEK

DAYS PER MONTH

(SKIP to 76)

(SKIP to 76)

(SKIP to 76)

(SKIP to 76)
- [No Moderate Activity]

[Unable to Do Moderate Activity]

[Don't Know/Not Sure]

[Refused]

[Terminate Interview]

76. On how many days per week or per month do you do physical activities or exercises to STRENGTHEN your muscles? Do NOT count aerobic activities like walking, running, or bicycling. Please include activities using your own body weight, such as yoga, sit-ups or push-ups, and those using weight machines, free weights, or elastic bands.

- DAYS PER WEEK
- DAYS PER MONTH
- (SKIP to 77)
- [No Strengthening Activity]
- (SKIP to 77)
- [Unable to Do Strengthening Activity]
- (SKIP to 77)
- [Don't Know/Not Sure]
- (SKIP to 77)
- [Refused]
- [Terminate Interview]

1 to 31

[Don't Know/Not Sure]

[Refused]

77. In some communities, organizations make their indoor and outdoor physical activity spaces like gyms, tracks, and pools available for the public to use during off times.

How important do you feel it is for organizations in the community to explore ways to increase the public's access to these types of facilities during off times? Would you say:

- Very
- Somewhat
- or Not At All Important
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: If Q2 is "Cherokee County" or "Graham County", ASK Q78.

If Q2 is "Clay County" or "Haywood County", SKIP to 79.

All Others, SKIP to 81.

CHEROKEE AND GRAHAM COUNTIES

78. Please tell me your level of agreement or disagreement with the following statement: I believe my county provides the facilities and programs needed for ADULTS, CHILDREN and YOUTH to be physically active throughout the year. Do you:
- Strongly Agree

Agree

Neither Agree Nor Disagree

Disagree

or Strongly Disagree

[Not Applicable]

[Don't Know/Not Sure]

[Refused]

[Terminate Interview]

NOTE: SKIP to 81.

CLAY AND HAYWOOD COUNTIES

79. Please tell me your level of agreement or disagreement with the following statement: I believe my county provides the facilities and programs needed for CHILDREN and YOUTH to be physically active throughout the year. Do you:
- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- or Strongly Disagree
- [Not Applicable]
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: If Q2 is "Haywood County", SKIP to 81.

CLAY COUNTY

80. The next question is about some pets you may have. Are ALL dogs, cats, and ferrets that you own as pets up-to-date on their rabies vaccinations?
- Yes
- No
- [No Pets]
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]
81. Now I would like to ask, in general, how satisfied are you with your life? Would you say:
- Very Satisfied
- Satisfied
- Dissatisfied
- or Very Dissatisfied
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

82. How often do you get the social and emotional support you need? Would you say:
- Always

Usually

Sometimes

Seldom

or Never

[Not Applicable]

[Don't Know/Not Sure]

[Refused]

[Terminate Interview]
83. Now thinking about your MENTAL health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health NOT good?
- 0 to 30

[Don't Know/Not Sure]

[Refused]
84. Was there a time in the past 12 months when you needed mental health care or counseling, but did not get it at that time?
- Yes

(SKIP to 86)

No

(SKIP to 86)

[Don't Know/Not Sure]

(SKIP to 86)

[Refused]

[Terminate Interview]
85. What was the MAIN reason you did not get mental health care or counseling?
- [Don't Know/Not Sure]

[Refused]

Apprehension/Fear/Nervousness/Embarrassment

Condition Not Serious Enough

Didn't Accept Medicaid/Insurance

Didn't Know Where To Go

Difficulty Getting Appointment

Don't Have Insurance/Could Not Afford It

Don't Like/Trust/Believe in Counselors

Health of Another Family Member

Inconvenient Hours

Lack of Transportation

Never Got Around to Going

No Counselor Available

No Place I Feel Welcome

Speak a Different Language

Wait Too Long In Clinic/Office

Other (Specify)

86. The following questions are about health problems or impairments you may have.

Are you limited in any way in any activities because of physical, mental or emotional problems?

	Yes
(SKIP to NOTE before 88)	No
(SKIP to NOTE before 88)	[Don't Know/Not Sure]
(SKIP to NOTE before 88)	[Refused]
	[Terminate Interview]

87. What is the major impairment or health problem that limits you?

Arthritis/Rheumatism
Back or Neck Problem
Cancer
Depression/Anxiety/Emotional Problem
Diabetes
Eye/Vision Problem
Fractures, Bone/Joint Injury
Hearing Problem
Heart Problem
Hypertension/High Blood Pressure
Lung/Breathing Problem
Stroke Problem
Walking Problem
Other Impairment/Problem
[Don't Know/Not Sure]
[Refused]
[Terminate Interview]

NOTE: If Q40 is 45 Years of Age or Older, ASK Q88.

All Others, SKIP to 89.

88. Now I would like to ask you about recent falls. By a fall, I mean when a person unintentionally comes to rest on the ground or another lower level.

In the past 12 months, how many times have you fallen?

0 to 100
[Don't Know/Not Sure]
[Refused]

89. People may provide regular care or assistance to a friend or family member who has a health problem, long-term illness, or disability.

During the past 30 days, did you provide any such care or assistance to a friend or family member?

(INTERVIEWER: If Necessary, READ: This question includes any care or assistance, not limited to someone living in the household.)

- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

90. Now I would like to ask, where do you get MOST of your health care information?

- [Don't Know/Not Sure]
- [Refused]
- [Don't Receive Any]
- Books/Magazines
- Child's School
- Church
- Family Doctor
- Friends/Relatives
- Health Department
- Help Lines
- Hospital
- Hospital Publications
- Insurance
- Internet
- Library
- Newspaper
- Pharmacist
- Other (Specify)

NOTE: If Q2 is "Macon County", ASK Q91.

If Q2 is "Polk County", SKIP to 92.

All Others, SKIP to READ BOX before CELLQ.

MACON COUNTY

91. Do you currently have access to the internet for PERSONAL use, either at home, work, or school?

Yes
No
[Don't Know/Not Sure]
[Refused]
[Terminate Interview]

NOTE: SKIP to READ BOX before CELLQ.

POLK COUNTY

92. Where do you get most of your local news?

(INTERVIEWER: If Respondent Answers "Newspaper," "Radio," "TV Station," or "Internet," PROBE for Specific Paper, Station or Website.)

[Don't Know/Not Sure]

[Refused]

(Newspaper) Asheville Citizen-Times [Asheville]

(Newspaper) Black Mountain News [Black Mountain]

(Newspaper) Digital Courier [ForestCity]

(Newspaper) Franklin Press [Franklin]

(Newspaper) Macon County News [Franklin]

(Newspaper) McDowell News [Marion]

(Newspaper) Mountain Xpress [Asheville]

(Newspaper) News-Journal [Spruce Pine]

(Newspaper) Smoky Mountain News [Waynesville]

(Newspaper) Spartanburg Herald Journal [Spartanburg, SC]

(Newspaper) The Cherokee Scout [Murphy]

(Newspaper) The Mountaineer [Waynesville]

(Newspaper) Times News [Hendersonville]

(Newspaper) Tryon Daily Bulletin [Tryon]

(Newspaper) Western North Carolina Times [Asheville]

(Radio) 1290 WHKY Radio (FOX News/ESPN) [Hickory]

(Radio) WLFJ 89.3 FM [Greenville, SC]

(Radio) WMYI 102.5 FM [Greenville, SC]

(Radio) WNCW 88.7 FM [Spindale]

(Radio) WNCW 92.9 FM [Boone]

(Radio) WNCW 99.1, 100.3 FM [Charlotte]

(Radio) WSIF 90.9 FM [Wilkesboro]

(Radio) WSSL 100.5 FM [Greenville, SC]

(TV Station) WBTB Ch. 3 CBS [Charlotte]

(TV Station) WCNC Ch. 22/36 [Charlotte]

(TV Station) WHKY Ch. 14 (Independent) [Hickory]

(TV Station) WLOS Ch. 13 ABC [Asheville]

(TV Station) WSPA Ch. 7 CBS [Spartanburg, SC]

(TV Station) WYCW Ch. 62 CW [Spartanburg, SC]

(TV Station) WYFF Ch. 4 NBC [Greenville, SC]

(Website) BlueRidgeNow.com [Hendersonville] (Times News online)

(Website) goupstate.com (Spartanburg Herald Journal online)

(Website) tryondailybulletin.com (Tryon Daily Bulletin online)

(Website) wnctimes.com (Western North Carolina Times online)

(Website) www.wbtv.com

(Website) www.wcnc.com

(Website) www.whky.com

(Website) www.wncw.com

(Website) www.wspa.com

(Website) www.wyff4.com

Other (Specify)

My last questions are for classifying purposes only and are strictly confidential.

93. How many children under the age of 18 are currently LIVING in your household?

One
Two
Three
Four
Five or More
[None]
[Refused]
[Terminate Interview]

94. Are you of Hispanic or Latino origin, or is your family originally from a Spanish-speaking country?

Yes
No
[Don't Know/Not Sure]
[Refused]
[Terminate Interview]

95. What is your race? Would you say:

(Do Not Read the Latino/Hispanic Code.)

(SKIP to 97)	[Don't Know/Not Sure]
(SKIP to 97)	[Refused]
	American Indian, Alaska Native
(SKIP to 97)	Native Hawaiian, Pacific Islander
(SKIP to 97)	Asian
(SKIP to 97)	Black/African American
(SKIP to 97)	White
(SKIP to 97)	[Latino/Hispanic]
(SKIP to 97)	Other (Specify)

96. Which of the following BEST describes you? Are you:

An Enrolled Member of the Eastern Band of Cherokee Indians, or EBCI, living ON the boundary;
An Enrolled Member of the Eastern Band of Cherokee Indians, or EBCI, living OFF the boundary,
or something else?

[Don't Know/Not Sure]
[Refused]
Enrolled EBCI on Boundary
Enrolled EBCI off Boundary
Other (Specify)

97. Are you:

- Married
- Divorced
- Widowed
- Separated
- Never Been Married
- In a Domestic Partnership or Civil Union
- or A Member of an Unmarried Couple
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

98. Now I would like to ask, about how much do you weigh without shoes?

(INTERVIEWER: Round Fractions Up)

- 40 to 600
- [Don't Know/Not Sure]
- [Refused]

99. About how tall are you without shoes?

(INTERVIEWER: Round Fractions Down)

- 300 to 311
- 400 to 411
- 500 to 511
- 600 to 611
- 700 to 711
- 800 to 811
- [Don't Know/Not Sure]
- [Refused]

100. What is the highest grade or year of school you have completed?

- Never Attended School or Kindergarten Only
- Grades 1 through 8 (Elementary)
- Grades 9 through 11 (Some High School)
- Grade 12 or GED (High School Graduate)
- College 1 Year to 3 Years (Some College or Technical School)
- Bachelor's Degree (College Graduate)
- Postgraduate Degree (Master's, M.D., Ph.D., J.D.)
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

101. Are you currently:

- Employed for Wages
- Self-Employed
- Out of Work for More Than 1 Year
- Out of Work for Less Than 1 Year
- A Homemaker
- A Student
- Retired
- or Unable to Work
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

102. Do you live in this area year-round (permanent address), or are you a seasonal (part-time) resident?

- Permanent Resident
- Seasonal Resident
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

103. Do you have any kind of health care coverage, including health insurance, a prepaid plan such as an HMO, or a government-sponsored plan such as Medicare or Indian Health Services?

- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

104. An Advance Directive is a set of directions you give about the medical health care you want if you ever lose the ability to make decisions for yourself. Formal Advance Directives include Living Wills and Health Care Powers of Attorney.

Do you have any completed Advance Directive documents?

- (SKIP to 106)
- (SKIP to 106)
- (SKIP to 106)
- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

105. Have you communicated these health care decisions to your family or your doctor?

- Yes
- No
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

106. Have you ever served on ACTIVE DUTY in the U.S. Armed Forces, either in the regular military or in a National Guard or Military Reserve Unit? Active Duty does NOT include training for the National Guard or the Reserves, but DOES include activation, for example, for the Persian Gulf War.

- Yes, Was on Active Duty
- No, Was Never on Active Duty
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

NOTE: If Q2 is "Buncombe County" AND Q101 is "Employed for Wages", ASK Q107.

All Others, SKIP to SCRIPTING NOTE before 108.

BUNCOMBE COUNTY

107. Which of the following BEST describes your income:

(INTERVIEWER: If More Than One Job, PROBE for Job Where Employee Has the Most Hours.)

- I Am an Hourly Employee and Make Less Than \$11 per Hour
- I Am an Hourly Employee and Make \$11 per Hour or More
- I Am a Salaried Employee and Make Less Than \$22,880 per Year
- or I Am a Salaried Employee and Make \$22,880 per Year or More
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

108. Total Family Household Income.

- Under \$11,700
- \$11,700 to \$15,699
- \$15,700 to \$19,799
- \$19,800 to \$23,599
- \$23,600 to \$27,899
- \$27,900 to \$31,799
- \$31,800 to \$35,999
- \$36,000 to \$39,899
- \$39,900 to \$44,199
- \$44,200 to \$47,999
- \$48,000 to \$52,299
- \$52,300 to \$56,099
- \$56,100 to \$63,899
- \$63,900 to \$72,099
- \$72,100 to \$80,199
- \$80,200 to \$88,299
- \$88,300 to \$96,399
- \$96,400 to \$104,499
- \$104,500 to \$112,699
- \$112,700/Over
- [Don't Know/Not Sure]
- [Refused]
- [Terminate Interview]

That's my last question. Everyone's answers will be combined to give us information about the health of residents in this community. Thank you very much for your time and cooperation.

CALCULATED VARIABLES

109. [Those With Diagnosed Depression] Seeking Help.

- Yes
- No

110. Heart Attack/Angina/Coronary Disease (Composite).

- Yes
- No

111.	High Blood Pressure.	<div> <div> HBP Diagnosis (Ever)</div> <div> No HBP Diagnosis (Tested in Past 5 Years)</div> <div> Not Tested in Past 5 Years</div> </div>
112.	High Blood Cholesterol.	<div> <div> HBC Diagnosis (Ever)</div> <div> No HBC Diagnosis (Tested in Past 5 Years)</div> <div> Not Tested in Past 5 Years</div> </div>
113.	Cardiovascular Risk (Composite).	<div> <div> 1+ Cardiovascular Risk Factors</div> <div> No Risk Factors</div> </div>
114.	[Women 40+] Mammogram In The Past 2 Years.	<div> <div>Yes</div> <div>No</div> </div>
115.	[Women 50-74] Mammogram In The Past 2 Years.	<div> <div>Yes</div> <div>No</div> </div>
116.	[Women 21-65] Pap Smear In The Past 3 Years.	<div> <div>Yes</div> <div>No</div> </div>
117.	[Adults 50+] Sigmoidoscopy/Colonoscopy EVER.	<div> <div>Yes</div> <div>No</div> </div>
118.	[Adults 50+] Blood Stool Test In The Past 2 Years.	<div> <div>Yes</div> <div>No</div> </div>
119.	[Adults 50-75] Colorectal Cancer Screening (FOBT/Sigmoidoscopy/Colonoscopy).	<div> <div>Yes</div> <div>No</div> </div>

120.	[Adult] Currently Has Asthma.	Yes No
121.	[Child] Currently Has Asthma.	Yes No
122.	Diabetes.	Yes Borderline/Pre-Diabetic No
123.	[Households With Children] Presence of Firearms.	Yes No
124.	[Homes With Firearms] With Unlocked & Loaded Weapon(s).	Yes No
125.	[Adults 50+] Arthritis/Rheumatism.	Yes No
126.	[Adults 50+] Osteoporosis.	Yes No
127.	[Adults 65+] Flu Shot In The Past Year.	Yes No
128.	[High-Risk Adults 18-64] Flu Shot In The Past Year.	Yes No

129.	[Adults 65+] Pneumonia Vaccine EVER.	Yes No
130.	[High-Risk Adults 18-64] Pneumonia Vaccine EVER.	Yes No
131.	[Adults 18-44] HIV Testing In Past Year.	Yes No
132.	5 or More Servings of Fruits/Vegetables Per Day.	Yes No
133.	Meets HHS Physical Activity Guidelines.	Yes No
134.	Moderate Physical Activity (30 or More Minutes/5 or More Times per Week).	Yes No
135.	Vigorous Physical Activity (20 or More Minutes/3 or More Times per Week).	Yes No
136.	Body Mass Index.	0.0 to 99.9
137.	Weight Status.	Underweight (BMI < 18.5) Healthy Weight (18.5 ≤ BMI < 25.0) Overweight, Not Obese (25.0 ≤ BMI < 30.0) Obese (BMI ≥ 30.0)

138.	[Overweights] Trying to Lose Weight With Both Diet/Exercise.	Yes No
139.	[Overweights] Counseled About Weight.	Yes No
140.	[Obese] Counseled About Weight.	Yes No
141.	[Children 5-17] Weight Status.	Underweight (Under 5th Percentile) Not Overweight (5th-84th Percentile) Overweight (85th-94th Percentile) Obese (95th Percentile)
142.	Smoking Status.	Current Smoker – Regular (Every Day) Current Smoker – Occasional (Some Days) Former Smoker Never Smoked
143.	[Women 18-44] Current Smoker (Regular or Occasional).	Yes No
144.	[Non-Smokers] Smoker In The Home.	Yes No
145.	[Households With Children] Smoker In The Home.	Yes No

146. Current Drinker (1 or More Drinks in Past Month).

Yes
No

147. Heavy Drinker (60 or More Drinks/Month for Men; 30 or More Drinks/Month for Women).

Yes
No

148. Binge Drinker (5 or More Drinks on an Occasion for Men; 4 or More Drinks on an Occasion for Women).

Yes
No

149. [Men Age 18-39] Binge Drinking (5 or More Drinks on an Occasion).

Yes
No

150. Excessive Drinking (Binge or Heavy Drinking).

Yes
No

151. [Adults 18-64] Insured Status.

- Health Insurance, Through Employer or Union
- Health Insurance, Self-Purchased
- Medicare
- Medicaid
- VA or Military Benefits
- No Insurance/Self-Pay
- Insured, Unknown Type
- Other Government-Sponsored Program
- Medicare and Medicaid

152. [Adults 18+] Specific Source of Ongoing Care.

Yes
No

153. [Adults 18-64] Specific Source of Ongoing Care.

Yes
No

154. [Adults 65+] Specific Source of Ongoing Care.

- Yes
- No

155. Difficulties Accessing Healthcare in Past Year (Composite).

- Yes
- No

156. Child's Age.

- 0 to 4
- 5 to 12
- 13 to 17

157. Gender of Respondent.

- Male
- Female

158. Age Groupings. (3 Categories.)

- 18 to 39
- 40 to 64
- 65/Over

159. Age Groupings. (5 Categories.)

- 18 to 34
- 35 to 44
- 45 to 54
- 55 to 64
- 65/Over

160. Combined Race/Ethnicity.

- Non-Hispanic White
- Non-Hispanic Black
- Hispanic
- Non-Hispanic Asian
- Non-Hispanic American Native
- Other

161. HHS Poverty Status (Two Categories).

- Below 200% of Poverty
- 200% of Poverty or Higher

162. HHS Poverty Status (Three Categories).

Below Poverty
100% to 199% of Poverty
200% of Poverty or Higher

2015 PRC Community Health Needs Assessment

A Data-Driven Approach to Identifying Community Health Needs

Madison County, NC

Community Health Findings

Professional Research Consultants, Inc.

Prepared for WNC Health Network

By Professional Research Consultants, Inc.





Methodology

- Telephone survey methodology
 - Allows for high participation and random selection
 - These are critical to achieving a sample representative of county and regional populations by gender, age, race/ ethnicity, income
 - Landline (94%) and cell phone (6%)
 - English and Spanish



Methodology

- 3,300 telephone surveys throughout WNC
 - Adults 18+
 - Gathered data for each of 16 counties
 - Weights were added to enhance representativeness of data at county and regional levels

Methodology

- Full WNC sample allows for drill-down by:
 - County
 - Age
 - Gender
 - Race/ ethnicity (White, Black, Hispanic, Native American)
 - Income (3 levels based on poverty status)
 - Other categories, based on question responses
- Individual county samples allow for drill-down by
 - Gender
 - Income (2 levels based on poverty status)
 - Other categories, based on question responses

Survey Instrument

- Based largely on national survey models
 - When possible, question wording from public surveys (e.g., CDC BRFSS)
- 75 questions asked of all counties
 - Each county added three county-specific questions
 - Approximately 15-minute interviews
 - Questions determined by WNC stakeholder input

Minimizing bias

- Potential bias
 - Noncoverage error - *Underrepresentation of people without phones*
 - Sampling error - *Estimates based on only a sample*
 - Measurement error - *Responses to questions may not be completely accurate due to question wording, interviewer's tone, etc.*
- Strategies to minimize bias
 - Random selection
 - Strict adherence to administration protocols
 - Use of a tested survey instrument
 - Automated CATI system (lessens risk of human error in data entry)



Keep in mind

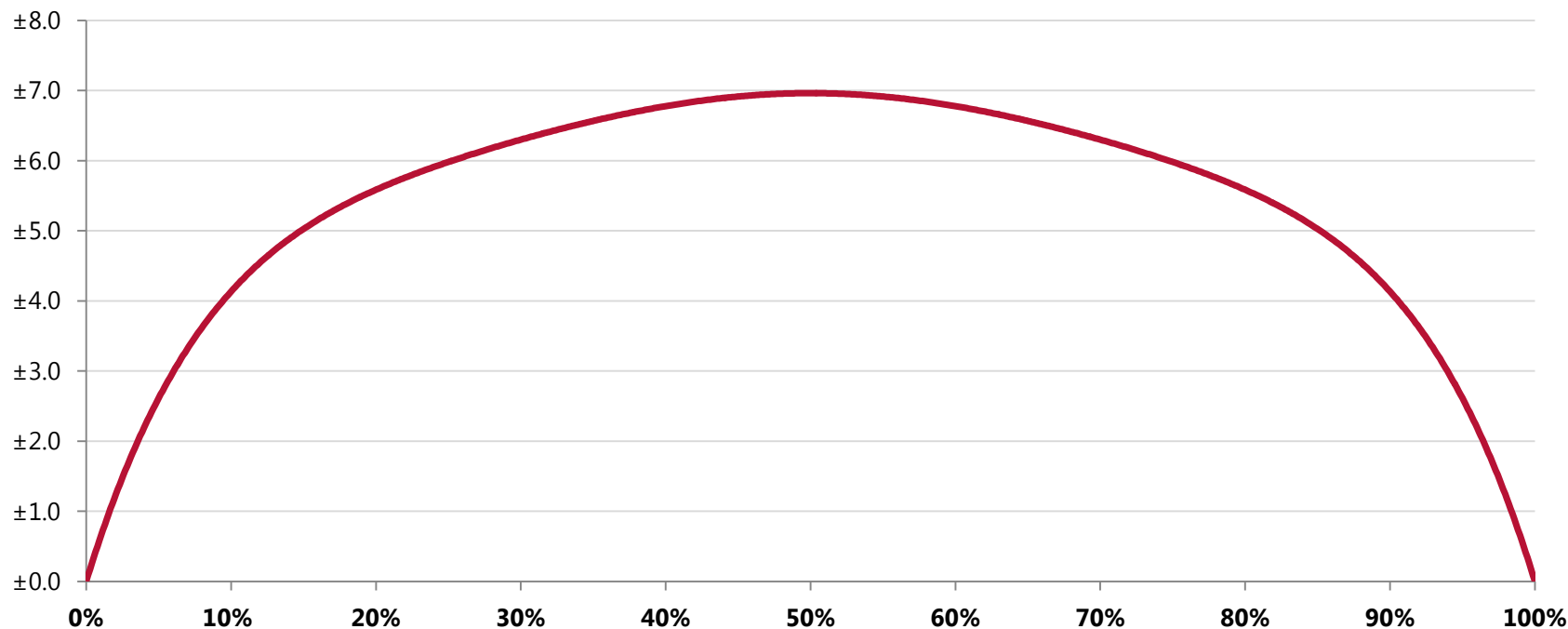
- Sampling levels allow for good local confidence intervals, but you should still keep in mind that error rates are larger at the county level than for WNC as a region
 - Results for WNC regional data have maximum error rate of $\pm 1.7\%$ at the 95% confidence level
 - Results for individual counties have maximum error rate of $\pm 5.6\%$ at the 95% confidence level
- PRC indicates in regional report when differences – between county and regional results, different demographic groups, and 2012 to 2015 – are statistically significant

Keep in mind

For more detailed information on methods, see:

- **PRC's Primary Data Collection: Research Approach & Methods document (2015)**
- **County-specific CH(N)A Templates**

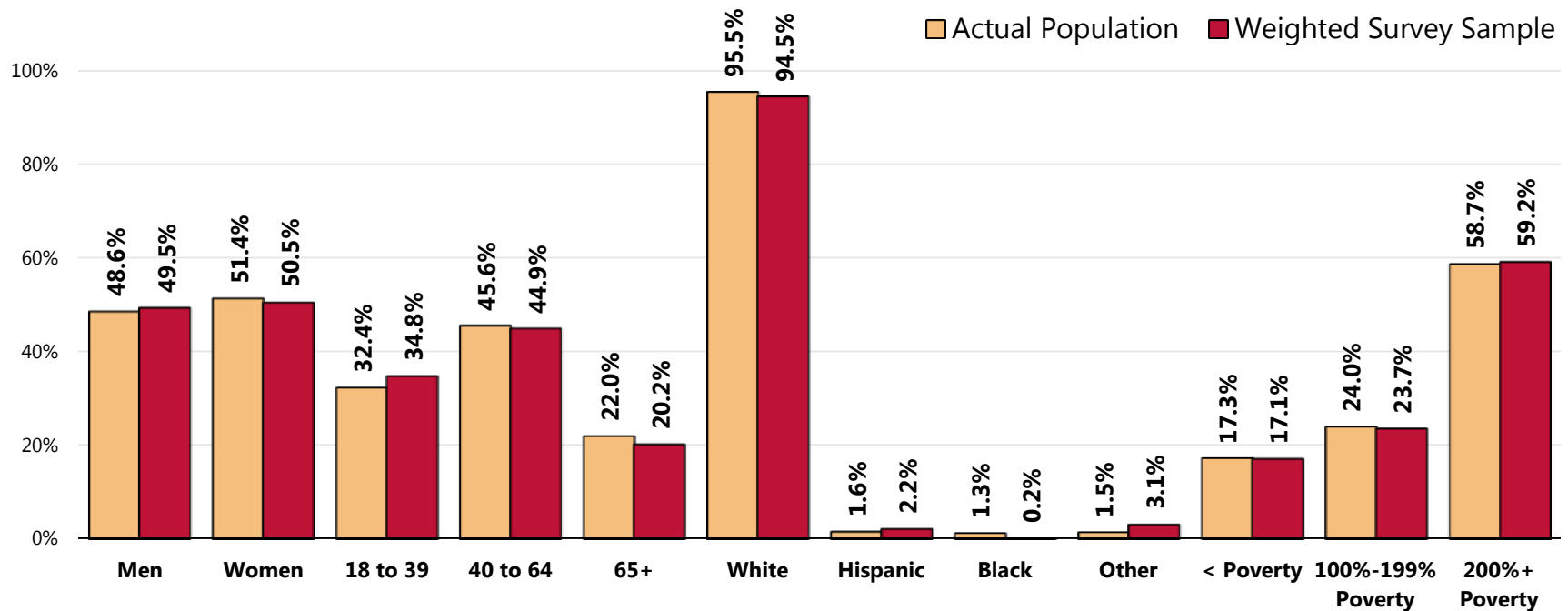
Expected Error Ranges for a Sample of 200 Respondents at the 95 Percent Level of Confidence



Note: • The "response rate" (the percentage of a population giving a particular response) determines the error rate associated with that response. A "95 percent level of confidence" indicates that responses would fall within the expected error range on 95 out of 100 trials.

Examples: • If 10% of the sample of 200 respondents answered a certain question with a "yes," it can be asserted that between 5.8% and 14.2% ($10\% \pm 4.2\%$) of the total population would offer this response.
• If 50% of respondents said "yes," one could be certain with a 95 percent level of confidence that between 43.1% and 56.9% ($50\% \pm 6.9\%$) of the total population would respond "yes" if asked this question.

Population & Sample Characteristics (Madison County, 2015)



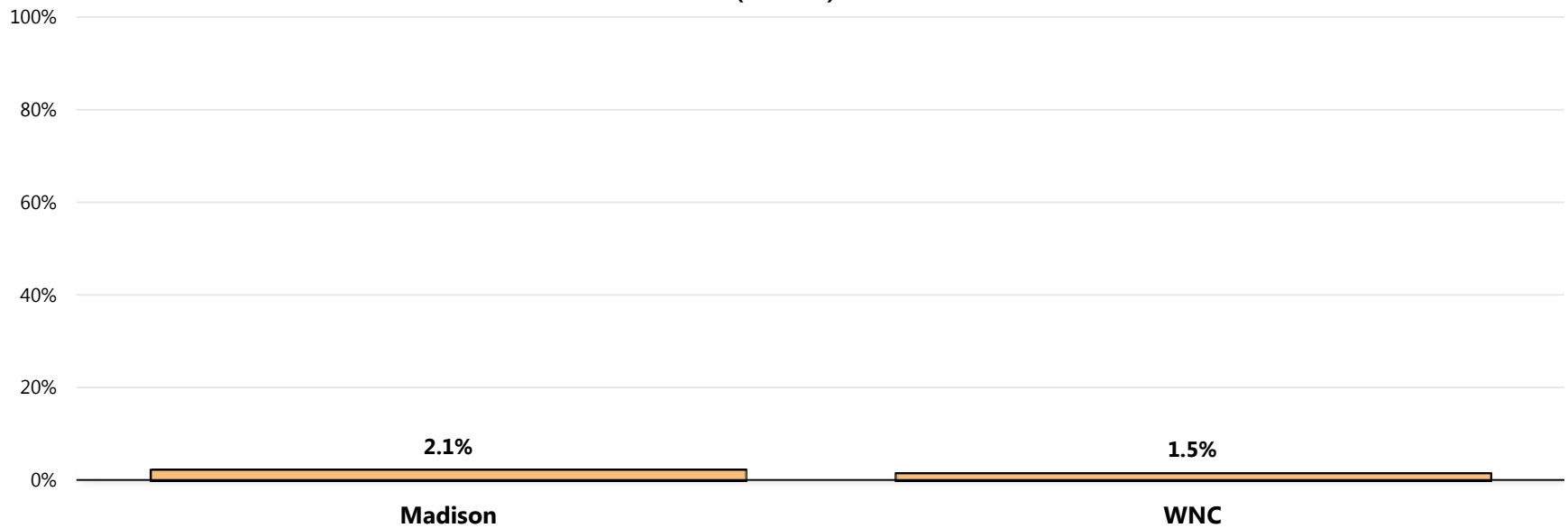
Sources: • 2015 Census Estimates/Projections. Geolytics, Inc.

• 2015 PRC Community Health Survey, Professional Research Consultants, Inc.

Notes: • Hispanics can be of any race. Other race categories are non-Hispanic categorizations (e.g., "White" reflects non-Hispanic White respondents).



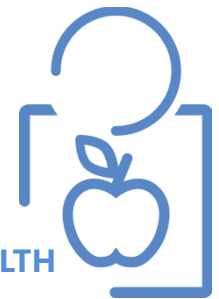
Sample of Seasonal (Part-Time) Residents (2015)



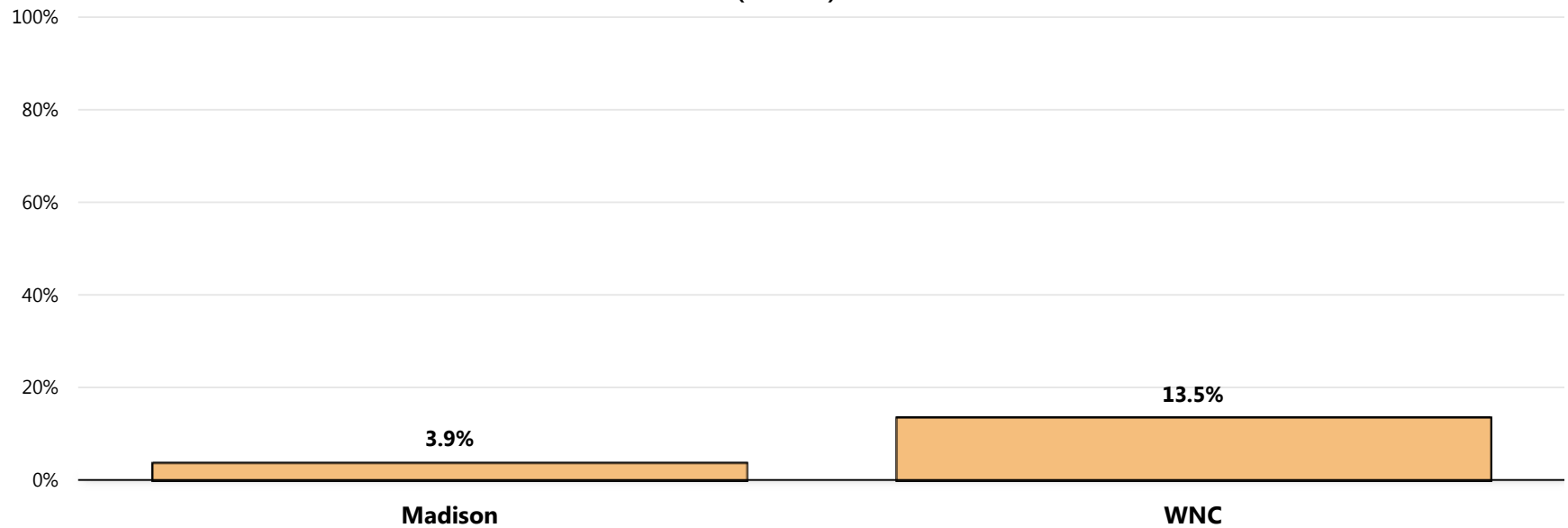
Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 102]

QUALITY OF LIFE

COMMUNITY HEALTH



County is a “Fair/Poor” Place to Live (2015)



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 5]

Notes: • Asked of all respondents.

Top Three County Issues Perceived as in Most Need of Improvement (2015)

	Madison	WNC
Economy/Unemployment	✓	✓
Nothing	✓	✓
Road Maintenance/Safety		✓
Improve Education	✓	

Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 6]

Notes: • Asked of all respondents.

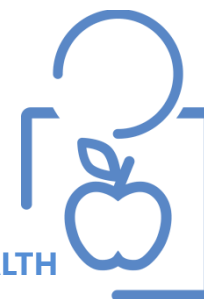


SELF-REPORTED HEALTH STATUS



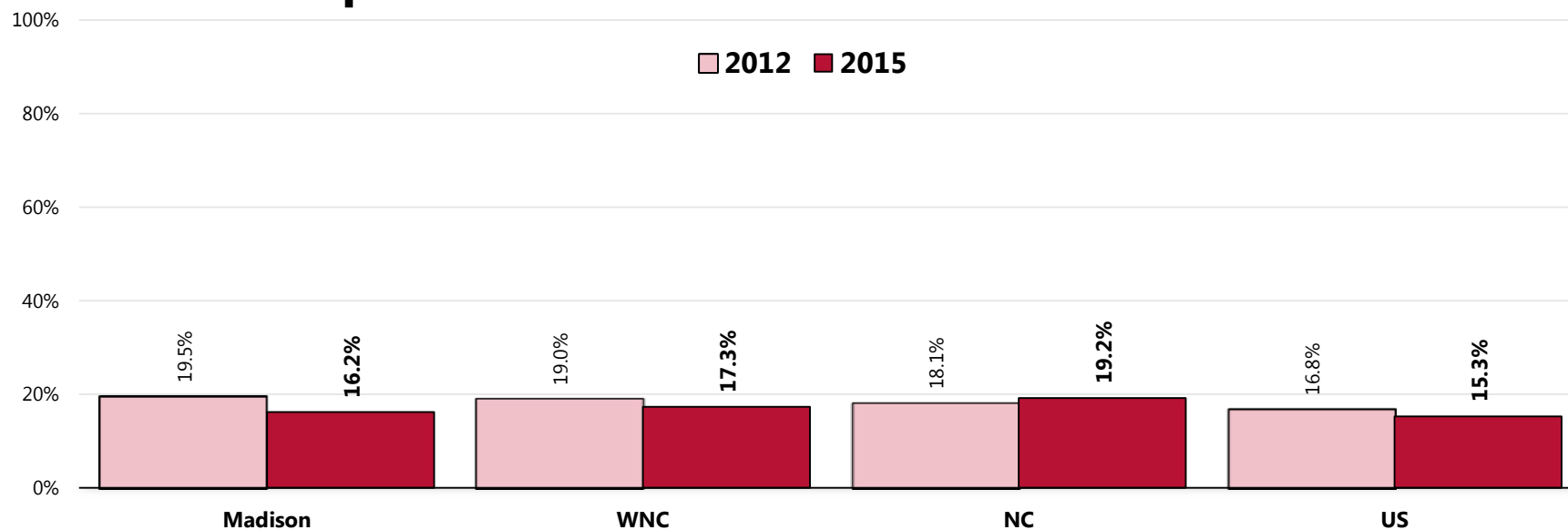


Overall Health



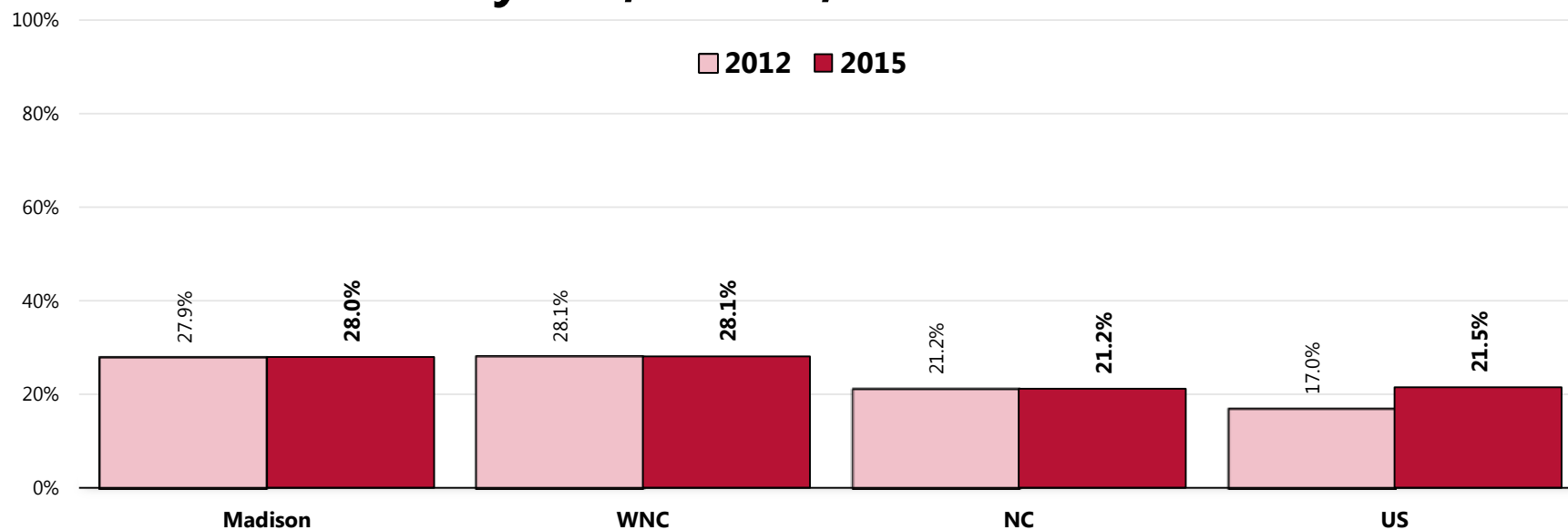
COMMUNITY HEALTH

Experience “Fair” or “Poor” Overall Health



- Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 7]
 - Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
 - PRC National Health Surveys, Professional Research Consultants, Inc.
- Notes:
- Asked of all respondents.

Limited in Activities in Some Way Due to a Physical, Mental, or Emotional Problem

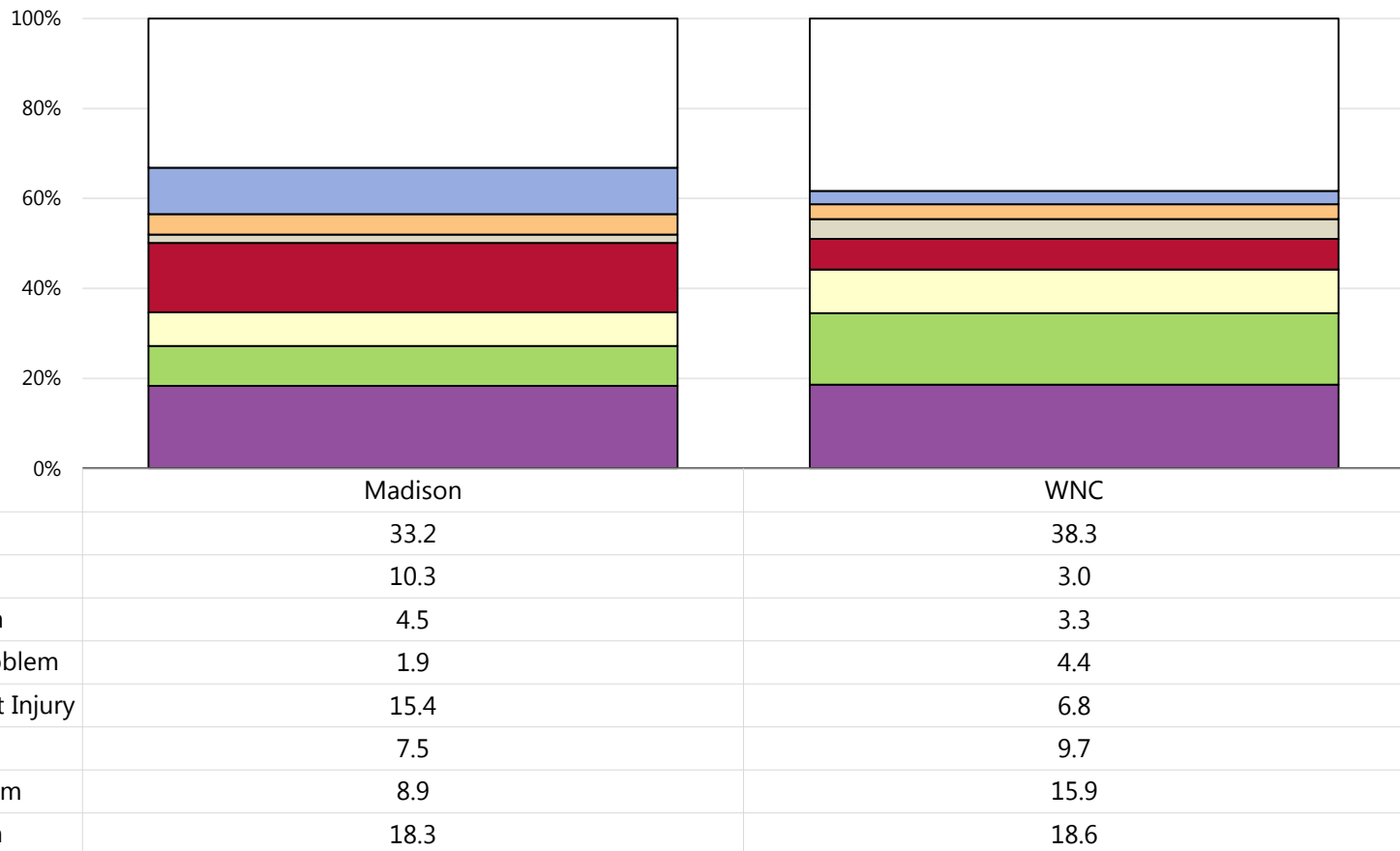


Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 86]
• Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
• PRC National Health Surveys, Professional Research Consultants, Inc.

Notes: • Asked of all respondents.

Type of Problem That Limits Activities

(Among Those Reporting Activity Limitations; 2015)



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 87]

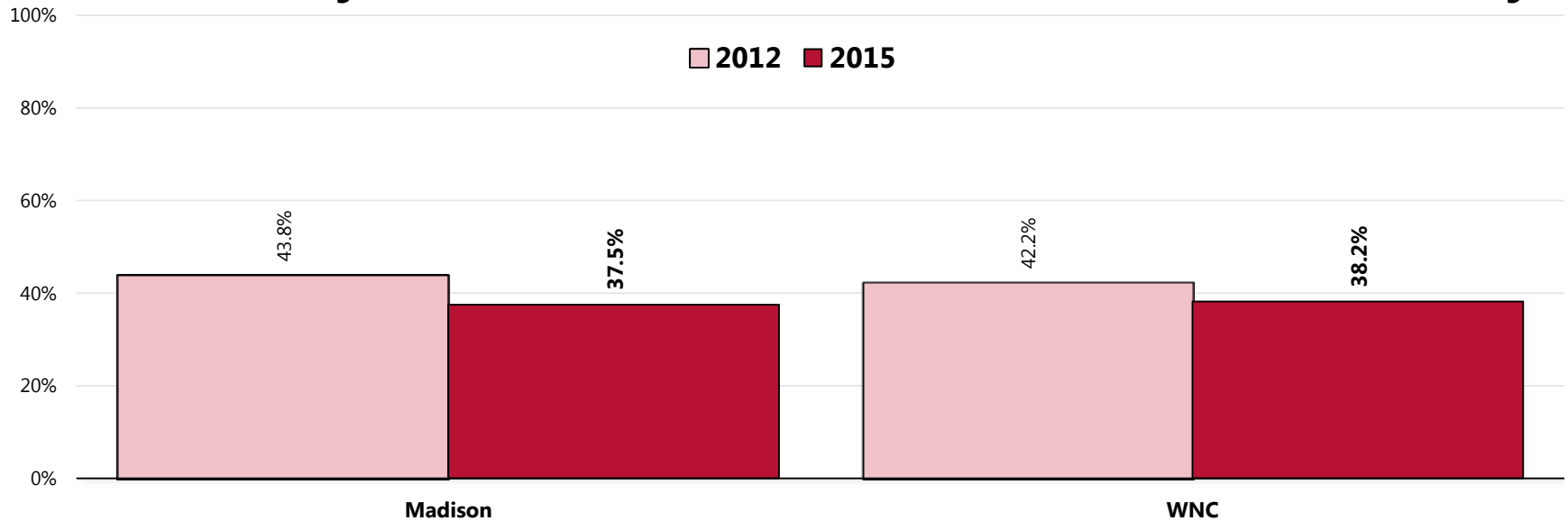
Notes: • Asked of those respondents reporting activity limitations.

Caregiving

COMMUNITY HEALTH



Provide Regular Care or Assistance to a Friend/Family Member Who Has a Health Problem or Disability



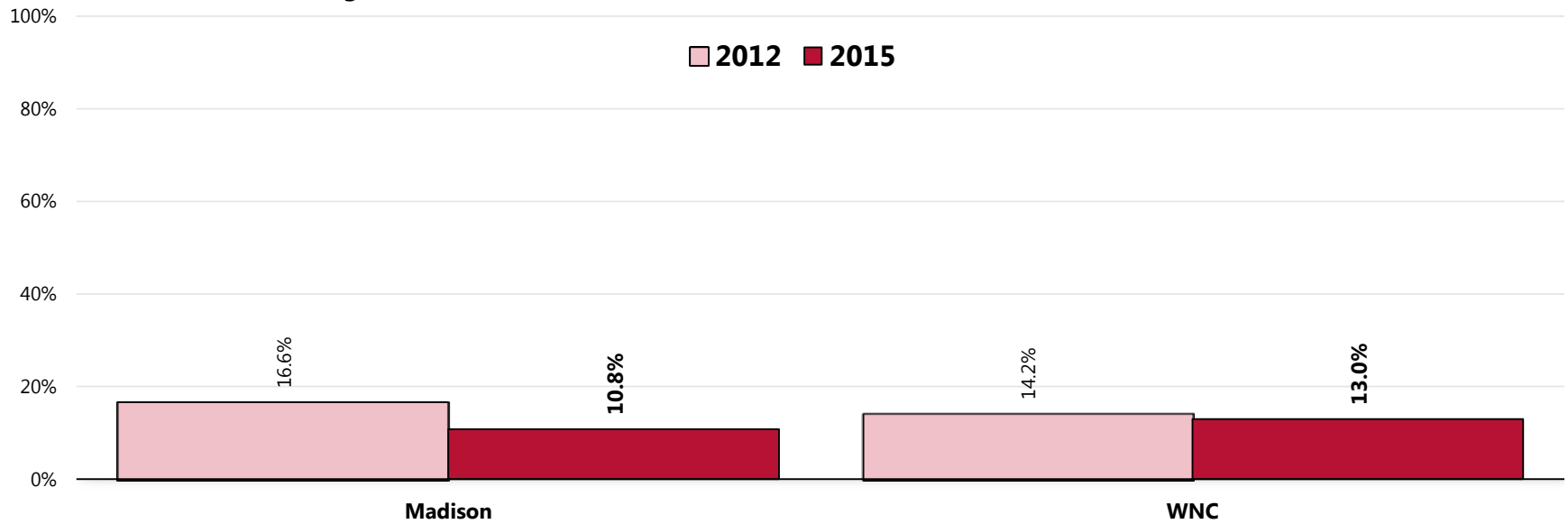
Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 89]

Notes: • Asked of all respondents.

Mental Health & Mental Disorders



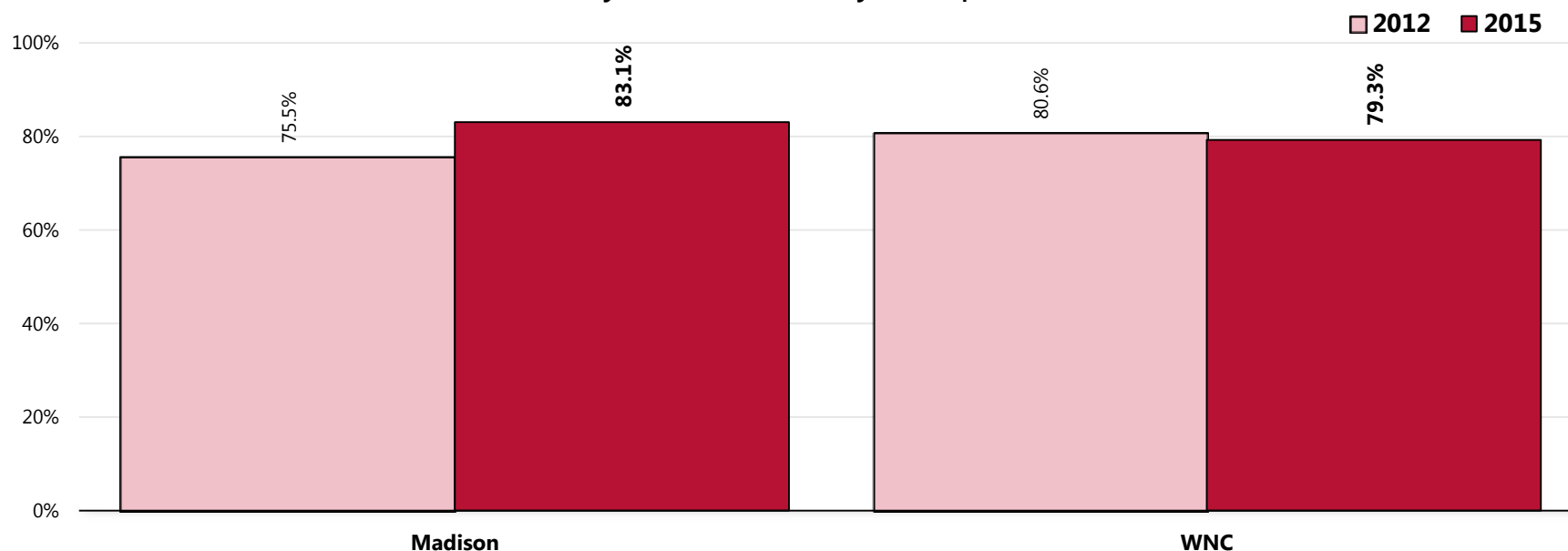
>7 Days of Poor Mental Health in the Past Month



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 83]

Notes: • Asked of all respondents.

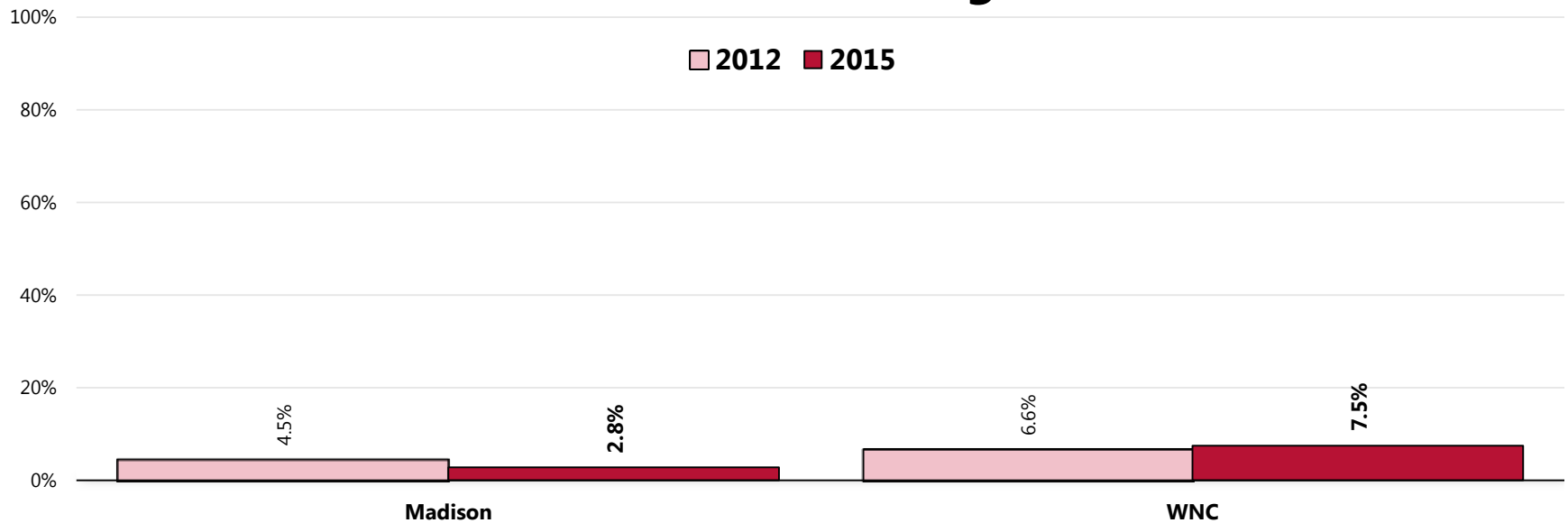
“Always” or “Usually” Get Needed Social/Emotional Support (“Always” and “Usually” Responses)



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 82]

Notes: • Asked of all respondents.

Unable to Get Needed Mental Health Care or Counseling in the Past Year

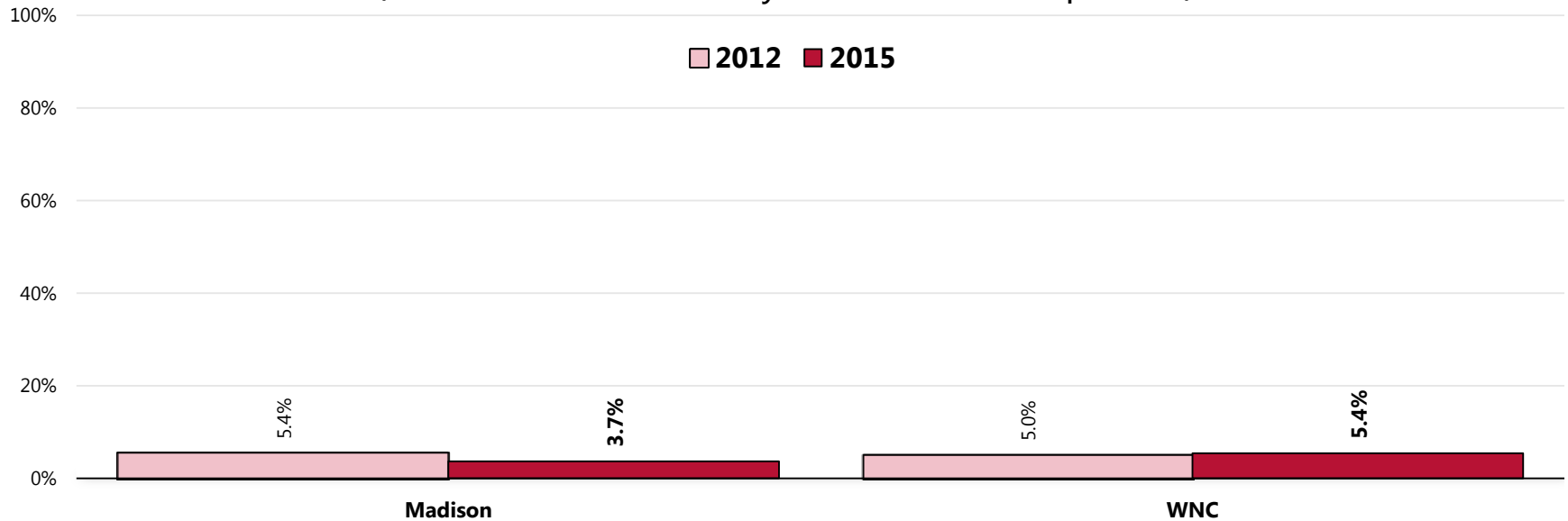


Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 84]

Notes: • Asked of all respondents.

Dissatisfied with Life

("Dissatisfied" and "Very Dissatisfied" Responses)

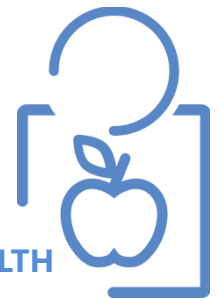


Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 81]

Notes: • Asked of all respondents.

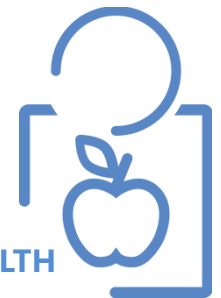
CHRONIC CONDITIONS & INJURY

COMMUNITY HEALTH



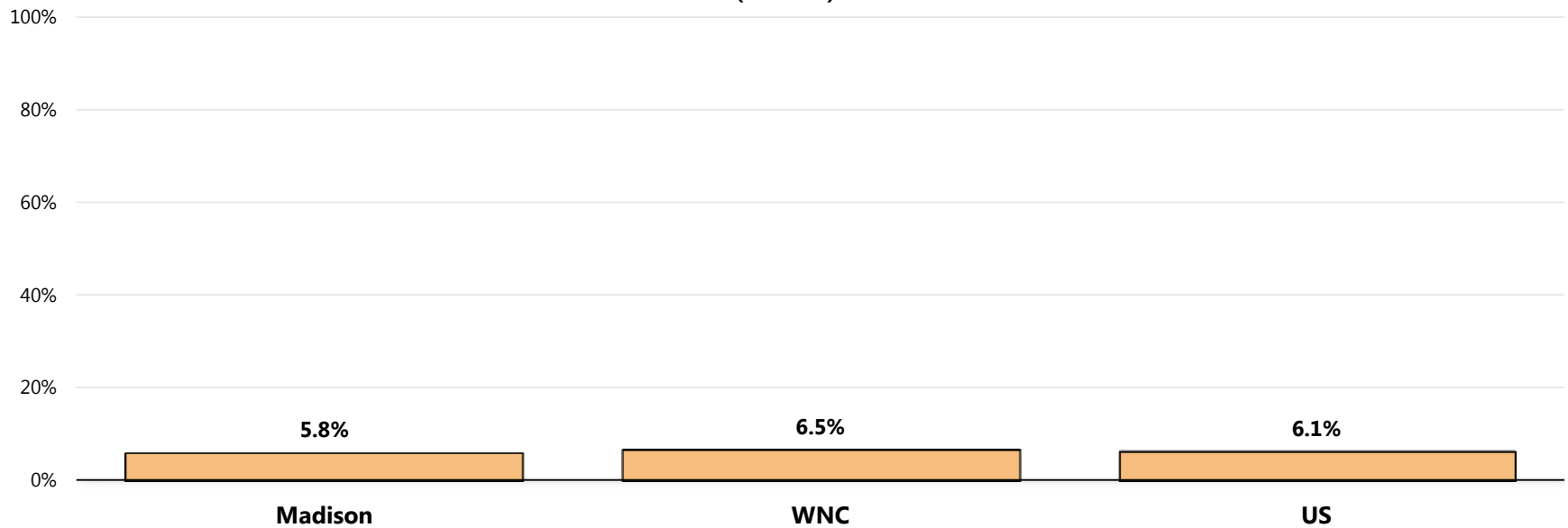


Cardiovascular Risk



COMMUNITY HEALTH

Prevalence of Heart Disease (2015)



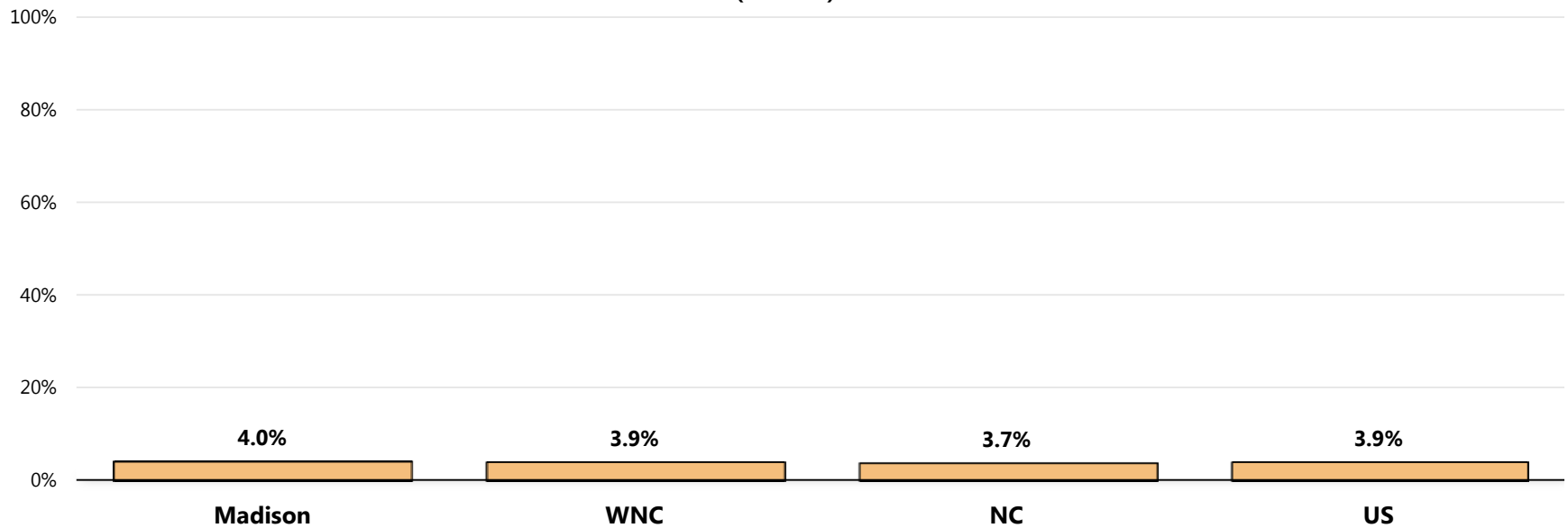
Sources:

- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 24]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:

- Asked of all respondents.
- Includes diagnoses of heart attack, angina or coronary heart disease.

Prevalence of Stroke (2015)



Sources:

- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 25]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2013 North Carolina data.
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

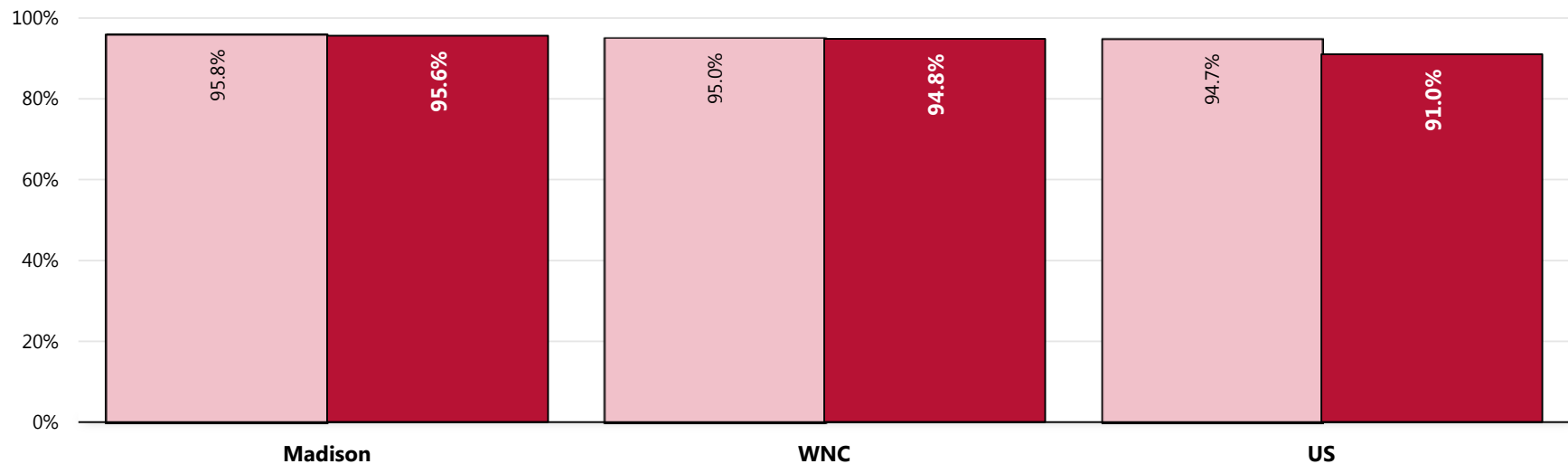
Notes:

- Asked of all respondents.

Have Had Blood Pressure Checked in the Past Two Years

Healthy People 2020 Target = 94.9% or Higher

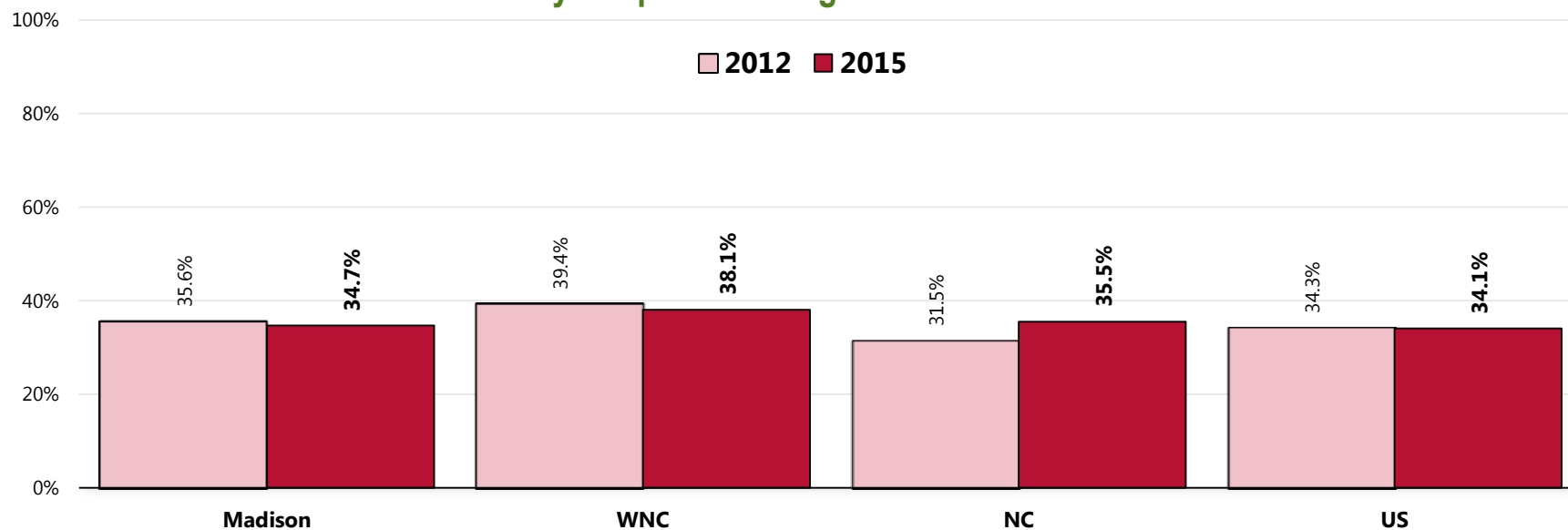
2012 2015



- Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 34]
 - PRC National Health Surveys, Professional Research Consultants, Inc.
 - US Department of Health and Human Services. Healthy People 2020. December 2010. <http://www.healthypeople.gov> [Objective HDS-4]
- Notes:
- Asked of all respondents.

Prevalence of High Blood Pressure

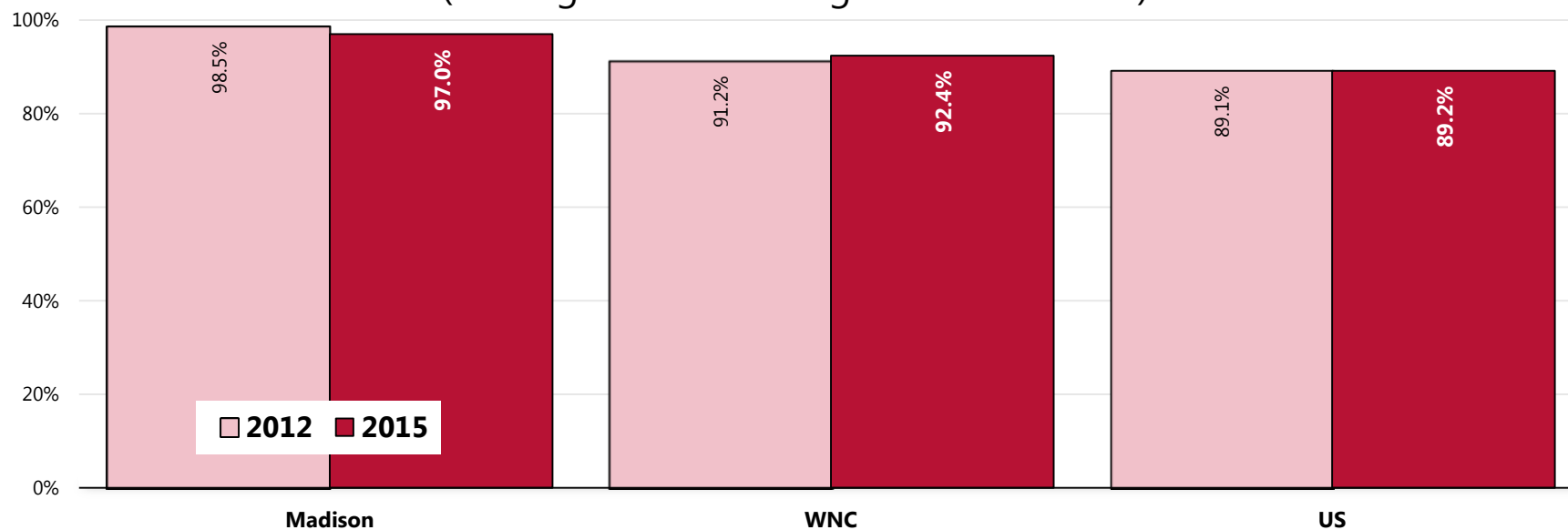
Healthy People 2020 Target = 26.9% or Lower



- Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 111]
 - Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
 - PRC National Health Surveys, Professional Research Consultants, Inc.
 - US Department of Health and Human Services. Healthy People 2020. December 2010. <http://www.healthypeople.gov> [Objective HDS-5.1]
- Notes:
- Asked of all respondents.

Taking Action to Control Hypertension

(Among Adults with High Blood Pressure)



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 33]

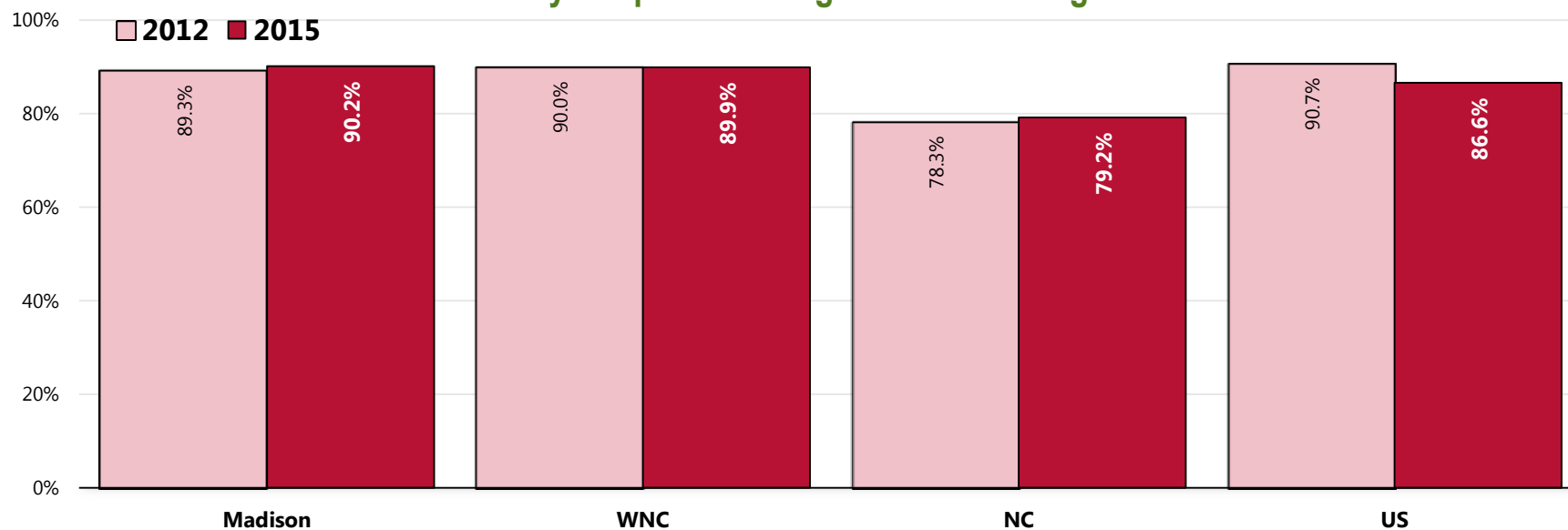
• PRC National Health Surveys, Professional Research Consultants, Inc.

Notes: • Asked of respondents who have been diagnosed with high blood pressure.

• In this case, the term "action" refers to medication, change in diet, and/or exercise.

Have Had Blood Cholesterol Levels Checked in the Past Five Years

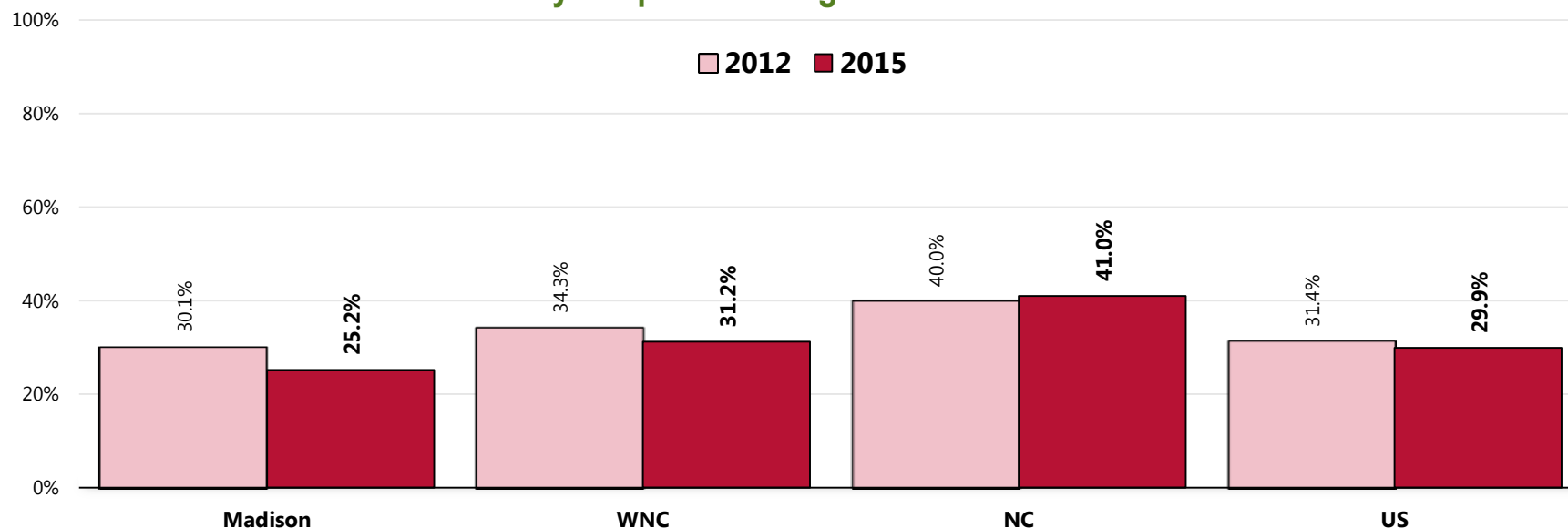
Healthy People 2020 Target = 82.1% or Higher



- Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 37]
 - Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
 - PRC National Health Surveys, Professional Research Consultants, Inc.
 - US Department of Health and Human Services. Healthy People 2020. December 2010. <http://www.healthypeople.gov> [Objective HDS-6]
- Notes:
- Asked of all respondents.

Prevalence of High Blood Cholesterol

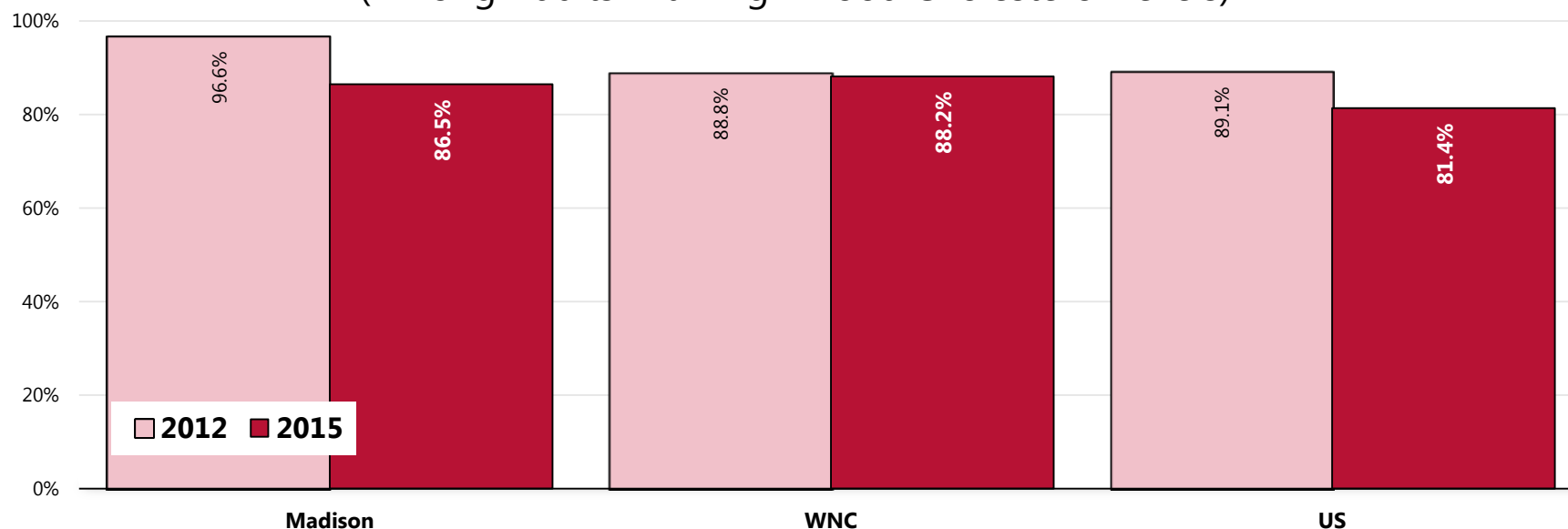
Healthy People 2020 Target = 13.5% or Lower



- Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 112]
 - Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
 - PRC National Health Survey, Professional Research Consultants, Inc.
 - US Department of Health and Human Services. Healthy People 2020. December 2010. <http://www.healthypeople.gov> [Objective HDS-7]
- Notes:
- Asked of all respondents.

Taking Action to Control High Blood Cholesterol

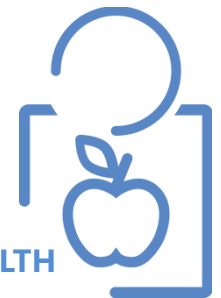
(Among Adults with High Blood Cholesterol Levels)



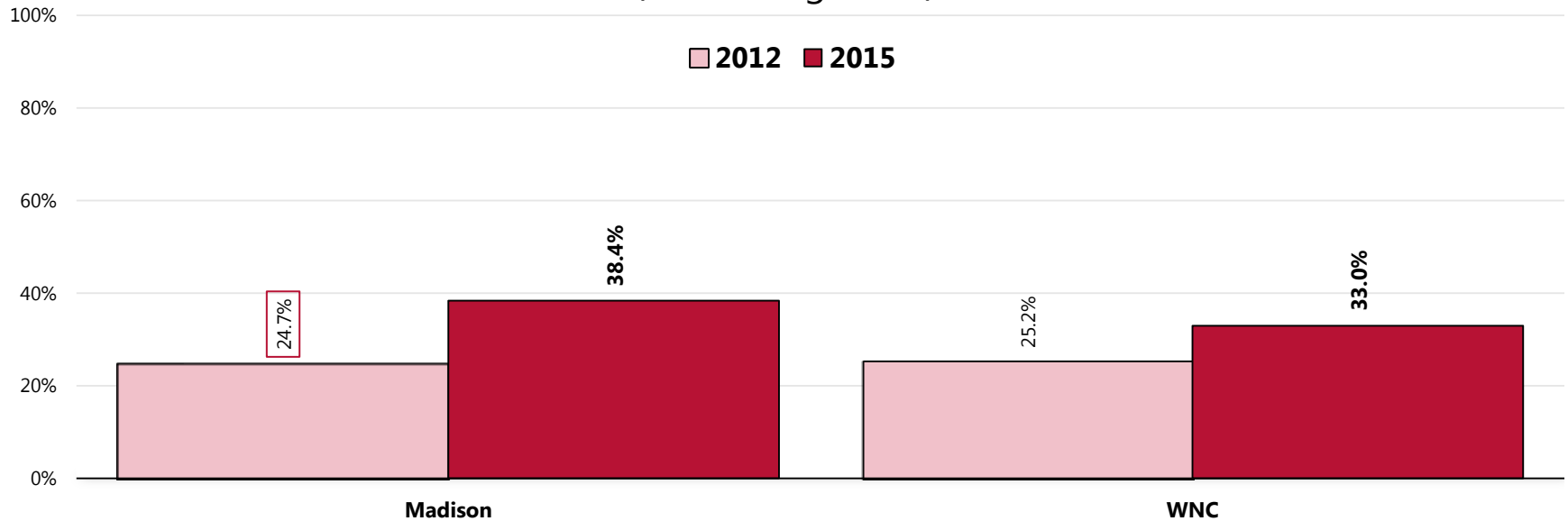
- Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 36]
 - PRC National Health Surveys, Professional Research Consultants, Inc.
- Notes:
- Asked of respondents who have been diagnosed with high blood pressure.
 - In this case, the term "action" refers to medication, change in diet, and/or exercise.

Falls

COMMUNITY HEALTH



Have Fallen in the Past Year (Seniors Age 65+)



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 88]

Notes: • Asked of those respondents age 65+.

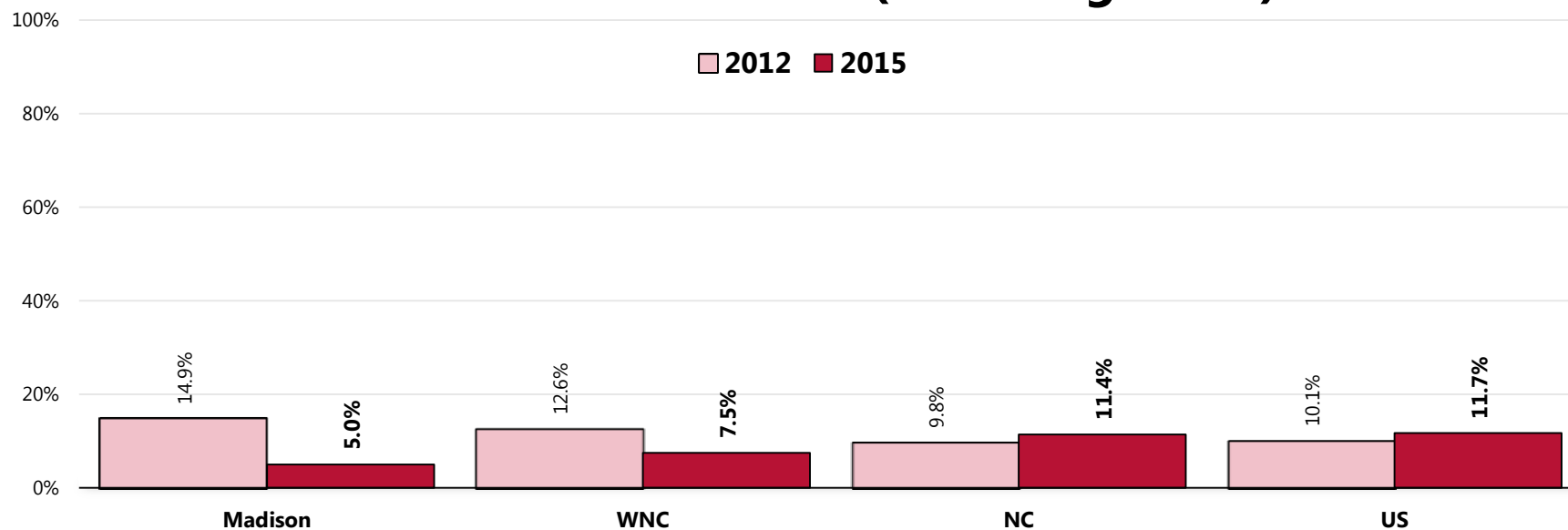
• Percentages outlined in red reflect sample sizes deemed unreliable ($n < 50$).

Diabetes



COMMUNITY HEALTH

Prevalence of Diabetes (Ever Diagnosed)



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 28]

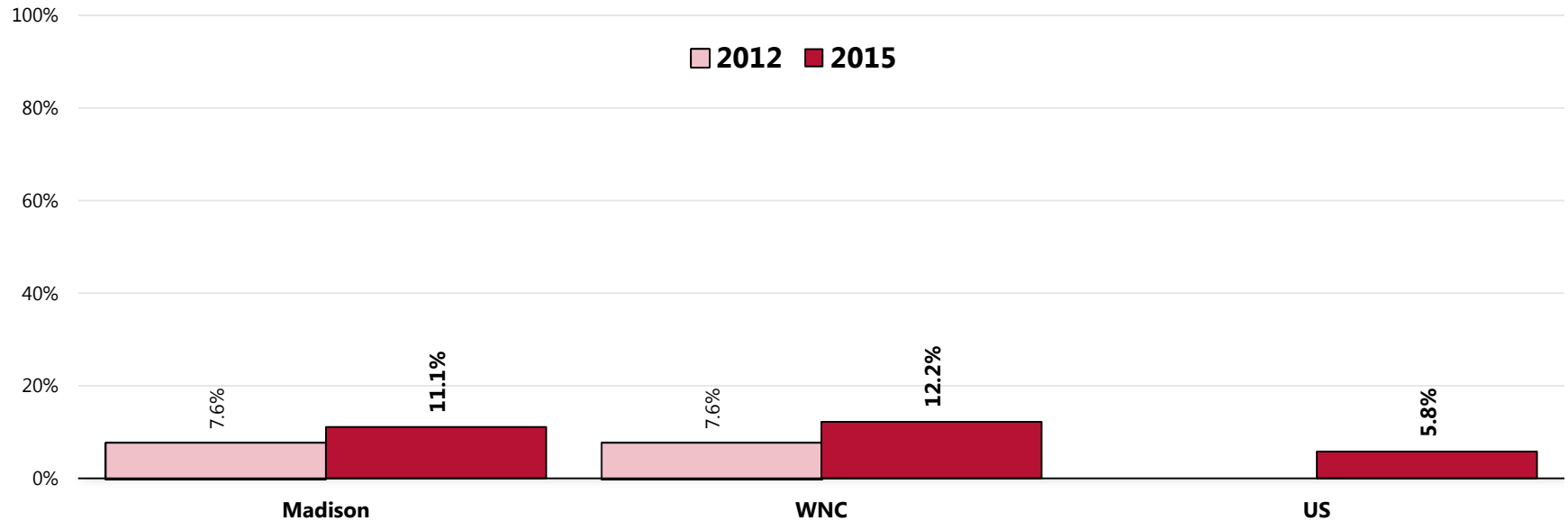
• PRC National Health Survey, Professional Research Consultants, Inc.

• Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.

Notes: • Asked of all respondents.

• Excludes gestational diabetes (occurring only during pregnancy).

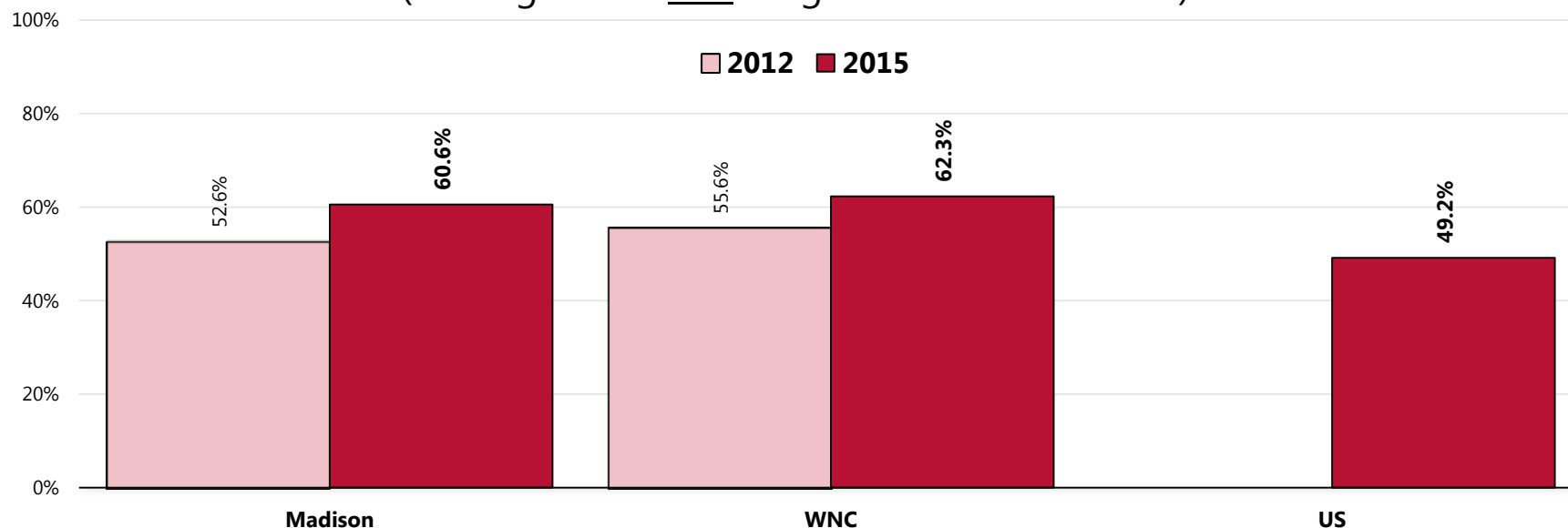
Prevalence of Borderline or Pre-Diabetes



- Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 28]
 - PRC National Health Survey, Professional Research Consultants, Inc.
- Notes:
- Asked of all respondents.
 - Excludes gestational diabetes (occurring only during pregnancy).

Tested for Diabetes in the Past Three Years

(Among Adults Not Diagnosed With Diabetes)

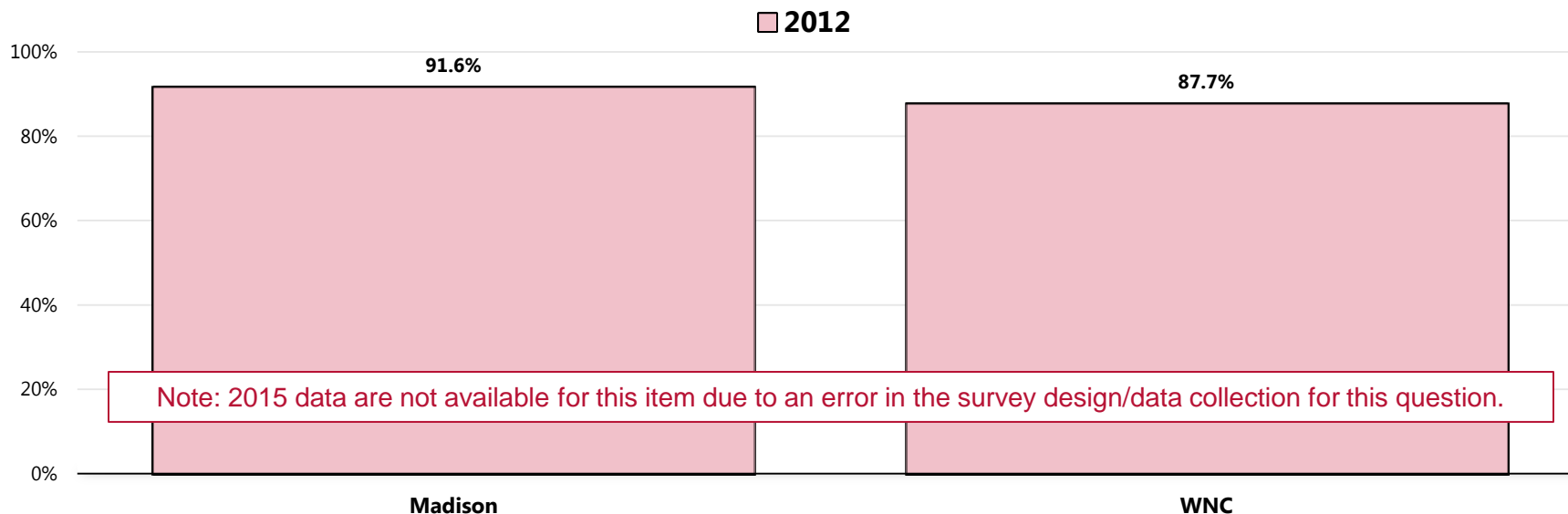


Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 29]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes: • Asked of respondents who have never been diagnosed with diabetes; also includes women who have only been diagnosed when pregnant.

Taking Action to Control Diabetes or Pre-diabetes

(Among Adults Diagnosed With Diabetes or Prediabetes/Borderline Diabetes)



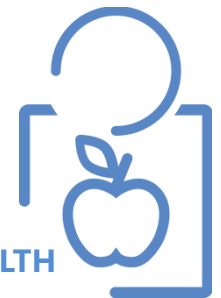
Sources: • 2012 PRC Community Health Survey, Professional Research Consultants, Inc.

Notes: • Asked of respondents who have been diagnosed with diabetes or pre-diabetes/borderline diabetes.

• In this case, the term "action" refers to taking natural or conventional medicines or supplements, diet modification, or exercising.

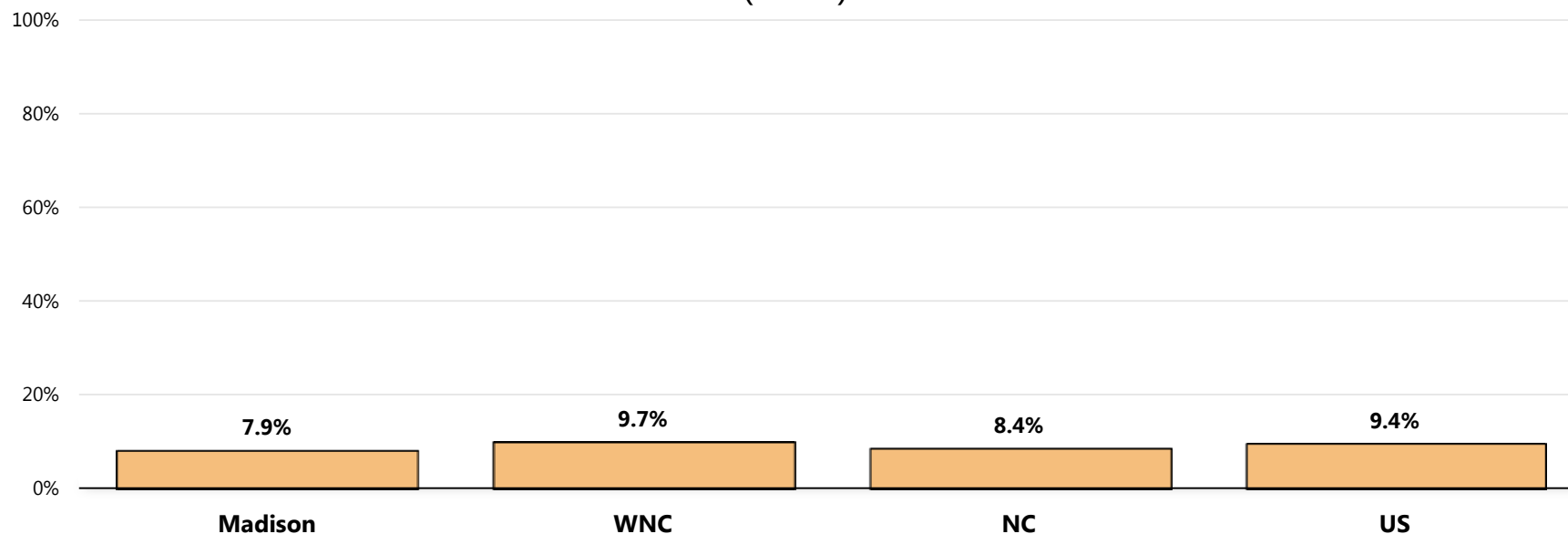


Respiratory Conditions



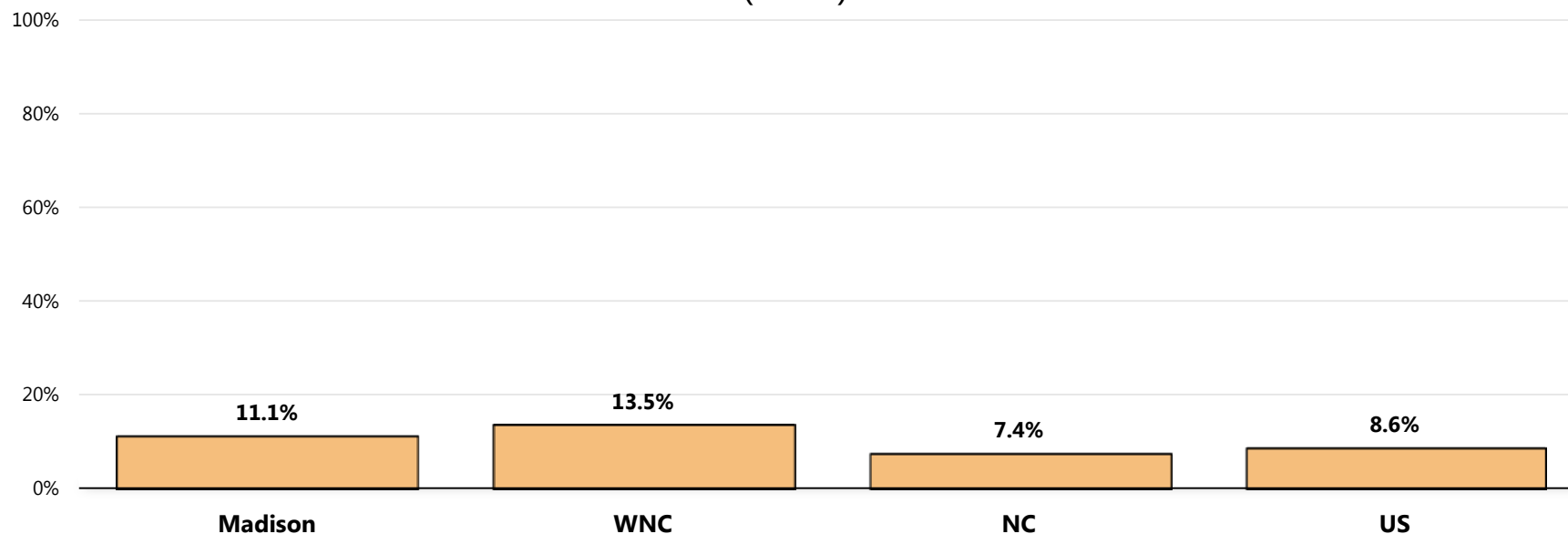
COMMUNITY HEALTH

Current Prevalence of Asthma (2015)



- Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 120]
 - Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2013 North Carolina data.
 - 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- Notes:
- Asked of all respondents.
 - Includes those who have ever been diagnosed with asthma and who report that they still have asthma.

Prevalence of Chronic Obstructive Pulmonary Disease (COPD) (2015)



- Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 23]
 - Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2013 North Carolina data.
 - 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- Notes:
- Asked of all respondents.
 - Includes those have ever suffered from or been diagnosed with COPD or chronic obstructive pulmonary disease, including bronchitis or emphysema.

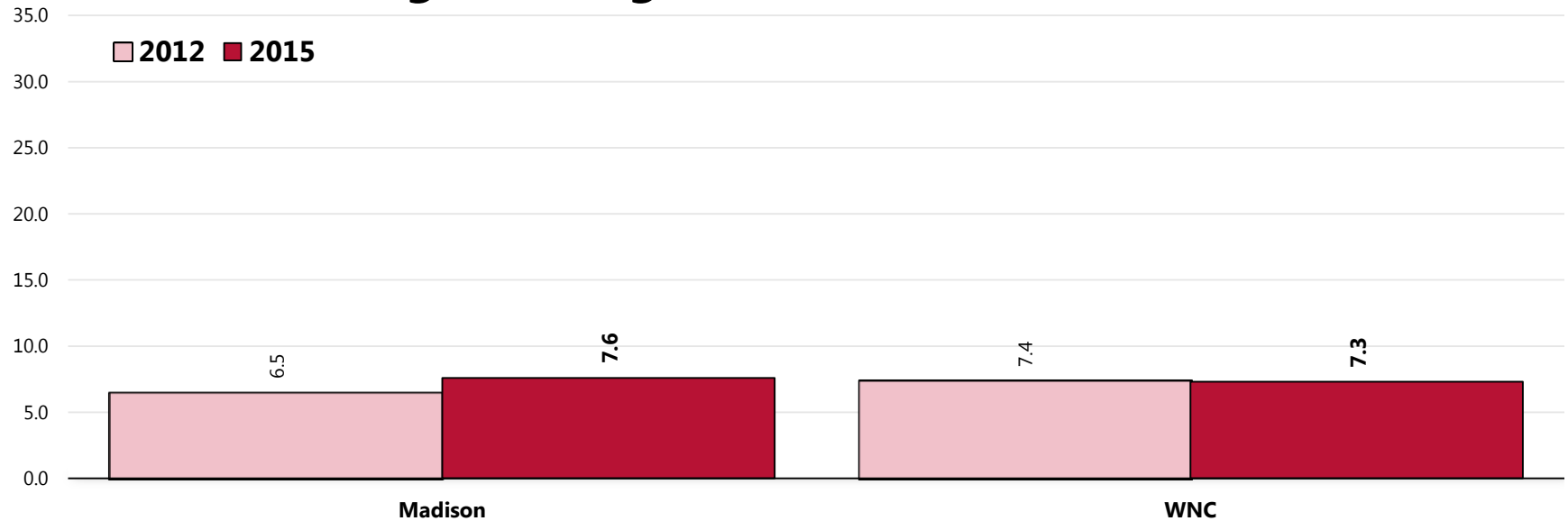
MODIFIABLE HEALTH RISKS



Nutrition



Average Servings of Fruits in the Past Week

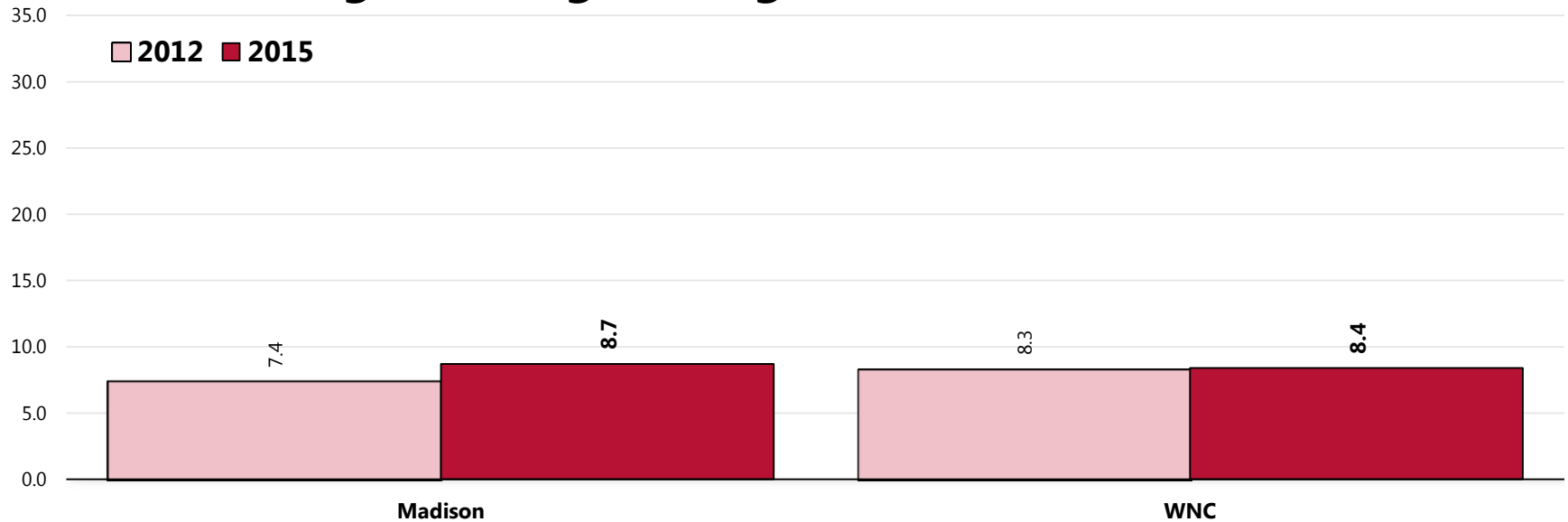


Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 63]

Notes: • Asked of all respondents.

• For this issue, respondents were asked to recall their food intake during the previous week. Reflects 1-cup servings of fruits in the past week.

Average Servings of Vegetables in the Past Week

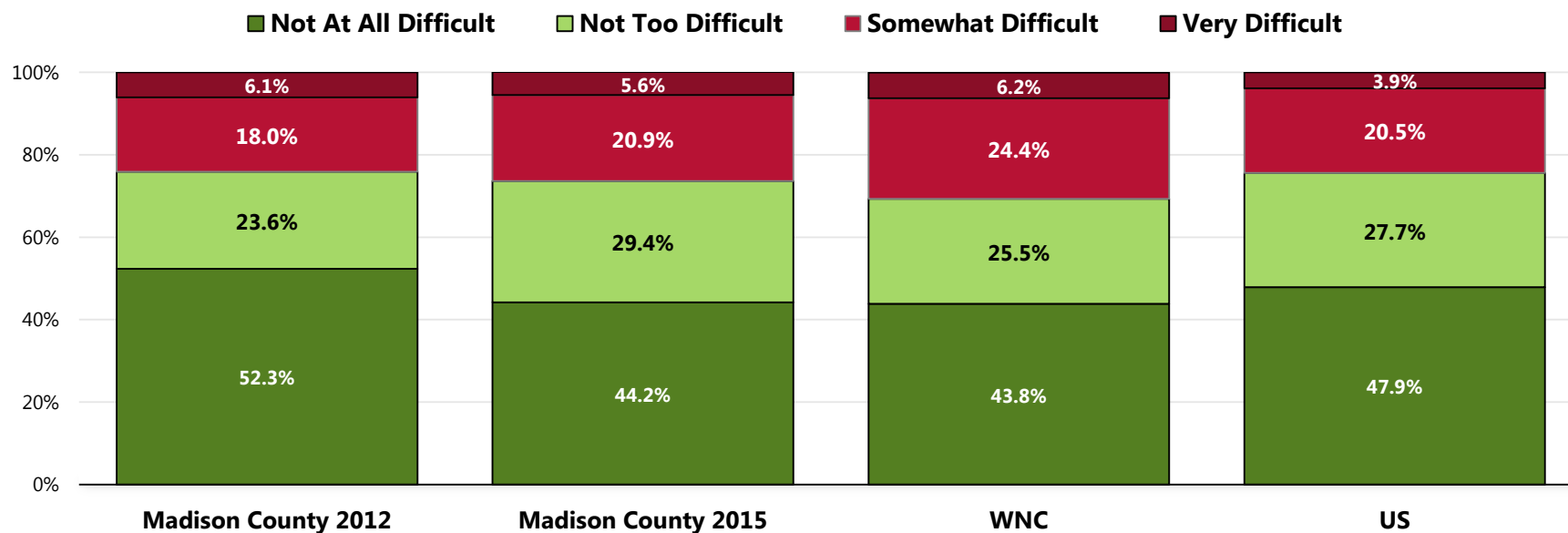


Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 64]

Notes: • Asked of all respondents.

• For this issue, respondents were asked to recall their food intake during the previous week. Reflects 1-cup servings of vegetables in the past week, excluding lettuce salad and potatoes.

Level of Difficulty Accessing Fresh Produce at an Affordable Price



Sources: • 2015 PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 66]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes: • Asked of all respondents.

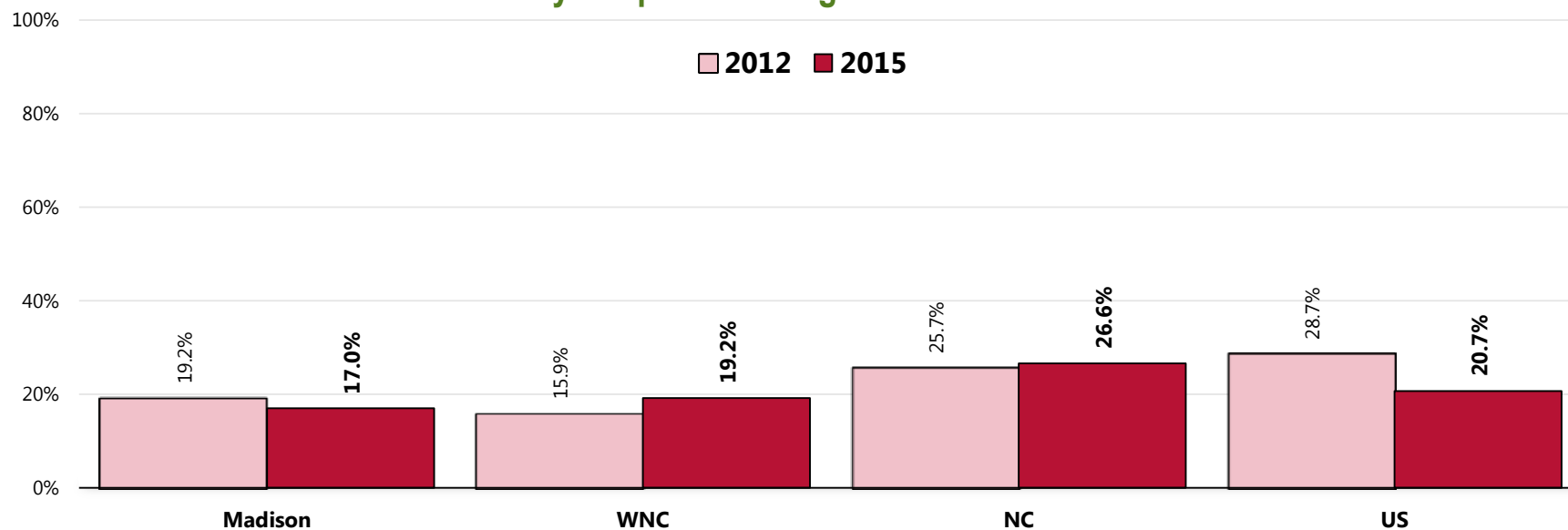
Physical Activity & Fitness



COMMUNITY HEALTH

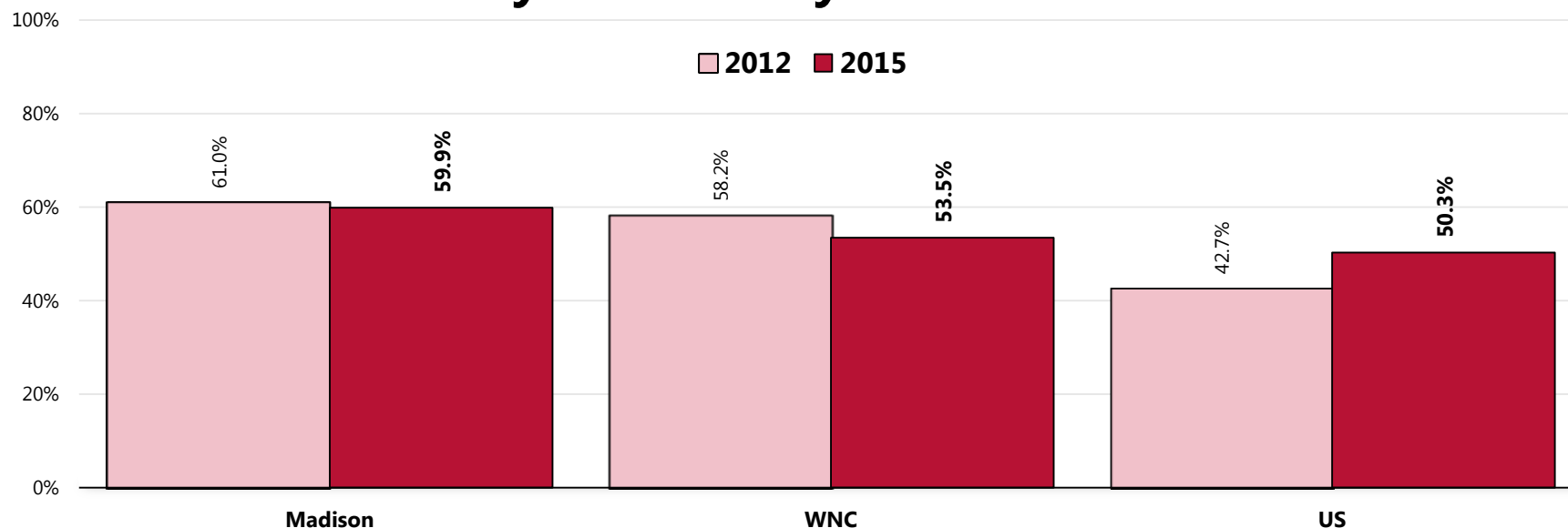
No Leisure-Time Physical Activity in the Past Month

Healthy People 2020 Target = 32.6% or Lower



- Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 73]
 - Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
 - PRC National Health Surveys, Professional Research Consultants, Inc.
 - US Department of Health and Human Services. Healthy People 2020. December 2010. <http://www.healthypeople.gov> [Objective PA-1]
- Notes:
- Asked of all respondents.

Meets Physical Activity Recommendations



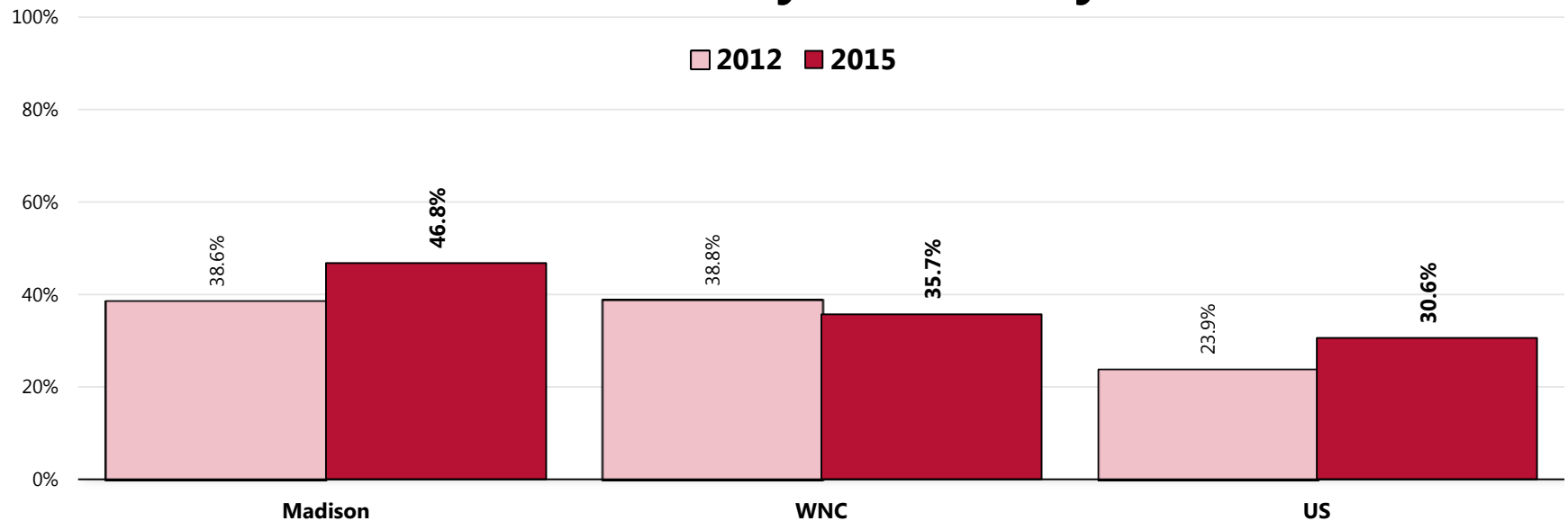
Sources:

- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 133]
- PRC National Health Surveys, Professional Research Consultants, Inc.

Notes:

- Asked of all respondents.
- In this case the term "meets physical activity recommendations" refers to participation in moderate physical activity (exercise that produces only light sweating or a slight to moderate increase in breathing or heart rate) at least 5 times a week for 30 minutes at a time, and/or vigorous physical activity (activities that cause heavy sweating or large increases in breathing or heart rate) at least 3 times a week for 20 minutes at a time.

Moderate Physical Activity



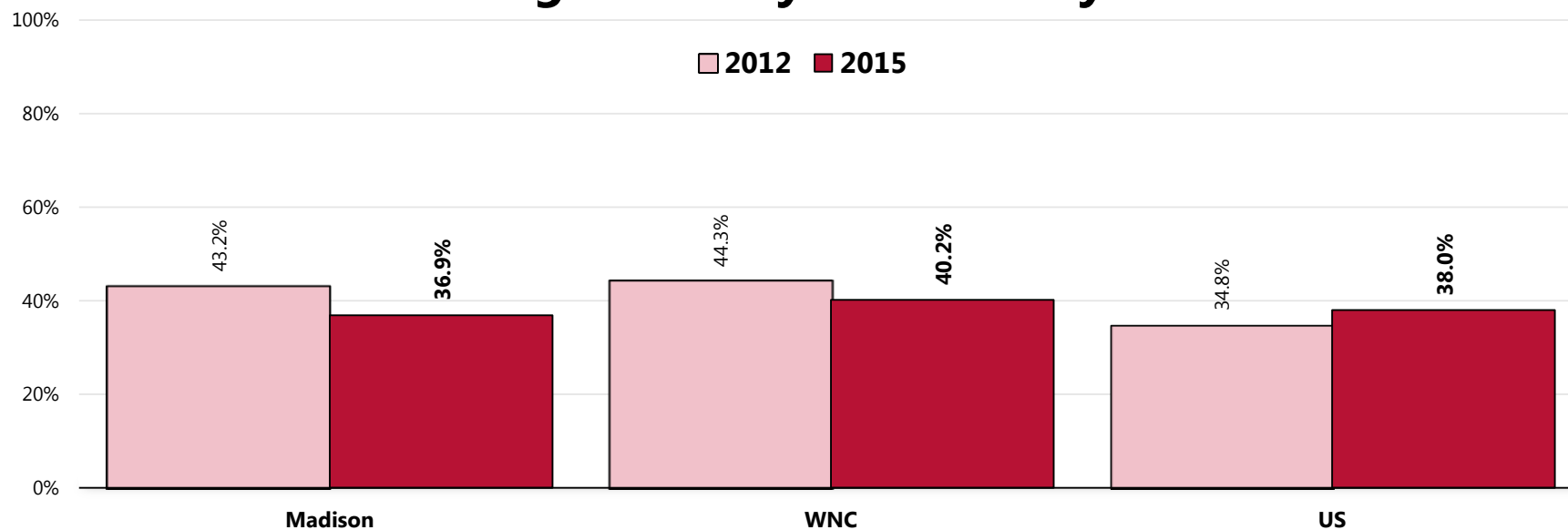
Sources:

- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 134]
- PRC National Health Surveys, Professional Research Consultants, Inc.

Notes:

- Asked of all respondents.
- Moderate Physical Activity: Takes part in exercise that produces only light sweating or a slight to moderate increase in breathing or heart rate at least 5 times per week for at least 30 minutes per time.

Vigorous Physical Activity



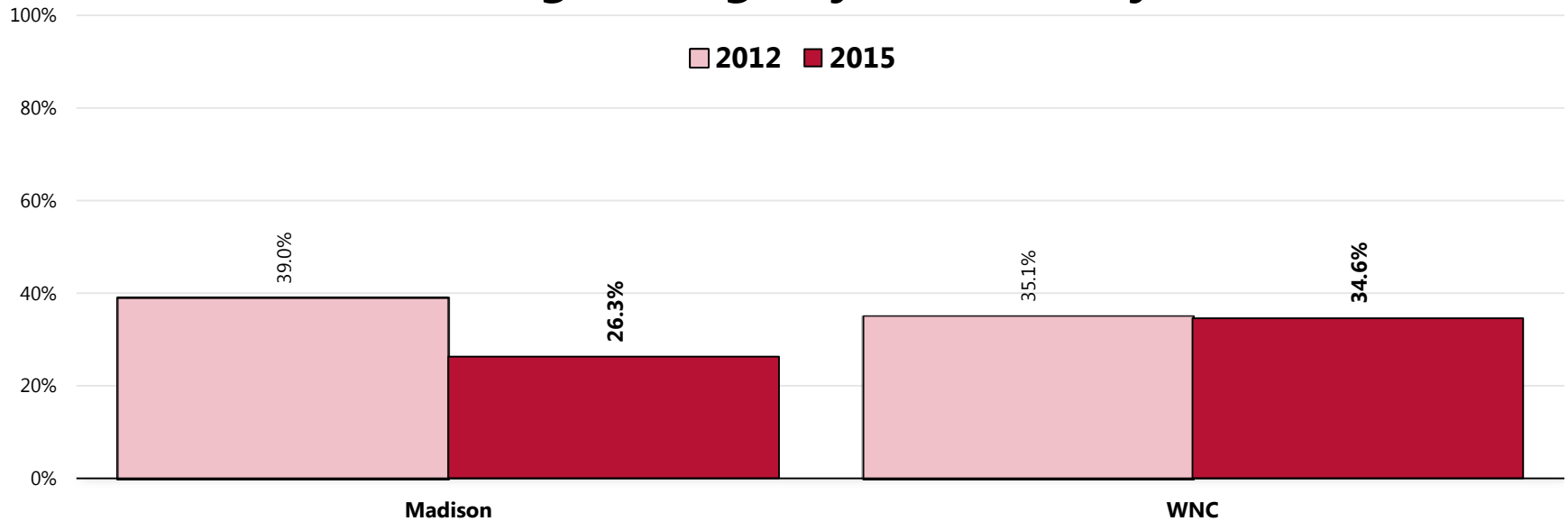
Sources:

- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 135]
- PRC National Health Surveys, Professional Research Consultants, Inc.

Notes:

- Asked of all respondents.
- Vigorous Physical Activity: Takes part in activities that cause heavy sweating or large increases in breathing or heart rate at least 3 times per week for at least 20 minutes per time.

Strengthening Physical Activity



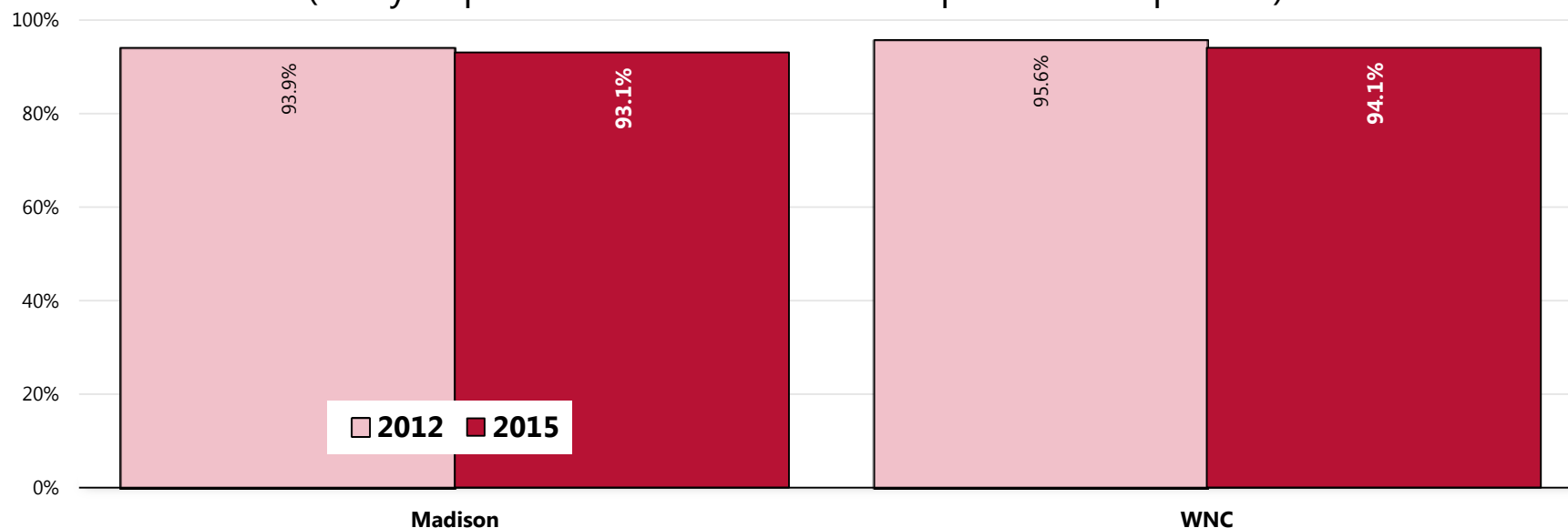
Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 164]

Notes: • Asked of all respondents.

• Strengthening Physical Activity: Takes part in physical activities or exercises that strengthen muscles at least 2 times per week.

Believe It Is Important That Community Organizations Make Physical Activity Spaces Available for Public Use After Hours

("Very Important" and "Somewhat Important" Responses)



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 77]

Notes: • Asked of all respondents.

Body Weight

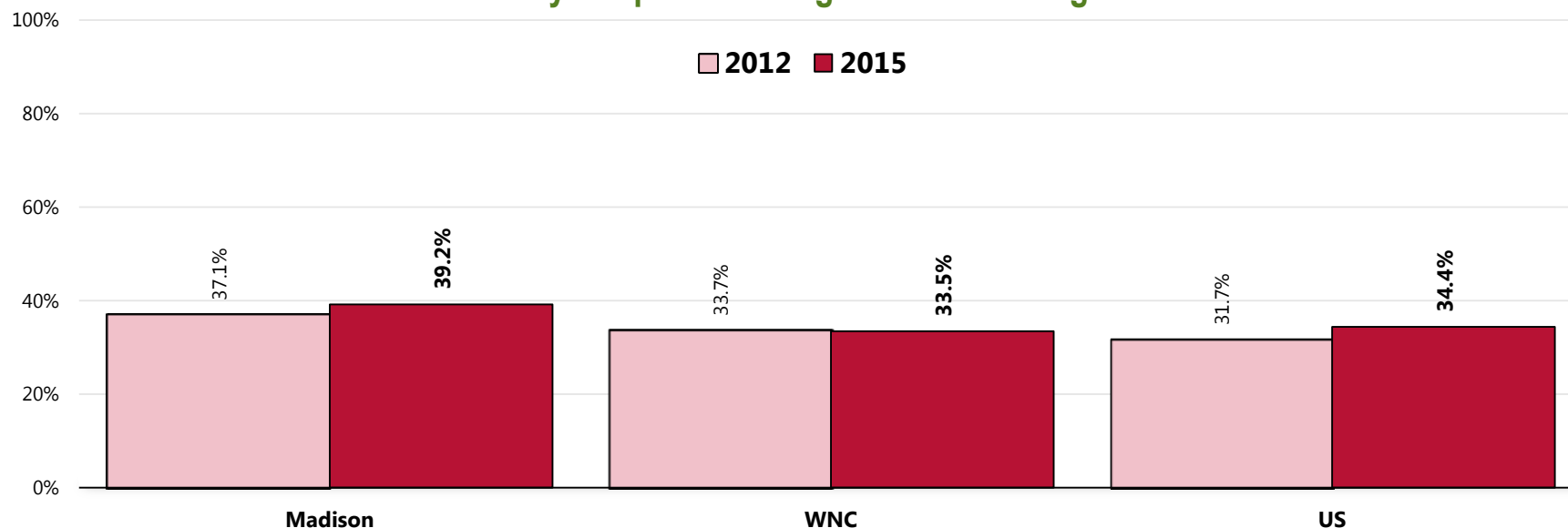


COMMUNITY HEALTH

Healthy Weight

(Percent of Adults With a Body Mass Index Between 18.5 and 24.9)

Healthy People 2020 Target = 33.9% or Higher



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 137]

• PRC National Health Surveys, Professional Research Consultants, Inc.

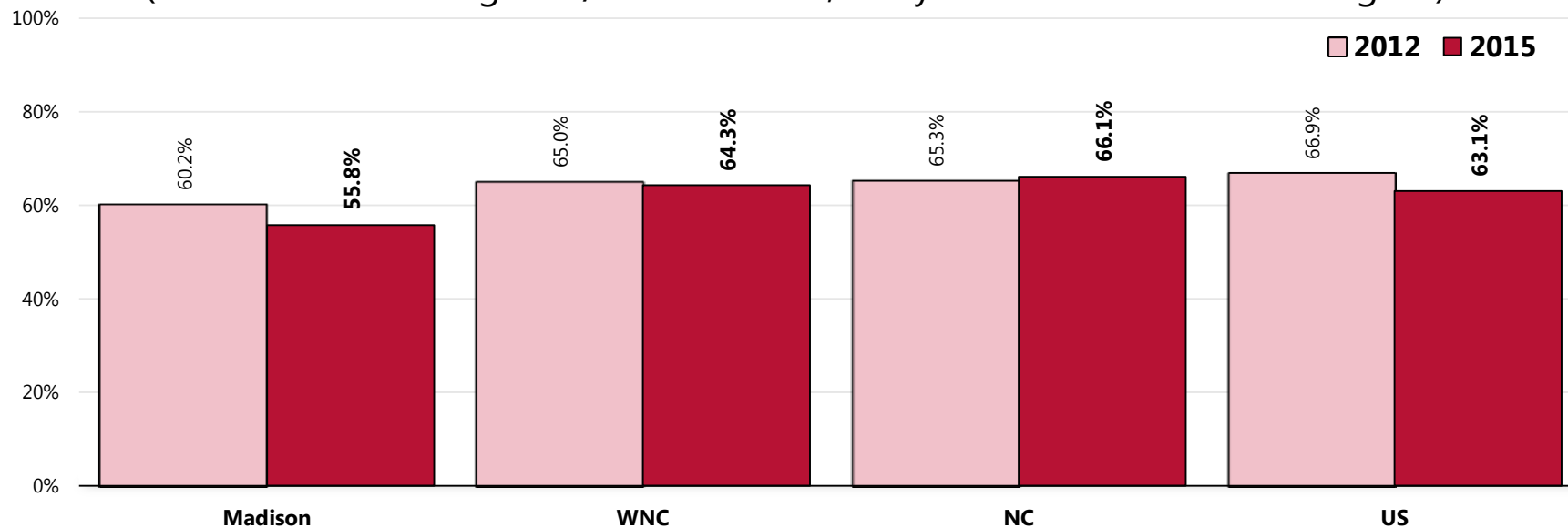
Notes: • Based on reported heights and weights, asked of all respondents.

• US Department of Health and Human Services. Healthy People 2020. December 2010. <http://www.healthypeople.gov> [Objective NWS-8]

• The definition of healthy weight is having a body mass index (BMI), a ratio of weight to height (kilograms divided by meters squared), between 18.5 and 24.9.

Prevalence of Total Overweight (Overweight or Obese)

(Percent of Overweight or/Obese Adults; Body Mass Index of 25.0 or Higher)



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 137]

• PRC National Health Surveys, Professional Research Consultants, Inc.

• Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.

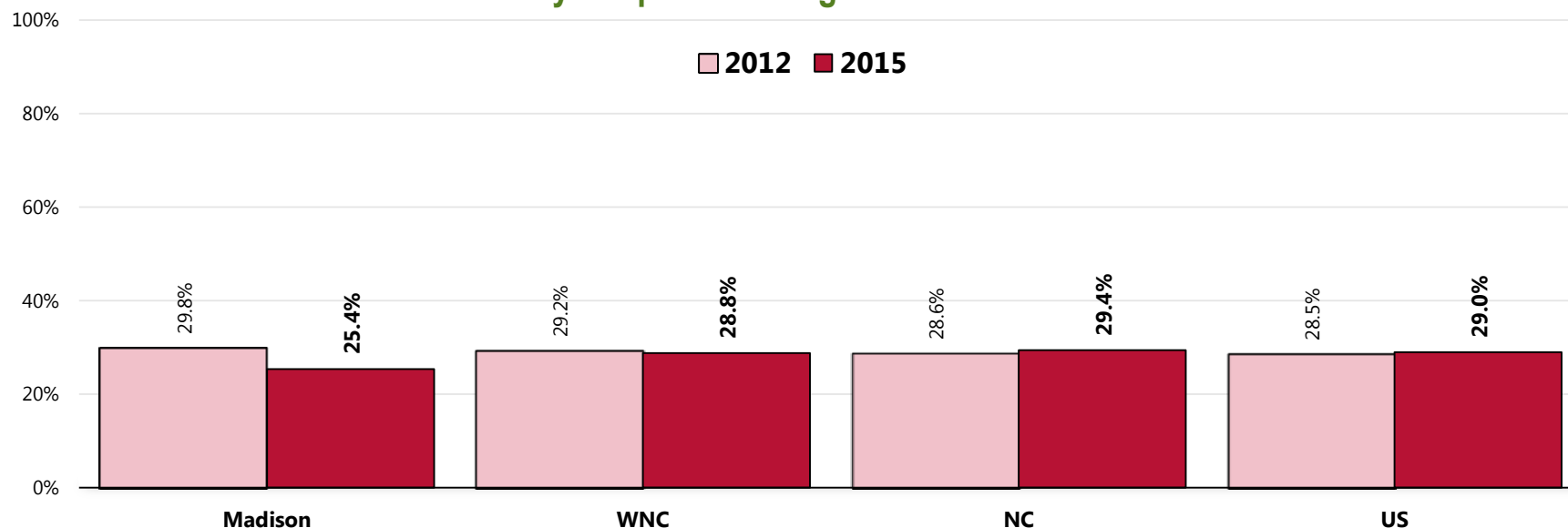
Notes: • Based on reported heights and weights, asked of all respondents.

• The definition of overweight is having a body mass index (BMI), a ratio of weight to height (kilograms divided by meters squared), greater than or equal to 25.0, regardless of gender. The definition for obesity is a BMI greater than or equal to 30.0.

Prevalence of Obesity

(Percent of Obese Adults; Body Mass Index of 30.0 or Higher)

Healthy People 2020 Target = 30.6% or Lower



Sources:

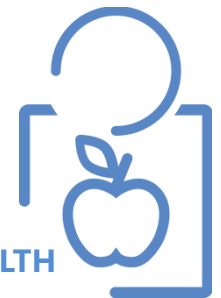
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 137]
- PRC National Health Surveys, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. <http://www.healthypeople.gov> [Objective NWS-9]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.

Notes:

- Based on reported heights and weights, asked of all respondents.
- The definition of obesity is having a body mass index (BMI), a ratio of weight to height (kilograms divided by meters squared), greater than or equal to 30.0, regardless of gender.

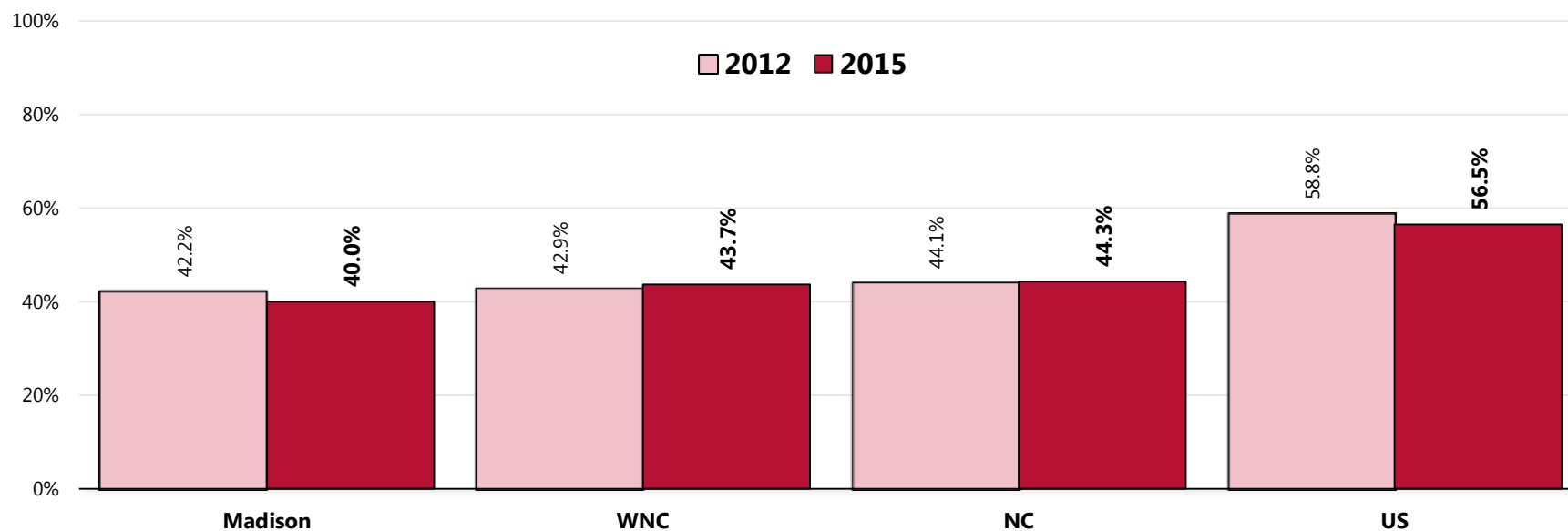


Substance Abuse



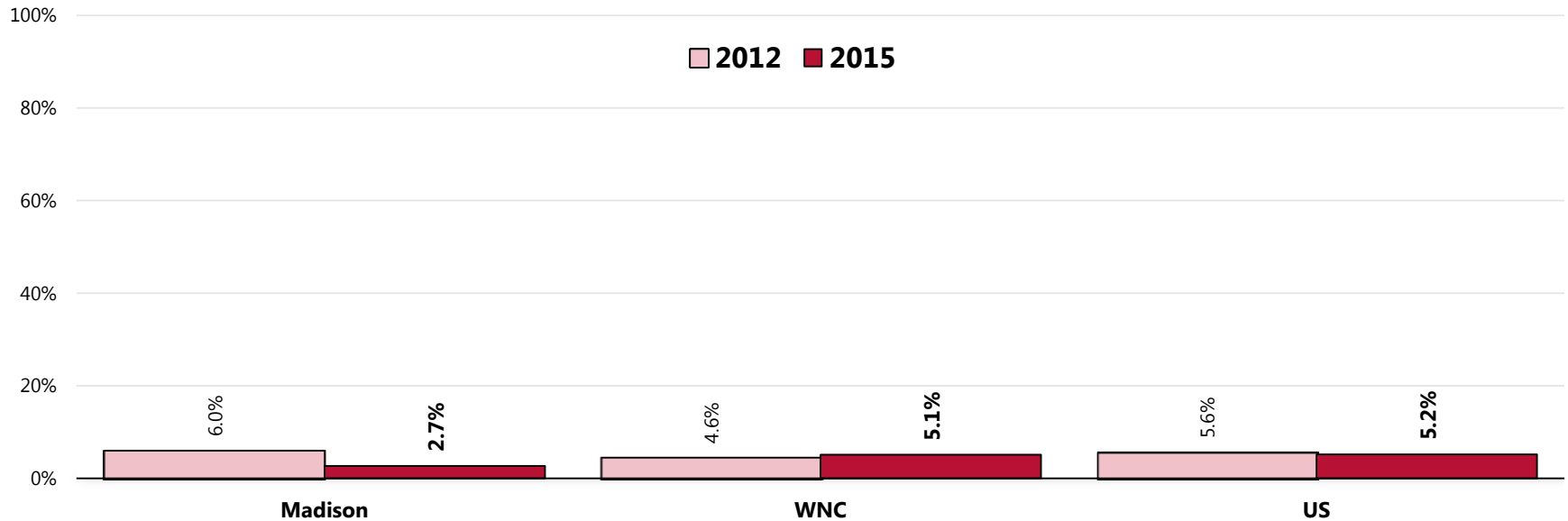
COMMUNITY HEALTH

Current Drinkers



- Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 146]
 - Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
 - PRC National Health Surveys, Professional Research Consultants, Inc.
- Notes:
- Asked of all respondents.
 - Current drinkers had at least one alcoholic drink in the past month.

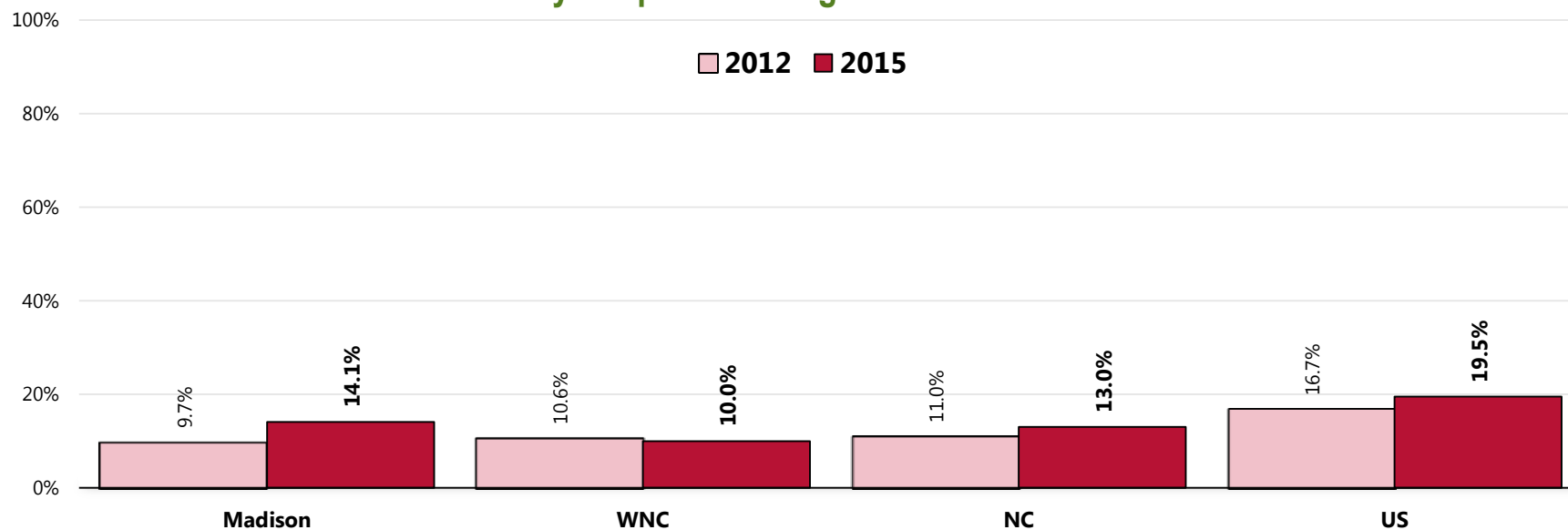
Chronic Drinkers



- Sources:
- PRC Community Health Survey, Professional Research Consultants, Inc. [Item 147]
 - PRC National Health Surveys, Professional Research Consultants, Inc.
- Notes:
- Asked of all respondents.
 - Chronic drinkers are defined as having 60+ alcoholic drinks in the past month.

Binge Drinkers

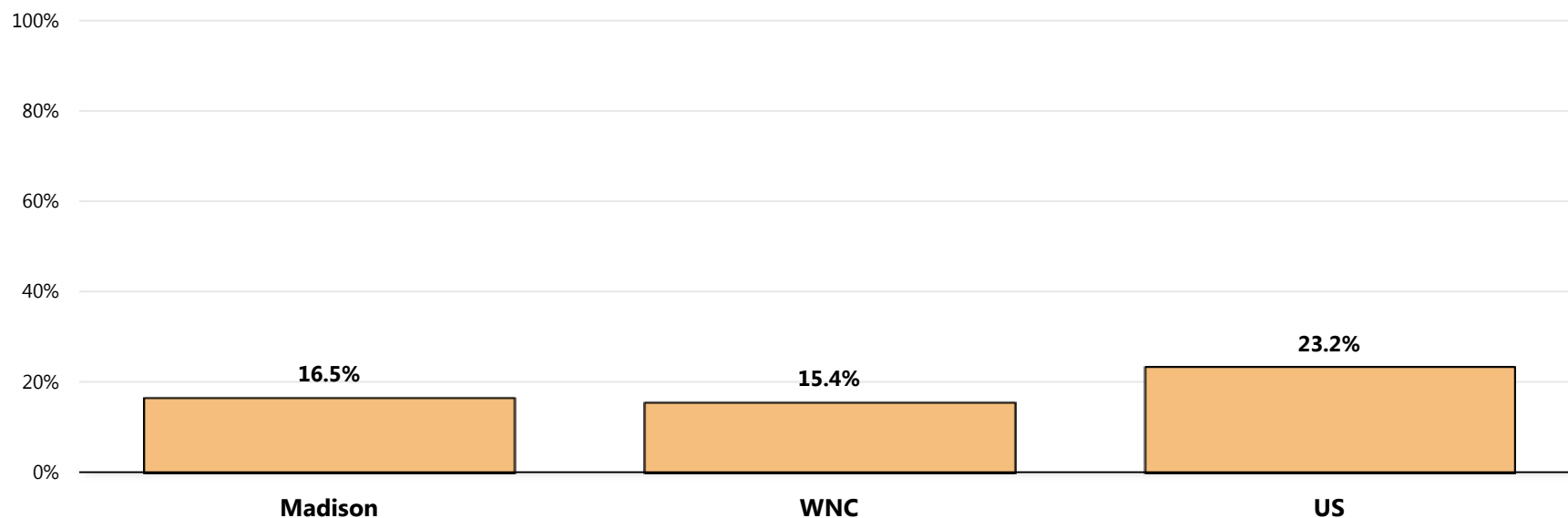
Healthy People 2020 Target = 24.3% or Lower



- Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 148]
 - Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
 - PRC National Health Surveys, Professional Research Consultants, Inc.
 - US Department of Health and Human Services. Healthy People 2020. December 2010. <http://www.healthypeople.gov> [Objective SA-14.3]
- Notes:
- Asked of all respondents.
 - Binge drinkers are defined as those consuming 5+ alcoholic drinks on any one occasion in the past 30 days; * note that state and national data reflect different thresholds for men (5+ drinks) and women (4+ drinks).

Excessive Drinkers

Healthy People 2020 Target = 25.4% or Lower



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 150]

• 2013 PRC National Health Survey, Professional Research Consultants, Inc.

• US Department of Health and Human Services. Healthy People 2020. December 2010. <http://www.healthypeople.gov> [Objective SA-15]

Notes: • Asked of all respondents.

• Excessive drinking reflects the number of persons aged 18 years and over who drank more than two drinks per day on average (for men) or more than one drink per day on average (for women) OR who drank 5 or more drinks during a single occasion (for men) or 4 or more drinks during a single occasion (for women) during the past 30 days.

Have Taken a Prescription Drug in the Past Month That Was Not Prescribed (2015)



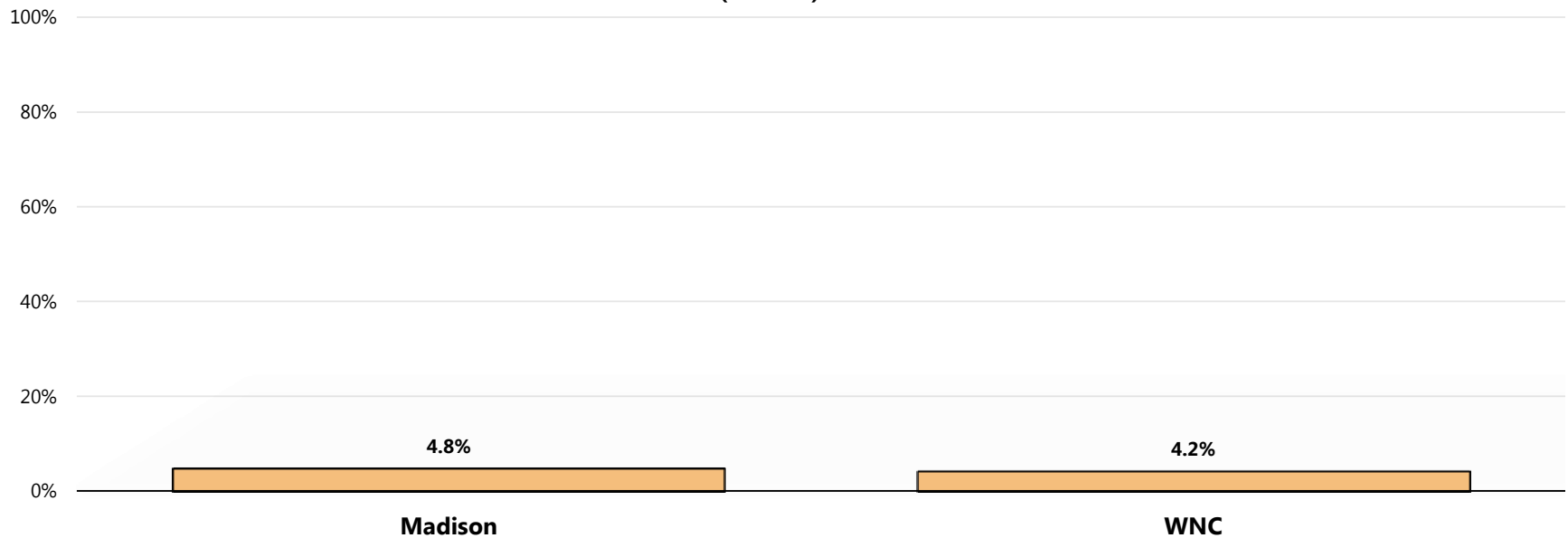
Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 58]

Notes: • Asked of all respondents.

• Includes reported use of a prescription drug not prescribed to the respondent.



Have Ever Shared a Prescription Medication With Someone Else (2015)



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 59]

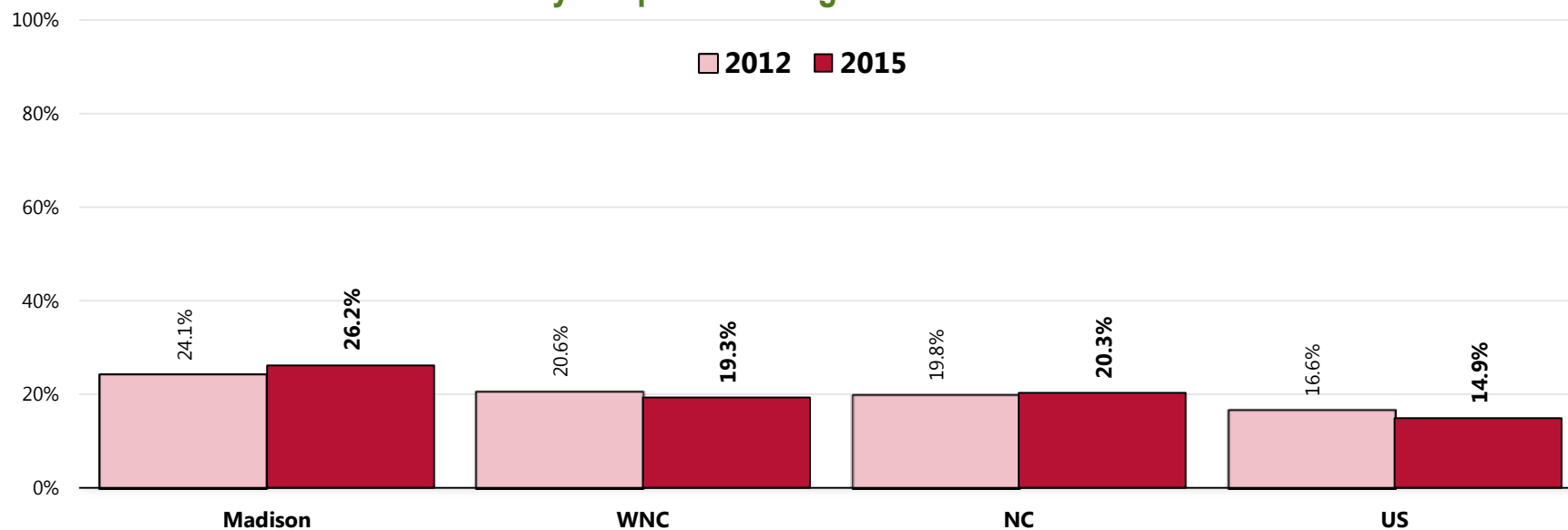
Notes: • Asked of all respondents.

Tobacco Use



Current Smokers

Healthy People 2020 Target = 12.0% or Lower



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 45]

• PRC National Health Surveys, Professional Research Consultants, Inc.

• Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.

• US Department of Health and Human Services. Healthy People 2020. December 2010. <http://www.healthypeople.gov> [Objective TU-1.1]

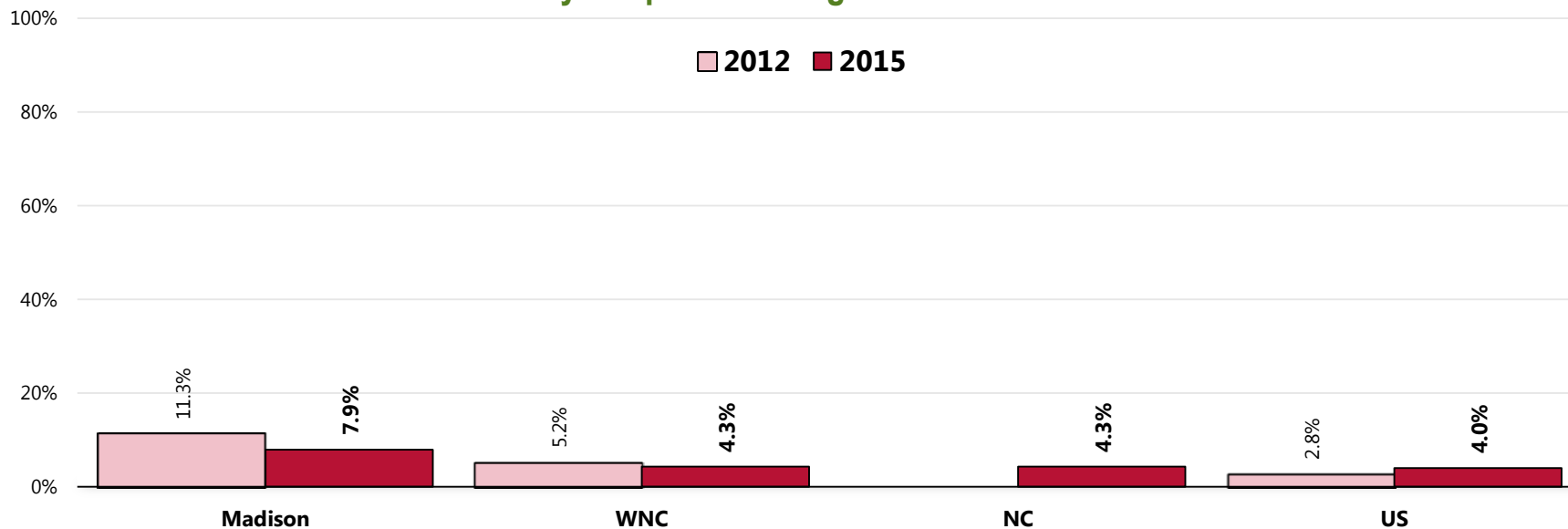
Notes:

• Asked of all respondents.

• Includes regular and occasional smokers (everyday and some days).

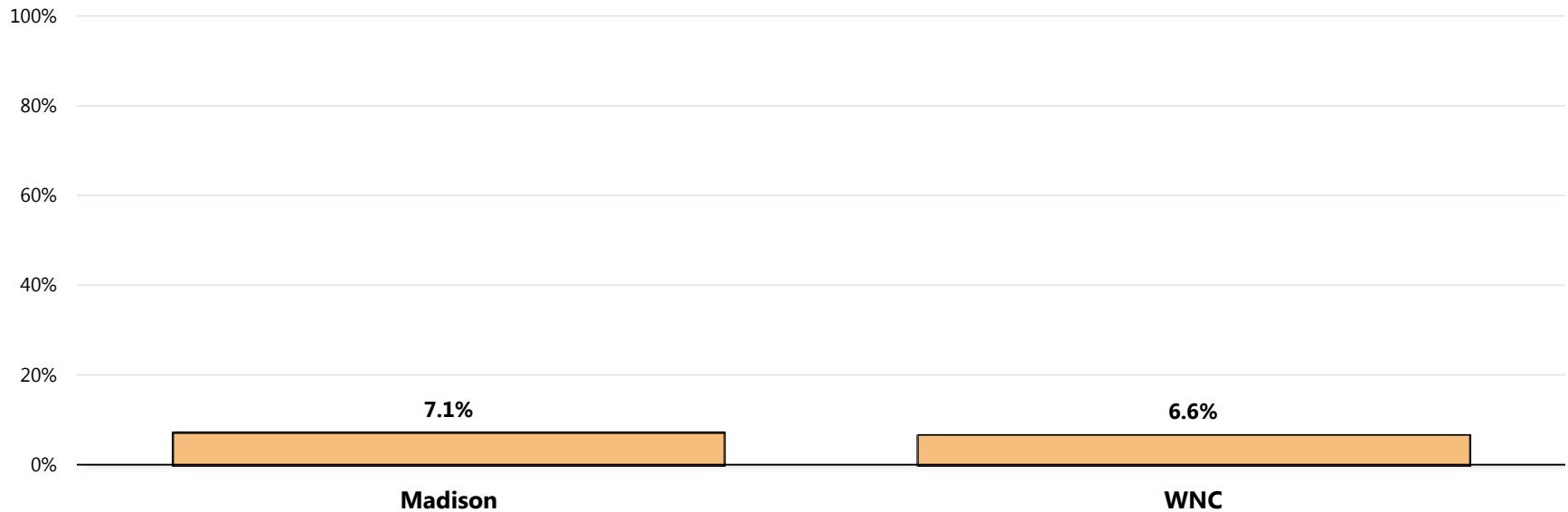
Currently Use Smokeless Tobacco Products

Healthy People 2020 Target = 0.3% or Lower



- Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 46]
 - 2013 PRC National Health Survey, Professional Research Consultants, Inc.
 - Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2013 North Carolina data.
 - US Department of Health and Human Services. Healthy People 2020. December 2010. <http://www.healthypeople.gov> [Objective TU-1.2]
- Notes:
- Asked of all respondents.
 - Includes regular and occasional users (everyday and some days).

Currently Use E-Cigarettes (2015)



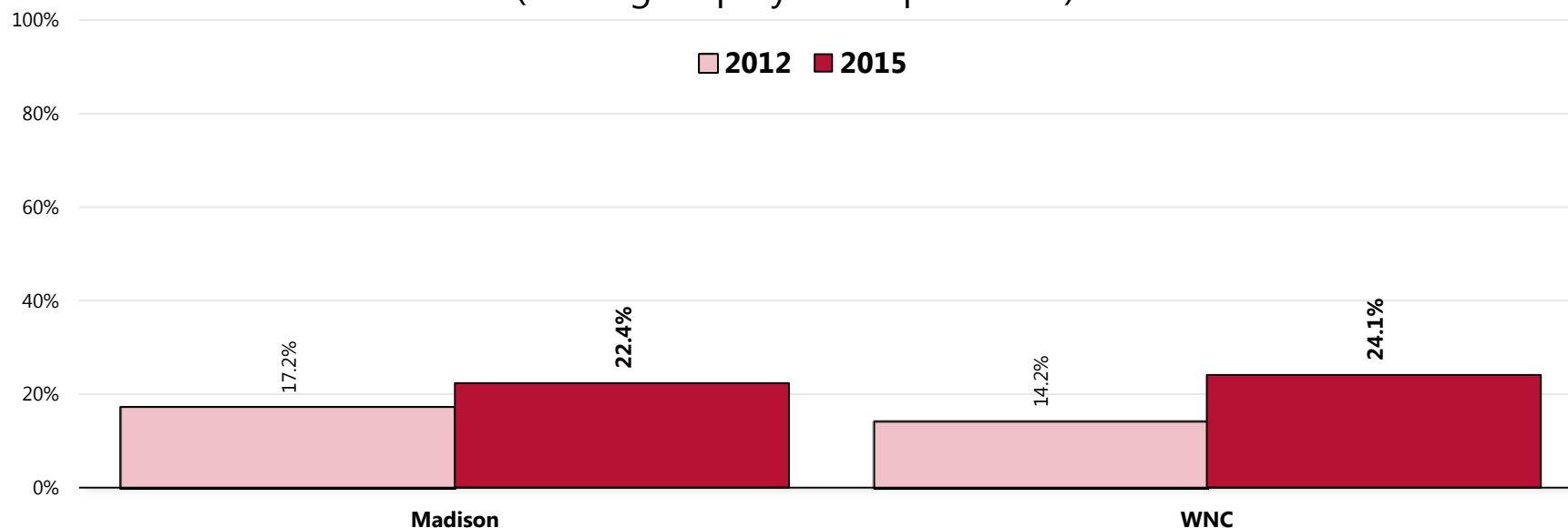
Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 47]

Notes: • Asked of all respondents.

- Electronic cigarettes (or e-cigarettes) are battery-operated devices that simulate traditional cigarette smoking, but do not involve the burning of tobacco. The cartridge or liquid "e-juice" used in these devices produces vapor and comes in a variety of flavors.
- Includes regular and occasional use (everyday and some days).

Have Breathed Someone Else's Cigarette Smoke at Work in the Past Week

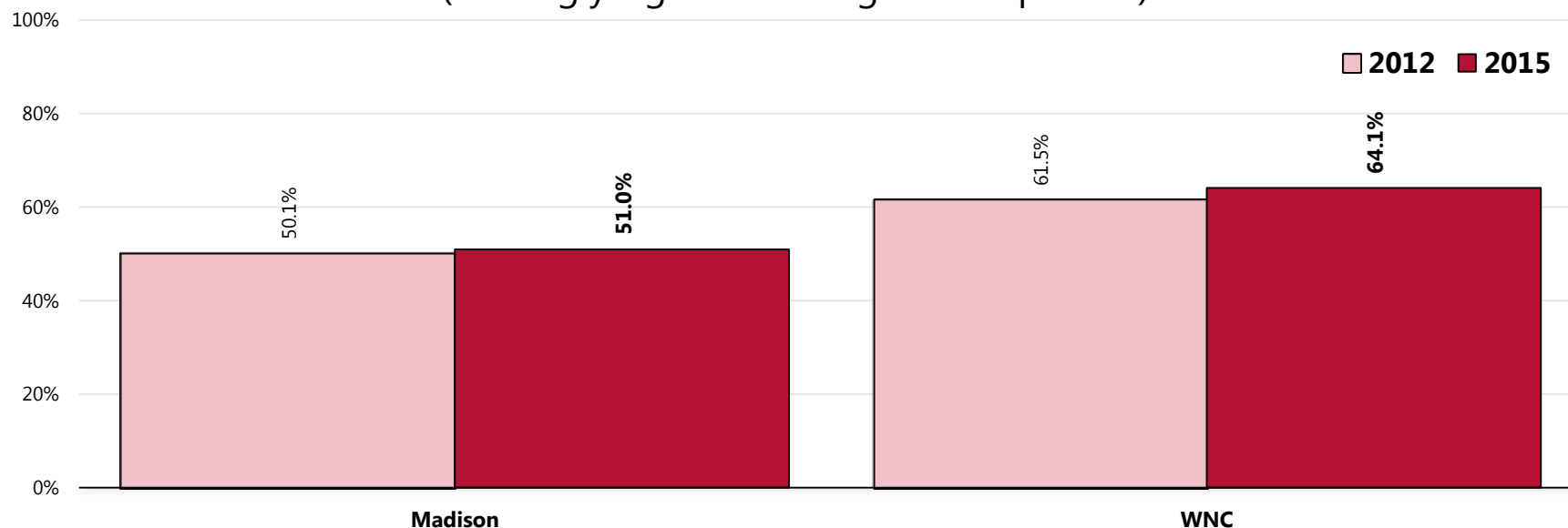
(Among Employed Respondents)



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 49]

Notes: • Asked of employed respondents.

Believe It Is Important That Public Walking/Biking Trails Are 100% Tobacco-Free ("Strongly Agree" and "Agree" Responses)

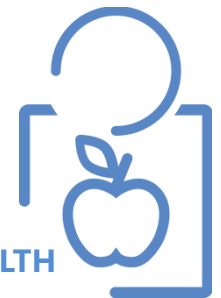


Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 50]

Notes: • Asked of all respondents.
• Includes "very important" and "somewhat important" responses.

ACCESS TO HEALTHCARE SERVICES

COMMUNITY HEALTH



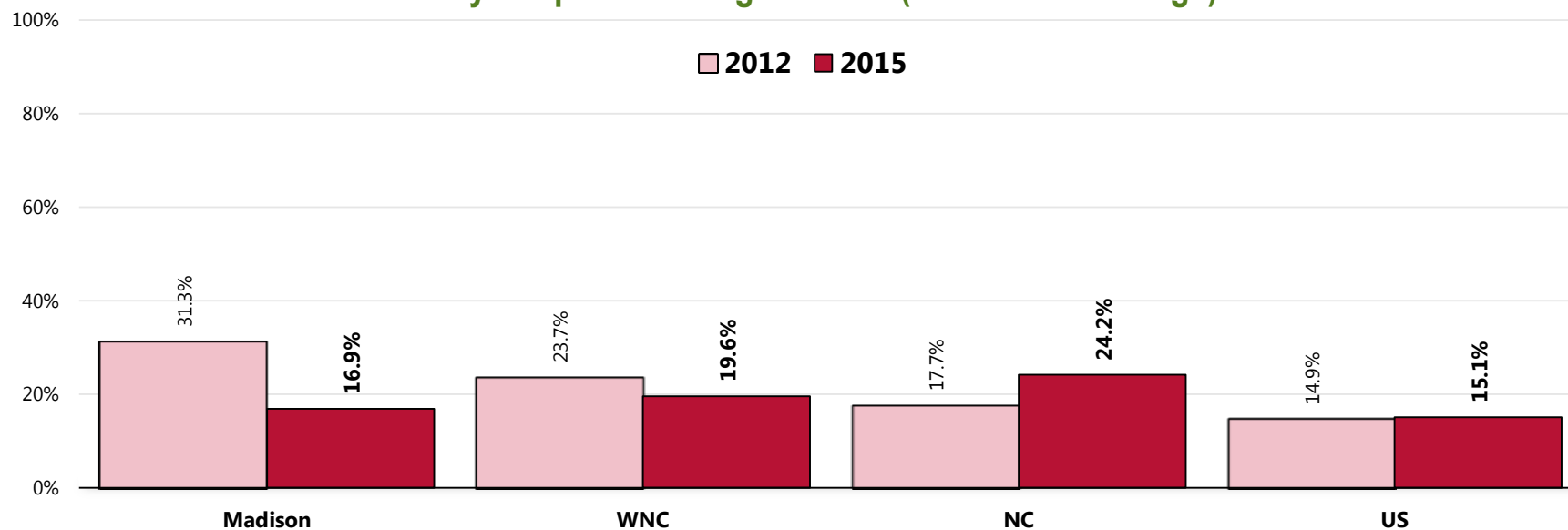
Health Insurance Coverage



Lack of Healthcare Insurance Coverage

(Among Adults Age 18-64)

Healthy People 2020 Target = 0.0% (Universal Coverage)

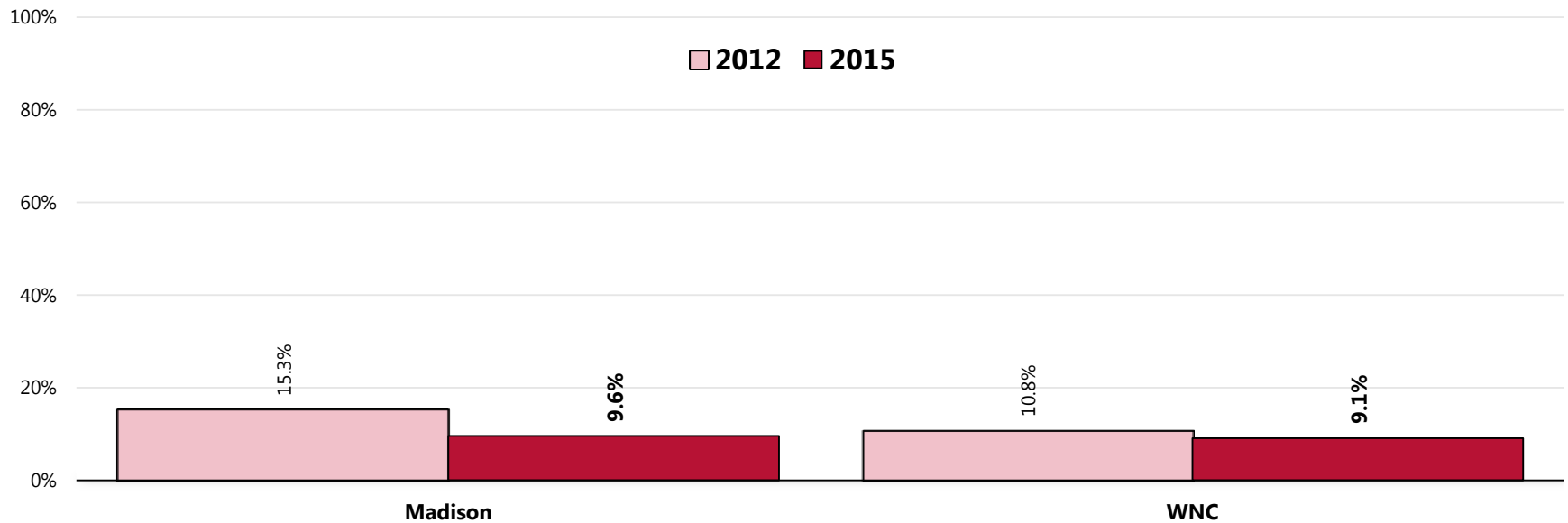


- Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 165]
 - Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
 - PRC National Health Surveys, Professional Research Consultants, Inc.
 - US Department of Health and Human Services. Healthy People 2020. December 2010. <http://www.healthypeople.gov> [Objective AHS-1]
- Notes:
- Reflects adults under the age of 65.
 - Includes any type of insurance, such as traditional health insurance, prepaid plans such as HMOs, or government-sponsored coverage (e.g., Medicare, Medicaid, Indian Health Services, etc.).

Difficulties Accessing Healthcare Services



Was Unable to Get Needed Medical Care at Some Point in the Past Year

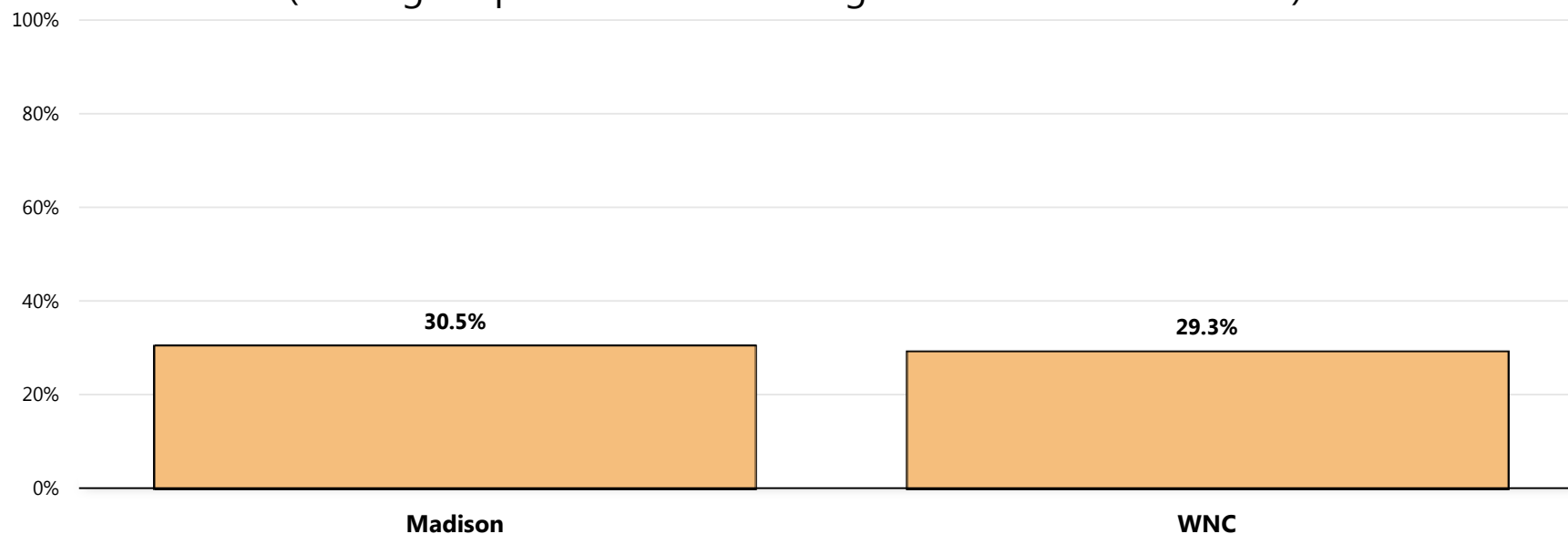


Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 8]

Notes: • Asked of all respondents.

Healthcare Provider Has Helped to Connect With a Community Resource (Classes, Coaching) to Educate About Condition

(Among Respondents With a Diagnosed Chronic Condition)

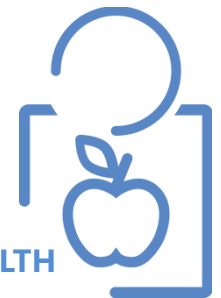


Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 39]

Notes: • Asked of those respondents who have been diagnosed with COPD, heart disease, stroke, asthma, diabetes/pre-diabetes, hypertension, and/or high blood cholesterol.



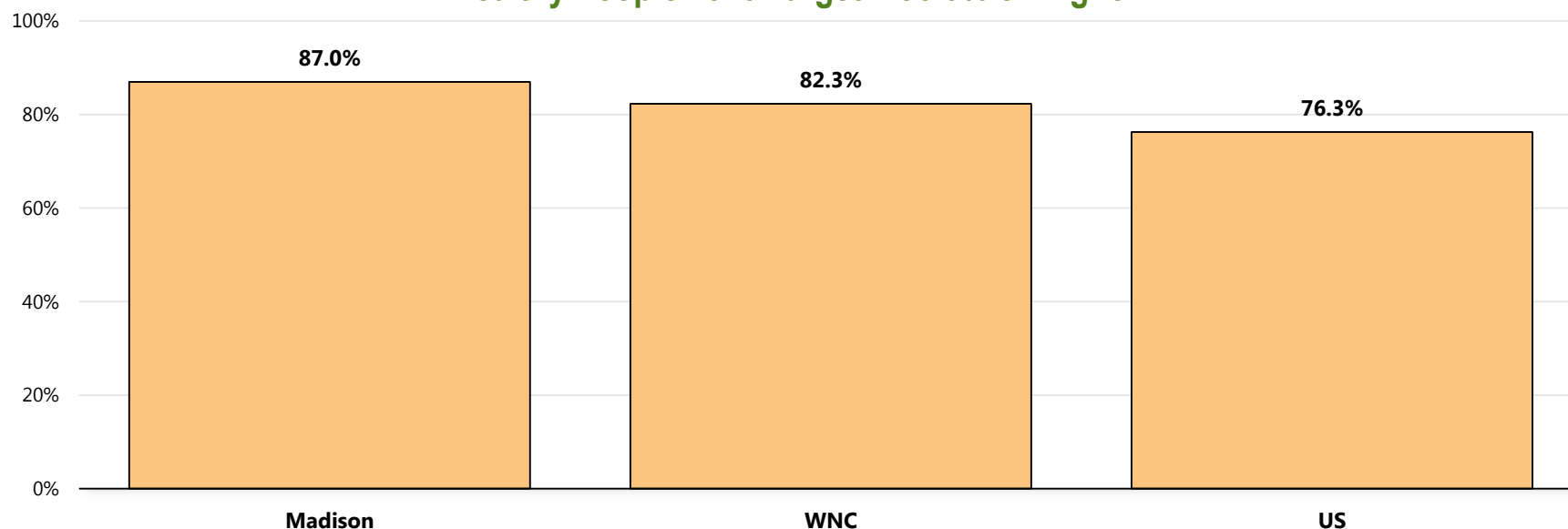
Primary Care Services



COMMUNITY HEALTH

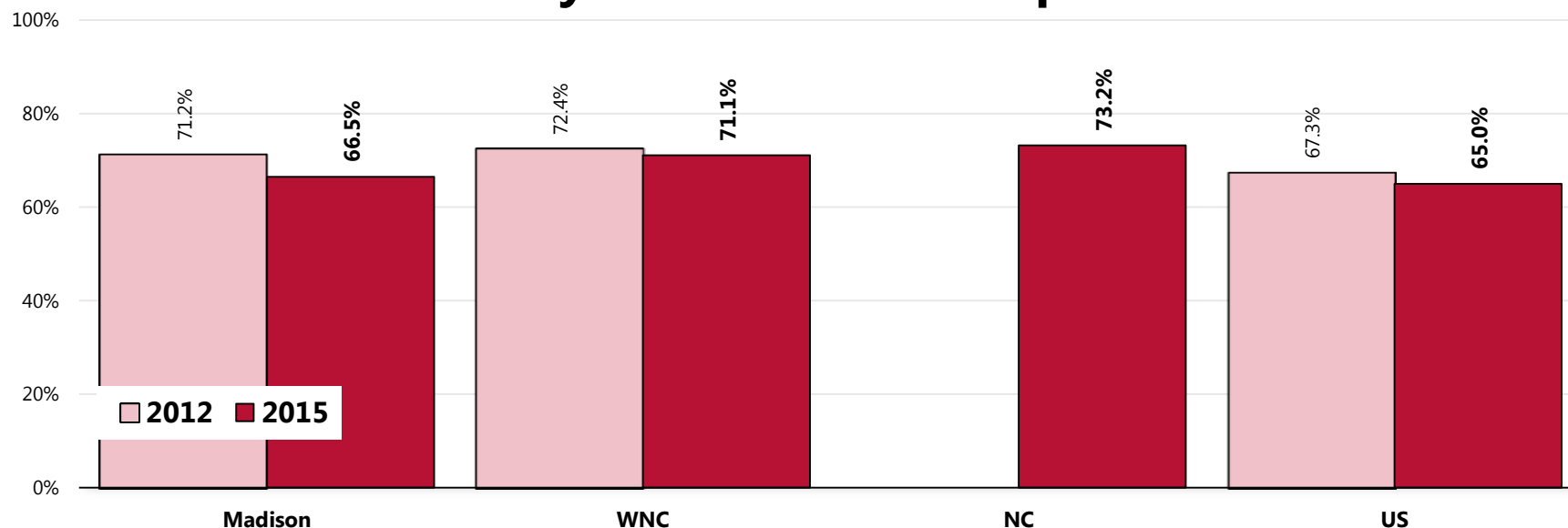
Have a Specific Source of Ongoing Medical Care

Healthy People 2020 Target = 95.0% or Higher



- Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 152]
 - PRC National Health Surveys, Professional Research Consultants, Inc.
 - US Department of Health and Human Services. Healthy People 2020. December 2010. <http://www.healthypeople.gov> [Objective AHS-5.1]
- Notes:
- Asked of all respondents.

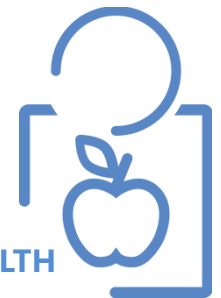
Have Visited a Physician for a Checkup in the Past Year



- Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 19]
 - Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
 - PRC National Health Surveys, Professional Research Consultants, Inc.
- Notes:
- Asked of all respondents.



Preventive Screenings

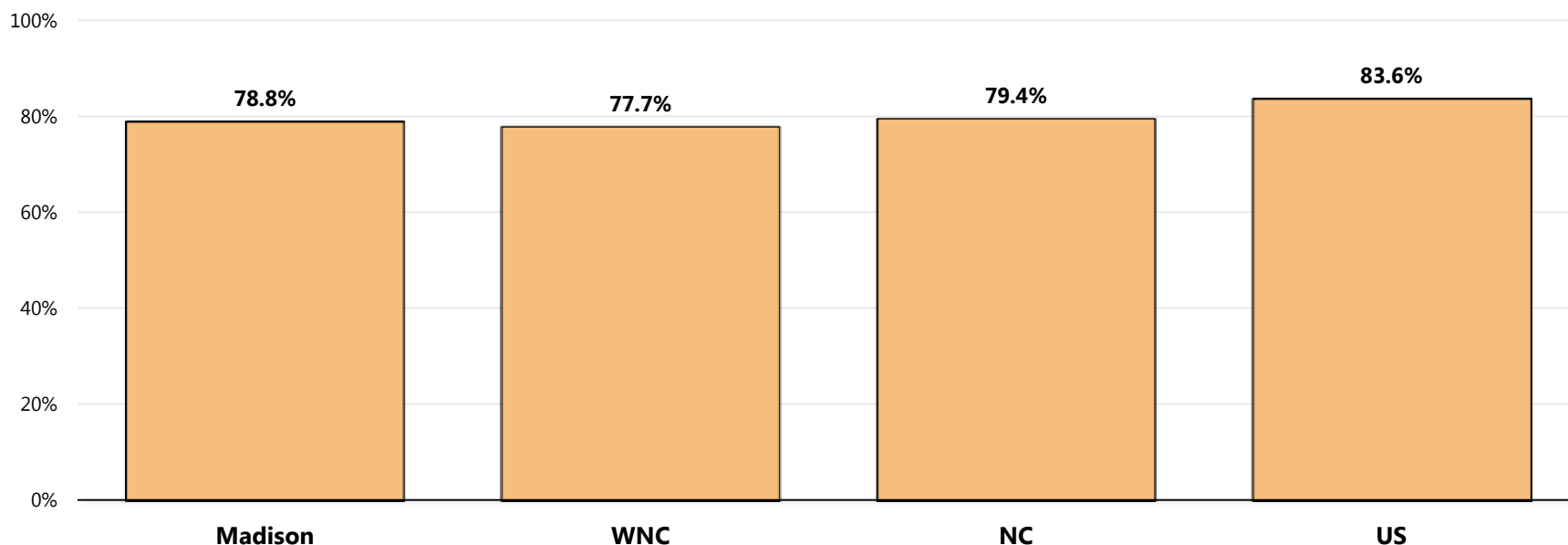


COMMUNITY HEALTH

Have Had a Mammogram in the Past Two Years

(Among Women Age 50-74; 2015)

Healthy People 2020 Target = 81.1% or Higher [All Ages]



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 115]

• 2013 PRC National Health Survey, Professional Research Consultants, Inc.

• Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2013 North Carolina data.

• US Department of Health and Human Services. Healthy People 2020. December 2010. <http://www.healthypeople.gov> [Objective C-17]

Notes:

• Reflects female respondents 50-74.

• *Note that state data reflects all women 50 and older (vs. women 50-74 in local, US, and Healthy People data).

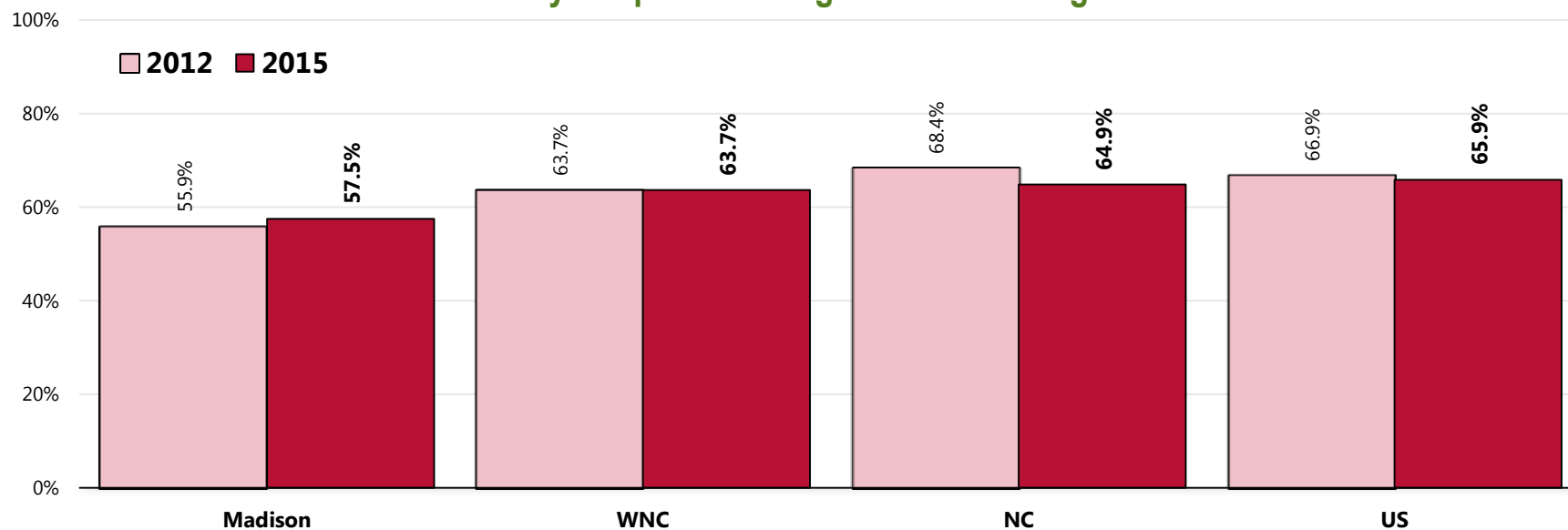


Oral Health



Have Visited a Dentist or Dental Clinic Within the Past Year

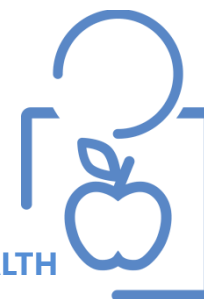
Healthy People 2020 Target = 49.0% or Higher



- Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 21]
 - PRC National Health Surveys, Professional Research Consultants, Inc.
 - US Department of Health and Human Services. Healthy People 2020. December 2010. <http://www.healthypeople.gov> [Objective OH-7]
 - Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
- Notes:
- Asked of all respondents.

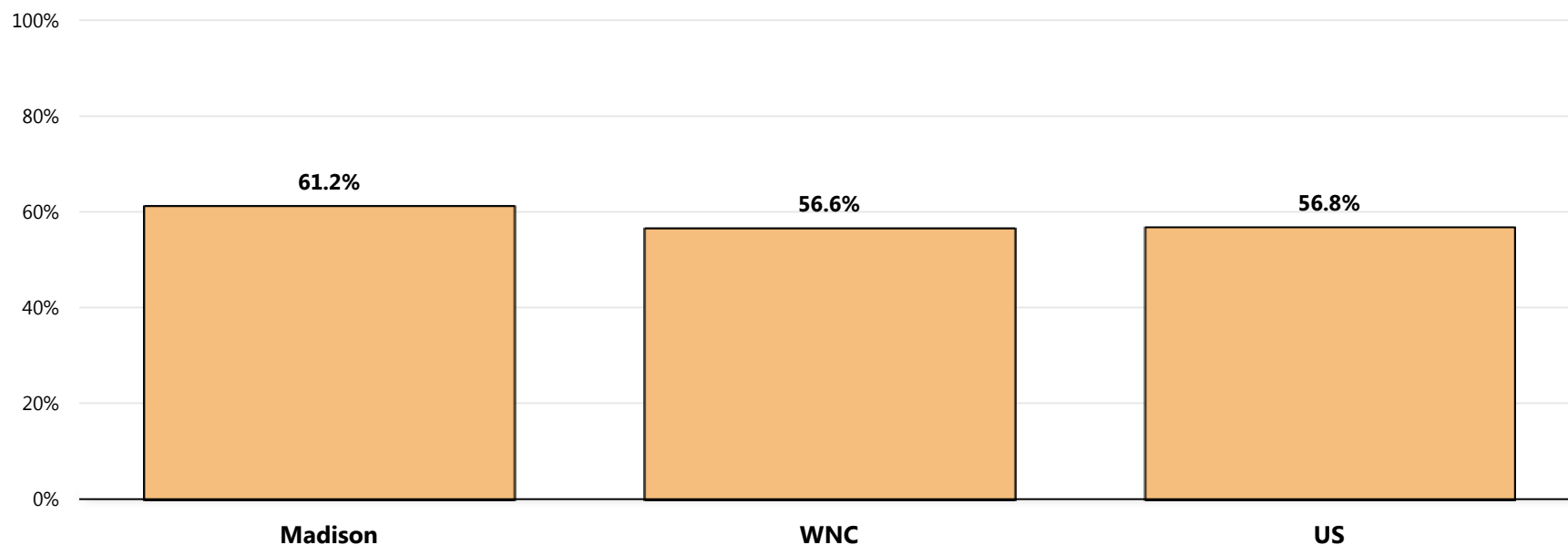


Vision Care



COMMUNITY HEALTH

Had an Eye Exam in the Past Two Years During Which the Pupils Were Dilated (2015)



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 20]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.

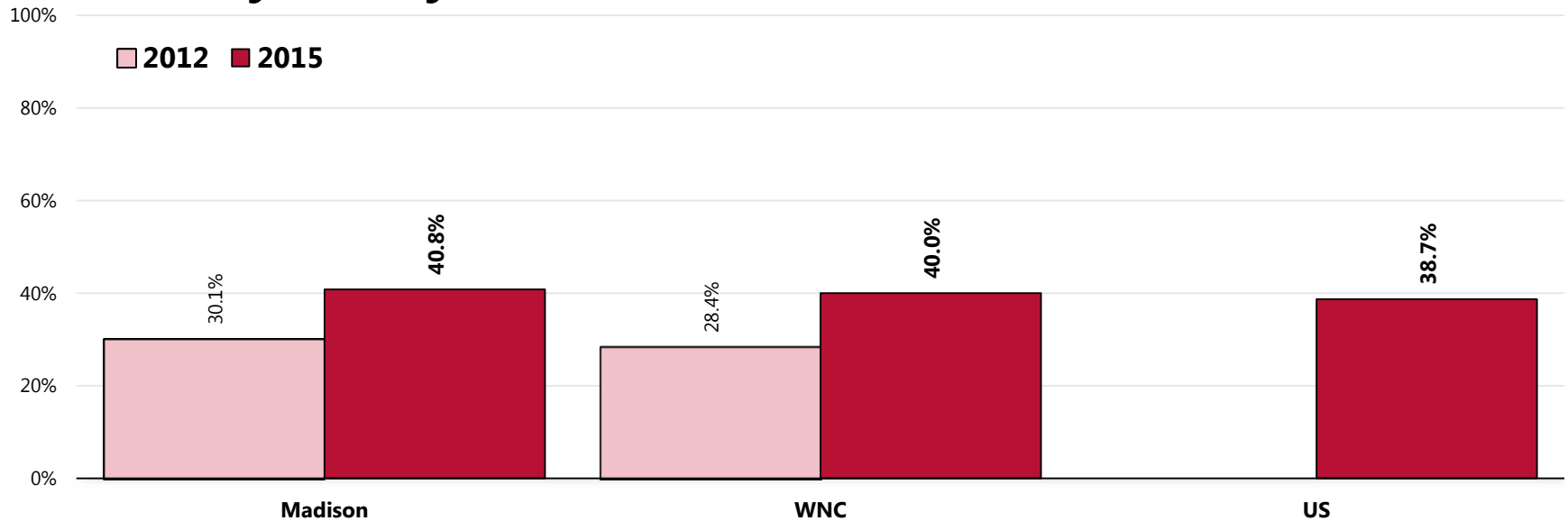
Notes: • Asked of all respondents.



Health Education & Outreach



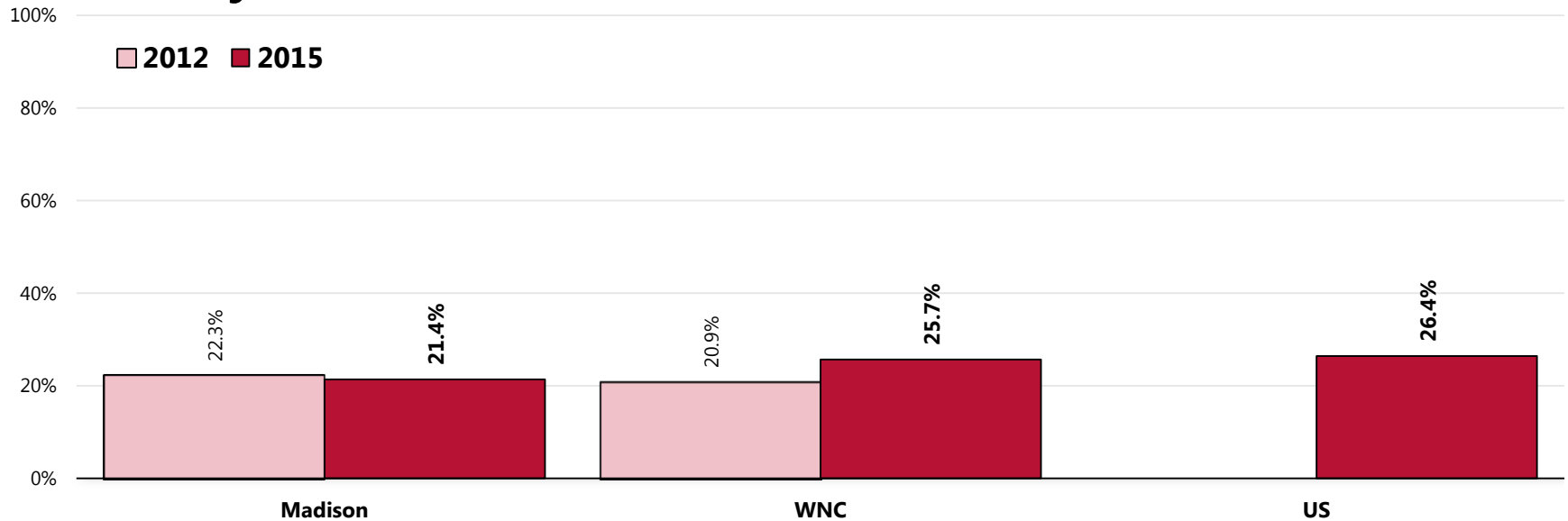
Rely on Physicians for Most Healthcare Information



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 90]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes: • Asked of all respondents.

Rely on the Internet for Most Healthcare Information



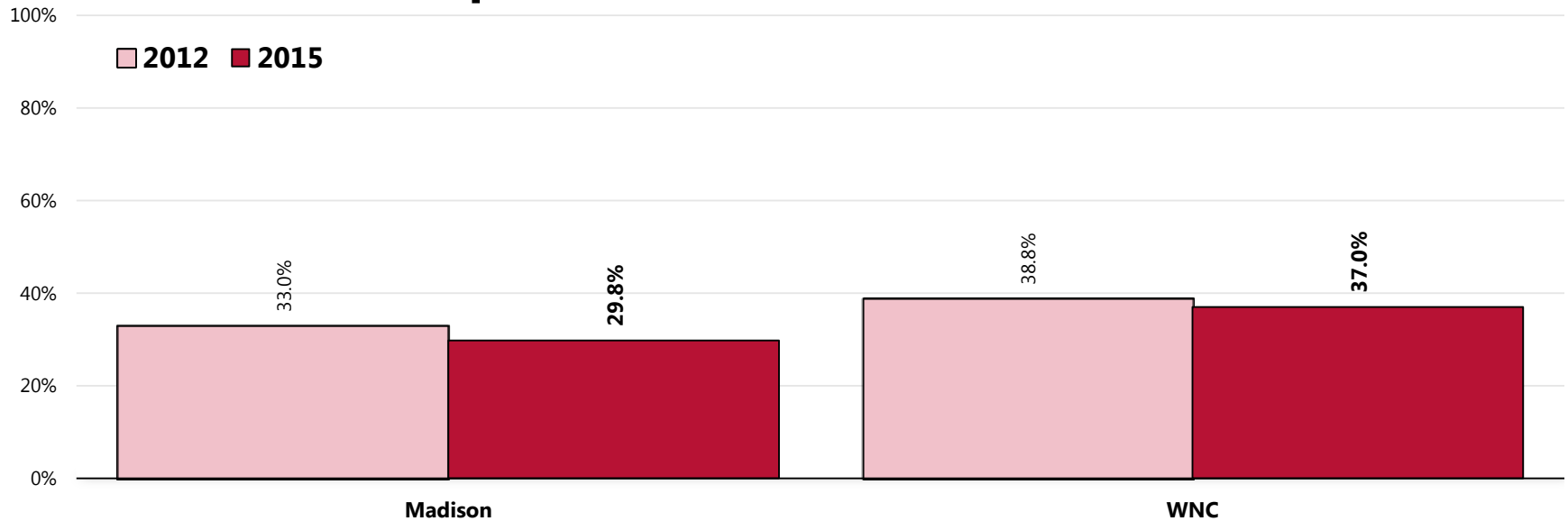
Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 90]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes: • Asked of all respondents.

Advanced Directives



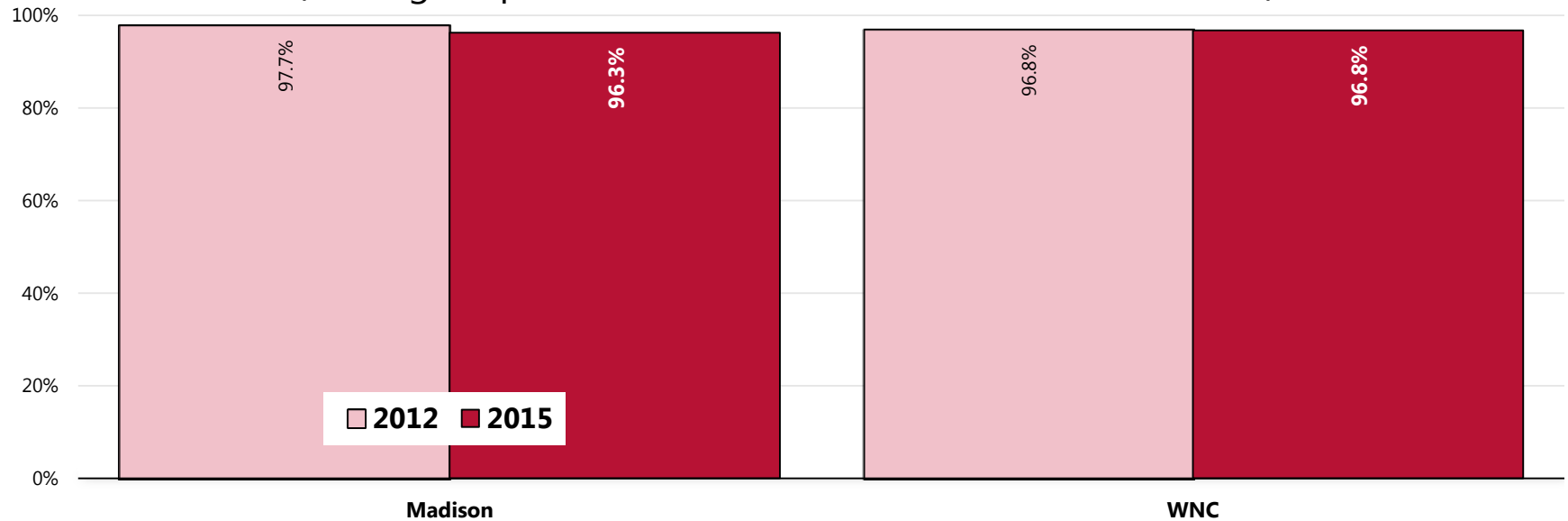
Have Completed Advance Directive Documents



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 104]

Notes: • Asked of all respondents.

Have Communicated Healthcare Decisions to Family or Doctor (Among Respondents With Advance Directive Documents)



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 105]

Notes: • Asked of respondents with completed advance directive documents.

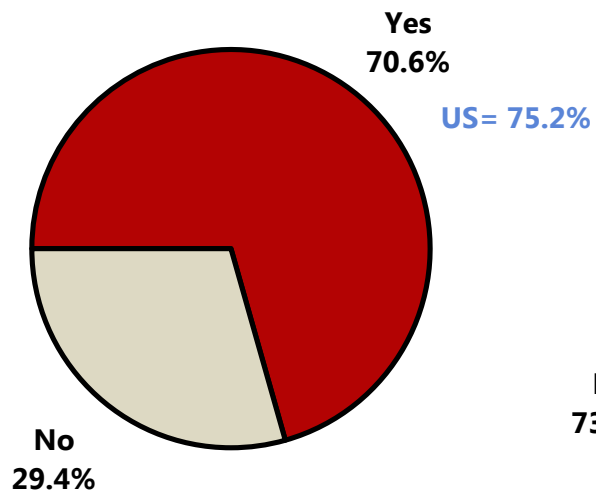


COUNTY-SPECIFIC QUESTIONS

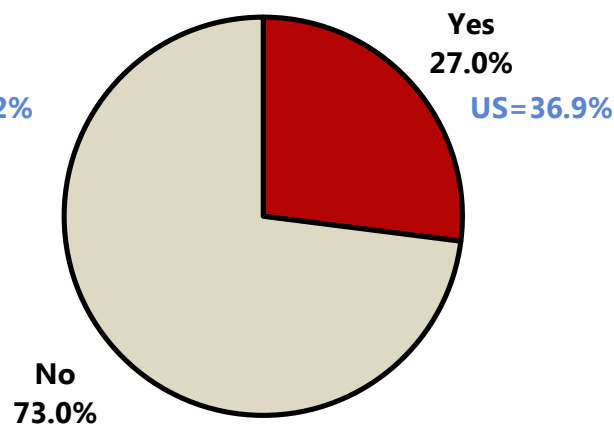


Colorectal Cancer Screenings

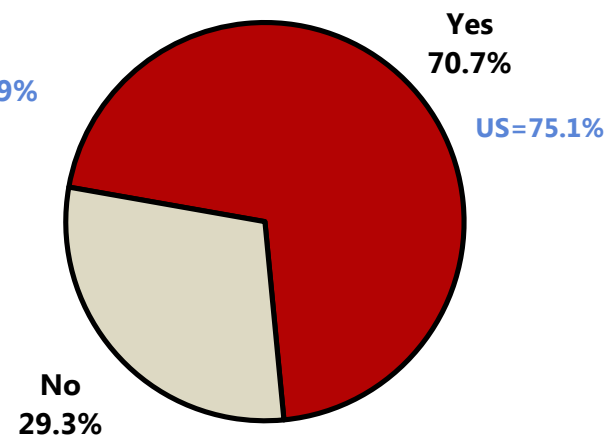
(Madison County Adults Age 50+, 2015)



Lower Endoscopy Ever



**Blood Stool Test/
Past 2 Years**



**Colorectal Cancer
Screening (Age 50-75)**

Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Items 117-119]

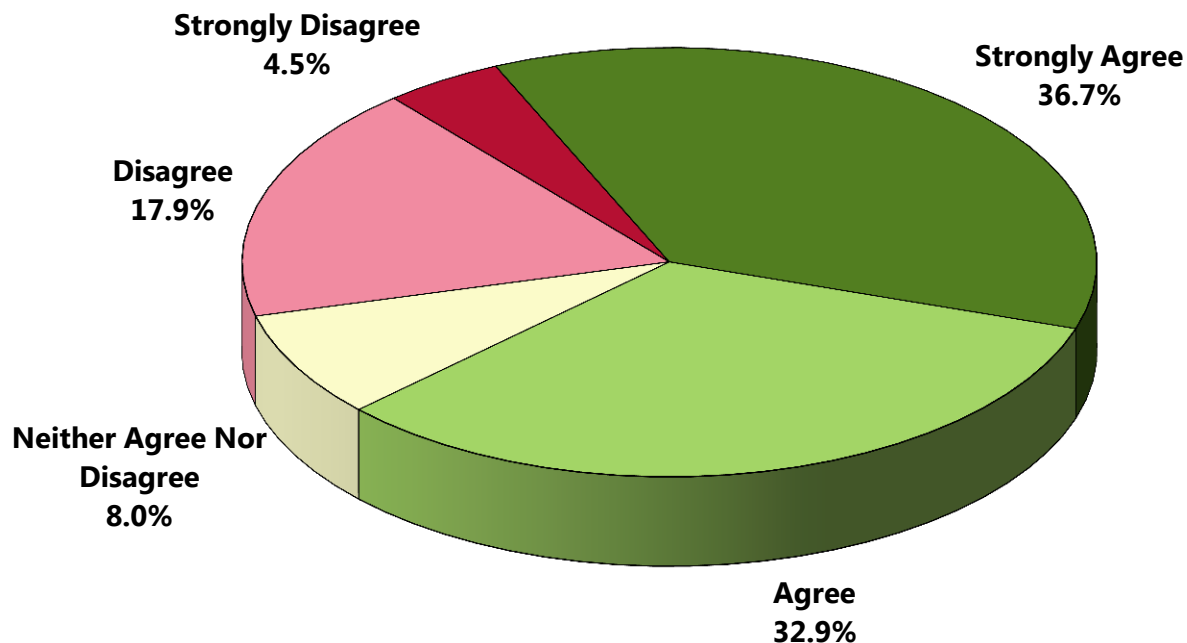
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes: • Asked of all respondents age 50 and older; overall colorectal cancer screening reflects respondents age 50-75.

• Lower endoscopy includes either sigmoidoscopy or colonoscopy.

• The term "colorectal screening" refers to adults age 50-75 receiving a FOBT (fecal occult blood test) in the past year and/or a lower endoscopy (sigmoidoscopy/colonoscopy) in the past 10 years.

**"I believe it is important for government
buildings and grounds to be 100% tobacco-free."**
(Madison County, 2015)



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 52]

Notes: • Asked of all respondents.

Community Stakeholder Input 2015 PRC Online Key Informant Survey

Madison County, NC

Prepared for:
WNC Healthy Impact

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Introduction



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Methodology

To solicit input from key informants, those individuals who have a broad interest in the health of the community, an Online Key Informant Survey was implemented. A list of recommended participants was provided to PRC by WNC Healthy Impact, who compiled lists submitted by 13 of the 16 WNC counties; this list included names and contact information for physicians, public health representatives, other health professionals, social service providers, and a variety of other community leaders. Potential participants were chosen because of their ability to identify primary concerns of the populations with whom they work, as well as of the community overall.

Key informants were contacted by email, introducing the purpose of the survey and providing a link to take the survey online; reminder emails were sent as needed to increase participation.

Participation

In all, 32 community stakeholders took part in the Online Key Informant Survey, as outlined below:

Madison County Online Key Informant Survey Participation		
Key Informant Type	Number Invited	Number Participating
Community/Business Leader	28	18
Other Health Provider	14	7
Physician	2	2
Public Health Representative	3	3
Social Service Provider	3	2

Participating Organization	Populations Served		
	Low-Income Residents	Minority Populations	Medically Underserved
American Cancer Society	✓	✓	✓
Area Agency on Aging at Land of Sky Regional Council	✓	✓	✓
Beacon of Hope Services of Madison County	✓	✓	✓
Board of Health	✓		✓
Communities in Schools of Madison County	✓		
Community Housing Coalition of Madison County	✓		
DACJJ/Juvenile Justice	✓	✓	✓
Gear Up Grant/Communities in Schools of Madison County	✓		
Hot Springs Health Program	✓	✓	✓
Madison County Dental Center	✓	✓	✓
Madison County Department of Community Services	✓		✓
Madison County Department of Social Services	✓	✓	✓
Madison County Government	✓	✓	✓
Madison County Health Department	✓	✓	✓
Madison County Partnership for Children and Families	✓	✓	✓
Madison County Schools	✓	✓	✓
Mars Hill Chiropractic	✓	✓	
My Sister's Place	✓	✓	✓
NC Cooperative Extension	✓	✓	
October Road Inc.	✓	✓	✓
Printpack Medical	✓	✓	✓
WNC Healthy Impact	✓	✓	✓

Through this process, input was gathered from several individuals whose organizations work with low-income, minority populations, or other medically underserved populations.

Minority populations represented:

- African American
- American Indian
- Asian
- Children
- Disabled
- Females
- Hispanic/Latino
- Homeless
- Immigrants
- Lacking Transportation
- LGBT
- Low Education Level
- Low Income
- Medically Underserved
- Non-White Races
- Socially Isolated
- Ukrainian/Russian
- Uninsured/Underinsured
- Women and Children

Medically underserved populations represented:

- African American
- Asian
- Children With Special Health Needs
- Diabetic/Pre-Diabetic
- Disabled
- Elderly
- Hispanic/Latino
- Homeless
- Immigrants
- Lacking Transportation
- Low Education Level
- Low Income
- Males
- Medically Underserved
- Mentally Ill

- Minorities
- Non-English Speaking
- Nutrition
- Obese
- People who Don't Understand how to Access Health System
- Undocumented
- Unemployed
- Uninsured/Underinsured
- Veterans
- Women and Children

In the online survey, respondents had the chance to explain what view was most needed to create a healthy community, and how they feel that the physical environment and social determinants impact health. Key informants were also asked to specifically rate the degree to which various health issues are a problem in their own county; follow-up questions asked them to describe why they identify problem areas as such, and how these might be better addressed. Results of their ratings, as well as their verbatim comments, are included throughout this report as they relate to the various other data presented.

NOTE: These findings represent qualitative rather than quantitative data. The Online Key Informant Survey was designed to gather input from participants regarding their opinions and perceptions of the health of the residents in the area. Thus, these findings are based on perceptions, not facts.

Perceptions of Community



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Characteristics of a Healthy Community

“What are the MOST IMPORTANT characteristics of a healthy community?”

Key informants could list up to 3 responses.

Key informants characterized a healthy community as containing the following (*number in parenthesis identifies number of total mentions*):

- Access to Health Care (5)
- Access to Healthy Foods (2)
- Access to Preventive Health Care (4)
- Adequate and Proper Sanitation
- Adequate Recreational Facilities
- Affordable Health Care (5)
- Awareness in the Community
- Clean Air and Water
- Collaboration (2)
- Community Members Live Proactive Healthy Lifestyles
- Community Resources (2)
- Community Wide Support of Health Services (2)
- Concern for the Greater Good of the Community
- Culture of Activity
- Culture of Good Health Care
- Culture of Healthy Living
- Diet/Nutrition (4)
- Educational Opportunities
- Effective Services to Address Child Abuse and Neglect
- Employment Opportunities (3)
- Encouraging Physical Activity (2)
- Engaged Community
- Equitable Access to Resources Coming Into the Community
- Focus on Healthy Pregnancies
- Free From Violence
- Good Education (4)
- Good Health Department
- Good School Attendance
- Growth Opportunities for Its Members
- Healthy Lifestyles (2)
- Healthy Economy (2)
- Healthy Lifestyle Education (4)
- Healthy Residents
- Health Department/PCP's Aware of African-American/Native American

Meetings in the Area

- Income
- Insurance
- Low Death Rate due to Preventable Illness/Disease
- Low Obesity Levels (2)
- Low Rate of Substance Abuse (3)
- Neighbors Helping Neighbors
- Population is Fully Vaccinated
- Prioritization
- Quality Health Care (6)
- Reliable/Quality Emergency Services
- Safety (2)
- Strong Families
- Strong School System
- Understanding/Usage of Alternative Health Procedures
- Variety of Opportunities for Physical Activity

Community's Greatest Gem/Asset

Key informants characterized Madison County's greatest "gem" or asset as the following:

Natural Environment

Beautiful, largely unspoiled environment. - Community/Business Leader
Natural beauty, geography and location offer opportunities for tourism and economic growth. - Community/Business Leader
The greatest assets in Madison County are its natural beauty, and wonderful caring people. It is a blessing to live in this county. - Community/Business Leader
Scenery is beautiful. People are friendly - Community/Business Leader
Outdoor potential e.g. hiking, river, fishing - Other Health Provider
The beauty of the area - Community/Business Leader
Its natural beauty - Community/Business Leader
The beautiful land and the sweet people who live here - Community/Business Leader
Natural resources - Other Health Provider
The woods, streams, forests and farmland. - Social Service Provider
Its physical environment. - Other Health Provider
Environment: People, topography, proximity to city conveniences. - Community/Business Leader
Its rural nature with limited man made things. - Community/Business Leader
Madison County is a rural county, making it very appealing to retirees and tourism; however, making it just as taxing for seniors or anyone without transportation. - Community/Business Leader

Sense of Community

Community support. - Community/Business Leader
Strong sense of community and collaboration across sectors of the community - Community/Business Leader
Passion of the community to help others. - Other Health Provider
The sense of community; neighbor helping neighbor - Social Service Provider
True sense of community and caring for one another; cohesion as a community and within families - Physician
Sense of community and comradely among citizens. - Other Health Provider
Community collaboration. - Other Health Provider

People

The locals, the views, and the lifestyle - Public Health Representative
Our people and their willingness to help one another - Community/Business Leader
Friendly people and low-stress culture - Physician
The natives and the culture of the county. - Community/Business Leader
Its people - Community/Business Leader
The people with educations, financial means and time are interested in helping our residents and want to help. - Public Health Representative
Family unity - Community/Business Leader

Low-Key Living

Low-key living, not fast paced as in bigger cities. - Community/Business Leader

Safe Place to Live

Safe place to live. - Public Health Representative

Requirements for Quality of Life

“What are the MOST IMPORTANT issues that must be addressed to improve the quality of life?”

Key informants could list up to 3 responses.

Key informants characterized the following as issues that must be addressed in order to improve the quality of life in Madison County (*number in parenthesis identifies number of total mentions*):

- Access to Affordable Healthcare
- Access to Healthcare (3)
- Access to Indoor Recreation Facilities
- Access to Resources
- Affordable Housing (9)
- Alcohol/Drug Abuse (2)
- Attracting More Population
- Better Paying Jobs (2)
- Better Restaurants
- Culture (2)
- Economy (2)
- Education (7)
- Employment (11)
- Encourage Healthy Living Lifestyle (2)
- End Discrimination
- Family Values (2)
- Geriatric Services
- Increase Efforts for Home Environments to be Safer
- Increased Services for Vulnerable Groups (2)
- Infrastructure (2)
- Job Training for Adults
- Limited Opportunities
- Madison County Needs to Raise Level of Funding
- Mental Health (2)
- More Residential Subdivisions to Increase Tax Base
- More/Better Outdoor Recreation Areas (4)
- Parental Involvement
- Poverty (3)
- Promoting Healthy Diet/Nutrition
- Recruit/Develop Green Businesses
- Residents are Blind to Bounty of Outdoor Opportunities
- Sense of Community
- The “Born Here” Versus the “Moved Here” Mentality

- Tobacco Use
- Transportation (2)
- Values

Evaluation of Health Issues



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Ranking of Health Issues

Online key informants were asked to rate each of the following health issues as a “major problem,” “moderate problem,” “minor problem,” or “no problem at all” in Madison County. The table below illustrates these responses.

Evaluation of Health Issues				
Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Diabetes	65.6%	34.4%	0.0%	0.0%
Mental Health	64.5%	25.8%	6.5%	3.2%
Substance Abuse	59.4%	37.5%	3.1%	0.0%
Nutrition, Physical Activity, & Weight	53.1%	37.5%	9.4%	0.0%
Tobacco Use	51.6%	45.2%	3.2%	0.0%
Cancer	51.6%	41.9%	6.5%	0.0%
Heart Disease & Stroke	40.6%	56.3%	3.1%	0.0%
Oral Health	28.1%	53.1%	18.8%	0.0%
Respiratory Diseases	19.4%	58.1%	22.6%	0.0%
Maternal & Infant Health	13.3%	40.0%	46.7%	0.0%
Sexually Transmitted Disease & Unintended Pregnancy	6.7%	56.7%	36.7%	0.0%
Access to Health Care Services	6.5%	54.8%	25.8%	12.9%
Injury & Violence	3.2%	51.6%	41.9%	3.2%
Infectious Diseases & Foodborne Illnesses	0.0%	22.6%	71.0%	6.5%

Perceptions of Health Issues

Online Key Informant Survey participants rating any of the aforementioned health issues as “major problems” in Madison County were further asked to give reasons for their perceptions. These are outlined, by health issue, in the following sections.

Access to Health Care Services

The greatest share of key informants characterized *Access to Health Care Services* as a “moderate problem” in Madison County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Access to Health Care Services	6.5%	54.8%	25.8%	12.9%

Type of Care Most Difficult to Access

Key informants (who rated this as a “major problem”) most often identified specialty care and urgent care as the most difficult to access in Madison County.

	Most Difficult to Access	Second-Most Difficult to Access	Third-Most Difficult to Access	Total Mentions
Specialty Care	50.0%	0.0%	50.0%	2
Urgent Care	50.0%	50.0%	0.0%	2
Chronic Disease Care	0.0%	50.0%	0.0%	1
Dental Care	0.0%	0.0%	50.0%	1

Top Concerns

One comment was received among those rating this issue as a “major problem,” as follows:

Lack of Transportation

Lack of transportation, lack of available doctors, dentists, specialists and lack of education about when health care is needed. - Other Health Provider

Cancer

Over half of key informants characterized **Cancer** as a “major problem” in Madison County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Cancer	51.6%	41.9%	6.5%	0.0%

Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

Lack of Local Cancer Healthcare Facilities

Residents have to leave the county for cancer treatments. - Community/Business Leader
No local health care and long drive for a lot of folks. - Community/Business Leader
Transportation for treatment. No cancer center within the county. - Public Health Representative

Lifestyle Choices

Unhealthy lifestyles including smoking and obesity. - Community/Business Leader
Seems to be the default because of death for anyone who survives everything else. Frequently appears to be unrelated to lifestyle choices and health habits. - Community/Business Leader
Environment, lifestyle. - Public Health Representative

Tobacco Use

Smoking and other tobacco use. - Community/Business Leader
Prevalence of smoking and other risk factors for cancer. - Community/Business Leader
We used to be a major tobacco raising community with heavy smokers. - Community/Business Leader

Leading Cause of Death

It is one of the highest causes of death in our county. - Other Health Provider
One of the leading causes of death. - Physician

Prevalence/Incidence

It is more treatable than in the past, but many residents continue to have the diagnosis at some point. - Community/Business Leader
I don't know. Just seems that half the people you see that are sick have cancer. - Community/Business Leader

Access for Underinsured/Uninsured

Because people don't have means to treat it. - Community/Business Leader

Environmental Factors

Because of the way farmers managed their crops. With very hazardous chemicals and no protection. Plus, Madison is a fallout from TN and their Nuclear Plant. - Public Health Representative

Nationwide Problem

I believe it is a major problem nationwide and is an affliction of many people, with a heavy financial burden and time consuming problem in society as a whole. - Community/Business Leader

Diabetes

The greatest share of key informants characterized *Diabetes* as a “major problem” in Madison County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Diabetes	65.6%	34.4%	0.0%	0.0%

Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

Nutrition, Physical Activity, and Weight

Increasing diagnosis due to weight and inactivity. Huge, huge, huge issue. - Physician

Because of the obesity in the population and people eat all types of food then adjust their shots according to how much they ate. Also, there is nowhere for the public to go for free fitness. - Public Health Representative

The general eating habits of a great many residence will eventually lead to diabetes and related problems. This is particularly concerning when you see grammar school children already significantly over weight. - Other Health Provider

Poor eating habits, poverty, and genetic predisposition. - Community/Business Leader

Because of poor eating habits, lack of education, lack of medical care. - Community/Business Leader

People do not eat healthy - Community/Business Leader

Nutrition, obesity, and it runs in the family. - Community/Business Leader

I'm assuming a poor diet is the cause. Kids drinking sodas from a very early age. - Community/Business Leader

Lack of proper diet and exercise, poor nutrition choices. - Social Service Provider

Lifestyle Choices

People have gotten convinced that 'new medications' are the solution to their diabetes and they have yet to really believe that exercise and diet are significant in diabetes modification. - Other Health Provider

Unhealthy lifestyles including smoking and obesity. - Community/Business Leader

Type 2 Diabetes can be prevented. Our children need to be set up for a good healthy life, not having diabetes at a young age. - Other Health Provider

Folks just don't see it as a problem. Eating wrong foods because of way grown up and foods that they eat growing up. - Community/Business Leader

Lack of Education

Need for health educators to provide diabetes education for patients. Increase in incidents especially in younger residents. - Public Health Representative

Lack of education. - Community/Business Leader

Prevalence/Incidence

It is widespread and increasing. - Community/Business Leader

Increasing. - Community/Business Leader

Access to Affordable Healthy Foods

I surveyed over 250 senior citizens this year and 17% had type 2 diabetes. Because of fixed income constraints they did not have access to fresh fruits and vegetables or lean meats. My program only supported these 250 seniors, the percentage would be higher had I surveyed all the seniors in the county. - Community/Business Leader

Data/Statistics

I have seen and read statistics on its prevalence in Madison County. Anecdotally, I know several people around me who are either diabetic or at risk. - Community/Business Leader

Heart Disease & Stroke

Most key informants characterized **Heart Disease & Stroke** as a “moderate problem” in Madison County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Heart Disease & Stroke	40.6%	56.3%	3.1%	0.0%

Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

Leading Cause of Death

Common cause of death and hospitalization. - Community/Business Leader

Leading causes of death. - Other Health Provider

One of the leading causes of death and related to the increase in diabetes. - Physician

Lifestyle Choices

Multiple factors including unhealthy lifestyle, diet and not accessing regular health care. - Community/Business Leader

Unhealthy lifestyles including smoking and obesity. - Community/Business Leader

Nutrition, Physical Activity and Weight

No true understanding that diet and exercise are the best way to modify the resulting symptoms of heart disease and stroke. - Other Health Provider

Obesity, smoking, lack of exercise. - Community/Business Leader

Prevalence/Incidence

Widespread in its affliction. - Community/Business Leader

Affects a lot of people and has serious implications for chronic disability and mortality. - Physician

Aging Population

Aging population. Preventive care not a priority. - Public Health Representative

Lack of Education

Lack of education, physical activity. - Community/Business Leader

Heredity

Hereditary concerns. - Community/Business Leader

Infectious Diseases & Foodborne Illnesses

A majority of key informants characterized *Infectious Diseases & Foodborne Illnesses* as a “minor problem” in Madison County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Infectious Diseases & Foodborne Illnesses	0.0%	22.6%	71.0%	6.5%

Injury & Violence

The largest share of key informants characterized *Injury & Violence* as a “moderate problem” in Madison County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Injury & Violence	3.2%	51.6%	41.9%	3.2%

Top Concerns

One respondent rated this as a “major problem,” offering the following reason:

No Local Healthcare Facilities

If a resident is seriously hurt, there are no hospitals or facilities in the county to treat serious injury. - Community/Business Leader

Maternal & Infant Health

Key informants generally characterized *Maternal & Infant Health* as a “minor problem” in Madison County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Maternal & Infant Health	13.3%	40.0%	46.7%	0.0%

Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

Lack of Resources

Because the only resources that I am aware of are at the Health Department. Very limited resource and very limited access to this support. - Other Health Provider

Money and health care providers not getting state help or federal help. Too many program cuts. - Public Health Representative

Access to Prenatal Care

Too many mothers don't have the resources they need to deliver a healthy baby and make sure it gets the care needed in critical early months of life. I understand there is only one chance in a life to get this right. - Community/Business Leader

Lack of Education

Lack of education, lifestyle. - Community/Business Leader

Mental Health

The greatest share of key informants characterized *Mental Health* as a “major problem” in Madison County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Mental Health	64.5%	25.8%	6.5%	3.2%

Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

Lack of Resources

All programs were cut, and people have nowhere to go for help. - Public Health Representative

Lack of mental health treatment leads to increase in violence, crime and instability in homes and workplaces. - Other Health Provider

Many people of all ages are receiving treatment, or need treatment and are not able to get what they need. Lack of treatment and understanding leads to many other problems in our community. - Community/Business Leader

There is a nearly complete lack of mental health services within the county and those that are there, mainly RHA, offer a level of service to clients that would actually qualify as more of a disservice than a service at all. - Social Service Provider

Lack of effective services available, no choices in providers for the Medicaid population. - Social Service Provider

Major lack of mental health services. No support available. - Community/Business Leader

Lack of resources, especially treatment centers. - Public Health Representative

Access Barriers

An excellent, comprehensive, accessible system was dismantled, and the system is now fragmented and limited. - Community/Business Leader

The lack of affordable services. - Community/Business Leader

Again there are no facilities or specialized doctors that handle mental health issues in Madison County. - Community/Business Leader

Too few people who need mental health services actually use them. Perhaps part of the cause for that is that people don't know that they need them or don't have faith that the mental health community can actually help them. - Other Health Provider

Poor access to care, especially for Medicare patients. - Physician

Lack of Providers

There is only one major provider in Madison County. Smoky Mountain Center insists on having RHA as the main provider in Madison County. However, October Road does an excellent job with Assertive Community Treatment Team in Madison and has the ability to provide additional services if given the opportunity. The community has repeatedly communicated their unhappiness with RHA, but SMC has not allowed another provider the opportunity to provide additional services. - Other Health Provider

Prevalence/Incidence

Many struggle with this. I am aware of a primary care provider in Madison County without specialized training who estimates about 20 percent of their patient face-to-face time is spent dealing with mental health concerns. - Community/Business Leader

High prevalence, affects quality of life greatly, and low availability of services. -Physician

The prevalence of mental health issues affecting the community. - Community/Business Leader

Environment/Family

Mental health care access has improved but mental health issues can be exacerbated by unemployment, family stress, housing problems, etc. - Community/Business Leader

Family dynamics, substance abuse, genetics. - Community/Business Leader

Cost

Accessing mental health services boil down to, "How much will this cost, because I am poor." Many people are afraid to seek help due to the cost of services or the fear of costs for services. - Community/Business Leader

Nutrition, Physical Activity, & Weight

The greatest share of key informants characterized *Nutrition, Physical Activity, & Weight* as a “major problem” in Madison County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Nutrition, Physical Activity, & Weight	53.1%	37.5%	9.4%	0.0%

Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

Access to Affordable Healthy Foods

Low-income residents of Madison County need access to nutritious foods. They rely on food pantries to supplement their food stamp allotments. All food distribution organizations should work together to provide nutritious food to these residents who cannot come from the furthest corner of Madison to get food. A collaboration of these resources would greatly improve the outcome of providing nutritious foods to those who cannot afford or are unable to get to food distribution centers. - Community/Business Leader

The senior citizens I am in contact with they are low-income or near low-income status. They are used to having gardens where fresh produce was plentiful, however, now that they can no longer get outside and physically make their gardens they cannot afford the fresh produce in the grocery stores or the farmers markets. Thus, they are forced to rely on the cheapest foods, they have limited physical activity and most are overweight. - Community/Business Leader

Lack of access to healthy nutritious foods and/or lack of awareness of their importance for maintaining good health. - Community/Business Leader

Culture

Current culture here does not support good nutrition or high level of physical activity. -Physician
Long standing family eating habits, but no longer working the land. No exercise facilities in the county. - Community/Business Leader

History. Families generally do not teach healthy eating, physical activity and maintaining a healthy weight as important in the home. - Community/Business Leader

Culture, poverty and not having access to healthy foods. - Public Health Representative

Affordable/Safe Opportunities for Physical Activity

No free fitness areas. - Public Health Representative

Limitations to opportunities to be physically active, poor knowledge of basic nutrition issues, and ongoing issues with overweight and obesity. - Physician

Lack of Education

Many children in this county are taught early to eat unhealthy foods and many do not have family support for the importance of healthy eating and weight control. - Other Health Provider

Most people are ignorant to the relationship of diet, activity, weight, and diabetes. (Influence on hormonal imbalance). - Other Health Provider

Lifestyle Choices

Exercise is often unrealistic, cars are a necessity as opposed to walking or biking. Residents have become reliant on prepared foods rather than scratch-cooked and home-grown. - Community/Business Leader

Lifestyle and lack of education. - Community/Business Leader

Access to Health Lunches and Breakfasts in Schools

Schools resisting/overturning efforts toward healthy lunches- very understandable from the money end, but a concern as there also seemed to be a revolt against the actual idea of healthier food instead of white bread, etc. - Community/Business Leader

Co-Occurrences

These factors contribute to so many illnesses and medical problems and seem to be widespread in our area. - Community/Business Leader

Lack of Resources

Lack of resources to have adequate opportunity to play and exercise and if healthy eating doesn't happen at an early age, health problems come quickly. - Other Health Provider

Obesity

Look around, everyone is obese. Out of 10 people I walk past in this county, 7-8 of them are overweight. It's an epidemic. Education on healthy eating is done getting accomplished effectively. When you see folks in the grocery stores using their EBT card, chances are their buggy is full of frozen and processed foods. The poorest and most out of shape folks are the ones eating the worst food, despite their ability to select fresh foods, vegetables and meats. - Social Service Provider

Oral Health

Key informants most often characterized **Oral Health** as a “moderate problem” in Madison County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Oral Health	28.1%	53.1%	18.8%	0.0%

Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

Access and Cost

Not enough dentists, and the cost of dental care. - Community/Business Leader

Access and expense. - Other Health Provider

Money. - Public Health Representative

Culture

Poor dental care of children leads to total extractions and severe cavities at a young age. - Physician

Culture. Residents don't understand the importance of oral care. Possibly not aware of the dental center at the health department and not aware they accept Medicaid and have a sliding scale. - Public Health Representative

Lifestyle. - Community/Business Leader

Medicare/Medicaid

The lack of affordable insurance for working families that do not qualify for Medicaid. - Community/Business Leader

Uninsured/Underinsured

To my knowledge, there are no dental treatment resources for uninsured or underinsured patients. - Other Health Provider

Respiratory Diseases

The greatest share of key informants characterized *Respiratory Diseases* as a “moderate problem” in Madison County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Respiratory Diseases	19.4%	58.1%	22.6%	0.0%

Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

Tobacco Use

We are a tobacco state and there are a lot of smokers here. - Public Health Representative
Smoking prevalence is high. - Physician
Smoking related, or can be dampness of climate, mold issues in home, variety of reasons. - Community/Business Leader

Comorbidities

Leads to other health problems, loss of quality of life. - Community/Business Leader

Sexually Transmitted Disease & Unintended Pregnancy

Most key informants characterized *Sexually Transmitted Disease & Unintended Pregnancy* as a “moderate problem” in Madison County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Sexually Transmitted Disease & Unintended Pregnancy	6.7%	56.7%	36.7%	0.0%

Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

Sexually Transmitted Disease Comorbidities

Health problems for STDs. While there are strong examples of families who go against the trend, it is common to see a repeating cycle of adults who were products of unplanned pregnancy repeating the same mistake. No matter their income or socioeconomic status, parents need to be fully aware and prepared financially and emotionally for the challenges that come with raising children. Children who aren't valued are at a greater risk of crime, unplanned pregnancies of their own, difficulty in school, and difficulty functioning in the workplace. - Community/Business Leader

Lack of Sex Education in Schools

We have school nurses and plenty of educational materials. - Public Health Representative

Substance Abuse

The greatest share of key informants characterized **Substance Abuse** as a “major problem” in Madison County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Substance Abuse	59.4%	37.5%	3.1%	0.0%

TOP CONCERNS

Among those rating this issue as a “major problem,” the greatest barriers to accessing substance abuse treatment are viewed as:

Prevalence/Incidence

Madison has a history of substance use struggles. Like many of the rural NC counties, prescription drug misuse and trafficking has become a major issue. Additionally, only one treatment provider is currently allowed to provide substance abuse treatment; RHA. Since 2010, there has been very little change in the services offered by RHA in Madison County. Despite repeated requests from the community, RHA has not delivered a quality level of treatment in this area. - Other Health Provider

The community is doing a good job collaborating around this, but many of those who are often at the health department, in jail, on probation, etc. struggle with lifelong substance abuse problems. We are in the Southeast, which tends to have a higher level of opioid prescription problems at present and on the outskirts of some of the regions with some of the most known opioid problems in the nation. For the purposes of treatment, the county may want to look at opioid medications and heroin together, as they go hand in hand. Many folks who take opioids never do heroin, but almost everyone on heroin started with opioid pills. - Community/Business Leader

I believe “substance abuse” includes not only alcohol, cigarettes, and non-prescribed drugs, but also prescription medication. - Other Health Provider

Because I know it is in the schools. - Community/Business Leader

Being a rural county use to the shelter, but because of new future I-26, we are put on the map and a lot of drugs are introduced into our families now. - Public Health Representative

Seems to be increasing abuse of prescription drugs and use of heroin. - Community/Business Leader

Self-Medicating

People think they can smoke something, drink something, or take something to deal, to make

all of their problems go away. People with substance abuse issues lose their ability to cope with life's challenges and make life difficult for those around them. Many of our child abuse and neglect cases, law enforcement reports, and other conflicts are directly related to substance abuse. We do a great job of educating people about the dangers of drunk driving, but don't do a very good job of explaining why drugs and excessive alcohol consumption can be harmful in other ways. - Community/Business Leader

Lack of mental health services, self-medicating - Public Health Representative

Current Laws

Maybe law not strict enough and schools are not doing a good job of keeping drugs out of the schools. - Community/Business Leader

Need for tougher laws and sentences for county residents that are involved in substance abuse. - Public Health Representative

Poverty

Poverty. – Physician

Lots of access in the community. Stress from low-income families leads to turning to substances. - Other Health Provider

Crime

Well over 90% of break-ins in Madison County are fueled by folks either looking for drugs or looking to steal something to sell for drugs. This same statistic is what keeps child protective services busy and what also fuels poor health and mental health. Many of the folks abusing substances are doing so due to untreated mental health. It's a viscous circle. - Social Service Provider

Lack of Education

The lack of education and depression. - Community/Business Leader

Lack of Entertainment

Rural area, not much to do, peer pressure. - Community/Business Leader

Lack of Treatment Facilities/Programs

Lack of effective preventive services, lack of effective substance abuse services in the county. - Social Service Provider

Lifestyle Choices

Lifestyle. - Community/Business Leader

Prevalence of Overdose

Major increase in number of overdoses in the county this past year. Heroin is on the rise as narcotics and opiates are harder to get. - Physician

Prevalence of Prescription Drugs

Seems to be increasing abuse of prescription drugs and use of heroin. - Community/Business Leader

Teen Use

Widespread use, especially among younger persons, and resultant health and societal problems. - Community/Business Leader

Most Problematic Substances

Key informants (who rated this as a “major problem”) most often identified methamphetamines or other amphetamines, alcohol, and opioid analgesics as the most problematic substances abused in Madison County.

	Most Problematic	Second-Most Problematic	Third-Most Problematic	Total Mentions
Methamphetamines or Other Amphetamines	10.5%	18.8%	43.8%	12
Alcohol	36.8%	12.5%	6.3%	10
Opioid Analgesics (e.g. Oxycodone, Hydrocodone, Percocet, Fentanyl, Methadone)	21.1%	18.8%	6.3%	8
Heroin	5.3%	25.0%	6.3%	6
Marijuana	0.0%	18.8%	18.8%	6
Prescription Medications (NOT including Opioid Analgesics)	15.8%	0.0%	12.5%	5
Over-The-Counter Medications	5.3%	6.3%	0.0%	2
Nicotine	5.3%	0.0%	0.0%	1

Tobacco Use

The greatest share of key informants characterized *Tobacco Use* as a “major problem” in Madison County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Tobacco Use	51.6%	45.2%	3.2%	0.0%

Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

Culture

Growing of tobacco and raised with that situation so smoking is a habit. - Community/Business Leader

Tradition because of tobacco farming history, but also easy access. - Other Health Provider

That was our main source of income and now that is gone, people are addicted and can't quit. - Public Health Representative

It is a major problem because I still see way to many young people who ought to know better

taking it up. - Other Health Provider

Long history of tobacco growth and use. - Community/Business Leader

The history of tobacco use and production in Madison County. There is a generational view of tobacco use that allows kids to start early. - Community/Business Leader

It seems to be generational, lack of effective educational programs. - Social Service Provider

Prevalence/Incidence

Any tobacco use is a concern and we need to continue to address tobacco use and decrease lung cancer and oral cancer. - Physician

Use increased in school age children. Tobacco use not seen as a priority. Need for stricter guidelines to be passed. - Public Health Representative

Lots of smokers and tobacco use. The family history plays a role in this as well. - Community/Business Leader

Widespread use, and its contribution to serious medical problems. - Community/Business Leader

Lack of Resources and Education

Slow uptake of health information, culture does not encourage smoking cessation and addiction hard to break. - Physician

Parents use tobacco and don't teach their children the risks and effects of use. - Community/Business Leader

Addiction

It's an addiction and to an extent, a cultural norm. - Community/Business Leader

Co-Occurrences

Children exposed to passive cigarette smoke -Physician

Contributors to Health Issues

Online key informants were asked to indicate whether they believe physical environment and social determinants of health are each a “major contributor,” “moderate contributor,” “minor contributor,” or “not a contributor at all” to health problems in Madison County.

Physical environment includes factors such as air and water quality, and pollution and hazards inside homes. It also includes elements of the built environment, such as bike paths and sidewalks.

Social determinants of health are economic and social conditions that influence the health of people and communities. It includes social and economic policies, education, income and poverty, racial discrimination, employment status, and more.

Evaluation of Contributors to Health Issues				
Health Issue	Major Contributor	Moderate Contributor	Minor Contributor	Not a Contributor At All
Physical Environment	16.1%	54.8%	19.4%	9.7%
Social Determinants of Health	61.3%	29.0%	9.7%	0.0%

Physical Environment

The greatest share of key informants characterized Physical Environment as a “moderate contributor” to local health issues.

Those rating this as a “major contributor” identified the following as the greatest contributors to health problems in Madison County:

- Access to Parks
- Air Pollution/Quality
- Environmental Issues in Older Homes
- Lack of Affordable and Quality Housing
- Lack of Bike Paths/Sidewalks
- Lack of Transportation
- Old Structures/Garbage on People's Property
- Water Pollution/Quality

Social Determinants of Health

Over half of key informants characterized Social Determinants of Health as a “major contributor” to local health issues.

Those who rated this as a “major contributor” feel that the following contribute the most to health problems in Madison County:

- Abuse in Homes
- Access to Affordable Healthy Foods
- Access to Health Care

- Affordable Insurance
- Alcohol/Drug Abuse
- Community Mindset
- Commuting Long Distances to Low Wage Work
- Culture/Tradition
- Dysfunctional Families
- Education
- Employment
- Employment That Pays a Living Wage
- Income/Financial Ability
- Isolation
- Lack of Neighborhood for Families to Socialize In
- Lack of Support for Children
- Lack of Transportation
- Nutrition Education
- Parental Involvement
- Poverty
- Race
- Social Impact
- Tobacco Use

Local Data & Resources



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Additional Local Data & Information

Key informants were aware of the following recent data collection efforts about the health issues, needs, or assets in Madison County:

- CHA Madison County Health Department
- County Government
- Family Needs Assessment
- Madison Mental Health Coalition
- Madison Substance Awareness Coalition
- Member of the Board of Health
- Mission Hospital
- NC Immunization Registry
- Parks and Recreation Comprehensive Plan
- Western North Carolina Health Network

Local Resource Guides & Directories

Key informants included the following as examples of health-related resource guides or directories created or used by their agency:

- 2012 Madison County Community Health Assessment
- ACS, US Census
- Aging Resource Directory
- NC State Government
- United Way 211
- WNC Medical Society Directory

Other Issues

Additional Comments

Other issues uncovered through the online key informant survey include the following:

Kidney Stones

I know a number of people, young and old, who have kidney stones. It seems like a lot of people in the county are experiencing this. - Social Service Provider