McDowell County Community Health Assessment 2012

Developed By: WNC Healthy Impact, McDowell Hospital, Marjorie Vestal with the Rutherford-Polk-McDowell District Health Department and the McDowell County Health Coalition

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ACKNOWLEDGEMENTS

This document was developed by McDowell County, in partnership with WNC Healthy Impact as part of a local community health assessment process. We would like to thank several agencies and individuals for their contributions and support in conducting this health assessment: McDowell County Health Coalition, 2012 Board of Directors including Tim Blenco, Chairman, McDowell Health Coalition, Caroline Rodier, Past Chair, McDowell Health Coalition, Bob Boyette, City of Marion, Chuck Abernathy, McDowell County, Cara Lafon, McDowell Hospital, Michael Bullman, Baxter Health Care, Carol Dymond, Dudley Greene, McDowell County Sheriff, Phillip Hardin, McDowell DSS, Access to Care, Heather Cotton, City of Marion, Sharon Parker, McDowell Foundation Jimmy Hines, RPM District Health Department, Kristen Weaver, YMCA of WNC, Kristen Mart, Cooperative Extension, Mary Smith, CTG Coordinator Mike Ayers, McDowell County School District Weyland Prebor, McDowell Senior Center.

Our community health assessment process and products were also supported by technical assistance, financial support, and collaboration as part of WNC Healthy Impact, a partnership between hospitals and health departments in western North Carolina to improve community health. www.WNCHealthyImpact.com

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EXECUTIVE SUMMARY

This document was developed by Rutherford Polk McDowell District Health Department, in partnership with WNC Healthy Impact as part of a local community health assessment process.

We would like to thank several agencies and individuals for their contributions and support in conducting this health assessment:

McDowell County Health Coalition, 2012 Board of Directors including Tim Blenco, Chairman, McDowell Health Coalition, Caroline Rodier, Past Chair, McDowell Health Coalition, Bob Boyette, City of Marion, Chuck Abernathy, McDowell County, Cara Lafon, McDowell Hospital, Michael Bullman, Baxter Health Care, Carol Dymond, Dudley Greene, McDowell County Sheriff, Phillip Hardin, McDowell DSS, Access to Care, Heather Cotton, City of Marion, Sharon Parker, McDowell Foundation
Jimmy Hines, RPM District Health Department, Kristen Weaver, YMCA of WNC, Kristen Mart, Cooperative Extension, Mary Smith, CTG Coordinator Mike Ayers, McDowell County School District Weyland Prebor, McDowell Senior Center.

Overview of CHA Purpose and Process

A. Community Collaboration

Rutherford Polk McDowell District Health Department worked together with the McDowell County Health Coalition and WNC Healthy Impact to conduct a community-wide assessment between July 2012 and December 2012. Team members worked together and independently to organize listening sessions in the community. A Health Behaviors Survey was distributed on line through a Survey Monkey with convenience sampling among interested McDowell County Residents

In September 2012, The McDowell Health Coalition partnered with the Corpening Memorial YMCA to host a Community Health Forum. A preliminary data set was presented prior to the completion of the Community Health Assessment. The Forum presented a review of the 2008 Health Priorities and Action Plans. Over 100 community members attended the Community Health Forum held at the Corpening Memorial YMCA in September 2012.

The 2012 McDowell County Community Health Assessment Team consisted of:

- Jimmy Hines, Rutherford-Polk-McDowell District Health Director
- Marjorie Vestal, Rutherford-Polk-McDowell District Public Health Consultant
- Tim Blenco, McDowell County Health Coalition Board Chair

- Emily Miller, Rutherford Polk McDowell District Health Department Intern
- Mary Smith, Rutherford Polk McDowell District Health Department Health Educator and CTG Coordinator.

List of Health Priorities

In 2009 these areas were designated as the 4 primary areas of focus for McDowell County:

- Obesity, Physical Activity, Nutrition & Diabetes
- Teen Pregnancy Prevention
- Access to Care
- Substance Abuse Prevention

2012 Health Priorities include:

- Teen Pregnancy Prevention
- Tobacco Use
- Healthy Eating & Active Living
- Substance Abuse & Behavioral Health
- Access to Care

General Review of Data and Trends

Racial Diversity and Demographic Highlights

In terms of racial and ethnic diversity, McDowell County is less diverse than either WNC or NC as a whole. In McDowell County the population is 90.6% white/Caucasian and 9.4% non-white. Region-wide, the population is 89.3% white/Caucasian and 10.7% non-white. Statewide, the comparable figures are 68.5% white and 31.5% non-white. The proportion of the population that self-identifies as Hispanic or Latino of any race is 5.3% in McDowell County, 5.4% region-wide, and 8.4% statewide. Approximately 4.8% of residents speak a language other than English at home.

Poverty

High levels of poverty are unfortunately a reality in McDowell County. According to the U.S. Census Bureau (2010), 21.3% of McDowell County residents lived in poverty, compared to a state rate of 16.2%. In addition, 29.2% of residents were considered low-income, meaning that the family's income was less than twice the federal poverty level ($44,100 for a family of four in 2009). The average median household income in McDowell County is only $31,514, roughly 72% of the statewide average. The N.C. Division of Social Services reported that the number of residents receiving food stamps increased from 6,877 in 2009 to 8,385 in 2010, totaling 18.6% of the county's population. Additionally, 69.1% of McDowell County children are enrolled in the

Free/Reduced Price School Meals program, compared to a state rate of 53.7%.

Nationally, between 2007 and 2010, the poverty rate for school-age children showed a statistically significant increase in about 20 percent of counties across the United States, according to U.S. Census Bureau estimates. The Annie E. Casey Foundation's Kids Count Data Center reports that a startling 2,831 children under age 18 (totaling 29.6%) live in poverty in McDowell County, an 8.5% increase from 2007. Compared to a state rate of 24.6%, our county's children are faring worse than most. While approximately 33.9% of children in McDowell County are eligible for Medicaid (compared to a state rate of 32.6%), an additional 10.3% of children have no health insurance at all.

Notable Changes since 2004

- 57.7% growth in Latino population since 2004
- 2,085 more unemployed adults than in 2004
- 4.5% decrease in obese 2-4 year olds since 2004
- 3,247 more adults receiving Medicaid benefits than 2004
- Non-Profit Organizations collaborating to meet community needs

Unemployment Rate

From these data it appears that the unemployment rate in McDowell County was significantly higher than comparable figures for both WNC and NC as a whole throughout the period from 2007-2011.

Unemployment Rate as Percent of Workforce (2007 through 2011)

Geography	Annual Average				
	2007	2008	2009	2010	2011
McDowell County	5.6	8.2	15.5	13.6	13.0
Regional Arithmetic Mean	4.9	6.8	11.8	11.8	11.5
State Total	4.8	6.3	10.5	10.9	10.5

County Health Rankings

The Table below presents the health outcome and health factor rankings for McDowell County.

County Health Rankings via MATCH (2012)

Geography	County Rank (Out of 100)[1]		
	Health Outcomes	Health Factors	Overall

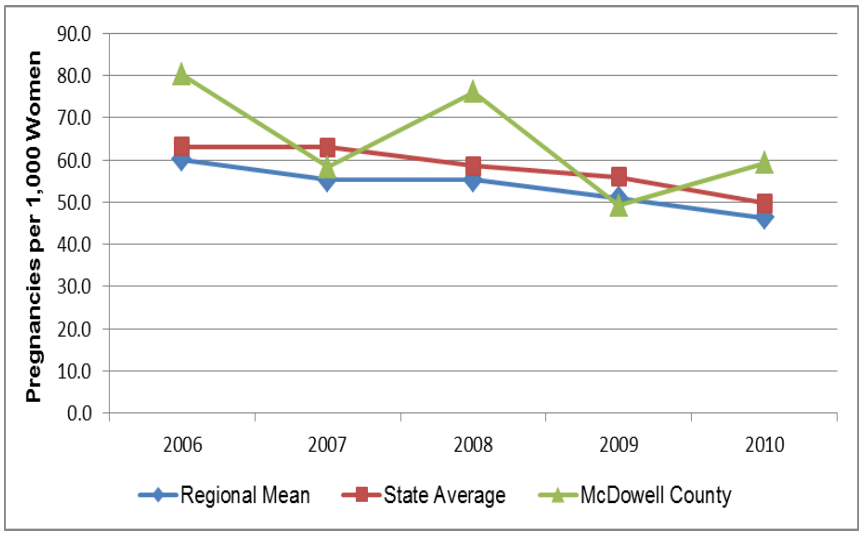
	Mortality	Morbidity	Health Behaviors	Clinical Care	Social & Economic Factors	Physical Environment	Rank
McDowell County	55	67	42	59	66	72	62

Source: *County Health Rankings and Roadmaps, 2012.* Available at http://www.countyhealthrankings.org/app/north-carolina/2012/rankings/outcomes/overall

Teen Pregnancy Prevention

The state of North Carolina has the 14th highest teen pregnancy rate in the United States, with underserved rural counties typically having higher rates than urban counties. The Healthy People 2020 target is 36.2 while the 2010 teen pregnancy rate was 59.2 in McDowell County, 46.3 in WNC, and 49.7 in NC. In 2010, there were 77 babies born to teen mothers in McDowell County (up from 67 in 2009), consequently ranking our county 30th in the state for teen pregnancy.

Pregnancy Rate Ages 15-19, Pregnancies per 1,000 Women (Single Years, 2006-2010)



Healthy Eating & Active Living

Heart disease was the second leading cause of death in McDowell County in the 2006-2010 aggregate period. Further subdivision of heart disease mortality data reveals a striking gender disparity. From these data it is clear that McDowell County males have had a higher heart disease mortality rate than females for the past decade, with the difference as high as 81%.

Regular physical activity can improve the health and quality of life of Americans of all ages, regardless of the presence of a chronic disease or disability. Among adults and older adults, physical activity can lower the risk of: early death; coronary heart disease; stroke; high blood pressure; type 2 diabetes; breast and colon cancer; falls; and depression.

Diet and Nutrition

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 Americans reduce their risks for many health conditions, including: overweight and obesity; malnutrition; iron-deficiency anemia; heart disease; high blood pressure; dyslipidemia (poor lipid profiles); type 2 diabetes; osteoporosis; oral disease; constipation; diverticular disease; and some cancers. 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.

Adult Obesity

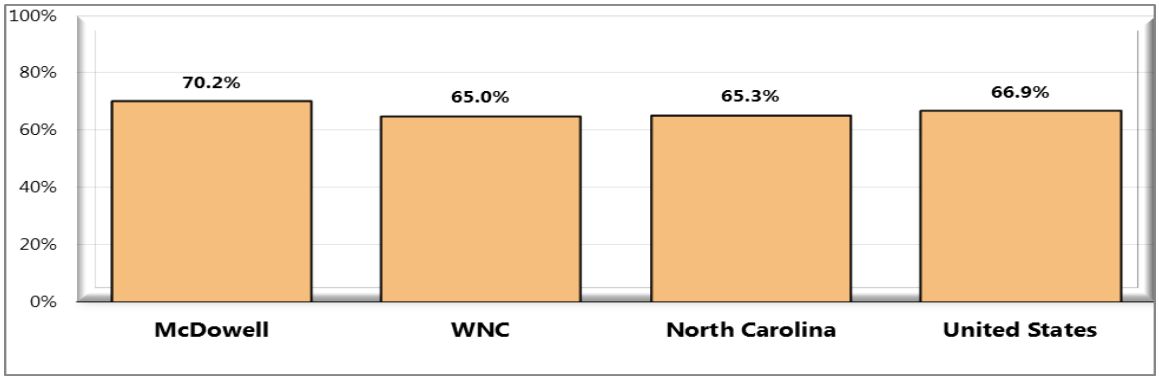
Obesity among adults in McDowell County rose most years between 2005 and 2009; the increase from 2005 to 2009 was 24.9%.

Estimate of Diagnosed Obesity Among Adults Age 20 and Older (2005-2009)

Geography	2005		2006		2007		2008		2009	
	#	%	#	%	#	%	#	%	#	%
McDowell County	8,757	26.9	10,440	31.9	10,640	32.4	11,160	33.8	11,132	33.6
Regional Total	128,908	-	136,661	-	139,114	-	143,681	-	148,403	-
Regional Arithmetic Mean	8,057	25.2	8,541	26.4	8,695	26.7	8,980	27.4	9,275	28.0

Based on self-reported heights and weights, the survey data below shows 2012 county and regional estimates of the prevalence of healthy weight, overweight, and obesity.

Total overweight adults



Tobacco

Tobacco use is the single most preventable cause of death and disease in the United States. Each year, approximately 443,000 Americans die from tobacco-related illnesses. For every person who dies from tobacco use, 20 more people suffer with at least one serious tobacco-related illness.

From this data it appears that lung cancer incidence in McDowell County, which was higher than both the mean WNC and NC rates throughout the period cited, increased 21.9% (from 76.2 to 92.9) between 1999-2003 and 2005-2009.

Lung Cancer Incidence, New Cases per 100,000 Population (Five-Year Aggregates, 1999-2003 through 2005-2009)

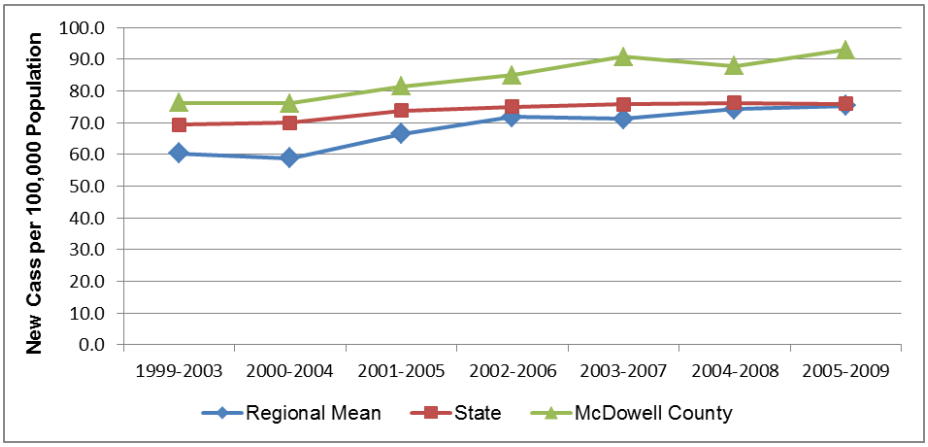
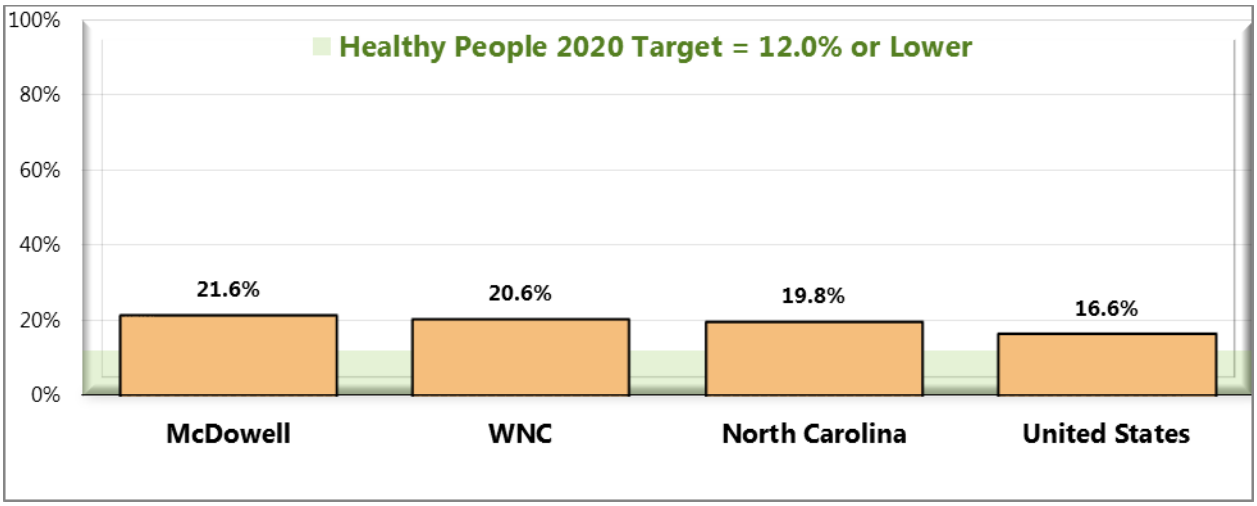


Figure 67. Current Smokers (WNC Healthy Impact Survey)

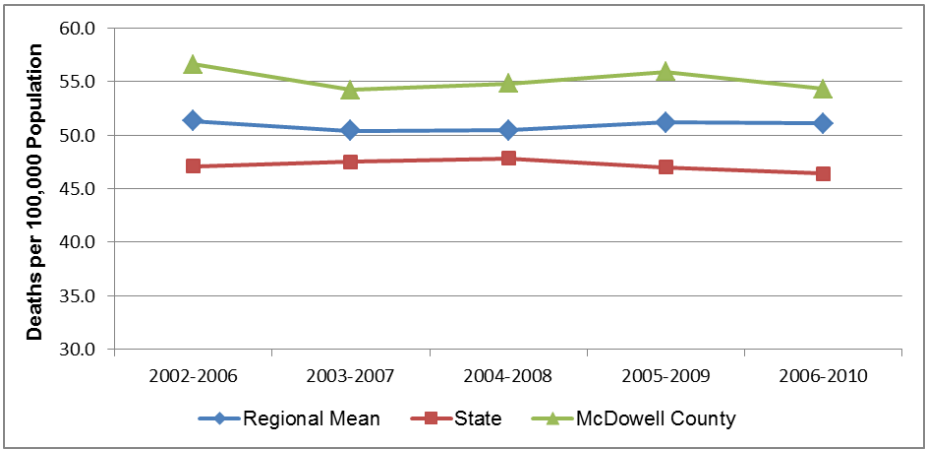


Chronic Lower Respiratory Disease (CLRD) Mortality

Chronic lower respiratory disease (CLRD) is composed of three major diseases, chronic bronchitis, emphysema, and asthma, all of which are characterized by shortness of breath caused by airway obstruction and sometimes lung tissue destruction.

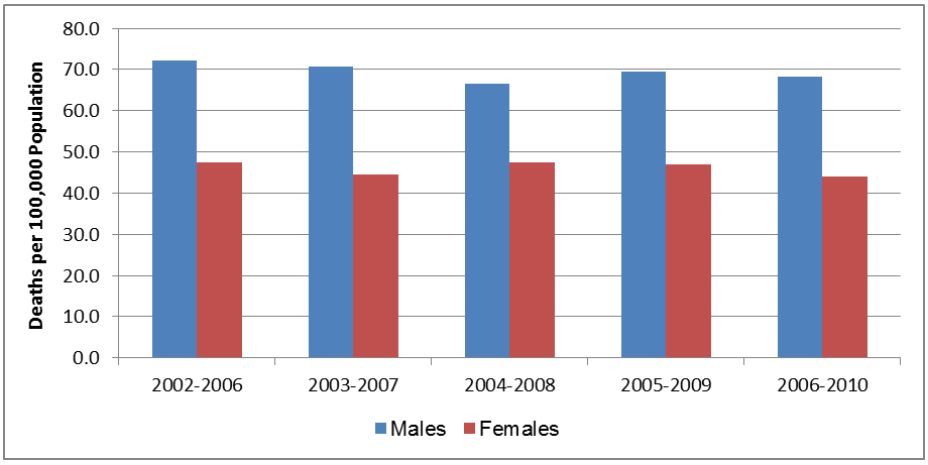
CLRD/COPD was the third leading cause of death in WNC and McDowell County for the 2006-2010 aggregate period

CLRD Mortality Rate, Deaths per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)



In McDowell County, the CLRD mortality rate among males exceeded the comparable rate among females by from 40% to 58% over the past decade (Figure 22). Both rates fluctuated over the period cited, but both fell overall. The county CLRD mortality rate for males fell 5.4%, from 72.2 to 68.3, and the rate for females fell 7.0%, from 47.4 to 44.1. In the last aggregate period the CLRD mortality rate for McDowell County males was 48.1% higher than the rate for females.

Figure 22. Gender Disparities in CLRD Mortality, McDowell County (Five-Year Aggregates, 2002-2006 through 2006-2010)



Medical Care Access

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.

Uninsured Population

The Table below presents data on the proportion of the non-elderly population (ages 19-64) without health insurance of any kind. From 2006-2007 to 2009-2010 there was an 8.7% increase in uninsured adults in McDowell County.

Estimated Percent Uninsured Adults, Ages 19-64
Biennial Periods (2006-2007, 2008-2009, and 2009-2010)

Geography	Percent Uninsured		
	2006-2007	2008-2009	2009-2010
McDowell County	20.7	20.0	22.5
Regional Arithmetic Mean	23.4	22.3	22.0
State Total	19.5	23.2	23.6

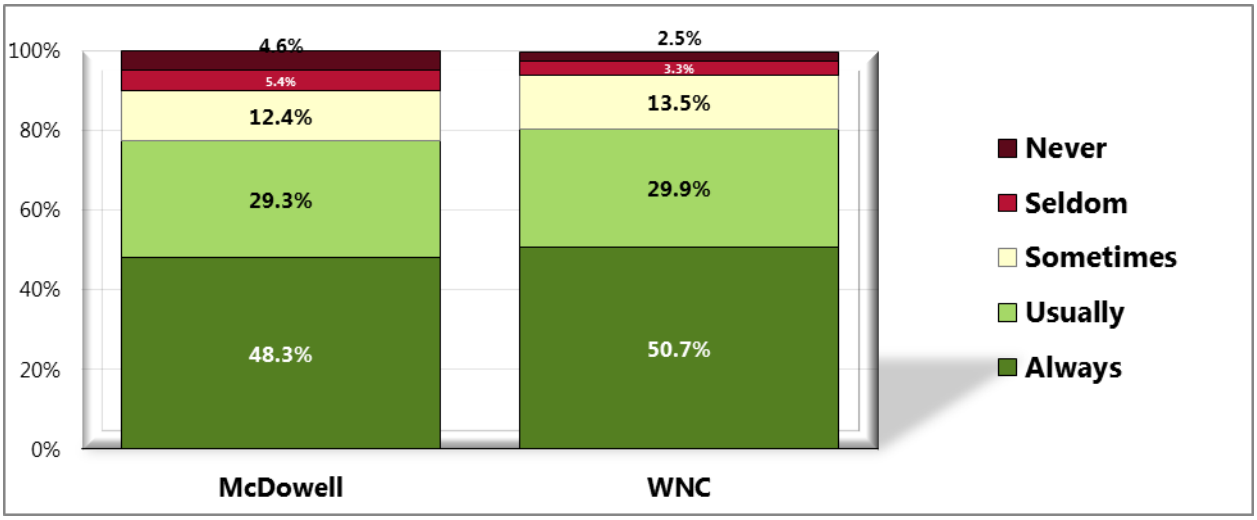
Substance Abuse and Behavioral Health

Substance abuse refers to a set of related conditions associated with the consumption of mind- and behavior-altering substances that have negative behavioral and health outcomes. The listening sessions

conducted by the McDowell Health Coalition highlight the importance of increasing prevention efforts and improving access to treatment for substance abuse and co-occurring disorders. Substance abuse has a major impact on individuals, families, and communities. The effects of substance abuse are cumulative, significantly contributing to costly social, physical, mental, and public health problems (DHHS, 2010).

Social and Emotional Support

Figure 105. Frequency of Getting Needed Social/Emotional Support (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 63]
Notes: ● Asked of all respondents.

Emergency Department Utilization

According to data in Table 47, the diagnoses associated with the highest frequency of emergency department visits in McDowell County in 2010 were psychiatric disorders (13.98% of all ED visits), followed by chest pain/ischemic heart disease (12.87%) and diabetes (9.51%).

Next Steps

At the McDowell Health Coalition Annual Meeting on December 5, 2012, this information was presented to Stakeholders and community members. Coalition members and other participants were encouraged to read this Community Health Assessment (CHA) and use the data to develop appropriate Community Health Improvement Plans. This CHA is accessible on the Rutherford Polk McDowell District Health Department (www.rpmhd.org) website under "Health Promotion".

Community Transformation Grant Program

McDowell County is part of the NC Community Transformation Grant Project (CTGP). This project aims to reduce chronic diseases, promote healthier lifestyles, reduce health disparities and control health care spending in North Carolina. Mary Smith is the Regional Coordinator for CTGP and she has been working closely with the McDowell Health Coalition.

Some early strategies of the Community Transformation Grant Project include increasing tobacco free environments and increasing physical activity through joint use agreements. Enhancing Farmers Markets and access to fresh fruits and vegetable is another key strategy that will be used to reduce chronic disease.

Healthy Places Initiative

The Kate B. Reynolds Charitable Trust is making a long-term commitment to improving community-wide health in McDowell County through the *Healthy Places NC* initiative. *Healthy Places NC* is a new rural place-based strategy aimed at enhancing the health and overall quality of life for people in rural areas of North Carolina. *Healthy Places* thrives on the energy, enthusiasm, sweat equity and vision of local community actors to make McDowell County healthier.

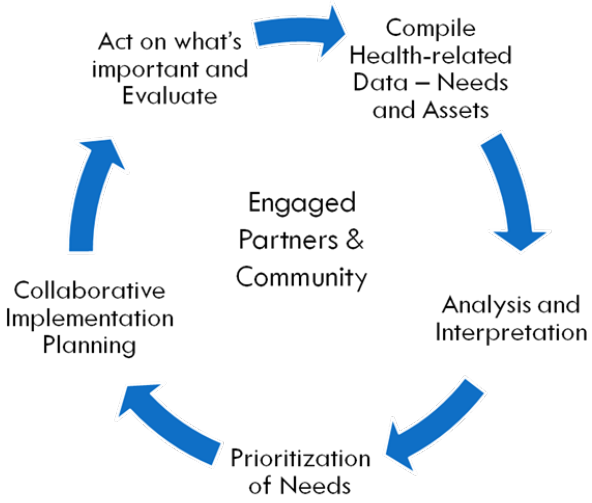
Healthy Places NC –provides opportunities for the Trust and McDowell County to work deeply together to stimulate new ideas and thinking to address persistent health issues. It broadens the conversation to include and embrace cross-sectorial partners (health and non-health), traditional and non-traditional partners to work in new ways that are locally driven to create a shared community change agenda to improve health.

The Trust will support a complement of mutually reinforcing strategies and programs to support the *Healthy Places NC* initiative . In McDowell County, WNC Non-Profit Pathways, a capacity building intermediary will engage local nonprofit board and staff in trainings to increase their organizational effectiveness. In addition, the County Health Rankings and Roadmap Team will offer support and technical assistance to the McDowell County Health Coalition. KaBOOM! a national playground builder is yet another resource that will build two playgrounds in McDowell County as part of the Healthy Places work to enhance opportunities for physical activity.

CHAPTER 1 - INTRODUCTION

Purpose of Community Health Assessment (CHA)

Community health assessment (CHA) is the foundation for improving and promoting the health of county residents. **Community-health assessment is a key step in the continuous community health improvement process.** The role of CHA is to identify factors that affect the health of a population and determine the availability of resources within the county to adequately address these factors.



A community health assessment (CHA), which refers both to a process and a document, investigates and describes the current health status of the community, what has changed since a recent past assessment, and what still needs to change to improve the health of the community. The *process* involves the collection and analysis of a large range of secondary data, including demographic, socioeconomic and health statistics, environmental data, as well as primary data such as personal self-reports and public opinion collected by survey, listening sessions, or other methods. The *document* is a summary of all the available evidence and serves as a resource until the next assessment. Together they provide a basis for prioritizing the community's health needs, and for planning to meet those needs.

Because it is good evidence-based public health practice, local health departments (LHDs) across North Carolina (NC) are required to conduct a comprehensive community health assessment at least every four years. It is required of public health departments in the consolidated agreement between the NC Division of Public Health and local public health departments. Furthermore, it is required for local public health department accreditation through the NC Local Health Department Accreditation Board (G.S. § 130A-34.1). As part of the Affordable Care Act, non-profit hospitals are also now required to conduct a community health (needs) assessment at least every three years.

The local health department usually conducts the CHA as part (and usually the leader) of a team composed of representatives from a broad range of health and human service and other organizations within the community. Community partners and residents are part this process as well.

Definition of Community

Community is defined as "county" for the purposes of the North Carolina Community Health Assessment Process. In western North Carolina, hospitals define their community as one or more counties for this process. *[Insert]* county is included in *[insert hospital(s)*

name's] community for the purposes of community health improvement and investment, and as such *[insert hospital name's]* was a key partner in this local level assessment process.

WNC Healthy Impact

WNC Healthy Impact is a partnership between hospitals and health departments in 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. See www.WNCHealthyImpact.com for more details about the purpose and participants of this region-wide effort. The regional work of WNC Healthy Impact is supported by a steering committee, workgroups, local agency representatives, and a public health/data consulting team. In addition, for this data collection phase of our regional efforts, a survey vendor (PRC – Professional Research Consultants, Inc.) was hired to administer a region-wide telephone survey. Various partners, coalitions, and community members are also engaged at the local level. The template for this CHA report, a core set of secondary and survey (primary) data, and analysis support, were made available through this collaborative regional effort.

Data Collection Process

Core Dataset Collection

As part of WNC Healthy Impact, a regional data workgroup of public health and hospital representatives and regional partners, with support from the consulting team, made recommendations to the steering committee on the data approach and content used to help inform regional data collection. The core regional dataset was informed by stakeholder data needs, guidelines, and requirements. From data collected as part of this core dataset, the consulting team compiled secondary (existing) data and new survey findings for each county in the 16-county region. This assessment includes data integrated from the secondary data efforts as well as the community health survey for our county. See Appendix A for details on the data collection methodology.

Criteria for selecting "highlights"

The body of assessment data supporting this document is wide-ranging and complex. In order to develop a summary of major findings, the consultant team applied three key criteria to nominate data for inclusion in this report. The data described in this report was selected because:

- County statistics deviate in significant ways from WNC regional data or NC statistics;
- County trend data show significant change—positive or negative—over time; or

- County data demonstrate noteworthy age, gender, or racial disparities.

Supplementary to this report is the *WNC Healthy Impact Secondary Data Workbook* (*Data Workbook*) that contains complete county-level data as well as the state and regional averages and totals described here. Data contained in the *Data Workbook* is thoroughly referenced as to source. Readers should consult the *Data Workbook* to review all of the secondary data comprising the regional summaries.

Unless specifically noted otherwise, all tables, graphs and figures presented in this report were derived directly from spreadsheets in the *Data Workbook* or survey data reported by the survey vendor (PRC).

Additional Local Data

The Rutherford Polk McDowell District Health Department used an online Survey Monkey Tool to received additional feedback from residents in the three counties we serve. Highlights from this survey are included in appendix A.

Information for our Health Resource Inventory and 2-1-1 caller statistics was provided by the 2-1-1- of Western North Carolina and lists health providers in each county, pulled from the 2-1-1 database as of June 2012, as well as data on most common requests and unmet needs of callers to 2-1-1. See Chapter 7 and/or Appendix D for more details.

Definitions & Data Interpretation Guidance

Reports of this type customarily employ a range of technical terms, some of which may be unfamiliar to many readers. This report defines technical terms within the section where each term is first encountered.

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. See Appendix A for additional details and definitions.

Community Engagement

In the random-sample survey that was administered in our county as part of this community health assessment, 200 community members completed a questionnaire regarding their health status, health behaviors, interactions with clinical care services, support for certain health-related policies, and factors that impact their quality of life.

In addition, in our county, community members and partners were involved in listening sessions conducted by the McDowell Health Coalition with assistance from the Corpening Memorial YMCA and the Rutherford Polk McDowell District Health Department during the summer and fall of 2012.

Mary Smith, the former Health Educator for the Rutherford-Polk-McDowell District Health Department and Emily Miller, a Master of Public Health student intern from East Carolina University worked together to conduct seven listening sessions with the following groups in McDowell County:

- McDowell County Health Department Patients
- McDowell Senior Center
- Centro Unido Latino Americano (Two Listening Sesions)
- Addie's Chapel
- McDowell County Department of Social Services Clientele
- The Good Samaritan Clinic
- McDowell County NPO & Human Service Agency Directors

The listening session questions were taken directly from the 2011 *Community Health Assessment Guidebook* and are listed in Appendix A.

Chronic disease, cancer, mental illness, and substance abuse emerged as being the serious health problems most often sited by the 67 key informants in these 7 listening sessions. Specifically, diabetes and obesity surfaced as the most commonly identified chronic diseases in all groups. However, heart disease and high blood pressure were not far behind. Several participants in various groups also pointed out that many children in the County are being diagnosed with chronic diseases such as obesity and high blood pressure. The most frequently cited health problems related to substance abuse include: alcoholism, tobacco use, and abuse of prescription drugs (unintentional poisoning). Among Latino participants, access to medical and behavioral health services were priorities as well as access to soccer fields for children and adults.

Priority Setting

Details on our county's priority setting process and outcomes are included in Chapter 9 of this document.

Chapter 2 – Demographic and Socioeconomic Parameters

Location and Geography

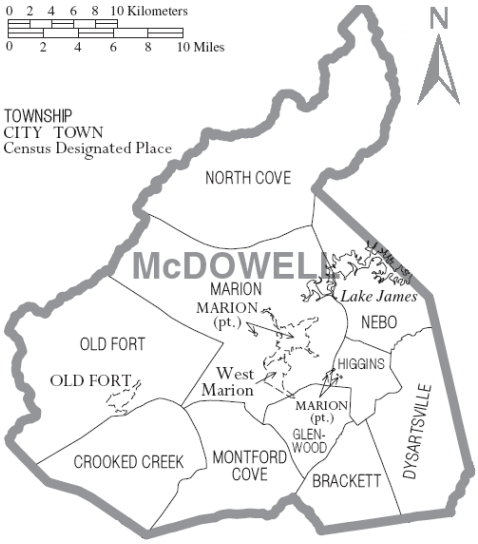
McDowell County is located in the foothills of western North Carolina. Elevations range from 900 to 5,665 ft. McDowell County consists of 442 square miles with 75 percent of this area forested; 67 acres of which is Pisgah National Forest lands. In 2010 there were 102 persons per square mile. McDowell County is approximately 30 minutes east of Asheville and 35 minutes west of Hickory via Interstate 40. Interstate 40 crosses the county in an east-west direction with US 221 crossing in a north-south direction.

Average humidity is 62 percent and the average annual rainfall is 52.32 in. The mean temperature during the summer is 75 degrees and the winter is 41.2 degrees. The county features a rich heritage and pristine natural resources.

McDowell County is home to many magnificent mountain treasures such as Grandfather Mountain, Emerald Village, Linville Caverns, Linville Gorge. There are also numerous gold and gem mines, historic museums, and hiking/biking trails. Greenways have been steadily expanding throughout McDowell County in recent years. Future phases of the Greenway will extend along the river towards Old Fort in the west and Lake James in the east.

There are two significant rivers (Catawba and North Fork), numerous creeks, waterfalls, and two lakes, Lake Tahoma and Lake James. The larger, Lake James, is located in eastern McDowell County. It contains 10.2 square miles of surface area and more than 150 miles of shoreline. There are numerous public and private access points for the lake. One highlight of Lake James is Lake James State Park. In operation since 1989, the park recently added 3,000 acres to its holdings. Amenities include overnight camping, canoe rentals, and a 700 foot long swim beach.

The City of Marion is located along the Catawba River Basin. The county is divided into eleven townships: Crooked Creek, Dysartsville, Glenwood, Marion, Montford Cove, Nebo, Ashford-North Cove, Pleasant Gardens, Woodlawn-Sevier, Sugar Hill, and Old Fort.



The McDowell County Recreation Department operates several facilities throughout the county, including the main facility in Marion which features a gymnasium, outdoor swimming pool, and the county's only skate park. In addition, the Department maintains ballfields throughout the county and an additional outdoor pool in Old Fort. The Corpening Memorial YMCA is the local branch of the YMCA of Western North Carolina and features an indoor swimming pool, gymnasium, fitness center, youth programs and adult fitness classes.

History

Extensive archaeological work has been done at the Berry site near Morganton and the Catawba River. The archaeological finds there shed light on how Native Americans might have been living in what is now McDowell County. The earliest known settlers arrived around 10,000BCE, (late Pleistocene). At that time, evidence reveals that stands of oak, hickory, beech, birch and elm were replacing forests of pine and spruce. (Mead and Meltzer 1984:47,Trawick, Ward, 1999)

Between 1100 and 1600 regional manifestations of the village tradition emerged. Population increased and so did inter-village conflict. Larger villages were surrounded by stockades. In some areas, the small hamlet tradition persisted, but the large villages associated with increased cultivation became more common. Crops entail crop storage; good crop land becomes something worth defending or attacking. (Chapman and Adovasio 1977).

In the early 1700’s, Ulster Scots and German settlers were drawn here by the fertile Catawba River basin. These hunters and cattle-drivers evicted the native Cherokee and Catawba Indians, formed a close community protected by a series of forts, and were followed by numerous subsistence farmers.

Between 1804 & 1827, the area contributed to North Carolina's gold legacy as the nation's leader in gold production. McDowell County was formally organized in 1843 at the home of Colonel John Carson. His home serves as a museum today in the Pleasant Gardens community. The county was named for Joseph McDowell, a prominent leader during the Revolutionary War. Marion, serves as the county seat. John Carson donated 50 acres for the foundation of Marion, which was laid out in 1843. Commercial development began as simple log construction. By 1870, the Western Rail Line made its way to Marion.

Unfortunately in 1894, a devastating fire occurred that destroyed nearly everything in downtown Marion. At the time there was no fire department in the town so many citizens had to gather together in bucket lines, saving several historic homes in McDowell County. Many of the houses still stand in Marion and some of the structures are listed as historical significant structures in the McDowell County cultural institution, Main Street Historic District. The town was slowly restored over the next several years.

Numerous Manufacturing Plants flourished in McDowell County from 1930 to 1990. However, as jobs were outsourced overseas, the decline of manufacturing lead to high unemployment. McDowell County has not been successful at establishing a new source of employment to replace the number of manufacturing jobs that have been lost. Abandoned dye and textile plants remain vacant in Marion and Old Fort.

Population

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

Current Population (Stratified by Gender, Age, and Race/Ethnicity)

According to data from the 2010 US Census, the total population of McDowell County is 44,916. In McDowell County the proportion of males and females is equal; region-wide and statewide, there is a slightly higher proportion of females than males.

Table 1. Overall Population and Distribution, by Gender (2010)

Geography	Total Population (2010)	# Males	% Males	# Females	% Females
McDowell County	44,916	22,517	50.0	22,479	50.0
Regional Total	759,727	368,826	48.5	390,901	51.5
State Total	9,535,483	4,645,492	48.7	4,889,991	51.3

In McDowell County 16.4% of the population is in the 65-and-older age group, compared to 19.0% region-wide and 12.9% statewide (Table 2). The median age in McDowell County is 41.6, while the regional mean median age is 44.7 years and the state median age is 37.4 years.

Table 2. Median Age and Population Distribution, by Age Group (2010)

Geography	Median Age	# Under 5 Years Old	% Under 5 Years Old	# 5-19 Years Old	% 5-19 Years Old	# 20 - 64 Years Old	% 20 - 64 Years Old	# 65 Years and Older	% 65 Years and Older
McDowell County	41.6	2,596	5.8	8,202	18.2	26,821	59.6	7,377	16.4
Regional Total	44.7	40,927	5.4	132,291	17.4	441,901	58.2	144,608	19.0
State Total	37.4	632,040	6.6	1,926,640	20.2	5,742,724	60.2	1,234,079	12.9

Racial Diversity and Demographic Highlights

In terms of racial and ethnic diversity, McDowell County is less diverse than either WNC or NC as a whole. In McDowell County the population is 90.6% white/Caucasian and 9.4% non-white. Region-wide, the population is 89.3% white/Caucasian and 10.7% non-white. Statewide, the comparable figures are 68.5% white and 31.5% non-white (Table 3). The proportion of the population that self-identifies as Hispanic or Latino of any race is 5.3% in McDowell County, 5.4% region-wide, and 8.4% statewide (Table 3). Approximately 4.8% of residents speak a language other than English at home.

The racial and ethnic diversity within the 16 counties that compose the region is quite varied, and readers should consult the *Data Workbook* to understand those differences.

Table 3. Population Distribution, by Racial/Ethnic Groups, as Percent of Overall Population (2010)

Geography	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)
McDowell County	90.6	3.8	0.4	0.8	0.0	3.2	1.2	5.3
Regional Total	89.3	4.2	1.5	0.7	0.1	2.5	1.8	5.4
State Total	68.5	21.5	1.3	2.2	0.1	4.3	2.2	8.4

Population Growth Trend

Between the 2000 and 2010 US Censuses the population of McDowell County grew by 6.3% and the population of WNC grew by 13.0% (Table 4). The rate of growth in the county is projected to slow dramatically over the next 10 years as well as in the decade following that. Future McDowell County decadal growth rates are much smaller than the double-digit (or near double-digit) figures projected for WNC and for NC as a whole over the same period.

Table 4. Decadal Population Growth Rate (2000 to 2030)

Geography	% Total Population Growth			
	2000 to 2010	2010 to 2020	2020 to 2030	2000 to 2030
McDowell County	6.3	3.9	0.5	11.4
Regional Total	13.0	11.6	9.6	38.2
State Total	15.6	11.3	9.6	44.5

The growth rate of a population is a function of emigration and death rates on the negative side, and immigration and birth rates on the positive side. As illustrated by the data in Table 5, the birth rate in McDowell County, higher than the comparable mean WNC rate but lower than the rate for NC, was relatively static (around 11.9%) over the five aggregate periods between 2002-2006 and 2006-2010 (Table 5). Region-wide the birth rate was static at around 10.8 for several years before falling recently to 10.5. Statewide, the birth rate, which hovered for several years around 14.2, fell recently to 13.8.

Table 5. Birth Rate, Five 5-Year Aggregate Period (2002-2006 through 2006-2010)

Geography	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010
McDowell County	12.0	11.9	12.0	11.9	11.8
Regional Arithmetic Mean	10.8	10.8	10.8	10.7	10.5
State Total	14.2	14.2	14.2	14.1	13.8

Older Adult Population Growth Trend

As noted previously, the age 65-and-older segment of the population represents a larger proportion of the overall population in McDowell County and WNC than in the state as a whole. In terms of future health resource planning, it will be important to understand how this segment of the population, a group that utilizes health care services at a higher rate than other age groups, is going to change in the coming years. Table 6 presents the decadal growth trend for the age 65-and-older population, further stratified into smaller age groups, for the decades from 2010 through 2030. These data illustrate how the population age 65-and-older in the county is going to increase over the coming two decades. Calculated from the figures in Table 6, the percent increase anticipated for each age group in McDowell County between 2010 and 2030 is 37.6% for the 65-74 age group, 71.2% for the 75-84 age group, and 63.2% for the 85+ age group. In WNC as a whole, the 65-74 age group is projected to grow by 24.0%, the 75-84 age group by 52.5%, and the 85+ age group by 40.0% over the same period of time.

Table 6. Population Age 65 and Older (2010 through 2030)

Geography	2010 Census Data				2020 (Projected)				2030 (Projected)			
	Total % Age 65 and Older	*% Age 65-74**	*% Age 75-84*	*% Age 85+*	% Age 65 and Older	% Age 65-74	% Age 75-84	% Age 85+	% Age 65 and Older	% Age 65-74	% Age 75-84	% Age 85+ *
McDowell County	16.4	9.3	5.2	1.9	21.6	12.6	6.6	2.4	24.8	12.8	8.9	3.1
Regional Total	19.0	10.4	6.1	2.5	23.5	13.2	7.4	2.9	25.7	12.9	9.3	3.5
State Total	12.9	7.3	4.1	1.5	16.6	9.9	4.9	1.8	19.3	10.6	61.8	2.2

Composition of Families with Children

Data in Table 7 illustrates that the percentage of households with children headed by a married couple is slightly larger in McDowell County than in WNC (17.5% vs. 17.2%) but smaller than the comparable figure for NC as a whole (17.5% vs. 20.1%).

Table 7. Composition of Family Households, 5-Year Estimate (2006-2010)

Geography	Family Composition						
	# 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. #	%
McDowell County	17,560	3,075	17.5	367	2.1	1,115	6.3
Regional Total	318,280	54,822	17.2	5,322	1.7	17,134	5.4
State Total	3,626,179	729,708	20.1	78,051	2.2	282,131	7.8

* A household includes all the people who occupy a housing unit. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated people who share living arrangements.
** A family consists of a householder and one or more other people living in the same household who are related to the householder by birth, marriage, or adoption. All people in a household who are related to the householder are regarded as members of his or her family. A family household may contain people not related to the householder, but those people are not included as part of the householder's family in tabulations.
*** Family composition percentages are based on total number of households. Numerator is number of family households (headed by male, female or married couple) with children under 18 years; denominator is total number of households.

In McDowell County, 66.2% of grandparents living with their minor grandchildren also are the party responsible for their grandchildren's care. In WNC as in NC as a whole, the comparable figure is about 51% (Table 8).

Table 8. Grandparents Responsible for Grandchildren, 5-Year Estimate (2006-2010)

Geography	Family Composition		
	# Grandparents Living with Own Grandchildren (<18 Years)*	Grandparent Responsible for Grandchildren (under 18 years)	
		Est. #	%
McDowell County	941	623	66.2
Regional Total	13,470	6,971	51.8
State Total	187,626	95,027	50.6

* Grandparents responsible for grandchildren - data on grandparents as caregivers were derived from American Community Survey questions. Data were collected on whether a grandchild lives with a grandparent in the household, whether the grandparent has responsibility for the basic needs of the grandchild, and the duration of that responsibility. Responsibility of basic needs determines if the grandparent is financially responsible for food, shelter, clothing, day care, etc., for any or all grandchildren living in the household. Percent is derived with the number of grandparents responsible for grandchildren (under 18 years) as the numerator and number of grandparents living with own grandchildren (under 18 years) as the denominator.

Military Veteran Population

Military veterans compose a higher proportion of the total civilian population in WNC than in either NC or the US as a whole. Calculating

from figures in Table 9, veterans make up 11.4% of the civilian population in McDowell County, compared to 12.4% in the WNC region, 10.8% statewide, and 9.9% nationally. In McDowell County, 41% of the veteran population is 65 years of age or older; the comparable proportions are 49% for the WNC mean, 36% for NC statewide, and 40% nationwide.

Table 9. Population of Military Veterans, 5-Year Estimate (2006-2010)

Geography	Civilian Population 18 years and over			% Veterans by Age				
	Total	Veterans	Nonveterans	18 to 34 years	35 to 54 years	55 to 64 years	65 to 74 years	75 years and over
McDowell County	34,621	3,944	30,677	6.1	22.2	30.8	18.4	22.6
Regional Total	593,603	73,783	519,820	n/a	n/a	n/a	n/a	n/a
Regional Arithmetic Mean	n/a	n/a	n/a	3.6	19.3	28.1	24.1	24.9
State Total	6,947,547	747,052	6,200,495	8.7	30.0	25.7	17.9	17.8
National Total	228,808,831	22,652,496	206,156,335	7.8	26.3	25.4	19.0	21.4

Education

It is helpful to understand the level of education of the general population, and with what frequency current students stay in school and eventually graduate.

Educational Attainment

Table 10 provides data on the proportion of the population age 25 and older with one of three levels of educational attainment: high school or equivalent, some college, and a bachelor's degree or higher. In these terms, in 2006-2010, McDowell County had a higher proportion than WNC as a whole of residents age 25 or older possessing a high school diploma or its equivalent (36.7% vs. 32.2%), as well as a higher proportion than NC as a whole (36.7% vs. 28.2%). On the other hand, the overall proportion of the McDowell County population with *more* than a high school diploma or equivalency is smaller than for WNC or for NC as a whole. The county has an 11% lower proportion of persons age 25 and older with some college than does the region, and a 12% lower proportion than the state. At the bachelor's degree and greater level the proportional attainment in the county (14.0%) is 31% smaller than the comparable mean regional figure (20.2%) and 46% smaller than statewide figure (26.1%).

Table 10. Educational Attainment of Population Age 25 and Older, Two 5-Year Estimates (2005-2009 and 2006-2010)

Geography	2005-2009				2006-2010			
	Total Population Age 25 Years and Older	% High School Graduation Rate (Includes equivalency)	% Some College	% Bachelor's Degree or Higher	Total Population Age 25 Years and Older	% High School Graduation Rate (Includes equivalency)	% Some College	% Bachelor's Degree or Higher
McDowell County	30,440	34.8	18.9	13.2	31,364	36.7	18.3	14.0
Regional Total	511,076	n/a	n/a	n/a	532,838	n/a	n/a	n/a
Regional Arithmetic Mean	31,942	32.2	19.6	19.9	33,302	32.2	20.5	20.2
State Total	5,940,248	28.6	20.4	25.8	6,121,611	28.2	20.9	26.1

Drop-Out Rate Trend

For each of the five school years of the period cited in Table 11, the high school drop-out rate for McDowell County public schools was higher than the comparable mean rate for the 17 school districts in WNC (one per county plus Asheville City Schools) and higher than the rate for all NC public schools as well. Drop-out rates in all three jurisdictions fell annually over the period cited in the table.

Table 11. High School Drop-Out Numbers and Rates (SY2006-2007 through SY2010-2011)

Geography	SY2006-2007		SY2007-2008		SY2008-2009		SY2009-2010		SY2010-2011	
	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
McDowell County	144	7.10	123	6.10	110	5.52	95	4.73	79	3.91
Regional Total	1,756	n/a	1,651	n/a	1,385	n/a	1,129	n/a	1,019	n/a
Regional Arithmetic Mean	n/a	5.66	n/a	5.58	n/a	4.51	n/a	3.61	n/a	3.36
State Total	23,550	5.27	22,434	4.97	19,184	4.27	16,804	3.75	15,342	3.43

Current High School Graduation Rate

The four-year cohort graduation rates for subpopulations of 9th graders entering high school in SY2007-2008 and graduating in SY2010-2011 are presented in Table 12. In McDowell County the graduation rates for all subpopulations fell below both the mean graduation rate for the 17 school districts in WNC, and the comparable rates for NC as a whole. The graduation rate for the population of economically disadvantaged students in McDowell County is 4.8 points lower than the county's overall graduation rate. At the region- and state-level the graduation rate for economically disadvantaged students is approximately 6.7 points lower than the comparable overall graduation rates. Students in McDowell with limited English proficiency have a graduation rate of 45.5, the lowest rate among the three jurisdictions.

Table 12. 4-Year Cohort High School Graduation Rate
SY2007-2008 Entering 9th Graders Graduating in SY2010-2011 or Earlier

Geography	Total Number of Students	% Students Graduating				
		All Students	Males	Females	Economically Disadvantaged	Limited English Proficiency
McDowell County	491	75.2	71.1	79.2	70.4	45.5
Regional Total	7,545	78.8	75.2	82.5	72.0	57.2
State Total	110,377	77.9	73.8	82.2	71.2	48.1

Income

There are several income measures that can be used to compare the economic well-being of communities, among them median household income, and median family income.

Median Household and Family Income

As calculated from the most recent estimate (2006-2010), the median *household* income in McDowell County was $34,953, compared to a mean WNC median household income of $37,815, a difference of $2,862 *less* in McDowell County. The median household income in McDowell County was over $7,500 lower than the comparable state average for both the periods cited in Table 13, and the gap widened by $2,922 from 2005-2009 to 2006-2010.

As calculated from the most recent estimate (2006-2010), the median *family* income in McDowell County was $47,243, compared to a mean WNC median family income of $47,608, a difference of $365 *less* in McDowell County. The median family income in McDowell County was more than $8,600 *lower* than the comparable state average for both periods cited in Table 13, and the gap widened by $229 between 2005-2009 and 2006-2010.

Table 13. Median Household and Median Family Income 5-Year Estimates (2005-2009 and 200-2010)

Geography	2005-2009				2006-2010			
	Median Household Income*		Median Family Income**		Median Household Income		Median Family Income	
	$	$ Difference from State	$	$ Difference from State	$	$ Difference from State	$	$ Difference from State
McDowell County	37,374	-7,695	46,848	-8,681	34,953	-10,617	47,243	-8,910
Regional Arithmetic Mean	37,107	-7,962	46,578	-8,951	37,815	-7,756	47,608	-8,545
State Total	45,069	n/a	55,529	n/a	45,570	n/a	56,153	n/a

* Median household income is the incomes of all the people 15 years of age or older living in the same household (i.e., occupying the same housing unit) regardless of relationship. For example, two roommates sharing an apartment would be a household, but not a family.

** Median family income is the income of all the people 15 years of age or older living in the same household who are related through either marriage or bloodline. For example, in the case of a married couple who rent out a room in their house to a non-relative, the household would include all three people, but the family would be just the couple.

Population in Poverty

The *poverty rate* is the percent of the population (both individuals and families) whose money income (which includes job earnings, unemployment compensation, social security income, public assistance, pension/retirement, royalties, child support, etc.) is below a federally established threshold. (This is the "100%-level" figure.)

Table 14 shows the estimated annual poverty rate for two five year periods: 2005-2009 and 2006-2010. The table also presents an estimate for the number of persons living below 200% of the Federal poverty rate, since this figure is often used as a threshold for determining eligibility for government services. The data in this table describe an overall rate, representing the entire population in each geographic entity. As subsequent data will show, poverty may have a strong age component that is not detectable in these numbers.

The 100%-level poverty rate in McDowell County was 15.2% in the 2005-2009 period, and rose to 17.9% in the 2006-2010 period; this change represents an increase of 17.8% in the percent of persons living in poverty. In both periods cited, the poverty rate in McDowell County was higher than the comparable rates in both WNC and NC. As calculated from figures in Table 14, the 200%-level poverty rate in McDowell County was 37.6% in the 2005-2009 period and rose to 40.3% in the 2006-2010 period, an increase of 7.2%. In WNC the 200% poverty rate was 36.6% in the 2005-2009 period and rose to 37.3% in the 2006-2010 period, an increase of 1.9%. Statewide, the 100%-level poverty rate rose from 15.1% to 15.5% (an increase of 2.6%) and the 200%-level poverty rate rose from 35.0% to 35.6% (an increase of 1.7%) over the same time frame.

Table 14. Population in Poverty, All Ages
5-Year Estimates (2005-2009 and 2006-2010)

Geography	2005-2009				2006-2010			
	Population Estimate	# Below Poverty Level	% Below Poverty Level	# Below 200% Federal Poverty Level	Population Estimate	# Below Poverty Level	% Below Poverty Level	# Below 200% Federal Poverty Level
McDowell County	42,653	6,495	15.2	16,028	43,835	7,834	17.9	17,655
Regional Total	697,685	103,966	14.9	255,556	726,827	113,990	15.7	271,215
State Total	8,768,580	1,320,816	15.1	3,066,957	9,013,443	1,399,945	15.5	3,208,471

Table 15 presents similar data focusing this time exclusively on children under the age of 18. From these data it is apparent that children suffer disproportionately from poverty. In McDowell County the 2005-2009 poverty rate for young persons (21.2%) was 39.5% higher than the overall rate (15.2%), and the 2006-2010 poverty rate for young people (27.1%) was 51.4% higher than the overall rate (17.9%). Childhood poverty increased in McDowell County, WNC and NC between the 2005-2009 and 2006-2010 periods, rising by 27.8% in McDowell County, 5.2% in WNC and 3.8% statewide.

Table 15. Population in Poverty, Under Age 18
5-Year Estimates (2005-2009 and 2006-2010)

Geography	2005-2009			2006-2010		
	Population Estimate	# Below Poverty Level	% Below Poverty Level	Population Estimate	# Below Poverty Level	% Below Poverty Level
McDowell County	9,611	2,035	21.2	9,760	2,647	27.1
Regional Total	146,592	31,196	21.3	149,649	33,486	22.4
State Total	2,173,508	452,280	20.8	2,205,704	476,790	21.6

Child Poverty

High levels of poverty are unfortunately a reality in McDowell County. According to the U.S. Census Bureau (2010), 21.3% of McDowell County residents lived in poverty, compared to a state rate of 16.2%. In addition, 29.2% of residents were considered low-income, meaning that the family's income was less than twice the federal poverty level ($44,100 for a family of four in 2009). The average median household income in McDowell County is only $31,514, roughly 72% of the statewide average. The N.C. Division of Social Services reported that the number of residents receiving food stamps increased from 6,877 in 2009 to 8,385 in 2010, totaling 18.6% of the county's population. Additionally, 69.1% of McDowell County children are enrolled in the

Free/Reduced Price School Meals program, compared to a state rate of 53.7%.

Nationally, between 2007 and 2010, the poverty rate for school-age children showed a statistically significant increase in about 20 percent of counties across the United States, according to U.S. Census Bureau estimates. The Annie E. Casey Foundation's Kids Count Data Center reports that a startling 2,831 children under age 18 (totaling 29.6%) live in poverty in McDowell County, an 8.5% increase from 2007. Compared to a state rate of 24.6%, our county's children are faring worse than most. While approximately 33.9% of children in McDowell County are eligible for Medicaid (compared to a state rate of 32.6%), an additional 10.3% of children have no health insurance at all.

Housing Costs

Because the cost of housing is a major component of the overall cost of living for individuals and families it merits close examination. Table 16 presents housing costs as a percent of total household income, specifically the percent of housing units—both rented and mortgaged—for which the cost exceeds 30% of household income.

In McDowell County, the percentage of *rental* housing units costing more than 30% of household income was 27.3% in the 2005-2009 period and 28.6% in the 2006-2010 period, an increase of 4.8%. In WNC, the comparable percentage was 38.9% in the 2005-2009 period and 40.5% in the 2006-2010 period, an increase of 4%. These percentages correspond to state figures of 43.0% and 44.0%, respectively, with a state-level increase of only 2%. The percent of *mortgaged* housing units in McDowell County costing more than 30% of household income was 21.8% in 2005-2009 and 21.3% in 2006-2010, a decrease of 2.3%. Comparable figures for mortgaged housing units in WNC stood at 33.0% in 2005-2009 and 32.6% in 2006-2010, a decrease of 1%. These percentages compare to state figures of 31.4% and 31.7% in the same periods, and a state-level increase of not quite 1%. From these data it appears that in McDowell County, WNC, and NC as a whole a higher proportion of renters than mortgage holders spend 30% or more of household income on housing costs.

Table 16. Estimated Housing Units Spending >30% Household Income on Housing
5-Year Estimates (2005-2009 and 2006-2010)

Geography	Renter Occupied Units				Mortgaged Housing Units			
	2005-2009		2006-2010		2005-2009		2006-2010	
	Total Units	% Units Spending >30%	Total Units	% Units Spending >30%	Total Units	% Units Spending >30%	Total Units	% Units Spending >30%
McDowell County	4,376	27.3	4,819	28.6	6,750	21.8	6,884	21.3
Regional Total	82,441	38.9	86,022	40.5	122,383	33.0	132,668	32.6
State Total	1,131,480	43.0	1,157,690	44.0	1,634,410	31.4	1,688,790	31.7

Note: The percent of renter-occupied units spending greater than 30% of household income on rental housing was derived by dividing the number of renter-occupied units spending >30% on gross rent by the total renter-occupied units. Gross rent is defined as the amount of the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid for by the renter (or paid for the renter by someone else). Gross rent is intended to eliminate differentials which result from varying practices with respect to the inclusion of utilities and fuels as part of the rental payment.

Employment and Unemployment

The following definitions will be useful in understanding the data in this section.

- *Labor force* – includes all persons over the age of 16 who, during the week, are employed, unemployed or in the armed services.
- *Civilian labor force* – excludes the Armed Forces from the labor force equation.
- *Unemployed* – civilians not currently employed but are available for work and have actively looked for a job within the four weeks prior to the date of analysis; also, laid-off civilians waiting to be called back to their jobs, as well as those who will be starting new jobs in the next 30 days.
- *Unemployment rate* – calculated by dividing the number of unemployed persons by the number of people in the civilian labor force.

Employment

Table 17 summarizes employment by sector. In McDowell County the five sectors employing the greatest proportions of the workforce are, in descending order: (1) Manufacturing (36.66%), (2) Retail Trade (12.91%), (3) Health Care and Social Assistance (12.33%), (4) Accommodation and Food Service (9.24%), and (5) Public Administration (8.27%). In WNC, the five leading employment sectors are: (1) Health Care and Social Assistance (18.52%), (2) Retail Trade (13.86%), (3) Accommodation and Food Services (11.43%), (4) Manufacturing (11.28%) and (5) Educational Services (9.19%). Statewide the comparably ordered list is composed of: (1) Health Care and Social Assistance (14.45%), (2) Retail Trade (11.66%), (3) Manufacturing (11.33%), (4) Educational Services (9.58%) and (5) Accommodation and Food Services (8.95%). The WNC and NC lists are quite similar, with variations in WNC stemming from its relative lack of manufacturing jobs and the regionally greater significance of the tourism industry, represented by the Accommodations and Food Service sector. McDowell County is different from the other jurisdictions in its high employment in the manufacturing sector. Recent industry layoffs and closings have had a detrimental effect on unemployment rates, with more than 20 plants closing their doors in the last 20 years.

Table 17. Insured Employment by Sector, Annual Summary (2011)

Sector	McDowell County	WNC	NC

	Avg. No. Employed	% Total Employment in Sector**	% Total Employment in Sector**	% Total Employment in Sector**
Agriculture, Forestry, Fishing & Hunting	*	n/a	0.58	0.74
Mining	63	0.48	0.24	0.08
Utilities	*	n/a	0.36	0.35
Construction	517	3.96	4.75	4.53
Manufacturing	4,783	36.66	11.28	11.33
Wholesale Trade	284	2.18	2.35	4.38
Retail Trade	1,684	12.91	13.86	11.66
Transportation & Warehousing	147	1.13	2.53	3.27
Information	38	0.29	1.35	1.82
Finance & Insurance	176	1.35	2.25	3.88
Real Estate & Rental & Leasing	58	0.44	0.93	1.23
Professional, Scientific & Technical Services	164	1.26	3.32	4.96
Management of Companies & Enterprises	*	n/a	0.49	2.01
Administrative & Waste Services	740	5.67	4.90	6.53
Educational Services	*	n/a	9.19	9.58
Health Care & Social Assistance	1,609	12.33	18.52	14.45
Arts, Entertainment & Recreation	65	0.50	1.73	1.58
Accommodation & Food Services	1,206	9.24	11.43	8.95
Public Administration	1,079	8.27	7.18	6.18
Other Services	435	3.33	2.76	2.49
Unclassified	*	n/a	0.00	n/a
TOTAL ALL SECTORS	13,048	100.00	100.00	100.00

Table 18 summarizes the annual average wage paid to employees in the various sectors.
Data in Table 18 reveal that overall the annual wage per employee in McDowell County ($29,733) is $2,411 lower than the comparable figure for employees region-wide ($32,144) and $17,039 lower than the average annual wage statewide ($46,772).

Unemployment
The U.S. Bureau of Labor Statistics states that the unemployment rate for North Carolina in December 2010 was at 9.7%, compared to 11.7% for McDowell County. In the last five years, this county has also seen a 15% decline in available jobs, driving the unemployment rates even higher. The 2008 McDowell County Health Assessment states that private industry jobs make up approximately 83% of the workforce, and roughly 38% of these are manufacturing jobs. Recent industry layoffs and closings have had a detrimental effect on unemployment rates, with more than 20 plants closing their doors in the last 20 years.

Table 18. Insured Wages by Sector, Annual Summary (2011)

Sector	Average Annual Wage per Employee		
	McDowell County	WNC	NC
Agriculture, Forestry, Fishing & Hunting	n/a	$23,145	$28,752
Mining	$29,802	41,662	45,828
Utilities	n/a	72,196	76,552
Construction	33,428	31,190	41,316
Manufacturing	39,178	38,443	52,613
Wholesale Trade	37,864	36,182	61,194
Retail Trade	22,746	22,109	24,650
Transportation & Warehousing	41,306	39,117	43,400
Information	43,265	38,682	63,833
Finance & Insurance	37,515	42,881	75,088
Real Estate & Rental & Leasing	24,369	24,051	38,476
Professional, Scientific & Technical Services	35,631	36,584	66,951
Management of Companies & Enterprises	n/a	43,518	88,763
Administrative & Waste Services	21,582	25,753	30,258
Educational Services	n/a	32,604	39,787
Health Care & Social Assistance	29,565	32,843	42,811
Arts, Entertainment & Recreation	14,748	20,936	28,474
Accommodation & Food Services	12,929	14,424	14,877
Public Administration	32,438	33,818	43,641
Other Services	19,368	24,660	28,182
Unclassified	n/a	12,056	n/a
TOTAL ALL SECTORS	$29,733	$32,144	$46,772

Unemployment

Table 19 summarizes the annual unemployment rate for 2007 through 2011. From these data it appears that the unemployment rate in McDowell County was significantly higher than comparable figures for both WNC and NC as a whole throughout the period from 2007-2011.

Table 19. Unemployment Rate as Percent of Workforce (2007 through 2011)

Geography	Annual Average				
	2007	2008	2009	2010	2011
McDowell County	5.6	8.2	15.5	13.6	13.0
Regional Arithmetic Mean	4.9	6.8	11.8	11.8	11.5
State Total	4.8	6.3	10.5	10.9	10.5

Crime

Tables 20-22 present annual crime rates for McDowell County, WNC and the state of NC for the 10 years from 2001 through 2010. Table 20 summarizes the "index crime rate", which is the sum of the violent crime rate (murder, forcible rape, robbery, and aggravated assault) *plus* the property crime rate (burglary, larceny, arson, and motor vehicle theft). Table 21 summarizes violent crime, and Table 22 summarizes property crime.

Data in Table 20 indicate that the index crime rate in McDowell County was higher than the mean WNC index crime rate in 2003, 2005, 2006, 2008, and 2010. The mean index crime rate in WNC was far lower than the comparable state rate for every year during the decade covered in the table. There is not enough information available from the data source to interpret annual variations in these rates.

Table 20. Index Crime Rate (2001-2010)

Geography	Index Crimes per 100,000 Population									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
McDowell County	2,146.1	2,201.9	2,530.3	2,653.2	2,841.8	2,777.1	2,654.0	2,818.6	2,407.9	2,436.2
Regional Arithmetic Mean	2,163.4	2,294.3	2,413.8	2,656.0	2,648.1	2,536.4	2,688.3	2,703.4	2,502.2	2,426.4
State Total	5,005.2	4,792.6	4,711.8	4,641.7	4,622.9	4,654.4	4,658.6	4,581.0	4,191.2	3,955.7

Table 21 separates the violent crime rate from the overall index crime rate for the same period cited above. The violent crime rate in McDowell County was lower than the comparable mean WNC rate in every year cited except 2008, and lower than the state rate over the entire span from 2001 through 2010. The mean violent crime rate in WNC was significantly lower than the rate for NC as a whole throughout the period cited in the table. According to data from the NC SCHS, there were a total of 148 homicides in the 16 WNC counties during the five-year period from 2006 through 2010, 14 of them in McDowell County (*Data Workbook*).

Table 21. Violent Crime Rate (2001-2010)

Geography	Violent Crimes per 100,000 Population									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
McDowell County	158.2	52.6	174.6	195.0	161.9	194.6	158.1	202.0	150.4	136.3
Regional Arithmetic Mean	181.5	194.4	200.4	198.5	232.9	221.9	274.4	190.7	224.4	258.6
State Total	503.8	475.3	454.7	460.9	478.6	483.5	480.5	477.0	417.1	374.4

Table 22 separates the property crime rate from the overall index crime rate for the same period cited above. Comparing these figures to the index crime rate, it is clear that the majority of all index

crime committed is property crime. The property crime rate for McDowell County was higher than the comparable mean WNC rate for every year cited except 2009 and 2010; the county rate was lower in every year than the comparable NC rate. The mean property crime rate for WNC was significantly lower than the comparable rate for NC as a whole from 2001 to 2010.

Table 22. Property Crime Rate (2001-2010)

Geography	Property Crimes per 100,000 Population									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
McDowell County	1,987.9	2,149.3	2,355.7	2,458.2	2,680.0	2,582.5	2,495.9	2,616.6	2,257.5	1,987.9
Regional Arithmetic Mean	1,981.9	2,093.9	2,215.2	2,423.1	2,410.3	2,298.7	2,468.3	2,494.0	2,262.1	2,228.4
State Total	4,501.4	4,317.3	4,257.1	4,180.7	4,144.3	4,170.9	4,178.1	4,103.9	3,774.1	3,581.4

CHAPTER 3 – HEALTH STATUS AND HEALTH OUTCOME PARAMETERS

Health Rankings

America's Health Rankings

Each year for 20 years, America's Health Rankings™, a project of United Health Foundation, has tracked the health of the nation and provided a comprehensive perspective on how the nation—and each state—measures up. America's Health Rankings is the longest running state-by-state analysis of health in the US (United Health Foundation, 2011).

America's Health Rankings are based on several kinds of measures, including *determinates* (socioeconomic and behavioral factors and standards of care that underlay health and well-being) and *outcomes* (measures of morbidity, mortality, and other health conditions). Together, the determinates and outcomes help calculate an overall rank. Table 23 shows where NC stood in the 2011 rankings relative to the "best" and "worst" states (where 1="best"). *When comparing county or regional health data with data for the state as a whole it is necessary to keep in mind that NC ranks 32nd overall, just outside the bottom third of the 50 US states.*

Table 23. State Rank of North Carolina in America's Health Rankings (2011)

Geography	National Rank (Out of 50)		
	Overall	Determinates	Outcomes
Vermont	1	1	5
North Carolina	32	31	38
Mississippi	50	48	50

Source: United Health Foundation, 2011. *America's Health Rankings*. Available at: http://www.americashealthrankings.org/mediacenter/mediacenter2.aspx

County Health Rankings

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 birthweight	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	

Table 24 presents the health outcome and health factor rankings for McDowell County.

Table 24. County Health Rankings via MATCH (2012)

Geography	County Rank (Out of 100)[1]						
	Health Outcomes		Health Factors				Overall Rank
	Mortality	Morbidity	Health Behaviors	Clinical Care	Social & Economic Factors	Physical Environment	
McDowell County	55	67	42	59	66	72	62

Source: *County Health Rankings and Roadmaps, 2012*. Available at http://www.countyhealthrankings.org/app/north-carolina/2012/rankings/outcomes/overall

Pregnancy and Birth Data

Pregnancy Rate

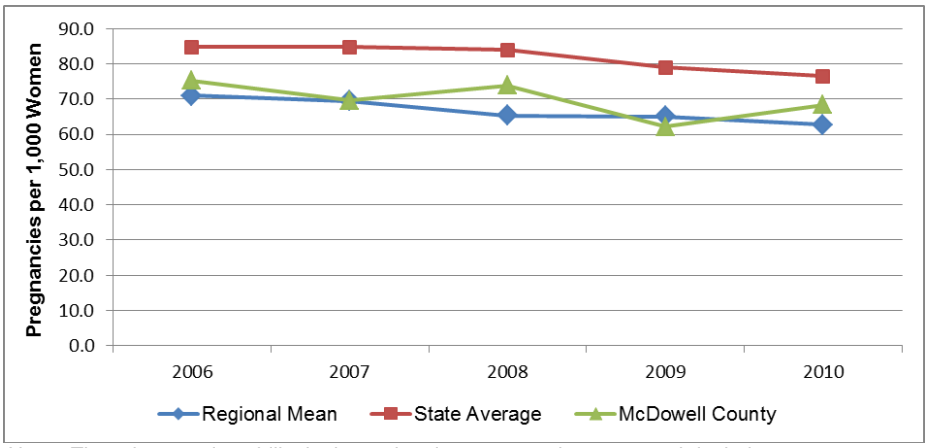
The following definitions and statistical conventions will be helpful in understanding the data on pregnancy:

- Reproductive age = 15-44
- Total pregnancies = live births + induced abortions + fetal death at >20 weeks gestation
- Pregnancy rate = number of pregnancies per 1,000 women of reproductive age
- Fertility rate = number of live births per 1,000 women of reproductive age
- Abortion rate = number of induced abortions per 1,000 women of reproductive age

The NC SCHS stratifies much of the pregnancy-related data it maintains into two age groups: ages 15-44 (all women of reproductive age) and ages 15-19 ("teens"). Figures below present pregnancy rate data for ages 15-44 and 15-19. Note that regional rates are presented as *arithmetic means* (sums of individual county rates divided by the number of county rates). These means are approximations of true regional rates, which NC SCHS does not compute.

Data in Figure 1 illustrate that the pregnancy rate for women ages 15-44 in McDowell County was lower than the comparable state rate and approximately equal to the mean WNC rate over most of the period cited. The pregnancy rates in all three jurisdictions decreased between 2006 and 2010, by 9.0% in McDowell County, by 11.6% in WNC, and by 9.9% in NC. The 2010 pregnancy rate was 68.4 in McDowell County, 62.7 in WNC, and 76.4 in NC.

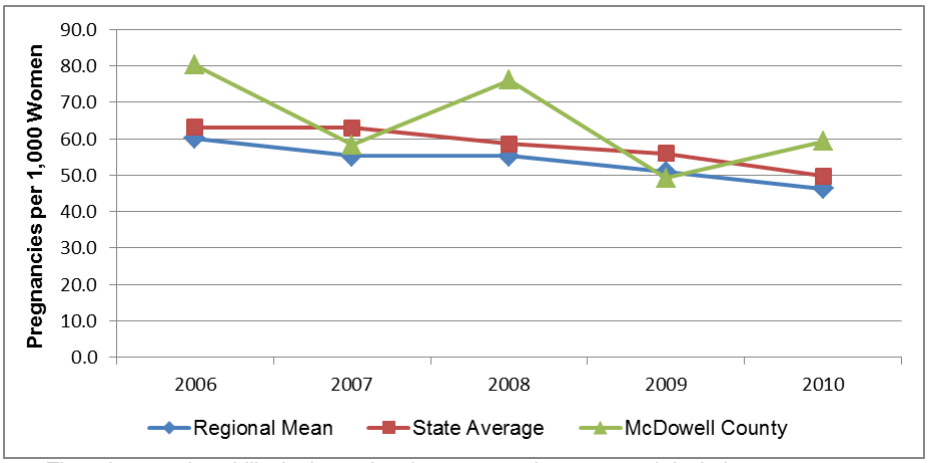
Figure 1 – Pregnancy Rate Ages 15-44, Pregnancies per 1,000 Women (Single Years, 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

- Data in Figure 2 illustrate that the pregnancy rate for teens (ages 15-19) in McDowell County was both above and below the comparable WNC and NC rates over the period cited. Note that the teen pregnancy rate in all three jurisdictions decreased between 2006 and 2010, by 26.2% in McDowell County, by 22.9% in WNC, and by 21.2% in NC.

Figure 2 – Pregnancy Rate Ages 15-19, Pregnancies per 1,000 Women (Single Years, 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

- While North Carolina has made strong progress is decreasing the number of teen pregnancies, cutting its rate in half since it peaked in 1991, the state still has the 14th highest teen pregnancy rate in the United States, with underserved rural counties typically having higher rates than urban counties. The Healthy People 2020 target is 36.2 while the 2010 teen pregnancy rate was 59.2 in McDowell County, 46.3 in WNC, and 49.7 in NC. In 2010, there were 77 babies born to teen mothers in McDowell County (up from 67 in 2009), consequently ranking our county 30th in the state for teen pregnancy.

Pregnancy Risk Factors

Smoking During Pregnancy

Smoking during pregnancy is an unhealthy behavior that may have negative effects on both the mother and the fetus. Smoking can lead to fetal and newborn death, and contribute to low birth weight and pre-term delivery. In pregnant women, smoking can increase the rate of placental problems, and contribute to premature rupture of membranes and heavy bleeding during delivery (March of Dimes, 2010).

Table 25 presents data on the number and percent of births resulting from pregnancies in which the mother smoked during the prenatal period. The percentage frequency of smoking during pregnancy in McDowell County was approximately the same as or slightly higher than the comparable mean percentages for WNC, and the WNC means were significantly higher than the comparable percentages statewide in *all* of the time periods cited in the table. The frequency of smoking during pregnancy in McDowell County, WNC, and NC all improved over the period cited, by 2.2% in McDowell County, by 8.0% in WNC, and by 14.7% in NC.

Table 25. Births to Mothers Who Smoked During the Prenatal Period (Five-Year Aggregates, 2001-2005 through 2005-2009)

Geography	2001-2005		2002-2006		2003-2007		2004-2008		2005-2009	
	#	%	#	%	#	%	#	%	#	%

McDowell County	569	22.3	571	22.1	569	22.0	578	22.0	568	21.8
Regional Total	7,496	22.4	7,442	22.1	7,361	21.7	7,106	21.2	6,919	20.6
State Total	76,712	12.9	74,901	12.4	73,887	11.9	72,513	11.5	70,529	11.0

Late or No Prenatal Care

Good pre-conception health and early prenatal care can help assure women the healthiest pregnancies and best birth outcomes possible. Access to prenatal care is particularly important during the first three months of pregnancy (March of Dimes, 2012).

Table 26 shows data summarizing utilization of prenatal care during the first three months of pregnancy. The percent of births in McDowell County that included early prenatal care consistently fell between the rates for WNC and NC. Overall, the McDowell County percentage fell from 86.0% in 2001-2005 to 84.2% in 2005-2009, a decrease of 2.1%. The frequency of early prenatal care utilization was higher in WNC than in the state as a whole for every period noted in the figure, but the percentages for both the region and the state decreased over the period cited, by 2.7% in WNC and by 1.7% in NC.

Table 26. Births to Mothers Receiving Prenatal Care During the First Trimester (Five-Year Aggregates, 2001-2005 through 2005-2009)

Geography	2001-2005		2002-2006		2003-2007		2004-2008		2005-2009	
	#	%	#	%	#	%	#	%	#	%
McDowell County	2,192	86.0	2,193	84.8	2,193	84.7	2,220	84.6	2,197	84.2
Regional Total	35,375	89.3	35,799	89.0	36,433	88.9	36,806	88.0	37,049	86.9
State Total	497,895	83.5	503,331	83.0	510,954	82.5	519,098	82.1	524,902	82.1

Birth Outcomes

Low Birth Weight

Low birth weight can result in serious health problems in newborns (e.g., respiratory distress, bleeding in the brain, and heart, intestinal and eye problems), and cause lasting disabilities (mental retardation, cerebral palsy, and vision and hearing loss) or even death (March of Dimes, 2012).

Table 27 summarizes data on the number and percent of low birth weight ($\leq$ 2500 grams or 5.5 pounds) births. (Note that NC SCHS also maintains data on *very* low birth weight [$\leq$1500 grams or 3.3 pounds] births. There are so few very low birth weight births in WNC that county rates are too unstable to calculate a stable regional mean.)

In WNC, the percentage of low-birth weight births was lower than the comparable percentage for NC as a whole in each of the aggregate periods cited in the table. Further, the percentages were relatively static in both jurisdictions during the entire period.

In McDowell County over the time span from 2002-2006 through 2006-2010, low birth weight data demonstrated some variability, but county percentages were higher than comparable figures for the region in every aggregate period except 2003 -2007.

Table 27. Low-Weight Births (Five-Year Aggregates, 2002-2006 through 2006-2010)

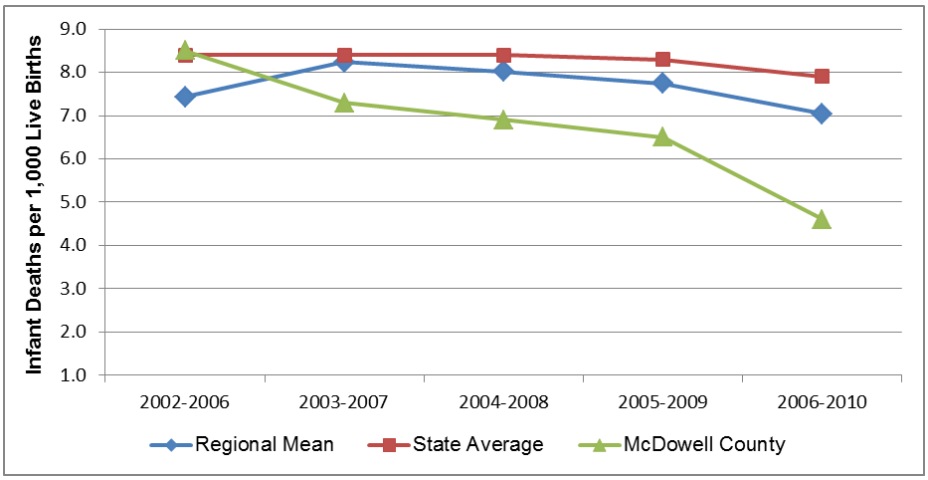
Geography	2002-2006		2003-2007		2004-2008		2005-2009		2006-2010	
	#	%	#	%	#	%	#	%	#	%
McDowell County	226	8.7	216	8.3	220	8.4	223	8.5	224	8.7
Regional Total	3,447	8.2	3,473	8.4	3,467	8.3	3,434	8,2	3,373	8.2
State Total	54,991	9.1	56,541	9.1	57,823	9.1	58,461	9.1	58,260	9.1

Infant Mortality

Infant mortality is the number of deaths of infants under one year of age per 1,000 live births. Figure 3 presents infant mortality data for WNC and the state. When interpreting this data it is important to remember that the infant mortality rate for NC as a whole is among the highest (i.e., worst) in the US, ranking 46th out of 50 according to the 2011 *America's Health Rankings*, cited previously.

The state's infant mortality rate recently has begun to decrease; after hovering near 8.5 for several years, it was 7.9 in the most recent aggregate period (2006-2010). The mean infant mortality rate for WNC has been lower than the state rate, and appears to be trending in the right direction. While the infant mortality rate for McDowell County plotted in Figure 3 appears generally lower than both the comparable WNC and NC rates, it should be noted that all five of the plotted rates except the first one are unstable due to small numbers of events (n=12-19 per aggregate period).

Figure 3. Infant Mortality Rate, Infant Deaths per 1,000 Live Births (Five-Year Aggregates, 2002-2006 through 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rates.

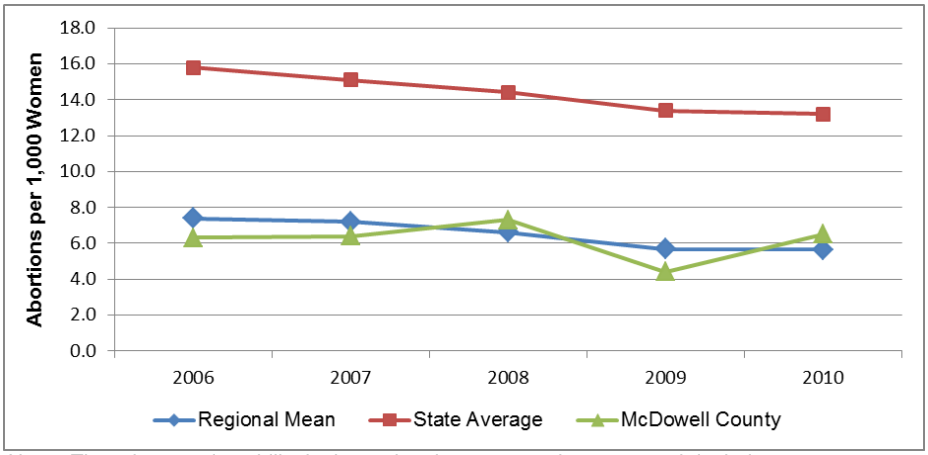
Due to small non-white populations and similarly small numbers of infant deaths among them in both McDowell County and WNC it is not possible to calculate stable minority infant mortality rates for those jurisdictions. Statewide, the infant mortality rate among non-Hispanic African Americans is *more than twice* the comparable rate among whites (*Data Workbook*).

Abortion

Figures 4 and 5 depict abortion rates for the region and state. Data in Figure 4 show that the mean abortion rate in WNC for women ages 15-44 was less than half the abortion rate for the state as a whole, and that the rate in both jurisdictions fell over the time period cited in the figure, by 24.3% in WNC and by 16.5% in NC. In 2010 the abortion rate was 5.6 in WNC and 13.2 in NC.

The abortion rate in McDowell County was mostly below both the WNC and NC rates throughout the period cited. In 2010 the abortion rate was 6.5 in McDowell County.

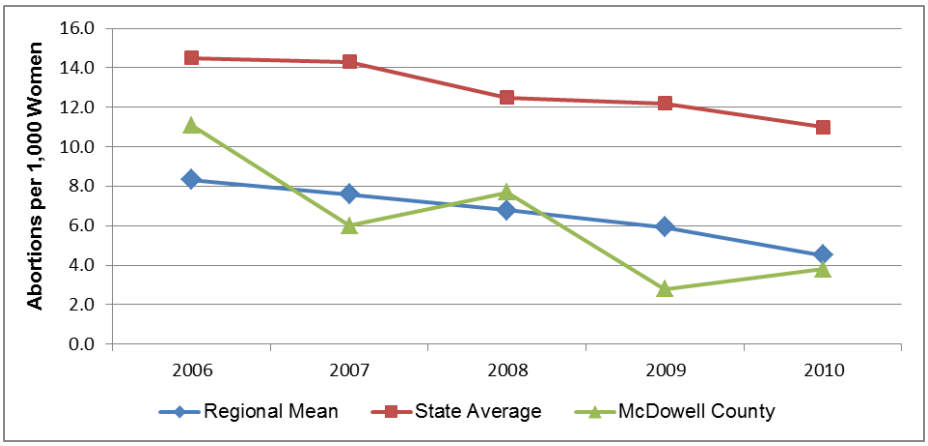
Figure 4. Pregnancies Ending in Abortion, Ages 15-44, per 1,000 Population (Single Years, 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rates.

Data in Figure 5 show that the mean abortion rate in WNC for teens ages 15-19 was slightly more than half the teen abortion rate for the state as a whole for the first three years cited in the figure and less than half the state rate in the most recent two years. The rate in both jurisdictions fell over the time period cited in the figure, by 45.8% in WNC and by 24.1% in NC. The teen abortion rate in McDowell County appears to have been lower than the comparable WNC and state rates in three of the five years cited. In 2010 the teen abortion rate in McDowell County was reported as 3.8. However, the three lowest abortion rates for McDowell County for the period cited likely are unstable due to small numbers of abortions (n=4-8 per year).

Figure 5. Pregnancies Ending in Abortion, Age 15-19, per 1,000 Population (Single Years, 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

Mortality Data

This section describes mortality for the 15 leading causes of death, as well as mortality due to four major site-specific cancers. The list of topics and the accompanying data is derived from the NC SCHS *County Health Databook*. Unless otherwise noted, the numerical data are age-adjusted and represent overlapping five-year aggregate periods.

Leading Causes of Death

Table 28 compares the mean rank order of the 15 leading causes of death in McDowell County, WNC and NC for the five-year aggregate period 2006-2010. (The causes of death are listed in descending rank order for WNC.) From this data it appears that chronic lower respiratory disease, pneumonia and influenza, motor vehicle injury and suicide rank higher as causes of death in WNC than in the state as a whole. Conversely, cerebrovascular disease, kidney disease, and septicemia rank lower as causes of death regionally than statewide.

The leading causes of death in McDowell County differ in rank order from the comparable lists for WNC or NC, most notably in a higher county placement for cancer and unintentional motor vehicle injuries. In McDowell County, the mortality rate for total cancer (196.6) exceeds the mean WNC rate (180.3) by 9.0%, the mortality rate for diabetes (28.7) exceeds the mean WNC rate (19.6) by 46.6%, and the mortality rate resulting from motor vehicle injuries (18.1) exceeds the WNC rate (16.7) by 8.4%. Other differences in mortality statistics will be covered as each cause of death is discussed

separately below. It should be noted from the onset, however, that for some causes of death (e.g., conditions ranked 14 and 15 below) there may not be stable county mortality rates, due to small numbers of deaths. Some unstable data will be presented in this document, but always accompanied by cautions regarding its use.

Table 28. Rank of Cause-Specific Mortality Rates for the Fifteen Leading Causes of Death (Five-Year Aggregate, 2006-2010)

Leading Cause of Death	McDowell County		WNC Mean		NC	
	Rank	Rate	Rank	Rate	Rank	Rate
Heart Disease	2	195.7	1	194.4	1	184.9
Total Cancer	1	196.6	2	180.3	2	183.1
Chronic Lower Respiratory Disease	3	54.3	3	51.1	4	46.4
Cerebrovascular Disease	4	47.6	4	44.0	3	47.8
All Other Unintentional Injuries	5	34.5	5	42.9	5	28.6
Alzheimer's Disease	7	28.5	6	30.7	6	28.5
Diabetes Mellitus	6	28.7	7	19.6	7	22.5
Pneumonia and Influenza	9	16.8	8	19.1	9	18.6
Unintentional Motor Vehicle Injuries	8	18.1	9	16.7	10	16.7
Suicide	11	12.2	10	16.7	12	12.1
Nephritis, Nephrotic Syndrome & Nephrosis	10	16.6	11	16.2	8	18.9
Septicemia	12	10.9	12	13.4	11	13.7
Chronic Liver Disease & Cirrhosis	13	8.3	13	13.2	13	9.1
Homicide	14	n/a	14	n/a	14	6.6
Acquired Immune Deficiency Syndrome	15	n/a	15	n/a	15	5.4

It should be noted that the rank order of leading causes of death varies somewhat among the 16 counties in WNC. Further, NC SCHS has not calculated mortality rates for some causes of death in several counties because the number of deaths fell below the Center's threshold of 20 per five-year aggregate period. The mean WNC ranking displayed in Table 28 includes only stable rates presented in the *Data Workbook*.

Each age group tends to have its own leading causes of death. Table 29 lists the three leading causes of death by age group for the five-year aggregate period from 2006-2010. (Note that for this purpose it is important to use *non*-age adjusted death rates.) The WNC rankings were developed by a qualitative examination of the individual ranking lists for each of the counties in the region.

In McDowell County, deaths in the youngest age group were too highly varied by cause to yield stable rates for any cause of death; that instability is indicated by *italics*. Causes of death in the four older age groups are similar to those noted for WNC as a whole.

Noteworthy findings among the age-grouped rankings of mortality in WNC compared to NC as a whole include the relatively greater regional prominence of non-motor vehicle injury in the two youngest age groups (00-19 and 20-39) and the third-place ranking of Alzheimer's disease among the leading causes of death in the oldest age group (85+).

Table 29. Leading Causes of Death by Age Group
Unadjusted Death Rates per 100,000 Population
(Five-Year Aggregate, 2006-2010)

Age Group	Rank	Leading Cause of Death		
		McDowell County	WNC	NC
00-19	**1**	*Motor vehicle injuries*	Perinatal conditions	Perinatal conditions
	2	*Perinatal conditions*	Motor vehicle injuries	Congenital abnormalities
	3	*Congenital abnormalities*	Congenital abnormalities	Motor vehicle injuries
			Other unintentional injuries	
20-39	**1**	Other unintentional injuries	Other unintentional injuries	Motor vehicle injuries
	2	Motor vehicle injuries	Motor vehicle injuries	Other unintentional injuries
	3	Suicide	Suicide	Suicide
40-64	**1**	Cancer – all sites	Cancer – all sites	Cancer – all sites
	2	Heart disease	Heart disease	Heart disease
	3	Other unintentional injuries	Other unintentional injuries	Other unintentional injuries
65-84	**1**	Cancer – all sites	Cancer – all sites	Cancer – all sites
	2	Heart disease	Heart disease	Heart disease
	3	Chronic lower respiratory disease	Chronic lower respiratory disease	Chronic lower respiratory disease
85+	**1**	Diseases of the heart	Heart disease	Heart disease
	2	Cancer – all sites	Cancer – all sites	Cancer – all sites
	3	Alzheimer's disease	Alzheimer's disease	Cerebrovascular disease

The following section examines in greater detail each of the causes of death listed in Table 28, in the order of highest mean WNC rank to lowest, beginning with heart disease.

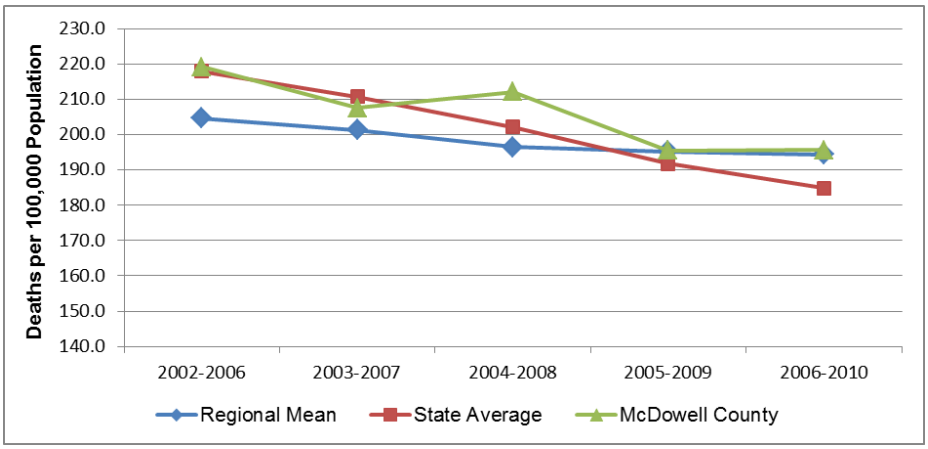
Heart Disease Mortality

Heart disease is an abnormal organic condition of the heart or of the heart and circulation. Heart disease is the number one killer in the US. It is also a major cause of disability. The most common cause of heart disease, coronary artery disease, is a narrowing or blockage of the coronary arteries, the blood vessels that supply blood to the heart itself. This is the major reason people have heart attacks. Other kinds of heart problems may happen to the valves in the heart, or the heart may not pump well and cause heart failure (US National Library of Medicine).

Heart disease was the leading cause of death in WNC and NC but the second leading cause of death in McDowell County in the 2006-2010 aggregate period (Table 28, cited previously). Figure 6 presents heart disease mortality trend data. This graph illustrates that the heart disease mortality rate in McDowell County was between or near the comparable rates for WNC and NC throughout most the period cited. The graph also illustrates that the heart disease mortality rate in McDowell County fell from 219.2 in the 2002-2006 aggregate period to 195.7 in the 2006-2010 aggregate period, a decrease of 10.7%. Over the same interval heart diseases mortality rates decreased in the other two jurisdictions. The NC heart disease mortality rate fell from 217.9 for the 2002-2006 aggregate period to 184.9 for the 2006-2010 aggregate period, a decrease of 15.1%. The mean WNC rate, which for the first three periods cited was below the state rate, surpassed the state rate and leveled during the two most recent periods. For the 2002-2006 period the mean WNC heart disease mortality rate was

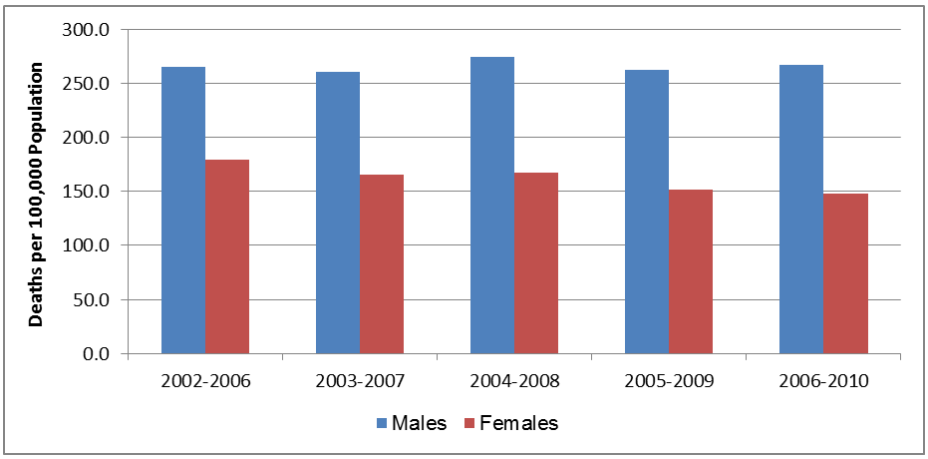
204.6; by the 2006-2010 period it had fallen to 194.4, a decrease of 4.9%.

Figure 6. Heart Disease Mortality Rate, Deaths per 100,000 Population Five-Year Aggregates (2002-2006 through 2006-2010)



Further subdivision of heart disease mortality data reveals a striking gender disparity. Figure 7 plots heart disease mortality rates for McDowell County, stratified by gender. From these data it is clear that McDowell County males have had a higher heart disease mortality rate than females for the past decade, with the difference as high as 81%. This trend data also shows, however, an apparent 17.5% decrease in the heart disease mortality rate among county females (from 179.3 to 148.0) and a corresponding 0.9% increase in the rate among county males (from 264.9 to 267.3) from the beginning of the entire period cited to the end. As a result of this shift, in the 2006-2010 aggregate period the heart disease mortality rate difference between males (267.3) and females (148.0) in the county was 81%, the largest percent difference over the period cited.

Figure 7. Gender Disparities in Heart Disease Mortality, McDowell County (Five-Year Aggregates, 2002-2006 through 2006-2010)



Only four of the 16 counties in WNC (Buncombe, Jackson, Rutherford and Swain) had large enough minority populations to yield stable heart disease mortality rates for minority populations, so it is not possible to calculate stable mean region-wide rate for minorities. At the state level, heart disease mortality demonstrates significant racial disparity, with the minority rate higher than the non-minority rate. For example, statewide in 2006-2010 the heart disease mortality rate among non-Hispanic African American males (285.8) was almost 23% higher than the comparable rate among non-Hispanic white males (233.0), and the rate among non-Hispanic African American females (175.7) was 25% higher than the rate among non-Hispanic white females (140.9). The comparable rates among Other non-Hispanics were 148.7 for males and 102.7 for females. Hispanics had the lowest heart disease mortality rates, 55.7 for males and 36.9 for females (*Data Workbook*).

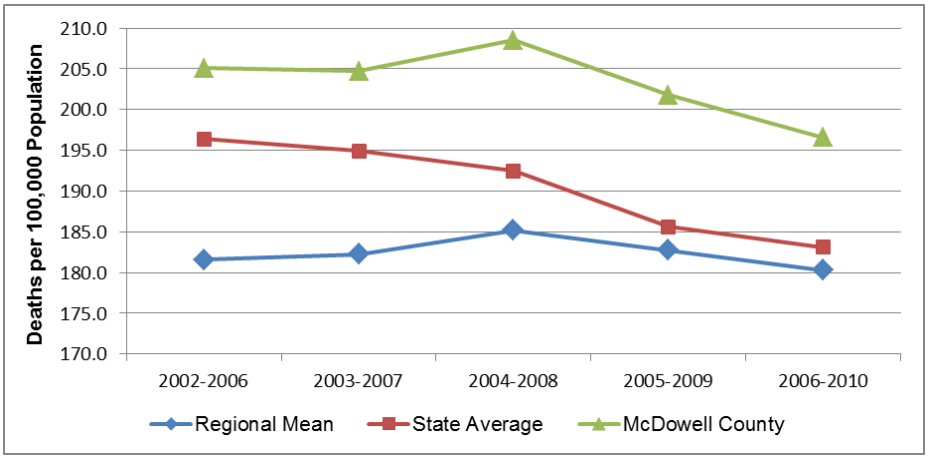
Total Cancer Mortality

Cancer is a term for diseases in which abnormal cells divide without control and can invade nearby tissues. Cancer cells also can spread to other parts of the body through the blood and lymph systems. If the disease remains unchecked, it can result in death (National Cancer Institute).

Taken together, cancers of all types compose the second leading cause of death in WNC and NC, but the first leading cause of death in McDowell County in 2006-2010 (Table 28, cited previously).

Figure 8 presents mortality trend data for total cancer. This graph illustrates how over the period cited the total cancer death rate in McDowell County was well above the comparable rates for WNC and NC. While the county and state total cancer mortality rates both fell, the mean WNC rate changed very little. The McDowell County rate decreased from 205.1 to 196.6 (4.1%), the state rate decreased from 196.4 to 183.1 (6.8%), but the mean WNC rate decreased only from 181.5 to 180.3 (0.7%).

Figure 8. Total Cancer Mortality Rate, Deaths per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)



Like heart disease mortality, total cancer mortality demonstrates a gender disparity. Figure 9 plots mean total cancer mortality rates for McDowell County, stratified by gender. From these data it is clear that males had and continue to have a higher total cancer mortality rate than females for the past decade. In the most recent aggregate period (2006-2010) the total cancer mortality rate for McDowell County males (241.6) was 48.1% higher than the comparable rate for females (163.1)

Figure 9. Gender Disparities in Total Cancer Mortality, McDowell County (Five-Year Aggregates, 2002-2006 through 2006-2010)

Regionally, only four of the 16 counties in WNC (Buncombe, Jackson, Rutherford and Swain) had large enough minority populations to yield stable total cancer mortality rates, so it is not possible to calculate stable mean region-wide rates for minority populations. At the state level, total cancer mortality demonstrates significant racial disparity, with the minority rates higher than non-minority rates. For example, statewide in 2006-2010 the total cancer mortality rate among non-Hispanic African American males (302.9) was 35% higher

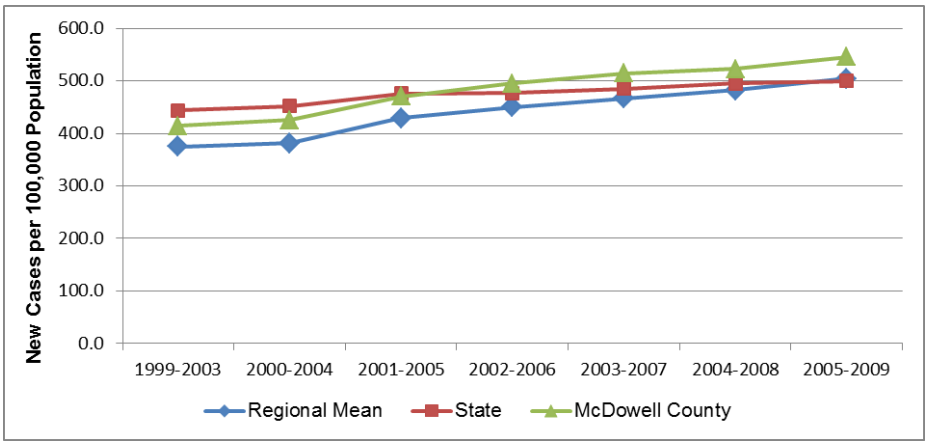
than the comparable rate among non-Hispanic white males (224.6), and the rate among non-Hispanic African American females (166.6) was 12% higher than the rate among non-Hispanic white females (149.3). The comparable total cancer mortality rates for Other non-Hispanics were 145.7 for males and 103.2 for females. Hispanics had the lowest total cancer mortality rates, 66.0 for males and 61.2 for females (*Data Workbook*).

Since total cancer is a very significant cause of death, it is useful to examine patterns in the development of new cases of cancer in the county. The statistic important to understanding the growth of a health problem is *incidence*. Incidence is the population-based rate at which new cases of a disease occur and are diagnosed. It is calculated by dividing the number of newly diagnosed cases of a disease or condition during a given period by the population size during that period. Typically, the resulting value is multiplied by 100,000 and is expressed as cases per 100,000; sometimes the multiplier is a smaller number, such as 10,000 or 1,000. Cancer incidence rates were obtained from the NC Cancer Registry, which collects data on newly diagnosed cases from NC clinics and hospitals as well as on NC residents whose cancers were diagnosed at medical facilities in bordering states.

Figure 10 graphs the incidence rates for total cancer for seven five-year aggregate periods. From this data it appears that the incidence rate for total cancer increased in McDowell County, WNC and NC between 1999-2003 and 2005-2009. In McDowell County, the total cancer incidence rate rose from 414.0 at the beginning of the period cited to 522.5 at the end, an increase of 26.2%. The county rate has surpassed both the mean WNC and NC rates.

While both state and mean WNC total cancer incidence rates increased over the period cited in the graph, the slope of increase for WNC is greater than that for the state as a whole. The NC rate rose from 444.0 in 1999-2003 to 500.1 in 2005-2009, a 12.6% increase. The mean total cancer incidence rate in WNC rose from 374.5 in 1999-2003 to 503.8 in 2005-2009, an increase of 35%. Further, the regional incidence rate for total cancer, which for years had been below the comparable NC rate, surpassed the state rate for the first time in the 2005-2009 period.

Figure 10. Total Cancer Incidence Rate, New Cases per 100,000 Population
(Five-Year Aggregates, 1999-2003 through 2005-2009)



To this point the discussion of cancer mortality and incidence has focused on figures for total cancer. In McDowell County, as throughout both WNC and the state of NC, there are four site-specific cancers that cause most cancer deaths: breast cancer, colon cancer, lung cancer, and prostate cancer. Table 30 summarizes the age-adjusted mortality rates for the four site-specific cancers for the 2006-2010 aggregate period. In McDowell County lung cancer has the highest mortality rate, followed by prostate cancer, breast cancer, and colon cancer. The county mortality rates for all four site-specific cancers exceed the comparable rates for WNC and NC. In WNC, lung cancer is the site-specific cancer with the highest mortality, followed by breast cancer, prostate cancer, and colon cancer.

Table 30. Age-Adjusted Mortality Rates for Major Site-Specific Cancers (2006-2010)

Geography	Deaths per 100,000 Population			
	Lung Cancer	Breast Cancer	Prostate Cancer	Colon Cancer
McDowell County	59.9	26.9	27.0	19.5
Regional Mean	54.7	24.3	22.9	16.6
State	55.9	23.4	25,5	16,0

Multi-year mortality rate trends for these four site-specific cancers will be presented subsequently, as each cancer type is discussed separately.

Table 31 summarizes the age-adjusted incidence rates for these four site-specific cancers for the 2005-2009 aggregate period. From this data it appears that in McDowell County, as in WNC, breast cancer was the site-specific cancer with the highest incidence, followed by prostate cancer, lung cancer, and colon cancer. The McDowell County incidence rates for breast, lung and colon cancer were above the comparable incidence rates for WNC and NC; the county incidence rate for prostate cancer was above the mean incidence rate for WNC but above the rate for NC. Multi-year incidence rate trends for these four site-specific cancers will be presented subsequently, as each cancer type is discussed separately.

Table 31. Age-Adjusted Incidence Rates for Major Site-Specific Cancers (2005-2009)

Geography	New Cases per 100,000 Population			
	Breast Cancer	Prostate Cancer	Lung Cancer	Colon Cancer
McDowell County	166.5	153.5	92.9	51.6
Regional Mean	154.0	139.2	75.4	46.0
State	154.5	158.3	75.9	45.5

Lung Cancer Mortality

Lung cancer was the leading cause of cancer mortality in McDowell County in 2006-2010 (Table 30, cited above). Figure 11 plots lung cancer mortality rates for several aggregate periods. This data reveals that the lung cancer mortality rate in McDowell was higher than the comparable rates for WNC and NC for the period cited in the graph. The lung cancer mortality rate in McDowell County fell from 67.6 for 2002-2006 to 59.9 for 2006-2010, a decrease of 11.4%. Statewide the lung cancer mortality rate fell from 59.8 for 2002-2006 to 55.9 for 2006-2010, a 6.5% decrease over the period. The comparable mean WNC rate fluctuated somewhat but was essentially the same at the end of the period (54.7) as at the beginning (54.2).

Figure 11. Lung Cancer Mortality Rate, Deaths per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)

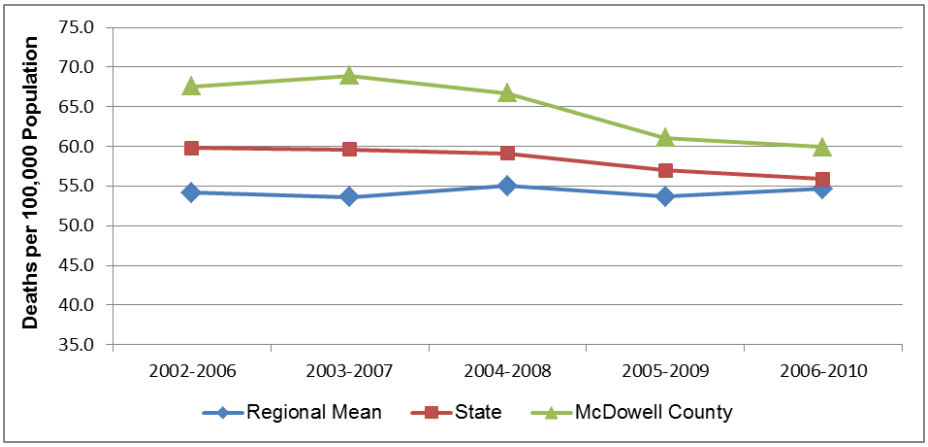
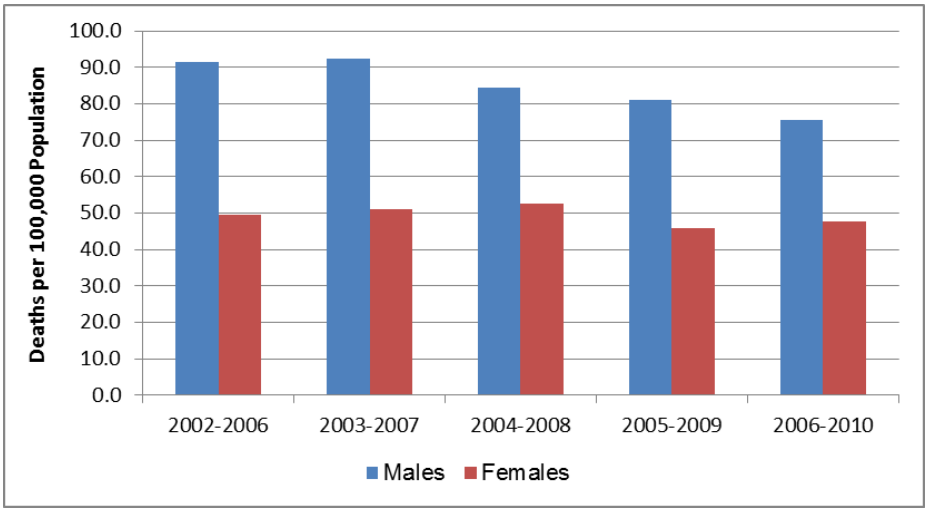


Figure 12 presents gender-stratified McDowell County lung cancer mortality rates for several aggregate periods. From this data it is clear that males experience disproportionately higher lung cancer mortality than females, with the lung cancer mortality rate among men from 48%-81% higher than the rate among women over the period cited. Of further note is the apparent recent increase in lung cancer mortality rates among McDowell County males, and simultaneous but less pronounced decrease in lung cancer mortality rates among county females.

Figure 12. Gender Disparities in Lung Cancer Mortality, McDowell County (Five-Year Aggregates, 2002-2006 through 2006-2010)



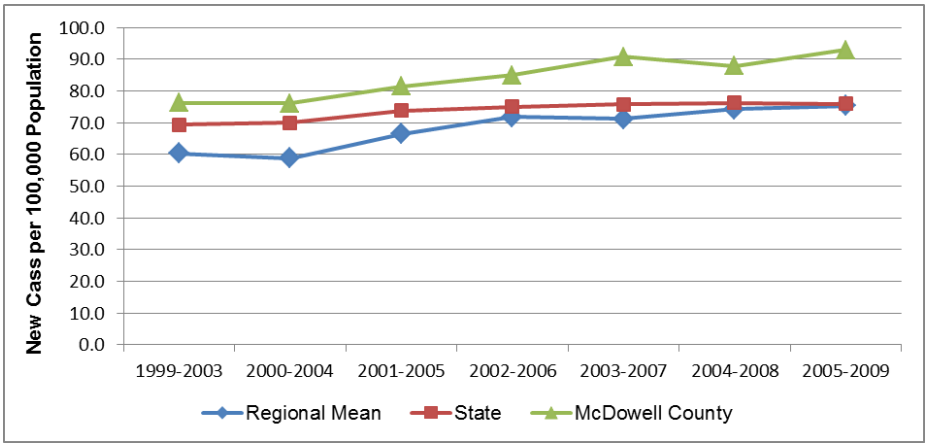
Regionally, only one of the 16 counties in WNC (Buncombe) had large enough minority populations to yield stable minority lung cancer mortality rates, so it is not possible to calculate stable mean region-wide rates for minorities. Statewide, lung cancer mortality rates demonstrate racial disparity. For example, statewide in 2006-

2010 the lung cancer mortality rate among African American non-Hispanic males (90.9) was 19% higher than the comparable rate among white non-Hispanic males (76.1); however, the rate among African American non-Hispanic females (32.7) was 25% lower than the rate among white non-Hispanic females (43.7). The comparable rates among "Other" non-Hispanics were 47.2 for males and 24.6 for females. Hispanic males and females had the lowest lung cancer mortality rates, 12.7 and 8.6, respectively (*Data Workbook*).

Since lung cancer is a significant cause of mortality in McDowell County, it is instructive to examine the trend of development of new lung cancer cases over time. Figure 13 depicts the seven-year trend of lung cancer incidence.

From this data it appears that lung cancer incidence in McDowell County, which was higher than both the mean WNC and NC rates throughout the period cited, increased 21.9% (from 76.2 to 92.9) between 1999-2003 and 2005-2009. Region-wide, the mean lung cancer incidence rate has been creeping upward over the past several years, from a point well below the comparable state rate to a point barely below it. The lung cancer incidence rate in WNC increased 25.0% from the 1999-2003 aggregate period (60.3) to the 2005-2009 aggregate period (75.4), while the statewide lung cancer incidence rate increased by 9.5% (from 69.3 to 75.9) over the same time frame. Since lung cancer mortality is already on the rise in the region, the increase in the incidence rate may portend additional lung cancer mortality in the future.

Figure 13. Lung Cancer Incidence, New Cases per 100,000 Population (Five-Year Aggregates, 1999-2003 through 2005-2009)

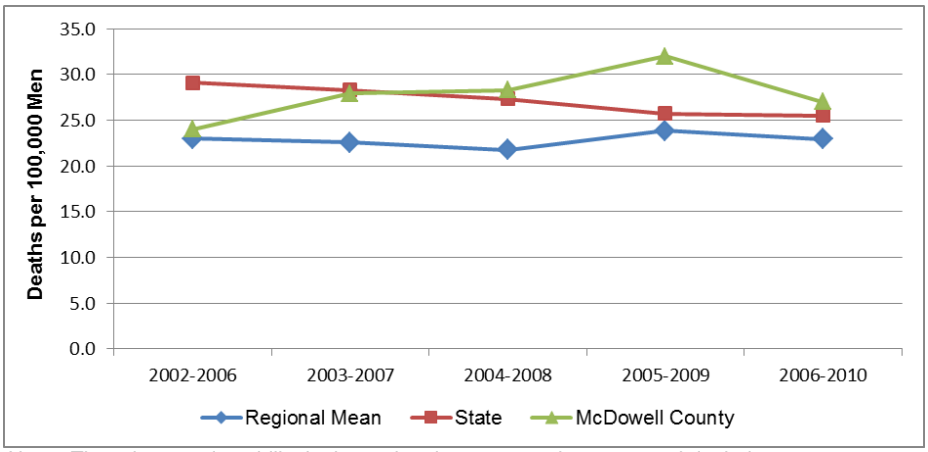


Prostate Cancer Mortality

Prostate cancer was the second leading cause of cancer deaths in McDowell County for the 2006-2010 aggregate period (Table 30, cited previously). Figure 14 plots the prostate cancer mortality trend for several aggregate periods. Statewide, prostate cancer mortality demonstrates a slight downward trend, with the 2006-2010 rate (25.5)

approximately 12% lower than the comparable rate in 2002-2006 (29.1). In WNC, there has been fluctuation but little net decrease in the mean prostate cancer mortality rate over the period cited in the graph (23.0 the first aggregate period; 22.9 the last aggregate period). In McDowell County, the prostate cancer mortality rate fluctuated around the state rate, ending the 2006-2010 aggregate period above the state rate. Over the entire period cited, the prostate cancer mortality rate in McDowell County rose from 24.0 to 27.0, an increase of 12.5%.

Figure 14. Prostate Cancer Mortality Rate, Deaths per 100,000 Men (Five-Year Aggregates, 2002-2006 through 2006-2010)

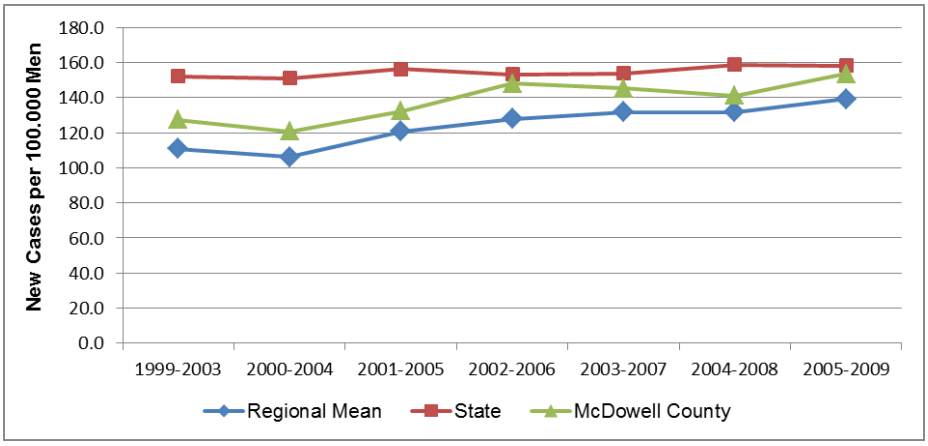


Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

In WNC, none of the 16 counties had large enough minority populations to yield stable prostate cancer mortality rates for any minority group. Statewide, there is a significant racial disparity in prostate cancer mortality. For 2006-2010 in NC as a whole the prostate cancer mortality rate among non-Hispanic African American males (59.4) was *three times* the rate for either non-Hispanic white males (20.4) or "Other" non-Hispanic males (18.2). The prostate cancer mortality rate for Hispanic males (9.5) was the lowest of any minority group in NC (*Data Workbook*).

Prostate cancer incidence statewide has remained relatively stable in recent years, increasing by 4.1%, from 152.0 to 158.3, in the period from 1999-2003 through 2005-2009 (Figure 15). Over the same span of time, the mean prostate cancer incidence rate in WNC rose from 110.7 in the 1999-2003 period to 139.2 in 2005-2009 period, a total increase of 25.7%, or over six times the percentage increase statewide. In McDowell County, where the prostate cancer incidence rate remained between the mean WNC and NC rates, the rate rose from 127.2 to 153.5 over the same period, an overall increase of 20.7%.

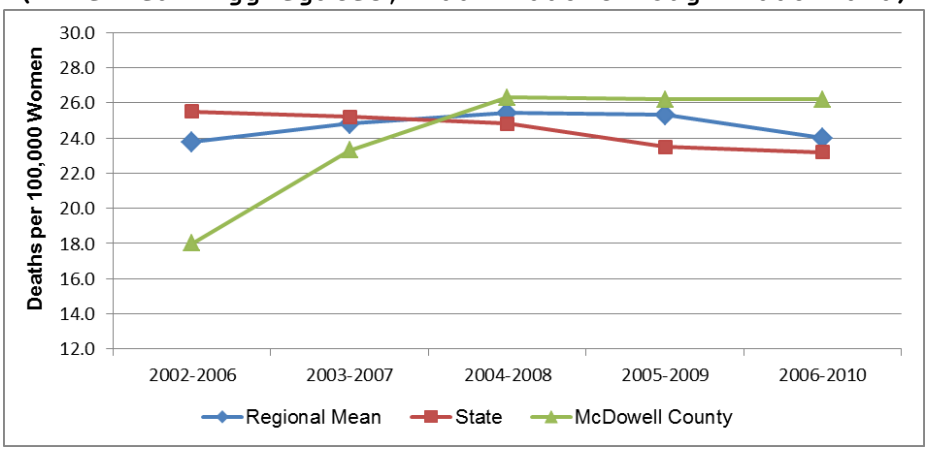
Figure 15. Prostate Cancer Incidence, New Cases per 100,000 Men (Five-Year Aggregates, 1999-2003 through 2005-2009)



Breast Cancer Mortality

Breast cancer was the third leading cause of cancer death in McDowell County in 2006-2010 (Table 30, cited previously). Data in Figure 16 demonstrate that the breast cancer mortality rate in McDowell County, which began to exceed both the WNC and NC rates in 2004-2008, rose 45.6% from 2002-2006 through 2006-2010, increasing from 18.0 to 26.2 over the period. At the state level, the breast cancer mortality rate fell throughout the period cited, from a high of 25.5 deaths per 100,000 women in 2002-2006 to a low of 23.2 in 2006-2010, a decrease of 9.0%. In WNC, the mean breast cancer mortality rate has been more volatile, actually increasing 6.7% from 23.8 in 2002-2006 to 25.4 in 2004-2008. Since then, the regional rate has reversed to a current breast cancer death rate of 24.0. The WNC mean breast cancer mortality rate has exceeded the comparable state rate for the past three aggregate periods.

Figure 16. Breast Cancer Mortality Rate, Deaths per 100,000 Women (Five-Year Aggregates, 2002-2006 through 2006-2010)

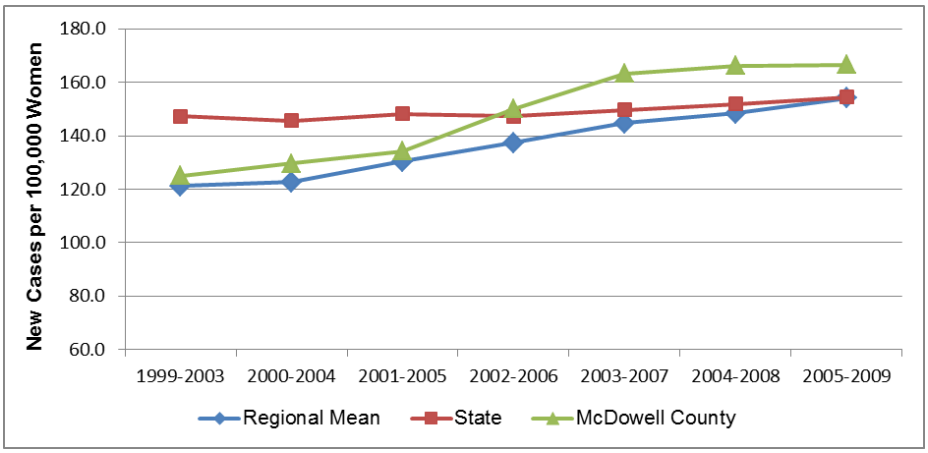


Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

In WNC, none of the 16 counties had large enough minority populations to yield stable breast cancer mortality rates for any minority group. At the state level, minority breast cancer mortality rates are higher than the non-minority rates. For example, statewide in 2006-2010 the breast cancer mortality rate among non-Hispanic African American women (30.7) was 40% higher than the comparable rate among non-Hispanic white women (21.9), and the rate among "Other" non-Hispanic women (11.7) was less than half the rate among non-Hispanic white women. The rate among Hispanic women (6.7) was far lower than the rate in any other population (*Data Workbook*).

Figure 17 demonstrates that the breast cancer incidence rate has been increasing in all three jurisdictions over the past several years, but at the fastest pace in McDowell County. In McDowell County, the breast cancer incidence rate rose from 125.0 in the 1999-2003 aggregate period to 166.5 in the 2005-2009 aggregate period, an increase of 33.2%. In WNC, the mean breast cancer incidence rate rose from 121.3 in the 1999-2003 aggregate period to 154.0 in the 2005-2009 aggregate period, an increase of 27.0%. At the state level, breast cancer incidence rate rose from 147.3 to 154.5 over the same period, an increase of approximately 5%.

Figure 17. Breast Cancer Incidence, New Cases per 100,000 Women (Five-Year Aggregates, 1999-2003 through 2005-2009)



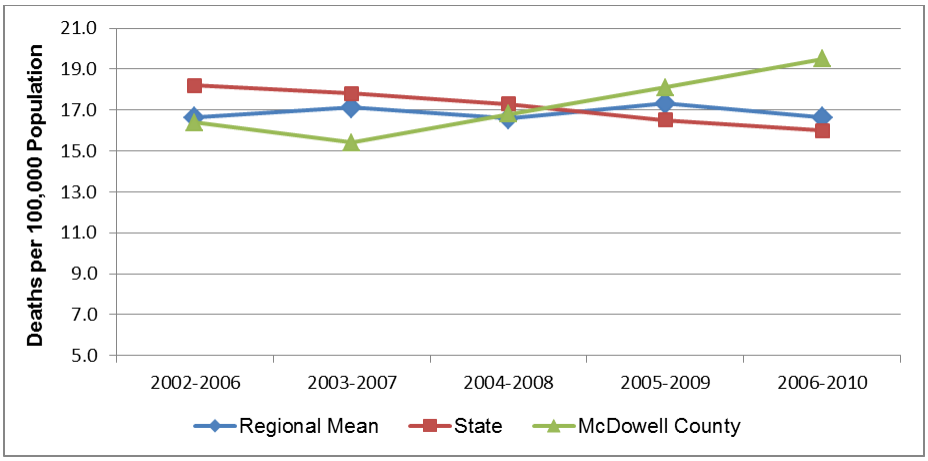
Colorectal Cancer Mortality

Cancer of the colon, rectum and anus (collectively "colorectal" cancer) caused the fourth largest mortality rate among the major site-specific cancers in McDowell County, WNC and NC in the 2006-2010 aggregate period (Table 30, cited previously).

Figure 18 plots the colorectal cancer mortality rate trend for several aggregate periods. The colorectal cancer mortality rate in McDowell County rose from 16.4 in the 2002-2006 aggregate period to 19.5 in the 2006-2010 aggregate period, an increase of 18.9%. As seen for a number of other cancers, the state colorectal cancer mortality rate

has fallen steadily in recent years, from a high of 18.2 in the 2002-2006 period to a low of 16.0 in the 2006-2010 period, a rate decrease of 12.1%. In WNC, the mean colorectal cancer mortality rate fluctuated, possibly due to a high proportion of unstable county rates, but was the same at the end of the period cited as at the beginning (16.6). In the most recent two aggregate periods, the mean regional colorectal cancer incidence rate surpassed the state rate, after being below the state rate for the prior three aggregate periods.

Figure 18. Colorectal Cancer Mortality Rate, Deaths per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

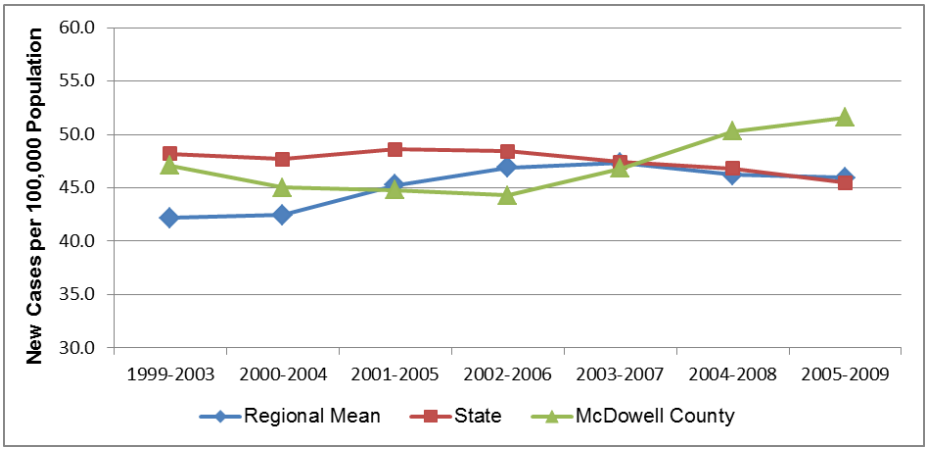
In McDowell County there are too few colorectal cancer deaths stratified by gender to yield a complete series of stable gender-based mortality rates, so Figure 19 contains a number of unstable (or missing) rates. As shown in Figure 19, in McDowell County the colorectal cancer rate for females was higher than the rate for males in the three most recent aggregate periods. Further, it appears that the colorectal cancer mortality rate among females has been increasing. The rate among females was 15.4 in the 2002-2006 period and 20.3 in the 2006-2010 period, an increase of 31.8%. It should be noted that all of the data points for males except the last were technically unstable. In 2006-2010, the colorectal cancer mortality rate for McDowell County females was 20.3; 9.1% higher than the comparable (stable) rate for males (18.6).

Figure 19. Gender Disparities in Mean Colorectal Cancer Mortality, McDowell County (Five-Year Aggregates, 2002-2006 through 2006-2010)

In WNC, only one of the 16 counties (Buncombe) had large enough minority populations to yield stable colorectal cancer mortality rates for any minority group, so it is not possible to calculate stable mean region-wide colorectal cancer mortality rates for minorities. Statewide, colorectal cancer mortality rates demonstrate some racial disparities. In the 2006-2010 aggregate period, the colorectal cancer mortality rate among African American non-Hispanic males (29.0) was 58% higher than the comparable rate among white non-Hispanic males (18.4) and over three times the rate among Other non-Hispanic males (9.0). Statewide in the same period the colorectal cancer mortality rate was 18.5 for African American non-Hispanic females, 12.4 for white non-Hispanic females, and 9.9 for Other non-Hispanic females. Statewide, the colorectal cancer mortality rates were lowest for Hispanic males (7.4) and Hispanic females (5.4) (*Data Workbook*).

From data in Figure 20 it is apparent that the incidence rate for colorectal cancer in McDowell County rose over the full period cited, from 47.1 in 1999-2003 to 51.6 in 2005-2009, an increase of 9.6%, and began to exceed both the WNC and NC rates in the 2003-2007 aggregate period. The mean WNC colorectal cancer incidence rate has been, until recently, following a different trend than the comparable state rate. In the 1999-2003 aggregate period, the mean colorectal cancer incidence rate in WNC (42.2) was 12% lower than the comparable state rate (48.2). By the 2005-2009 aggregate period, the state colorectal cancer rate had fallen to 45.5 (a decrease of over 5%), but the mean WNC rate had risen to 46.0 (an increase of 9%).

Figure 20. Colorectal Cancer Incidence, New Cases per 100,000 Population (Five-Year Aggregates, 1999-2003 through 2005-2009)



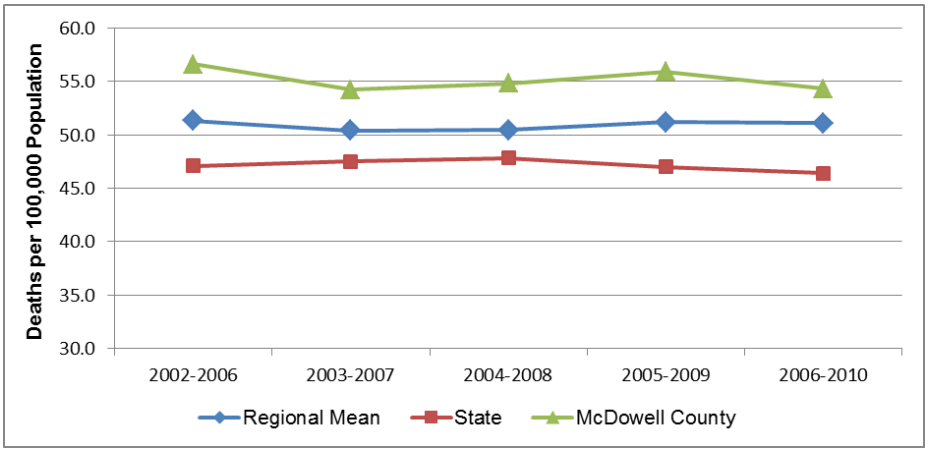
Chronic Lower Respiratory Disease (CLRD) Mortality

Chronic lower respiratory disease (CLRD) is composed of three major diseases, chronic bronchitis, emphysema, and asthma, all of which are characterized by shortness of breath caused by airway obstruction and sometimes lung tissue destruction. The obstruction is irreversible in chronic bronchitis and emphysema, reversible in asthma. Before 1999, CLRD was called chronic obstructive pulmonary disease (COPD). Some in the field still use the designation COPD, but limit it to mean chronic bronchitis and emphysema only. In the United States, tobacco use is a key factor in the development and progression of CLRD/COPD, but exposure to air pollutants in the home and workplace, genetic factors, and respiratory infections also play a role (West Virginia Health Statistics Center, 2006).

CLRD/COPD was the third leading cause of death in WNC and McDowell County for the 2006-2010 aggregate period (Table 28, cited previously).

Figure 21 plots CLRD mortality rates for five aggregate periods. The CLRD mortality rate was relatively stable in McDowell County, WNC and NC for the overall period from 2002-2006 through 2006-2010. McDowell County had the highest CLRD mortality rate of the three jurisdictions over the entire period. The mean WNC CLRD mortality rate ranged from 5% to 10% higher than NC rate throughout the period cited in Figure 21. Neither the NC nor the mean WNC CLRD mortality rates improved significantly over the period. In McDowell County the CLRD mortality rate decreased 4.1%, from 56.6 to 54.3. In 2006-2010, CLRD mortality rates were 54.3 in McDowell County, 46.4 in NC, and 51.1 in WNC.

Figure 21. CLRD Mortality Rate, Deaths per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)



In McDowell County, the CLRD mortality rate among males exceeded the comparable rate among females by from 40% to 58% over the past decade (Figure 22). Both rates fluctuated over the period cited, but both fell overall. The county CLRD mortality rate for males fell 5.4%, from 72.2 to 68.3, and the rate for females fell 7.0%, from 47.4 to 44.1. In the last aggregate period the CLRD mortality rate for McDowell County males was 48.1% higher than the rate for females.

Figure 22. Gender Disparities in CLRD Mortality, McDowell County (Five-Year Aggregates, 2002-2006 through 2006-2010)

In WNC, only one of the 16 counties (Buncombe) had large enough minority populations to yield stable CLRD mortality rates for any minority group, so it is not possible to calculate a stable mean region-wide CLRD mortality rates for minorities. At the state level for the 2006-2010 aggregate period, the CLRD mortality rate was highest among non-Hispanic white males (58.7), followed by non-Hispanic white females (46.4), non-Hispanic African American males (45.1), Other non-Hispanic males (27.4), non-Hispanic females (21.1), and Other non-Hispanic females (15.6). CLRD mortality rates among

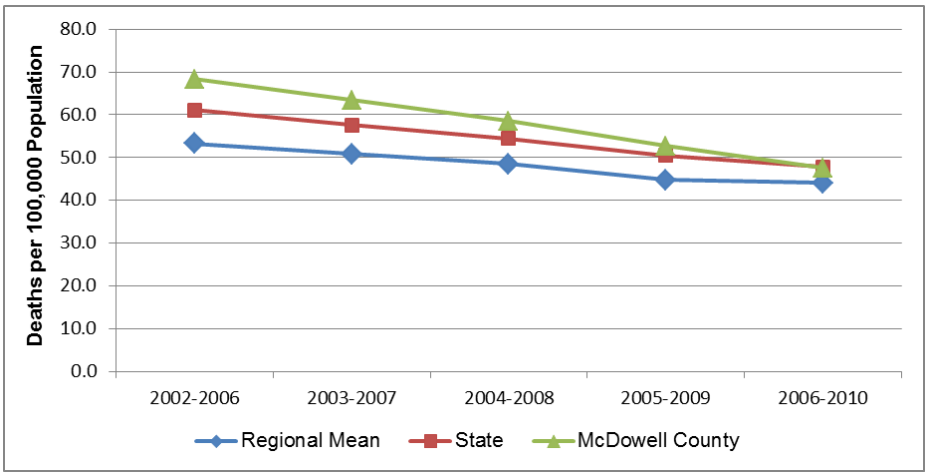
Hispanic males and females are much lower (6.8 and 7.5, respectively) (*Data Workbook*).

Cerebrovascular Disease (Stroke) Mortality

Cerebrovascular disease describes the physiological conditions that lead to stroke. Strokes happen when blood flow to the brain stops and brain cells begin to die. There are two types of stroke. Ischemic stroke (the more common type) is caused by a blood clot that blocks or plugs a blood vessel in the brain. The other kind, called hemorrhagic stroke, is caused by a blood vessel that breaks and bleeds into the brain (US National Library of Medicine).

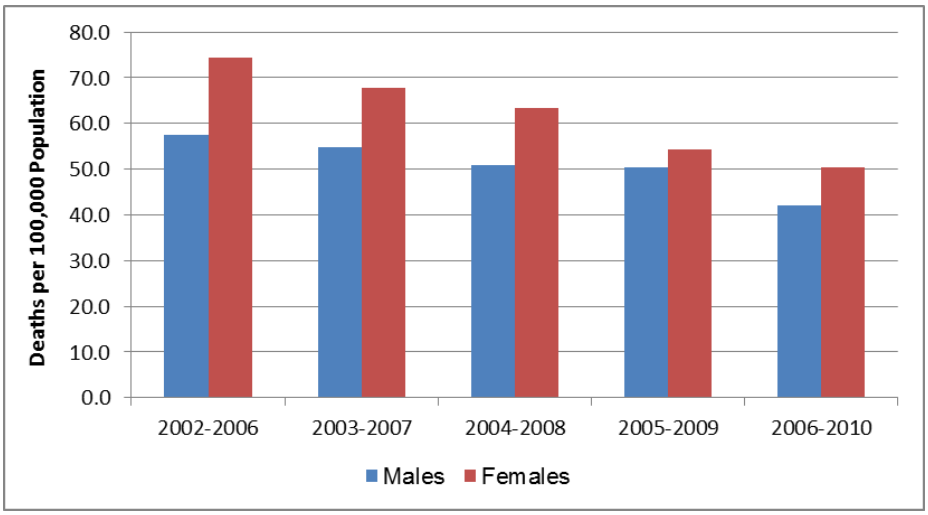
In the 2006-2010 aggregate period, cerebrovascular disease (stroke) was the fourth leading cause of death in WNC and McDowell County (Table 28, cited previously). Figure 23 plots stroke mortality rates for several aggregate periods. These data illustrate that the stroke mortality rate for McDowell County was higher than the rates for the other two jurisdictions for most of the period cited. The stroke mortality rates for McDowell County, WNC and NC all decreased over the period cited in the graph. The rate fell 30.3% in McDowell County (from 68.3 to 47.6), 17.4% in WNC (from 53.3 to 44.9) and 21.8% in NC (from 61.1 to 47.8).

Figure 23. Cerebrovascular Disease Mortality Rate, Deaths per 100,000 Population
(Five-Year Aggregates, 2002-2006 through 2006-2010)



Stroke is one cause of death for which there is little gender disparity in the WNC region (*Data Workbook*). The data in Figure 24, however, demonstrates that the cerebrovascular disease mortality rate in McDowell County was from 8% to 30% higher for females than for males over the period cited. The stroke mortality rates for both men and women appear to have decreased to a point in 2006-2010 where the separation between the rate for females (50.5) and the rate for males (42.0) is 20.2%.

Figure 24. Gender Disparities in Cerebrovascular Disease Mortality, McDowell County (Five-Year Aggregates, 2002-2006 through 2006-2010)



No county in WNC had large enough minority populations to yield stable cerebrovascular disease mortality rates for any minority group, so it is not possible to calculate stable mean region-wide cerebrovascular disease mortality rates for minorities. At the state level stroke mortality demonstrates a significant racial disparity. Statewide in the 2006-2010 aggregate period African American non-Hispanic males and females had the highest stroke mortality rates, 71.4 and 60.1, respectively. The comparable rate for non-Hispanic white males was 44.9, and the rate for non-Hispanic white females was 43.6, and the rate for Other non-Hispanic males was 39.6 and the rate for Other non-Hispanic females was 30.0. The Hispanic population had the lowest stroke mortality rates statewide over the same period, 13.1 among males and 15.2 among females (*Data Workbook*).

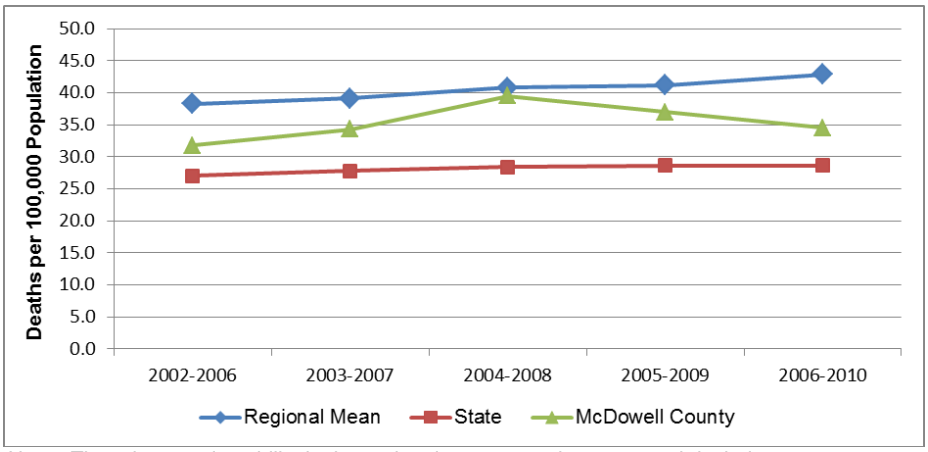
Non-Motor Vehicle Injury Mortality ("All Other Injuries Mortality")

Mortality due to injuries *not* involving motor vehicles was the fifth leading cause of death in WNC and McDowell County in the 2006-2010 aggregate period (Table 28, cited previously). This "all other injuries" category includes death without purposeful intent due to poisoning, falls, burns, choking, animal bites, drowning, and occupational or recreational injuries. (Death due to injury involving motor vehicles is a separate cause of death and will be covered subsequently.)

Figure 25 plots the trend in mortality due to all other injuries for five aggregate periods. Throughout the period cited, the non-motor vehicle injury mortality rate in McDowell County was between the comparable mean WNC and NC rates. Over this period the mean rate for WNC exceeded the comparable state rate by from 41% to 50%. While the state rate increased 5.9% (from 27.0 to 28.6) over the entire span cited, the mean WNC rate rose 12.3% from the first period (38.2) to

the last (42.9). Over the same span, the comparable rate in McDowell County was more variable but was 8.5% higher in 2006-2010 (34.5) than in 2002-2006 (31.8).

Figure 25. All Other Unintentional Injury Mortality Rate, Deaths per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

As in other leading causes of death, non-motor vehicle injury mortality in McDowell County demonstrated a strong gender disparity (Figure 26). In each of the periods cited, the mortality rate for all other unintentional injuries among males was from 1.8 to 2.7 times the comparable rate among females. While the non-motor vehicle injury mortality rate among women in McDowell County increased 47.1% overall between the 2002-2006 and 2006-2010 aggregate periods, the rate among men decreased 9.8% overall in the time span.

Figure 26. Gender Disparities in All Other Unintentional Injury Mortality, McDowell County (Five-Year Aggregates, 2002-2006 through 2006-2010)

In WNC, none of the 16 counties had large enough minority populations to yield stable all other injury mortality rates for any minority group, so it is not possible to calculate stable mean region-wide rates for minorities. At the state level for 2006-2010, mortality rates attributable to non-motor vehicle injury are higher among males of each race/ethnicity than females. All other injury mortality rates are highest among non-Hispanic white males (42.2), non-Hispanic African American males (31.7), Other non-Hispanic males (25.6) and Hispanic males (15.0). Comparable rates for females are 23.0 for non-Hispanic white females, 13.1 for non-Hispanic African American females, 12.5 for Other non-Hispanic females, and 6.2 for Hispanic females (*Data Workbook*).

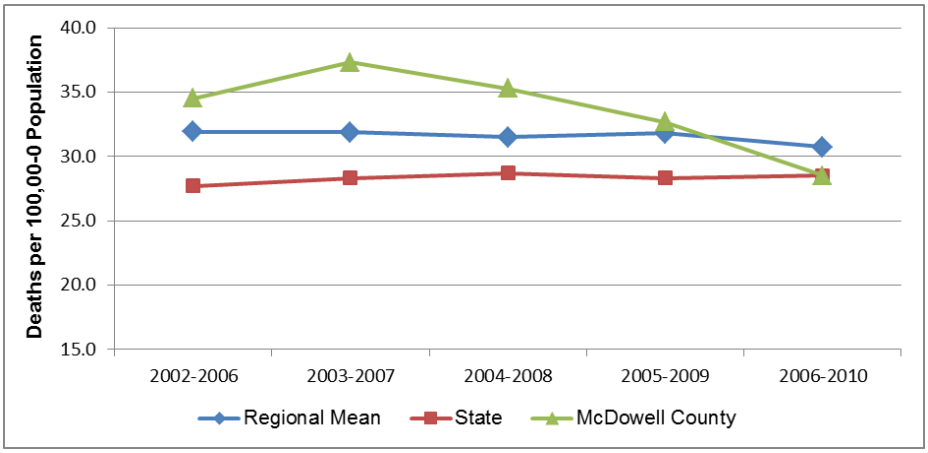
Alzheimer's Disease Mortality

Alzheimer's disease is a progressive neurodegenerative disease affecting mental abilities including memory, cognition and language. Alzheimer's disease is characterized by memory loss and dementia. The risk of developing Alzheimer's disease increases with age (e.g., almost half of those 85 years and older suffer from Alzheimer's disease). Early-onset Alzheimer's has been shown to be genetic in origin, but a relationship between genetics and the late-onset form of the disease has not been demonstrated. No other definitive causes have been identified (National Institute on Aging, 2012).

Alzheimer's disease was the sixth leading cause of death in WNC and the seventh leading cause of death in McDowell County for the aggregate period 2006-2010 (Table 28, cited previously).

Figure 27 plots Alzheimer's disease mortality rates over several aggregate periods. The Alzheimer's disease mortality rate in McDowell County was higher than both the state and regional mortality rates for four of the five aggregate periods cited in the figure. The county rate fell by 17.4% from 2002-2006 to 2006-2010. The mean Alzheimer's disease mortality rate in WNC was higher than the comparable state rate throughout the span of time cited in Figure 27, despite the fact that the data used are all age-adjusted. Note, however, that NC SCHS made the age-adjustment calculations on the basis of the 2000 US Census, and as we have seen, the "elderly" population in WNC has grown considerably since 2000. It should be noted that the difference between the WNC and NC rates may look different once the 2010 Census becomes the basis of the age adjustment. In the 2006-2010 aggregate period the Alzheimer's disease mortality rate was 28.5 in McDowell County, 30.7 in WNC, and 28.5 in NC.

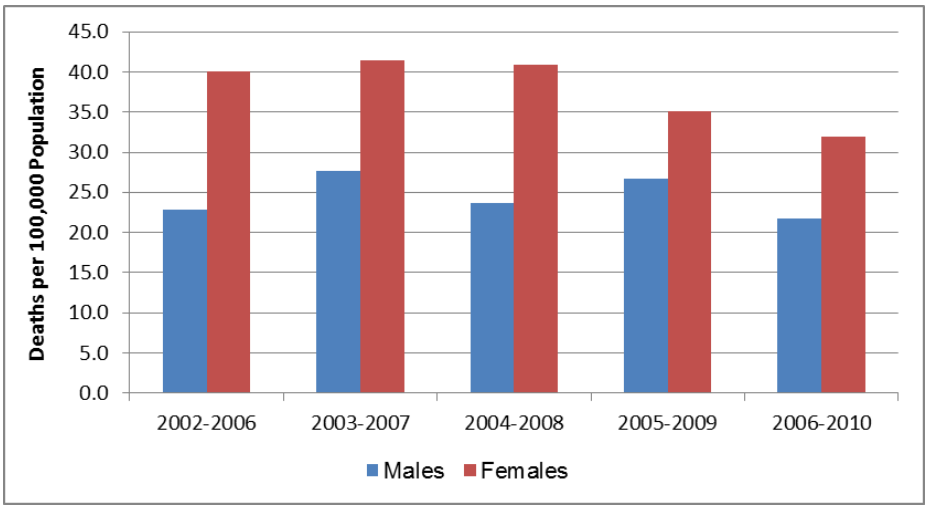
Figure 27. Alzheimer's Disease Mortality Rate, Deaths per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

Alzheimer's disease mortality has a strong gender component, with mortality rates traditionally much higher among women than among men. In WNC, for example, the mean Alzheimer's disease mortality rate among women was from 51% to 62% higher than the rate among men over the past decade (*Data Workbook*). Figure 28 plots gender-stratified data for Alzheimer's disease in McDowell County that shows a similar gender disparity. In McDowell County, the Alzheimer's disease mortality rate among women was from 31% to 76% higher than the rate among men over the same period. The Alzheimer's disease mortality rate for McDowell County males demonstrated considerable variability over the period covered in the figure, likely due to relatively small and changing numbers of events (n=20-25 deaths per aggregate period). Among females, however, there appeared to be a downward trend, as the Alzheimer's disease mortality rate in that population fell 25.7%, from 40.1 to 31.9, between 2002-2006 and 2006-2010. In the 2006-2010 aggregate period the Alzheimer's disease mortality rate for county females was 31.9 and the comparable rate for males was 21.78, a 47.0% difference.

Figure 28. Gender Disparities in Alzheimer's Disease Mortality, McDowell County (Five-Year Aggregates, 2002-2006 through 2006-2010)



In WNC, none of the 16 counties had large enough minority populations to yield stable Alzheimer's disease mortality rates for any minority group, so it is not possible to calculate stable mean region-wide rates for minorities. Statewide, the disparity in Alzheimer's disease mortality may be more gender-based than race-based. In NC as a whole in the 2006-2010 aggregate period, the Alzheimer's disease mortality rate for white non-Hispanic females was 32.5, compared to 23.3 for white, non-Hispanic males; the rate for African American non-Hispanic females was 27.6 compared to 20.9 for African American non-Hispanic males; and the rate for Other non-Hispanic females was 21.1 compared to 17.3 for Other non-Hispanic males. The Alzheimer's disease mortality rate for Hispanic females was 9.7; due to a small number of events, the NC SCHS did not release a comparable rate for Hispanic males (*Data Workbook*).

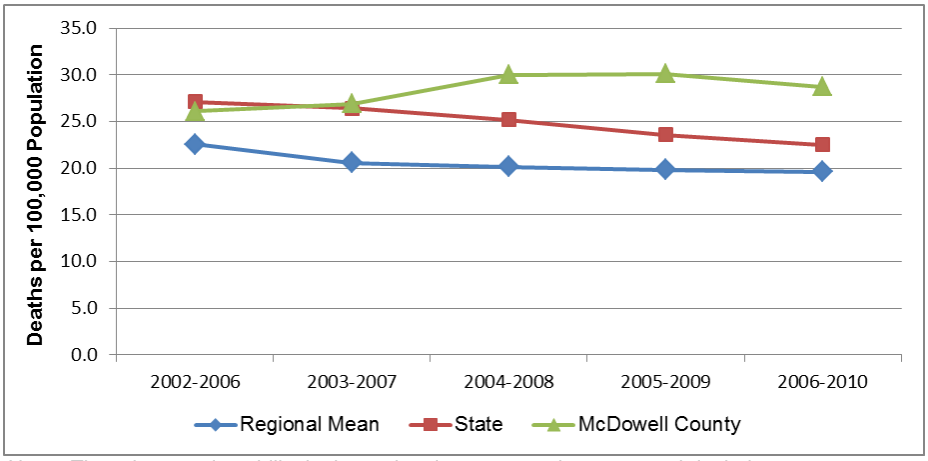
Diabetes Mellitus Mortality

Diabetes is a disease in which the body's blood glucose levels are too high due to problems with insulin production and/or utilization. Insulin is a hormone that helps the glucose get to cells where it is used to produce energy. With type 1 diabetes, the body does not make insulin. With type 2 diabetes, the more common type, the body does not make or use insulin well. Without enough insulin, glucose stays in the blood. Over time, having too much glucose in the blood can damage the eyes, kidneys, and nerves. Diabetes can also lead to heart disease, stroke and even the need to remove a limb (US National Library of Medicine).

Diabetes was the seventh leading cause of death in WNC and the sixth leading cause of death in McDowell County in the 2006-2010 aggregate period (Table 28, cited previously).

Figure 29 plots trend data for diabetes mortality for several aggregate periods. According to data in Figure 29, the diabetes mortality rate in McDowell County has risen to well above both the mean WNC rate and NC rate in the last three aggregate periods. The mean diabetes mortality rate in WNC is and has been lower than the state rate. Statewide, the diabetes mortality rate fell from 27.1 to 22.5 (17.0%) over the period cited in the figure. Region-wide, the mean diabetes mortality rate fell from 22.6 to 19.6 (13.3%) over the same period. In McDowell County, the diabetes mortality rate rose from 26.1 in 2002-2006 to 28.7 in 2006-2020, a 10.0% increase.

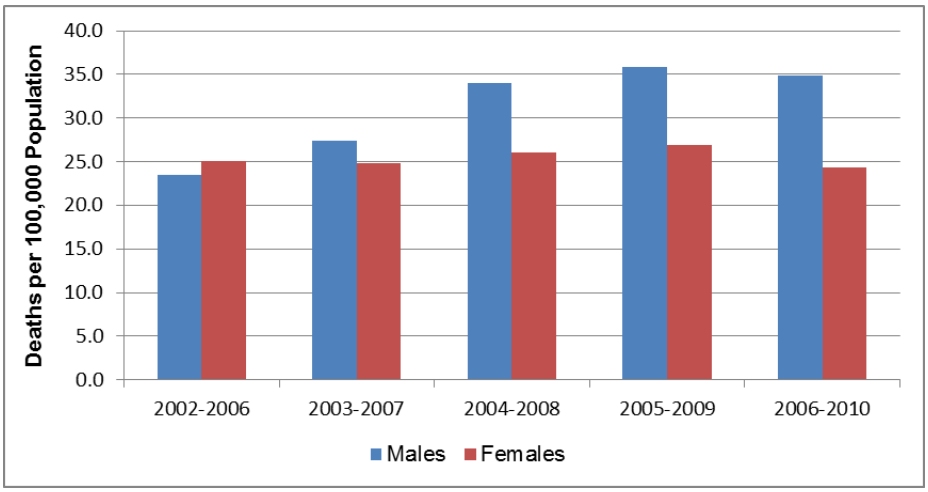
Figure 29. Diabetes Mellitus Mortality Rate, Deaths per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

Diabetes mortality rates stratified by gender in McDowell County are plotted in Figure 30. From this data it appears that men in the county have experienced a growing disparity in diabetes mortality. In the beginning of the period cited, the diabetes mortality rate for women in the county (25.1) was 6.8% higher than the comparable rate for men (23.5). The diabetes mortality rate for women fluctuated over the entire period cited but changed little in the net (from 25.1 to 24.4). However, by the end of the period cited, the rate for men had risen to 34.9%, an increase of 48.5%, and this rate for men was 43.3% higher than the comparable rate for women.

Figure 30. Gender Disparities in Diabetes Mellitus Mortality, McDowell County (Five-Year Aggregates, 2002-2006 through 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

In WNC, none of the 16 counties had large enough minority populations to yield stable diabetes mortality rates for any minority group, so it is not possible to calculate stable mean region-wide rates for minorities. Statewide, diabetes mortality demonstrates significant racial disparities. At the state level in the 2006-2010 aggregate period, the highest diabetes mortality rates were observed among African American non-Hispanic males and females, with rates of 51.3 and 42.5, respectively. The next highest rates occurred among Other non-Hispanic persons, both male and female, with rates of 25.0 and 25.5, respectively. The diabetes mortality rate during this period for white non-Hispanics was 22.2 for males and 14.4 for females. The lowest diabetes mortality was observed in the Hispanic population, with a rate of 11.2 for men and 7.1 for women (*Data Workbook*).

Pneumonia and Influenza Mortality

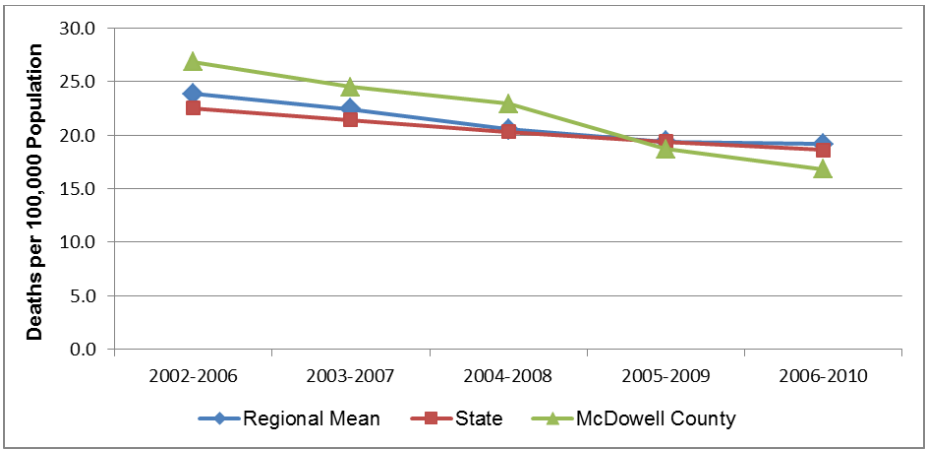
Pneumonia and influenza are diseases of the lungs. Pneumonia is an inflammation of the lungs caused by either bacteria or viruses. Bacterial pneumonia is the most common and serious form of pneumonia, and among individuals with suppressed immune systems, it may follow influenza or the common cold. Influenza (the "flu") is a contagious infection of the throat, mouth and lungs caused by an airborne virus (US National Library of Medicine).

The joint mortality category pneumonia and influenza was the eighth leading cause of death in WNC and the ninth leading cause in McDowell County for the period 2006-2010 (Table 28, cited previously).

Figure 31 plots the mortality trend for pneumonia and influenza for several aggregate periods. From this data it is apparent that the mean pneumonia/influenza mortality rate in WNC closely paralleled the

comparable NC rate throughout the period cited in the figure. Both the regional and state mortality rates for this cause of death decreased in the net over the period. The mean WNC rate decreased from 23.8 to 19.1 (19.7%) and the comparable NC rate decreased from 22.5 to 18.6 (17.3%). A corresponding decrease in pneumonia/influenza mortality in McDowell County was more dramatic, as the rate fell 59.5% from 26.8 in 2002-2006 to 16.8 in 2006-2010. The county rate, higher at the beginning of the period cited than both the WNC and NC rates, by the end of the period was lower than both.

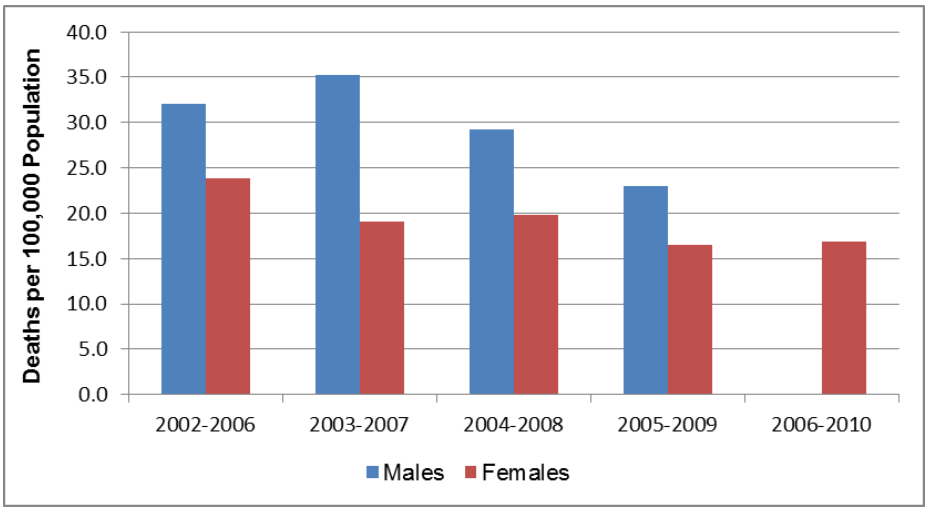
Figure 31. Pneumonia and Influenza Mortality Rate, Deaths per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

Figure 32 plots gender-stratified pneumonia/influenza mortality rates for McDowell County for several aggregate periods. Note that due to a below-threshold number of pneumonia/influenza deaths in the last aggregate period the NC SCHS did not release a mortality rate for men. According to the data displayed in the figure, the pneumonia/influenza mortality rate among McDowell County males fell substantially, from 32.1 to 23.0 (39.6%), and the comparable rate for county females fell from 23.9 to 16.9 (29.3%) as well. During the periods for which there was data for both men and women, the pneumonia/influenza mortality rate for men was higher than the comparable rate for women by from 34% to 84%.

Figure 32. Gender Disparities in Pneumonia/Influenza Mortality, McDowell County (Five-Year Aggregates, 2002-2006 through 2006-2010)



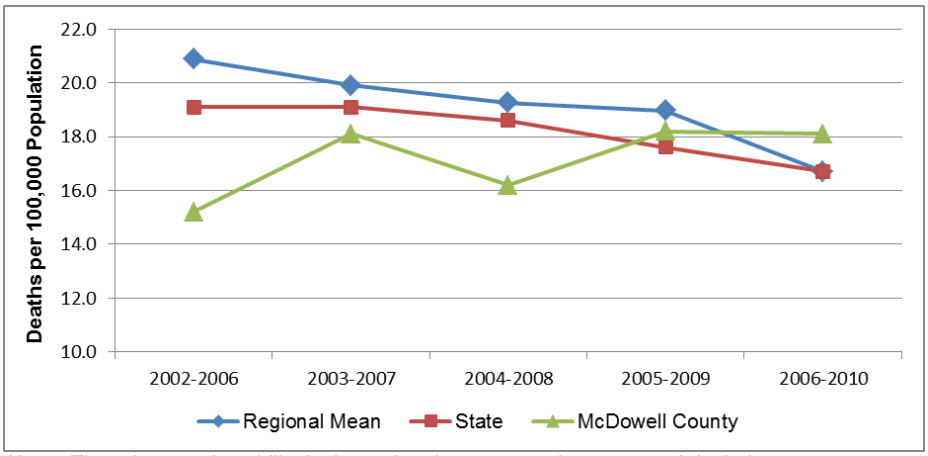
In WNC, none of the 16 counties had large enough minority populations to yield stable pneumonia/influenza mortality rates for any minority group, so it is not possible to calculate stable mean region-wide rates for minorities. At the state level pneumonia and influenza mortality rates demonstrate moderate racial disparities. Statewide in the 2006-2010 aggregate period the highest pneumonia/influenza mortality rate (24.1) occurred among African American non-Hispanic males, followed in order by white non-Hispanic males (21.5), white non-Hispanic females (17.3), African American non-Hispanic females (15.8), other non-Hispanic males (11.1), and other non-Hispanic females (9.0). The Hispanic population, both male and female, experienced the lowest pneumonia and influenza mortality rates, 5.8 and 7.1, respectively (*Data Workbook*).

Unintentional Motor Vehicle Injury (UMVI) Mortality

Death due to injuries incurred in unintentional motor vehicle crashes was the ninth leading cause of death in WNC and the eighth leading cause of death in McDowell County in the 2006-2010 aggregate period (Table 28, cited previously).

Figure 33 plots UMVI mortality rates over several aggregate periods. From this data it appears that the mortality rate attributable to UMVI in McDowell County was usually lower than the comparable rate for WNC, and that the mean WNC rate was slightly higher than the comparable state rate for most of the time span cited in the table. UMVI mortality rates fell in WNC and NC jurisdictions over the period cited in the figure. In WNC, the UMVI mortality rate fell from 20.9 to 16.7 (20.1%), and in NC the rate fell from 19.1 to 16.7 (12.5%). In McDowell County the rate rose from 15.2 in the 2002-2006 aggregate period to 18.1 in the 2006-2010 aggregate period, an increase of 19.1%.

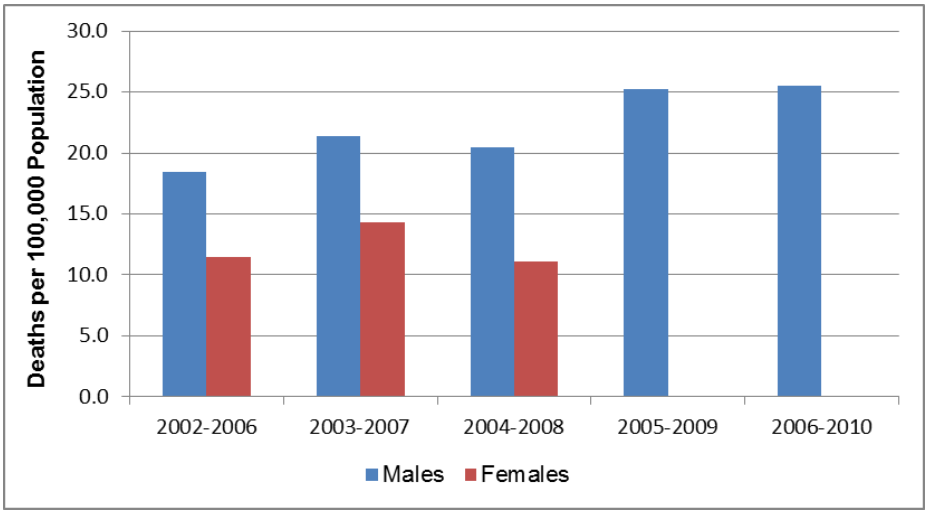
Figure 33. Unintentional Motor Vehicle Injury Mortality Rate Deaths per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

In McDowell County there were too few deaths attributable to UMVI among females to calculate any stable gender-stratified mortality rates and the NC SCHS did not release rates for females in the last two aggregate periods. Using unstable rates for females and stable rates for males, there does appear to be a gender-based disparity in UMVI mortality in the county (Figure 34). From this data it is apparent that UMVI mortality among males was from 60% to 85% higher than the rate for women over the first three aggregate periods. The rate for males in the county rose over the entire period cited in the figure, from 18.4 in 2002-2006 to 25.5 in 2006-2010, a 38.6% increase.

Figure 34. Gender Disparities in Unintentional Motor Vehicle Injury Mortality McDowell County (Five-Year Aggregates, 2002-2006 through 2006-2010)



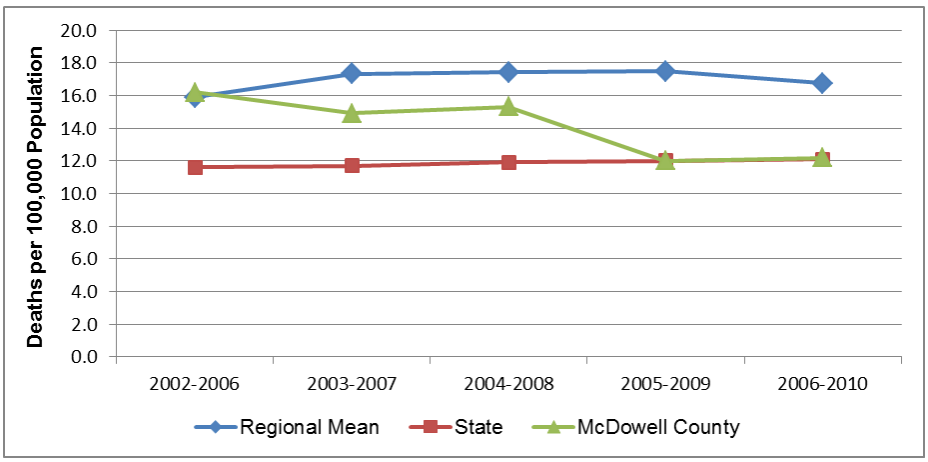
In WNC, none of the 16 counties had large enough minority populations to yield stable UMVI mortality rates for any minority group, so it is not possible to calculate stable mean region-wide rates for minorities. Statewide, disparities in UMVI mortality appear more gender-based than racially-based. At the state level in 2006-2010, the highest UMVI mortality rates all occurred among males with the following rates, in decreasing order: 27.1 for African American non-Hispanic males, 24.2 for non-Hispanic males of other races, and 23.6 for both white non-Hispanic males and Hispanic males. Among women statewide the highest rates were noted among non-Hispanic females of other races (10.4), followed by white non-Hispanic females (9.9), African American non-Hispanic females (7.9) and Hispanic females (7.3) (*Data Workbook*).

Suicide Mortality

Suicide was the tenth leading cause of death in WNC and the eleventh leading cause of death in McDowell County for the 2006-2010 aggregate period (Table 28, cited previously).

Figure 35 plots suicide mortality rates for several aggregate periods. From these data it is clear that mortality due to suicide is significantly higher in WNC than in NC as a whole. The mean suicide mortality rate in WNC ranged from 37% to 48% higher than the state rate over the period cited in Figure 35. While the suicide mortality rates in WNC and NC changed little over the period cited, the comparable rate in McDowell County fell from 16.2 to 12.2, a decrease of 24.7%. For the 2006-2010 aggregate period the suicide mortality rate in McDowell County was 12.2, in WNC it was 16.7 and in NC it was 12.1.

Figure 35. Suicide Mortality Rate, Deaths per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

Suicide mortality in McDowell County demonstrates a very pronounced gender disparity. From data in Figure 36 it is apparent that the

suicide mortality rate for men was between 4½ and 5½ times higher than the rate for women over the first three aggregate periods. Although there is instability in all three data points for females (and NC SCHS did not calculate rates for females for the remainder of the periods cited in the figure), the gender difference remained very large over time. In 2006-2010 the suicide mortality rate for McDowell County males was 20.9; a comparable rate for females was not released.

Figure 36. Gender Disparities in Suicide Mortality, McDowell County (Five-Year Aggregates, 2002-2006 through 2006-2010)

In WNC, none of the 16 counties had large enough minority populations to yield stable suicide mortality rates for any minority group, so it is not possible to calculate stable mean region-wide rates for minorities. At the state level, suicide mortality demonstrates a racial disparity as well as a gender disparity. Statewide in the 2006-2010 aggregate period the highest suicide mortality rates occurred among white non-Hispanic males (23.9) followed by other non-Hispanic males (10.8), African American non-Hispanic males (8.6) and Hispanic males (7.4). Among females, the highest suicide mortality rates occurred among white non-Hispanic females (6.7) followed by other non-Hispanic females (4.7), Hispanic females (1.7) and African American non-Hispanic females (1.5) (*Data Workbook*).

Nephritis, Nephrotic Syndrome and Nephrosis (Kidney Disease) Mortality

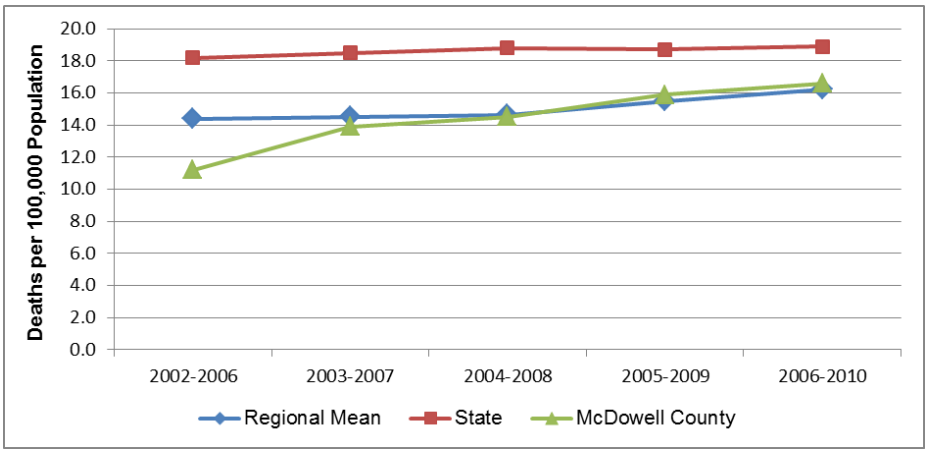
Nephritis refers to inflammation of the kidney, which causes impaired kidney function. Nephritis can be due to a variety of causes, including kidney disease, autoimmune disease, and infection. *Nephrotic syndrome* refers to a group of symptoms that include protein in the urine, low blood protein levels, high cholesterol levels, high triglyceride levels, and swelling. *Nephrosis* refers to any degenerative disease of the kidney tubules, the tiny canals that make up much of the substance of the kidney. Nephrosis can be caused by kidney disease, or it may be a complication of another disorder,

particularly diabetes (MedineNet.com, March 2012; PubMed Health, 2011).

This set of kidney disorders was the eleventh leading cause of death in WNC and the tenth leading cause of death in McDowell County for the 2006-2010 aggregate period (Table 28, cited previously).

Figure 37 plots kidney disease mortality over several aggregate periods. This data reveals that the mean kidney disease mortality rate in WNC was below the comparable figure for NC as a whole, and that the mortality rate in McDowell County was below the WNC rate for the first three aggregate periods cited in the figure. Between the 2002-2006 aggregate period and the 2006-2010 aggregate period the mean regional rate climbed from 14.4 to 16.2 (12.5%), and the McDowell County rate rose from 11.2 to 16.6 (48.2%). Over the same time span the NC rate increased slightly, from 18.2 to 18.9 (3.8%). The county kidney disease mortality rate, once below both the comparable mean WNC and NC rates, surpassed the rate for WNC in the 2005-2009 aggregate period.

Figure 37. Kidney Disease Mortality Rate, Deaths per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

Many gender-stratified kidney disease mortality rates for McDowell County are unstable, but nevertheless are plotted in Figure 38. According to this data, the mean kidney disease mortality rate among men in the county rose throughout the period cited, from a low of 14.9 (an unstable rate) in the 2002-2006 aggregate to a high of 22.7 (a stable rate) in the 2006-2010 aggregate period, an increase of 52.3%. Over the same period, the kidney disease mortality rate among women in the county rose 63.5%, from 8.5 (an unstable rate) to 13.9 (a stable rate). On the basis of the two final, stable data points, the kidney disease mortality rate for McDowell County males was 63.3% higher than the comparable rate among females.

Figure 38. Gender Disparities in Kidney Disease Mortality, McDowell County (Five-Year Aggregates, 2002-2006 through 2006-2010)

In WNC, none of the 16 counties had large enough minority populations to yield stable kidney disease mortality rates for any minority group, so it is not possible to calculate stable mean region-wide rates for minorities. Statewide for 2006-2010 kidney disease mortality rates demonstrate both racial and gender disparities. Men of all racial groups suffer kidney disease mortality at rates higher than their female counterparts in the same racial group, and non-Hispanic African Americans of either gender have the highest kidney disease mortality rates among their gender group. For instance, kidney disease mortality among non-Hispanic African American males in this period was 42.4, compared to 19.7 among non-Hispanic white males, 18.0 among other non-Hispanic males, and 7.1 among Hispanic males. Similarly, the kidney disease mortality rate among non-Hispanic African American females was 34.6, followed by 15.3 among other non-Hispanic females, 12.5 among non-Hispanic white females, and 5.4 among Hispanic females (*Data Workbook*).

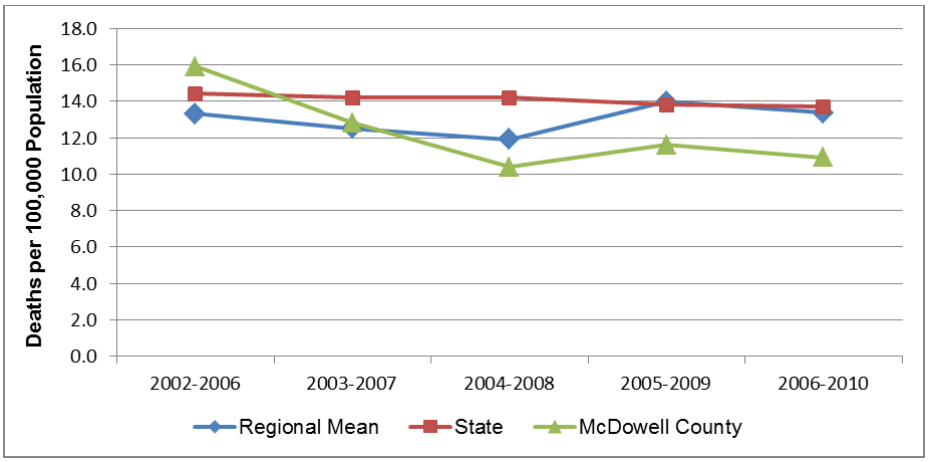
Septicemia Mortality

Septicemia is a rapidly progressing infection resulting from the presence of bacteria in the blood. The disease often arises from other infections throughout the body, such as meningitis, burns, and wound infections. Septicemia can lead to septic shock in which case low blood pressure and low blood flow cause organ failure (US National Library of Medicine). While septicemia can be community-acquired, some cases are acquired by patients hospitalized initially for other conditions; these are referred to as nosocomial infections. Sepsis is now a preferred term for septicemia, but NC SCHS continues to use the older term.

Septicemia was the twelfth leading cause of death in WNC and in McDowell County for the aggregate period 2006-2010 (Table 28, cited previously).

Figure 39 plots septicemia morality data for several aggregate periods. This data shows that the mean WNC septicemia mortality rate fluctuated over the period cited in approaching the state rate, while the state rate decreased 4.9%, from 14.1 to 13.7. Fluctuation at the WNC-level may be attributed partly to unstable regional mean rates. In McDowell County, the septicemia mortality rate decreased 31.2% over the period cited, from 15.9 in 2002-2006 to 10.9 in 2006-2010. Once higher than both the mean WNC and NC rates, the septicemia mortality rate in McDowell County fell below both in the 2004-2008 aggregate period.

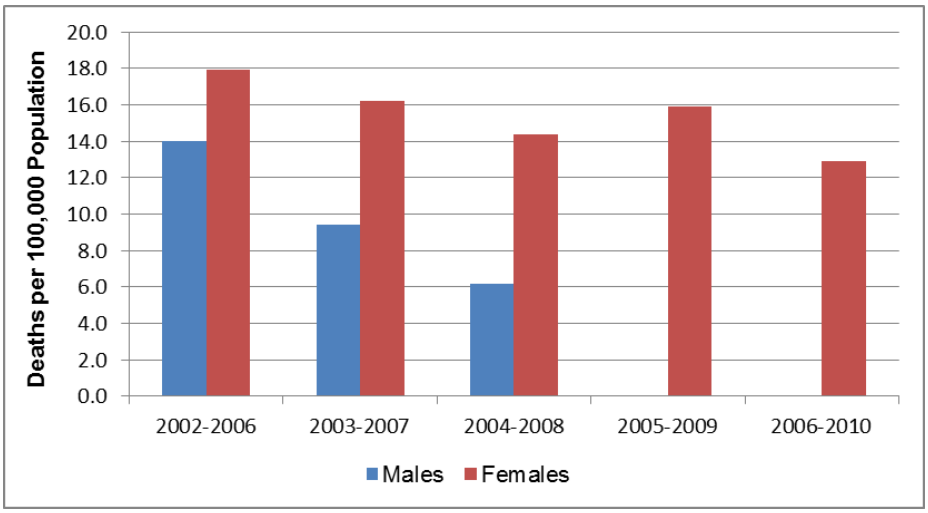
Figure 39. Septicemia Mortality Rate, Deaths per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

Gender-stratified septicemia mortality rates for McDowell County males all are unstable; all of the rates for females are stable. From data presented in Figure 40, it appears there may be a gender-based difference in mean septicemia mortality rates in the county. In periods in which there are rates for both men and women, the rates for women are much higher. It is also noteworthy that the rates for females fell overall throughout the period cited, from 17.9 to 12.9, a decrease of 27.9%

Figure 40. Gender Disparities in Mean Septicemia Mortality, McDowell County (Five-Year Aggregates, 2002-2006 through 2006-2010)



In WNC, none of the 16 counties had large enough minority populations to yield stable septicemia mortality rates for any minority group, so it is not possible to calculate stable mean region-wide rates for minorities. At the state level, where the calculation of stable septicemia mortality rates is possible, mortality is highest among African American non-Hispanics, both male and female. Statewide the septicemia mortality rate for African American non-Hispanic males in the 2002-2010 aggregate period was 23.7; for females of the same population group the rate was 18.8. For white non-Hispanic males the comparable rate was 13.7; for white non-Hispanic females the rate was 11.5. Among other non-Hispanic males the septicemia mortality rate was 10.6; among other non-Hispanic females the rate was 7.6. The lowest septicemia mortality rates occurred among Hispanics; for males the rate was 5.3, and for females, 4.9 (*Data Workbook*).

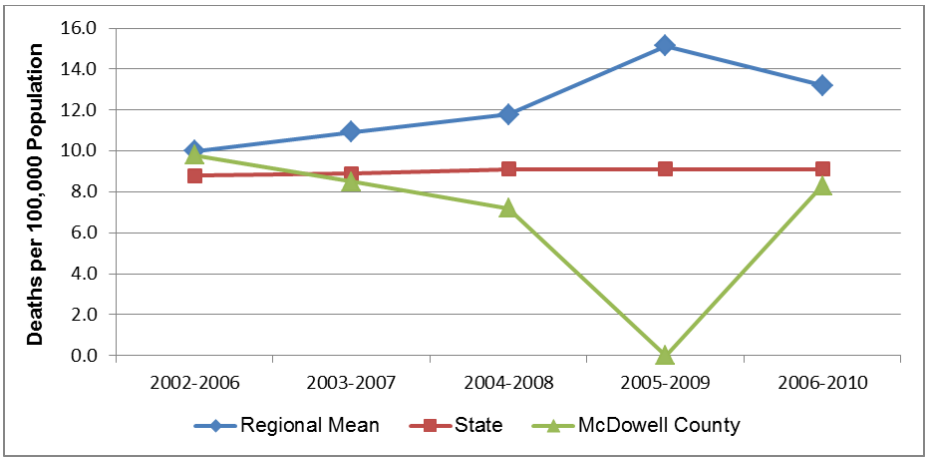
Chronic Liver Disease and Cirrhosis Mortality

Chronic liver disease describes an ongoing disturbance of liver function that causes illness. Liver disease, also referred to as hepatic disease, is a broad term that covers all the potential problems that cause the liver to fail to perform its designated functions. Usually, more than 75% or three quarters of liver tissue needs to be affected before decrease in function occurs. Cirrhosis is a term that describes permanent scarring of the liver. In cirrhosis, the normal liver cells are replaced by scar tissue that cannot perform any liver function (MedicineNet.com, June 2012).

Chronic liver disease and cirrhosis was the thirteenth leading cause of death in WNC and McDowell County in the 2006-2010 aggregate period (Table 28, cited previously).

Figure 41 plots mortality data for liver disease over several aggregate periods. This data shows that the mean WNC rate exceeded the state rate and increased by 32.0% over the period cited. Throughout this period the state rate was stable at or near 9.1. It also appears that the McDowell County rate fell 15.3% overall between the 2002-2006 and 2006-2010 aggregate periods. Note that the "zero" county rate in the 2005-2009 aggregate period signifies that the NC SCHS did not release a rate for McDowell County in that period due to a below-threshold number of events.

Figure 41. Chronic Liver Disease and Cirrhosis Mortality Rate Deaths per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

All gender-stratified chronic liver disease and cirrhosis mortality rates for McDowell County in the target period are unstable or were not released by NC SCHS. Nevertheless, the data presented in Figure 42 reveal a possible gender-based disparity in liver disease mortality rates in the county. The liver disease mortality rates among McDowell County males plotted in the figure all were higher than the comparable rates among county females.

Figure 42. Gender Disparities in Chronic Liver Disease and Cirrhosis Mortality
McDowell County
(Five-Year Aggregates, 2002-2006 through 2004-2008)

In WNC, none of the 16 counties had large enough minority populations to yield stable chronic liver disease/cirrhosis mortality rates for any minority group, so it is not possible to calculate stable mean region-wide rates for minorities. At the state level, liver disease mortality rates demonstrate some differences among racial groups but a consistent trend of higher mortality rates among men than women. For example, the liver disease mortality rate is highest among white non-Hispanic men (13.8), followed by African American non-Hispanic men (11.2). The liver disease mortality rates among other non-Hispanic men was 7.5, and the rate among Hispanic men was 6.8. Liver disease mortality rates among females were highest for white non-Hispanic women (6.0), followed by other non-Hispanic women (5.2), and African American women non-Hispanic women (5.1). There were too few liver disease deaths among Hispanic women statewide to calculate a stable rate (*Data Workbook*).

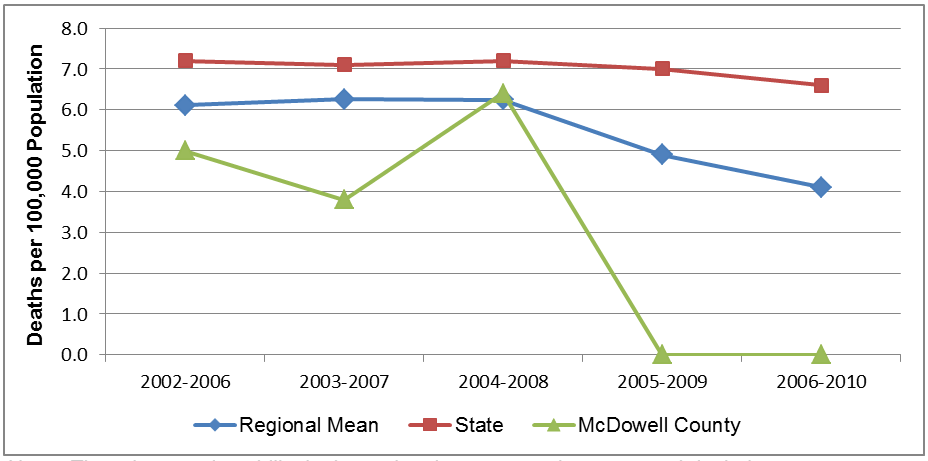
Homicide Mortality

Death by homicide was the fourteenth leading cause of death in WNC and McDowell County for the 2006-2010 aggregate period (Table 28, cited previously).

In McDowell County there were too few deaths attributable to homicide (7-15 per five-year aggregate period) to calculate any stable rates in the target period. Figure 43 plots homicide mortality rate trends over several aggregate periods. From this data it is apparent that mean homicide mortality rates in WNC are lower than comparable rates for NC as a whole. This observation would appear to be in concert with earlier data reporting lower rates of violent crime in WNC than in NC. The mean homicide mortality rate in WNC for the 2006-2010 aggregate period was 4.1; the comparable rate for NC was 6.6. The

variability noted in the McDowell County plot in the figure is the result of unstable rates. Note that the "zero" value data point signify that the NC SCHS did not release county a rate in those periods due to below-threshold numbers of events.

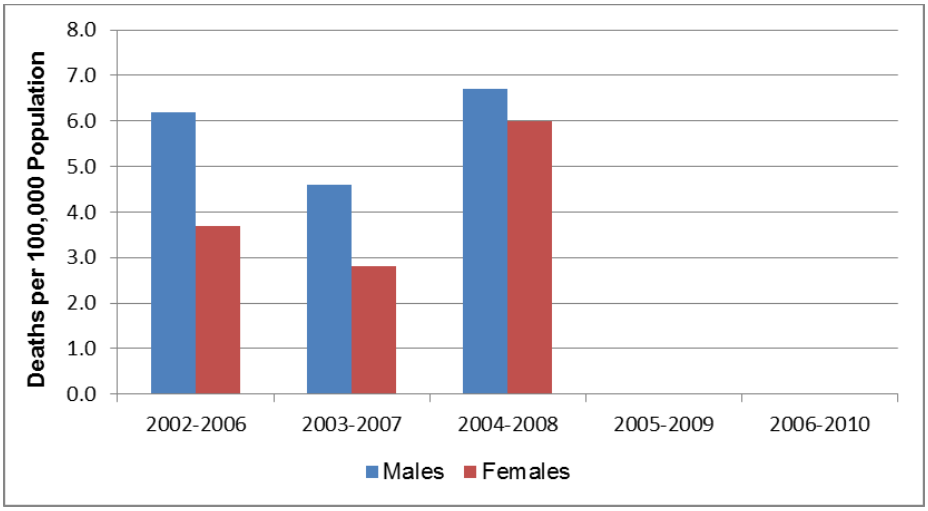
Figure 43. Homicide Mortality Rate, Deaths per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

All gender-stratified homicide mortality rates for McDowell County are unstable because they are based on very small numbers of events (n=3-8 deaths per gender group per five-year aggregate period). Region-wide, the homicide mortality rate among WNC males is approximately twice the rate among WNC females (*Data Workbook*). The limited data plotted for McDowell County in Figure 44 does appear to demonstrate a homicide mortality rate for males higher than the rate for females.

Figure 44. Gender Disparities in Homicide Mortality, McDowell County (Five-Year Aggregates, 2002-2006 through 2004-2008)



In WNC, none of the 16 counties had large enough minority populations to yield stable homicide mortality rates for any minority group, so it

is not possible to calculate stable mean region-wide rates for minorities. At the state level homicide mortality demonstrates strong racial and gender disparities. In NC for the 2006-2010 aggregate period the highest homicide mortality rates were among African American non-Hispanic males (25.6), and Hispanic males and other non-Hispanic males (13.0). The next highest homicide mortality rate occurred among African American non-Hispanic females (5.2), followed by white, non-Hispanic males (4.6), other non-Hispanic females (3.4), Hispanic females (2.6), and white non-Hispanic females (2.2) (*Data Workbook*).

Acquired Immune Deficiency Syndrome (AIDS) Mortality

The human immunodeficiency virus (HIV) is the virus that causes AIDS. HIV attacks the immune system by destroying CD4 positive (CD4+) T cells, a type of white blood cell that is vital to fighting off infection. The destruction of these cells leaves people infected with HIV vulnerable to other infections, diseases and other complications. The acquired immunodeficiency syndrome (AIDS) is the final stage of HIV infection. A person infected with HIV is diagnosed with AIDS when he or she has one or more opportunistic infections, such as pneumonia or tuberculosis, and has a dangerously low number of CD4+ T cells (less than 200 cells per cubic millimeter of blood) (National Institutes of Health, 2012).

AIDS was the fifteenth leading cause of death in WNC for the aggregate period 2006-2010 (Table 28, cited previously).

Because of small numbers of AIDS deaths across WNC, AIDS mortality rates are unstable or non-existent in 15 of the 16 counties in the region. In McDowell County there was a total of four AIDS deaths over five five-year aggregate periods.

Even at the state level it is not possible to calculate a stable AIDS mortality rate for several minority population groups. Using the stable NC rates available, it is apparent that non-Hispanic African Americans suffered mortality attributable to AIDS at rates much higher than did other groups. For example, in the 2006-2010 aggregate period, the AIDS mortality rate for African American non-Hispanic men (20.2) was almost 12 times the rate among white non-Hispanic men (1.7), and the rate among African American non-Hispanic women (9.8) was almost 25 times the rate among white non-Hispanic women (0.4). The AIDS mortality rate among Hispanic men statewide during this period was 4.1; rates were not released for any other minority group because of below-threshold numbers of AIDS deaths (*Data Workbook*).

Life Expectancy

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. As the above data has demonstrated, there are many factors, from the prenatal period through the senior years, which can affect life expectancy. Table 32 presents a fairly recent summary of life expectancy for McDowell County, WNC, and NC as a whole. From this data it appears that females born in McDowell County in the period cited could expect to live 4.7 years longer than males born at the same time. Similarly, females born in WNC in the same period could expect to live 5.5 years longer on average than males born under the same parameters. African Americans born in McDowell County at the same time could expect to live a 1.9 year shorter lifespan than their white counterparts, and African Americans born in WNC at the same time could expect to live a 3.3 year shorter lifespan than their white counterparts. Life expectancy overall in McDowell County (76.4) is only 0.6 years shorter than life expectancy in WNC (77.0 years), where life expectancy is only 0.3 years shorter than for the state as a whole (77.3 years).

Table 32. Life Expectancy at Birth (2006-2008)

Geography	Overall	Gender		Race	
		Male	Female	White	African American
McDowell County	76.4	74.1	78.8	76.2	78.1
Regional Arithmetic Mean	77.0	74.3	79.8	77.3	74.0
State Total	77.3	74.5	80.0	78.1	73.8

Morbidity Data

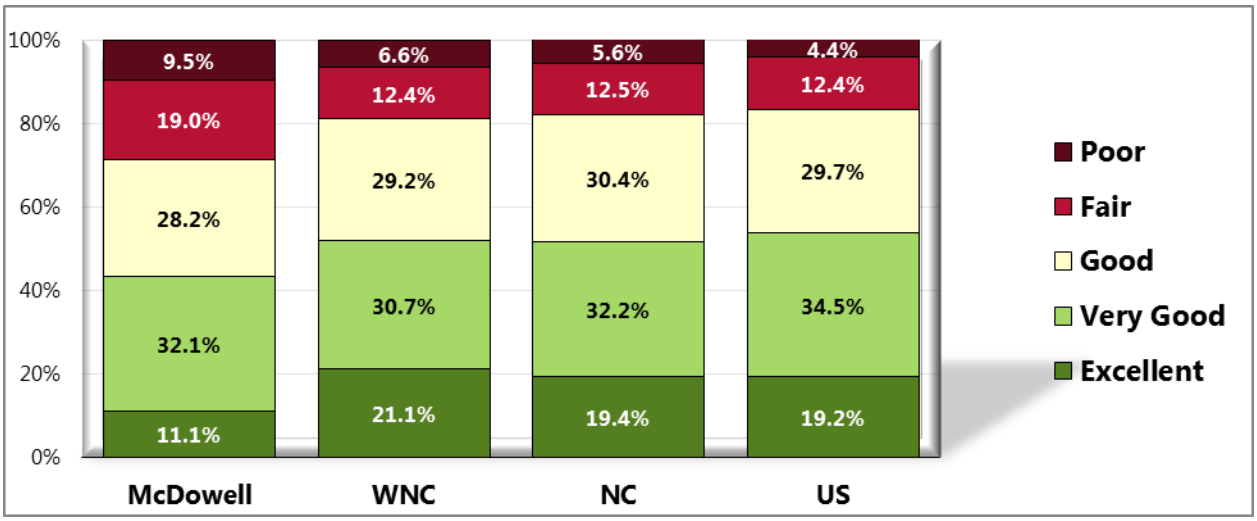
Morbidity as used in this report refers generally to the current presence of injury, sickness or disease (and sometimes the symptoms and/or disability resulting from those conditions) in the living population. In this report disability, diabetes, obesity, injury, communicable disease (including sexually-transmitted infections) and mental health conditions are the topics covered under morbidity.

The parameter most frequently used to describe the current extent of any condition of morbidity in a population is *prevalence*. Prevalence is the number of existing cases of a disease or health condition in a population at a defined point in time or during a period. Prevalence usually is expressed as a proportion, not a rate, and often represents an estimate rather than a direct count.

Self-Reported Health Status

Survey respondents were asked, "Would you say that in general your health is excellent, very good, good, fair, or poor?"

Figure 45. Self-Reported Health Status (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 12]
● Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2010 North Carolina data.
● 2011 PRC National Health Survey, Professional Research Consultants, Inc.

Notes: ● Asked of all respondents.

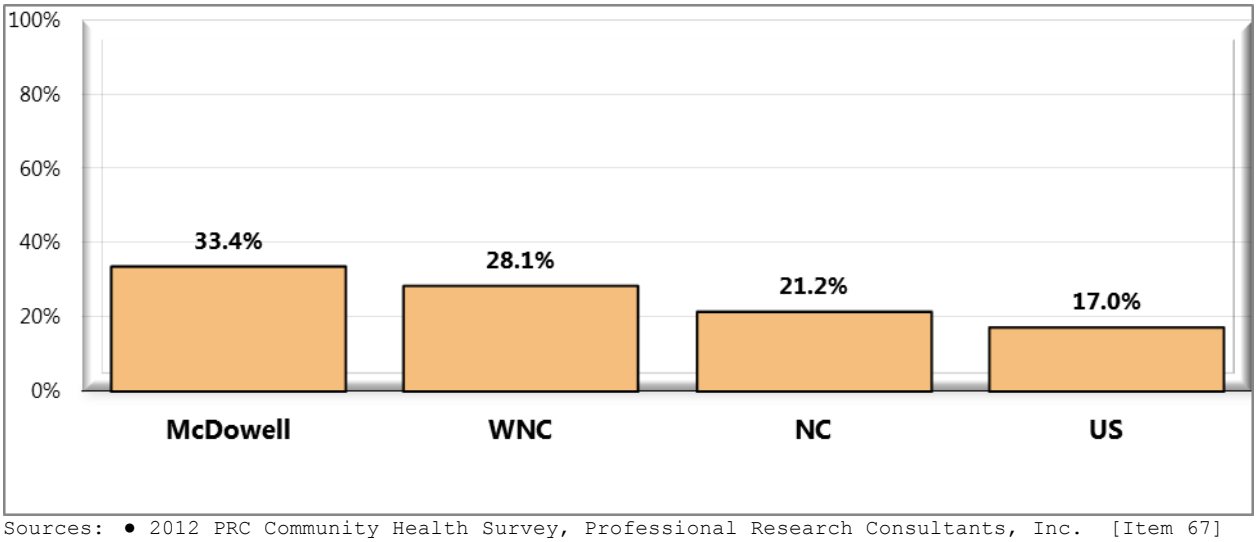
Disability and Limitations in Physical Activity

An individual can get a disabling impairment or chronic condition at any point in life. Compared with people without disabilities, people with disabilities are more likely to (DHHS, 2010):

- Experience difficulties or delays in getting the health care they need.
- Not have had an annual dental visit.
- Not have had a mammogram in past 2 years.
- Not have had a Pap test within the past 3 years.
- Not engage in fitness activities.
- Use tobacco.
- Be overweight or obese.
- Have high blood pressure.
- Experience symptoms of psychological distress.
- Receive less social-emotional support.
- Have lower employment rates.

Survey respondents were asked, "Are you limited in any way in any activities because of physical, mental or emotional problems?" Those who responded, "yes," were then asked to name the major impairment or health problem that limits them. Due to small county-level sample sizes, only regional data is shown for the latter question.

Figure 46. Limited in Activities in Some Way Due to Physical, Mental or Emotional Problem (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 67]
● Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2010 North Carolina data.
● 2011 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents

Table 33. Type of Problem That Limits Activities (WNC Healthy Impact Survey)
(Among Those Reporting Activity Limitations)
(Western North Carolina, 2012)

	Arthritis / Rheumatism	Back/Neck Problem	Difficulty Walking	Fracture/Bone/ Joint Injury	Heart Problem	Lung/Breathing Problem	Mental/ Depression	Other (<3%)
McDowell	9.7%	25.7%	8.0%	10.7%	1.2%	4.7%	5.9%	34.1%

Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 68]
Notes: ● Asked of those respondents reporting activity limitations.

Diabetes

Table 34 presents trend data from the US Centers for Disease Control and Prevention (CDC) on the estimated prevalence of diagnosed diabetes in McDowell County and WNC. The prevalence of diagnosed diabetes and selected risk factors by county was estimated using data from CDC's Behavioral Risk Factor Surveillance System (BRFSS) and data from the U.S. Census Bureau's Population Estimates Program. Three years of data were used to improve the precision of the year-specific county-level estimates of diagnosed diabetes and selected risk factors.

From these data it appears that the estimated prevalence of diagnosed diabetes among adults in McDowell County was variable over the period cited, but rose overall from 10.0% in 2005 to 10.6% in 2009, an

increase of 6.0%. In WNC the estimated mean percent prevalence of diagnosed diabetes among adults rose from 8.5% in 2005 to 9.0% in 2009, an increase of 5.9%.

Table 34. Estimate of Diagnosed Diabetes Among Adults Age 20 and Older (2005-2009)

Geography	2005		2006		2007		2008		2009	
	#	%	#	%	#	%	#	%	#	%
McDowell County	3,521	10.0	3,549	9.9	3,595	9.9	3,712	10.0	4,048	10.6
Regional Total	49,896	-	52,045	-	55,160	-	55,442	-	58,378	-
Regional Arithmetic Mean	3,119	8.5	3,253	8.7	3,448	8.9	3,465	8.8	3,649	9.0

In 2010, inpatient hospitalizations for diabetes among McDowell County residents totaled 87 cases, or 1.9% of all inpatient hospitalizations listed for the county. In the same year, there were 1,240 inpatient hospital cases associated with treatment of diabetes in WNC. This number of cases represented 1.6% of all hospitalizations in the region. Statewide, diabetes hospitalizations composed 1.9% of all hospitalizations in NC (*Data Workbook*).

Obesity

Obesity is a problem throughout the population. However, among adults in the U.S., vast disparities in obesity exist. Within the U.S., the prevalence of obesity is highest for middle-aged people and for non-Hispanic black and Mexican American women. Among children and adolescents, the prevalence of obesity is highest among older and Mexican American children and non-Hispanic black girls. The association of income with obesity varies by age, gender, and race/ethnicity. Social and physical factors affecting diet and physical activity have an impact on weight. (DHHS, 2010).

Body Mass Index (BMI), which describes relative weight for height, is significantly correlated with total body fat content. The BMI should be used to assess overweight and obesity and to monitor changes in body weight. In addition, measurements of body weight alone can be used to determine efficacy of weight loss therapy. BMI is calculated as weight (kg)/height squared (m^2). To estimate BMI using pounds and inches, use: [weight (pounds)/height squared ($inches^2$)] x 703.

In this report, underweight is defined as a BMI of <18.5 kg/m^2, normal is defined as a BMI of 18.5 to 24.9 kg/m^2, overweight is defined as a BMI of 25.0 to 29.9 kg/m^2 and obesity as a BMI ≥30 kg/m^2. The rationale behind these definitions is based on epidemiological data that show increases in mortality with BMIs above 25 kg/m^2. The increase in mortality, however, tends to be modest until a BMI of 30 kg/m^2 is

reached. For persons with a BMI ≥30 kg/m^2, mortality rates from all causes, and especially from cardiovascular disease, are generally increased by 50 to 100 percent above that of persons with BMIs in the range of 20 to 25 kg/m^2 (NIH, 1998).

Adult Obesity

Table 35 presents trend data from the CDC on the estimated prevalence of diagnosed adult obesity in McDowell County and WNC. The prevalence of diagnosed obesity and selected risk factors by county was estimated using data from CDC's Behavioral Risk Factor Surveillance System (BRFSS) and data from the U.S. Census Bureau's Population Estimates Program. Three years of data were used to improve the precision of the year-specific county-level estimates of diagnosed diabetes and selected risk factors.

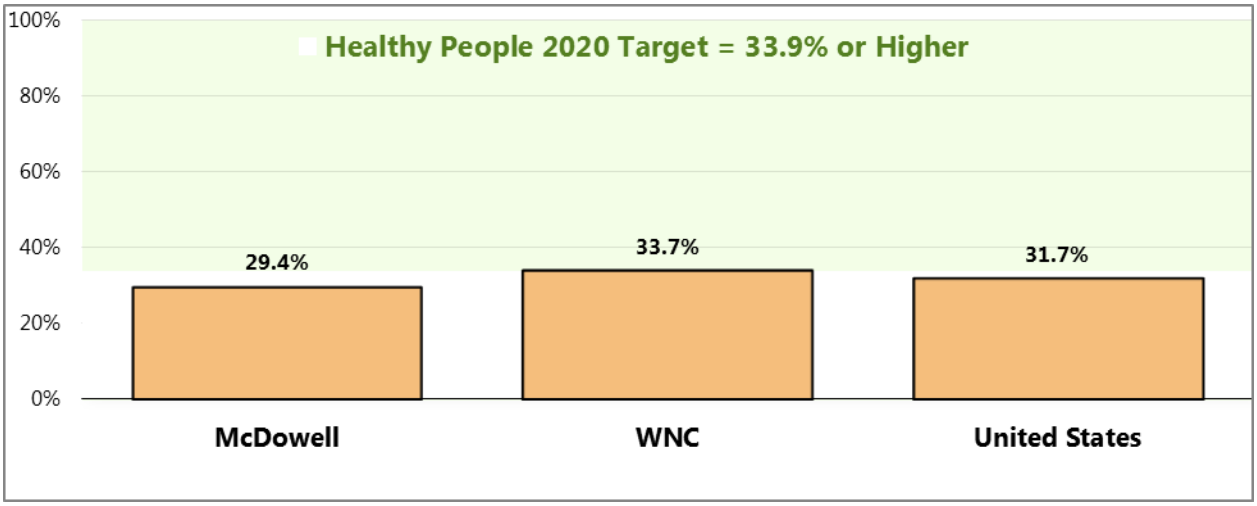
From these data it appears that the estimated prevalence of diagnosed obesity among adults in McDowell County rose most years between 2005 and 2009; the increase from 2005 to 2009 was 24.9%. The estimated mean prevalence of adult obesity in WNC increased annually throughout the period cited. Between 2005 and 2009 the estimated mean percent of the WNC population diagnosed as obese rose from 25.2% to 28.0%, a total increase of 11.1%.

Table 35. Estimate of Diagnosed Obesity Among Adults Age 20 and Older (2005-2009)

Geography	2005		2006		2007		2008		2009	
	#	%	#	%	#	%	#	%	#	%
McDowell County	8,757	26.9	10,440	31.9	10,640	32.4	11,160	33.8	11,132	33.6
Regional Total	128,908	-	136,661	-	139,114	-	143,681	-	148,403	-
Regional Arithmetic Mean	8,057	25.2	8,541	26.4	8,695	26.7	8,980	27.4	9,275	28.0

Based on self-reported heights and weights, the survey data below shows 2012 county and regional estimates of the prevalence of healthy weight, overweight, and obesity.

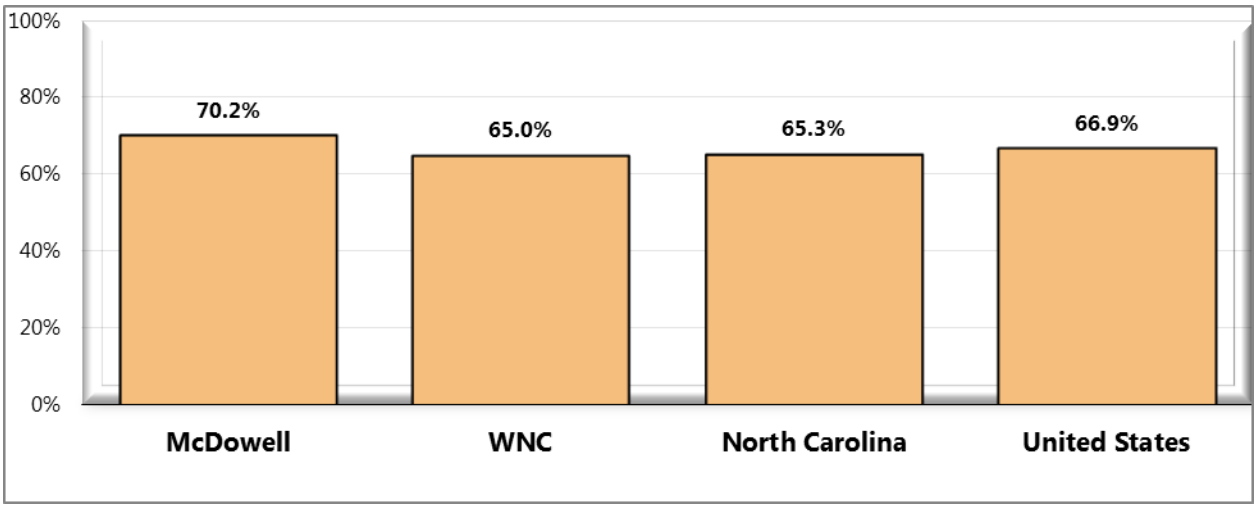
Figure 47. Healthy Weight (WNC Healthy Impact Survey)
(Percent of Adults With a Body Mass Index Between 18.5 and 24.9)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 85]
● 2011 PRC National Health Survey, 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.

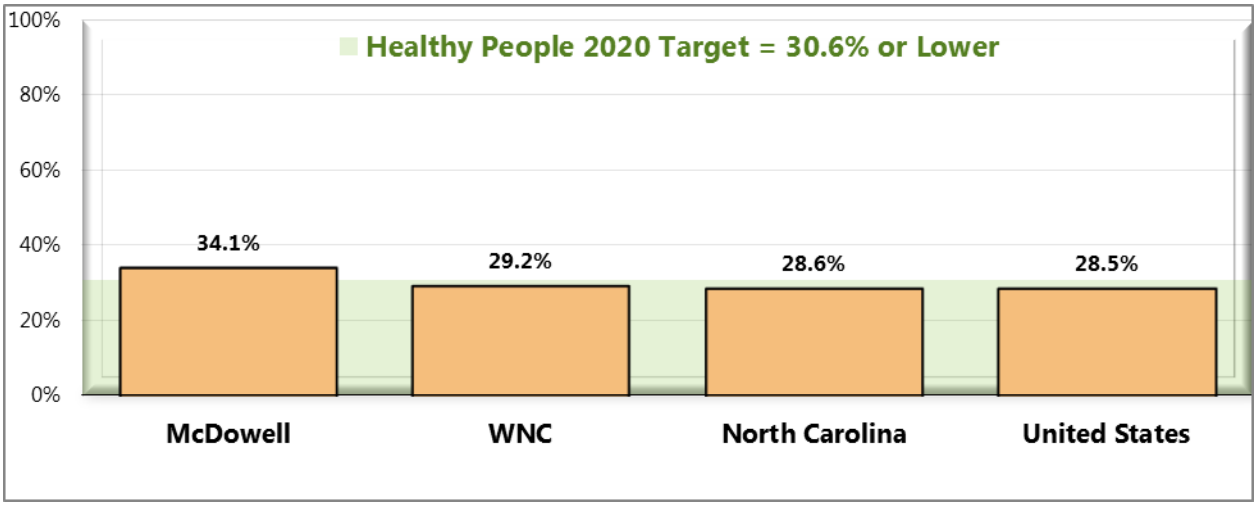
Figure 48. Prevalence of Total Overweight (WNC Healthy Impact Survey)
(Percent of Overweight or/Obese Adults; Body Mass Index of 25.0 or Higher)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 85]
● 2011 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): 2010 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.

Figure 49. Prevalence of Obesity (WNC Healthy Impact Survey)
(Percent of Obese Adults; Body Mass Index of 30.0 or Higher)



Sources:
- 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 85]
- 2011 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 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): 2010 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.

Childhood Obesity

The NC Healthy Weight Initiative, using the NC Nutrition and Physical Activity Surveillance System (NC NPASS), collects height and weight measurements from children seen in NC DPH-sponsored WIC and Child Health Clinics, as well as some school-based Health Centers (NC DHHS – Nutrition Services Branch, 2012). (Note that this data is not necessarily representative of the county-wide or region-wide population of children.) This data is used to calculate Body Mass Indices (BMIs) in order to gain some insight into the prevalence of childhood obesity.

BMI is a calculation relating weight to height by the following formula:

BMI = (weight in kilograms) / (height in meters)

For children, a BMI in the 95th percentile or above is considered "obese" (formerly defined as "overweight"), while BMIs that are between the 85th and 94th percentiles are considered "overweight" (formerly defined as "at risk for overweight").

Tables 36, 37 and 38 present NC NPASS data for 2010 on children in three age groups: ages 2-4, ages 5-11, and ages 12-18.

From data presented in Table 36 it appears that the prevalence of healthy weight among 2-4 year-olds in McDowell County (68.8%) was higher than the comparable figures for either WNC (64.5%) or NC (63.5%). The prevalence of *overweight* among children ages 2-4 was lower in McDowell County (12.8%) than the mean for WNC (17.2%) or the figure for NC as a whole (16.1%). The prevalence of *obesity* in McDowell County 2-4 year-olds (9.4%) was lower than the mean prevalence in WNC (13.6%) or in NC as a whole (15.6%). It must be noted that the regional means denoted in *italics* contain one or more county percentages that are unstable due to small numbers of children participating in the program.

Table 36. Prevalence of Obesity, Overweight, Healthy Weight and Underweight
Children 2 through 4 years

(2010)

Geography	Total	Underweight		Healthy Weight		Overweight		Obese	
		<5th Percentile		≥5th to <85th Percentile		≥85th to <95th Percentile		≥95th Percentile	
	#	#	%	#	%	#	%	#	%
McDowell County	648	58	9.0	446	68.8	83	12.8	61	9.4
Regional Total	6,814	316	-	4,410	-	1,139	-	949	-
Regional Arithmetic Mean	426	20	*4.8*	276	64.5	71	*17.2*	59	*13.6*
State Total	105,410	4,935	4.7	66,975	63.5	17,022	16.1	16,478	15.6

Data presented in Table 37 for McDowell County are all based on very small numbers of program participants (total n=15) so accurate comparisons with other jurisdictions are not possible. In WNC, the mean prevalence of obesity in the 5-11 age group (19.4%) was smaller than the comparable figure for NC as a whole (25.8%). It must be noted that the regional means denoted in *italics* contain one or more county percentages that are unstable due to small numbers of children participating in the program.

Table 37. Prevalence of Obesity, Overweight, Healthy Weight and Underweight
Children 5 through 11 years

Geography	Total	Underweight		Healthy Weight		Overweight		Obese	
		<5th Percentile		≥5th to <85th Percentile		≥85th to <95th Percentile		≥95th Percentile	
	#	#	%	#	%	#	%	#	%
McDowell County	15	2	***13.3***	8	***53.3***	2	***13.3***	3	***20.0***
Regional Total	1,243	26	-	721	-	208	-	288	-
Regional Arithmetic Mean	78	2	*2.9*	45	*63.4*	13	*14.3*	18	*19.4*
State Total	12,633	353	2.8	6,859	54.3	2,157	17.1	3,264	25.8

(2010)

Note: County percentages in ***bold italics*** are unstable due to small numbers of participants.

In McDowell County there were no NC NPASS program participants in the 12-18 age group in 2010. Examining regional data, it appears that the prevalence of healthy weight children ages 12-18 was higher in WNC (56.3%) than statewide (51.9%), that the prevalence of *overweight* children ages 12-18 was higher in WNC (19.0%) than in NC as a whole (18.1%), but that the prevalence of *obesity* in this age group was smaller in WNC (23.8%) than statewide (28.0%). It must be noted that the regional means denoted in *italics* contain one or more county percentages that are unstable due to small numbers of children participating in the program.

Table 38. Prevalence of Obesity, Overweight, Healthy Weight and Underweight
Children 12 through 18 years
(2010)

Geography	Total	Underweight		Healthy Weight		Overweight		Obese	
		<5th Percentile		≥5th to <85th Percentile		≥85th to <95th Percentile		≥95th Percentile	
	#	#	%	#	%	#	%	#	%
McDowell County	0	0	**n/a**	0	**n/a**	0	**n/a**	0	**n/a**
Regional Total	1,348	13	-	729	-	245	-	361	-
Regional Arithmetic Mean	84	1	*1.0*	46	*56.3*	15	*19.0*	23	*23.8*
State Total	6,854	133	1.9	3,560	51.9	1,241	18.1	1,920	28.0

For further details regarding this NC NPASS data, consult the *Data Workbook*.

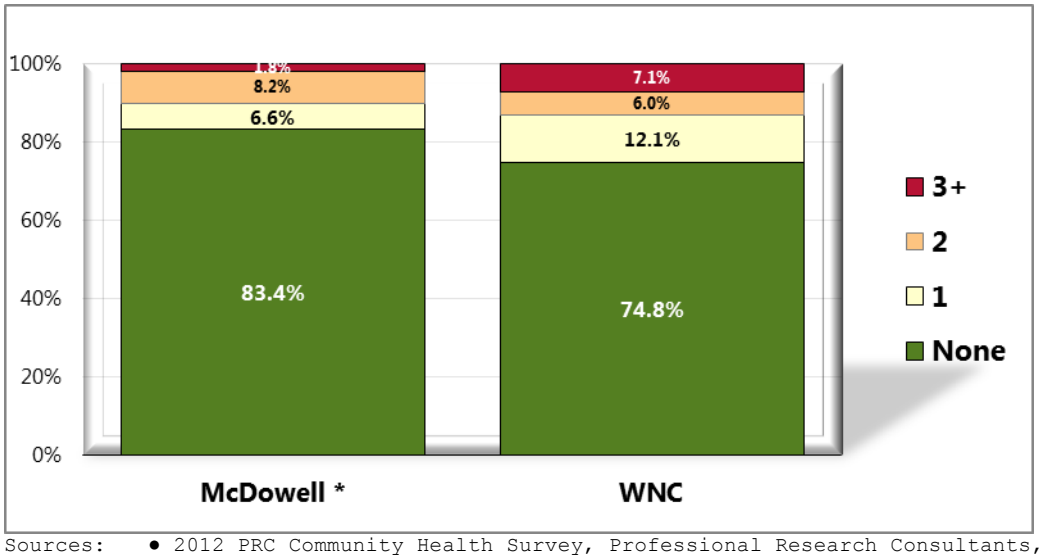
Injuries

Falls

There were 21 deaths due to falls in McDowell County in the period 2006-2010. In 2009 alone there were six, all of them in the over-65 age group (two each in the 65-74, 75-84, and 85+ age groups) (*Data Workbook*).

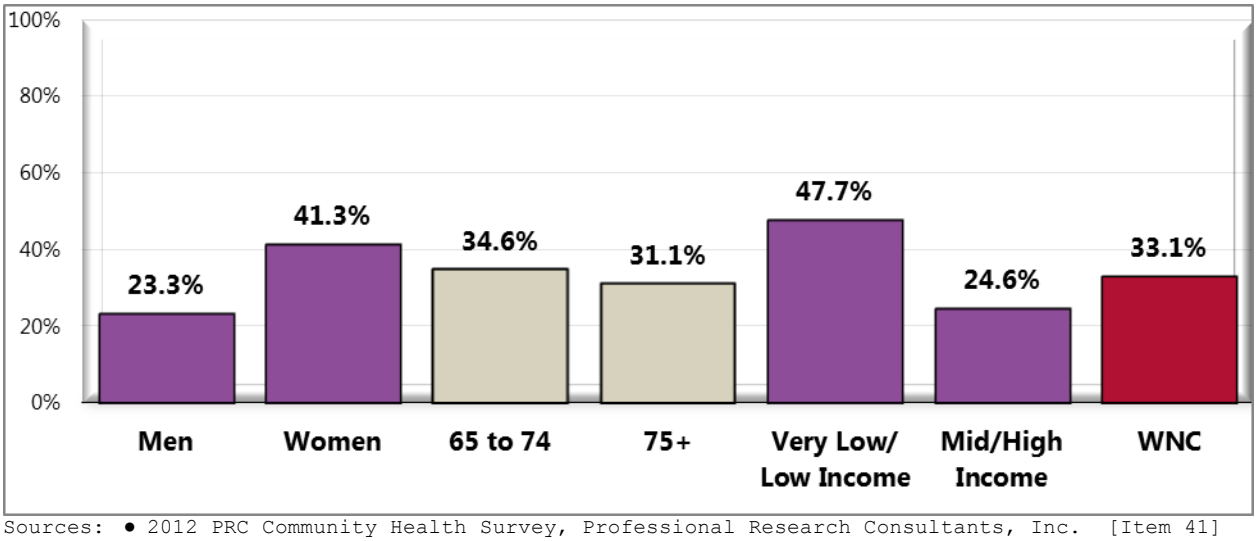
Survey respondents were also asked how many times they have fallen in the past 12 months, and how many of these falls caused an injury. Data is shown below for adults age 65 and older. Due to small county-level sample sizes, fall-related injury data is provided at the regional level.

Figure 50. Number of Falls in the Past Year (WNC Healthy Impact Survey)
(Among Adults Age 65 and Older)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 40]
Notes: ● Asked of respondents age 65 and older.
* These counties have sample sizes deemed unreliable (n<50).

Figure 51. Sustained a Fall-Related Injury in the Past Year (WNC Healthy Impact Survey)
(Among Adults 65+ Who Have Fallen in the Past Year)
(Western North Carolina, 2012)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 41]
Notes: ● Asked of respondents age 65 and older who have fallen in the past year.
● Includes falls that caused respondent to limit his/her regular activities for at least a day or caused him/her to go see a doctor.
● Hispanics can be of any race. Other race categories are non-Hispanic categorizations (e.g., "White" reflects non-Hispanic White respondents).
● Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their

household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Vehicle Crashes

The Highway Safety Research Center at the University of North Carolina at Chapel Hill tracks information about vehicle crashes across the state on an annual basis, including detail on the fraction of crashes that are alcohol-related. Table 39 presents trend data on vehicle crashes for the period from 2006 through 2010. The data presented for McDowell County demonstrated high variability, with the percentage of alcohol-related crashes above the percentage for WNC in four of the five years cited. The percentage of alcohol-related traffic crashes in the county was above the comparable state rate in every year cited in the table. The data in the table also shows that the percentage of alcohol-related vehicle crashes in WNC was higher than the comparable percentage for the state as a whole throughout the period cited, with the difference varying from 16% to 27% depending on the year. It also appears that the percent of crashes that were alcohol-related decreased in McDowell County, WNC and NC since peaking in all three jurisdictions in 2008

Table 39. Alcohol-Related Traffic Crashes (2006-2010)

Geography	2006		2007		2008		2009		2010	
	# Crashes	% Alcohol-Related	# Crashes	% Alcohol-Related	# Crashes	% Alcohol-Related	# Crashes	% Alcohol-Related	# Crashes	% Alcohol-Related
McDowell County	762	7.2	833	8.4	746	8.7	1,065	6.8	1,025	4.5
Regional Total	15,004	6.2	15,216	6.5	13,997	7.1	14,075	6.6	14,763	5.8
State Total	220,307	5.1	224,307	5.3	214,358	5.6	209,695	5.4	213,573	5.0

Table 40 presents additional detail on the nature of vehicular crashes for a single year, 2010. In McDowell County 4.5% of *all* crashes were alcohol-related; although the following number may be unstable since it is based on only six events, 33.3% of the *fatal* crashes (2 of 6) in the county were alcohol-related. In both WNC and NC as a whole, the proportion of *all* crashes that were alcohol-related was less than 6%, but the proportion of *fatal* crashes that were alcohol-related was over 30%. It is noteworthy that the percentages of crashes that were alcohol-related were higher in WNC than in NC for every outcome category displayed in Table 40.

Table 40. Outcomes of Traffic Crashes (2010)

Geography	Total Crashes		Property Damage Only Crashes		Non-Fatal Crashes		Fatal Crashes	
	# Reportable Crashes	% Alcohol-Related Crashes	# Reportable Crashes	% Alcohol-Related Crashes	# Reportable Crashes	% Alcohol-Related Crashes	# Reportable Crashes	% Alcohol-Related Crashes
McDowell County	1,025	4.5	685	3.4	334	6.3	6	**33.3**

Regional Total	14,763	5.8	9,469	4.0	5,192	8.3	102	36.3
State Total	213,573	5.0	143,211	3.4	69,138	7.8	1,224	32.4

Distracted Drivers
There is no comparable data for McDowell County, WNC or NC, but in the US as a whole in 2010, 3,092 people died and 416,000 were injured as a result of distracted driving (*Data Workbook*).

Workplace Injury
There is no comparable data for McDowell County, WNC or the US, but in NC as a whole, the mortality rate associated with work-related injury was 3.9 deaths per 100,000 full-time equivalent workers in 2008, and 3.3 in 2009 (*Data Workbook*).

Poisonings
For the five-year aggregate period 2006-2010 there were 30 unintentional poisoning deaths in McDowell County, with a corresponding age-adjusted mortality rate of 29.8 per 100,000 population. The comparable mean unintentional poisoning mortality rate for WNC was 23.1 over the same period.

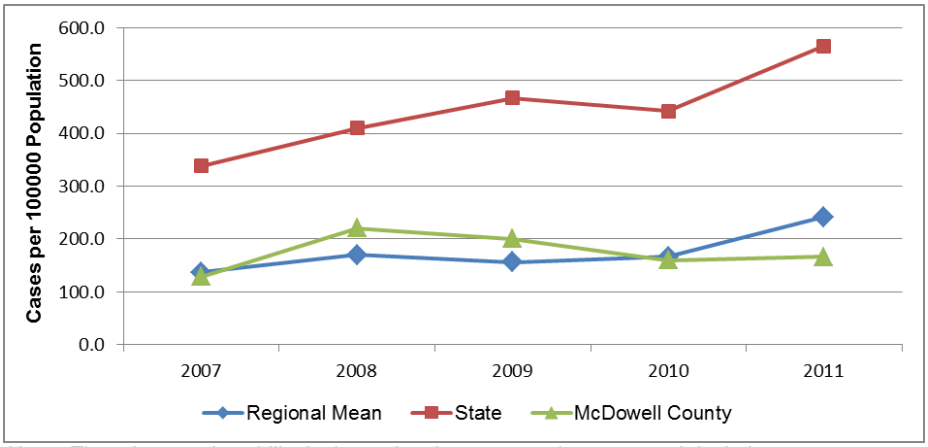
Communicable Disease

A communicable disease is a disease transmitted through direct contact with an infected individual or indirectly through a vector (Merriam-Webster.com). The topic of communicable diseases includes sexually transmitted infections (STIs). The STIs of greatest regional interest are chlamydia and gonorrhea. HIV/AIDS is sometimes grouped with STIs, since sexual contact is one mode of HIV transmission. While AIDS, as the final stage of HIV infection, was discussed previously among the leading causes of death, HIV is discussed here as a communicable disease.

Chlamydia is the most frequently reported bacterial STI in the US. It is estimated that there are approximately 2.8 million new cases of chlamydia in the US each year. Chlamydia cases frequently go undiagnosed and can cause serious problems in men and women, such as penile discharge and infertility respectively, as well as infections in newborn babies of infected mothers (CDC, 2012).

Figure 52 plots chlamydia rates for several years. From this data it appears that chlamydia infection was less prevalent in McDowell County than in NC and of similar prevalence as in WNC. In WNC the mean chlamydia infection rate was 57% to 66% lower than the comparable rate for NC as a whole for the time span cited. Chlamydia rates in both NC and WNC increased overall between 2007 and 2011, as the NC rate rose 67.2% (from 337.7 to 564.8) and the mean WNC rate rose 76.4% (from 136.9 to 241.5. In McDowell County over the same period the chlamydia infection rate appears to have increased 29.7% overall, from 128.5 to 166.7.

Figure 52. Chlamydia Rate, All Ages, Cases per 100,000 Population (Five Single Years, 2007-2011)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

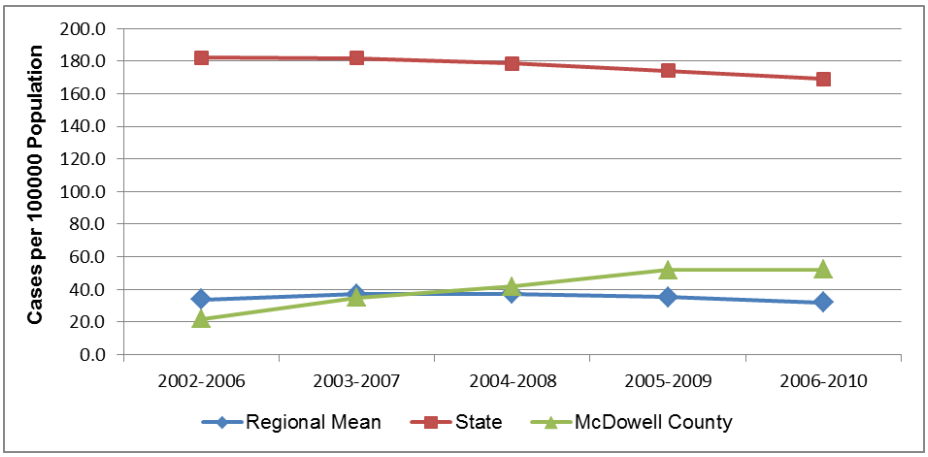
Gonorrhea is the second most commonly reported bacterial STI in the US. The highest rates of gonorrhea have been found in African Americans, people 20 to 24 years of age, and women, respectively. In women, gonorrhea can spread into the uterus and fallopian tubes, resulting in pelvic inflammatory disease (PID). PID affects more than 1 million women in the US every year and can cause tubal pregnancy and infertility in as many as 10 percent of infected women. In addition, some health researchers think gonorrhea adds to the risk of getting HIV infection (CDC, 2012).

Figure 53 plots gonorrhea rates for several aggregate periods. From this data is appears that gonorrhea was far less prevalent in McDowell County than in NC as a whole, and of approximately the same prevalence as in WNC. Note that the last figure shown for McDowell County likely was unstable because it was based on a small number of events. The mean gonorrhea rate in WNC was 72% to 82% lower than the state rate for the span of aggregate periods shown in Figure 53. It is noteworthy that as the state gonorrhea rate decreased 7.2% (from 182.0 to 168.9) over the period cited, the mean WNC gonorrhea rate increased 36.2% (from 33.7 to 45.9) in the same time span. The last stable gonorrhea infection rate in McDowell County (2005-2009) was 51.8

Correct language and figure for gonorrhea section in McDowell County Report (carries corrections to Regional Mean and McDowell figures):

Figure 46 plots gonorrhea rates for several aggregate periods. From this data is appears that gonorrhea was far less prevalent in McDowell County than in NC as a whole. The mean gonorrhea rate in WNC was approximately 80% lower than the state rate for the span of aggregate periods shown in Figure 46. As the state gonorrhea rate decreased 7.2% (from 182.0 to 168.9) over the period cited, the mean WNC gonorrhea rate decreased 5.3% (from 33.7 to 31.9) in the same time span. In McDowell County the gonorrhea rate increased 2.4 times overall, from 21.7 to 52.3, over the same period.

Figure 46. Gonorrhea Rate, Cases per 100,000 Population (Five-Year Aggregates, 2002-2006 through 2006-2010)



Note: There is some instability in the regional mean rates because each includes one or more unstable county rate.

CHAPTER 4 – HEALTH BEHAVIORS

Physical Activity

Regular physical activity can improve the health and quality of life of Americans of all ages, regardless of the presence of a chronic disease or disability. Among adults and older adults, physical activity can lower the risk of: early death; coronary heart disease; stroke; high blood pressure; type 2 diabetes; breast and colon cancer; falls; and depression. Among children and adolescents, physical activity can: improve bone health; improve cardiorespiratory and muscular fitness; decrease levels of body fat; and reduce symptoms of depression. For people who are inactive, even small increases in physical activity are associated with health benefits.

Personal, social, economic, and environmental factors all play a role in physical activity levels among youth, adults, and older adults.

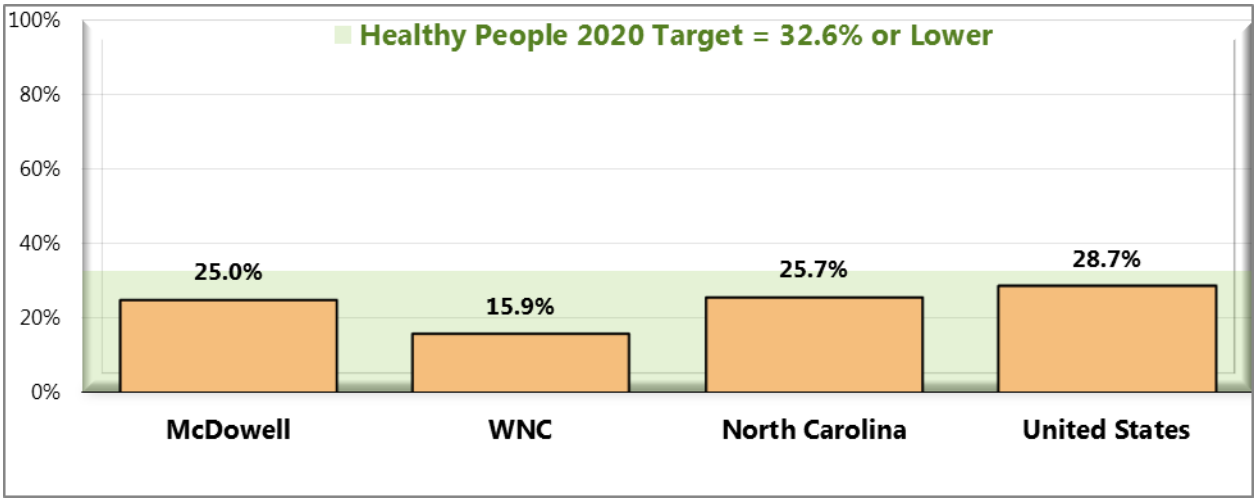
Factors **positively** associated with adult physical activity include: postsecondary education; higher income; enjoyment of exercise; expectation of benefits; belief in ability to exercise (self-efficacy); history of activity in adulthood; social support from peers, family, or spouse; access to and satisfaction with facilities; enjoyable scenery; and safe neighborhoods. Factors **negatively** associated with adult physical activity include: advancing age; low income; lack of time; low motivation; rural residency; perception of great effort needed for exercise; overweight or obesity; perception of poor health; and being disabled. Older adults may have additional factors that keep them from being physically active, including lack of social support, lack of transportation to facilities, fear of injury, and cost of programs (DHHS, 2010).

Adults (age 18–64) should do 2 hours and 30 minutes a week of moderate-intensity, or 1 hour and 15 minutes (75 minutes) a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic physical activity. Aerobic activity should be performed in episodes of at least 10 minutes, preferably spread throughout the week. Additional health benefits are provided by increasing to 5 hours (300 minutes) a week of moderate-intensity aerobic physical activity, or 2 hours and 30 minutes a week of vigorous-intensity physical activity, or an equivalent combination of both.

Older adults (age 65 and older) should follow the adult guidelines. If this is not possible due to limiting chronic conditions, older adults should be as physically active as their abilities allow. They should avoid inactivity. Older adults should do exercises that maintain or improve balance if they are at risk of falling.

For all individuals, some activity is better than none. Physical activity is safe for almost everyone, and the health benefits of physical activity far outweigh the risks (DHHS, 2008).

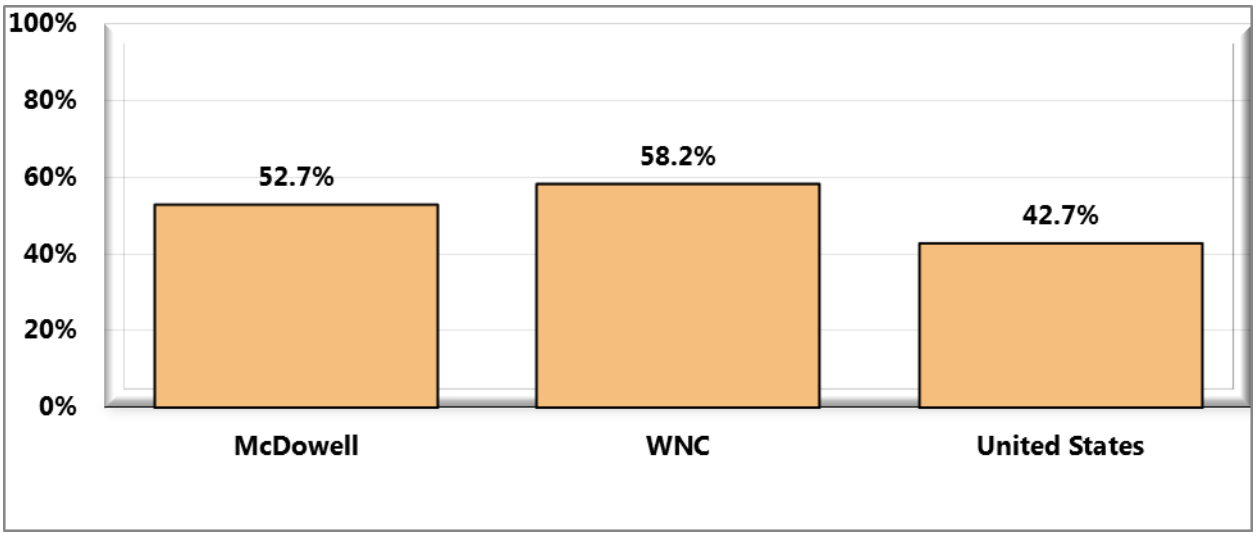
Figure 54. No Leisure-Time Physical Activity in the Past Month (WNC Healthy Impact Survey)



.Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 56]
● Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2010 North Carolina data.
● 2011 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 PA-1]

Notes: ● Asked of all respondents.

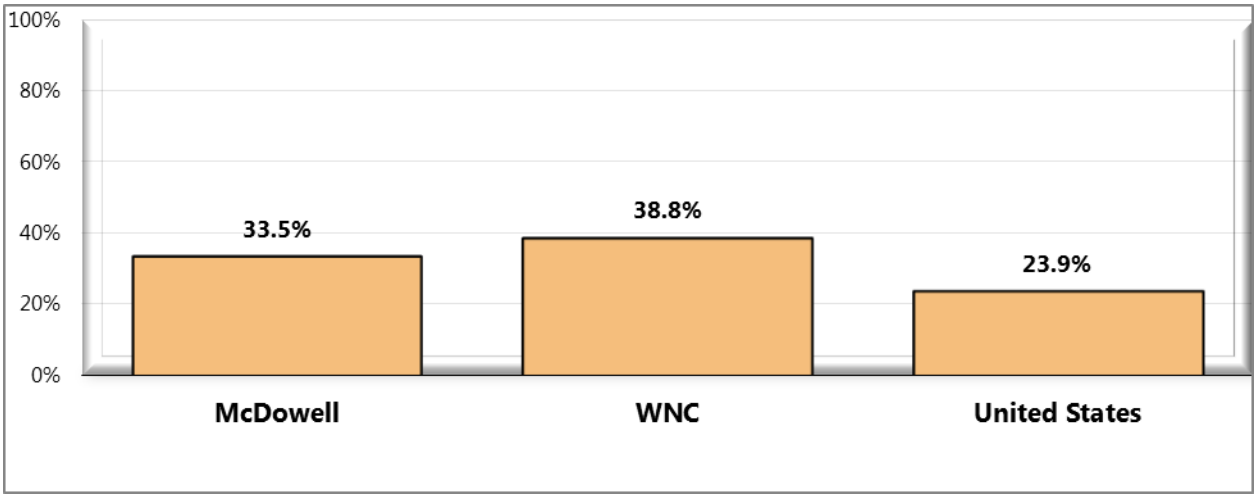
Figure 55. Meets Physical Activity Recommendations (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 80]
● 2011 PRC National Health Survey, 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.

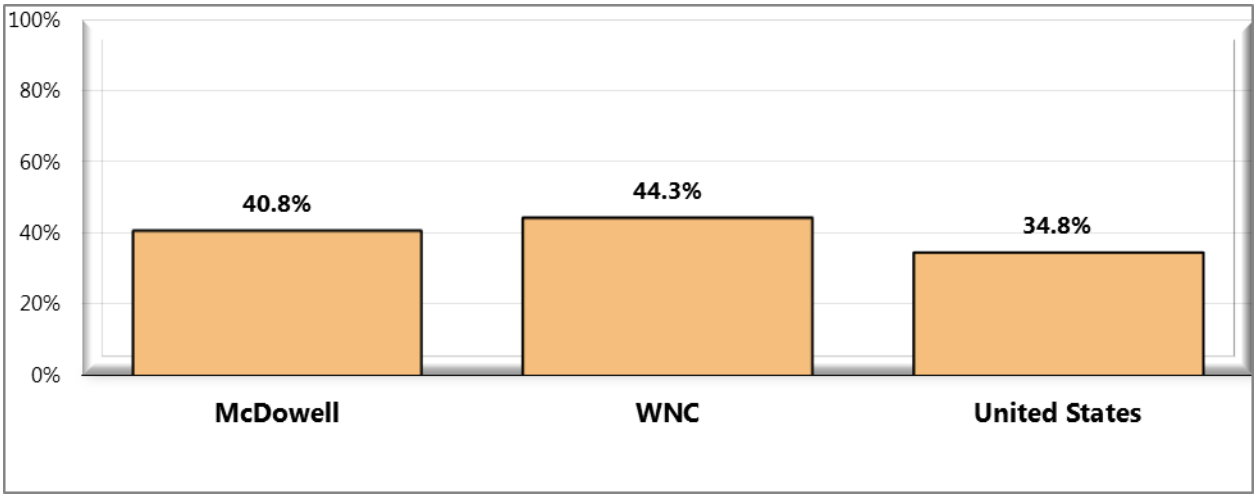
Figure 56. Moderate Physical Activity (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 81]
● 2011 PRC National Health Survey, 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.

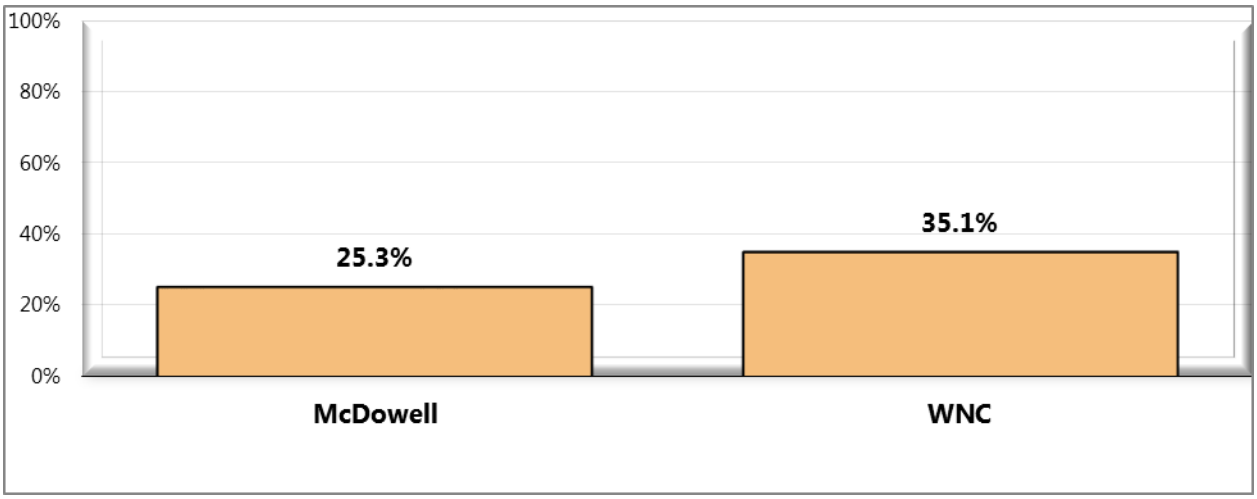
Figure 57. Vigorous Physical Activity (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 82]
● 2011 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): 2010 North Carolina data.

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.

Figure 58. Strengthening Physical Activity (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 83]
Notes: ● Asked of all respondents.
● Strengthening Physical Activity: Takes part in physical activities or exercises that strengthen muscles at least 2 times per week.

Diet and Nutrition

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 Americans reduce their risks for many health conditions, including: overweight and obesity; malnutrition; iron-deficiency anemia; heart disease; high blood pressure; dyslipidemia (poor lipid profiles); type 2 diabetes; osteoporosis; oral disease; constipation; diverticular disease; and some cancers. 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.

Social Determinants of Diet. Social factors thought to influence diet include:

- Knowledge and attitudes
- Skills
- Social support
- Societal and cultural norms
- Food and agricultural policies
- Food assistance programs
- Economic price systems

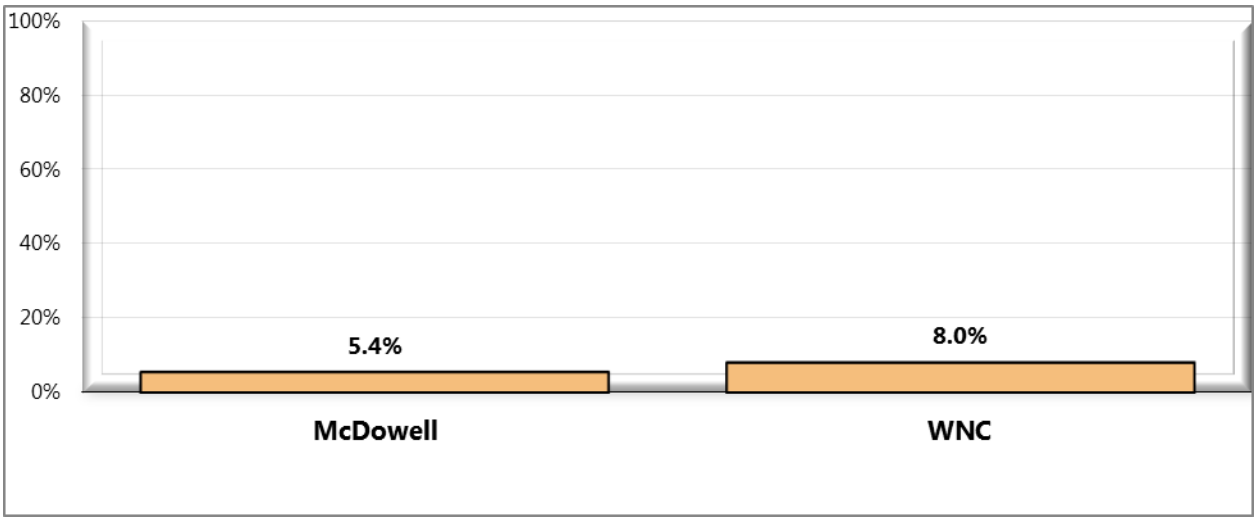
Physical Determinants of Diet.
The places where people eat appear to influence their diet. For example, foods eaten away from home often have more calories and are of lower nutritional quality than foods prepared at home. Marketing

also influences people's—particularly children's—food choices (DHHS, 2010).

More information is available elsewhere in this report about some of these determinants.

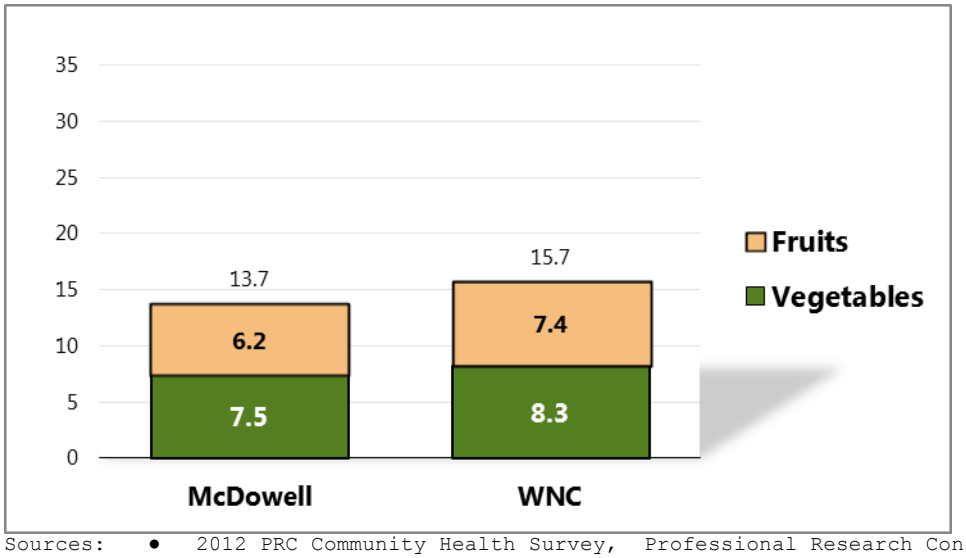
To measure fruit and vegetable consumption, survey respondents were asked how many one-cup servings of fruit and one-cup servings of vegetables (not counting lettuce salad or potatoes) they ate over the past week. Survey respondents in McDowell County were also asked to estimate their daily caloric intake and indicate their understanding of nutrition information on food labels.

Figure 59. Had an Average of Five or More Servings of Fruits/Vegetables per Day in the Past Week (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 79]
Notes: ● Asked of all respondents.
● For this issue, respondents were asked to recall their food intake during the previous week. Reflects 35 or more 1-cup servings of fruits and/or vegetables in the past week, excluding lettuce salad and potatoes.

Figure 60. Average Servings of Fruits/Vegetables in the Past Week (WNC Healthy Impact Survey)



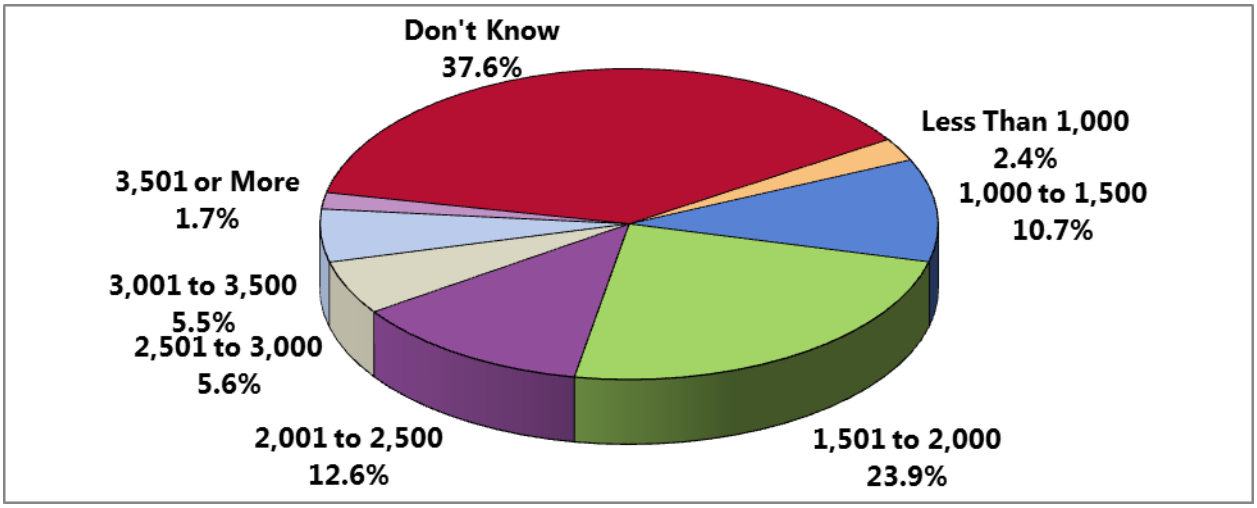
Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Items 53-54]

Notes: ● Asked of all respondents.

● For this issue, respondents were asked to recall their food intake during the previous week.

Reflects 35 or more 1-cup servings of fruits and/or vegetables in the past week, excluding lettuce salad and potatoes.

Figure 61. Estimated Daily Caloric Intake (WNC Healthy Impact Survey)

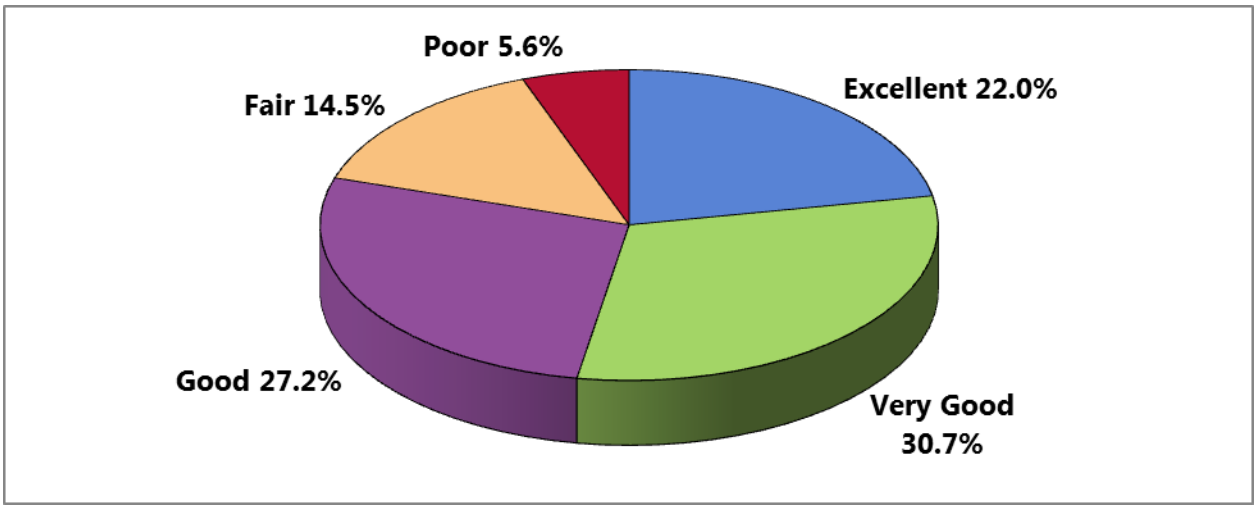


Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 111]

Notes: ● Asked of all respondents.

Figure 62. Evaluation of Own Understanding of the Nutrition Information

Presented on Food Labels



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 112]
Notes: ● Asked of all respondents.

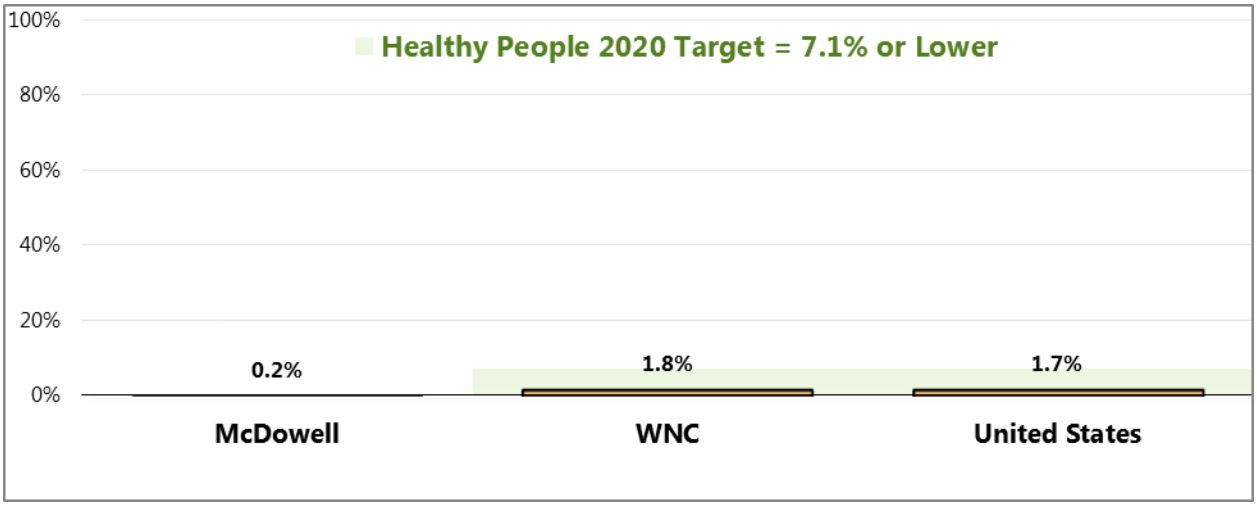
Substance Use/Abuse

Substance abuse refers to a set of related conditions associated with the consumption of mind- and behavior-altering substances that have negative behavioral and health outcomes. Social attitudes and political and legal responses to the consumption of alcohol and illicit drugs make substance abuse one of the most complex public health issues. In 2005, an estimated 22 million Americans struggled with a drug or alcohol problem. Almost 95% of people with substance use problems are considered unaware of their problem. Of those who recognize their problem, 273,000 have made an unsuccessful effort to obtain treatment. These estimates highlight the importance of increasing prevention efforts and improving access to treatment for substance abuse and co-occurring disorders. Substance abuse has a major impact on individuals, families, and communities. The effects of substance abuse are cumulative, significantly contributing to costly social, physical, mental, and public health problems (DHHS, 2010).

Illicit Drugs

For the purposes of the survey, "illicit drug use" includes use of illegal substances or of prescription drugs taken without a physician's order. It is important to note that as a self-reported measure – and because this indicator reflects potentially illegal behavior – it is reasonable to expect that it might be underreported, and that actual illicit drug use in the community is likely higher.

Figure 63. Illicit Drug Use in the Past Month (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 52]
● 2011 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-13.3]

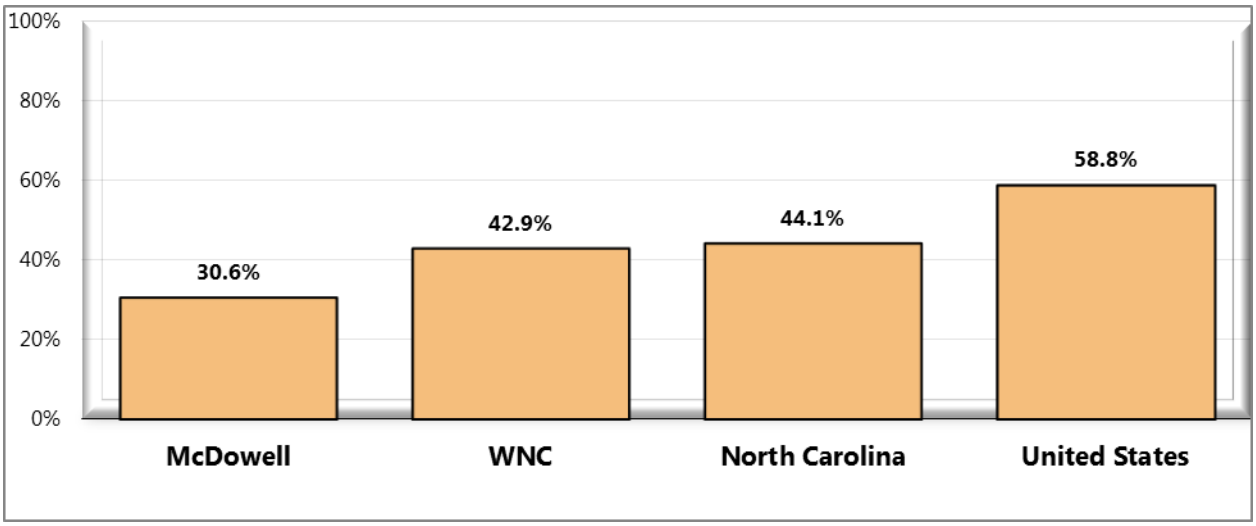
Notes: ● Asked of all respondents.
● Includes reported use of an illegal drug or of a prescription drug not prescribed to the respondent

Alcohol

"**Current drinkers**" include survey respondents who had at least one drink of alcohol in the month preceding the interview. For the purposes of this study, a "drink" is considered one can or bottle of beer, one glass of wine, one can or bottle of wine cooler, one cocktail, or one shot of liquor. "**Chronic drinkers**" include survey respondents reporting 60 or more drinks of alcohol in the month preceding the interview.

In this assessment, "**binge drinkers**" include adults who report drinking 5 or more alcoholic drinks on any single occasion during the past month. Note that state and national data reflect different thresholds for men (5+ drinks) and women (4+ drinks), so county and regional data is not directly comparable to state and national figures.

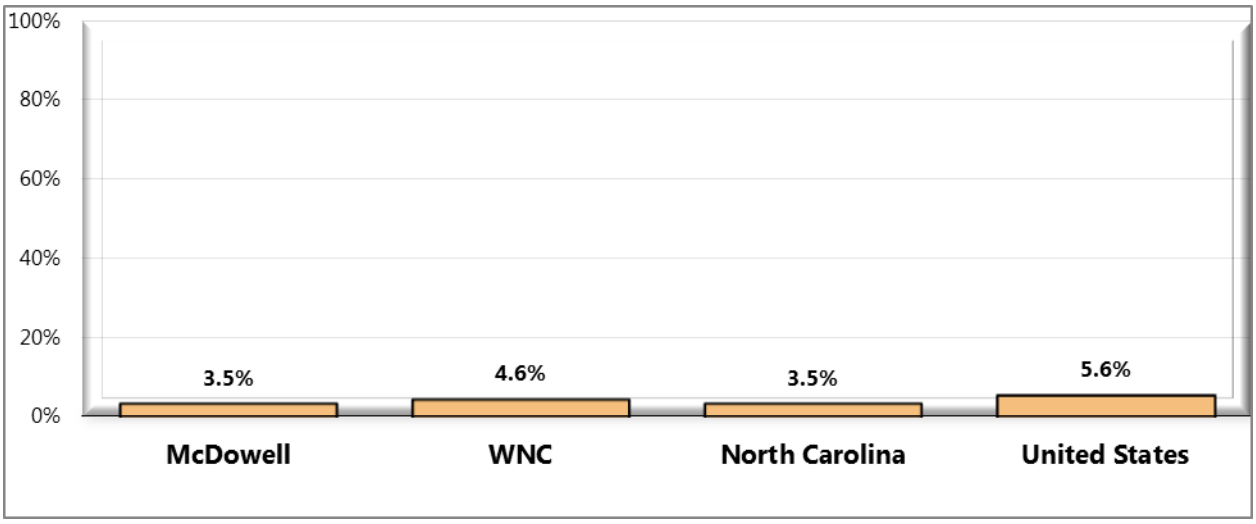
Figure 64. Current Drinkers (WNC Healthy Impact Survey)



Sources:
- 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 88]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2010 North Carolina data.
- 2011 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
- Current drinkers had at least one alcoholic drink in the past month.

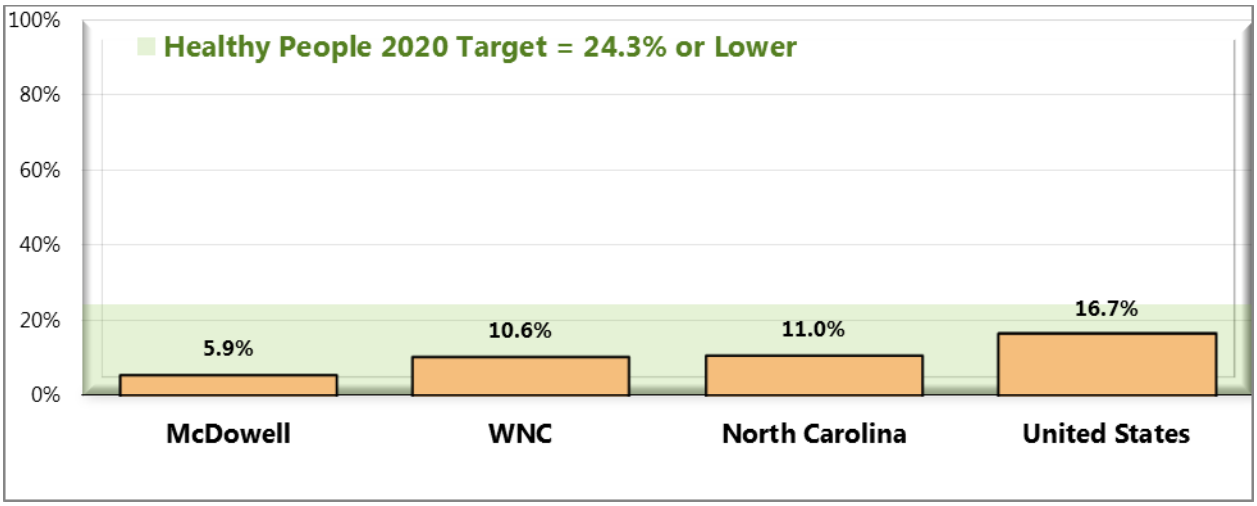
Figure 65. Chronic Drinkers (WNC Healthy Impact Survey)



Sources:
- 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 89]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2010 North Carolina data.
- 2011 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
- Chronic drinkers are defined as having 60+ alcoholic drinks in the past month.
- *The state definition for chronic drinkers is males consuming 2+ drinks per day and females consuming 1+ drink per day in the past 30 days.

Figure 66. Binge Drinkers (WNC Healthy Impact Survey)



Sources:
- 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 90]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2010 North Carolina data.
- 2011 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-14.3]

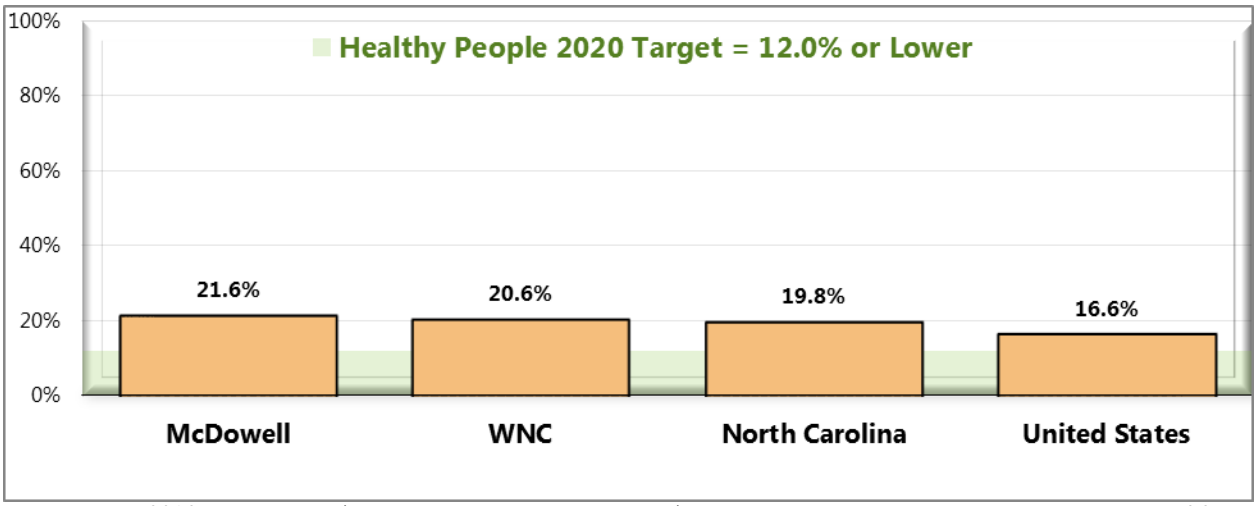
Notes:
- Asked of all respondents.
- Binge drinkers are defined as those consuming 5+ alcoholic drinks on any one occasion in the past 30 days; * note that state and national data reflect different thresholds for men (5+ drinks) and women (4+ drinks).

Tobacco

Tobacco use is the single most preventable cause of death and disease in the United States. Each year, approximately 443,000 Americans die from tobacco-related illnesses. For every person who dies from tobacco use, 20 more people suffer with at least one serious tobacco-related illness. In addition, tobacco use costs the US $193 billion annually in direct medical expenses and lost productivity. Preventing tobacco use and helping tobacco users quit can improve the health and quality of life for Americans of all ages. People who stop smoking greatly reduce their risk of disease and premature death. Benefits are greater for people who stop at earlier ages, but quitting tobacco use is beneficial at any age.

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).

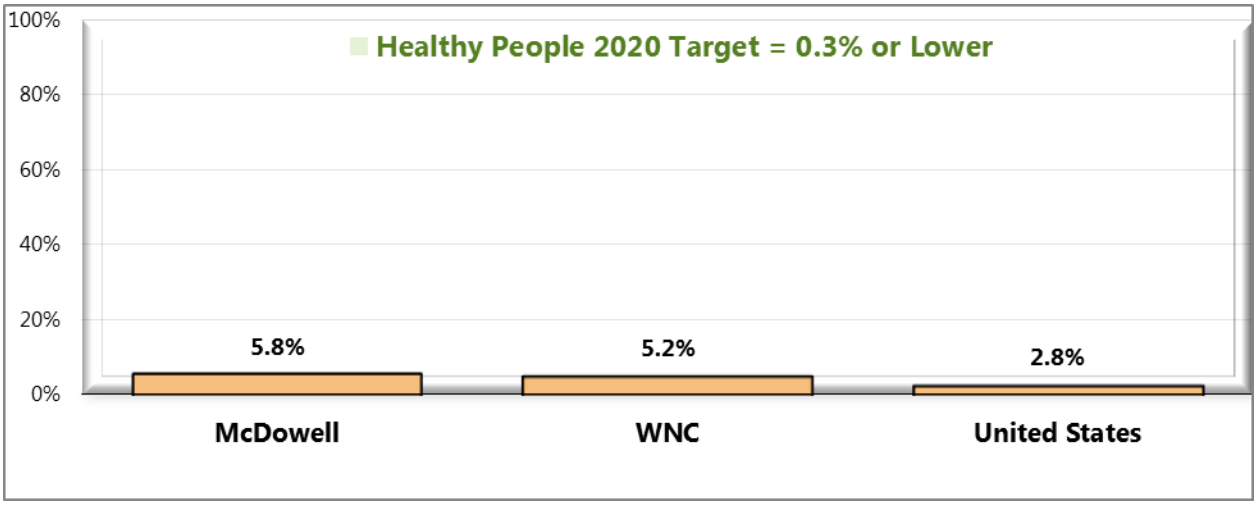
Figure 67. Current Smokers (WNC Healthy Impact Survey)



Sources:
- 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 86]
- 2011 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): 2010 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 (every day and some days).

Figure 68. Currently Use Smokeless Tobacco Products (WNC Healthy Impact Survey)



Sources:
- 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 43]
- 2011 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 TU-1.2]

Notes:
- Asked of all respondents.
- Includes regular and occasional users (every day and some days).

Table 41. Top Three Resources Respondents Would Go to for Help Quitting Tobacco (WNC Healthy Impact Survey)

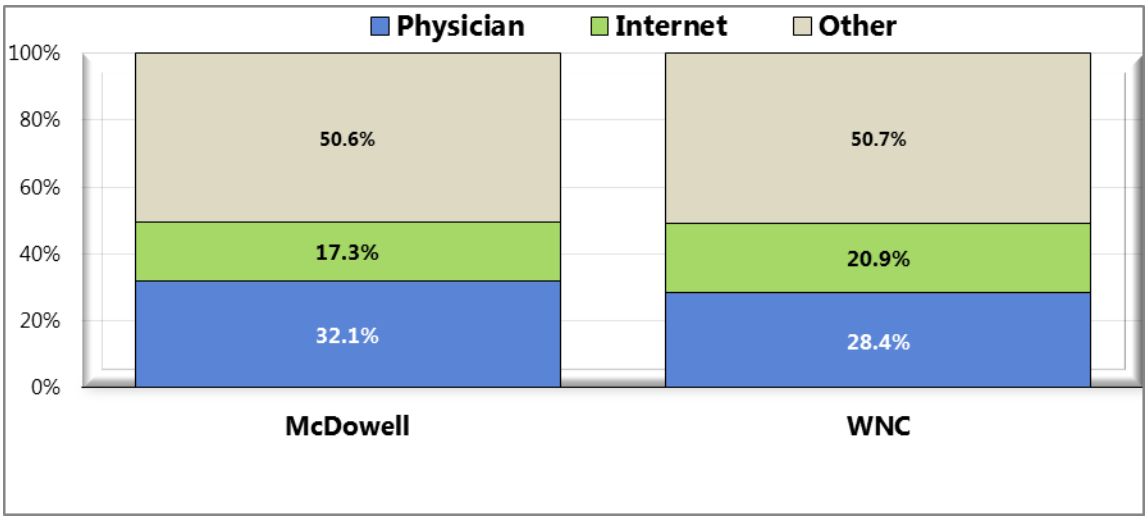
	Doctor	On My Own/Cold Turkey	Don't Know
McDowell	✓	✓	✓
WNC	✓	✓	✓

Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 48]
Notes: ● Asked of all respondents.

Health Information

Survey respondents were asked about where they get their healthcare information

Figure 69. Primary Source of Healthcare Information (WNC Healthy Impact Survey)

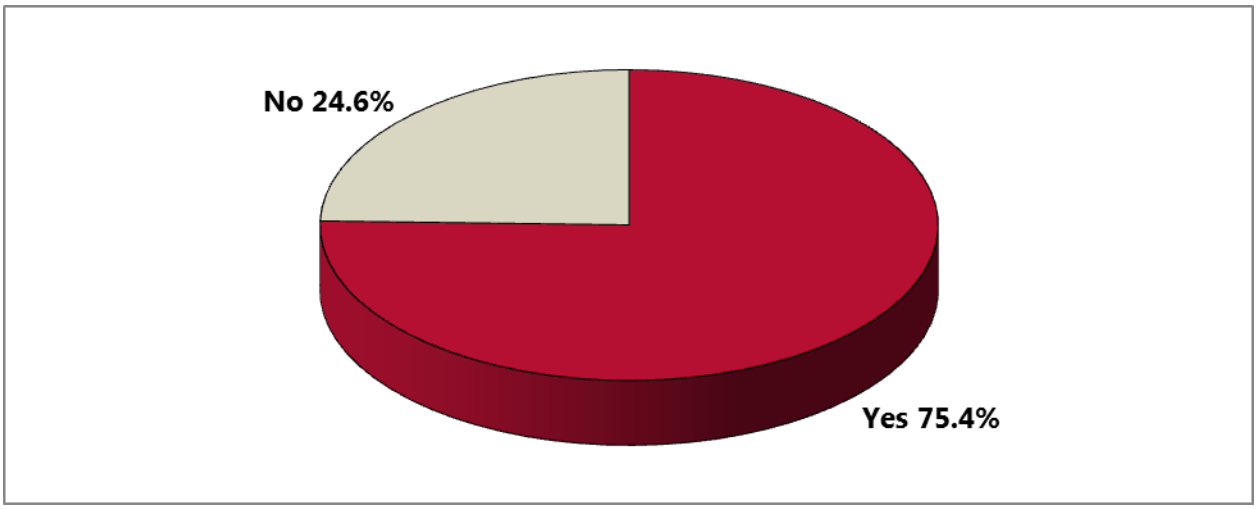


Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 11]
Notes: ● Asked of all respondents.

Sex Education

McDowell County survey respondents were asked whether they believe that sex education (including classes referring to sexual behavior and sexual health, human development, relationships, and communication skills) should be taught in the North Carolina public school system.

Figure 70. Believe That Sex Education Should Be Taught in the North Carolina Public School System (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 121]
Notes: ● Asked of all respondents.

CHAPTER 5 – CLINICAL CARE PARAMETERS

Medical Care Access

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.

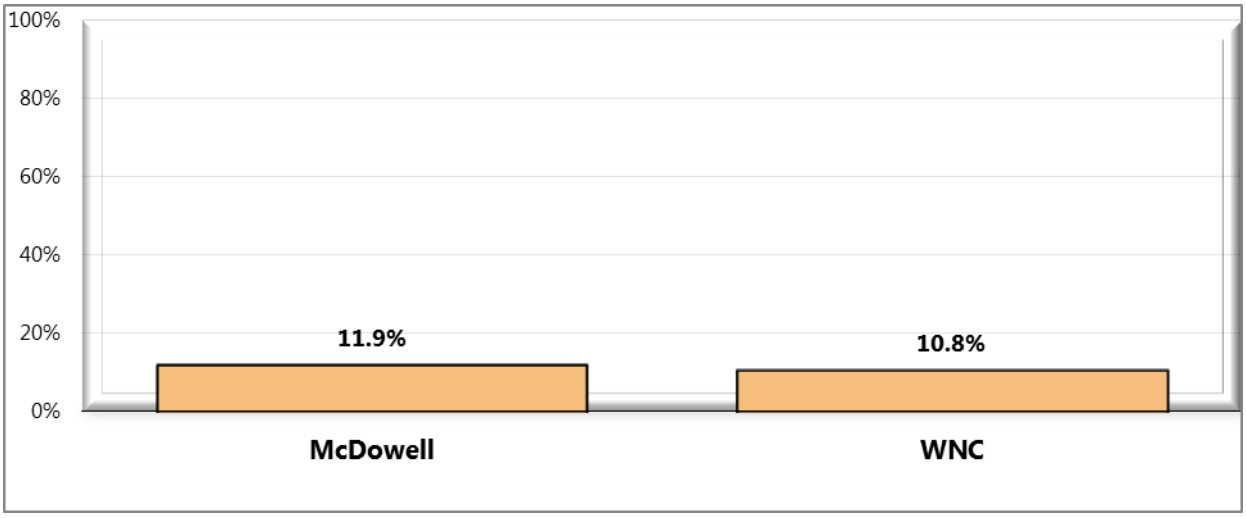
Access to health services means the timely use of personal health services to achieve the best health outcomes. It requires three distinct steps: 1) gaining entry into the health care system; 2) accessing a health care location where needed services are provided; and 3) finding a health care provider with whom the patient can communicate and trust (DHHS, 2010).

Self-Reported Access

Survey respondents were asked if there was a time in the past 12 months when they needed medical care, but could not get it. If they responded, "yes," they were asked to name the main reason they could not get needed medical care. Due to small county-level sample sizes, the responses to the latter question are displayed at the regional-level, below.

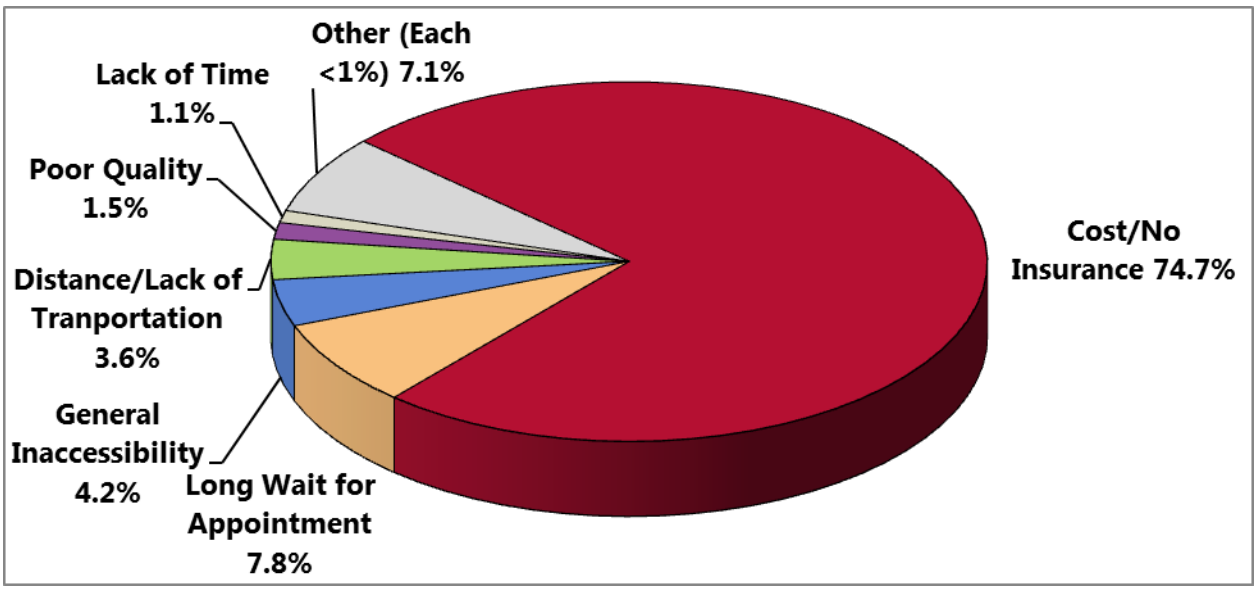
Survey respondents were also asked to indicate their agreement with the following statement: "*Considering cost, quality, number of options and availability, there is good healthcare in my county.*"

Figure 71. Was Unable to Get Needed Medical Care at Some Point in the Past Year (WNC Healthy Impact Survey)



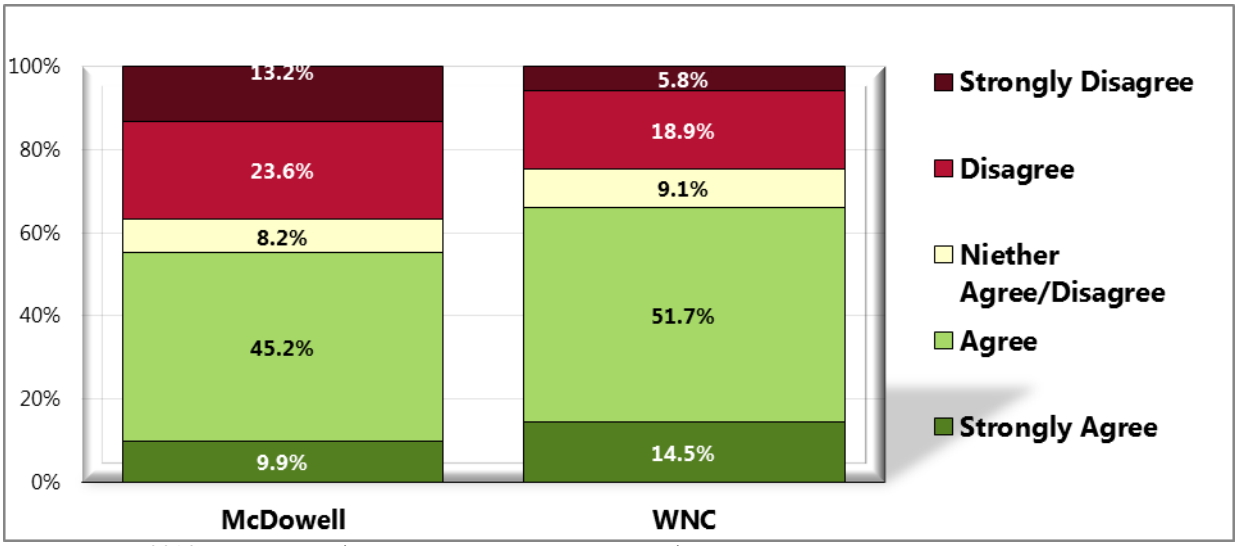
Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 13]
Notes: ● Asked of all respondents.

Figure 72. Primary Reason for Inability to Get Needed Medical Care (WNC Healthy Impact)
(Adults Unable to Get Needed Medical Care at Some Point in the Past Year)
(Western North Carolina, 2012)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 14]
Notes: ● Asked of all respondents.

Figure 73. "Considering cost, quality, number of options And availability, there is good health care in my county (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 7]
Notes: ● Asked of all respondents.

Health Care Providers

Provider/Population Ratios

One way to judge the supply of health care providers in a jurisdiction is to calculate the ratio of the number of health professionals to the number of persons in the population of that jurisdiction. In NC, there is data on the ratio of active health professionals per 10,000 population calculated at the county level. Table 42 presents those data (which for simplicity's sake will be referred to simply as the "ratio") for McDowell County, WNC, the state as a whole, and the US for five key categories of health care professionals: physicians, primary care physicians, dentists, registered nurses, and pharmacists. The years covered are 2008 and 2010.

According to this data, the ratio of professionals to population is lower in all categories for McDowell County than for WNC, NC or the US. It should be noted that the average ratios for WNC also are lower than the comparable state averages in every professional category listed in the table, and lower than the comparable national average in every professional category except primary care.

Table 42. Active Health Professionals per 10,000 Population (2008 and 2010)

Geography	2008					2010				
	Phys	Primary Care Phys	Dents	RNs	Pharms	Phys	Primary Care Phys	Dents	RNs	Pharms
McDowell County	8.1	5.8	2.2	57.2	5.8	8.2	6.2	2.0	55.7	5.3
Regional Average	15.0	8.9	3.4	75.3	7.0	14.8	8.9	3.4	74.9	6.9
State Average	21.2	9.0	4.3	95.1	9.3	21.7	9.4	4.4	97.4	9.2
National Average	23.2*	8.5*	4.9	91.4	8.0	22.7**	8.2**	5.7	92.0	8.3

* Data are for 2006
** Data are for 2008

Providers by Specialty

Table 43 lists the number of active health care professionals in McDowell County and WNC, by specialty, for 2010. From these data it is apparent that there are several categories of professionals absent from McDowell County, among them are certified nurse midwives, podiatrists, and practicing psychologists. There also are three or fewer providers in the county in the specialties of general practice, occupational therapy, and optometry.

Table 43. Active Health Professionals in McDowell County and WNC, by Specialty (2010)

Category of Professionals	McDowell County	WNC Total
Physicians		
Primary Care Physicians	28	813
Family Practice	13	368
General Practice	2	10
Internal Medicine	4	240
Obstetrics/Gynecology	5	85
Pediatrics	4	110
Other Specialties	9	853
Dentists and Dental Hygienists		
Dentists	9	342
Dental Hygienists	27	479
Nurses		
Registered Nurses	251	7,981
Nurse Practitioners	12	316
Certified Nurse Midwives	0	28
Licensed Practical Nurses	126	1,854
Other Health Professionals		
Chiropractors	5	192
Occupational Therapists	3	242
Occupational Therapy Assistants	4	99
Optometrists	2	84
Pharmacists	24	669
Physical Therapists	8	511
Physical Therapy Assistants	11	309
Physician Assistants	8	290
Podiatrists	0	24
Practicing Psychologists	0	201
Psychological Assistants	4	87
Respiratory Therapists	12	370

Uninsured Population

Table 44 presents periodic biennial data on the proportion of the non-elderly population (ages 19-64) without health insurance of any kind. While from 2006-2007 to 2009-2010 there was a 21% increase in the percent of uninsured at the state level and an 8.7% increase in McDowell County, the percent of uninsured adults in WNC decreased from one biennial period to the next throughout the span of years shown in the table, with an overall decrease of 5.9%.

Table 44. Estimated Percent Uninsured Adults, Ages 19-64 Biennial Periods (2006-2007, 2008-2009, and 2009-2010)

Geography	Percent Uninsured		
	2006-2007	2008-2009	2009-2010
McDowell County	20.7	20.0	22.5
Regional Arithmetic Mean	23.4	22.3	22.0
State Total	19.5	23.2	23.6

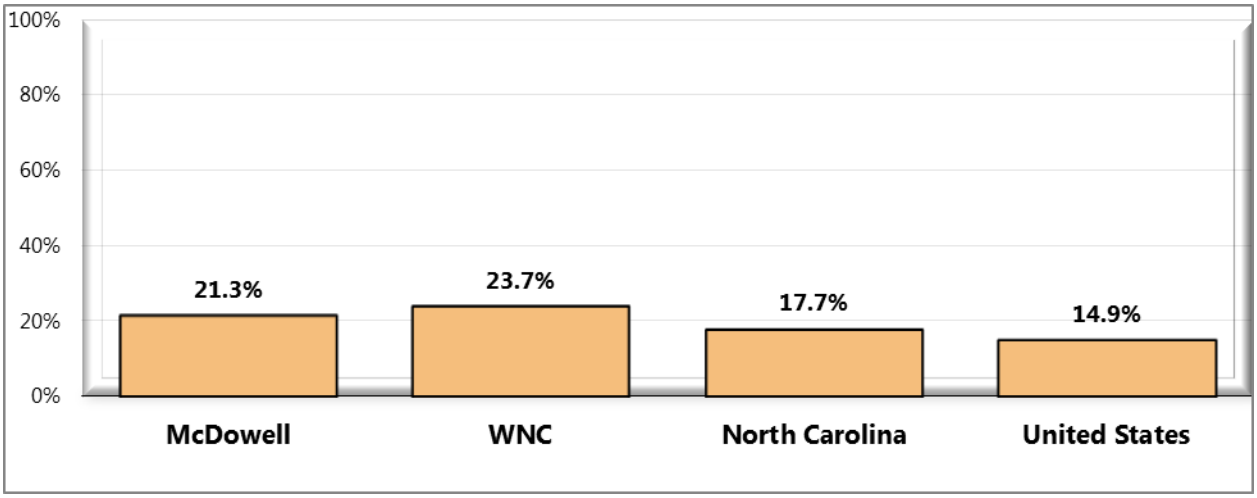
Table 45 shows the percent uninsured for one biennium (2009-2010) stratified by age. This data makes it clear that in McDowell County as well as in WNC and NC as a whole, insurance coverage is better for children, among whom the percentage uninsured is less than half the percentage uninsured among the 19-64 age group.

Table 45. Estimated Percent Uninsured, All Ages (2009-2010)

Geography	2009-2010		
	Children (0-18)	Adults (19-64)	Total (0-64)
McDowell County	10.5	22.5	19.2
Regional Arithmetic Mean	9.6	22.0	18.6
State Total	10.3	23.6	19.6

Survey data also provides county and regional estimates of health insurance coverage. Lack of health insurance coverage reflects respondents age 18 to 64 (thus, excluding the Medicare population) who have no type of insurance coverage for healthcare services – neither private insurance nor government-sponsored plans (e.g., Medicaid).

Figure 74. Lack of Healthcare Insurance Coverage (WNC Healthy Impact Survey)
(Among Adults 18-64)



Sources:
- 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 125]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2010 North Carolina data.
- 2011 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 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.).

Medicaid Eligibility

Table 46 presents trend data on the number and percent of persons eligible for Medicaid for several state fiscal years. This data demonstrates that in McDowell County the number and percent of Medicaid-eligible persons increased every state fiscal year since SFY2004. The percent of Medicaid-eligible McDowell County residents was higher than the comparable percentages for WNC and NC in SFY2006 through SFY2008. With the exception of SFY2007, the mean percent of the WNC population eligible for Medicaid rose from one year to the next throughout the period cited in the table. Note that between SFY2006 and SFY2007 the number in WNC that were Medicaid-eligible rose even if the percentage did not. Further, the mean percent Medicaid-eligible in WNC exceeded the comparable percent eligible statewide for every period cited.

Table 46. Number and Percent of Population Medicaid-Eligible (SFY2004 through SFY2008)

Geography	SFY 2004		SFY 2005		SFY 2006		SFY 2007		SFY 2008	
	#	%	#	%	#	%	#	%	#	%
McDowell County	8,283	19.23	8,600	19.89	9,097	21.07	9,293	21.30	9,699	22.01
Regional Total	128,727	-	132,895	-	138,616	-	139,891	-	142,606	-
Regional Arithmetic Mean	16,091	19.90	16,612	20.21	17,327	20.75	17,486	20.52	17,826	20.82
State Total	1,512,360	17.97	1,563,751	18.31	1,602,645	18.46	1,682,028	18.98	1,726,412	19.04

Screening and Prevention

Diabetes

Diabetes mellitus occurs when the body cannot produce or respond appropriately to insulin. Insulin is a hormone that the body needs to absorb and use glucose (sugar) as fuel for the body's cells. Without a properly functioning insulin signaling system, blood glucose levels become elevated and other metabolic abnormalities occur, leading to the development of serious, disabling complications. Many forms of diabetes exist; the three common types are Type 1, Type 2, and gestational diabetes.

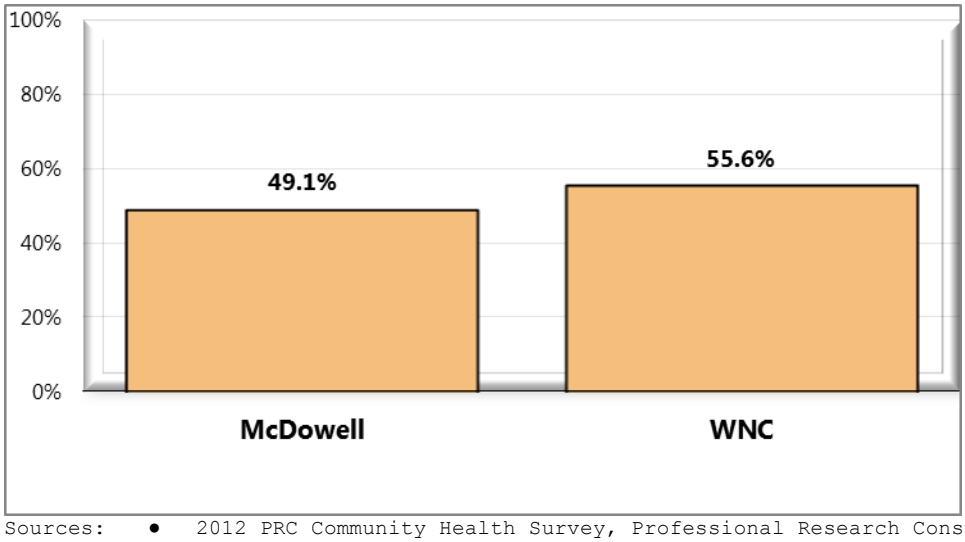
Diabetes mellitus affects an estimated 23.6 million people in the United States and is the 7th leading cause of death. Diabetes mellitus:

- Lowers life expectancy by up to 15 years.
- Increases the risk of heart disease by 2 to 4 times.
- Is the leading cause of kidney failure, lower limb amputations, and adult-onset blindness.

People from minority populations are more frequently affected by type 2 diabetes. Minority groups constitute 25% of all adult patients with diabetes in the US and represent the majority of children and adolescents with type 2 diabetes. Lifestyle change has been proven effective in preventing or delaying the onset of type 2 diabetes in high-risk individuals (DHHS, 2010).

Figure 75. Tested for Diabetes in the Past Three Years (WNC Healthy Impact Survey)

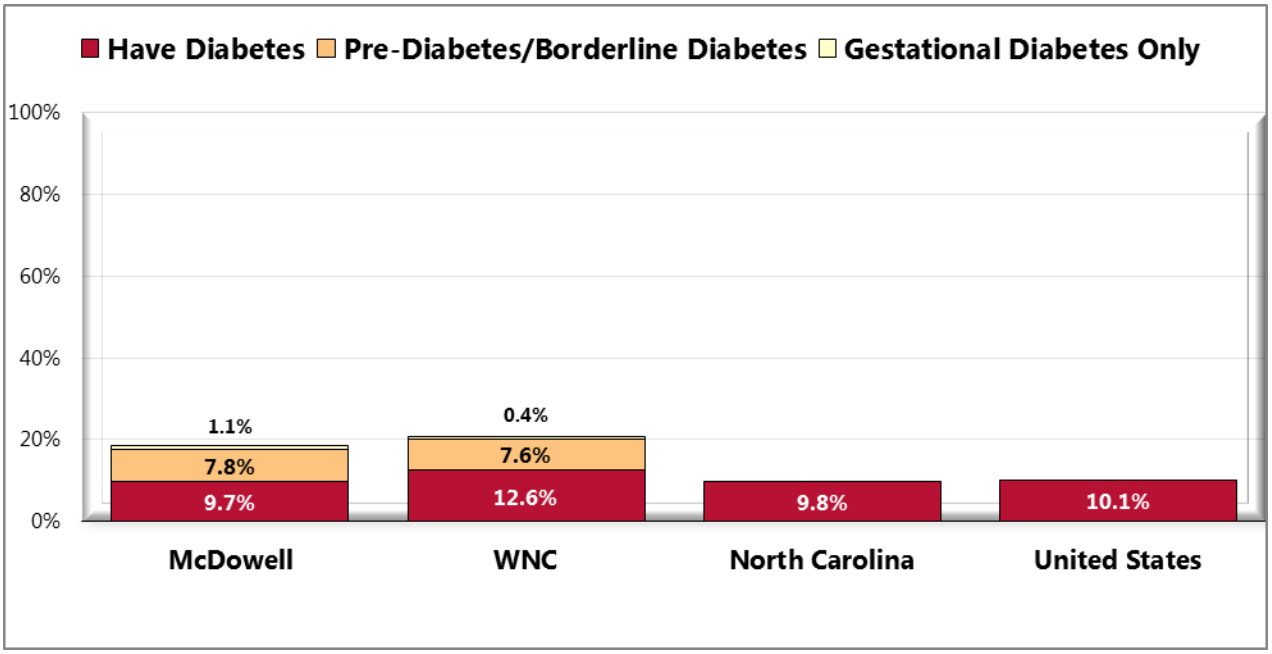
(Among Adults Who Have Not Been Diagnosed With Diabetes)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 19]

Notes: ● Asked of respondents who have never been diagnosed with diabetes; also includes women who have only been diagnosed when pregnant.

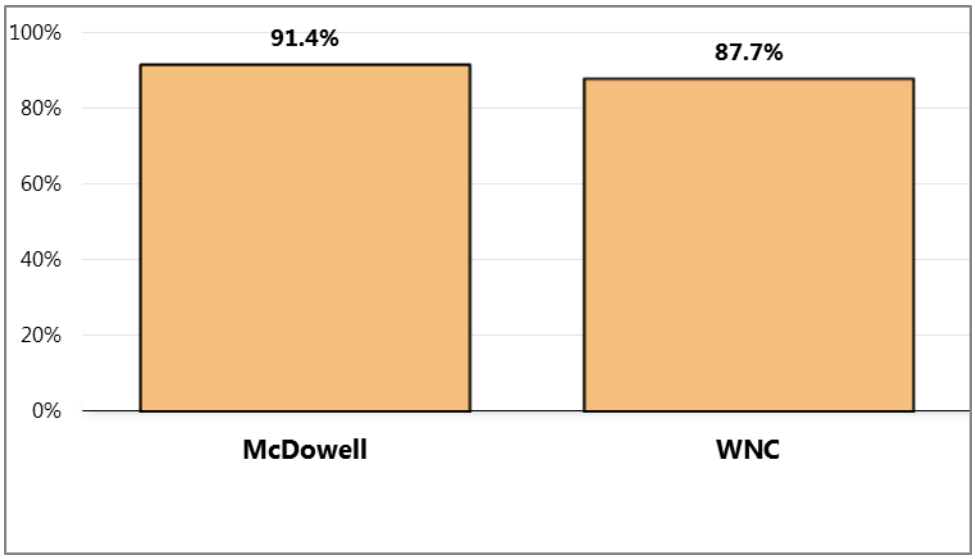
Figure 76. Prevalence of Diabetes (Ever Diagnosed) (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 78]
● 2011 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): 2010 North Carolina data.

Notes: ● Asked of all respondents.
● Local and national data exclude gestation diabetes (occurring only during pregnancy).

Figure 77. Taking Action to Control Diabetes or Prediabetes (WNC Healthy Impact Survey)
(Among Adults Diagnosed with Diabetes or Prediabetes/Borderline Diabetes)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 21]

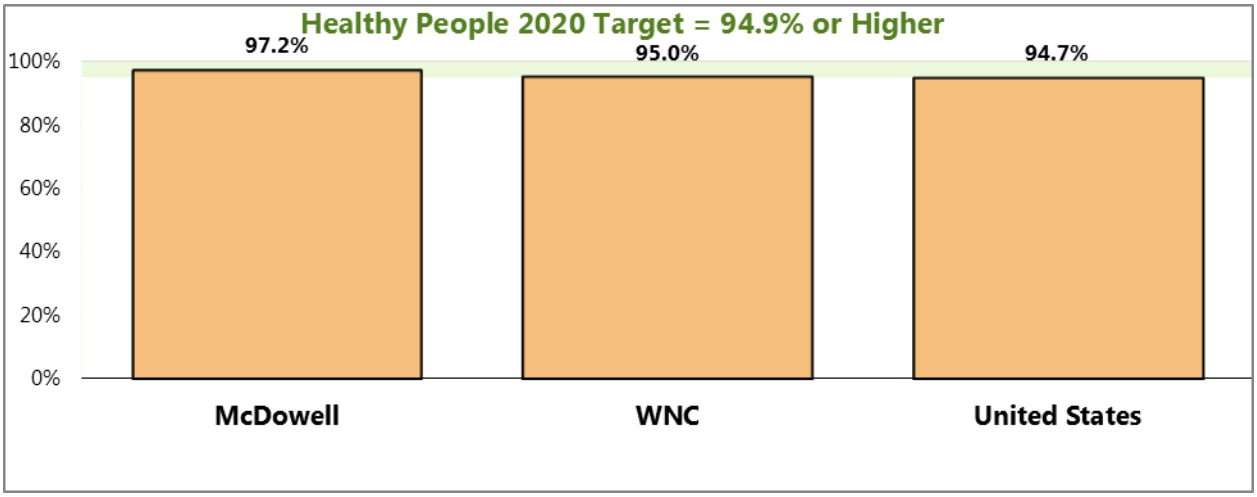
Notes: ● Asked of respondents who have been diagnosed with diabetes or prediabetes/borderline diabetes.

● In this case, the term "action" refers to taking natural or conventional medicines or supplements, diet modification, or exercising.

Hypertension

Controlling risk factors for heart disease and stroke remains a challenge. High blood pressure is still a major contributor to the national epidemic of cardiovascular disease. High blood pressure affects approximately 1 in 3 adults in the United States, and more than half of Americans with high blood pressure do not have it under control (DHHS, 2010).

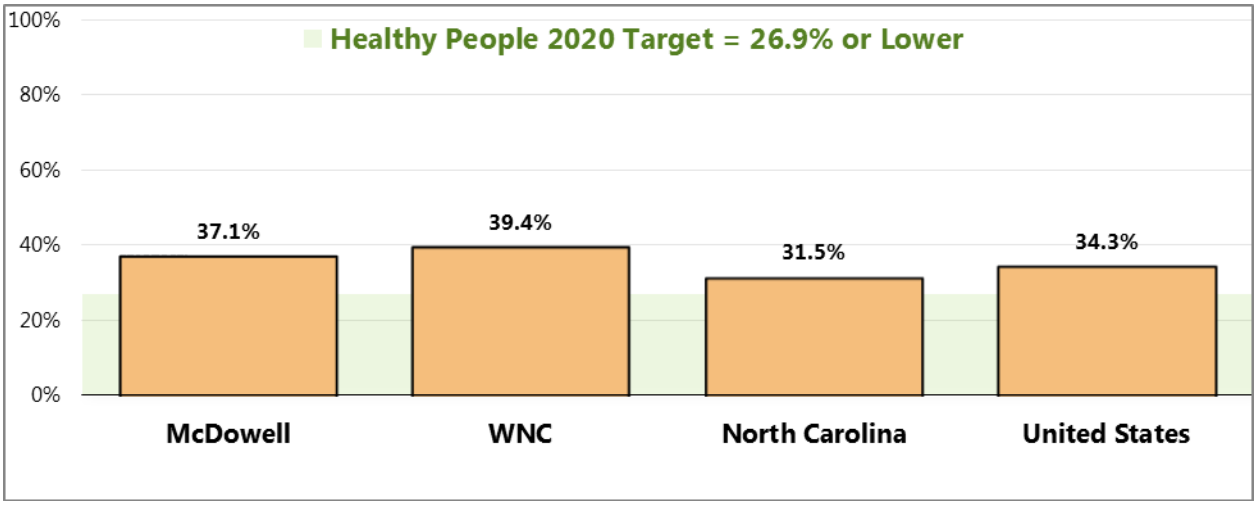
Figure 78. Have Had Blood Pressure Checked in the Past Two Years (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 24]
● 2011 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-4]

Notes: ● Asked of all respondents.

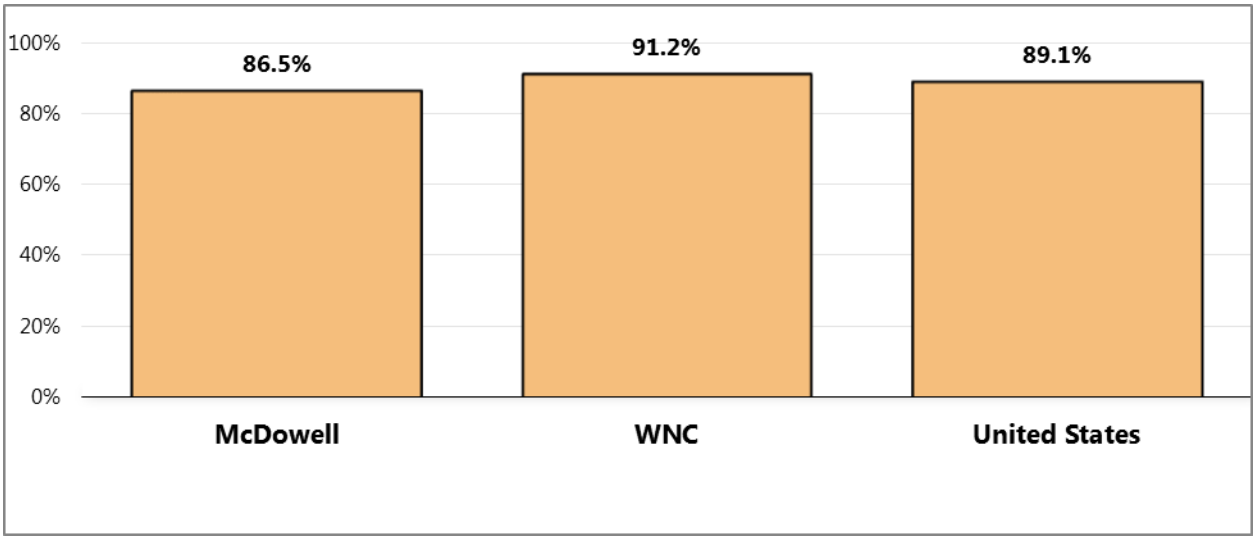
Figure 79. Prevalence of High Blood Pressure (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 76]
● Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2009 North Carolina data.
● 2011 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-5.1]

Notes: ● Asked of all respondents.

Figure 80. Taking Action to Control Hypertension (WNC Healthy Impact Survey)
(Among Adults with High Blood Pressure)

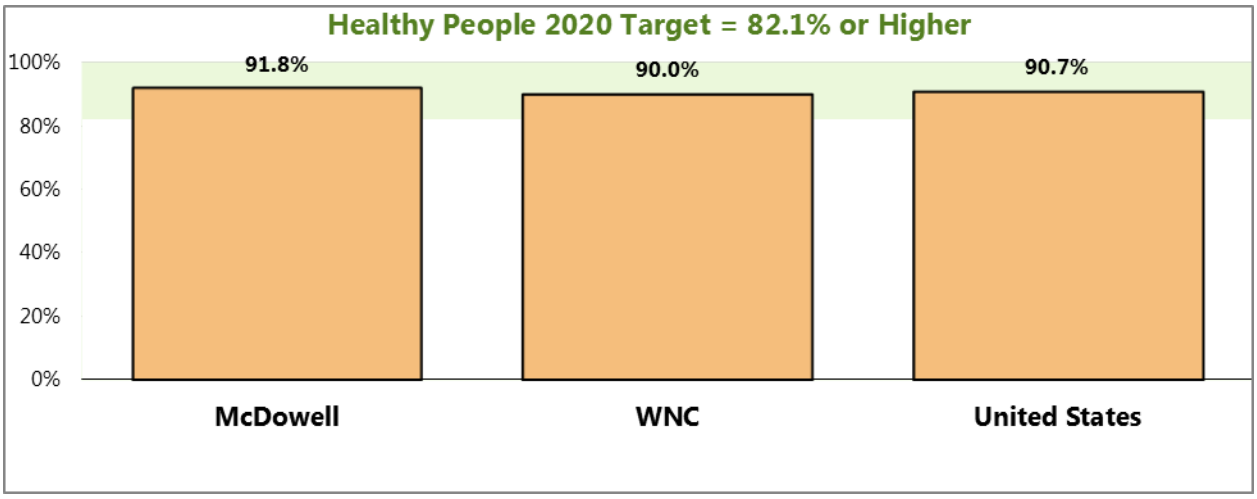


Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 23]
● 2011 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of respondents who have been diagnosed with high blood pressure.
● In this case, the term "action" refers to medication, change in diet, and/or exercise.

Cholesterol

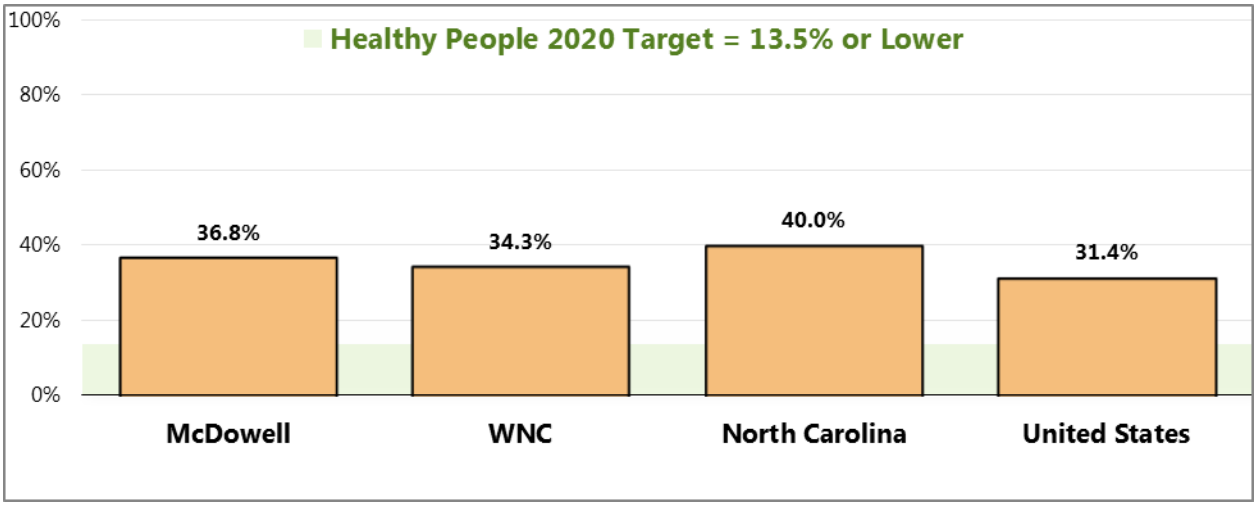
Cholesterol is also a major contributor to the national epidemic of cardiovascular disease. Survey respondents were asked a series of questions about their blood cholesterol levels.

Figure 81. Have Had Blood Cholesterol Levels Checked in the Past Five Years (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 27]
● 2011 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-6]
Notes: ● Asked of all respondents.

Figure 82. Prevalence of High Blood Cholesterol (WNC Healthy Impact Survey)

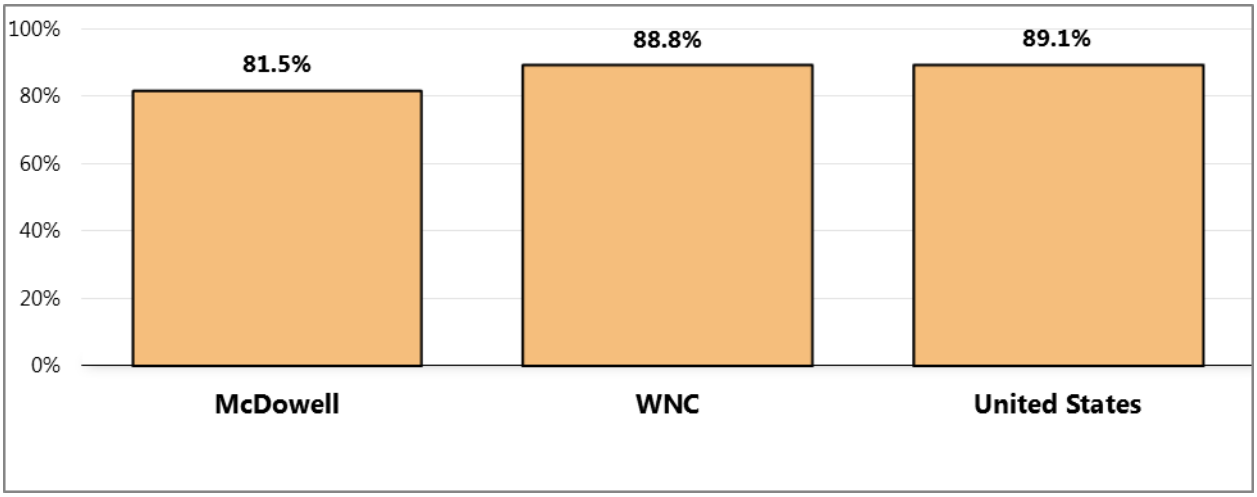


Sources:
- 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 77]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2009 North Carolina data.
- 2011 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.

Figure 83. Taking Action to Control High Blood Cholesterol (WNC Healthy Impact Survey)

(Among Adults With High Blood Pressure)



Sources:
- 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 26]
- 2011 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of respondents who have been diagnosed with high blood cholesterol.
- In this case, the term "action" refers to medication, change in diet, and/or exercise.

Healthcare Utilization

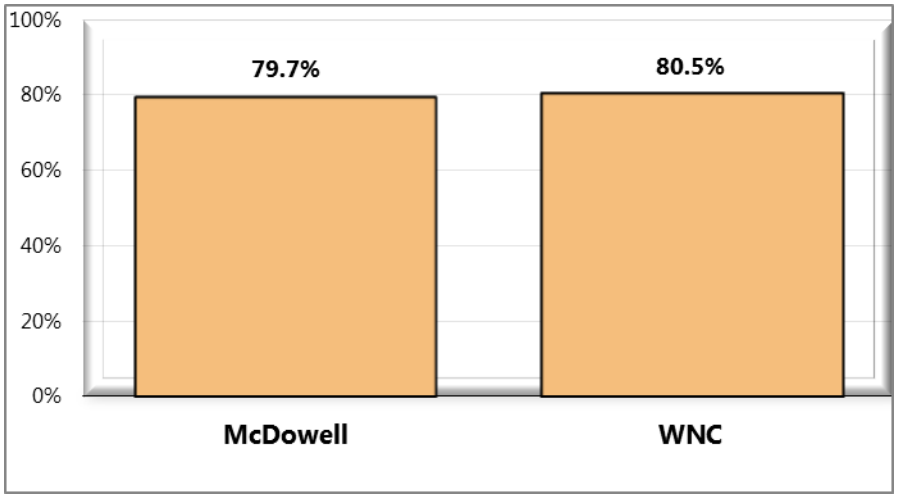
Routine Medical Care

Improving health care services depends in part on ensuring that people have a usual and ongoing source of care. People with a usual source of care have better health outcomes and fewer disparities and costs. Having a primary care provider (PCP) as the usual source of care is especially important. PCPs can develop meaningful and sustained relationships with patients and provide integrated services while practicing in the context of family and community. Having a usual PCP is associated with:

- Greater patient trust in the provider
- Good patient-provider communication
- Increased likelihood that patients will receive appropriate care

Improving health care services includes increasing access to and use of evidence-based preventive services. Clinical preventive services are services that: **prevent** illness by detecting early warning signs or symptoms before they develop into a disease (primary prevention); or **detect** a disease at an earlier, and often more treatable, stage (secondary prevention) (DHHS, 2010).

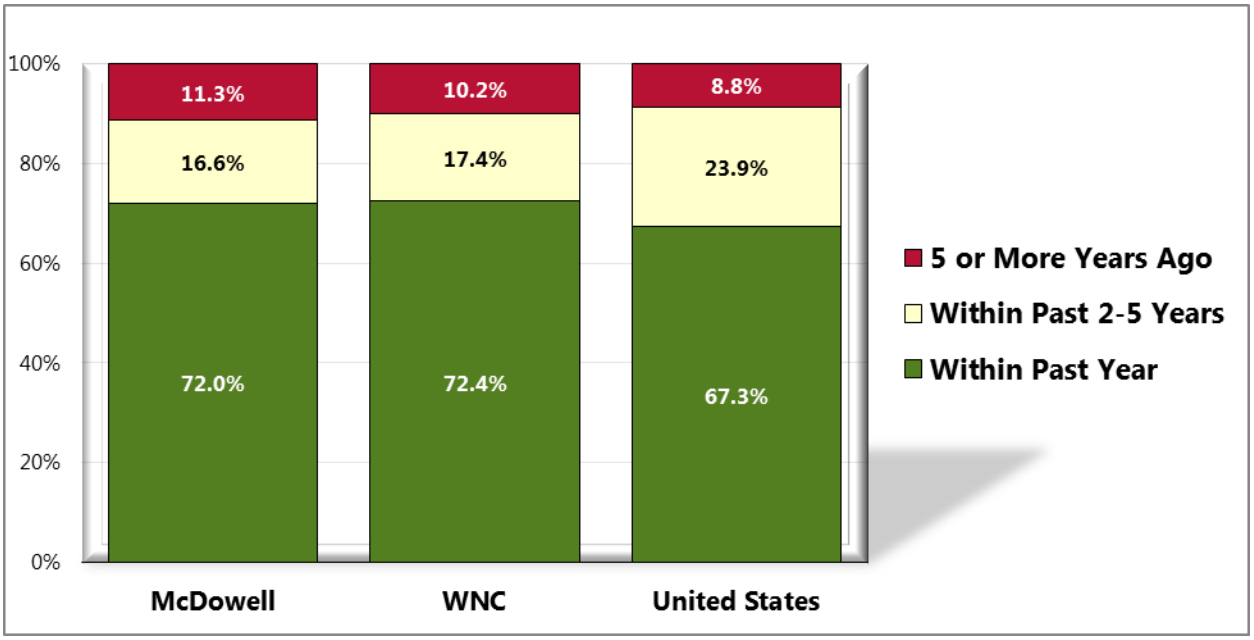
Figure 84. Have One Person Thought of as Respondent's Personal Doctor or Health Care Provider (WNC Healthy Impact Survey)



Sources: • 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 16]

Notes: • Asked of all respondents.

Figure 85. Length of Time Since Last Routine Check-Up (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 15]
● 2011 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

Emergency Department Utilization

According to data in Table 47, the diagnoses associated with the highest frequency of emergency department visits in McDowell County in 2010 were psychiatric disorders (13.98% of all ED visits), followed by chest pain/ischemic heart disease (12.87%) and diabetes (9.51%). On the regional level, the diagnoses associated with the highest frequency of ED visits were chest pain/ischemic heart disease (11.83% of all ED visits), followed by psychiatric disorders (10.98%) and lower respiratory disorders (9.48%)

Table 47. North Carolina Emergency Department Visits, NC DETECT Data (2010)

Diagnosis	McDowell County		WNC Mean
	#	%*	%
Chest pain/ischemic heart disease	3,003	12.87	11.83
Heart failure	524	2.25	2.58
Cardiac arrest	16	0.07	0.14
Lower respiratory disorders	2,111	9.05	9.48
Diabetes	2,219	9.51	8.80
Neoplasms	307	1.32	1.57
Dental problems	361	1.55	1.85
Stroke/TIA	83	0.36	0.62
Traumatic brain injury	32	0.14	0.30
Psychiatric disorders	3,263	13.98	10.98
Substance abuse	600	2.57	2.99
Total ED Visits	23,336	n/a	n/a

* % represents percent of total ED visits
Note: for the full description of the disease group diagnosis codes included in each diagnosis line, see the *Data Workbook*.

Table 48 presents a summary of the major first-listed emergency department diagnoses for the WNC region according to DRG code. According to this data, the most common first-listed diagnosis codes in emergency departments across the region are abdominal pain (2.37% of all ED visits) and back pain, sprains of the lumbar spice, and sciatica (also 2.37%). It would appear that some of these cases could qualify for diversion to other health care providers *if* they were present in the community.

Table 48. Most Common First-Listed Diagnosis Codes in Emergency Departments, WNC
NC DETECT Data
2010

Diagnosis	Diagnosis Codes	# ED Visits	% of Total ED Visits
Abdominal pain	789.0, 789.00, 789.03, 789.09	7,597	2.37
Back pain, sprains of lumbar spine, sciatica	724.2, 724.3, 724.5, 847.2	7,590	2.37
Essential hypertension	401.9	7,490	2.34
Nausea with vomiting or vomiting alone	787.01, 787.03	5,873	1.83
Headache, Migraine, unspecified	784.0, 346.9	5,584	1.74
Acute URI/Pharyngitis, Streptococcal sore throat	034.0, 465.9, 462	5,458	1.70
Cough, Bronchitis	786.2, 466.0, 490	4,703	1.47
Dental caries, periapical abscess, tooth structure, disorders	521.00, 522.5, 525.9	4,210	1.31
UTI	599	4,027	1.26
Fever, Unknown origin	780.6, 780.60	3,285	1.03
Asthma, unspecified	493.90, 439.92	2,823	0.88
Neck sprains/stains	723.1, 847.0	2,728	0.85
Pain in joint	719.41, 719.45, 719.46	2,609	0.81
Pain in limb	729.5	2,486	0.78
Chest pain	786.5, 786.50, 786.59	2,186	0.68
Otitis media	382.9	2,083	0.65
Pneumonia	486	1,934	0.60
Open wound of hand or finger without complication	882.0, 883.0	1,644	0.51
Contusion of face, scalp, and neck except eyes	920	1,622	0.51
Syncope and collapse	780.2	1,552	0.48
TOTAL ED VISITS		320,429	

Inpatient Hospitalizations

Table 49 lists the diagnostic categories accounting for the most cases of inpatient hospitalization for 2010. The source data is based on a patient's county of residence, so the regional totals presented in the table represent the sum of hospitalizations from each of the 16 WNC counties.

According to data in Table 49, the diagnosis resulting in the highest number of cases of hospitalization in 2010 among McDowell County residents was cardiovascular and circulatory diseases (including heart disease and cerebrovascular disease), which accounted for 814 hospitalizations. The next highest number of hospitalizations was for pregnancy and childbirth (525 cases), followed by digestive system diseases, including chronic liver disease and cirrhosis (501 cases).

Table 49. Inpatient Hospital Utilization by McDowell County Residents, by Principal Diagnoses Excluding Newborns and Discharges from Out-of-State Hospitals (2011)

Diagnostic Category	Total # Cases		
	McDowell County	Region	North Carolina
INFECTIOUS & PARASITIC DISEASES	145	2,741	41,705
-- Septicemia	92	1,604	27,412
-- AIDS	1	41	1,456
MALIGNANT NEOPLASMS	138	2,599	31,225
-- Colon, Rectum, Anus	29	324	3,770
-- Trachea, Bronchus, Lung	20	346	4,541
-- Female Breast	8	157	1,498
-- Prostate	10	192	2,505
BENIGN, UNCERTAIN & OTHER NEOPLASMS	42	650	8,948
ENDOCRINE, METABOLIC & NUTRITIONAL DISEASES	191	2,905	40,208
-- Diabetes	87	1,240	18,101
BLOOD & HEMOPOETIC TISSUE DISEASES	44	770	14,011
NERVOUS SYSTEM & SENSE ORGAN DISEASES	99	1,597	19,315
CARDIOVASCULAR & CIRCULATORY DISEASES	814	12,961	162,327
-- Heart Disease	577	9,006	108,060
-- Cerebrovascular Disease	144	2,259	29,429
RESPIRATORY DISEASES	469	8,683	93,891
-- Pneumonia/Influenza	147	3,089	29,852
-- Chronic Obstructive Pulmonary Disease	138	2,557	30,832
DIGESTIVE SYSTEM DISEASES	501	8,527	95,068
-- Chronic Liver Disease/Cirrhosis	10	178	2,361
GENITOURINARY DISEASES	244	4,123	45,978
-- Nephritis, Nephrosis, Nephrotic Synd.	87	1,036	14,368
PREGNANCY & CHILDBIRTH	525	7,921	125,271
SKIN & SUBCUTANEOUS TISSUE DISEASES	63	1,287	17,734
MUSCULOSKELETAL SYSTEM DISEASES	329	5,950	58,753
-- Arthropathies and Related Disorders	135	3,155	30,683
CONGENITAL MALFORMATIONS	6	294	3,318
PERINATAL COMPLICATIONS	13	198	4,035
SYMPTOMS, SIGNS & ILL-DEFINED CONDITIONS	223	3,916	48,299
INJURIES & POISONING	440	7,474	78,637
OTHER DIAGNOSES (INCL. MENTAL DISORDERS)	415	7,329	84,657
ALL CONDITIONS	4,701	79,925	973,380

Source: *Inpatient Hospital Utilization and Charges by Principal Diagnosis, and County of Residence, North Carolina, 2010 (Excluding Newborns & Discharges from Out of State Hospitals)* Retrieved June 20, 2012, from North Carolina State Center for Health Statistics (NC SCHS), 2012 County Health Data Book website: http://www.schs.state.nc.us/schs/data/databook/

Dental Services

The significant improvement in the oral health of Americans over the past 50 years is a public health success story. Most of the gains are a result of effective prevention and treatment efforts. One major success is community water fluoridation, which now benefits about 7 out of 10 Americans who get water through public water systems. However, some Americans do not have access to preventive programs. People who have the least access to preventive services and dental treatment have greater rates of oral diseases. A person's ability to access oral healthcare is associated with factors such as education level, income, race, and ethnicity.

Oral health is essential to overall health. Good oral health improves a person's ability to speak, smile, smell, taste, touch, chew, swallow, and make facial expressions to show feelings and emotions. However, oral diseases, from cavities to oral cancer, cause pain and disability for many Americans. Good self-care, such as brushing with fluoride toothpaste, daily flossing, and professional treatment, is key to good oral health. Health behaviors that can lead to poor oral health include:

- Tobacco use
- Excessive alcohol use
- Poor dietary choices

There are also social determinants that affect oral health. In general, people with lower levels of education and income, and people from specific racial/ethnic groups, have higher rates of disease. People with disabilities and other health conditions, like diabetes, are more likely to have poor oral health (DHHS, 2010).

Utilization of Dental Services by the Medicaid Population

Table 50 presents data on the percent of the Medicaid population eligible for dental care that utilizes it. This data represents the Medicaid population of all ages, but split into under-age-21 and age-21-and over-categories. In all three jurisdictions the Medicaid population under age 21 appears to be more likely to utilize dental services than the population age 21 and older. The figures for McDowell County are lower than in the other two jurisdictions.

Table 50. Medicaid Recipients Receiving Dental Services, All Ages (2010)

Geography	Medicaid Recipients Utilizing Dental Services (by Ages Group)					
	<21 Years Old			21+ Years Old		
	# Eligible for Services	# Receiving Services	% Eligibles Receiving Services	# Eligible for Services	# Receiving Services	% Eligibles Receiving Services
McDowell County	5,874	3,065	52.2	4,292	1,276	29.7

Regional Total	85,652	42,135	49.2	62,817	18,536	29.5
State Total	1,113,692	541,210	48.6	679,139	214,786	31.6

Table 51, focusing only on children ages 1-5, helps in understanding why utilization in the under 21 age group is so high. In this youngest age group, half or more of the eligible population received dental services in all three jurisdictions.

Table 51. Medicaid-Recipients Receiving Dental Services, Ages 1-5 (2010)

Geography	Children (aged 1-5) Enrolled in Medicaid Who Received Any Dental Service In the Previous 12 Months)		
	# Eligible for Services*	# Receiving Services**	% Eligibles Receiving Services
McDowell County	1,841	1,054	57.3
Regional Total	26,820	14,407	53.7
State Total	n/a	n/a	51.7

Dental Screening Results among Children

Table 52 presents 2009 dental screening results for kindergarteners. While the screening process captures other data, this data covers only the average number of decayed, missing or filled teeth. The average number of decayed, missing or filled teeth discovered among kindergarteners screened in McDowell County (2.65 per child) was 22% higher than the mean percentage for WNC (2.18) and 77% higher than the state average (1.50).

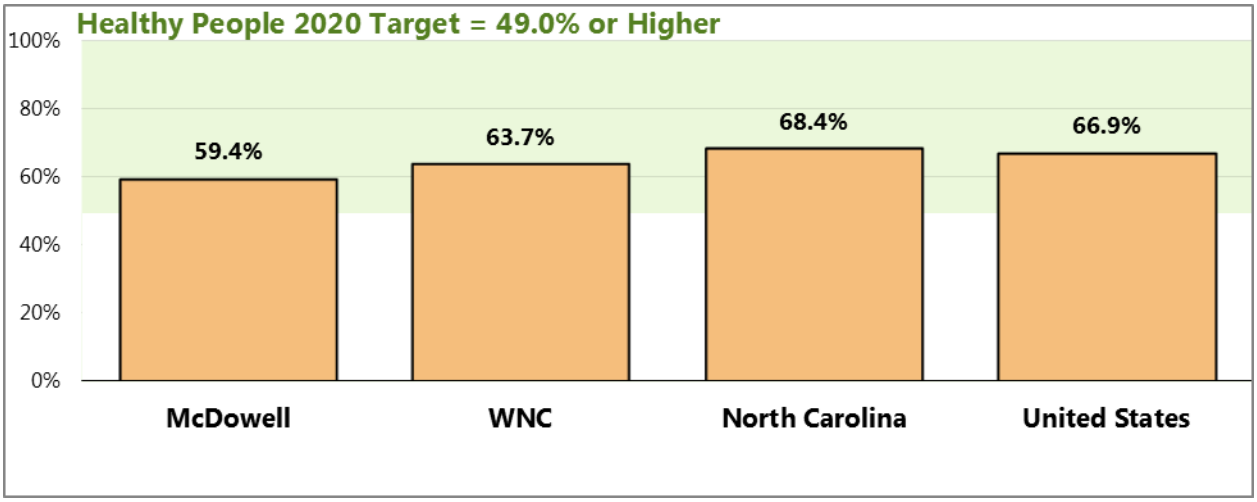
Table 52. Dental Screening Results, Kindergarteners (2009)

Geography	Average # Decayed, Missing or Filled Teeth
McDowell County	2.65
Regional Arithmetic Mean	2.18
State Total	1.50

Utilization of Preventive Dental Care

Survey respondents were asked, "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."

Figure 86. Have Visited a Dentist or Dental Clinic Within the Past Year
(WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 17]
● 2011 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 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): 2010 North Carolina data.
Notes: ● Asked of all respondents.

Mental Health

Mental health is a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with challenges. Mental health is essential to personal well-being, family and interpersonal relationships, and the ability to contribute to community or society. Mental disorders are health conditions that are characterized by alterations in thinking, mood, and/or behavior that are associated with distress and/or impaired functioning. Mental disorders contribute to a host of problems that may include disability, pain, or death. Mental illness is the term that refers collectively to all diagnosable mental disorders.

Mental disorders are among the most common causes of disability. The resulting disease burden of mental illness is among the highest of all diseases. According to the national Institute of Mental Health (NIMH), in any given year, an estimated 13 million American adults (approximately 1 in 17) have a seriously debilitating mental illness. Mental health disorders are the leading cause of disability in the United States and Canada, accounting for 25% of all years of life lost to disability and premature mortality. Moreover, suicide is the 11th leading cause of death in the United States, accounting for the deaths of approximately 30,000 Americans each year.

Mental health and physical health are closely connected. Mental health plays a major role in people's ability to maintain good physical health. 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.

In addition to advancements in the prevention of mental disorders, there continues to be steady progress in treating mental disorders as new drugs and stronger evidence-based outcomes become available (DHHS, 2010).

The unit of NC government responsible for overseeing mental health services is the Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMH/DD/SAS). The NC mental health system is built on a system of Local Management Entities (LMEs)—area authorities or county programs—responsible for managing, coordinating, facilitating and monitoring the provision of MH/DD/SAS services in the catchment area served. There are two LMEs serving the population in WNC: Smoky Mountain Center and Western Highlands Network (NC Division of Mental Health, August 2012).

Mental Health Service Utilization Trends

Table 53 presents figures on the numbers of persons receiving services in Area Mental Health Programs in 2006 through 2010. No clear pattern of service utilization is apparent from this data in any of the three jurisdictions. It should be noted that the mental health system in NC is in some disarray, as reform of the recent past is being reconsidered.

Table 53. Persons Served in Area Mental Health Programs (2006-2010)

Geography	# Persons Served in Area Mental Health Programs				
	2006	2007	2008	2009	2010
McDowell County	2,005	1,826	1,649	1,108	1,577
Regional Total	30,952	31,271	28,380	24,527	28,453
State Total	322,397	315,338	306,907	309,155	332,796

Table 54 presents figures on the numbers of persons receiving services in NC state alcohol and drug treatment centers. Although the pattern of increase is not straight-line, it appears that increasing numbers of persons in WNC have received services from NC state alcohol and drug treatment centers since 2007. Noteworthy at the regional level was a 23% increase in persons being served between 2009 and 2010. The data for McDowell County would appear to indicate decreasing utilization of NC State Alcohol and Drug Treatment Centers by county residents.

Table 54. Persons Served in NC State Alcohol and Drug Treatment Centers (2006-2010)

Geography	# Persons Served in NC Alcohol and Drug Treatment Centers				
	2006	2007	2008	2009	2010
McDowell County	32	24	25	16	18
Regional Total	664	604	774	751	921
State Total	4,003	3,733	4,284	4,812	4,483

Table 55 presents figures on the numbers of persons receiving services in NC state psychiatric hospitals. The number of persons in McDowell County utilizing these services fell every year from 2006 to 2010, decreasing by 52% over the period. The number of persons in WNC receiving these services also fell. The number of persons in WNC utilizing state psychiatric hospital services in 2010 (564) was 63% lower than the number utilizing services in 2006 (1,509). The decrease in persons receiving services likely is a reflection of a decreasing availability of state services, rather than a decreasing need for services.

Table 55. Persons Served in NC State Psychiatric Hospitals (2006-2010)

Geography	# Persons Served in NC State Psychiatric Hospitals				
	2006	2007	2008	2009	2010
McDowell County	125	118	87	74	60
Regional Total	1,509	1,529	1190	818	564
State Total	18,292	18,498	14,643	9,643	7,188

Poor Mental Health Days

Mental health is a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with challenges. Mental health is essential to personal well-being, family and interpersonal relationships, and the ability to contribute to community or society. Mental disorders are health conditions that are characterized by alterations in thinking, mood, and/or behavior that are associated with distress and/or impaired functioning. Mental disorders contribute to a host of problems that may include disability, pain, or death. Mental illness is the term that refers collectively to all diagnosable mental disorders.

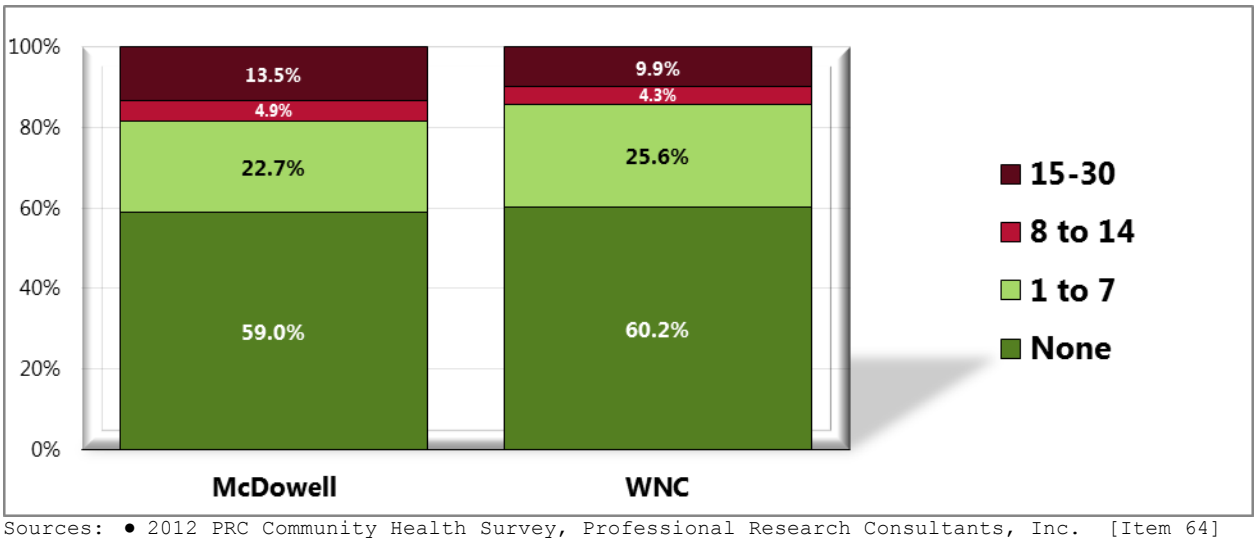
Mental disorders are among the most common causes of disability. The resulting disease burden of mental illness is among the highest of all diseases. According to the national Institute of Mental Health (NIMH), in any given year, an estimated 13 million American adults

(approximately 1 in 17) have a seriously debilitating mental illness. Mental health disorders are the leading cause of disability in the United States and Canada, accounting for 25% of all years of life lost to disability and premature mortality. Moreover, suicide is the 11th leading cause of death in the United States, accounting for the deaths of approximately 30,000 Americans each year.

Mental health and physical health are closely connected. Mental health plays a major role in people's ability to maintain good physical health. 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.

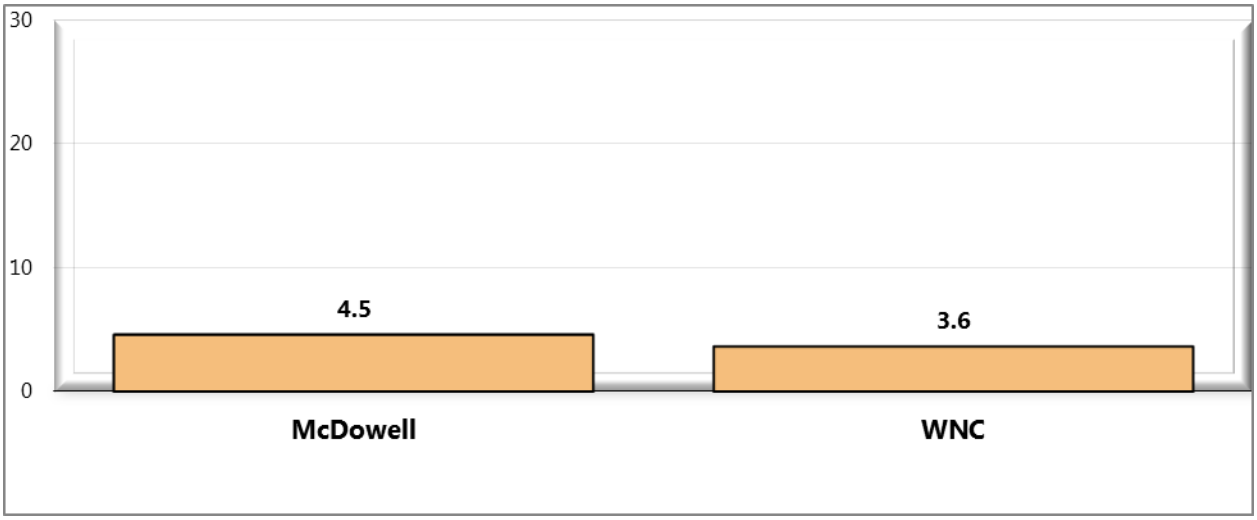
In addition to advancements in the prevention of mental disorders, there continues to be steady progress in treating mental disorders as new drugs and stronger evidence-based outcomes become available (DHHS, 2010).

Figure 87. Number of Days in the Past 30 Days on Which Mental Health Was Not Good (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 64]
Notes: ● Asked of all respondents.

Figure 88. Average Number of the Past 30 Days on Which Mental Health Was Not Good (WNC Healthy Impact Survey)

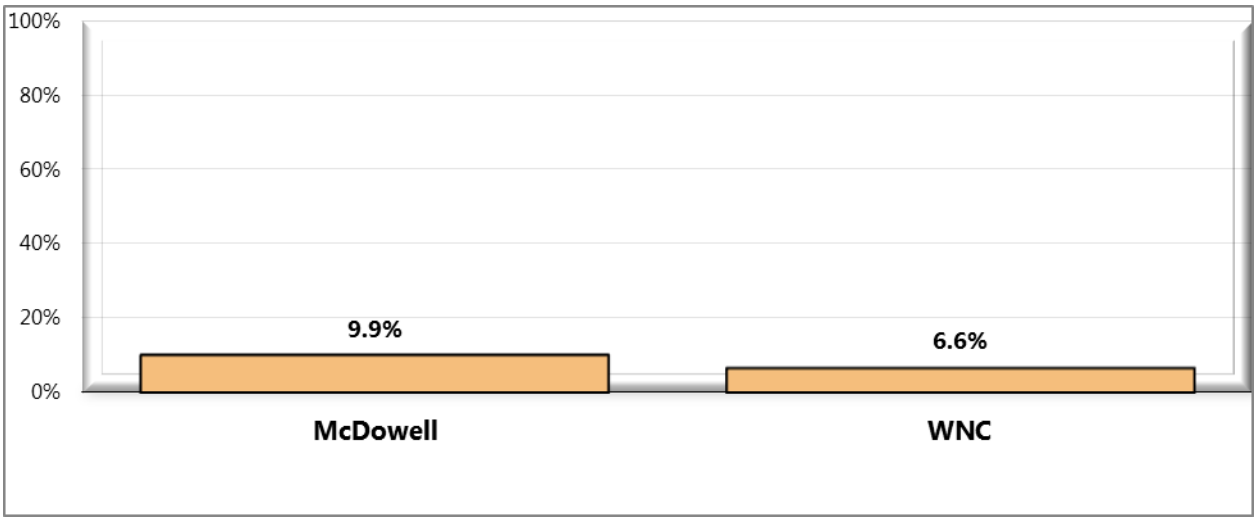


Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 64]
Notes: ● Asked of all respondents.

Access to Mental Health Services

Survey respondents were asked if they had a time in the past year when they needed mental health care or counseling, but did not get it at that time. Those who responded, "yes," were asked to name the main reason they did not get mental health care or counseling. Due to small county-level sample sizes, responses to the latter question are displayed below for the region.

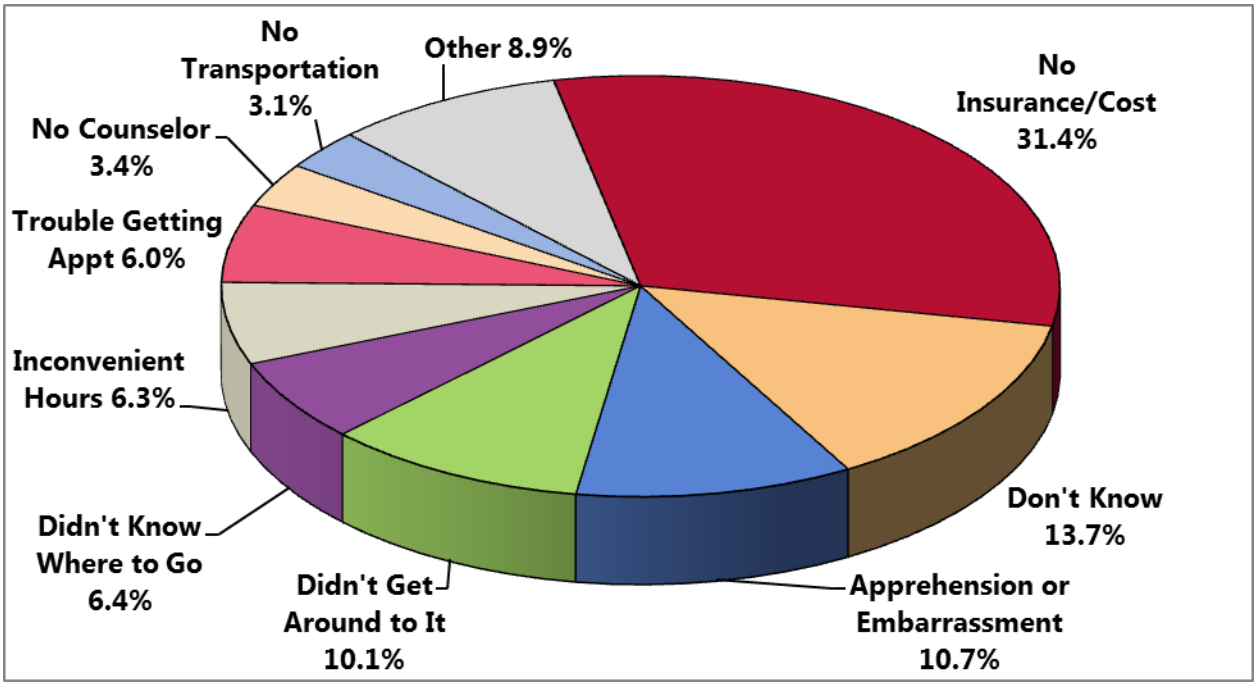
Figure 89. Had a Time in the Past Year When Mental Health Care or Counseling Was Needed, But Was Unable to Get It (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 65]
Notes: ● Asked of all respondents.

Figure 90. Primary Reason for Inability to Access

Mental Health Services (WNC Healthy Impact Survey)
(Adults Unable to Get Needed Mental Health Care in the Past Year)
(Western North Carolina, 2012)

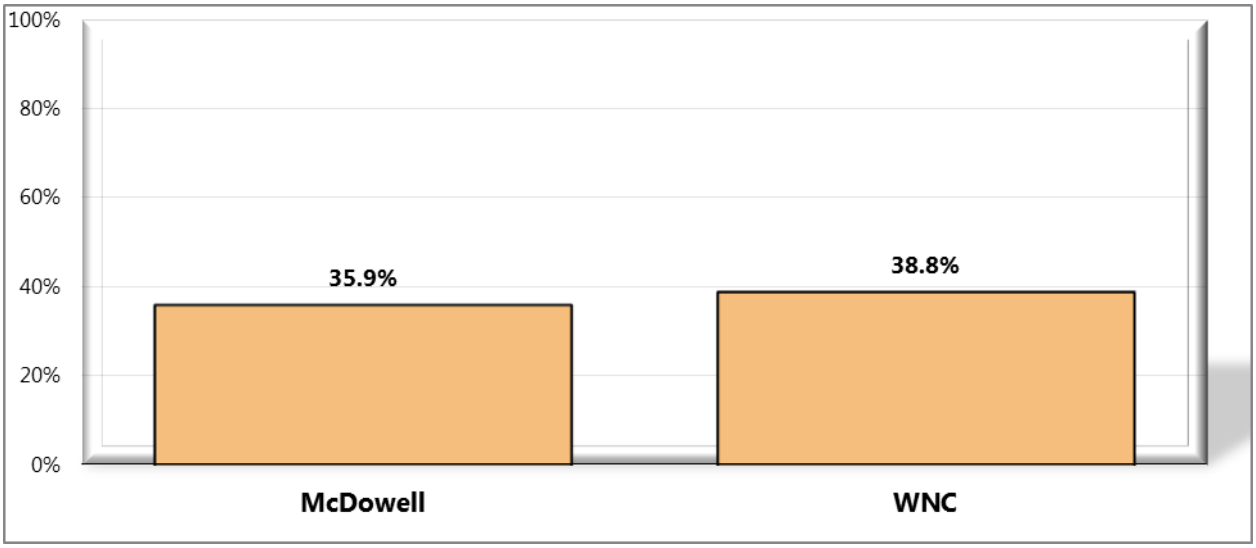


Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 66]
Notes: ● Asked of those respondents who were unable to get needed mental health care in the past year.

Advance Directives

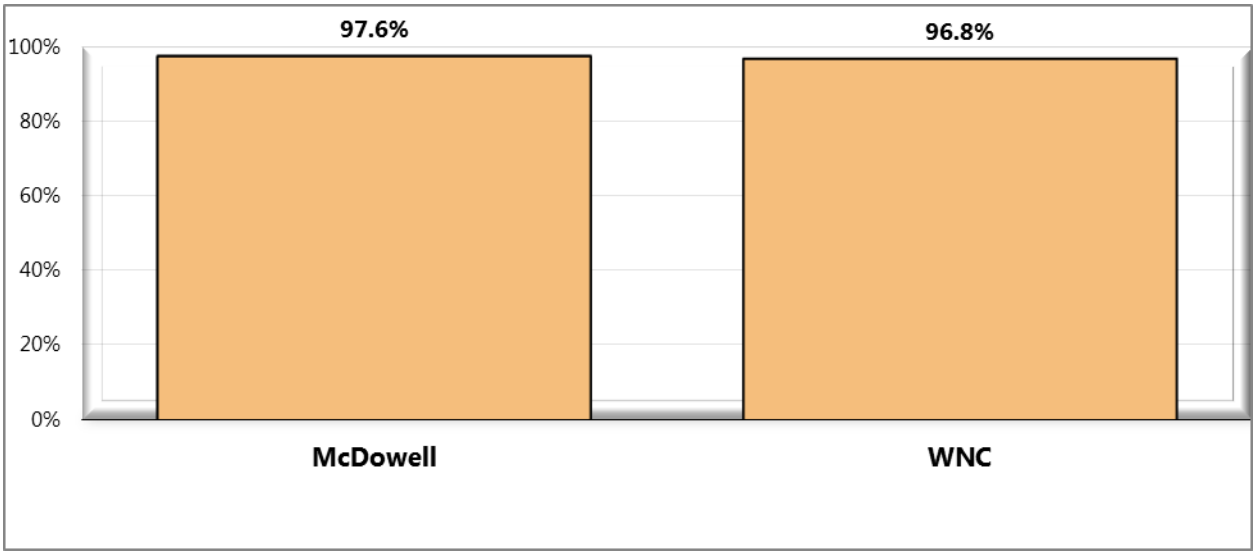
An Advance Directive is a set of directions given about the medical care a person wants if he/she ever loses the ability to make decisions for him/herself. Formal Advance Directives include Living Wills and Healthcare Powers of Attorney. Survey respondents were asked whether they have any completed Advance Directive documents, and if so, if they have communicated these health care decisions to their family or doctor.

Figure 91. Have Completed Advance Directive Documents (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 34]
Notes: ● Asked of all respondents.

Figure 92. Have Communicated Health Care Decisions to Family or Doctor (WNC Healthy Impact Survey)
(Among Respondents with Advance Directive Documents)

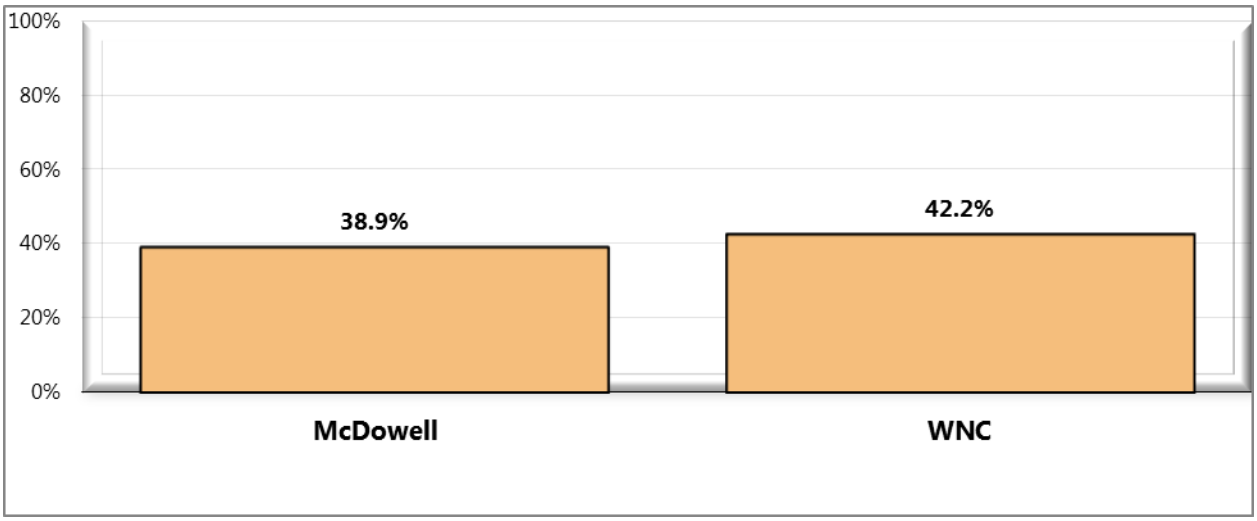


Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 35]
Notes: ● Asked of respondents with completed advance directive documents.

Care-giving

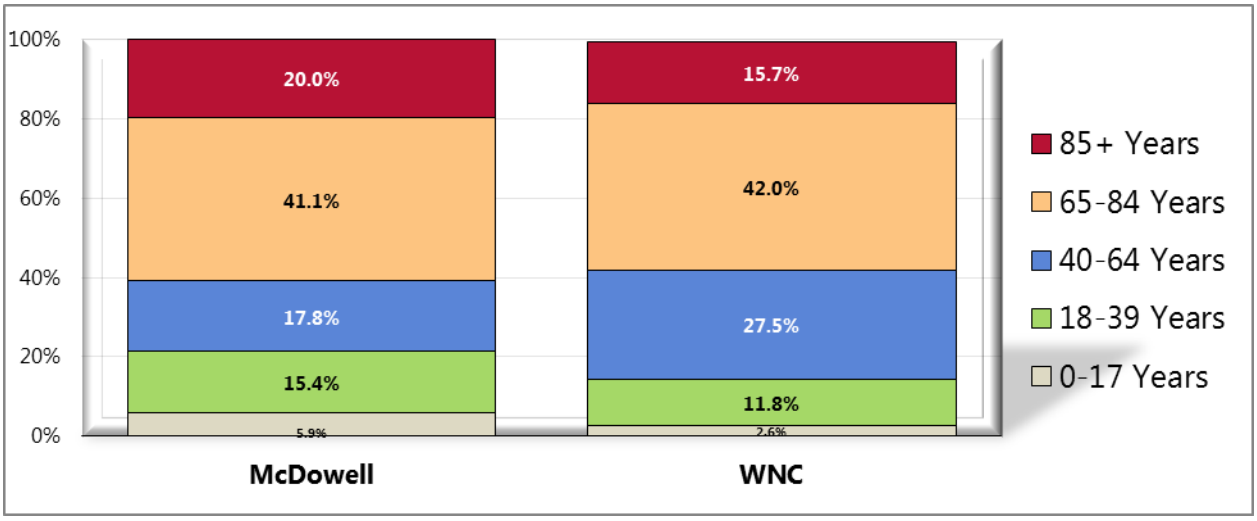
People may provide regular care or assistance to a friend or family member who has a health problem, long-term illness, or disability. Respondents were asked, "During the past month, did you provide any such care or assistance to a friend or family member?" Those who answered, "yes," were asked for the age, primary health issue, and the primary type of assistance needed by the person for whom the respondent provides care.

Figure 93. Provide Regular Care or Assistance to a Friend/Family Member Who Has a Health Problem or Disability (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 69]
Notes: ● Asked of all respondents.

Figure 94. Age of Person for Whom Respondent Provides Care (WNC Healthy Impact Survey)
(Among Respondents Acting as a Caregiver for a Friend/Family Member)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 70]
Notes: ● Asked of respondents acting as a caregiver for a friend or family member.

Table 56. Primary Health Issue of Person for Whom Respondent Provides Care (WNC Healthy Impact Survey)
(Among Respondents Acting as a Caregiver for a Friend/Family Member)

	Aging	Alzheimers /Dementia	Cancer	Diabetes	Emotional/ Mental	Heart Disease	Stroke	Other (Each < 4%)	Don't Know/Not Sure
McDowell	5.6%	8.2%	9.5%	8.7%	3.7%	4.0%	3.8%	52.6%	3.9%
WNC	7.9%	8.4%	8.6%	4.3%	4.8%	7.4%	4.9%	46.3%	7.4%

Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 71]
Notes: ● Asked of respondents acting as a caregiver for a friend or family member.

Table 57. Primary Type of Assistance Needed by Person for Whom Respondent Provides Care (WNC Healthy Impact Survey)
(Among Respondents Acting as a Caregiver for a Friend/Family Member)

	Other (Each < 2%)	Learning/ Remembering	Communi- cating	Moving Around the Home	Taking Care of Living Space	Taking Care of Self	Help with Anxiety/ Depression	Transportation Outside Home
McDowell	2.5%	2.6%	6.2%	9.0%	18.8%	24.9%	16.3%	19.8%
WNC	2.0%	3.8%	3.9%	6.3%	18.5%	20.1%	20.9%	24.5%

Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 72]
Notes: ● Asked of respondents acting as a caregiver for a friend or family member.

CHAPTER 6 – PHYSICAL ENVIRONMENT

Air Quality

Outdoor Air Quality

Nationally, outdoor air quality monitoring is the responsibility of the Environmental Protection Agency (EPA); most of the following information and data originate with that agency. In NC, the agency responsible for monitoring air quality is the Division of Air Quality (DAQ) in the NC Department of Environment and Natural Resources (NC DENR).

The EPA categorizes outdoor air pollutants as "criteria air pollutants" (CAPs) and "hazardous air pollutants" (HAPs). Criteria air pollutants (CAPS), which are covered in this report, are six chemicals that can injure human health, harm the environment, or cause property damage: carbon monoxide, lead, nitrogen oxides, particulate matter, ozone, and sulfur dioxide. The EPA has established National Ambient Air Quality Standards (NAAQS) that define the maximum legally allowable concentration for each CAP, above which human health may suffer adverse effects (US Environmental Protection Agency, 2012).

The impact of CAPs in the environment is described on the basis of emissions, exposure, and health risks. A useful measure that combines these three parameters is the *Air Quality Index* (AQI).

The 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 concentrations of five of the six criteria air pollutants and converts the measures to a number on a scale of 0-500, with 100 representing the NAAQS 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 (AIRNow, 2011). Table 58 defines the AQI levels.

Table 58. General Health Effects and Cautionary Statements, Air Quality Index

Index Value	Descriptor	Color Code	Meaning
Up to 50	Good	Green	Air quality is satisfactory, and air pollution poses little or no risk.
51 to 100	Moderate	Yellow	Air quality is acceptable; however, for some pollutants there may be a moderate heath concern for a very small number of people who are unusually sensitive to air pollution.
101 to 150	Unhealthy for sensitive groups	Orange	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
151 to 200	Unhealthy	Red	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
201-300	Very unhealthy	Purple	Health alert: everyone may experience more serious health effects.
301-500	Hazardous	Maroon	Health warnings of emergency conditions. The entire population is more likely to be affected.

Source: AIRNow, Air Quality Index (AQI) – A Guide to Air Quality and Your Health; http://airnow.gov/index.cfm?action=aqibasics.aqi

The EPA reports AQI measures for nine of the 16 counties in the WNC region: Buncombe, Haywood, Graham, Jackson, Macon, McDowell, Mitchell, Swain and Yancey. Note that McDowell County is among the monitored counties. The WNC figures presented in Tables 59 and 60 below represent the arithmetic means of the values for those nine counties. Data in Table 59 shows that there were no days rated "very unhealthy" or "unhealthy" in 2011, and only one day in the WNC region was rated "unhealthy for sensitive groups". Of the 2011 mean of 275 days in WNC with an assigned AQI, 227 had "good" air quality and 47 had "moderate" air quality. Of the 357 days monitored in McDowell County. 309 had "good" air quality and 48 had "moderate" air quality.

Table 59. Air Quality Index Summary, WNC (2011)

Geography	No. Days with AQI	Number of Days When Air Quality Was:				
		Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy	Very Unhealthy
McDowell County	357	309	48	0	0	0
Regional Arithmetic Mean	275	227	47	1	0	0

Table 60 lists the pollutants causing the air quality deficiencies. This data shows that in WNC in 2011 the primary air pollutants were ozone (O_3) and small particulate matter ($PM_{2.5}$). In McDowell County, the offending pollutants were small particulate matter and large particulate matter (PM_{10}).

Ozone, the major component of smog, is not usually emitted directly but rather formed through chemical reactions in the atmosphere. Peak O_3 levels typically occur during the warmer and sunnier times of the day and year. The potential health effects of ozone include damage to lung tissues, reduction of lung function and sensitization of lungs to other irritants (Scorecard, 2011).

Particulate matter is usually categorized on the basis of particle size, and includes dust, dirt, soot, smoke, and liquid droplets emitted directly into the air by factories, power plants, construction activity, fires and vehicles. Particulates in air can affect breathing, aggravate existing respiratory and cardiovascular disease, and damage lung tissue (Scorecard, 2011).

Table 60. CAPs Causing Air Quality Problems, WNC (2011)

Geography	No. Days with AQI	Number of Days When Air Pollutant Was:					
		CO	NO_2	O_3	SO_2	$PM_{2.5}$	PM_{10}
McDowell County	357	0	0	0	0	356	1
Regional Arithmetic Mean	275	0	0	156	0	118	0

Toxic Chemical Releases

Over 4 billion pounds of toxic chemicals are released into the nation's environment each year. 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 (US Environmental Protection Agency, 2012).

According to EPA data, twelve of the 16 WNC counties had measurable TRI releases in 2010. (Only Clay, Madison, Polk and Transylvania Counties did not.) In 2010, Haywood County in WNC was the eighth leading emitter of TRIs in NC in terms of tonnage of TRI chemicals released.
Although not among the "top ten", Rutherford County, also in WNC, ranks just off the list, at number eleven. (No other WNC county ranks higher than 21st.) The *Data Workbook* presents detail on toxic chemical releases in all 16 WNC counties.

Table 61 presents the 2010 TRI Summary for McDowell County, which ranks 56th among the state's 86 ranked counties. The TRI chemicals released in the greatest quantity in McDowell County include: methanol, released by Jeld-Wen in Marion, and di(2-ethylhexyl)phalate, released by the Baxter Healthcare Corporation, also in Marion.

Table 61. Toxic Release Inventory (TRI) Summary, McDowell County, 2010

Total On-and Off-Site Disposal or Other Released, in Pounds	Compounds Released in Greatest Quantity	Quantity Released, in Pounds	Releasing Facility	Facility Location
59,766	Methanol	33,747	Jeld-Wen	Marion
	Di(2-ethylhexyl)phthalate	24,414	Baxter Healthcare Corporation	Marion
	Diisocyanates	831	Baxter Healthcare Corporation	Marion
	Nitrate compounds	695	Baxter Healthcare Corporation	Marion
	Lead	74	Baxter Healthcare Corporation	Marion

Indoor Air Quality

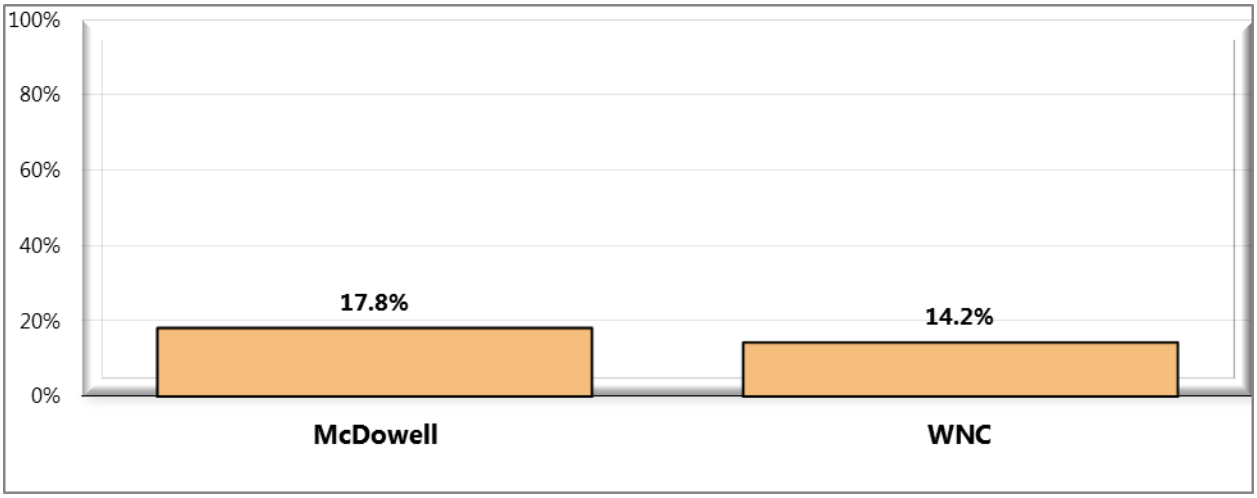
Environmental tobacco smoke

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 US. 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 U.S. 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: sidestream 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).

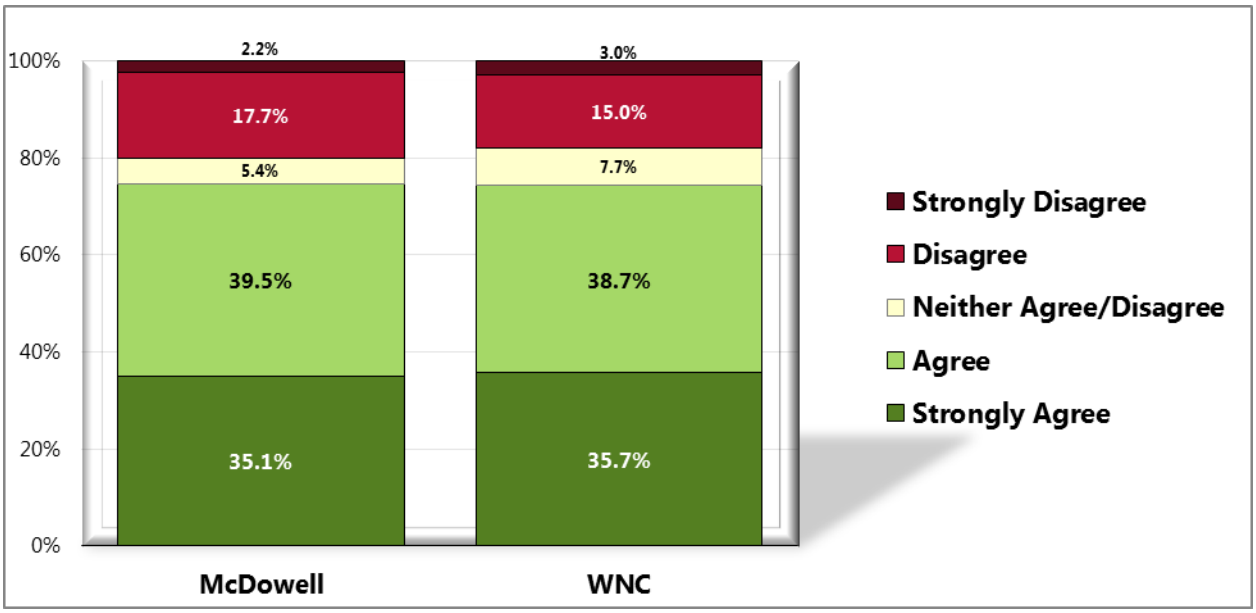
Survey respondents were asked about their second-hand smoke exposure in their workplace. Specifically, they were asked, "During how many of the past 7 days, at your workplace, did you breathe the smoke from someone who was using tobacco?" In order to evaluate community members' perceptions about environmental tobacco smoke, survey respondents were given a series of three 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 universities and colleges to be 100% tobacco-free," "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."

Figure 95. Have Breathed Someone Else's Cigarette Smoke at Work in the Past Week (WNC Healthy Impact Survey)
(Among Employed Respondents)



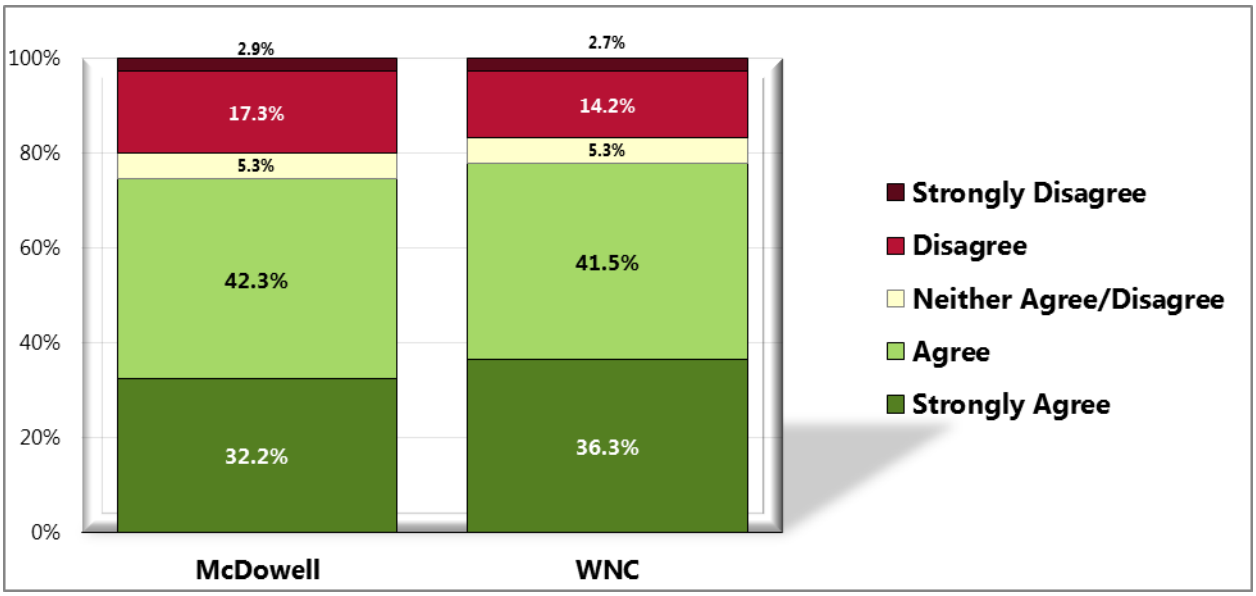
Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 44]
Notes: ● Asked of employed respondents.

Figure 96. "I believe it is important for universities and colleges to be 100% tobacco-free" (WNC Healthy Impact Survey)



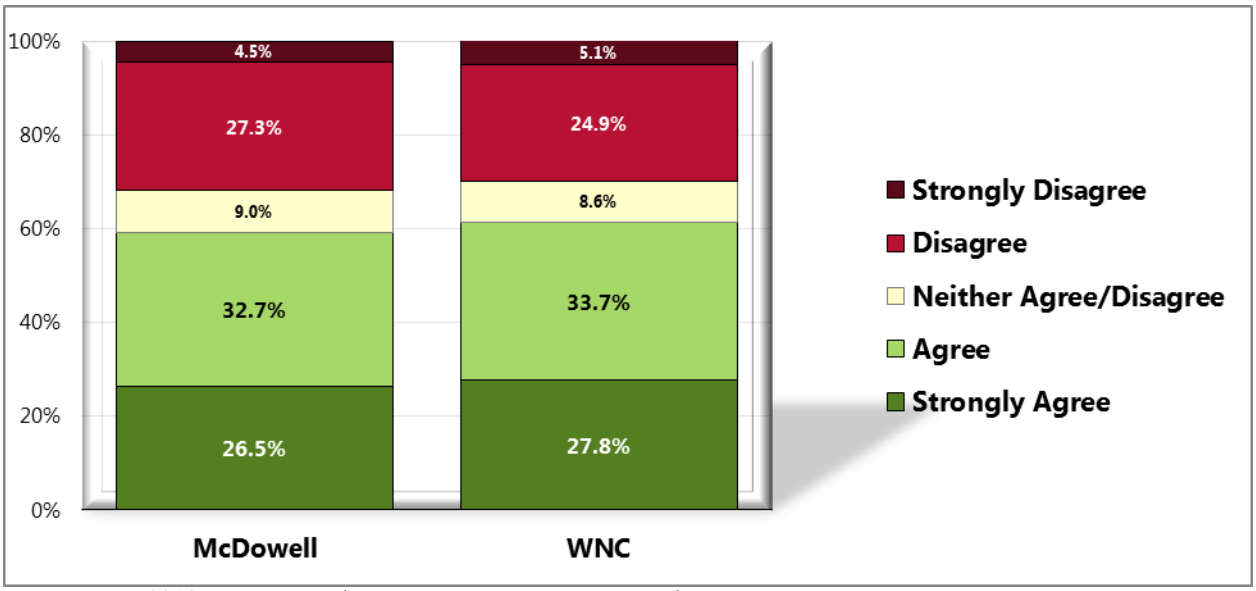
Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 45]
Notes: ● Asked of all respondents.

Figure 97. "I believe it is important for government buildings and grounds to be 100% tobacco-free (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 46]
Notes: ● Asked of all respondents.

Figure 98. "I believe it is important for parks and public walking/biking trails to be 100% tobacco-free (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 47]
Notes: ● Asked of all respondents.

Drinking 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 2012, a regional mean of 55% of the WNC population was being served by community water systems (*Data Workbook*). The 45% remaining presumably were being served by wells or by some other source, such as springs, creeks, rivers, lakes, ponds or cisterns.

Individual counties in WNC, however, have highly varied percentages of their populations served by community water systems; in some counties the figure is as low as 18% and in others it is as high as 65%. In McDowell County, 13,939 of 44,996 county residents, or 31.0%, were being served by community water systems in February of 2012. Presumably the remaining 69.0% were served by wells or other sources.

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. There are an additional 31 counties in the central and western Piedmont area of the state with radon levels in the 2-4 pCi/L range; the remaining 61 NC counties, mostly in the piedmont and eastern regions of the state have predicted indoor radon levels of less than 2 pCi/L (NC Department of Environment and Natural Resources).

According to one recent assessment, the regional mean indoor radon level for the 16 counties of WNC was 4.3 pCi/L, over three times the national indoor radon level of 1.3 pCi/L. According to this same source, the level for McDowell County was 5.4 pCi/L, over four times the national indoor radon level (*Data Workbook*).

Built Environment

The term "built environment" refers to the human-made surroundings that provide the setting for human activity, ranging in scale from buildings and parks or green space to neighborhoods and cities that can often include their supporting infrastructure, such as water supply, or energy networks. In recent years, public health research has expanded the definition of built environment to include healthy food access, community gardens, "walkability", and "bikability" (Wikipedia, 2012).

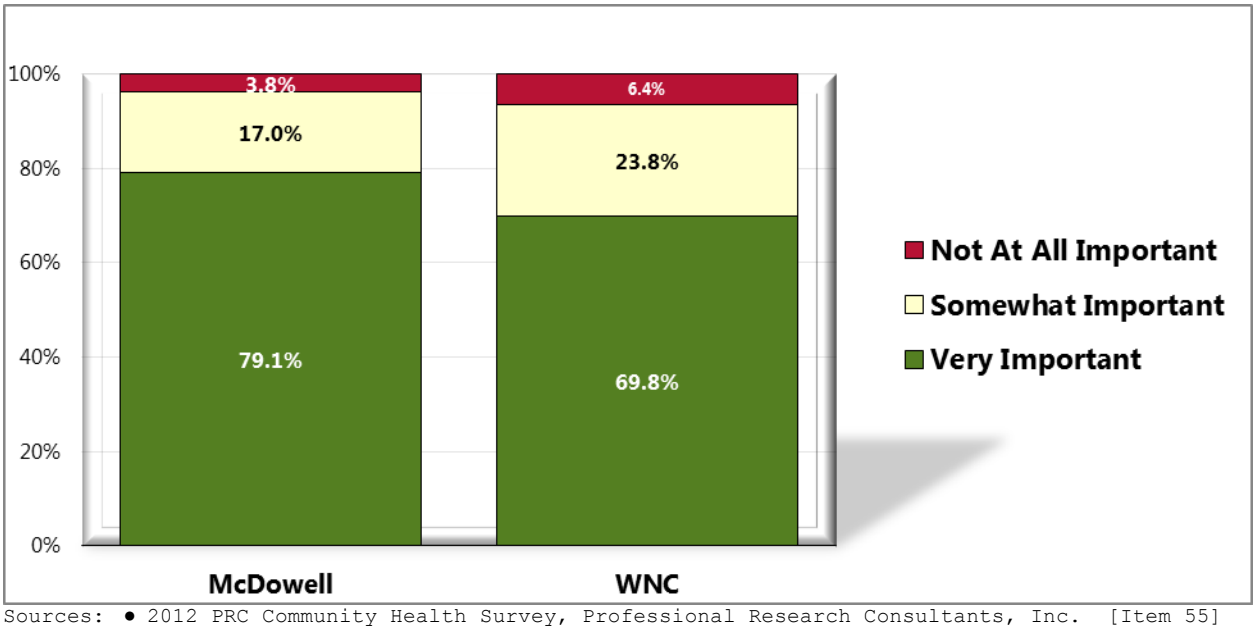
Access to Farmers' Markets and Grocery Stores

According to the US Department of Agriculture (USDA) Economic Research Service's *Your Food Environment Atlas,* there were a total of 49 farmers' markets in the 16 WNC counties in 2009. This number was reported to have grown by 5, to a total of 54, in 2011, an increase of 10%. According to this source, in McDowell County there was one farmers' market in both 2009 and 2011 (*Data Workbook*).

According to the same source, there were a total of 158 grocery stores in the 16 WNC counties in 2007. This number was reported to have shrunken by 4, to a total of 154, in 2009, a decrease of 2%. In McDowell County the number of grocery stores slipped from 11 to 9 over the same period (*Data Workbook*).

Survey respondents were asked, "How important do you feel it is for your community to make it easier for people to access farmer's markets, including mobile farmer's markets and tailgate markets?"

Figure 99. Importance of Communities Making It Easier to Access Farmer's Markets, Including Mobile/Tailgate Markets (WNC Healthy Impact Survey)



Sources: • 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 55]
Notes: • Asked of all respondents.

Access to Fast Food Restaurants

According to the same source cited above, there were a total of 526 fast food restaurants in the 16 WNC counties in 2007. This number was reported to have dropped by 21, to a total of 505, in 2009, a decrease of 4%. In McDowell County the number of fast food restaurants fell from 23 to 22 over the same period (*Data Workbook*).

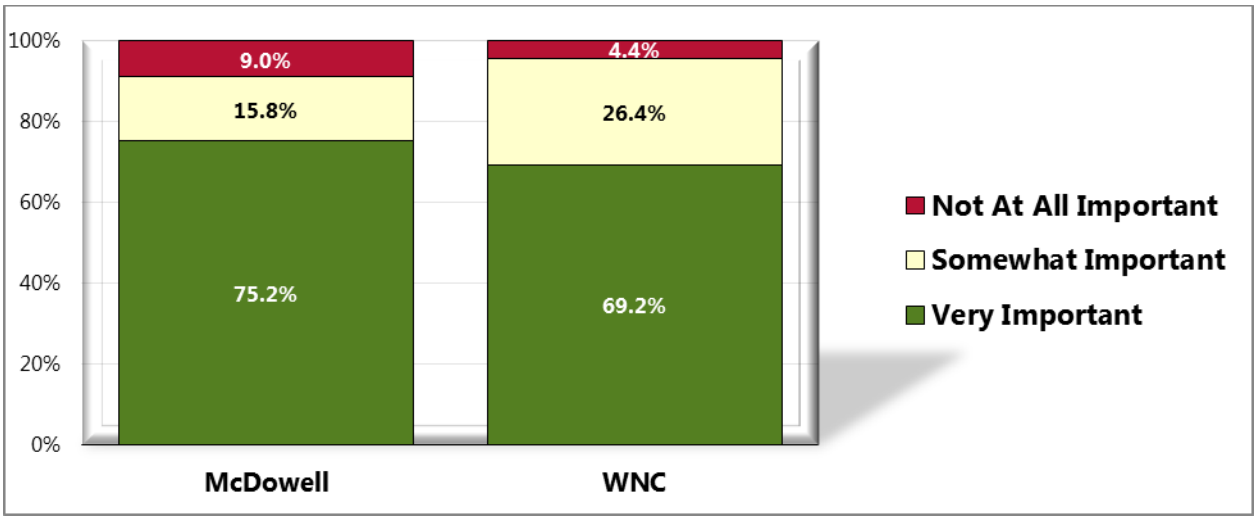
Also according to the USDA, mean per capita fast food expenditures in WNC rose 45% (from $514 to $746) between 2002 and 2007, and mean per capita restaurant expenditures in WNC also rose 45% (from $449 to $665) over the same period (*Data Workbook*).

Access to Recreational Facilities

According to the same source cited above, 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 McDowell County the number of recreational and fitness facilities fell from 2 to zero over the same period (*Data Workbook*).

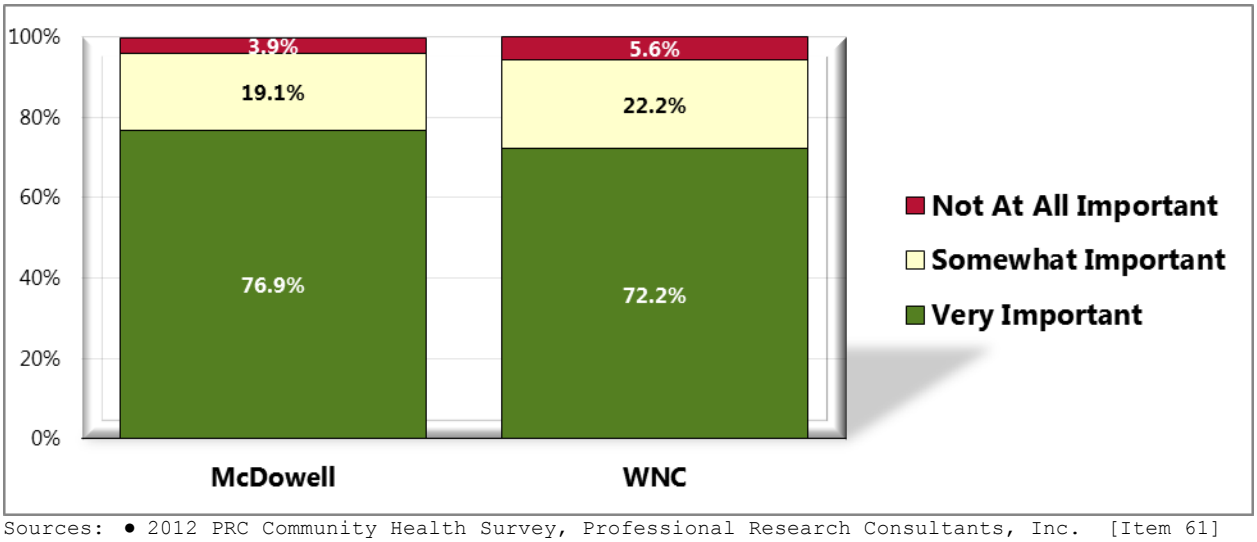
Survey respondents were asked whether they feel it is important for community organizations to explore ways to increase the public's access to physical activity spaces during off-times, as well as whether it is important for communities to improve access to trails, parks, and greenways.

Figure 100. Importance That Community Organizations Make Physical Activity Spaces Available for Public Use After Hours (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 60]
Notes: ● Asked of all respondents.

Figure 101. Importance That Communities Improve Access to Trails, Parks, and Greenways (WNC Healthy Impact Survey)



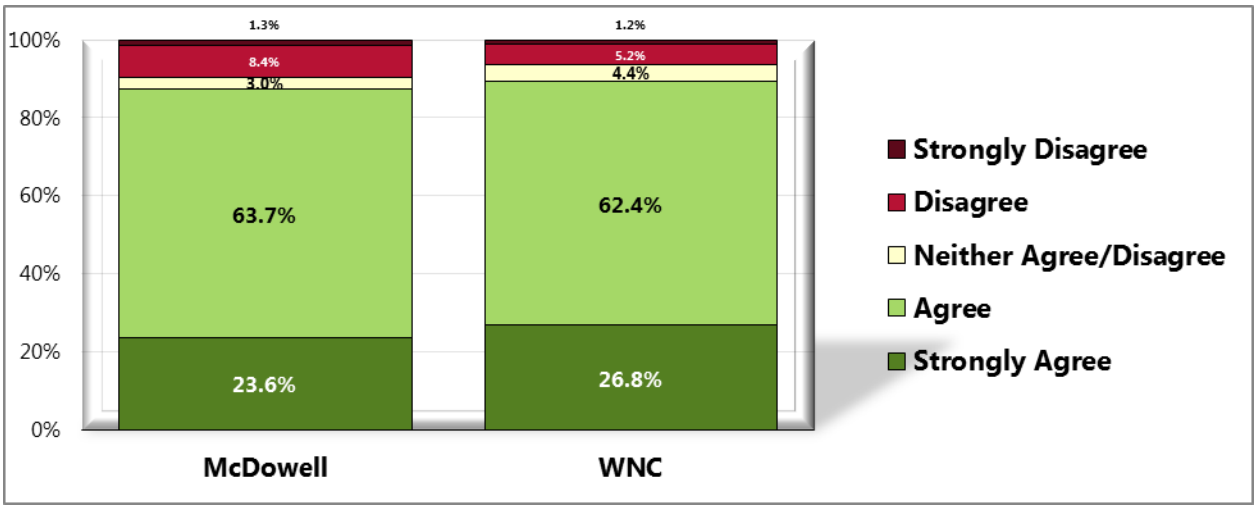
Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 61]
Notes: ● Asked of all respondents.

CHAPTER 7 – QUALITY OF LIFE

Perception of County

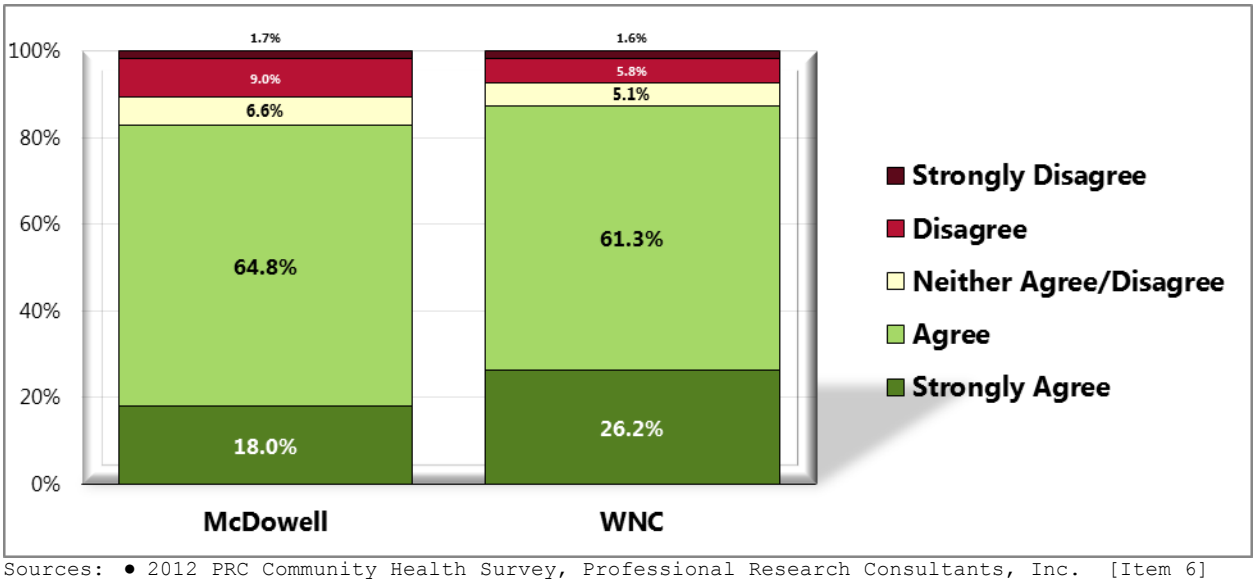
In order to evaluate community members' perceptions about the quality of life in western North Carolina (WNC), survey respondents were given a series of three statements regarding life in their county (my county is a good place to raise children, my county is a good place to grow old, and there is plenty of help for people during times of need in my county) and asked whether they "*strongly agree*," "*agree*," "*neither agree nor disagree*," "*disagree*" or "*strongly disagree*" with each statement. Survey respondents were also asked about their frequency of getting needed social and emotional support, their satisfaction with life, the one thing that needs the most improvement in their neighborhood or community, and the one issue which has the most negative impact on the quality of life in their county.

Figure 102. "My county is a good place to raise children" (WNC Healthy Impact Survey)



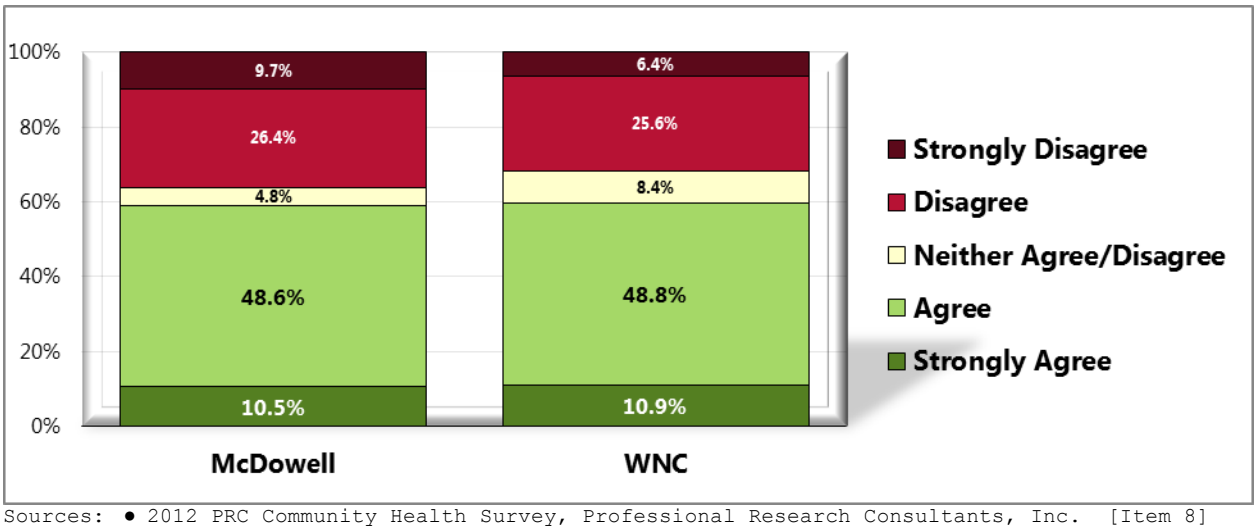
Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 5]
Notes: ● Asked of all respondents.

Figure 103. "My county is a good place to grow old." (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 6]
Notes: ● Asked of all respondents.

Figure 104. "There is plenty of help for people during times of need in my county." (WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 8]
Notes: ● Asked of all respondents.

Table 62. Top Three County Issues Perceived as Having the Most Negative Impact on Quality of Life (WNC Healthy Impact Survey)

	Economy/ Unemployment	Nothing	Don't Know	Substance Abuse	Government/ Politics	Health Care
McDowell	✓		✓	✓		
WNC	✓	✓	✓			

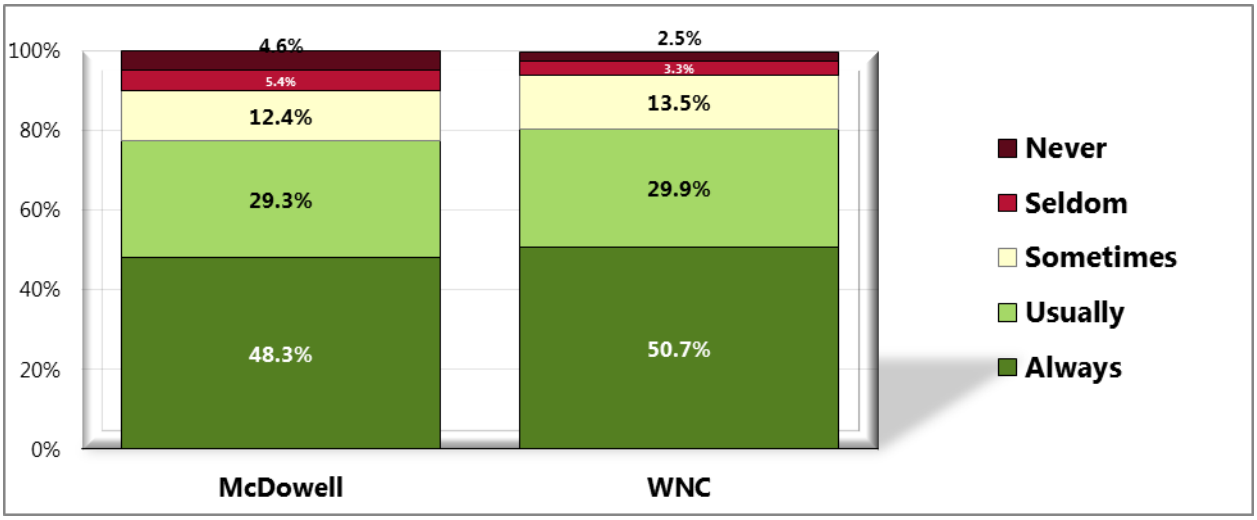
Table 63. Top Three Neighborhood/Community Issues Perceived as in Most Need of Improvement (WNC Healthy Impact Survey)

	Economy/ Unemployment	Healthcare Services	Activity/Recreation Options	Nothing
McDowell	✓	✓	✓	
WNC	✓	✓		✓

Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 9]
Notes: ● Asked of all respondents.

Social and Emotional Support

Figure 105. Frequency of Getting Needed Social/Emotional Support (WNC Healthy Impact Survey)

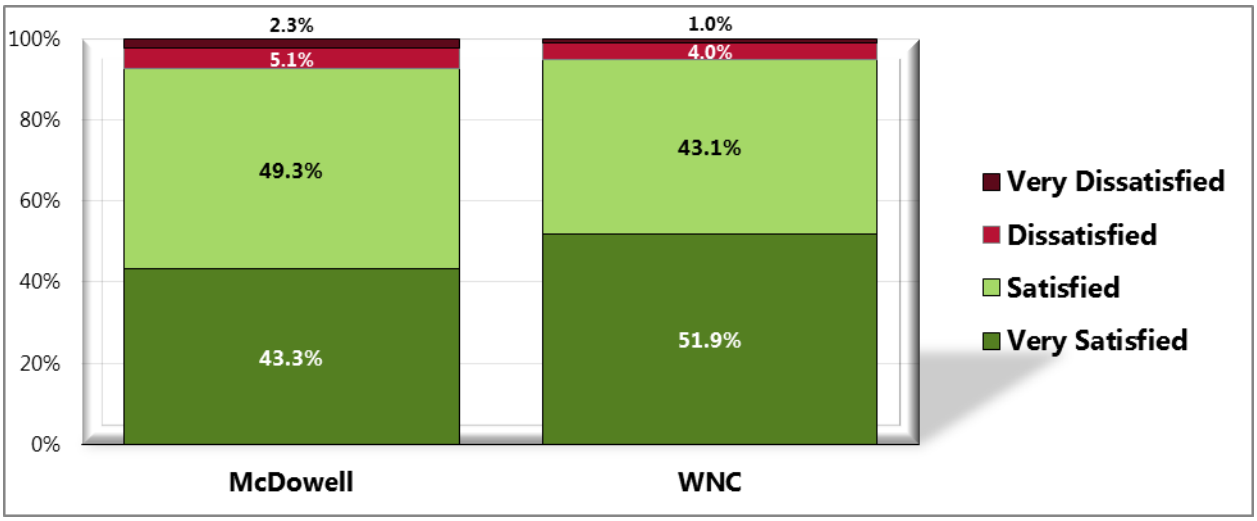


Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 63]
Notes: ● Asked of all respondents.

Satisfaction with Life

Figure 106. Satisfaction with Life

(WNC Healthy Impact Survey)



Sources: ● 2012 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 62]
Notes: ● Asked of all respondents.

CHAPTER 8 – HEALTHCARE & HEALTH PROMOTION RESOURCES

Health Resources

See Appendix A for a description of the data collection methods use to gather this information.

See Appendix C for a summary list of the healthcare and health promotion resources and facilities available in McDowell County to respond to the health needs of the community.

Information for our Health Resource Inventory and 2-1-1 caller statistics was provided by 2-1-1- of Western North Carolina and lists health providers in each county, pulled from the 2-1-1 database as of June 2012, as well as data on most common requests and unmet needs of callers to 2-1-1.

Resource Gaps

In the Listening Sessions, many services were identified as being lacking in McDowell County. The most frequently mentioned resource gap was lack of transportation. This was seen as a huge detriment to the health and welfare of many community members in the County. The group of senior citizens as well as the group of representatives from the Hispanic/Latino community also vocalized the need for gerontologists and other medical professionals qualified to treat and care for the growing elderly population in the county. Many of the elderly participants felt that there were not adequate services to deal with some of the health problems they were facing associated with their increasing ages. Specialists and dental care were also commonly identified as services that were lacking in McDowell County.

Lack of insurance also emerged as a major barrier to living a healthy lifestyle. Lack of insurance was seen as not only a barrier to receiving general care, but also to receiving the specialized care that many community members need. Lack of insurance is also related to the barrier of costs in that many are not able to afford insurance; therefore, they cannot afford to pay the deductibles for medical services.

Many individuals also discussed their perceptions of the injustice of the "system" as it relates to who qualifies for government assistance (e.g., Medicaid; Medicare), and who doesn't. These participants either identified themselves as individuals who were "falling through the cracks" and not qualifying for any much needed assistance, or were able to share stories of friends and family who were facing these issues.

Chapter 9 – Health Priorities & Next Steps

Prioritization Process & Criteria

- A Health Summit was held in September 2012 and community members were encouraged to help the Coalition Officers choose winnable strategies for creating Health Improvement Plans.
- The McDowell Health Coalition held an annual meeting to review the data and choose data driven priorities in December 2012. Attendees were given the opportunity to give input once again.
- The criteria for prioritization included the seriousness of the problem, the breadth of the health issue among residents and the availability of needed resources to make measurable improvements.

Priority Health Issues

The previous CHA was conducted in 2008 and priorities were chosen by the community at a Health Summit in January 2009.

Priority Health Issues for 2012 – 2016 are:

- Teen Pregnancy Prevention
- Tobacco Use
- Healthy Eating & Active Living
- Substance Abuse & Behavioral Health
- Access to Care

Next Steps

Action planning and collaborative implementation began in early December, 2012 and continues through the monthly meetings of the McDowell Health Coalition. The development of strategies to improve the chosen priority health issues will continue throughout 2013 and beyond.

Healthy Places Initiative

The Kate B. Reynolds Charitable Trust is making a long-term commitment to improving community-wide health in McDowell County through the *Healthy Places NC* initiative. *Healthy Places NC* is a new rural place-based strategy aimed at enhancing the health and overall quality of life for people in rural areas of North Carolina. *Healthy Places* thrives on the energy, enthusiasm; sweat equity and vision of local community actors to make McDowell County healthier.

Healthy Places NC –provides opportunities for the Trust and McDowell County to work deeply together to stimulate new ideas and thinking to

address persistent health issues. It broadens the conversation to include and embrace cross-sectorial partners (health and non-health), traditional and non-traditional partners to work in new ways that are locally driven to create a shared community change agenda to improve health.

The Trust will support a complement of mutually reinforcing strategies and programs to support the *Healthy Places NC* initiative . In McDowell County, WNC Non-Profit Pathways, a capacity building intermediary will engage local nonprofit board and staff in trainings to increase their organizational effectiveness. In addition, the County Health Rankings and Roadmap Team will offer support and technical assistance to the McDowell County Health Coalition. KaBOOM! a national playground builder is yet another resource that will build two playgrounds in McDowell County as part of the Healthy Places work to enhance opportunities for physical activity.

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APPENDICES

APPENDIX A – DATA COLLECTION METHODS & LIMITATIONS

Secondary Data

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 narrative past a certain date; in most cases that end-point was June 30, 2012.

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; NC Department of Transportation; NC DETECT and the NC DPH Oral Health Section.

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. WNC Healthy Impact received approval from the NC Division of Public Health to use this regional comparison as "peer" for the purposes of our assessments (and related requirements). County data may not be available for some of the data parameters included in this report; in those cases state-level data is compared to US-level data or other standardized measures. 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. This report defines technical terms within the section where each term is first encountered.

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 any rate 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

- *[Insert a general statement of any relevant information gaps that you feel limits the county's ability to assess the community's health needs.* ***Note:*** *Where stratification is limited within secondary data sections for some counties in the report, mention of relevant health disparities within other geographic area (region, state, or nation) is often included.]*

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, *2012 WNC Healthy Impact Survey* (a.k.a.

2012 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.

Professional Research Consultants, Inc.

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

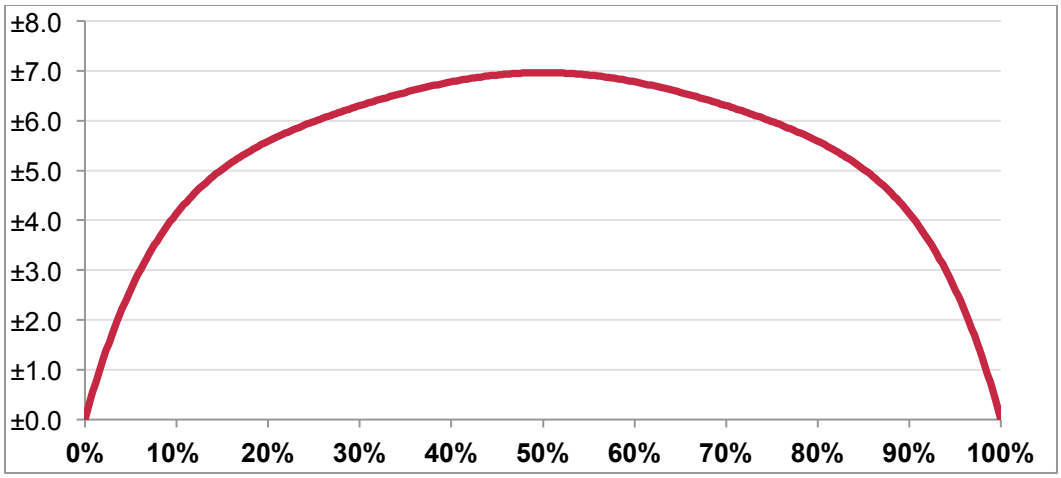
To ensure the best representation of the population surveyed, a telephone interview methodology (one that incorporates both landline and cell phone interviews) was employed. The primary advantages of telephone interviewing are timeliness, efficiency and random-selection capabilities.

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. Our county's sample size was 200. 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 is ±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% ± 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% ± 6.9%) of the total population would respond "yes" if asked this question.

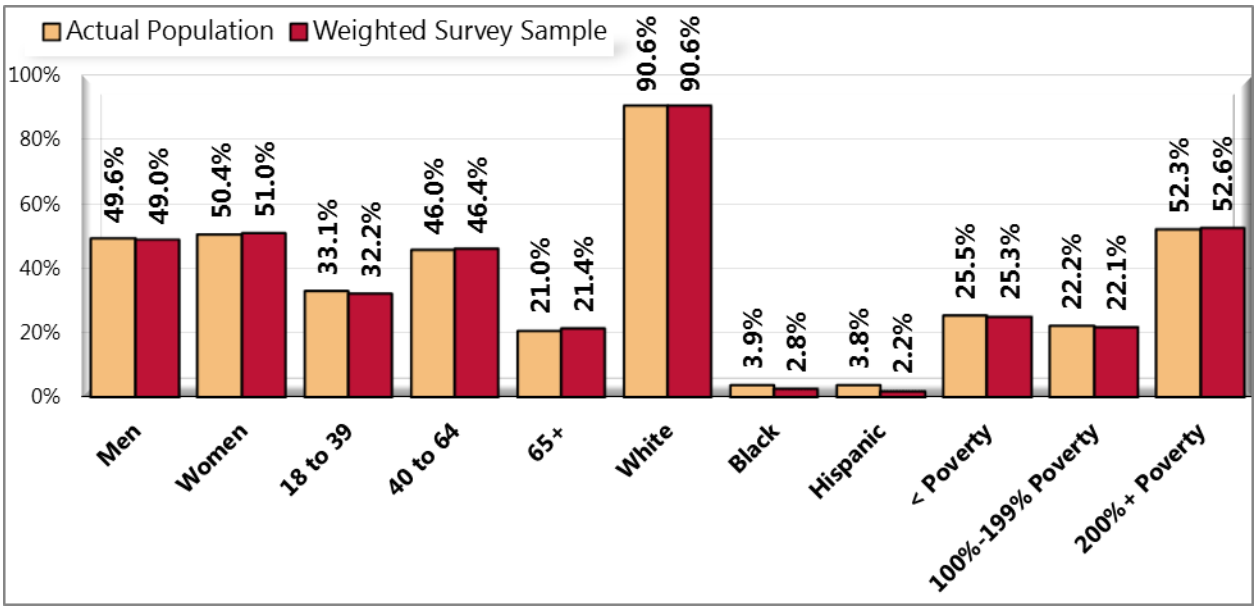
Sample Characteristics

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 "weight" the raw data to improve this representativeness even further. This is accomplished by adjusting the results of a random sample to match the geographic distribution and demographic characteristics of the population surveyed (poststratification), so as to eliminate any naturally occurring bias. 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.

Population and Sample Characteristics
(McDowell County, 2012)



Sources: ● Census 2010, Summary File 3 (SF 3). U.S. Census Bureau.
● 2012 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).

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 2012 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 *2011 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

Pilot Testing & Quality Assurance

Before going into the field in the latter half of May, 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'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.

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.

Random-Digit Dialing

PRC employs the latest CATI (computer-aided telephone interviewing) system technology in its interviewing facilities. The system PRC uses is a hybrid variation of a commercial application enhanced with internally developed software applications designed to specifically meet the needs of its health care client base. Since 1998 PRC has maintained, refined and developed proficiency in using this CATI system.

The CATI system automatically generates the daily sample for data collection using a random-digit dialing technique, retaining each telephone number until the Rules of Replacement (see description, below) are met. Up to five call attempts are 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.

Rules of Replacement

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.

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.

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.

APPENDIX B – COMMUNITY HEALTH SURVEY INSTRUMENT

Double-click on the survey coversheet below to access the complete survey instrument. If you cannot access this, please contact your local health department for a copy.

Date _____

Interviewed by _____ ID# _ _ _ _

2012-0615-02

WESTERN NORTH CAROLINA
2012 Community Health Needs Assessment MASTER
Asheville, North Carolina

Hello, this is _____ with Professional Research Consultants. We are conducting a survey to study ways to improve the health of your community.

(IF NECESSARY, READ:) Your number has been chosen randomly to be included in the study, and we'd like to ask some questions about things people do which may affect their health. Your answers will be kept completely confidential.

(IF Respondent seems suspicious, READ:) Some people we call want to know more before they answer the survey. If you would like more information regarding this research study, you can call '+chaname+' at '+chanumb+' during regular business hours.

*****Note that this survey is for processing & reports only. It is not to be used for interviewing in its current form. The notes in this survey do not have supporting logic, and this survey did not receive the review that the individual child surveys received from quality assurance.*****

Version:(1.0) 6/14/2012 1

APPENDIX C Listening Sessions

McDowell County Community Health Assessment
Listening Session Key Findings
Emily Miller, Intern

Introduction

Seven listening sessions were conducted with the following groups in McDowell County. These groups included:

1. McDowell County Health Department Patients
2. McDowell Senior Center
3. El Centro Unido
4. Addie's Chapel
5. McDowell County Department of Social Services Clientele
6. The Good Samaritan Clinic
7. McDowell County NPO & Human Service Agency Directors

The Health Educator for the Rutherford-Polk-McDowell District Health Department and a Master of Public Health student intern from East Carolina University working at the McDowell County Health Department collaborated to organize, moderate, and record these listening sessions. The listening session questions were taken directly from the 2011 *Community Health Assessment Guidebook*[1] and are listed below in the results section of this paper.

Demographics

A total of sixty-seven individuals participated in the listening sessions. Demographic information was collected prior to the beginning of each listening session in order to gain a better understanding of the backgrounds of individuals participating in the sessions, as well as to show that an attempt had been made on the part of those conducting the listening sessions to gather opinions and ideas from a wide variety of individuals living in McDowell County. This data was analyzed with the statistical software, SPSS 19.0. Group five (clients of McDowell County Department of Social Services) was the smallest of all the groups with only three participants. Group seven (McDowell County NPO & Human Service Agency Directors) was the largest group with nineteen participants (Exhibit 1). Although there may be some concern over whether incorporating the demographic data of the NPO group with the other groups would skew the data to reflect more positive outcomes in some of the categories, this was not necessarily the case. Data analysis in which either the NPO group was removed from the data set or the other six groups were removed showed that although the percentages for several of the data points did increase or decrease based on which groups were included (e.g., income; education), the distributions of participant responses were generally the same. There was also more than twice the number of participants in all other groups (e.g., groups one through six) combined than there were in the NPO group (Exhibit 2). Therefore, all groups were included in the analysis.

Seventy percent of the participants were residents of McDowell County for over ten years (Exhibit 3). Participants were asked in the survey to indicate the community within McDowell County in which they resided. The communities that the highest percentages of participants indicated that they resided in were Marion (thirty-seven percent) and Nebo (eighteen percent) (Exhibit 4).

Ages of participants ranged from twenty to ninety-five years old. The average age of participants was fifty-five years old (Exhibit 5). A majority of the participants indicated that they were female (sixty-seven percent) and White (eighty-one percent) (Exhibit 6; Exhibit 7). Twelve percent of participants indicated that they were Black or African American, two percent indicated "Other," three percent indicated that there were "No additional choices," and two percent indicated "Don't Know/ Not Sure," when asked to mark their race on the survey. Ten percent of the participants indicated that they were Hispanic/Latino (Exhibit 8).

Slightly over half (fifty-four percent) of participants indicated that they were married (Exhibit 9). A majority of participants (sixty-one percent) indicated that they currently did not have any children living in their home (Exhibit 10). This may be due to the fact that the average age of the participants was fifty-five years old.

A majority of participants were either employed for wages or retired (thirty-four percent and thirty-one percent, respectively). A higher percentage of those unemployed had been unemployed for over a year as opposed to for less than a year (twelve percent versus two percent, respectively) (Exhibit 11). The average annual income for all participants was less than $35,000.00 (Exhibit 12).

Listening Session Results

As previously mentioned, each of the listening sessions was guided by the same seven questions taken directly from the 2011 *Community Health Assessment Guidebook*. Several interesting common themes emerged that were consistent in each of the seven groups. These themes are expounded upon below. Themes were determined after all listening sessions were conducted and the notes were uploaded into the qualitative data analysis software, NVivo 9. Once all of the data was uploaded into NVivo 9, it was coded, or categorized, into nodes, or themes. A codebook was also created to provide guidelines and operational definitions of each node or theme. As analysis of the data continued, subthemes and categories were identified and added under the appropriate "parent nodes." In order to give a thorough report on the findings of the data analysis, an overview of common themes for each question is given below.

Question 1: What is the best thing about living in McDowell County? each of the listening sessions was guided by the same seven questions taken directly from the 2011 *Community Health Assessment Guidebook.*

Across all groups, individuals remarked on the friendliness, helpfulness, and overall goodness of the residents of McDowell County. McDowell County is perceived to be a safe, calm, and quiet place that is wonderful for raising a family. Many individuals remarked that their favorite part about living in McDowell County is the fact that they live close to their families and enjoy the support this provides. Related to the general overall helpfulness of residents of the county, several individuals remarked that they appreciated the level of volunteerism seen in McDowell County. Individuals in all groups also discussed how much they enjoyed the mountains, the overall landscape, and the climate of McDowell County.

Question 2: What do people in this community do to stay healthy? How do people get information about health?

When asked what people do to stay healthy, the most common answer given by the various groups was exercise. Walking and running were the most common examples of exercise given across all groups. Making healthy eating choices was also a common theme that emerged. Specifically, many individuals talked about the availability of fresh fruits and vegetables in the community as being an asset to promoting healthy lifestyles. Exercise facilities, such as the YMCA, the Senior Center, and other gyms not specifically named were commonly given as

resources people utilize to stay healthy. Another theme that emerged from the listening sessions was residents' appreciation and utilization of the various greenways and walking trails located in McDowell County. Lastly, many people vocalized the benefit of being active by doing housework, yard work, and gardening as ways to stay active and healthy.

Many participants said that they are able and do feel comfortable to get information about health from their physicians or nurses. Several participants also stated that they acquire their health information through the television, specifically from the government channel, as well as from Dr. Oz. Participants also discussed the benefits of sharing health information amongst community members by word of mouth. According to several participants, community members often share information with one another when they are facing similar problems, and sharing health information tends to increase with age. Finally, many participants gave examples of community programs and services that provide health information. For example, the Health Department, Department of Social Services, the Good Samaritan Clinic, and Cooperative Extension were noted as sources of health information. Churches, the senior center, El Centro Unido, and Hospice were also cited as places that provide health information to the community.

Question 3. In this group's opinion, what are the serious health problems in your community? What are some causes of these problems?

Chronic disease, cancer, mental illness, and substance abuse emerged as being the serious health problems most often given as an answer to the first part of Question 3. Specifically, diabetes and obesity surfaced as the most commonly identified chronic disease amongst all groups. However, heart disease and high blood pressure were not far behind and were also frequently mentioned as chronic diseases affecting the communities in McDowell County. Several participants in various groups also pointed out that many children in the County are being diagnosed with chronic diseases such as obesity and high blood pressure. Alcoholism, tobacco use, and abuse of prescription drugs were most often cited as the health problems related to substance abuse by the various listening session groups.

Each of the groups was able to think of many of the potential causes of these problems. Lifestyle choices, such as choosing to be proactive in one's health and welfare versus choosing not to be, choosing to eat healthy diets or not eat healthy diets, and choosing to exercise or not exercise, were cited most frequently. Several individuals stated that apathy and laziness were major contributors to the serious health problems facing their communities. The availability and inexpensiveness of fast food was seen as a major cause of the chronic health problems affecting the County. Lack of education, information, and lack of services were also seen as having a great impact on the poor health of many community members. Finally, work, and specifically the lack of available work, was also seen as a cause of some of the serious health problems facing the community.

Question 4. What keeps people in your community from being healthy?

Many of the same issues that were identified in Question 3 as being some of the causes of the serious health problems in McDowell County were also identified in Question 4 as being barriers to healthy lifestyles for people in the County. However, several unique key barriers were identified in response to this question that should be given attention. These barriers include cost of medical services and prescriptions, lack of services, and lack of insurance. Costs of office visits, prescriptions, and healthy foods were discussed and referred to as barriers to being healthy.

Many services were identified as being lacking in McDowell County. Perhaps one of the most frequently mentioned was lack of transportation. This was seen as a huge detriment to the

health and welfare of many community members in the County. The group of senior citizens as well as the group of representatives from the Hispanic/Latino community also vocalized the need for gerontologists and other medical professionals qualified to treat and care for the growing elderly population in the county. Many of the elderly participants felt that there were not adequate services to deal with some of the health problems they were facing associated with their increasing ages. Specialists and dental care were also commonly identified as services that were lacking in McDowell County.

Lack of insurance also emerged as a major barrier to living a healthy lifestyle. Lack of insurance was seen as not only a barrier to receiving general care, but also to receiving the specialized care that many community members need. Lack of insurance is also related to the barrier of costs in that many are not able to afford insurance; therefore, they cannot afford to pay the deductibles for medical services.

Many individuals also discussed their perceptions of the injustice of the "system" as it relates to who qualifies for government assistance (e.g., Medicaid; Medicare), and who doesn't. These participants either identified themselves as individuals who were "falling through the cracks" and not qualifying for any much needed assistance, or were able to share stories of friends and family who were facing these issues.

Question 5. What could be done to solve these problems?

Many ideas for solving the major health problems facing McDowell County emerged as common themes across all groups. Several of the most prevalent themes included increased education about many aspects of maintaining a healthy lifestyle, focusing resources and health related education on young people, having better diets, sharing health information, and finding ways to be politically proactive to make policy changes at the grassroots level. The idea of being a good neighbor to people close at hand who may need extra support also surfaced as a major theme.

Question 6. Is there any group not receiving enough health care? If so, why?

Children, uninsured individuals, unemployed individuals, the elderly, and those who do not qualify for any government medical assistance were identified as groups not receiving enough health care.

Question 7. Is there anything else you would like to add, or you think would be helpful for us to know?

When asked this question, participants in the listening sessions had many things to add to the discussion. However, none of the themes that emerged from this question differ greatly from any of the other themes discussed and explained above. One of the unique themes that did emerge was participants' common suggestion to find positive, constructive ideas that would motivate community members to live a proactive, healthier lifestyle. One idea was to host a scavenger hunt as a fundraiser on the greenway to raise financial support for the greenway as well as to draw more individuals out to experience it. Another participant had the idea of establishing some sort of gleaning program that the senior citizens could participate in to not only gather fresh fruits and vegetables for them to eat, but to also share with individuals on a fixed income who may not otherwise have access to fresh fruits and vegetables. Many participants acknowledged the wonderful work that the Good Samaritan Clinic does here in McDowell County, but they also discussed the need for more volunteers and resources at the clinic so that it can serve a greater number of people.

Limitations

Although every effort was made to recruit diverse participants for the listening sessions, a majority of the participants were white females. However, this may not necessarily be considered detrimental to the outcomes of the listening session. According to the US Census Bureau, in 2011, McDowell County was ninety-three percent White, four percent African American, and fifty percent female.[2] Some of the participants did not realize that the demographics survey was front and back, so several of these surveys were not fully completed. Participants may or may not answer questions truthfully if they believe that the moderator wishes them to answer questions in a particular manner. Every effort was made to reduce bias in the way the listening sessions were conducted, but there is still the possibility that some participants may have felt inclined to answer some questions in one way or another. During some of the listening sessions, participants did not directly answer the questions being asked, so the moderator and assistant moderator were forced to place answers given into the specific categories of questions being asked, both during the sessions themselves while taking notes, and during the content analysis. This may introduce some bias into the emergent themes identified in the listening sessions.

Conclusion

Despite these limitations, the current listening sessions did involve the people most often identified as being those who are most often underserved in the community. Although many serious and challenging barriers to healthy lifestyles were identified in the listening sessions, almost all of the participants expressed a true love for their community and McDowell County as a whole. Many participants voiced that they are in the process of making personal behavior changes to their own lives, and several expressed that they are becoming aware of the health of the communities around them. These participants were interested in ways that they could help one another to live healthier lives by being a good neighbor, lending a helping hand, and encouraging healthy behaviors. Many participants had a basic understanding of the ways in which interpersonal, intrapersonal, and societal factors influenced their own choices in living healthy lifestyles, as well as the choices of the larger community as a whole.[3]

The last listening session was conducted with directors of various non-profit agencies in McDowell County that both directly and indirectly have an impact on the health of the County. It was heartening for this author to see that the agency directors had a similar understanding of the major health issues affecting McDowell County as the underserved populations that gave their insight before them. There does seem to be a true spirit of camaraderie and a desire to help one another in this County, which will only serve to continue to improve the health and welfare of its citizens.

References:

1. Healthy Carolinians. Community health assessment guide book. Community health assessment. 2012. Available at http://www.healthycarolinians.org/assessment/guidebook.aspx. Retrieved June 29, 2012.

2. United States Census Bureau. State and county quickfacts: McDowell County, North Carolina. 2012. Available at http://quickfacts.census.gov/qfd/states/37/37111.html. Retrieved July 08, 2012.

3. Sallis JF, Neville O, Fisher EB. Ecological models of health behavior. In: Glanz K, Rimer BK, Viswanath K, eds. *Health Behavior and Health Education: Theory, Research, and Practice.* 4th ed. San Francisco, CA: Jossey-Bass; 2008:465-485.

Appendices

Exhibit 1:

SurveyType

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Community Member	48	71.6	71.6	71.6
	Key Informant	19	28.4	28.4	100.0
	Total	67	100.0	100.0	

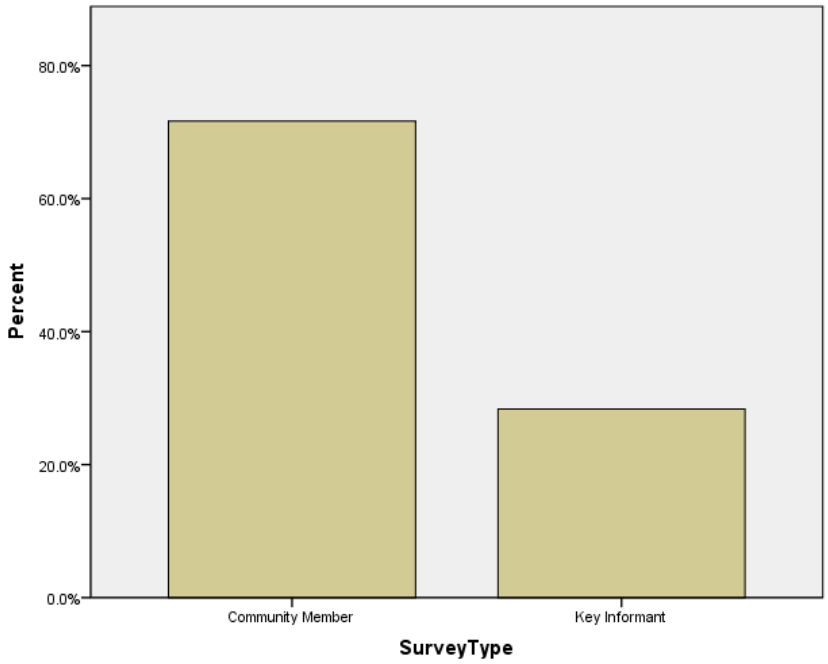


Exhibit 2:

Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	HD Clients	5	7.5	7.5	7.5
	Sr. Ctr	16	23.9	23.9	31.3
	El Centro	6	9.0	9.0	40.3
	Addie's Chapel	7	10.4	10.4	50.7
	DSS Clients	3	4.5	4.5	55.2
	Good Samaritan Patients	11	16.4	16.4	71.6
	Non Profit KIs	19	28.4	28.4	100.0
	Total	67	100.0	100.0	

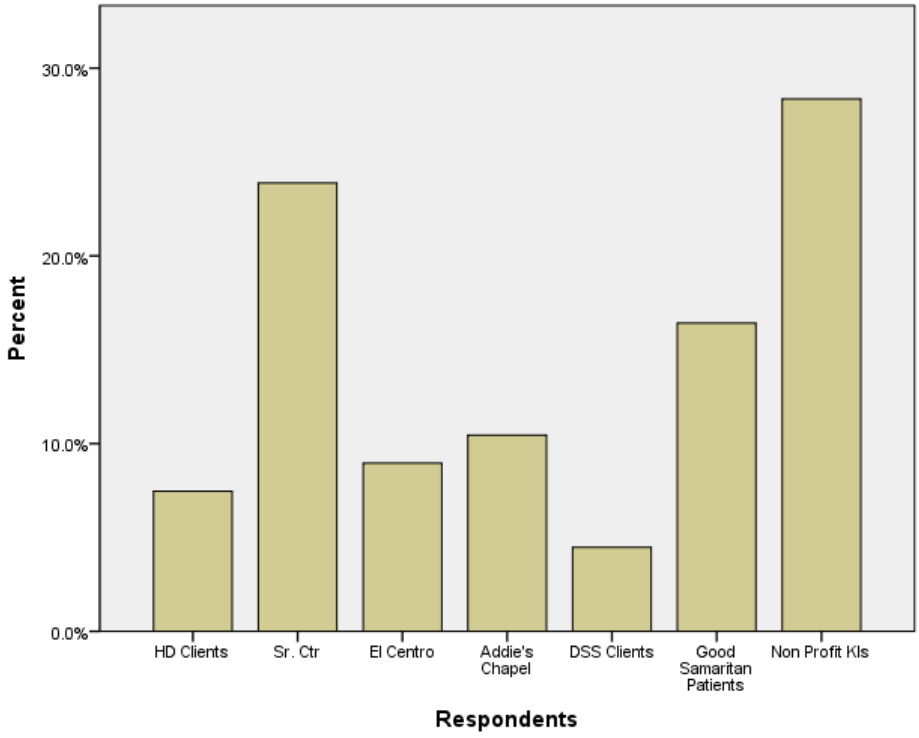


Exhibit 3:

Resident

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than ten years	15	22.4	22.4	22.4
	More than ten years	47	70.1	70.1	92.5
	Not a resident but own a home here	1	1.5	1.5	94.0
	Not a resident	4	6.0	6.0	100.0
	Total	67	100.0	100.0	

Exhibit 4:

Community

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Glenwood	8	11.9	12.1	12.1
	Marion	25	37.3	37.9	50.0
	West Marion	8	11.9	12.1	62.1
	Nebo	12	17.9	18.2	80.3
	Old Fort	2	3.0	3.0	83.3
	Pleasant Gardens	3	4.5	4.5	87.9
	Other	8	11.9	12.1	100.0
	Total	66	98.5	100.0	
Missing	System	1	1.5		
Total		67	100.0		

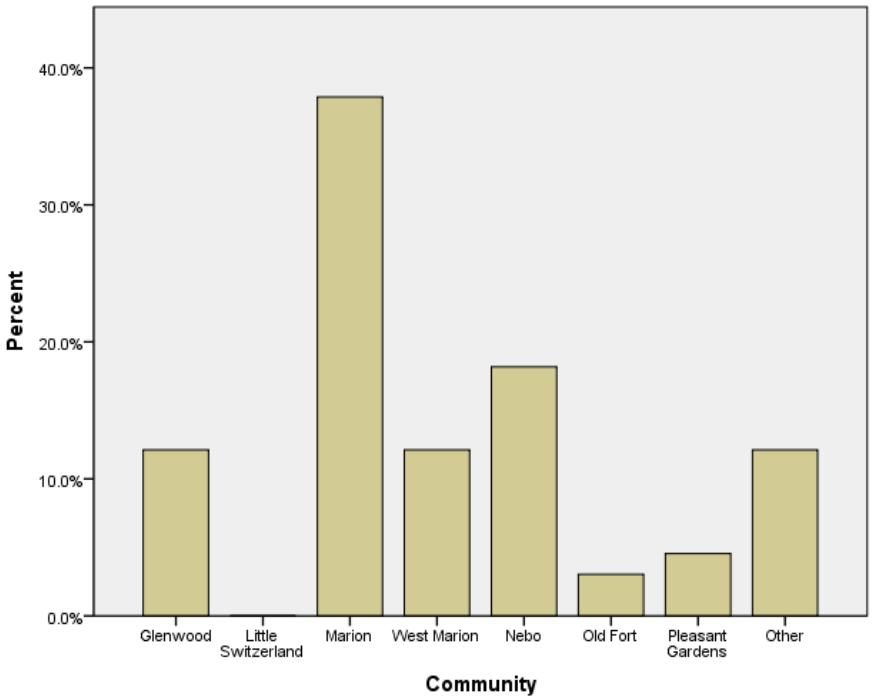


Exhibit 5:

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
SurveyType	67	1	2	1.28	.454
Respondents	67	1	7	4.43	2.203
Resident	67	1	4	1.91	.690
Community	66	1	8	4.12	2.042
Age	67	20	95	55.27	16.745
Gender	67	1	2	1.67	.473
Hisp_Lat	67	1	2	1.90	.308
Race	66	1	8	1.48	1.460
MaritalStat	64	1	6	1.94	1.332
No.Children	64	0	3	.56	.871
Education	64	3	6	5.05	.933
Employment	63	1	8	4.06	2.799
Income	60	1	9	4.75	2.772
OtherLang	62	1	2	1.89	.319
Valid N (listwise)	55				

Exhibit 6:

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	22	32.8	32.8	32.8
	Female	45	67.2	67.2	100.0
	Total	67	100.0	100.0	

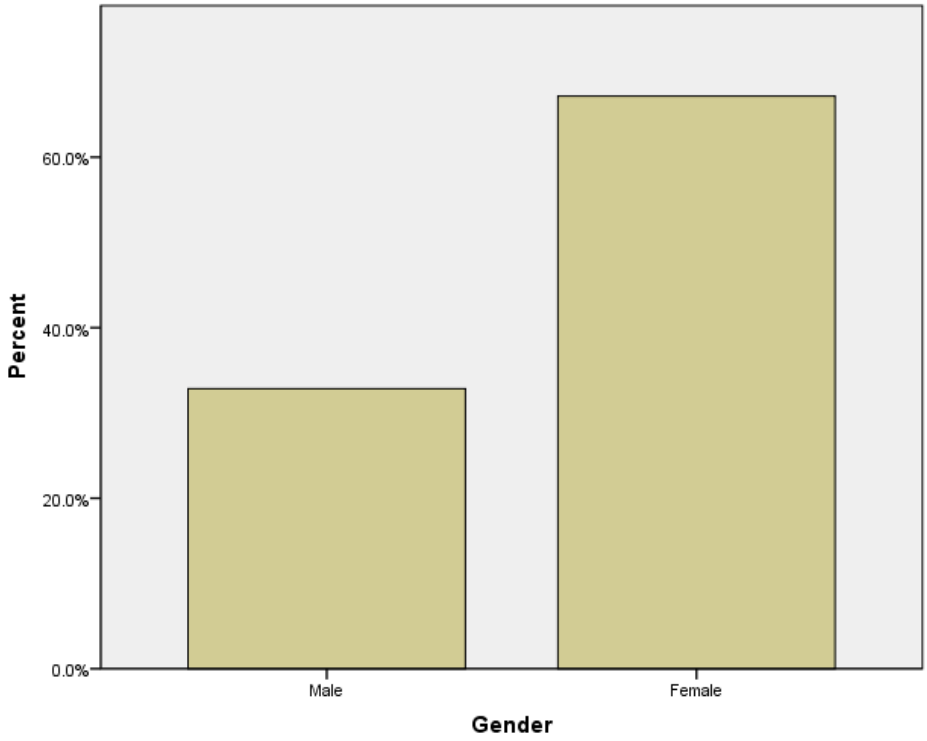


Exhibit 7:

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	White	54	80.6	81.8	81.8
	Black or African American	8	11.9	12.1	93.9
	Other	1	1.5	1.5	95.5
	No Additional Choices	2	3.0	3.0	98.5
	Don't Know/ Not Sure	1	1.5	1.5	100.0
	Total	66	98.5	100.0	
Missing	System	1	1.5		
Total		67	100.0		

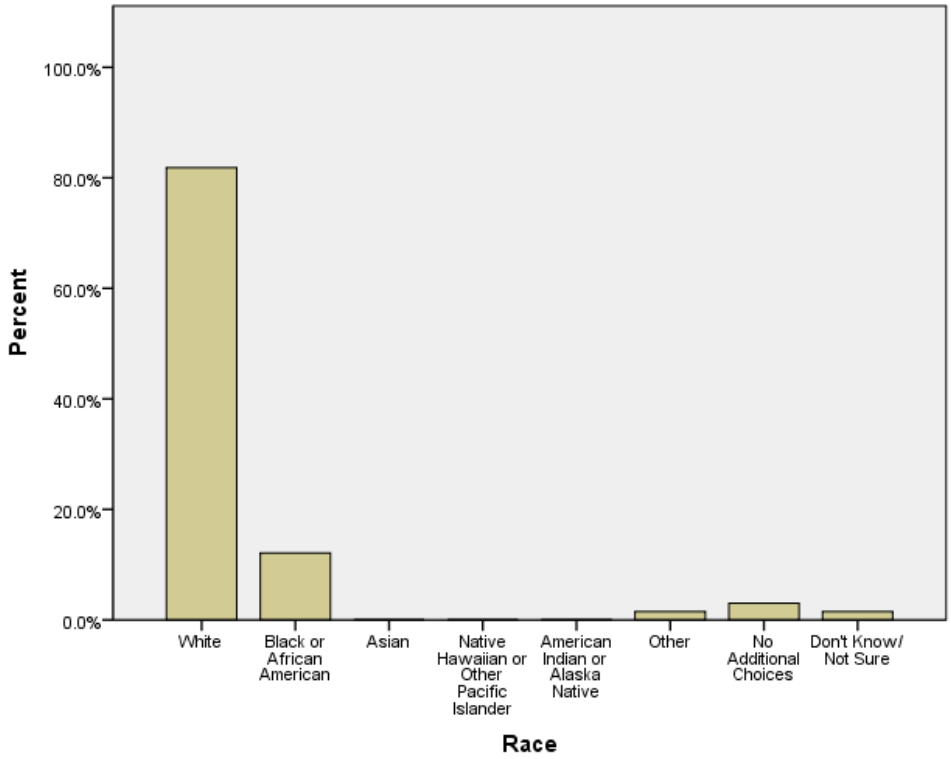


Exhibit 8:

Hisp_Lat

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	7	10.4	10.4	10.4
	No	60	89.6	89.6	100.0
	Total	67	100.0	100.0	

Exhibit 9:

MaritalStat

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Married	36	53.7	56.3	56.3
	Divorced	10	14.9	15.6	71.9
	Widowed	11	16.4	17.2	89.1
	Separated	1	1.5	1.6	90.6
	Never Married	5	7.5	7.8	98.4
	A Member of an Unmarried Couple	1	1.5	1.6	100.0
	Total	64	95.5	100.0	
Missing	System	3	4.5		
Total		67	100.0		

Exhibit 10:

No.Children

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	41	61.2	64.1	64.1
	1	13	19.4	20.3	84.4
	2	7	10.4	10.9	95.3
	3	3	4.5	4.7	100.0
	Total	64	95.5	100.0	
Missing	System	3	4.5		
Total		67	100.0		

Exhibit 11:

Employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed for wages	23	34.3	36.5	36.5
	Self-employed	2	3.0	3.2	39.7
	Out of work for more than 1 year	8	11.9	12.7	52.4
	Out of work for less than 1 year	1	1.5	1.6	54.0
	A Homemaker	2	3.0	3.2	57.1
	A Student	2	3.0	3.2	60.3
	Retired	21	31.3	33.3	93.7
	Unable to Work	4	6.0	6.3	100.0
	Total	63	94.0	100.0	
Missing	System	4	6.0		
Total		67	100.0		

Exhibit 12:

Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than $10,000	11	16.4	18.3	18.3
	Less than $15,000 ($10,000 to less than $15,000)	8	11.9	13.3	31.7
	Less than $20,000 ($15,000 to less than $20,000)	3	4.5	5.0	36.7
	Less than $25,000 ($20,000 to less than $25,000)	5	7.5	8.3	45.0
	Less than $35,000 ($25,000 to less than $35,000)	9	13.4	15.0	60.0
	Less than $50,000 ($35,000 to less than $50,000)	4	6.0	6.7	66.7
	Less than $75,000 ($50,000 to less than $75,000)	4	6.0	6.7	73.3
	$75,000 or more	12	17.9	20.0	93.3
	Don't Know/ Not Sure	4	6.0	6.7	100.0
	Total	60	89.6	100.0	
Missing	System	7	10.4		
Total		67	100.0		

APPENDIX D

Community Health Forum Notes and Goals September 2012
McDowell Health Coalition & Corpening YMCA

Obesity/Diabetes

I. **Policy Change**

a.) Update and increase awareness of joint-use agreement in school system

b.) Advocate for local food system council/policy

c.) Local farm to school program – increase local produce in schools
d.) Get EBT/SNAP access in farmers markets/tailgate market
e.) Increase PE time in schools – design more structured physical activity time either in the classroom or during the school day, or structured recess

II. Increase Program Capacity

a.) More youth programing for obesity and physical activity, revamp Energize program
b.) Increase employee wellness opportunities, cash incentives for healthy lifestyles
c.) Increase support and resources for parents who need access to low-cost, healthy activities for children and families
d.) Need education classes/programs in Spanish for Hispanic population
e.) Need to reach out to the faith community to get a bigger family impact
f.) Promote local swim teams, youth sports, etc – make more accessible and easy to ask for financial assistance so it's not a pride issue (maybe an automatic voucher or something if you qualify so there is no shame involved in asking)
g.) Increase focus on the "new mom" population – increase breastfeeding, WIC resources to expecting parents, and increase nutrition education for the infant-age 5 population
h.) Increase capacity for YMCA's Diabetes Prevention Program for adults
i.) Increase funding for translation and interpretation through Centro Unido

III. Building Connectivity & Awareness

a.) Need transportation - Increase relationships/partnerships with local resources to create some access for on-demand transport, utilize local school, church, DSS, and Y buses together
b.) More connection to resources already available in community, central location for info – maybe 211 or government channel? Grocery stores? Employers?
c.) Need more focus on seniors - lack of technology, how do we connect them?
d.) Increase signage at local parks and outdoor opportunities for physical activity

Substance Abuse

The top 2 goals for SA are: A Focus of Family as a System and Prevention through Education
To summarize the discussion, the community feels like treatment should not just be about the individual but the family as a whole due to the complex environmental issues and influences that may not be addressed otherwise. Also Prevention should be a primary goal for the community by raising awareness and education to everyone, these were the ones identified specifically (physicians, employers, schools, parents, pharmacies, children/adolescents).
Enforcement is another critical topic that was largely discussed, how do we consistently enforce? Some other comments include: infants born with addictions, pain management leading to dependence, other factors such as (neglect, abuse, domestic violence) that may increase risk, do we have effective treatment options, we should look at new approaches to education and awareness, we have a mindset that a pill is needed for everything, how can we best utilize law enforcement, how can we recognize and intervene, let's not forget the workforce populations (example

employers needing treatment options for employees), and crime prevention has a strong correlation.
Resources identified are:
211, AA/NA, Pill Drops, Families Together/ JJTC, Smoky Mountain Center LME/MCO Access, Rescare, McLeod Center, Crossroads Recovery, RHA, ARP Phoenix, Drug Court (state funding lost), JCPC funds, Teen Afterschool Program (YMCA), Community Care of Western NC, Project Lazarus, Reclaiming Futures Grant, DSS Child and family teams, A Caring Alternative Community Collaborative, Big Brother/ Sister, DJJ, McDowell County Drug Task Forces

Teen Pregnancy

Goals:
Community Awareness/Action and Reproductive Health Services
More Parent and Teen involvement
Causal Factors:

1. Media impact: Fad, Celebrities, Music, Movies, "Teen Moms" sensationalism

2. Boredom: Lack of opportunity to be more social/active in the community.
*Work with Y, schools, churches and communities to promote more social opportunities.
3. Love and Acceptance: Lack of support system, low self-esteem.
*No consequences for bad choices
*Grandparents (other family) raising children for them
*Financial burden
4. Sexual Awareness: Need to understand that sexuality is completely natural and part of our biology. Better understanding of how hormones affect us.
5. Need for Immediate or Self Gratification.
6. Lack of Parenting skills. Teen's parents lack the skills to communicate and educate them.

Access to Care

No new factors identified.
Continuing growth of uninsured and underinsured in the county.
Work to continue to serve the increasing number of uninsured through existing channels and increase the capabilities of other agencies/organizations to assist.
Continue to look forward to potential health care reform changes and be as prepared as possible to react as needed.

Social Determinates of Health

Top Three:
Substandard Housing – suggestion: start in Marion and get some minimal housing codes established
Transportation – need it! If can't get government to do anything what about a community driven initiative. Would the churches get on board?
Education- that will bring employment

Community Health On-line Survey – McDowell County Responses

1. How would you rate your county on the following issues related to healthcare as they relate to people in your county?

Affordable Healthcare
Quality of Healthcare
Convenience of Healthcare Locations
Convenience of Healthcare Office Hours
Access to Healthcare for Uninsured and Underinsured
Excellent
2.2% (4)
7.2% (13)
11.1% (20)
6.1% (11)
1.1% (2)
Very Good
7.8% (14)
16.7% (30)
25.6% (46)
19.4% (35)
7.2% (13)
Good
39.4% (71)
51.1% (92)
52.8% (95)
55.6% (100)
32.8% (59)
Not Very Good
38.9% (70)
21.1% (38)
7.8% (14)
16.1% (29)
26.7% (48)
Poor
11.7% (21)
3.9% (7)
2.8% (5)
2.8% (5)
32.2% (58)

Rating	**Response Average**	**Count**
3.50		180
2.98		180
2.66		180
2.90		180
3.82		180

answered question 180
skipped question 0

1 of 12

2. How satisfied are you with the following in your county?

Recreation Areas (Greenways, Walking Paths)
Recreational Facilities (Gyms, Pools)
Safe and Accessible Sidewalks
Bike Paths and Bike Lanes
Health and Wellness Support In Your Faith Community
Health Education in Schools
Wellness Education Programs
Local Hospital

Local Public Health Department
Very Satisfied
28.3% (51)
23.3% (42)
13.9% (25)
5.0% (9)
13.3% (24)
8.3% (15)
8.9% (16)
11.1% (20)
22.2% (40)
Somewhat Satisfied
48.9% (88)
38.3% (69)
46.1% (83)
17.8% (32)
30.6% (55)
28.3% (51)
40.0% (72)
35.6% (64)
35.6% (64)
No Opinion
7.2% (13)
7.2% (13)
8.9% (16)
24.4% (44)
28.9% (52)
26.7% (48)
20.0% (36)
9.4% (17)
26.7% (48)
Somewhat Dissatisfied
10.6% (19)
22.2% (40)
22.8% (41)
25.6% (46)
17.2% (31)
21.7% (39)
18.9% (34)
23.3% (42)
9.4% (17)
Very Dissatisfied
5.0% (9)
8.9% (16)
8.3% (15)
27.2% (49)
10.0% (18)
15.0% (27)
12.2% (22)
20.6% (37)
6.1% (11)

Rating	Response Average Count
2.15	180
2.55	180
2.66	180
3.52	180
2.80	180
3.07	180
2.86	180

3.07 180
2.42 180
answered question 180
skipped question 0
2 of 12

3. Overall, how would you rate the availability of affordable housing in your community? Would you say:

Response Percent
Response Count
Excellent
0.6%
1
Very Good
2.8%
5
Good
17.8%
32
Fair
28.3%
51
Poor
32.2%
58
Don't Know / Not Sure
18.3%
33
answered question
180
skipped question
0
3 of 12

4. Please rate each of the following health issues as they relate to people in your county:

Lack of physical activity or exercise
Poor eating habits / lack of good nutrition
Obesity
Alcohol abuse / alcoholism among adults (18 or older)
Alcohol abuse / alcoholism among children (17 and younger)
Drug abuse among adults (18 or older)
Drug abuse among children (17 and younger)
Methamphetamine (Meth) use
Prescription drug abuse
Mental illness or emotional issues among adults (18 or older)
Mental illness or emotional issues among children (17 and younger)
Depression
Not a Problem
1.1% (2)
0.0% (0)
0.0% (0)
0.6% (1)
3.3% (6)
0.0% (0)
0.6% (1)
0.0% (0)
0.0% (0)
0.6% (1)
0.6% (1)

0.6% (1)
Minor Problem
8.9% (16)
4.4% (8)
3.3% (6)
6.7% (12)
10.6% (19)
4.4% (8)
8.9% (16)
5.6% (10)
7.2% (13)
5.0% (9)
8.9% (16)
12.2% (22)
No Opinion
4.4% (8)
2.2% (4)
3.9% (7)
19.4% (35)
33.9% (61)
8.3% (15)
20.0% (36)
7.8% (14)
11.1% (20)
16.1% (29)
24.4% (44)
17.2% (31)
Moderate Problem
33.3% (60)
31.7% (57)
27.2% (49)
42.2% (76)
35.6% (64)
32.8% (59)
41.7% (75)
29.4% (53)
26.7% (48)
38.9% (70)
40.0% (72)
40.0% (72)
Major Problem
52.2% (94)
61.7% (111)
65.6% (118)
31.1% (56)
16.7% (30)
54.4% (98)
28.9% (52)
57.2% (103)
55.0% (99)
39.4% (71)
26.1% (47)
30.0% (54)

Rating	Response Average	Count
4.27		180
4.51		180
4.55		180
3.97		180
3.52		180

4.37 180
3.89 180
4.38 180
4.29 180
4.12 180
3.82 180
3.87 180
4 of 12
Stress
0.0% (0)
8.9% (16)
13.9% (25)
41.1% (74)
36.1% (65) 4.04 180
Suicide among adults
Suicide among youth
Sexual Assault / Rape
Abuse or neglect of senior citizens
Y outh violence
HIV / AIDS
T een pregnancy
T obacco use amongadults
Tobacco use among children 17 and younger
Tobacco use in workplaces
Cigarette smoking in restaurants
Diabetes
Heart disease
Cancer
4.4% (8)
5.6% (10)
1.7% (3)
4.4% (8)
3.3% (6)
5.6% (10)
0.6% (1)
1.7% (3)
1.1% (2)
15.0% (27)
48.3% (87)
1.1% (2)
0.6% (1)
0.6% (1)
21.1% (38)
24.4% (44)
21.1% (38)
20.0% (36)
23.9% (43)
27.2% (49)
10.0% (18)
5.0% (9)
8.3% (15)
23.3% (42)
20.0% (36)
5.6% (10)
6.7% (12)
5.0% (9)
38.9% (70)
47.2% (85)
30.0% (54)

23.3% (42)
30.6% (55)
51.1% (92)
15.6% (28)
6.7% (12)
14.4% (26)
22.2% (40)
17.8% (32)
11.1% (20)
11.7% (21)
13.3% (24)
28.3% (51)
17.2% (31)
35.6% (64)
40.0% (72)
31.1% (56)
13.3% (24)
37.2% (67)
29.4% (53)
35.6% (64)
23.9% (43)
8.9% (16)
36.7% (66)
37.2% (67)
32.8% (59)

7.2% (13)	3.13	180
5.6% (10)	2.93	180
11.7% (21)	3.34	180
12.2% (22)	3.36	180
11.1% (20)	3.23	180
2.8% (5)	2.81	180
36.7% (66)	3.99	180
57.2% (103)	4.36	180
40.6% (73)	4.06	180
15.6% (28)	3.02	180
5.0% (9)	2.02	180
45.6% (82)	4.20	180
43.9% (79)	4.17	180
48.3% (87)	4.23	180
answered question		**180**
skipped question		**0**

5 of 12

5. Please state any other health issue(s) not listed above that you feel is a top issue facing your county:

Response Count
40
answered question
40
skipped question
140

6. I believe it is important for UNIVERSITIES and COLLEGES to be 100% tobacco free

Response Percent
Response Count
Strongly Agree
58.9%
106
Agree

22.8%
41
Neither Agree nor Disagree
7.8%
14
Disagree
8.3%
15
Strongly Disagree
1.7%
3
Don't Know / Not Sure
0.6%
1
answered question
180
skipped question
0
6 of 12

7. I believe it is important for PARKS and PUBLIC WALKING and BIKING TRAILS to be 100% tobacco free.

Response Percent
Response Count
Strongly Agree
63.3%
114
Agree
20.6%
37
Neither Agree nor Disagree
6.1%
11
Disagree
7.2%
13
Strongly Disagree
2.8%
5
Don't Know / Not Sure
0.0%
0
answered question
180
skipped question
0
7 of 12

8. I believe it is important for ALL PUBLIC PLACES to be 100% tobacco free.

Strongly Agree
Agree
Neither Agree nor Disagree
Disagree
Strongly Disagree
Don't Know / Not Sure

9. Which county do you live?

Rutherford
Polk
McDowell
Response Response Percent Count

61.1% 110
19.4% 35
6.7% 12
8.3% 15
4.4% 8
0.0% 0
answered question 180
skipped question 0
Response Response Percent Count
0.0% 0
0.0% 0
100.0% 180
answered question 180
skipped question 0
8 of 12

10. I am:

Response Percent
Response Count
Male
25.6%
46
Female
74.4%
134
answered question
180
skipped question
0

11. What is your age range?

Response Percent
Response Count
18-34
13.9%
25
35-54
46.7%
84
55-74
34.4%
62
75+
5.0%
9
answered question
180
skipped question
0
9 of 12

12. Are you Hispanic or Latino?

Response Percent
Response Count
Yes
1.7%
3
No
98.3%
177
Don't Know / Not Sure

0.0%
0
answered question
180
skipped question
0
10 of 12

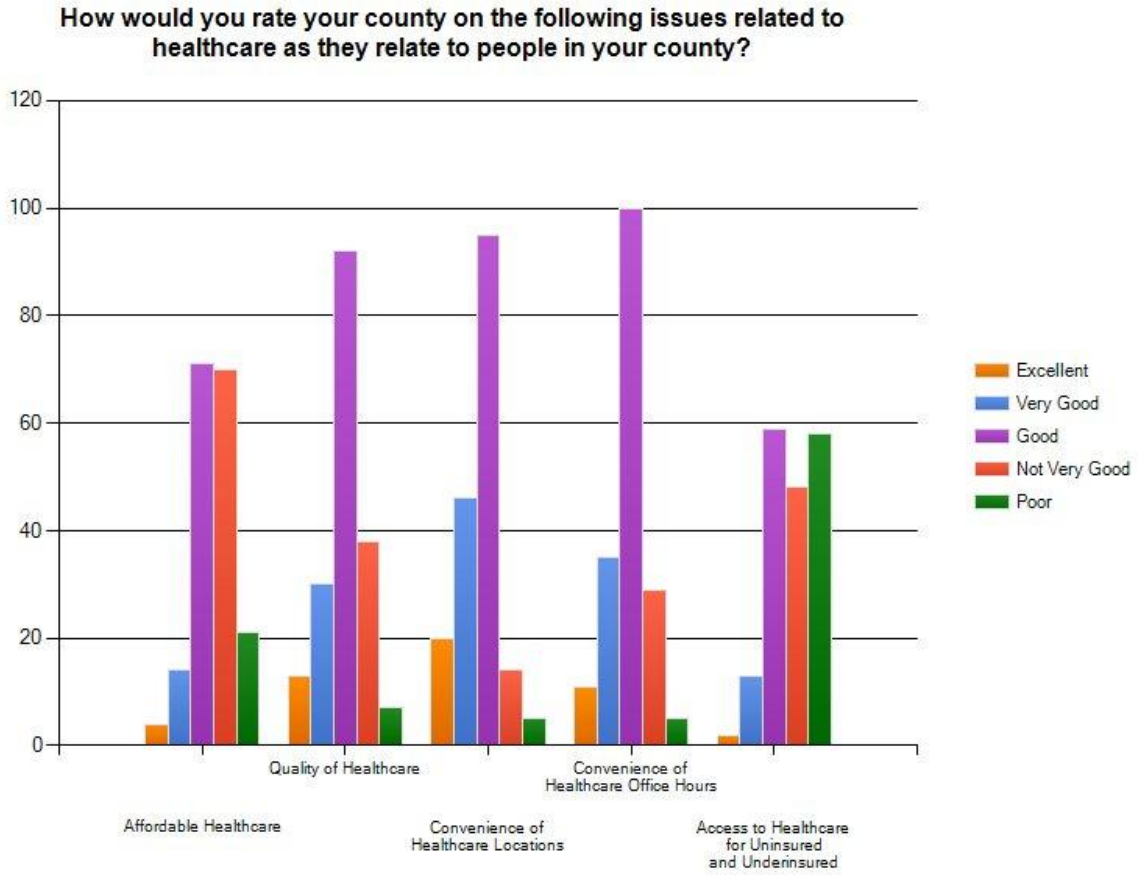
13. Which one or more of the following would you say is your race?

Response Percent
Response Count
White
96.1%
171
Black or African American
2.2%
4
Asian
0.0%
0
Native Hawaiian or Other Pacific Islander
0.0%
0
American Indian or Alaska Native
0.6%
1
Other
1.1%
2
No additional choices
0.6%
1
Don't Know / Not Sure
0.0%
0
answered question
178
skipped question
2
11 of 12

14. Are you currently.... ?

Response Percent
Response Count
Employed for wages
78.9%
142
Self-employed
2.8%
5
Out of work for more than 1 year
1.1%
2
Out of work for less than 1 year
0.6%
1
A homemaker
1.1%
2
A student

1.7%
3
Retired
14.4%
26
Unable to work
2.2%
4
answered question
180
skipped question
0
12 of 12



More Information about the RPMHD Online Community Health Survey can be accessed on line at: www.rpmhd.org/images/forms/1000/1120/cha/2012/2012

APPENDIX E – HEALTH RESOURCE INVENTORY

2-1-1 is an information and referral service that links people to community health and human services. Resources are available through pone (Free, confidential, 24/7) and the web. WNC Healthy Impact requested information on health-specific resources currently listed in the 2-1-1 data base for WNC Counties, as 2-1-1 maintains a comprehensive database of community resources. Note that this is a point-in-time summary list and greater details on these services can be accessed by calling 2-1-1 to speak to a trained staff person or visiting www.NC211.org.

Health-Related Directory Information

Provider	Provider Website Address	Service Code Description
Adolescent Pregnancy Prevention, YWCA of Asheville and WNC	www.ywcaofasheville.org	Teen Pregnancy Prevention
Adult and Youth Education, American Cancer Society - Western North Carolina	www.cancer.org	Disease/Disability Information
Adult Day Activity Center, Irene Wortham Center	www.iwcnc.org	Developmental Disabilities Day Habilitation Programs
Advanced Home Care - Western North Carolina	www.advhomecare.org	Medical Equipment/Supplies CVP Lines Intravenous Medication
Ambulatory Care, Charles George Veterans Affairs Medical Center	www.asheville.va.gov	Hospitals
American Cancer Society - Asheville	www.cancer.org	Health Care Referrals Disease/Disability Information
Apheresis/Platelets Donations, American Red Cross - Buncombe County	www.redcrosswnc.org	Blood Supply Services
Arts Expression, Goodwill Industries of Northwest NC - WNC	www.goodwillnwnc.org	Developmental Disabilities Day Habilitation Programs
Asheville-Buncombe Institute of Parity Achievement(10390)	www.abipa.org	Blood Pressure Screening BMI/Body Composition Screening Cancer Detection Diabetes Screening
Asheville Lions Eye Clinic		Glaucoma Screening Glasses/Contact Lenses Vision Screening
Asheville Pregnancy Support Services	www.preginfo.org	Diagnostic Imaging/Radiology Pro-Life Counseling Pregnancy Testing
Asheville TEACCH Center Western Region	www.teacch.com	Autism Therapy
Blood Donations, American Red Cross - Buncombe County	www.redcrosswnc.org	Blood Supply Services
Blood Pressure Screening, American Red Cross - Buncombe County	www.redcrosswnc.org	Blood Pressure Screening

Blue Ridge Group Homes	www.blueridgegrouphomes.org	Developmental Disabilities Day Habilitation Programs
Bone Density Screening for Women, Mission Hospitals	www.cancer.mission-health.org/events/detail/bone-density-screening	Bone Mineral Density Tests
Breast and Cervical Cancer Control Program, Buncombe County Department of Health	www.buncombecounty.org/governing/depts/health	Cancer Detection
Burton Street Recreational Center, Asheville Parks Recreation and Cultural Arts Department	www.ashevillenc.gov/Departments/ParksRecreation.aspx	Therapeutic Exercise
Cancer Connection, Mission Hospitals	www.cancer.mission-health.org	Disease/Disability Information
Cancer Response System, American Cancer Society - Western North Carolina	www.cancer.org	Disease/Disability Information
CarePartners Home Health Services, CarePartners Health Services	www.carepartners.org	Occupational Therapy Physical Therapy Speech and Language Pathology Home Nursing
CarePartners Hospice and Palliative Care, CarePartners Health Services	www.carepartners.org	Hospice Care Palliative Care
CarePartners Orthotics and Prosthetics, CarePartners Health Services	www.carepartners.org	Mobility Aids Amputee Rehabilitation
CarePartners Outpatient Rehabilitation Services, CarePartners Health Services	www.carepartners.org	Occupational Therapy Physical Therapy Speech and Language Pathology Therapeutic Exercise
CarePartners Private Duty Services, CarePartners Health Services	www.carepartners.org	Home Health Aide Services
CarePartners Rehabilitation Hospital, CarePartners Health services	www.carepartners.org	Amputee Rehabilitation Spinal Cord Rehabilitation Stroke Rehabilitation Inpatient Rehabilitation Occupational Therapy Physical Therapy Speech and Language Pathology Incontinence Management Programs Spasticity Management Clinics
CarePartners Work Smart Program, CarePartners Health Services	www.carepartners.org	Ergonomic Evaluations
Center for Disordered Eating, Treatment, Healing, and Education Center for Disordered Eating	www.thecenternc.org	Physician Referrals Disease/Disability Information
Children's Developmental Services - Buncombe County	www.beearly.nc.gov	Developmental Assessment Early Intervention for Children with Disabilities/Delays
Community Alternatives Program for Children, Families Together	www.familiestogether.net	Long Term Home Health Care

Community Alternatives Program for Disabled Adults, Families Together	www.familiestogether.net	Long Term Home Health Care
Community Living Center, Charles George Veterans Affairs Medical Center	www.asheville.va.gov	Hospitals Home Nursing
Community Residential Care, Charles George Veterans Affairs Medical Center	www.asheville.va.gov	Hospitals
CRC, DisAbility Partners - Western North Carolina	http://www.crclandofsky.org/	Aging and Disability Resource Centers Long Term Care Options Counseling
CRC, Western Highlands Network	www.crclandofsky.org	Aging and Disability Resource Centers Long Term Care Options Counseling
Deaf/Blind Services Program, NC Division of Services for the Blind - Asheville	www.dhhs.state.nc.us/dsb	Independent Living Skills Instruction
Dental Clinic, Western North Carolina Community Health Services	www.wncchs.org	General Dentistry Pediatric Dentistry
Dental Extraction Clinic, Asheville-Buncombe Community Christian Ministry (ABCCM)	www.abccm.org	General Dentistry
Dental Health Center, Mountain Area Health Education Center	www.mahec.net	Dental Hygiene General Dentistry
Dental Programs, Asheville-Buncombe Technical Community College	www.abtech.edu	Dental Hygiene General Dentistry
Diabetes Center, Mission Hospitals	www.mission-health.org/centers-and-services/support-services/chronic-medical-conditions/my-healthy-life-diabetes-management	Disease/Disability Information Diabetes Management Clinics
Diabetes Wellness Program, YWCA of Asheville and WNC	www.ywcaofasheville.org	Wellness Programs
Disability Partners - Sylva	www.disabilitypartners.org	Independent Living Skills Instruction
Discount Drug Cards, Buncombe County Government	www.coast2coastrx.com/buncombenc/	Prescription Medication Services
Driver Evaluation, CarePartners Health Services	www.carepartners.org	Driving Evaluation
East Buncombe, Saint Vincent de Paul Society - Buncombe County	www.financialhelpresources.com/details/saint_vincent_de_paul_society_buncombe_county.html	Medical Care Expense Assistance
Easter Seals UCP - Western North Carolina	www.nc.eastersealsucp.com	Developmental Disabilities Day Habilitation Programs
Eliada Academy Day Treatment, Eliada Homes	www.eliada.org	Developmental Disabilities Day Habilitation Programs
Emergency Assistance, Salvation Army - Buncombe County	http://www.salvationarmycarolinas.org/commands/asheville	Prescription Expense Assistance
Emergency Department, Charles George Veterans Medical Center	www.asheville.va.gov	Hospitals

Emergency Department, Mission Hospital	www.mission-health.org/contact/maps-directions/main-campuses-services/emergency-department	Emergency Room Care
Expanded Food and Nutrition Program, NC Cooperative Extension - Buncombe County	http://buncombe.ces.ncsu.edu/	Nutrition Education
Family Planning, Buncombe County Department of Health	www.buncombecounty.org/governing/depts/health/family.htm	Birth Control Pregnancy Testing
Flu Hotline, Buncombe County Department of Health	www.buncombecounty.org	Disease/Disability Information
Fullerton Genetics Center, Mission Hospitals	www.mission-health.org/centers-and-services/programs-service/genetics/fullerton-genetics-center	Developmental Assessment Genetic Counseling
Geriatric Programs, Mission Hospital	www.mission-health.org/centers-and-services/support-services/senior-services/geriatric-specialists	Geriatric Medicine
Geriatrics and Extended Care, Charles George Veterans Affairs Medical Center	www.va.gov/geriatrics/guide/LongTermCare/Medical_Foster_Homes.asp	Hospitals
Health and Safety Services, American Red Cross - Buncombe County	www.redcrosswnc.org	Disease/Disability Information First Aid Instruction
Health Check Coordination, Community Care of Western North Carolina	www.communitycarewnc.org	Health Insurance/Dental Coverage
Health Education, YWCA of Asheville and WNC	www.ywcaofasheville.org	Disease/Disability Information
Health Initiatives, One Youth at a Time		General Sexuality/Reproductive Health Education
HealthNet, Community Care of Western North Carolina	www.communitycarewnc.org	Prescription Expense Assistance
Health Promotion, Buncombe County Department of Health	www.buncombecounty.org/Governing/Depts/Health/HealthPromotion.aspx	General Health Education Programs
Healthy Living Program, Women's Wellbeing and Development Foundation	www.wwd-f.org	Nutrition Education
Heart Path, Mission Hospitals	http://heart.mission-health.org/heart-programs/heart-path-rehabilitation	Cardiac Rehabilitation Pulmonary Rehabilitation
Helios Warriors	www.helioswarriors.org	Alternative Medicine
HIV/AIDS and Hepatitis C Outreach/Educational Services, Western North Carolina AIDS Project	www.wncap.org	AIDS/HIV Prevention Counseling
HIV Specialty Care, Western North Carolina Community Health Services	www.wncchs.org	HIV Testing AIDS/HIV Clinics
Home Based Primary Care, Charles George Veterans Affairs Medical Center	www.va.gov/GERIATRICS/Guide/LongTermCare/Home_and_Community_Based_Services.asp	Home Health Aide Services
Hospitalization, Charles George Veterans Affairs Medical Center	www.asheville.va.gov	Hospitals
Immunization Clinic, Buncombe County Department of Health	www.buncombecounty.org/governing/depts/health	Adolescent/Adult Immunizations Childhood Immunizations Flu Vaccines

Independent Living Program, NC Division of Services for the Blind - Asheville	www.dhhs.state.nc.us/dsb	Independent Living Skills Instruction
Independent Living Skills Training, DisAbility Partners - Western North Carolina	www.disabilitypartners.org	Independent Living Skills Instruction
In-Home Aide Services, The Council on Aging of Buncombe County	www.coabc.org	Home Health Aide Services
Laboratory Services, Buncombe County Department of Health	www.buncombecounty.org/governing/depts/health	General Laboratory Tests
La Leche League of Asheville, La Leche League International	www.lllofnc.org	Breastfeeding Support Programs
Lewis Rathbun Center	www.rathbuncenter.org	Patient/Family Housing
Licensed Nursing Homes and Adult Care Homes Guide, Land-of-Sky Area Agency on Aging	www.landofsky.org/aging/a_ltcdir.html	Nursing Facilities
Lifeshare of the Carolinas	www.lifesharecarolinas.org	Organ and Tissue Banks Organ/Tissue Transplant Education Programs
Living Healthy Chronic Disease Self Management Program, Land-of-Sky Regional Council	www.ncdhhs.gov/aging/livinghealthy/livinghealthy.htm	Chronic Disease Self Management Programs
Loan/Gift Items, American Cancer Society - Western North Carolina	www.cancer.org	Medical Equipment/Supplies
Look Good...Feel Better, American Cancer Society - Western North Carolina	www.cancer.org	Appearance Enhancement Consultation Programs
Low Vision Center, Mission Hospitals	www.mission-health.org/centers-and-services/support-services/rehabilitation-therapy/occupational-therapy/low-vision-services	Eye Care
Main Ministry, Swannanoa Valley Christian Ministry	www.svcministry.org	Medical Care Expense Assistance Prescription Expense Assistance
MANNA Packs for Kids Program, MANNA FoodBank	www.mannafoodbank.org	Nutrition Education
March of Dimes-Pisgah Division	www.marchofdimes.com	Disease/Disability Information
Medical Assistance Counseling, Mission Hospitals	www.mission-health.org/patients-and-visitors/when-you-get-home/financial-assistance	Health Insurance Information/Counseling Medical Care Expense Assistance
Medical Assistance for Children, Eblen Charities	www.eblencharities.org	Medical Equipment/Supplies Medical Care Expense Assistance Prescription Expense Assistance

Medical Assistance/Illness or Disability, Eblen-Kimmel Charities	www.eblencharities.org	Vision Screening Glasses/Contact Lenses Medical Equipment/Supplies Medical Care Expense Assistance Prescription Expense Assistance
Medical Equipment Closet, Asheville-Buncombe Community Christian Ministry (ABCCM)	www.abccm.org	Medical Equipment/Supplies
Medical Equipment Loan Closet, American Red Cross - Buncombe County	www.redcrosswnc.org	Medical Equipment/Supplies
Medical Eye Care Program - NC Division of Services for the Blind - Western Regional	www.dhhs.state.nc.us/dsb	Medical Care Expense Assistance Prescription Expense Assistance
Medical Ministry, Asheville-Buncombe Community Christian Ministry (ABCCM)	www.abccm.org	Prescription Expense Assistance General Pharmacies Prescription Medication Services Community Clinics
Medicare Hotline, Social Security Administration - Buncombe County	www.ssa.gov	Health Insurance Information/Counseling
Medication Assistance Program, Mission Hospitals	www.mission-health.org/careers/staff-pharmacists/pharmacy-residency-programs/pgy1-program-ambulatory-care-setting/medication-assistance-program-map	Prescription Expense Assistance Prescription Medication Services
MemoryCare Services, MemoryCare	www.memorycare.org	Memory Screening Dementia Management Geriatric Medicine Neuropsychiatry/ Neuropsychology
Memory Loss Education, MemoryCare	www.memorycare.org	Disease/Disability Information
Mission Children's Hospital, Mission Hospitals	www.missionchildrens.org	Hospitals
Mountain Area Family Health Center, Mountain Area Health Education Center	www.mahec.net	Well Baby Care Pregnancy Testing Postpartum Care Prenatal Care Community Clinics Family and Community Medicine Geriatric Medicine General Obstetrics Adolescent Medicine Ambulatory Pediatrics

Mountain Area Women's Center, Mountain Area Health Education Center	www.mahec.net	Pregnancy Testing Midwifery Postpartum Care Prenatal Care Teen Pregnancy Prevention Women's Health Centers General Obstetrics Gynecology Services Maternal and Fetal Medicine
NC Department of Insurance Western Regional Office	www.ncdoi.com	Health Insurance Information/Counseling
North Carolina Pregnancy Exposure Risk Line, Mission Hospital	http://womens.mission-health.org/maternity-services	Disease/Disability Information Teratogenic Counseling
Nurse Family Partnership - Buncombe	www.buncombecounty.org/Governing/Depts/Health/nfp.aspx	Neonatal Care Postpartum Care Prenatal Care
Nutrition/Food/Wellness Education, NC Cooperative Extension - Buncombe County	http://buncombe.ces.ncsu.edu/	Nutrition Education
Nutrition Program/ WIC Program, Buncombe County Department of Health	http://www.buncombecounty.org/Governing/Depts/Health/Nutrition.aspx	Breastfeeding Support Programs Nutrition Education
Nutrition Therapy Services, Mission Hospitals	www.missionhospitals.org	Nutrition Assessment Services Weight Management
Outpatient Care, Charles George Veterans Affairs Medical Center	www.asheville.va.gov	Hospitals
Outpatient Clinic East, CarePartners Health Services	www.carepartners.org	Occupational Therapy Physical Therapy Speech and Language Pathology
Outpatient Clinic North, CarePartners Health Services	www.carepartners.org	Occupational Therapy Physical Therapy Speech and Language Pathology
Outpatient Clinic South, CarePartners Health Services	www.carepartners.org	Occupational Therapy Physical Therapy Speech and Language Pathology
Outpatient Clinic West, CarePartners Health Services	www.carepartners.org	Occupational Therapy Physical Therapy Speech and Language Pathology
Peer Counseling and Advocacy, DisAbility Partners - Western North Carolina	www.disabilitypartners.org	Independent Living Skills Instruction
Pharmacy, Buncombe County Department of Health	www.buncombecounty.org/governing/depts/health	General Pharmacies
Pharmacy, Western North Carolina Community Health Services	www.wncchs.org	Prescription Medication Services Flu Vaccines
Pisgah Wellness Center	www.pisgahvalley.org	Wellness Programs

Planned Parenthood - Western North Carolina	www.pphsinc.org	HIV Testing STD Screening Abortion Referrals Birth Control Pro-Choice Counseling Pregnancy Testing General Sexuality/Reproductive Health Education Gynecology Services
Pregnancy Care and Counseling, Bethany Christian Services - Buncombe County	www.bethany.org	Pro-Life Counseling
Pregnancy Resource Center of Stanly County	www.prcstanly.com	Pro-Choice Counseling Pregnancy Testing
Pregnancy Support, Catholic Social Services - Buncombe County	www.cssnc.org	Pro-Life Counseling
Prenatal Education Series, Mission Hospitals	www.womens.mission-health.org/classes-programs/additional-birth-classes	Childbirth Education
Prescription Assistance, Buncombe County Department of Social Services	www.buncombecounty.org	Prescription Expense Assistance
Primary Medical Care, Western North Carolina Community Health Services	www.wncchs.org	General Physical Examinations Birth Control Pregnancy Testing Postpartum Care Prenatal Care Community Clinics Urgent Care Centers Family and Community Medicine
Project Access, Western Carolina Medical Society	www.projectaccessonline.org	Health Insurance/Dental Coverage
Project EMPOWER, Mount Zion Community Development	www.mtzionasheville.org	Teen Pregnancy Prevention
Project NAF, Mount Zion Community Development	www.mtzionasheville.org	Postpartum Care Prenatal Care
Rainbow in My Tummy, Mountain Area Child and Family Center	www.rainbowinmytummy.com	Nutrition Education
Regional OB/GYN Specialists, Mountain Area Health Education Center	www.mahec.net	Cancer Detection Infertility Treatment Midwifery Prenatal Care Women's Health Centers Breast Care Centers General Obstetrics Gynecology Services Maternal and Fetal Medicine Reproductive Endocrinology
Rehabilitation, Physical Therapy and Sports Medicine, Mission Hospitals	www.missionhospitals.org	Physical Therapy Therapeutic Exercise
Reverse Mortgage Counseling, OnTrack Financial Education and Counseling	www.ontrackwnc.org	Reverse Mortgage Programs
Safe Surrender, Buncombe County Department of Social Services	www.buncombecounty.org	Safe Havens for Abandoned Newborns

Seniors Safe at Home, The Council on Aging of Buncombe County	www.coabc.org	Health Insurance Information/Counseling
Sleep Center, Mission Hospitals	www.mission-health.org/centers-and-services/programs-service/sleep-center	Sleep Disorders Clinics
STD/HIV Clinic, Buncombe County Department of Health	http://www.buncombecounty.org/Governing/Depts/Health/ClinicalServices.aspx#std	HIV Testing STD Screening AIDS/HIV Prevention Counseling
Support Care Teams, CarePartners Health Services	www.carepartners.org	Medical Social Work
Swannanoa Welcome Table, Life Ministries	www.givensestates.org/lifeministries.htm	Medical Equipment/Supplies
Switchboard/Operator, Mission Hospitals	www.mission-health.org	Hospitals
Take Off Pounds Sensibly - Buncombe County	www.tops.org	Weight Management
Telecommunication Equipment, NC Division of Services for the Deaf and Hard of Hearing - Buncombe County	http://www.ncdhhs.gov/dsdhh/	Hearing Augmentation Aids
Three Streams Family Health Center	www.threestreamshealth.org	General Physical Examinations Community Clinics
Tuberculosis Control, Buncombe County Department of Health	www.buncombecounty.org/Governing/Depts/Health/ClinicalServices.aspx#std	Tuberculosis Screening
United Medical Supply	www.umedsupply.com	Medical Equipment/Supplies
Urgent Care North, Sisters of Mercy Urgent Care	www.urgentcares.org	Urgent Care Centers
Urgent Care South, Sisters of Mercy Urgent Care	www.urgentcares.org	Urgent Care Centers
Urgent Care West, Sisters of Mercy Urgent Care	www.urgentcares.org	Urgent Care Centers
Wellness Resource Center, Mission Hospitals	www.mission-health.org/health-and-wellness/preventive-programs-education/mission-wellness-resource-centers	Women's Health Centers
Wheelchair/Seating Clinic, CarePartners Health Services	www.carepartners.org	Mobility Aids
WNC Breastfeeding Center, Mission Hospitals	http://www.missionchildrens.org/hospital-services/breastfeeding-center	Breastfeeding Support Programs
WNC Fall Prevention Coalition, Land-of-Sky Area Agency on Aging	www.landofsky.org/aging.html	Balance Screening
Wound Therapy Center, Mission Hospitals	www.mission-health.org/centers-and-services/programs-service/wound-healing-hyperbarics	Wound Clinics
Youth Fit for Life, YMCA of WNC	www.ymcawnc.org	Wellness Programs

MCDOWELL COUNTY RESOURCE GUIDE 2012

Please send additions and corrections for this resource guide to:
Health Educator
Rutherford-Polk-McDowell
District Health Department
408 Spaulding Road
Marion, NC 28752
E-mail: jhines@rpmhd.org

YOUR ROLE IN PREVENTATIVE CARE

You are responsible, in large part, for managing your own preventive care. Your primary-care practitioner should be your partner.
There are other important preventive measures —the kind of commonsense steps that could save millions of medical dollars and prevent injury, illness, disability, and premature death. Here's a checklist:

• Don't smoke, and avoid secondhand smoke.

• Maintain a healthy weight.

• Get regular exercise. Brisk walking for just half an hour every day can be a big factor in weight control and in staying healthy.

• Choose a diet low in animal fat and sodium, and rich in fruits, vegetables, whole grains, and low-fat or nonfat dairy products. Eat at least two servings of fish a week.

• Keep alcohol consumption moderate: no more than one drink daily for a woman, two drinks for a man. If you are a heavy drinker, seek counseling, and cut back or quit.

• Do self-exams of your breasts or testes, as well as skin.

• Fasten seat belts, see that kids ride in proper restraints, and obey the law. Drive sober and defensively.

• Brush and floss to prevent dental disease.

Medical experts may disagree about a lot of things, but they all agree that good health depends on improved access to and increased use of preventive services.

PHYSICAL ACTIVITY

Physical activity improves health and well being. It reduces stress, strengthens the heart and lungs, increases energy levels, helps you maintain and achieve a healthy body weight and it improves your outlook on life. Research shows that physical inactivity can cause premature death, chronic disease and disability. Health Canada encourages Canadians to integrate physical activity into their every day life; at home, at school, at work, at play

and on the way ... that's active living!

For children, regular physical activity is essential for healthy growth and development. For adults, it allows daily tasks to be accomplished with greater ease and comfort and with less fatigue.

For seniors, weight-bearing physical activity reduces the rate of bone loss associated with osteoporosis. Regular physical activity also maintains strength, flexibility, balance, and coordination, and can help reduce the risk of falls.

Being physically active not only strengthens your body, it also makes you feel good about yourself.

PLACES TO GO FOR FUN AND PHYSICAL ACTIVITY

SCHOOL PLAYGROUNDS:

Nebo Elementary	Old Fort Elementary
Glenwood Elementary	Pleasant Gardens Elementary
Marion Elementary	West Marion Elementary

WALKING THE COUNTY:

West Marion Elementary Trail - 4.25 Laps = 1 Mile
Old Fort Elementary Trail - 4 Laps = 1 Mile
East Junior High Trail - 6 Laps = 1 Mile
Glenwood Elementary Trail - 4 Laps = 1 Mile
Nebo Elementary Trail - 2.5 Laps A-B-C = 1 Mile
North Cove Elementary Trail - 3 Laps = 1 Mile
McDowell High Trail - 4 Laps = 1 Mile
Pleasant Gardens Elementary - 4 Laps = 1 Mile
Tom Johnson's Camping Center - 3.5 Laps = 1 Mile
Wal-Mart Parking Lot - 1.8 Laps = 1 Mile
Wal-Mart Walkway - 8.6 Laps = 1 Mile
Roses Parking Lot - 2.6 Laps = 1 Mile
Bi-Lo Center Walkway - 3.6 Laps = 1 Mile

PARKS AND RECREATION:

Glenwood Park –near Glenwood Elementary School
Sandi Andrews Memorial Park –on 221 North in North Cove
Lake James State Park – canoe rentals, hiking trails, swimming (for more info, call 652-5047)
Marion Community Building Park – basketball and tennis courts, playground
Cross Mill Park – walking trail (5 laps = 1 mile), basketball and volleyball courts, disc golf course, playground
McDowell County Recreation Department Facility – skate park, basketball court, tennis courts, playground, swimming pool, ball fields (located on West Court Street)
Mountain Paradise Campground
Ph: 828-756-4085; www.mountainparadisenc.com
Outdoor swimming pool and waterslide, miniature golf and game room.

Yogi Bear's Jellystone Park – swimming pool, waterslide, pedal boats, mini golf, nature trails, horseshoes, volleyball court (for more info, call 652-7208)
Woodlawn Fitness Trail – 7 stations, 2 exercises per station on a ¼ mile jogging path (located on 221 at

Woodlawn Work Center)
Apatchy Stables – horseback riding; trail rides, riding lessons for all ages (for more info, call 652-7977)
Marion Skate Park
Ph: 828-652-3001
Outdoor park located adjacent to the McDowell County Recreation Center on E. Court Street.

Recreation Center
Ph: 828-652-3001
Outdoor pool, basketball court, gymnasium located on E. Court Street, Marion.

Sports Complex
Ph: 828-652-2626
Baseball and softball tournaments throughout the year; snack bar. Located in Marion off N. Main Street on Finley Road, adjacent to Ivan's Restaurant.

Lightning Lanes Bowling Alley
Ph: 828-652-2626
Adjacent to Ivan's Restaurant and McDowell Sports Complex at 622 Finley Road, Marion.

Hiking in McDowell County

For additional information on trails, contact us or log onto www.nps.gov.
ARMSTRONG CREEK - 3640' • 6 miles • Easy to Moderate
Primitive hiking on Armstrong Fish Hatchery Road. Trail begins past hatchery parking lot.
BAD FORK - 2940' • 8 miles • Moderate
Primitive trail connects Woods Mountain and Armstrong Creek Trails. NC 226-A to Armstrong Fish Hatchery Rd. 3 miles to trailhead on left.
BETSY RIDGE - 3160' • 9 miles • Easy to Moderate
Black Mountains view, meets Little Buck Creek Trail ending at Woods Mountain Trail. US 221 North, left on Tom's Creek Road. Right onto first dirt road, head is second road on left.

CATAWBA FALLS
Ph: 888-233-6111 • www.mcdowellnc.org
Catawba Falls is about 70' high. access. 3 miles round-trip, moderate. Strenuous climb to upper falls! WARNING!!! Wet rocks are very slippery and people fall to their deaths from waterfalls every year! If you visit them, please be careful and use common sense! Do not climb rocks around the waterfalls and do not ever cross a stream or swim at the top of a waterfall. Keep children under constant supervision!!

KITSUMA PEAK - Short Hike- 20 minute trail.
Breathtaking views and unusual Carolina hemlocks. Take I-40 west to Ridgecrest Exit. Turn onto Old US 70, road is blocked. Park at road end.
LEAD MINE GAP - 5 miles • Moderate

Mixed forest environment, long range views. Hwy 70 to Curtis Creek Road, east of Old Fort. Trailhead approximately 8.5 miles. Trail ends at Hickory Branch Trail, after 2 miles trail rejoins Curtis Creek Road at lower point.

LITTLE BUCK CREEK - 5.8 miles • Moderate to Strenuous

Excellent views of Marion, Lake Tahoma and Black Mountain range. From US 70, west of Marion, turn right onto NC Hwy 80, passing Lake Tahoma on right. Cross bridge over Buck Creek, turn right onto dirt road. Take left at first intersection and go 1.5 miles to trailhead (turnout with USFS sign and gate).

MACKEY MOUNTAIN - 16 miles • Moderate to Strenuous

This trail is located in a bear sanctuary. Take appropriate precautions on trail. Spectacular views. US 70, east of Old Fort to Curtis Creek road, turning left. Trailhead is 9 miles at entrance of Sugar Cove Road.

Varying Lengths and Skill Levels

Two segments of this 700-mile route are in McDowell County. The Craggy Pinnacle segment follows the Blue Ridge Parkway from Asheville past Buck Creek Gap at NC 80 to Little Switzerland. The route includes a 14-mile steep downhill grade. The Brown Mountains Light segment continues on the Parkway to Linville Falls at the northern tip of McDowell County and onto the foothills area via NC 181. Route includes several gentle descents and easy climbs.

NEWBERRY CREEK - www.nps.gov/ovvi

4300' • 5 miles • Easy to Moderate

Scenic trail ends at Blue Ridge Parkway. Take US 70 West to Curtis Creek turning right. Left at Newberry Creek Road (FS 482-A). Go 4 miles to end. Trailhead begins at end of road.

POINT LOOKOUT TRAIL - 6.32 miles. Moderate

Continue past the Depot; next right turn is "Old" Highway 70. Drive 2.4 miles to Mill Creek Rd. Mills Creek Rd on right

Go **Straight to**first barricade and beginning of Point Lookout Trail

Avoid train tracks and respect private property boundaries. Parking at Old Fort Picnic Grounds, the Depot and Andrews Geyser Park.

Joseph McDowell Historical Catawba River Greenway – 1 mile easy to moderate. *The greenway's entrance road is located off of U.S. 70 past Lowe's and next to Table Rock Quarries. The gravel road, named Sam Phillips Drive, leads to the temporary parking lot and entrance to the park. This first phase has a paved pathway and wooden fences running alongside the Catawba River for about 4,300 linear feet to a point almost behind Lowe's store. It has fishing piers overlooking the river and boardwalks running over the river's tributaries. The first phase will also include historic Round Hill, where the McDowell and Carson families are buried. That includes the county's and greenway's namesake, Revolutionary War hero Joseph McDowell.*

More Information:
www.mcdowelltrails.com

FITNESS CENTERS

Corpening YMCA- (828) 659-9622

Curves - (828) 659-8100

Club Fitness - (828) 652-5122

Fitness Express - (828) 765-6336

Karakido Karate- (828) 652-1335

Gardin School Tae Kwan Do - 738-3608

Miss Jacie's School of Dance - (828) 652-3197

American Star Dance Studio - (828) 228-3222
Foot-Heels Stompin' Clogging Studio – (828) 442-0885
Age 7 - adult.
Le Petit Dance Studio - 460-1003. or 442-7386
Tap, jazz, ballet and modern dance. Age 4 - high school. Adults too, if a class can be formed.

COMMUNITY HEALTH SERVICES

The Open Door to Health & Asheville Psychotherapy
246 A South Main Street Marion, NC 28752
Marion, NC 28752
(828) 652-1517
Assisting McDowell County with a variety of programs such as vocational counseling, job seeking, resume writing, nutritional counseling, classes in stress reduction, guided imagery and massage therapy. Self pay on sliding scale.

Good Samaritan Clinic of McDowell County at First Presbyterian Church
P.O. Box 3002 / 79 Academy Street, Marion, NC 28752
Phone# 828-559-2055 Fax 652-1004

The Good Samaritan Clinic of McDowell County provides care to those who are uninsured and cannot afford care. It is a part-time, Christian-based, primary care clinic staffed by dedicated volunteers. Open from 4 - 9pm on Tues. nights, with patients scheduled from 6 - 8:00pm with a doctor

MCDOWELL COUNTY HEALTH DEPARTMENT:
McDowell County Health Department
408 Spaulding Drive, Marion, NC 28752
652-6811 www.rpmhd.org

Offers a variety of family health services including: child health clinic for well child exams, child service coordination, confidential teen clinic for Family Planning, pregnancy testing and referral, WIC nutrition education, Eat Smart, Move More Weigh Less program, health screenings, children's and adults immunizations, smoking cessation, women's preventive health screenings, family planning services for women of child bearing age, pregnancy prevention services, emergency contraception, Maternal Care Coordination (Baby Love), referrals to OB doctors for pregnant women ,post partum home visits for mother and New Born Screening home visit for infants, Breast and Cervical Cancer Screening and referrals for Women (BCCCP), Wise Woman services for women if eligible for BCCCP program, Communicable Disease and Sexually Transmitted Disease testing counseling and treatment, Completion of presumptive Medicaid applications for pregnant women

Payment: Medicaid, some private insurances Sliding fee scale for McDowell County residents. No charge for Communicable Disease or STD services and most children's immunizations.

Child Service Coordination Program (CSCP)
McDowell County Health Department
408 Spaulding Rd., Marion, NC 28752
652-6811

A voluntary home visitation program for families of young children who have, or are at risk for, medical or developmental conditions. Staffed by Public Health Nurses.

Maternity Care Coordination
Maternity Care Coordination (MCC or Baby Love) is a Medicaid-funded program of the McDowell Health Department that provides assistance with utilizing available community services and support for women who are pregnant and eligible for Medicaid. Maternity Care Coordinators provide these services for the duration of the pregnancy, as well as two months of additional follow-up.

Nurse Family Partnership (NFP)
Nurse-Family Partnership is a voluntary program where highly educated nurses visit low-income women in their homes during their pregnancy and throughout the first two years of their children's lives to improve pregnancy outcomes, child health and development, and the economic self-sufficiency of the family. Services include: screening and assessment, substance abuse classes, aftercare support, individual and family counseling, recommendation and referral.

McDowell County Department of Social Services (DSS)
145 East Court Street, Marion, NC 28752.
652-3355; http://www.mcdowellcountyncdss.org/
McDowell County DSS determines eligibility for Medicaid, food and nutrition services, Work First (welfare), subsidized childcare, medical transport. It oversees child and adult protective services by investigating cases of abuse and neglect, locates absent parents and establishes and enforces court orders with regard to child support. It also offers medication management.
Health Check -Provides access to health care for children up to age 21 who qualify for Medicaid.

Family, Infant, and Preschool Programs
The Family, Infant, and Preschool Programs (FIPP) is a state-funded program that provides such services as weekly home visits, pregnancy information and planning, weight and health monitoring, and parenting and child development support. A nurse and licensed psychological associate provide these services for any mothers with mental health, substance abuse, and risk for pre-maturity for a duration of birth through 1 year after birth. There are no income eligibility criteria to meet.

The McDowell Hospital
430 Rankin Drive Marion, NC 28752
Ph: 659-5000
Caring, supportive nursing staff trained in labor, delivery, breastfeeding and infant care. Our certified instructors also teach Childbirth Preparation, Breastfeeding and Infant CPR classes. Each new mother receives in-hospital post-delivery education and discharge preparation. Two staff lactation consultants offer breastfeeding support, while each newborn is given a hearing screening test. Postpartum home visitation by our nursing staff is available to all mothers who would like additional support.

First Steps
For mothers and their children 0-6 months old who are ineligible for Medicaid, home visits. Mothers are found through maternity records at the McDowell Hospital, physician and self-referral This program consists of an initial home visit to perform a physical assessment of the baby, a home safety inspection, and education on certain health topics (such as breastfeeding). Contact with the mother will be maintained for six months.
Ph: 659-5415

Healthy Start
In-home visitation program of the McDowell Hospital for mothers that screen positive on a records screen at the McDowell Hospital, or who are referred by a physician for services. An RN and visiting paraprofessional provide family support by teaching parenting skills and bonding.
Ph: 659-5415

Preschool Dental Outreach Program
Amanda Crisp, Program Coordinator
McDowell County Health Department
408 Spaulding Road, Marion NC 28752
Ph: 828-652-6811 Ext. 330
Program provides children ages 6 months to 5 years with a limited oral exam at no cost to parents. A dental assistant can assist parents in finding a dentist and can assist with identifying financial resources.

Healthy Smiles Dental Fund
McDowell County Partnership for Children and Families
70 N. Main St, Suite 3
PO Drawer 158, Marion, NC 28752
Ph: 659-2462
www.mcdowellpartnership-smartstart.org
Provides dental assistance for eligible children ages 3-5 who have a dental "need." Contact the Partnership for an application.

McDowell County Physicians:

21st Century Oncology 63 South Medical Court Marion NC 28752 ph: 828-659-2130 fax: 828-652-7828	**McDowell Orthopedics** 60 Medical Court South Marion, NC 28752 Phone: 828-652-1673
Allergy Partners of the Blue Ridge 136 Creekview Court Marion, NC 28752 Ph: 828-652-6454	**McDowell Medical Associates** 1860 Sugar Hill Road Marion, NC 28752 Ph: 828-652-8727
Appalachian Foot and Ankle Associates 1 Vanderbilt Park Drive, Suite 100	**McDowell Orthopedics and Sports Medicine** 60 Medical Court S

Asheville NC 28803 ph: 828-277-8042 fax: 828-277-8046	Marion, NC 28752 Ph: 828-652-1673
Asheville Gastroenterology 191 Biltmore Avenue Asheville NC 28801 ph: 828-254-0881 fax: 828-258-1614	**McDowell Pediatrics** 387 US 70 West Marion, NC 28752 Phone: 828-652-6386
Asheville Head, Neck and Ears 1065 Hendersonville Road Asheville NC 28803 ph: 828-254-3517 fax: 828-253-6960	**McDowell Primary Care and Walk-In Clinic** 6 E. Medical Court Suite 2 Marion, NC 28752 Ph: 828-659-2900
Asheville Radiology Associates PO Box 2959 Asheville NC 28802 ph: 828-213-0594 fax: 828-213-0590	**McDowell Radiation Center** 63 South Medical Court Suite A Marion, NC 28752 Ph: 828-659-2130
Blue Ridge Pathology Associates 2201 S. Sterling Street Morganton NC 28655 ph: 828-580-6117 fax: 828-580-6109	**McDowell Surgical Services** 31 Medical Court, Suite 1 Marion, NC 28752 Phone: 828-659-5700
Cancer Centers of North Carolina 20 Medical Park Drive Asheville NC 28803 ph: 828-271-6523 fax: 828-271-6589	**McDowell Women`s Center** 6 East Medical Court, Suite 1 Marion NC 28752 ph: 828-652-9197 fax: 828-652-9495
Carolina Hand Surgery 20 McDowell Street Asheville NC 28801 ph: 828-350-8905 fax: 828-255-7682	**Marion Eye Clinic** 40 E. Medial Court Marion NC 28752 ph: 828-652-1000 fax: 828-652-7170
Children's Clinic of Marion 1225 West Henderson St. Marion, NC Ph: 828-659-2000	**Marion Pediatric Clinic, PA** 31 Medical Court E Suite 1 Marion, NC 28752 828-652-6386
Health Plus of The McDowell Hospital 472 Rankin Drive Marion, NC 28752 Ph: 828 652-1400	**Mountain Kidney & Hypertension** 10 McDowell Street Asheville NC 28801 ph: 828-258-5512

	fax: 828-271-6920
McDowell Cancer Center 63 South Medical Court Drive Marion, NC Ph: 828-652-9507	**F. J. Ragaz** 231 East Court Street Marion NC 28752 ph: 828-652-4420 fax: 828-652-5537
McDowell Family Physicians 387 US Hwy 70 West, Suite 2 Marion, NC 28752 ph: 828 652-6386	**Sugar Hill Primary Care** 1633 Sugar Hill Road Marion, NC 28752 P: 828 659-3621
McDowell Hospital Wound Therapy 20 Medical Park Drive Marion, NC 28752 ph: 828-652-3414 fax: 828-652-3457	**Spine Carolina** 21 Turtle Creek Drive Asheville NC 28803 ph: 828-277-7558 fax: 828-277-7229
McDowell Internal Medicine 100 Spaulding Road, Suite 1 Marion, NC 28752 Ph: 828-652-7776	**Women's Health Group** 20 South Medical Court Marion, NC 28752 Ph: 828-652-3019
Woodridge Psychological Associates 182 West Court St Rutherfordton NC 28139 ph: 824-287-7806 fax: 828-287-0004	

Community Resources for Children, Families, Seniors and Adults

McDowell County is small community where most citizens' lives revolve around church, school and community activities. The county has one 65-bed hospital, a health department and about 30 physicians. Mission Children's Hospital in neighboring Buncombe County also serves our community's children with a wide array of specialty medical services. There are over 150 Protestant churches in McDowell County (most of which are Baptist) and one Catholic Church. Many of these churches have outreach programs that provide substantial support for families in need of items such as food and school supplies.

North Carolina 211

Community Service Information Line

www.nc211.org Ph: 211 or (866) 401-6342

Adolescent Parenting Program

The Adolescent Parenting Program (AAP) is a State Adolescent Parenting funded program of the McDowell County Schools that provides teen parents 17 and under with intense case management through monthly or bi-monthly peer group meetings. This program encourages these young parents to stay in school, delay further pregnancies, and improve parenting skills.

CHAMP, the Community Health and Mobility Partnership

CHAMP is designed to improve strength, balance, and mobility in older adults, helping them avoid falls and stay independent and active for life. CHAMP teams conduct monthly screening events at the McDowell Senior Center to identify participants at risk for falls and provide

individualized fall prevention recommendations for them. The CHAMP Team, including a nurse and physical therapist, conducts an in-depth screening and develops an individualized exercise plan for each participant based on the screening results. There is no charge for these services. Participation is open to anyone who:

- Wants to improve strength, balance, or mobility.
- Needs instruction in specific home exercises to help maintain fitness and independence.
- Has concerns about balance or walking.
- Needs advice about assistive devices, such as walkers and canes.
- Has had one or more falls.
- Wants to reduce individual risk factors for falls.

Area physicians are encouraged to refer patients to CHAMP who need this service.
CHAMP will be held monthly from March through November 2012 at the McDowell Senior Center. If you need additional information or would like to schedule an appointment, call: (828) 652-8953.

Family Services of McDowell County
PO Box 1572 Marion, NC 28752
652-8538 or 652-6150 (24 hr Crisis Line)
www.familyservicesofmcdowell.org
Family Services of McDowell County seeks to provide aid to victims of physical, emotional, and sexual violence in families and relationships by providing sanctuary; providing programs that promote prevention, healing, and empowerment; community education; forming partnerships with related agencies and local citizens who support the reduction of abuse and violence.

Hospice of McDowell County
575 Airport Rd, Marion, NC 28752
652-1318 *www.hospiceofmcdowell.org*
The program objective is to assist children, youth and their families in working through difficult grief and loss processes children grieve over family deaths, divorce, or painful transitions in their family just as profoundly as adults, although in different ways. It is crucial that their thoughts and feeling not be dismissed. This program offers an opportunity for them to express grief in appropriate ways in order to promote healing. The program is offered in the grief support room in the Hospice of McDowell County new center of Hope at county schools, or in the home.

McDowell County Senior Center
100 Spaulding Rd, Marion, NC 28752.
652-8953; www.mcdowellseniorcenter.org
McDowell County Senior Center's mission is to enhance the quality of life for McDowell County's senior citizens. Services include but are not limited to: Meals on Wheels, exercise programs, luncheons, prescription medication counseling.

McDowell Emergency Management Agency
60 E Court St. Marion, NC 28752
Ph: 659-2241 or 659-2197

Provides assistance with proper installation of child safety seats for parents and caregivers. Limited assistance (for replacement of) improper car seats.

Joblink Career Center
316 Baldwin Ave., Marion, NC 28752
Ph: 659-6001 www.ncjoblink.com
Joblink Career Center Vision: To improve North Carolina's workforce and strengthen our state's economy by developing a system of Joblink Career Centers that offer labor market Information, provide access to career training and job search/placement services, and serve as the connection between employers and qualified workers. Offers HS graduation with GED.

Maxwell M. Corpening Foundation
348 Grace Corpening Dr., Marion, NC 28752.
Ph: 659-9622; www.ymcawnc.org
The Maxwell M. Corpening Foundation provides emergency funds, such as heat medical bills, and tuition for people in need. Residents in McDowell County are eligible for this once a calendar year. Call to schedule an appointment.

American Red Cross
39 N Garden Street, Marion, NC 28752
Ph: 652-6531
The American Red Cross helps keep the public prepared to respond to disasters and emergencies. They also provide training in lifesaving skills such as CPR and first aid, Babysitting courses are also available.

McDowell County Health Coalition
www.healthymcdowell.com
Partners joining together to improve the health and well being of McDowell County residents by identifying and addressing health priorities and disparities through public awareness and education, community involvement, maximizing resources, and influencing public policy.

FOOD AND SHELTER

Angel Food Ministries
Clinchfield Presbyterian Church
45 7th Street Marion, NC 28752
659-2300 (Laura Long) www.angelfoodministries.com
Angel Food Ministries is a non-profit, non-denominational organization dedicated to providing grocery relief and financial support to communities throughout the United States.

Greenlee Baptist Church
5967 US 70 W., Old Fort, NC 28762
668-6075 ; www.angelfoodministries.com
AFM is a national food co-op operated through volunteers in churches. Anyone can join. Income level doesn't matter. A variety of food is delivered once a month based on individual orders placed the week before.

Grace Community Church
5182 US 70 West Marion, NC 28752

724-9599 www.graceforall.org
Call for more information concerning worship services, food distribution program, etc.

Dysartsville Christian Ministries
Trinity United Methodist Church, in back in basement.
174 Trinity Church Loop, off 226 S., Dysartsville, NC; 659-1907.
Food pantry for anyone in McDowell County in financial crisis. Th, 3:30-5:30 PM.

Meals That Heal
Clinchfield United Methodist Church, 131 Ridge Rd., Marion, NC 28752
Ph: 652-2759 Hot meals served Tu. and Th., 11AM – 1PM. Every hungry person is welcome. Food donations accepted during that time also. Volunteers welcome. Emergency food assistance given to serious needs.

St. John's Episcopal Church
Parish House, 339 S. Main St., Marion, NC 28761
Ph: 652-4144 *Food pantry open Wed., 2–4 PM. Non-perishable items offered to those in need.*

Habitat for Humanity
PO Box 75 Marion, NC 28752-0075
Ph: 659-627 www.habitat.org or steve.davis@sdy.com
Habitat for Humanity International seeks to eliminate poverty housing and homelessness from the world, and to make decent shelter a matter of conscience and action.

HAP (Housing Assistance Program)
29 N Garden St Marion, NC 28752
Ph: 652-8098

Section 8 Housing (Presided over by Department of Housing and Urban Development)
29 N. Garden St., Marion, NC 28752
Ph: 652-8098
Administers Section 8 vouchers for McDowell County. These vouchers help low-income people with their housing rent. From there it can step into mortgage help.

God's Country Thrift Store
1155 North Main Street, Marion, NC 28752
Ph: 652-9000.
Assists with clothing. Provides some furniture items for people who have lost their home to fire. Assists with utilities up to $50.

McDowell Mission Ministry
124 Fleming Avenue, Marion, NC 28752
Ph: 659-6490; www.mcdowellmission.com
The Mission provides: emergency shelter, food, clothing, furniture, and limited assistance with utilities, rent, and medications.

Old Fort Area Crisis Ministries
24 North Spring St., Old Fort, NC 28672; 828

Ph: 668-0002.
Assists people in Old Fort with paying for light bills, medicine, rent, clothing, food.

Salvation Army
95 West Henderson St., Marion, NC 28752
Ph: 828-659-2522; www.salvationarmy.org
The Marion Salvation Army operates a thrift store and provides clothing, food and help with utility bills to those in need. Call for appointment.

MENTAL HEALTH & SUBSTANCE ABUSE SERVICES

Smokey Mountain Area Authority— Access to Care
Toll Free 1-800-849-1627
Call to find local Mental Health, Developmental Disabilities & Substance Abuse Services in McDowell County.

AL-ANON
Al-Anon is a worldwide 12-step support group for individuals and families suffering from a loved one's alcohol addiction. The Marion Al-Anon meeting welcomes teenagers and also people whose lives are affected by someone else's drug use.

St. John's Episcopal Church, 339 S. Main St., Marion, NC 28752 in the parish house Wednesday, 8 PM.

1st Presbyterian Church, 100 Silver Creek Rd., Morganton, Wed, 12 noon & Sat 8 PM.

For other Al-Anon meetings in WNC: www.wnc-al-anon.org; 800 286-1326.

Alcoholics Anonymous
A 12 -step program to help people recover from the disease of alcoholism.
For other AA meetings in WNC visit: www.ashevilleaa.org or call 800-524-0465

St. Matthews Lutheran Church, 241 W. Court St, Marion, in the hut behind the church, Sun, Mon, Wed, Fri, 8 PM. And Mon, Wed, Fri, 12 noon.

In Spanish – En Español at **Centro Unido Latino Americano 652-0727**
70 N. Main Street Suite 3, Marion, NC www.culawnc.org
Mondays 7 pm to 8:30 pm. Andres 559-0630 or Juan 448-8768

Crossroads Recovery Center, Inc
440 East Court Street, Marion, NC 28752
432 East Main Street , Old Fort, NC 28762
Ph: 659-8626
crossroadsrecoveryctr@verizon.net
Crossroads Recovery Center, Inc offers counseling services assisting local residents to regain control of their lives while meeting the requirements of the Courts, DSS and/or Motor Vehicles Dept in order to regain their driving privileges in an expedient and affordable manner.

Freedom House of Mecklenberg, INC.
Maceo Mayo III, CSAPC ICPS
Work: 704 852-3196; Cell: 704 458-4458
Substance abuse prevention services for McDowell County Schools, individuals and communities.

McLeod Addictive Disease Center
117 West Medical Court, Marion, NC 28752
Ph: 659-3966; Web: http://mcleodcenter.com/
Outpatient **opioid** (pain medication) addiction treatment center, whether the drug is acquired illegally or by prescription. Physical assessment ($11) and detoxification, followed by methadone maintenance ($11 per dose). Daily on site admission. Services will be rendered same day as referral is made Counseling, anger management, nutrition and relapse prevention.

Mental Health Association in NC, McDowell Psychosocial Rehabilitation Services (PSR)
75 Crawford St., Marion, NC 28752;
Ph: 659-6480 Mon – Fri, 8AM-4PM.
Adult day program primarily focusing on training and education for people with mental health issues alone or coupled with substance abuse. Men's and women's group therapies, daily living and communication skills and pre-vocational training. Attendance must be doctor prescribed. Medicaid and IPRS state funding.

Meth Anonymous
New meeting location for Marion to be announced. Call New River Behavioral Health Care of McDowell County for information: 652-5444. Meth Anonymous meetings are 12 step programs to help people recover from illegal drug addiction.

Narcotics Anonymous:
St. Matthews Lutheran Church
241 W. Court St., Marion, NC 28752
Tu, Th, F, Sat, 8 PM in the hut behind the church.
Narcotics Anonymous are 12 step programs to help people recover from prescription drug addiction.

New River Behavioral Healthcare of McDowell County
486 Spaulding Road, Marion, NC 28752
Ph: 652-5444
New River is a local private provider coordinated and funded by Smokey Mountain Center, a WNC state Local Management Entity (LME). New River offers outpatient programs of individual and group therapy for alcohol and narcotics addiction and mental health issues. Prior detoxification elsewhere may be required. Sliding scale fee or minimal co-pay for McDowell County residents only.

North Carolina Vocational Rehabilitation Services
451 N. Main St., Suite 107, Marion, NC 28752
Ph: 652-2826; http://dvr.dhhs.state.nc.us
The North Carolina Division of Vocational Rehabilitation Services seeks to promote employment and independence for people with disabilities.

Recovery Ventures Corporation
904 Davistown Rd., Old Fort 28762
Ph: 828 686-0354; www.recoveryventurescorp.org

Provides long term (2 years) residential treatment for alcohol and drug addiction.
Self-admittance or through the court system. $175 entry fee. Outside contract jobs pay for the treatment stay. Interview, autobiography and background check required. Men are housed in Old Fort; women in Black Mountain. Eligibility: Ages 18 and up; Must be able to perform assigned duties through vocational training. Welcomes applications from the whole state of NC.

REPRODUCTIVE HEALTH

Unplanned Pregnancy
If you feel you may be pregnant, there are several local resources that can help you with the following:

Confidential pregnancy testing, including for minors: McDowell County Health Department, Planned Parenthood, McDowell Hospital Emergency Room in cases of rape, sexual assault or incest, and Private Physicians. See Listings Below.

Emergency Contraception (EC): EC is available over the counter at pharmacies to women 17 and older. A prescription is necessary for younger teens. McDowell County Health Department provides EC free to current family planning patients; Planned Parenthood; McDowell Hospital Emergency Room in cases of rape, incest or sexual assault.

Birth Control Options: McDowell County Health Department; Planned Parenthood; private physicians.

Counseling: McDowell County Health Department and its Teen Clinic; Planned Parenthood; McDowell Pregnancy Center, see listing below.

McDowell County Health Department
408 Spaulding Rd., Marion, NC 28752 652-6811; www.rpmhd.org
Offers a variety of family health services including: child health clinic for well child exams, child service coordination, confidential teen clinic for Family Planning, pregnancy testing and referral, WIC nutrition education, Eat Smart, Move More Weigh Less program, health screenings, children's and adults immunizations, smoking cessation, women's preventive health screenings, family planning services for women of child bearing age, pregnancy prevention services, emergency contraception, Maternal Care Coordination (Baby Love), referrals to OB doctors for pregnant women, post partum home visits for mother and New Born Screening home visit for infants, Breast and Cervical Cancer Screening and referrals for Women (BCCCP), Wise Woman services for women if eligible for BCCCP program, Communicable Disease and Sexually Transmitted Disease testing counseling and treatment, Completion of presumptive Medicaid applications for pregnant women. Payment: Medicaid, some private insurances Sliding fee scale for McDowell County residents. No charge for Communicable Disease or STD services and most children's immunizations.

McDowell County Health Department Teen Clinic
408 Spaulding Rd., Marion, NC 28752
Every Other Monday, 3PM - 7PM (by appointment).
Teen Hotline: 828 925- TEEN (925-8336)
Have a question? We are a confidential clinic where teens can call to talk to a nurse, leave a voicemail message or send a text message.

Planned Parenthood Health Systems (PPHS), Inc.
603 Biltmore Ave., Asheville, NC 28803

Ph: 828 252-7928; www.pphsinc.org
PPHS provides gynecological care, pregnancy testing, family planning services, birth control, emergency contraception, men's health services, STD/HIV testing, hepatitis vaccine, LGBT services. It is a private, non-profit family planning agency whose goal is to ensure that every individual has access to preventive reproductive health care and education in order to make thoughtful and responsible decisions regarding sexuality and parenthood. Medicaid and private insurance accepted.

McDowell Pregnancy Care Center
2170 Rutherford Road Post Office Box 2728 Marion, NC 28752
652-7676 Hours– M-TH 8-5pm and F 9-5pm www.mcdowellpregnancycarecenter.org
McDowell Pregnancy Care Center provides pregnancy counseling, free pregnancy tests, limited ultrasound services, maternity and baby clothes, baby furniture, referrals, and post-abortion counseling.
Private Physicians
Refer to the yellow pages for obstetricians (OB) and gynecologists (GYN) who treat and advise women and teenage girls on reproductive health care, pregnancy care, birth control, unplanned pregnancy and STD/HIV testing and treatment.

STDS and HIV/AIDS

People who use drugs and alcohol often take risks that endanger their health and the health of others. One of the most harmful risks is that of engaging in risky sexual

activities. Many people abandon safe sex practices when they're drunk, even if they do protect themselves when they're sober. Unprotected sex can result in Sexually Transmitted Disease (STD). Sexually Transmitted Disease is serious, sometimes painful and can cause a lot of damage. Some STDS only infect your sexual and reproductive organs. Others cause general body infection and possibly death (HIV/AIDS). Sometimes you can have an STD with no other symptoms. Some STDs cannot be cured. But most STDs can be cured if you get treated promptly. Locally you can receive confidential testing and treatment at: McDowell County Health Department.
Western North Carolina Aids Project
P.O. Box 2411, Asheville, NC 28802-2411
Ph: 828 252-7489; toll free: 800 346-3731.
www.wncap.org;
140 S. Church St., Hendersonville, NC 28739
Ph: 828 696-2267; toll free: 866 696-2267;
Case workers assist clients in locating doctors, HIV/Aids medication, counseling, support groups, nutrition programs, insurance, disability and other government aid.

American Social Health Association
Ph: 1 800 227-8922; www.ashastd.org
ASHA is dedicated to improving the health of individuals, families, and communities with an emphasis on sexual health and a focus on preventing sexually transmitted diseases and their harmful consequences.

Safe Surrender Law
NC's Safe Surrender Law allows an overwhelmed mother to surrender her baby to a responsible adult and walk away. The baby will be adopted.
A baby up to 7 days old may be placed with any responsible adult. The baby must be unharmed.

Anyone who receives a baby in this way must keep the baby safe and warm and call 911 or the county social services department immediately. (McDowell County Department of Social Services (DSS), 145 East Court Street, Marion, NC 28752, 652-3355.) Safe surrender is legal and anonymous.
The law is meant to prevent these babies from being killed or being left unsafely to die. Awareness of this law is essential if it is to be effective. Spread the word.

Drinking Alcohol and/or Using Drugs During Pregnancy
Illegal drugs, alcohol, strong prescription painkillers, smoking and some sexually transmitted diseases can damage the unborn baby during pregnancy. Alcohol easily crosses the placenta and affects the brain tissue and other organs of a developing fetus. In the United States, **Fetal Alcohol Syndrome** is the leading cause of birth defects and childhood developmental disabilities. The Food and Drug Administration advises women to **abstain completely from alcohol or drug use during pregnancy to avoid the risk of damage to their babies.**

Rape Crisis Help

RAINN (Rape, Abuse & Incest National Network)
Office: 210 349-7273; Toll free crisis line: 1 800 656-hope (4673). www.rainn.org
This national sexual assault hotline will inform the caller of the Rape Crisis Center closest to her.

Family Services of McDowell County
Confidential 24-hour hotline: 652-6150.
fsmc@verizon.net
McDowell's refuge for victims of domestic violence, rape, sexual assault and incest in families and relationships, providing emergency shelter, empowerment and prevention, weekly support group, counseling, assistance filing restraining orders (50-B), court advocacy, legal referrals, community education. Emergency contraception must be sought at the hospital ER or Health Department.

McDowell Hospital Emergency Room
430 Rankin Drive, Marion, NC 28752
Ph: 659-5000; www.mcdhospital.org
When a woman or teenage girl comes into the ER having been raped or sexually assaulted, tests for pregnancy and STDs are administered. Antibiotics will be given if the latter is positive. Emergency Contraception (EC) is also offered.

Mitchell County Safe Place
P.O. Box 544, Spruce Pine, NC 28777
Ph: 828 385-1716; Hot line: 828 765-4044.
Answered by a live person 24/7.
Safe Place is a domestic violence shelter offering rape and sexual assault counselors, hospital accompaniment, law enforcement involvement, court and legal support, peer group therapy, referral to a therapist, planning for the future.

Options, Inc.
PO Box 2512, Morganton, NC 28655

24 hour crisis line: 828 438-9444
Options is a shelter for victims of domestic violence, sexual assault, rape, and incest. It empowers them to press charges and break the cycles of abuse and economic dependence. It offers court advocacy, individual and group therapy. Residents from outside Burke County need a referral from an agency or shelter in their own county.

Resources of McDowell County Schools and McDowell Technical Community College

School Nursing Program
McDowell Hospital provides four full time nurses to serve the county's entire student population, including over 350 students with acute and chronic health conditions, many of whom carry and self-administer medications. Providing education, CPR and First Aid training, and vision and scoliosis screenings, the nurses have recently added the "Tooth Bus" dental service for eligible children to their list of services.

McSmiles Preschool A free service for all 3 and 4 year olds in the county, the McSmiles bus brings a teacher and assistant to area churches and elementary schools twice a week to provide preschool children with a few hours of fun activities to help them master social and academic skills needed to succeed in school.

NCPK
NCPK is a Pre-K program designed to prepare 4 year olds for Kindergarten by providing the highest standard of learning available. Acceptance is based on income eligibility and other criteria.

Head Start and Early Head Start
In a unique partnership with McDowell County Schools, Head Start serves children from pre-birth until kindergarten age. The extensive base of services provided by this program allowed the community to be awarded an Early Head Start Program in 1998. With 3 of the 5 centers holding accreditation from the National Association for the Education of Young Children, an honor that the remaining 2 centers are currently pursuing and only 5% of preschools nationwide hold, a new Head Start preschool is also being constructed at Eastfield Elementary.

Gifted Education
Geared toward K-12 students with exemplary performance or high potential to do so, this program offers specialized educational opportunities and individualized programming to challenge and motivate students.

New Century Scholars
Targeting "high potential" students at the end of sixth grade, this program provides extra support during the high school years and awards graduating participants a tuition scholarship for McDowell Technical Community College. Good grades, positive behavior, community service and initiative training on problem solving and team building are all requirements for New Century Scholar participants. This program will unfortunately be ending at the close of the 2013 school year.

LEAP Academy
Providing an accelerated, structured curriculum for secondary students without serious behavior problems who have been retained two or more times and are at risk for dropping out, this program focuses on intellectual growth, civic responsibility and career exploration with the overall goal of promoting students to high school in a shorter period of time than normally required.

Phoenix Academy
Founded in 2000 with a grant from the NC Governor Crime Commission, this program is the first of its kind in North Carolina. Serving McDowell County 6th-8th graders with long-term suspensions and 6th-12th graders with short-term

suspensions, this program allows students to continue receiving instruction in core subjects and offers an alternative to being absent from school. In addition, students participate in weekly community service projects such as Meals on Wheels and visitations to the local nursing home, as well as classes on conflict resolution, positive social interactions, mental health and substance abuse prevention.

Alternative Learning Center

Serving McDowell County 9th-12th graders who have dropped out of school or have been identified as potential dropouts, the ALC offers a wide variety of courses designed to allow students to move at an appropriate pace towards completion of high school. The flexible environment, small student population, dedicated staff, strong technology component and availability of special education services is tailored to students who have been unsuccessful in the traditional learning environment. A separate classroom with limited privileges serves secondary students who have been suspended for one or more semesters.

AVID

This is a program designed to help current high school students who will be their household's first generation high school or college graduate by helping them develop study skills, achieve academically and set goals for themselves.

School Resource Officers

Through partnerships with the City of Marion and the McDowell County Sheriff's Department, uniformed School Resource Officers are located at both East and West McDowell Junior Highs, as well as McDowell High School. The presence of these officers has resulted in a significant reduction of student suspensions and referrals, and has allowed the schools to expand the DARE (Drug Awareness and Resistance Education) programs.

Project Rise

Designed for ages 6-17, this program helps at risk youth become problem solvers, develop pro-social behaviors and demonstrate awareness and respect for the consequences of their actions in hopes of avoiding future court involvement or undisciplined behavior. By participating in interpersonal skill building activities focused on developing the individual's social skills, the overall goal is for the child to positively interact with others in their school, community, and eventually in their career.

Career and Technical Education

Offered by the McDowell High School Vocational Department, these educational courses help students develop technical skills, career awareness and valuable school-to-work experiences. One year after graduating, over 90% of students with a concentration in Career and Technical Education are either employed or are continuing their education. This program also benefits the LEA by having students- as a part of their course work- complete projects that benefit the school system in areas such as construction, masonry and information technology.

McDowell County Exceptional Children Program

Providing special education and related therapeutic and counseling services to children age 3-22 with mental and physical disabilities, specialized staff commit to developing and implementing Individualized Education Plans for each child.

ESL- English as a Second Language

This program targets the language learning needs of individual students to ensure that they progress toward full English language proficiency.

McDowell County Schools Before and After School Program

The Before School Program is offered every school day from 6:00-7:50 a.m. for students K-6 enrolled at Eastfield, North Cove, Nebo and Pleasant Gardens Elementary Schools for a fee of $4 per day. The Afterschool Program is offered every school day from the time school is dismissed until 6:00 p.m. for students K-6 enrolled at Eastfield, Marion, Nebo, North Cove, Pleasant Gardens and West Marion Elementary Schools for a fee of $7 per day.

Pregnancy Prevention Program

Focusing on 7th-9th graders, this program will begin next year and will utilize a variety of approaches and strategies to educate teens on how to be healthy, safe and responsible and reduce the unintended teenage pregnancy.

McDowell Technical Community College

Several options are available for high school students to earn college credits:

- **Early College:** Designed for freshmen high school students and located on the campus of McDowell Technical Community College, this five year program provides smaller classrooms than the traditional high school and allows randomly selected eighth grade students to earn their high school diploma and the first two years of college credits tuition free.

- **Dual Enrollment:** By attending evening or afternoon classes, students can begin to earn college credits toward a one-year diploma , two-year degree, or certificate of completion while still in high school. Although students must pay for textbooks and fees, tuition is usually exempt.
- **Huskins:** This program allows high school students to earn credits toward high school graduation and credits toward a one-year diploma, two-year degree, or certificate of completion by attending 1st and 2nd periods at their respective high schools, and McDowell Tech classes in the afternoon. Tuition, books, and fees are free, depending on the courses.
- **Articulated Credit:** Allowing eligible students to transfer (or "articulate") high school Career-Technical Education credits to McDowell Technical Community College within two years of graduation, this program lets students with a minimum score of 93 on the VOCATS exam and at least a B grade in the course get a head start on college credits.

Career Pathways Skill Center
McDowell County will be receiving $2.1 million in Golden LEAF Foundation money to transform parts of an old furniture plant complex into a "Career Pathways Skill Center." McDowell's economy is primarily focused on manufacturing and the renovation of this site (approximately 80,000 square feet) will help provide more jobs in this sector, as well as more space for the community college's vocational programs and classes, including expansion of the Early College.

More Community Resources

McDowell County Housing Coalition
This organization is responsible for accepting applications for owner occupied housing repairs, raising funds and garnering volunteer support to carry out those repairs. They also research available funding alternatives for low income clients.
Family Resource Centers
Run by McDowell County Schools, three FRCs in North Cove, Glenwood and Old Fort support a variety of parenting programs and family literacy activities. The centers provide learning opportunities for children and parents and build on the family's capacity to help their children enter school "healthy and ready to learn." All sites offer resource and referral services to help connect families with community resources, and the FRCs in North Cove and Glenwood also offer part-day preschool programs.
Family and Schools Together (FAST)
This is an eight week, multi-family and group-based program geared towards low-income, stressed and socially isolated families that works to enhance family functioning, promote healthy social-emotional development and promote school readiness. Group meetings involve structured, interpersonal activities that follow the protocols of the National FAST office and are facilitated by a nationally-trained collaborative team.
McDowell Council on Human Services
This council seeks funding and supports the work of wide range of services in the county, including those of the Senior Center, Housing Coalition and the children's fostering program.
McDowell Mission Ministries and the Friendship Home for Women and Children
A Christian ministry dedicated to impacting those in personal need by providing shelter, counseling and practical economic assistance with food and clothing. The Friendship Home, an arm of this ministry, can house up to 40 women and children and provide a clean, safe and structured environment to help them get back on their feet.
Family Services of McDowell County
This organization provides community education on violence prevention, sanctuary and aid to victims of physical, emotional and sexual violence, and programs to victims around healing and empowerment.
McDowell County Juvenile Crime Prevention Council (JCPC)
A planning body comprised of community leaders that supports and funds the development and implementation of community based programs for delinquent children or children identified as at risk of becoming undisciplined or delinquent.
Hospice Safe Harbor Grief Program for Children and Youth

This program assists children and families in grief and loss counseling due to death, divorce or other painful transitions.

McDowell Council on Alcohol and Drug Abuse

Focused on substance abuse, this organization provides treatment services, outpatient care, and special groups for DUI/DWI offenders.

Family and Child Support Teams

These teams, consisting of a school nurse and social worker, as well as other entities deemed appropriate for the child (such as mental health providers, medical professionals, juvenile court counselors, or extended family members) are formed to support any child who is having trouble passing school or living in his or her home. Currently established in four county schools (including the local high school), the FCST teams work to help students succeed in the classroom and bring stability to their family life.

McDowell Mission Ministry

Providing emergency food and limited financial assistance with utilities, rent and medications, this organization also operates the Friendship Home for Women and Children, a separate men's shelter and the Christian Clothing Closet.

Southmountain Children and Family Services

Providing support for foster families and community programs, this organization also coordinates the efforts of various agencies who intercede in child abuse cases.

The Gingerbread House

Established by Southmountain Children and Family Services, this Child Advocacy Center coordinates the efforts of the various agencies called into action for child abuse cases, including the Department of Social Services, local law enforcement, the district attorney's office and mental health groups, and thus eliminates the need for multiple interviews of victimized children.

McDowell County Pregnancy Care Center

Focused on helping those at risk for or facing an unplanned pregnancy, this organization offers free and confidential pregnancy services including counseling, option education and support, physician referrals and material needs for babies.

Guardian Ad Litem

This program provides independent advocates to represent and promote the best interests of children who are dependents of the state court system and children who have been abused or neglected.

Centro Unido Latino Americano (CULA)

This organization provides information, educational opportunities and support to Latin-Americans to promote a healthy, educated and racially-unified community. Direct services include an alcoholics anonymous support group, farmworker health program, interpretation and translation services and assistance with community resource navigation.

MANNA FoodBank

Serving 16 counties in Western North Carolina, this organization provides collects, stores, warehouses and distributes food to non-profits and provides direct service on a very limited basis to those struggling with hunger through a Food Stamp Outreach program and Packs for Kids program.

The Volunteer Center of McDowell County

Designed to mobilize people and resources, this organization works to assess the needs of the community and equip volunteers to address them. It serves as a resource center for people seeking volunteer opportunities, as well as agencies needing volunteers.

TAP (Teen Afterschool Program) at the YMCA

This program is designed especially for middle and high school students who have been identified as "at risk" by their school principals, guidance counselors or local church pastors. Students are transported to the Y every day after school and provided with quality programming that includes academic tutoring, mentoring, adventure programming, wellness activities and core values training around honesty, caring, respect and responsibility.

McDowell 4-H

Providing informal and practical out-of-school educational programming to youth ages 5-18, this volunteer-led club provides members with opportunities to participate in local, regional and state activities promoting growth and development around the four H's: head, heart, hands and health.

Boy Scouts of America Piedmont Council and Girl Scouts of WNC
While Boy Scouts focuses on building character, learning the responsibilities of citizenship and developing personal fitness, Girl Scouts is designed to challenge and prepare girls for the future by discovering talents, skills and strengths, connecting with others and taking action in their community.

Thanks to the following sources of information:

McDowell County Partnership for Children's Parent Helpbook - http://www.mcdowellpartnership-smartstart.org/McDowell%20County%20Parent's%20Helpbook%20-%206-10-10.pdf

McDowell County Tourism *McDowell County Traveler's Guide* - http://www.mcdowellnc.org/trip_planner/pdf/travel_guide.pdf

Voices in McDowell *Substance Abuse and Related Issues Resource Guide 2009*
On the web: http://www.voicesinmcdowell.org

Communities in Schools Needs & Feasibility Assessment

Please send additions and corrections for this resource guide to:
Health Educator
Rutherford-Polk-McDowell
District Health Department
408 Spaulding Road
Marion, NC 28752
E-mail: jhines@rpmhd.org

APPENDIX D – LISTENING SESSION AND/OR KEY INFORMANT INTERVIEW GUIDE (IF APPLICABLE)

Listening Sessions

Each of the listening sessions conducted by Rutherford Polk McDowell District Health Department was guided by the same seven questions taken directly from the 2011 *Community Health Assessment Guidebook*. Healthy Carolinians. Community health assessment guidebook. Community health assessment. 2012. Available at http://www.healthycarolinians.org/assessment/guidebook.aspx. Retrieved June 29, 2012.