

WILKES COUNTY

**Joint Community Health
Assessment &
Community Health Needs
Assessment
Spring 2013**

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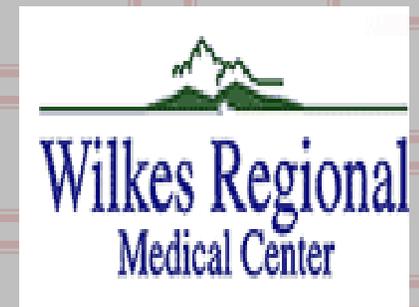


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Chapter 1: Introduction

Every four years the Wilkes County Health Department, along with community partners, conducts a community health assessment (CHA). Each hospital system also conducts a community health needs assessment (CHNA). This year Wilkes County Health Department and Wilkes Regional Medical Center are collaborating to fulfill their CHA and CHNA requirements. With the guidance from UNCG's Center for Social, Community and Health Research and Evaluation, collaborating partners are utilizing a participatory approach to document the health status of residents and the availability of resources in Wilkes County, North Carolina. The purpose of the CHA and CHNA effort is to collect data on health needs and assets within the county, priority health issues, and potential recommendations for the development of action plans that address community health concerns.

A steering committee has been developed comprised of representatives from Wilkes Regional Medical Center, Wilkes County Health Department, the Health Foundation, and UNCG's Center for Social, Community and Health Research and Evaluation. The steering committee engaged community members, local citizens and representatives from other entities residing in Wilkes County in the CHA and CHNA processes. This effort was intended to fulfill state and national reporting requirements for the health department and hospital system. Furthermore, in addition to fulfilling mandatory reporting guidelines the project collected supplementary data to gain a deeper understanding of community needs and assets and maximize problem-solving efficiency. In doing this, each system also has a template for future reporting needs.

Identify Collaborating Partners

In collaboration with the Wilkes County Health Department, Wilkes Regional Medical Center and the Health Foundation were identified as collaborating partners impacting the local service area in Wilkes County. The Center for Social, Community and Health Research and Evaluation (CSCHRE) at the University of North Carolina at Greensboro also contributed substantially to the assessment effort. The mission of the CSCHRE at the UNCG is to "stimulate the development and facilitation of social and community-based public health research, evaluation, and practice in the context of institutional and community collaborations." The CSCHRE specializes in initiating and maintaining community partnerships, database building and data collection, instrument and tool development, qualitative methods, research design and methodology development, evaluation, grant writing and intervention design and development.

Qualifications of third parties assisting with the CHNA

The CSCHRE's contributions to the joint community health assessment / community health needs assessment were led by the Director, Dr. Joseph Telfair. Dr. Telfair is an interdisciplinary community-based and community-oriented researcher with decades of public health and social work research and practice experience. As a professor, researcher and evaluator, Dr. Telfair has led team projects involving but not limited to social epidemiology, community-based and rural health, program evaluation, cultural and linguistic competency, public health genetics, elimination of health disparities, and policy issues concerning women, adolescents and children with chronic conditions. The CSCHRE employs a cadre of full-time staff, graduate research assistants and consultants qualified and experienced in cultural, ethical and social issues specific to health and wellness, health equity, health disparities and program assessment affecting geographically, economically and ethnic/racially diverse and/or vulnerable populations. Over the last 25 years UNCG CSCHRE

members have produced over 45 technical reports and 67 peer reviewed papers, books and book chapters in public health. Research and evaluation initiatives take place at the local, state, national and global levels.

Chapter 2: Description of Assessment Area

Location and Geography

Wilkes County is located in the northwestern corner of North Carolina, south of the Virginia border and one county east of the Tennessee border. Wilkes County's western border is shared with Watauga and Ashe Counties. To the north, the county is bordered by Alleghany and Surry Counties, to the east by Yadkin County, and to the south by Caldwell, Alexander and Iredell Counties. Wilkes County consists of 21 townships. North Wilkesboro is the most populated city in the county and Wilkesboro is the county seat.

Wilkes County is easily accessible by Interstate Highways 77 and 40. US Highway 421 cuts across the southern portion of the county while several NC highways spread through the county from a central point in Wilkesboro. The Blue Ridge Parkway lies along the northwestern border of the county. U.S. 421 and Interstate 40 provide residents with access to the Piedmont Triad International Airport located 80 miles to the east in Greensboro. Interstate 77 provides access to the Charlotte International Airport located 80 miles to the south. Local air access is provided by the Wilkes County Airport. Wilkes County is not a major stop on any passenger railway system (the closest stop is Winston-Salem) and there are no interstate bus lines within the county that offer passenger services (1, 2). The county land area is 760 square miles with 149 miles of paved roads. Approximately 74% of the county's population lives in rural areas and 24% of Wilkes County residents live within 10 miles of a four-lane highway (2).

With an elevation averaging just over 1,000 feet above sea level, Wilkes County enjoys a moderate year-round climate with an average annual temperature of around 56 degrees. Average annual rainfall is around 50 inches and the average snowfall is ten inches (3).

Figure 1. Wilkes County Map

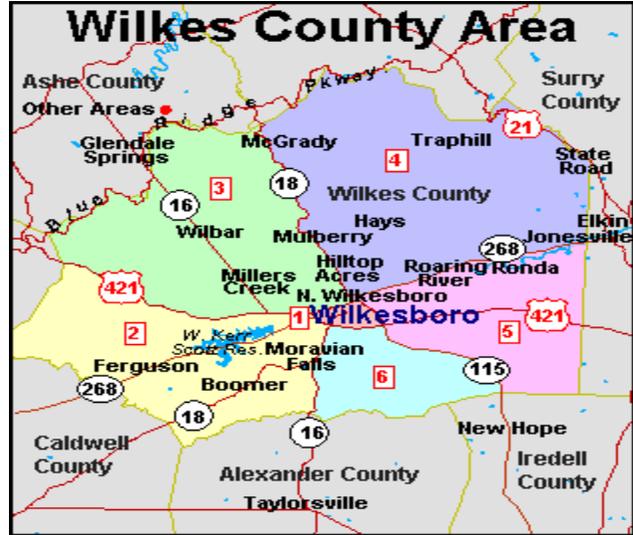
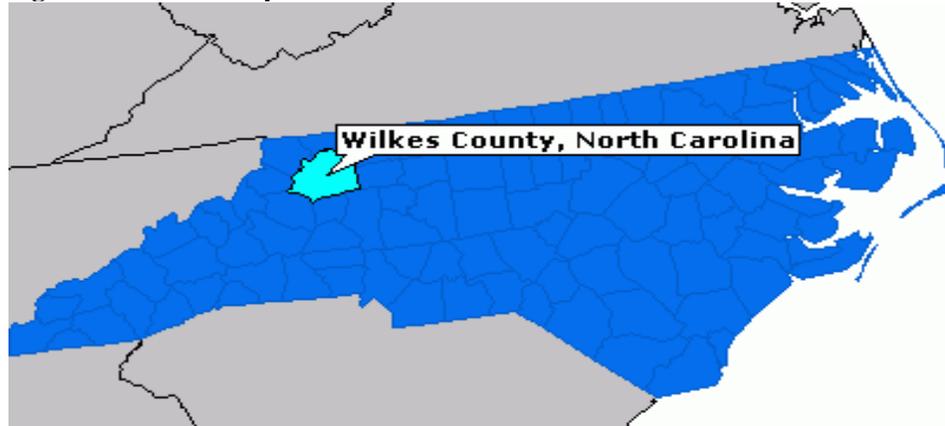


Figure 1. Wilkes County Positioned in North Carolina



Population Characteristics

Located in the north-western region of NC, Wilkes County has a population of 68,984, with an overall increase of 4.9% from 2000 to 2011. The racial makeup of the county is 93.6% Caucasians, 5.6% Hispanic or Latino, 4.4% Black or African Americans, .4% Asians and .3% American Indian and Alaska Natives.

Table 1. Wilkes County Demographics, 2011

Race	Wilkes County Rate	North Carolina Rate
Caucasian	93.6%	72.1%
Hispanic/Latino	5.6%	8.6%
African American	4.4%	22.0%
Asian	.4%	2.3%
American Indian/ Alaskan Native	.3%	1.5%

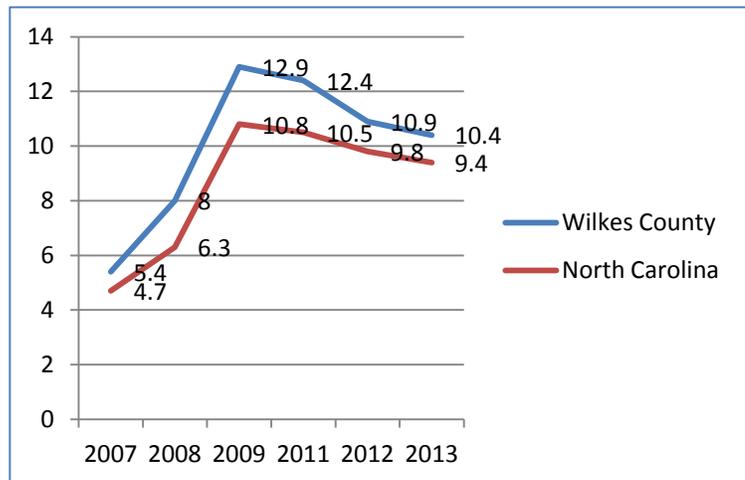
Additionally, 3.3% of county residents are foreign born persons and 5.3% speak a language other than English at home. The county seat is Wilkesboro where largest township being North Wilkesboro, with a population of 4,269. Wilkes County is also a part of the North Wilkesboro Micropolitan Area. [4]

Government and Media

Wilkes County is served by five elected county commissioners and a board of education. The County is a member of the regional High Country Council of Governments. Wilkes Regional Medical Center is the largest hospital in North Carolina’s High Country region. Wilkes County is also home to West Park, North Carolina's largest medical park, built in 2000. West Park has offices for physicians, physical therapists, pharmacies, medical specialists and other medical-related fields.

The primary newspaper publications in Wilkes County are the Wilkes Journal-Patriot, published three times a week, and the weekly Record of Wilkes. The county has three radio stations: WKBC-FM, which plays adult contemporary (Hot AC) music; WKBC (AM), which plays American country music; and WWWC (AM), which plays Southern Gospel Music. In 2006, WKBC-FM was voted the best radio station in the Charlotte listening area by the music critics of Charlotte's Creative Loafing magazine.

Figure 3. Unemployment Rates 2007-2013



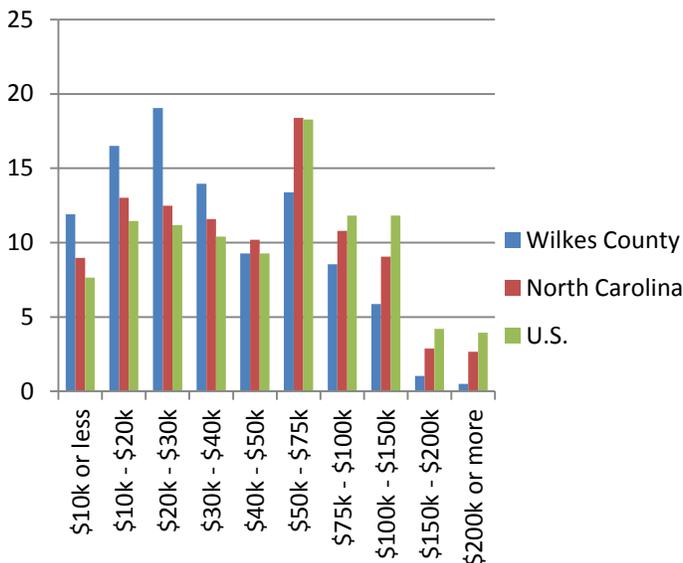
Economy

Wilkes County historically has higher unemployment rates, averaging a 2% difference when compared to state averages from 2007-2013. The unemployment rate for Wilkes County increased at a steady rate from 5.4% in 2007 to 12.9% in 2009. A change in trend was observed when the unemployment rate dropped 0.5% in 2011. The unemployment rate continued to decrease to 10.9% in 2012 and remained at 10.9% in 2013. [5]

The table below shows Wilkes County’s top employers. Tyson’s and Lowe’s each employ well over 2,000 residents. Wilkes County Schools and Wilkes Regional Medical Center are the 3rd and 4th largest employers in the county respectively. [6]

Rank	Company	Employees
1	Tyson	2,700
2	Lowe’s	2,200
3	Wilkes County School	1,200
4	Wilkes Regional Medical Center	848
5	Wilkes County	430
6	Louisiana-Pacific Corp	360
7	Wilkes Community College	252
8	East Coast Milwork Dist. Inc.	179
9	Wal-Mart Stores	156
10	Village of Wilkes	150
11	Westwood Hills Nursing & Rehab	130
12	The Interflex Group	103

Figure 4. Household Income Distribution 2010



The median income for a household in Wilkes County was \$33,464 in 2011. This is approximately \$13,000 less the statewide average of \$46,291. Wilkes County has a higher rate of income than the national and state rate for those making anywhere up to \$30k. There is a significant difference in income distribution for the \$50k and up range with Wilkes County ranking lower than both the national and state rate. The household income distribution by rank is shown to the left. [4]

Wilkes County has the leading rate of population living in poverty at 24.5% and children living in poverty at 35.1%, as compared to surrounding counties and the state level. [7]

Figure 5. 2011 Poverty Data by County as reported from the USDA Economic Research Service

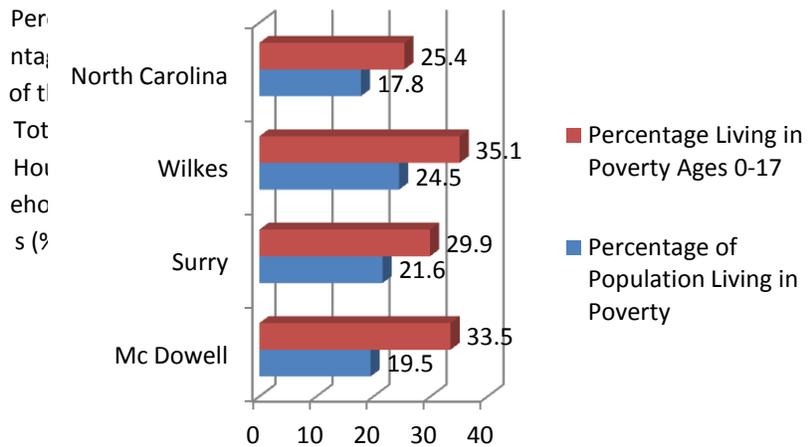


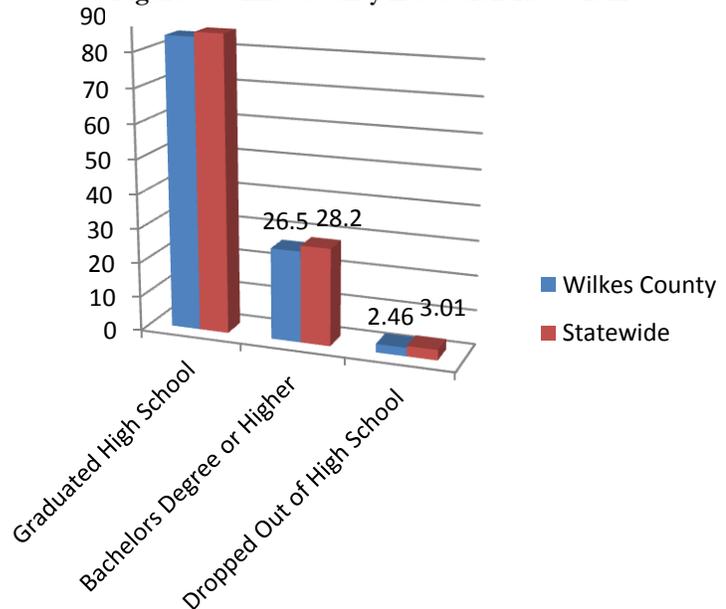
Table 3. 2011 Poverty Data by County as Reported from the USDA Economic Research Service

County	Percent of Population Living in Poverty	Percent Living in Poverty Ages 0-17
McDowell	19.5	33.5
Surry	21.6	29.9
Wilkes	24.5	35.1
North Carolina	17.8	25.4

Education

Wilkes County Schools system has 22 schools, 5 public high schools including an early college high school, 4 public middle schools, and 13 elementary schools. The county also has several private schools as well as a two year community college. As shown below, an average of 84.1% of adults ages 25 or older in Wilkes County have graduated from high school, compared to the 85.4% of adults statewide. Only 26.5% of adults 25 years of age or older have a bachelor's degree or more, which is 1.7% lower than the statewide average. Wilkes County has proven better in their dropout rates at 2.46%, compared to the 3.01% statewide average.

Figure 6. Wilkes County Education Rates 2011



Health Care Resources

One of the primary health care resources apart from WRMC is the Wilkes County Health Department (WCHD). WCHD offers a multitude of services to uninsured adults and children and those receiving Medicaid. Services include family planning, breast and cervical cancer screening, pregnancy care management, pharmacy, immunizations, communicable and sexually transmitted disease management, diabetes self-management education, medical nutrition therapy, environmental health and vital records keeping. Services for maternal and child health include care coordination for children, mobile expanded school health (inclusive of immunizations, sports physicals, sick and injury care, counseling and support), newborn/post-partum services and women, infants and children (WIC) provision. Particularly noteworthy is the Wilkes Public Dental Clinic, which provides a private practice type services to patients with Medicaid with sliding scale fees for those who qualify. The Department also runs a substance abuse task force, mental health task force, fitness and nutrition taskforce, and an access to care task force.

Wilkes Regional Medical Center

Wilkes Regional Medical Center is committed to being an outstanding medical center dedicated to the health of the community. Their mission is to strive to provide comprehensive, high quality and cost effective health care to the citizens of Wilkes County and surrounding areas. They offer a full line of comprehensive medical and education services and are accepted nationwide as the highest standard of medical care in personnel, equipment and organization. Opened in 1952, the facility was initiated as a 100 bed facility that is now licensed for 130 beds, inclusive of a skilled nursing unit on the main campus. The Center includes anesthetic, cardiopulmonary/neurological, maternal and child, dialysis, nutritional, quality management, rehab, surgical, women's, infection control and emergency department services. The rehabilitation services include inpatient and outpatient physical therapy, occupational therapy, speech therapy and athletic training. Rehabilitation, diagnostic and dialysis services are also available at offsite facilities. Additionally, home care, hospice and pastoral services are available for those who need them. Wilkes Regional also offers case management and care connection services which provide access affordable medications to those who qualify.

Community served by hospital and how it was determined

The vast majority of WRMC's patients are from Wilkes County. The following Wilkes Regional Medical Center demographic data are representative of all patient visits between June 2011 and September 2012. The data are inclusive of everyone who was admitted and/or received services from WCRM during this period of time.

The following data were all obtained from the Wilkes Regional Medical Center records.

Table 4. Demographics, N=79165

Gender	Frequency	%
Female	48253	61.0
Male	30894	39.0
Race		
Caucasian	71847	90.8
Black or African American	4574	5.8
Asian	1826	2.3
Other Race	717	0.9
Declined/unavailable	155	0.2
American Indian	46	0.1
Ethnicity		
Non-Hispanic	74537	94.2
Declined/unavailable	2509	3.2
Hispanic	2092	2.6
Age		
0	800	0.9
1-19	10699	13.5
20-34	13646	17.3
35-54	20145	25.5
55-64	10685	13.5
65-74	10714	13.5
75 or older	12476	15.8

During the period of June 2011 to September 2012, the majority (61%) of WRMC service users in Wilkes County were Caucasian (91%), non-Hispanic (94.2%) and female (61%). African Americans represent the second largest racial group represented (6%). The largest percentage of users fall in the between the ages 35-54 (26%) with a large majority of the patients being older adults.

The great majority (90%) of the patients' bill type was outpatient only, the second most prevalent bill type is inpatient (9%), and the remaining billing types represented less than 1% of the sample.

Table 5. Billing Type, N= 79165

Bill Type	n (%)
Outpatient only	71532 (90.4)
Inpatient bill type	7421 (9.4)
Skilled Nursing	201 (0.3)
Renal Dialysis	9 (0.0)
Inpatient Bill Type	2 (0.0)

Table 6. Top 10 Patient Zip Code, N = 79162

Rank	Zip Code	City	n (%)
1	28659	North Wilkesboro	27629 (34.9)
2	28697	Wilkesboro	15786 (19.9)
3	28651	Millers Creek	9210 (11.6)
4	28635	Hays	4285 (5.4)
5	28654	Moravian Falls	4201 (5.3)
6	28665	Purlear	2972 (3.8)
7	28606	Boomer	2341 (3.0)
8	28669	Roaring River	2073 (2.6)
9	28624	Ferguson	1817 (2.3)
10	28649	MC Grady	1350 (1.7)

Those who used WRMC services reported their marital status as almost equally married (44%) or single (33%) and less than 23% of others were widowed, divorced, separated or unknown.

Users of Wilkes Regional Medical Center (WRMC) were mostly from the Wilkesboro/North Wilkesboro area (55%) with the next most common area being Millers Creek (12%) all of the eight (8) other areas in the county represented 5% (each) of the users of the WRMC during the June 2011 to September 2012 period (see Table 6).

Table 7. Patient Marital Status, N= 23165

Marital Status	n (%)
Married	10240 (44.2)
Single	7618 (32.9)
Widowed	2512 (10.8)
Divorced	1975 (8.5)
Separated	706 (3.0)
Unknown	96 (0.4)
Life Partner	1 (0.1)

Table 8. Patient Employment, N=76413

Type of Employment	n (%)
Not Employed	28440 (37.2)
Retired	21215 (27.8)
Employed Full-time	17499 (22.9)
Disabled	6166 (8.1)
Employed Part-time	1732 (2.3)
Self Employed	1333 (1.7)
Unknown	28 (0.0)

Users of WRMC services more often unemployed (37%) than employed (full or part-time, 26%) and equally retired (28%), however only a small percent were identified as disabled (8%) (see Table 8).

Health Insurance

Wilkes County has a lower rate of uninsured children (7.7%) and adults (19.2%), as compared to the statewide level. The table below outlines the estimated rates of uninsured population for Wilkes County, surrounding counties and North Carolina. (Following convention, we do not include the elderly since only about one percent of older adults are uninsured.) Figure 7 offers a visual comparison to other counties.

Figure 7. Estimate of Uninsured 2010-2011

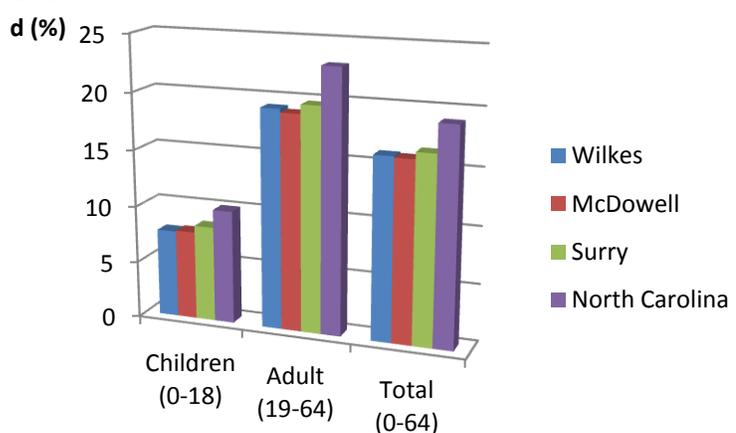


Table 9. Estimate of Uninsured 2010-2011

	Children (0-18)		Adult (19-64)		Total (0-64)	
	n	%t	n	%	n	%
Wilkes	1,000	7.7	9,000	19.2	10,000	16.0
McDowell	1,000	7.8	6,000	18.9	6,000	15.9
Surry	2,000	8.4	9,000	19.7	11,000	16.5
North Carolina	214,000	10	1,341,000	23.0	1,562,000	19.0

Chapter 3: Data Collection and Assessment Methods

Secondary Data

Secondary data were collected mainly from the North Carolina State Center for Health Statistics (SCHS) which has an online County Health Data Book and a link to BRFSS (Behavioral Risk Factor Surveillance System) and other online resources. Data were evaluated primarily at the county level. Comparisons were made between Wilkes County, surrounding counties and the state of North Carolina throughout.

Primary Data

Community Stakeholder Survey

The goal of the Community Health Assessment (CHA) is to learn about the health and quality of life in Wilkes County, while identifying the strengths and challenges in the community. As part of the larger CHA project, a stakeholder survey was distributed. The purpose of the stakeholder survey was to solicit input on critical issues that influence the health of citizens and decisions to be made by providers and institutions (e.g., Wilkes County Health Department [WCHD], Wilkes Regional Medical Center [WRMC], community organizations, physicians, etc.). The WCHD sought to include a diversity of opinions that were representative of decision makers, health providers, and social and education services to citizens of Wilkes County. A total of 33 responses were received.

Community Health Opinion Survey

Community Health Opinion Surveys (CHOS) were distributed to residents of Wilkes County, NC between July 2012 and January 2013. Surveys were completed either online via Survey Monkey or in person at various community locations. A total of 938 residents completed the survey.

Wilkes Regional Hospital Data Collection and Analysis Method

Wilkes Regional Medical Center collects inpatient and outpatient data and maintains databases that provide timely and detailed local statistics. A de-identified dataset was retrieved for all patients who used a WRMC facility during from June 2011 to September 2012. As a result, 79,165 patients' records were retrieved. Key variables (information) retrieved from the records includes: demographic information, bill types, admission types, discharge status, diagnosis codes, and procedures codes, among others. In total, 76 variables were retrieved.

Data were cleaned by removing redundant variables (e.g., overlapping variables), checking invalid input and then recoding them as missing values. Variables (or indicators) that had more than 40 percent missing values were excluded from further analysis. In the end, 15 variables were retained for further analysis. After data cleaning, descriptive analysis (i.e., frequency and percentage of each category under each variable) were provided.

Because diagnoses codes were spread out amongst patients, codes were clustered into broader ICD-9 categories. The frequencies and percentages for the top ten prevalent diagnosis codes were then provided.

Description of how input from the community was used

Community input for the joint CHA / CHNA process were gathered via a stakeholder survey and Community Health Opinion Survey as stated above. Wilkes County also hosted a Health Summit in May to present the current health findings in the County, solicit feedback and involve community stakeholders in a strategy planning effort toward addressing the top key issues. Two sets of 3 breakout sessions, one hour each, were held with health and service providers representing a number of community organizations. The key health areas focused on were access to care, chronic disease, physical activity and nutrition, unintentional injury, mental health and substance abuse. After being presented with the relevant data pertaining to the particular health area, participants were asked to indicate work they have done up to date that addresses those issues. From there they were asked to brainstorm and consider community resources and needs. Based on that information, community stakeholders were asked to devise ways in which these priority areas can be addressed in the future.

Limitations or information gaps that may impact ability to assess needs

The CHA/CHNA data collection had several quantitative study limitations. Quantitative data limitations were primarily associated with the collection and use of secondary data. There is no insurance of randomization (typically used in large surveys) and may not be representative of the county demographics. Therefore, many of the health behavior results measured may understate the true level of risk in the total population. Additionally, because it is expected that respondents will under-report health risk behaviors, especially those that are illegal or socially unacceptable, the data may not be representative of the reality.

In terms of the stakeholder data surveys were mailed and returned by mail. Because of this, issues in data collection cannot be fully determined. The research team is unable to assess whether the surveys reached the appropriate parties and were completed as intended.

The Community Health Opinion surveys were not entirely representative of the County. Hispanic populations were oversampled and men were under represented, though this is not atypical for survey research. Further, low income and those with lower education status (representative of the county demographics) were also under represented.

Wilkes Regional Medical Center data is believed to be representative of the population served during the time period indicated above.

Chapter 4: Detailed Data

This chapter contains secondary data on various health outcomes, including issues in women’s health, communicable disease and mental health.

Secondary Data

Leading Causes of Death

In 2011, total death count in Wilkes County was 672, and total death count for NC was 79,680. The top ten leading cause of death data in Table 10 was retrieved from *North Carolina Vital Statistics Volume 2: Leading Causes of Death* (January 2013). Percentages were calculated based on the total death and number of death caused by specific disease.

Overall, Wilkes County and North Carolina are similar in the top ten causes of death for persons aged 1-99. However, Motor Injury stands out to be one of the top ten causes of death in Wilkes County (tied with Septicemia), but does not rate in the top ten for North Carolina. Also, Pneumonia and Influenza is the fifth populated cause of death for Wilkes County, but the ninth for North Carolina. [9]

Table 10. Leading Causes of Death for Wilkes and North Carolina (2011)

Wilkes Rank	Cause	Wilkes Number n (%)	State Number n (%)	NC Rank
1	Cancer	175 (26.0)	18201 (22.8)	1
2	Disease of heart	132 (19.6)	16959 (21.3)	2
3	Chronic lower respiratory diseases	52 (7.7)	4705 (5.9)	3
4	Cerebrovascular Disease	30 (4.5)	4290 (5.4)	4
5	Pneumonia and Influenza	27 (4.0)	1616 (2.0)	9
6	Other unintentional	22 (3.3)	2996 (3.8)	5
7	Diabetes Mellitus	21 (3.1)	2276 (2.9)	7
8	Nephritis, Nephrotic Syndrome and Nephrosis	18 (2.7)	1705 (2.1)	8
9	Alzheimer’s Disease	13 (1.9)	2820 (3.5)	6
10	Septicemia	12 (1.8)	1319 (1.7)	10
10	Motor Injury	12 (1.8)	-	-

**Table 11. 2007-2011 NC Resident Race/ Ethnicity-Specific and sex-specific Age-Adjusted Death Rates
Residence=Wilkes)**

Cause of Death:	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
All Causes	3,296	847.4	158	921.5	6	N/A	27	288.2	1,784	998.2	1,703	704.7	3,487	839.3
Diseases of Heart	681	169.4	22	124.7	1	N/A	2	N/A	346	192.0	360	140.2	706	165.2
Acute Myocardial Infarction	139	34.1	9	N/A	0	N/A	0	N/A	84	46.3	64	24.2	148	34.4
Other Ischemic Heart Disease	302	74.0	10	N/A	0	N/A	2	N/A	178	97.1	136	53.0	314	72.6
Cerebrovascular Disease	177	44.4	17	N/A	0	N/A	1	N/A	83	49.3	112	44.1	195	46.1
Cancer	775	187.8	41	238.2	1	N/A	7	N/A	460	239.3	364	149.0	824	188.1
Colon, Rectum, and Anus	70	17.1	3	N/A	0	N/A	0	N/A	43	22.3	30	12.7	73	16.8
Pancreas	47	11.4	4	N/A	0	N/A	1	N/A	30	14.3	22	8.7	52	11.7
Trachea, Bronchus, and Lung	255	60.1	17	N/A	0	N/A	1	N/A	, Mal	75.3	122	49.1	273	60.7
Breast	35	15.8	3	N/A	0	N/A	0	N/A	0	N/A	38	16.1	38	16.1

Prostate	35	22.1	2	N/A	0	N/A	0	N/A	37	22.0	0	N/A	37	22.0
Diabetes Mellitus	93	22.9	9	N/A	1	N/A	1	N/A	63	34.0	41	17.3	104	24.0
Pneumonia and Influenza	97	24.6	5	N/A	0	N/A	1	N/A	48	29.6	55	21.7	103	24.7
Chronic Lower Respiratory Diseases	225	53.9	4	N/A	0	N/A	0	N/A	116	64.5	113	45.2	229	52.0
Chronic Liver Disease and Cirrhosis	39	10.3	5	N/A	0	N/A	0	N/A	35	17.3	9	N/A	44	10.6
Septicemia	63	16.0	8	N/A	0	N/A	0	N/A	38	20.4	33	14.2	71	17.0
Nephritis, Nephrotic Syndrome, and Nephrosis	50	12.7	6	N/A	1	N/A	0	N/A	25	15.9	32	12.9	57	13.7
Unintentional Motor Vehicle Injuries	79	27.9	2	N/A	0	N/A	6	N/A	59	36.9	28	17.7	87	27.4
All Other Unintentional Injuries	167	52.8	3	N/A	1	N/A	0	N/A	104	62.7	67	35.3	171	49.1
Suicide	54	16.5	1	N/A	0	N/A	1	N/A	45	25.3	11	N/A	56	15.5
Homicide	15	N/A	3	N/A	0	N/A	1	N/A	17	N/A	2	N/A	19	N/A
Alzheimer's disease	93	23.6	1	N/A	0	N/A	0	N/A	20	13.0	74	28.1	94	22.5
Acquired Immune Deficiency Syndrome	5	N/A	0	N/A	0	N/A	0	N/A	4	N/A	1	N/A	5	N/A

(Standard=Year 2000 U. S. Population; Rate per 100,000 Population.)

The aggregated data from 2007 to 2011 shows that African American non-Hispanics have the highest death rate compared to other races; Hispanics have the lowest death rate. White non-Hispanics have the highest death rate from heart disease.

Overall, males have higher death rates than women. Males have higher death rates from cancer, chronic lower respiratory diseases, pneumonia and influenza than women, but women have a higher death rate from Alzheimer’s disease than men.

Health Risk Factors

Many factors contribute to cancer and heart diseases (e.g., genetic factor, smoking, tobacco, diet, physical activity). The Behavioral Risk Factor Surveillance System (BRFSS) is a survey that collects data on health risk factors and behaviors for residents 18 years or older. A list of survey questions can be found at <http://www.schs.state.nc.us/schs/brfss/pdf/BRFSSQ11.pdf>. As BRFSS data is not available at county level, the comparison was made between NC and Western Region that Wilkes County falls within.

Table 12 shows the responses to selected questions about health risk factors and behaviors known to contribute to cancer and heart disease (Note: Factors or questions were selected based on previous Wilkes County CHA report, 2009). Percentages of respondents who reported no physical activity in the past month, not eating five or more servings of fruits or vegetables per day, and binge drinking were slightly lower in Wilkes County compared to state percentages. However, percentage of adults who are currently smokers in Wilkes County is higher than in North Carolina overall. [9]

Table 12. Selected Behavioral Risk Factors for Western Region and NC (2011)

	Western Region	NC
% Report no physical activity in past month	26.4	26.7
% Report not eating five or more serving of fruits or vegetables per day	86.1	86.3
% of adults who are currently smoker	24.2	21.8
% Adults who reported binge drinking	11.5	15.2
% Body mass index grouping –obese	24.7	29.1
% Body mass index grouping – overweight	39.5	36
% Being told having high blood pressure	35.1	32.4
% being told having borderline diabetes or pre-diabetes	8.2	7.9
% being told having diabetes	10.7	10.9
% having conditions that make taking aspirin unsafe	8.0	5.8

Wilkes County has a lower heart disease death rate than North Carolina. This rate has decreased substantially from rates reported in previous Wilkes County community health assessments. [9]

Table 13. Age-Adjusted Heart Disease Death Rates per 100,000 Residents

	1997-2001	2002-2006	2007-2011
Wilkes	242.5	203.9	165.2
NC	261.4	216.5	179.3

As evidenced in Table 14, Wilkes County's cancer death rate decreased slightly decreased previous years. In 2002-2006, Wilkes County had lower cancer death rates compared to North Carolina rates. However, from 2007-2011, Cancer death rates in Wilkes County were higher than overall rates in North Carolina. [10]

Table 14. Age-Adjusted Total Cancer Death Rates per 100,000 Residents

	1997-2001	2002-2006	2007-2011
Wilkes	201.8	193.2	188.1
NC	204.3	193.6	179.7

As evidenced in Table15, the Wilkes County stroke death rate is comparable to the overall stroke death rate in the North Carolina. The stroke death rate in Wilkes County has decreased from previous time periods. [10]

Table 15. Age-Adjusted Stroke Death Rates per 100,000 Residents

	1997-2001	2002-2006	2007-2011
Wilkes	92.1	56.8	46.1
NC	75.6	60.9	46.0

From the hospital inpatient utilization data, we can observe that the largest numbers of patients were diagnosed with Cardiovascular & Circulatory diseases followed by respiratory diseases. Although the number of patients were diagnosed with different cancers were small, the cost of the cancer treatment was high compared to some other diseases (e.g., infectious, respiratory diseases). [10]

Table 16. Inpatient Hospital Utilization and Charges by Principal Diagnosis, and County of Residence, NC 2011, RESIDENCE=WILKES

Diagnostic Category	Total Cases	Discharge Rate (per 1,000 Pop.)	Average Days Stay	Days Stay Rate (Per 1,000 Pop.)	Total Charges	Average Charge Per Day	Average Charge Per Case
INFECTIOUS & PARASITIC DISEASES	513	7.4	5.6	42.0	\$14,573,408	\$5,029	\$28,408
-- Septicemia	383	5.6	6.2	34.3	\$12,559,455	\$5,304	\$32,792
-- AIDS	3	0.0	8.0	0.3	\$69,359	\$2,890	\$23,120
MALIGNANT NEOPLASMS	253	3.7	6.2	22.7	\$9,384,501	\$5,989	\$37,093
-- Colon, Rectum, Anus	39	0.6	6.6	3.7	\$1,533,248	\$5,943	\$39,314
-- Trachea, Bronchus, Lung	40	0.6	6.9	4.0	\$1,379,941	\$5,018	\$34,499
-- Female Breast	15	0.2	3.1	0.7	\$318,138	\$6,916	\$21,209
-- Prostate	19	0.3	1.7	0.5	\$612,370	\$18,557	\$32,230
BENIGN, UNCERTAIN & OTHER NEOPLASMS	58	0.8	3.1	2.6	\$1,372,481	\$7,541	\$23,663
ENDOCRINE, METABOLIC & NUTRIT. DISEASES	284	4.1	3.3	13.6	\$4,424,197	\$4,702	\$15,578
-- Diabetes	152	2.2	3.7	8.1	\$2,629,710	\$4,696	\$17,301

BLOOD & HEMOPOETIC TISSUE DISEASES	93	1.3	3.7	5.0	\$1,657,456	\$4,846	\$17,822
NERVOUS SYSTEM & SENSE ORGAN DISEASES	193	2.8	3.9	11.0	\$3,489,488	\$4,591	\$18,080
CARDIOVASCULAR & CIRCULATORY DISEASES	1,598	23.2	4.0	92.8	\$43,287,105	\$6,761	\$27,088
-- Heart Disease	1,084	15.7	4.1	63.8	\$31,249,431	\$7,099	\$28,828
-- Cerobrovascular Disease	269	3.9	4.0	15.7	\$6,174,442	\$5,691	\$22,953
RESPIRATORY DISEASES	1,102	16.0	4.8	76.6	\$21,720,312	\$4,113	\$19,710
-- Pneumonia/Influenza	413	6.0	4.5	27.1	\$7,120,600	\$3,810	\$17,241
-- Chronic Obstructive Pulmonary Disease	393	5.7	3.7	20.8	\$5,625,991	\$3,918	\$14,315
DIGESTIVE SYSTEM DISEASES	872	12.6	4.1	51.8	\$18,845,104	\$5,270	\$21,611
-- Chronic Liver Disease/Cirrhosis	11	0.2	5.0	0.8	\$395,357	\$7,188	\$35,942
GENITOURINARY DISEASES	490	7.1	3.8	27.0	\$8,518,534	\$4,568	\$17,385
-- Nephritis, Nephrosis, Nephrotic Synd.	201	2.9	4.9	14.3	\$3,696,196	\$3,756	\$18,389
PREGNANCY & CHILDBIRTH	720	10.4	2.3	23.7	\$6,039,457	\$3,698	\$8,388
SKIN & SUBCUTANEOUS TISSUE DISEASES	187	2.7	4.3	11.6	\$2,964,660	\$3,706	\$15,854
MUSCULOSKELETAL SYSTEM DISEASES	435	6.3	3.4	21.3	\$20,927,221	\$14,217	\$48,109
-- Arthropathies and Related Disorders	213	3.1	3.4	10.5	\$10,191,251	\$14,038	\$47,846
CONGENITAL MALFORMATIONS	22	0.3	9.4	3.0	\$1,316,475	\$6,360	\$59,840
PERINATAL COMPLICATIONS	27	0.4	12.6	4.9	\$1,135,618	\$3,350	\$42,060
SYMPTOMS, SIGNS & ILL-DEFINED CONDITIONS	531	7.7	2.3	17.5	\$6,173,255	\$5,110	\$11,626
INJURIES & POISONING	669	9.7	5.7	55.1	\$25,651,937	\$6,754	\$38,344
OTHER DIAGNOSES (INCL. MENTAL DISORDERS)	601	8.7	7.0	60.6	\$8,893,709	\$2,129	\$14,798
ALL CONDITIONS	8,648	125.4	4.3	542.9	\$200,374,918	\$5,351	\$23,170

In Wilkes County, the colon and rectal cancer death rate is almost twice as high as colon and rectal cancer rates in North Carolina. It is also significantly higher for trachea, bronchea, lung and breast cancer, compared to the state. For all cancers, Wilkes County has a much higher colon and rectal cancer death rate per 100,000 people than the rest of the state. [11]

Table 17. Cancers Death Rate of 2011 per 100,000 Residents

	Colon, Rectum,	Trachea, Bronchea & Lung	Breast Cancers	Prostrate	All Cancer
Wilkes	30.4	73.9	40	17.7	253.7
NC	15.5	57.1	26.4	18.2	188.5

Once age-adjusted, the cancer death rates remain higher for colon, rectal, trachea, bronchea and lung cancers for Wilkes County than they do for North Carolina. However, the Wilkes County has a lower rate of breast and prostate cancer. Overall, Wilkes County has higher cancer death rate than the state in 2011. [11]

Table 18. Age- Adjusted Cancer Death Rate 2007-2011

	Colon & Rectum	Trachea, Bronchea & Lung	Breast Cancers	Prostrate	All Cancer
Wilkes	16.8	60.7	16.1	22.0	188.1
NC	15.5	54.5	22.8	24.3	179.7

As evidenced from Table 20, cancer incidence rates increased from previous periods for both Wilkes County and NC overall. Wilkes County has lower breast cancer incidence rate (138.2) than the state overall (155.9) between 2006-2010. Wilkes County also has lower breast death rate (22.0) than the state (24.3) as evidenced in Table 19. [12]

Table 19. Age- Adjusted Breast Cancer Incidence Rate per 100,000 Residents

	1996-2000	2001-2005	2006-2010
Wilkes	133.4	125.1	138.2
NC	147.2	149.7	155.9

There was a decrease in prostate cancer deaths from periods of 2001-2005 and 2006-2010. Prostate cancer deaths in Wilkes County were lower that the stated overall. [12]

Table 20. Age-Adjusted Prostrate Cancer Incidence Rate in per 100,000 Residents

	1996-2000	2001-2005	2006-2010
Wilkes	129.0	170.7	142.3
NC	154.5	162.1	153.7

Pregnancies and Live Birth Data

Wilkes County has a lower birth rate (9.8 per 1,000) overall, than that of North Carolina (12.5). Overall, the highest rate for live birth was among Hispanic-identified persons (19.9), followed by White-Non Hispanic persons (9.3). [13]

Table 21. Wilkes and North Carolina Live Birth Data 2011

	Total	White –Non Hispanic	Black, Non-Hispanic	Hispanic
	n (rate)	n (rate)	n (rate)	n (rate)
Wilkes	673 (9.8)	570 (9.3)	18 (5.7)	77 (19.9)
NC	120,403 (12.5)	67,542 (10.6)	28,509 (13.5)	18,217 (21.9)

Birth rate= number of live births/ population of area *1000

Live birth rates were highest among Hispanic persons (24.4 per 1,000), and second highest for non-Hispanic White persons. [13]

Table 22. Wilkes and North Carolina Live Birth Rate Data 2007-2011

	Total	White –Non Hispanic	Black, Non-Hispanic	Hispanic
Wilkes	10.9	9.9	9.3	24.4
NC	13.5	11.2	14.7	27.5

Birth rate= number of live births/ population of area *1000

In 2011, there were 673 live births in Wilkes County. The total birth rate of Wilkes County, 9.8 per 1,000 population, is lower than North Carolina state overall (12.5 per 1,000). The rate of perinatal death rate in Wilkes County is slightly higher (11.8 per 1,000) compared to NC (11.1 per 1,000). This is also true for the neonatal death rate (7.4 per 1,000) and the rate of deaths under 1 year of age (11.9 per 1,000) in Wilkes County. This is compared to NC neonatal and under 1 year date rates of 4.9 and 7.2 per 1000, respectively). [13]

Table 23. Birth and Death Vital Statistics 2011

	Live Births (Rate)	Total # of Perinatal Deaths (Rate)	Total # of Fetal Deaths (Rate)	Total # of Neonatal Deaths (Rate)	Total # of Infant Deaths Under 1 Year of Age (Rate)
Wilkes	673 (9.8)	8 (11.8)	3 (4.4)	5 (7.4)	8 (11.9)
NC	120,403 (12.5)	1348 (11.1)	753 (6.2)	595 (4.9)	866 (7.2)

Note: death rate is calculated by = Number of death/number or live birth X 1,000

In Wilkes County the rate of smoking during pregnancy was highest among non-Hispanic Whites (26.3) and African Americans (22.2). The rate of smoking during pregnancy in Wilkes County overall is twice as high (23.2) as the rate for North Carolina (14). [13]

Table 24. Women Smoked During Pregnancies 2011

	Total	White, Non-Hispanic	Black, Non-Hispanic	Hispanic
	n (rate)	n (rate)	n (rate)	n (rate)
Wilkes	156 (23.2)	150 (26.3)	4 (22.2)	2 (2.6)
NC	13159 (10.9)	9448 (14)	2,944 (10.3)	307 (1.7)

In 2011, the rate of women smoking during pregnancy in Wilkes County was much higher than NC overall. White women had the highest rate of smoking during pregnancy (26.3%). This is followed by Black women (22.2) in which the rate of smoking during pregnancy is more than double the NC rate (10.3).

Teenage Pregnancy

Wilkes County had higher teen pregnancies rates than that of the state overall, but the rate has decreased over the years. [14]

Table 25. Teen Pregnancies (Age 15-19) per 1,000 Female Residents

	1997-2001	2002-2006	2007-2011
Wilkes	83.4	64.5	58
NC	77.6	64	55.3

Overall, the Wilkes County teen pregnancy rate was higher (53.9) than in North Carolina (43.8). The highest rates of teen pregnancies in Wilkes County were found among non-Hispanic Whites (54) and among African Americans (61.6) in North Carolina. [14]

Table 26. Resident Pregnancy Rates per 1,000 Population, Ages 15-19, 2011

	Total	White Non-Hispanic	African American Non-Hispanic	Other Non-Hispanic	Hispanic
	n (rate)	n (rate)	n (rate)	n (rate)	n (rate)
Wilkes	107 (53.9)	93 (54.0)	2 (17.5)	0 (0)	12 (85.7)
NC	13,909 (43.8)	5,719 (30.8)	5,399 (61.6)	495 (39.4)	2241 (71.1)

Wilkes County had lower percentage of low birth weights (7.88%) compared to North Carolina (9.06%). However, the percentage of low birth weights among African Americans was 27.8%. This is 3 times as high as the total percentages of low birth weights in North Carolina. [15]

Table 27. Number and percentage of low birth weight births by race, 2011

	White Non-Hispanic	African American Non-Hispanic	Other Non-Hispanic	Hispanic	Total
	n (%)	n (%)	n (%)	n (%)	n (%)
Wilkes	40 (7.0)	5 (27.78)	8 (0)	8 (10.39)	53 (7.88)
NC	5046 (7.47)	4032 (14.14)	570 (9.29)	1257 (6.9)	10905 (9.06)

CHAMP (Child Health Assessment and Monitoring Program) is a survey to measure the health characteristics of children, ages 0 to 17. The table below shows during 2009-2010, Western NC has lower percentage of children who are identified as obese, than the state. The percentage of children who are overweight are similar to that of the state. There is higher percentage of children within recommended weight range than the whole state. [16]

Table 28. Weight Status Children Age 10-17, 2009-2010

	Total Respond	Underweight	Recommended Range	Overweight	Obese
		n (%)	n (%)	n (%)	n (%)
Western NC	336	9 (2.7)	223 (72.9)	54 (14.8)	50 (9.6)
North Carolina	2,074	79 (4.0)	1,375 (64.9)	303 (14.7)	317 (16.4)

Communicable Disease

Based on the reported data we can see that Wilkes communicable diseases rate are much lower than the state overall.

The gonorrhea rate was exceptionally high among African Americans both in Wilkes County (180.0) and North Carolina overall (581.6) when compared to other races. [17]

Table 29. Gonorrhea Cases and Rates per 100,000 Population, 2006-2010

	Total	White Non-Hispanic	African American Non-Hispanic	Other Non-Hispanic	Hispanic
Residence	Cases (rate)	Cases (rate)	Cases (rate)	Cases (rate)	Cases (rate)
Wilkes	73 (21.7)	46 (15.3)	26 (180.0)	0 (0.0)	1 (5.6)
North Carolina	77,867 (168.9)	16,488 (52.9)	58,041 (581.6)	1,485 (96.7)	1,853 (54.2)

Note: Rates based on small numbers (fewer than 20 cases) are unstable and should be interpreted with caution.

There were no known reports of primary or secondary Syphilis cases in Wilkes County between 2006-2010. [18]

Table 30. Primary and Secondary Syphilis Cases and Rates per 100,000 Population, 2006-2010

	Total	White Non-Hispanic	African American Non-Hispanic	Other Non-Hispanic	Hispanic
Residence	Cases (rate)	Cases (rate)	Cases (rate)	Cases (rate)	Cases (rate)
Wilkes	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
North Carolina	1,894 (4.1)	433 (1.4)	1,380 (13.8)	17 (1.1)	64 (1.9)

Note: Rates based on small numbers (fewer than 20 cases) are unstable and should be interpreted with caution.

The death rate due to HIV disease is substantially lower in Wilkes County than the state, overall. [19]

Table 31. HIV Disease Death Rate of 2011, and 2007-2011

Geographical Area	Number of Deaths 2011	Death Rate* 2011	Number of Deaths 2007-2011	Death Rate* 2007-2011	Age-Adjusted Death Rate* 2007-2011
Wilkes	1	1.4	5	1.5	1.8
North Carolina	271	2.8	1,687	3.6	3.5

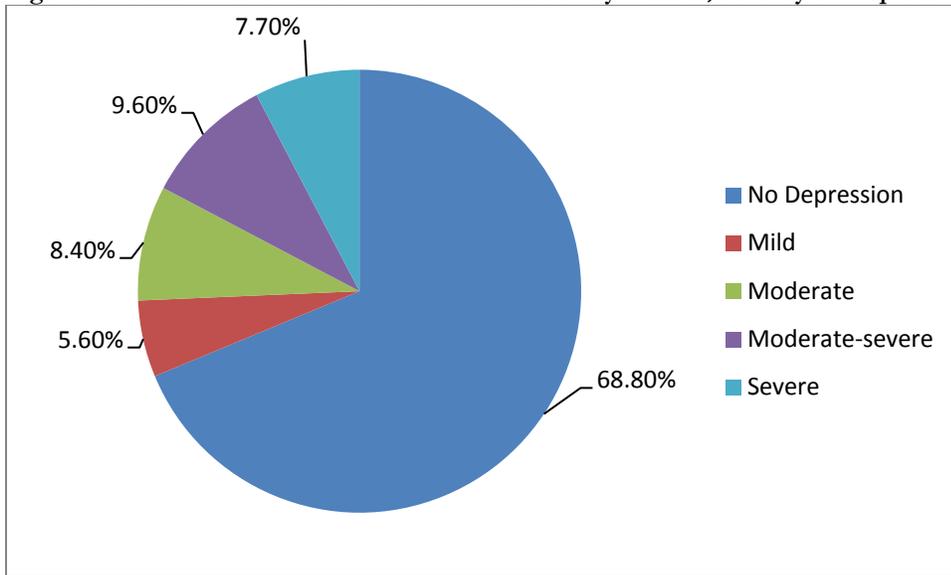
Mental Health Issues

Depression and suicide rates are key measures of mental health and emotional health. Depression from 2011 BRFSS data (Table 32) shows that the majority of Western NC respondents report no depression. [20]

Table 32. Severity of Depression, 2011

Residence	Total respond	No Depression n (%)	Mild n (%)	Moderate n (%)	Moderate-Severe n (%)	Severe n (%)
North Carolina	11318	8019 (67.30)	774 (7.8)	953 (9.8)	876 (9.3)	696 (5.8)
Western NC	1908	1360 (68.8)	97 (5.6)	137 (8.4)	163 (9.6)	151 (7.7)

Figure 8. Western North Carolina: 2011 BRFSS Survey Results, Severity of Depression



Wilkes County ranked 17th in suicide rates among all the counties in NC, and has higher suicide rate than that of the state overall. Wilkes County suicide rate in 2007-2001 did not change from previous periods. [10]

Table 33. Age-Adjusted Suicide Rates per 100,000 Residents

	1997-2001	2002-2006	2007-2011
Wilkes	11.7	15.5	15.5
NC	11.4	11.6	12.1

Primary Data: WCHD 2012 Community Health Assessment Stakeholders Survey

Between July 27 and September 17, 2012, stakeholder surveys were distributed to the agencies listed below. Basic content analyses (Strauss, 1989) was used to analyze the responses from the open-ended question. Simple responses were first extracted then aggregated into themes linked to each question. These simple responses are listed in the raw data tables and the themes are summarized in this preliminary executive report.

All persons were asked to complete the survey responded affirmatively. Prior to distribution, WCHD explained: a) the purpose and intent of the survey; b) the opt-out option on any and all questions; c) that responses would be anonymous; and d) participation consent procedures.

- Leadership staff at WRMC
- City Mayors in Wilkes County
- Health Department Management Team
- Health Foundation Board
- Economic Development
- United Way Partner Agencies

- Healthcare Providers
- Daymark
- Mental Health agencies and Substance Abuse agencies
- Wilkes Community College
- Wilkes County City Planners
- CHA Advisory Team

Description of Respondents

A total of 33 responses were received. As shown in Table 34, respondent stakeholders represented those in executive positions (such as Directors, VPs, President and CEOs), those in management positions (such as supervisors), those in direct service positions (such as coordinators and assistants) and those serving in an advisory capacity (such as Board Chair).

Table 34. Positions of Stakeholder Participants

Position	n (%)
Directors	10 (30.3)
President/owner	7 (21.2)
V-P	4 (12.1)
Manager	3 (9.1)
Chief Financial Officer	1 (3)
CEO	1 (3)
Nursing supervisor	1 (3)
Pastor	1 (3)
College Faculty	1 (3)
Administrative Assistant	1 (3)
Care coordinator	1 (3)
Board Chair	1 (3)
United Way	1 (3)

Respondents Service Characteristics and Practices

As shown in Table 35, the services provided by the stakeholder organizations varied greatly and included medical care (dental, inpatient/outpatient and home health care), social services (domestic violence and sexual assault services substance abuse counseling and disability services), spiritual support and recreational services (river outfitter and fishing).

Table 35. Services Provided for County Residents

Services	n (%)
Counseling/crisis intervention/psychiatric services	6 (18.2)
Education	4 (12.1)
Acute health care/urgent care	3 (9.1)
Health care/service	3 (9.1)
Disability assistance	3 (9.1)
Home care/onsite care	3 (9.1)
Dental Care	2 (6.1)
Primary care for children/adult	2 (6.1)
Outpatient services	2 (6.1)
Insurance and cost help	2 (6.1)
Food Assistance	2 (6.1)

Wellness/Child care	1 (3)
Social services	1 (3)
Spiritual care	1 (3)
Employment	1 (3)
Environment service	1 (3)
Hospice	1 (3)
Physician services	1 (3)
Surgery	1 (3)
Access to care	1 (3)
Outdoor activity	1 (3)

Population Served

Respondents reported serving a diverse population that includes all races, ethnicities, ages and genders, as well as those from low to moderate income groups and persons at-risk for or with special health and mental health needs. A majority of respondents (72%) did, however, report that there have been notable changes in those they serve over that last five years. This includes an increase in: a) the number of persons without health care insurance (such as self-pay and with Medicaid); b) the number middle income families seeking services; c) the number of Latinos seeking services; d) the number of males using domestic violence services; and e) the number of families with children facing health, mental health and economic crises.

Attraction of the Service

Respondents discussed a number of reasons county residents seek out and use the service they provide. These included: a) cost and affordability; b) having a welcoming, caring and non-judgmental service environment (e.g., handicap accessible ADA compliant settings and assistance); c) accessibility (i.e., close to home or worksite, hours meets the residents' needs); and d) the provision of high quality concrete and referral services (primary and dental care and language assistances for non-English speakers). However, respondents cited two key barriers to accessing their services: a) financial barriers due to unemployment and lack of insurance and b) transportation challenges.

Respondents Perception of Services in Wilkes County

As shown in Table 36, the majority of respondent stakeholders (67% or greater) perceived Wilkes County as: a) having a good health system; b) a good place to raise children; c) a good place to grow old; d) a safe place to live; and e) a place where there is plenty of support for individuals and families during times of stress and need. Overall, the stakeholders thought Wilkes County provides a small town atmosphere that is beautiful, friendly, caring, supportive and giving and provides lots of opportunity for outdoor recreation activity.

Table 36. Statement Agreement

Statement	Yes n (%)	No n (%)
There is a good health care system in Wilkes County	29 (87.9)	4 (12.1)
Wilkes County is a good place to raise children	30 (90.9)	3 (9.1)
Wilkes County is a good place to grow old	29 (87.9)	4 (12.1)
There is plenty of support	22 (66.7)	11 (33.3)
Wilkes County is a safe place to live	32 (97)	1 (3)
Wilkes County has clean water	32 (97)	1 (97)

Table 37. Needed Services or Programs

Service Type
Mental health service
Services for Children and Youth
Nutrition
Cardiac services
Housing
Drug abuse treatment
Hospital related
Sex education
Affordable Transportation
Indigent care
More physicians take Medicaid
Wound care
Additional crisis intervention services
Client accountability
Better coordination/communication of services

Programs currently available in Wilkes County

As in Table 37, stakeholder respondents indicated that Wilkes County has a diversity of support, health and social services that are beneficial to residents that include: a) spiritual (Ministry of Hope, Free health clinic at Celebration Church and Samaritan kitchen); b) social (United Way, Department of social service, food pantry services, and Crisis intervention); c) health (Diabetes and Medical Nutrition therapy, WCHD medical care, Wilkes dental clinic, Home Care-Hospice, Care Connection Pharmacy, and WRMC); d) education/training (Wilkes county schools, Wilkes community college, educational assistance and job training); and recreation/ sport (such as YMCA, Parks). Also, the majority of the

agencies provide language assistance. Some agencies have interpreter services for non-English speakers and some have diverse staff members who can provide interpretation or translation services. Those few agencies that do not have a language interpreter service refer out. The majority of them mentioned that they are handicap accessible or offer ADA compliant settings and assistance.

Stakeholders noted some services needed to expanded, were of poor quality, or simply were not available. These services include: a) additional crisis intervention; b) more affordable services (e.g., indigent care, housing, transportation; and c) provision of missing mental health (especially for children and youth and intensive drug treatment). Respondents suggested that services could be improved through better coordination and communication across services provided.

Health Concerns

Stakeholder respondents indicated that the major health concerns faced by residents of Wilkes County are obesity, drug abuse and health care cost (Table 38).

Table 38. Major Health Concerns for Residents

Health Concern	Survey Respondent n (%)
Obesity	10 (27%)
Substance drug abuse	6 (16%)
High cost of health care/affordable health care	6 (16%)
No insurance	3 (8%)
Specialty	3 (8%)
Prescription drugs abuse	2 (5%)
Aging	2 (5%)
Limited mental health	2 (5%)
Comprehensive Cardiac care	1 (2%)
Meth use	1 (2%)

Table 39. Important Health Behaviors Affecting Wilkes County

Health Behavior	n (%)
Nutrition/healthy eating	12 (36.4)
Drug	8 (24.2)
Exercise	7 (21.2)
Smoking	6 (18.2)

As shown in Table 39, nutrition/healthy eating were considered to be the most important behaviors by many stakeholders, followed by drug use, exercise and smoking. However, healthy eating was related to cost of health care as indicated by one stakeholder:

“Many are suffering because they have to make choices between paying rent/house payments, purchasing food, or buying medicine or going to doctors. They simply cannot afford to do all of this. Many will choose one or the other and therefore the choice they may be forced to make affects their overall health. If you choose to buy medicine (many of which are to be taken with food) and have nothing left over for food and other necessities of life there are going to long lasting effects to their health.”

Solutions

These respondents recommend that collective efforts, resources and policies should focus on a) changing behaviors to improve nutrition/healthy eating; b) stopping drug abuse; c) improving employment opportunities, d) encouraging companies to provide wellness plan focused on promoting healthy behaviors (e.g., exercise, smoking cessation and healthy eating). Stakeholder respondents believe much of this improvement can be realized with collaboration between different services that work together to provide best services

Community Health Opinion Survey

Between July 2012 and January 2013, Community Health Opinion Surveys (CHOS) were distributed to residents of Wilkes County, NC either online via Survey Monkey or in person at community locations. A total of 938 residents completed the survey.

Demographics of Population Surveyed

The Wilkes County Health Department employed several methods to distribute the Community Health Opinion Survey and to assure its responses adequately represented the demographics of county residents. Survey distribution methods included: a) electronically (online); b) outreach to persons in WCHD and its partner programs; and c) targeted outreach to difficult- to-engage populations (e.g., males, persons of color) with the assistance of community (e.g., churches) and other stakeholder agencies (e.g., Department of social services).

The Wilkes County Health Department conducted three rounds of outreach activities in effort to reach under-represented populations residing within the county. Even with these outreach initiatives, response rates still did not completely represent county demographics. Specifically, respondents earning less than \$25,000 were under-represented (Table 44). Female respondents (Table 41), respondents between 35-54 years old (Table 42) and respondents with high education level (Table 43) were over-represented. However, literature shows that female respondents are more likely to respond to surveys than male respondents.

Table 40. Demographic Characteristics of Participants

Demographics	n(%)
Gender	
Male	225 (25.1)
Female	670 (74.9)
Age, n (%)	
0-19	10 (1.1)
20-34	187 (20.9)
35-54	416 (46.5)
55-64	177 (19.8)
65-74	66 (7.4)
75 or older	39 (4.4)
Race	
Caucasian	747 (82.5)
African American	89 (9.8)
Asian	3 (0.3)
American Indian/ Alaskan Native	12 (1.3)
Native Hawaiian or other Pacific Islander	1 (0.1)
Other Race	18 (2)
Ethnicity	
Hispanic Origin	70 (10)
Non Hispanic Origin	799 (90)
Education	
Less Than 12th Grade	100 (11.2)
High School Graduate/GED	134 (15)
Associate's Degree or Vocational Training	157 (17.5)
Some College	164 (18.3)
Bachelor's Degree	185 (20.6)
Graduate/Professional	156 (17.4)
Income	
Less than \$10,000	70 (8.2)
\$10,000- 14,999	59 (6.9)
\$15,000- 24,999	93 (10.9)
\$25,000- 34,999	104 (12.2)
\$35,000- 49,000	143 (26.8)
\$50,000- 74,999	181 (21.2)
\$75,000 or more	202 (23.7)
Zip Code	
Unidentified	83 (8.8)
28606	20 (2.1)
28621	26 (2.8)
28624	11 (1.17)
28635	34 (3.6)
28649	26 (2.78)
28651	75 (8.0)
28654	45 (4.8)
28659	288 (30.7)
28665	17 (1.8)
28669	39 (4.2)
28670	20 (2.1)
28676	3 (0.3)
28683	2 (0.2)
28685	17 (1.8)
28697	197 (21)

Residents had to be at least 18 years old in order to respond to the survey. Respondents between 35-54 years old were over-represented. The distribution of respondents age ranges were representative of Wilkes County with the exception of the age range 0-19.

Table 41. Total Household Income of Survey Respondents, N=853

2012 Wilkes CHOS	Less than \$10,000 n (%)	\$10,000-14,999 n (%)	\$15,000-24,999 n (%)	\$25,000-34,999 n (%)	\$35,000-49,999 n (%)	\$50,000-74,999 n (%)	\$75,000 or more n (%)
	70 (8.2)	59 (6.9)	93 (10.9)	104 (12.2)	143 (16.8)	181 (21.2)	202 (23.7)
2011 Census	11.5%	9.0%	17.8%	13.2%	14.4%	17.0%	17.0%

Community Health Assessment Survey Findings

The Wilkes County Health Department utilizes two methods to set community priorities for the upcoming years. Surveys were utilized with both community stakeholders and residents living within Wilkes County. The following data represents results from the Community Health Opinion Survey taken by Wilkes County residents.

In the following analysis, the following color-coding system was used.

Mostly Frequently Chosen Answer	Second Most Frequently Chosen Answer	Third Most Frequently Chosen Answer	Fourth Most Frequently Chosen Answer
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The biggest health issues of concern in the community by the survey respondents were obesity/overweight and drugs (including drug/substance abuse, prescription drug abuse).

Table 42. Biggest Health Issue of Concern in the Community, N=725

2012 Wilkes CHOS	Obesity/Overweight n (%)	Drugs n (%)	No Insurance n (%)	Cancer n (%)
	186 (25.7)	173 (23.9)	85 (11.7)	45 (6.2)

In terms of issues affecting the quality of life of residents in Wilkes County, the most frequently chosen issues were drug/alcohol abuse, job opportunities and low-income.

Table 43. Issues Affecting Quality of Life Most in Wilkes County, N=936

2012 Wilkes CHOS	Drug/Alcohol Abuse n (%)	Job Opportunities n (%)	Low Income n (%)	Lack High Paying Jobs n (%)	Inadequate Health Insurance n (%)
	562 (60)	535 (57.2)	501 (53.5)	257 (27.5)	222 (23.7)

Availability of employment, affordable health insurance and higher paying employment were the three areas needing the most improvement in Wilkes County.

Table 44. Services Needing Improvement in the Community, N=937

2012 Wilkes CHOS	Availability Of Employment n (%)	Affordable Health Insurance n (%)	Higher Paying Employment n (%)	Substance Abuse Services n (%)	Healthy Teen Activities n (%)
	482 (51.4)	323 (34.5)	291 (31.1)	255 (27.2)	249 (26.6)

Substance abuse prevention, nutrition and weight management were the top three health behaviors that people needed more information about.

Table 45. Health Behaviors that People Need More Information About, N=935

2012 Wilkes CHOS	Substance Abuse Prevention n (%)	Eating Well/ Nutrition n (%)	Weight Management n (%)	Exercising n (%)
	395 (42.2)	334 (35.7)	265 (28.3)	239 (25.6)

More survey respondents said they receive health related information primarily from doctors/nurses.

Table 46. Most Frequently Used Health-Related Information Source, N=885

2012 Wilkes CHOS	Doctor/Nurse n (%)	Internet n (%)	Friends and Family n (%)
	356 (40.2)	199 (22.5)	92 (10.4)

More survey respondents indicated that they receive health-related information from their friends and family, newspaper and TV.

Table 47. Where to Find Out about Local Health News or Events, N=932

2012 Wilkes CHOS	Friends and Family n (%)	Newspaper n (%)	TV n (%)
	457 (49.0)	368 (39.5)	327 (35.1)

Almost half of all respondents were not care takers of children. More than half (n = 479) of survey respondents considered drug abuse, nutrition and internet safety to be the three areas that children needed more information about. Residents indicated the need for more information about substance abuse prevention and healthy eating information.

Table 48. Children Informational Needs, N=479

2012 Wilkes CHOS	Drug Abuse n (%)	Nutrition n (%)	Internet Safety n (%)	How to Make Healthy Food at School n (%)
	174 (27.9)	151 (24.2)	146 (23.4)	123 (19.7)

The vast majority of survey respondents were not tobacco users. Among the tobacco users, 32.3 percent indicated they would go to a doctor to quit smoking, 29% didn't know where to go to quit, and 17.7 percent of them would choose Quit Line NC.

Table 49. Tobacco Use, N=927

2012 Wilkes CHOS	No n (%)	Yes n (%)
	801 (86.4)	126 (13.6)

Table 50. Where to Go for Help to Quit Smoking, N=124 (smoker)

2012 Wilkes CHOS	Doctor n (%)	Do Not know n (%)	Quit line NC n (%)
	40 (32.3)	36 (29.0)	22 (17.7)

The majority of survey respondents supported a tobacco free environment. However, 11 percent of the survey respondents did not support tobacco free environments.

Table 51. Tobacco Free Environment Support, N=922

2012 Wilkes CHOS	Yes n (%)	No n (%)
	821 (89)	101 (11)

One-third (33.6 %) of respondents indicated that they got enough physical activity. “I don’t have enough time to exercise” was the mostly frequently chosen reason for not getting enough physical exercise. The next most frequently selected reason was “too tired to exercise.”

Table 52. Physical Activity Level, N=925

2012 Wilkes CHOS	Do Not Have Enough Time n (%)	Nothing, I Get Much Physical Activity n (%)	Too Tired to Exercise n (%)
	321 (34.7)	311 (33.6)	236 (25.5)

More survey respondents indicated they had enough fruit and vegetables. For those who did not have enough, food prices were “too expensive,” “They go bad before I eat them” and “I don’t think about it” were the three main reasons that kept them from getting enough fruits and vegetables.

Table 53. Healthy Eating Habits, N=924

Main Reason You Do Not Get The Recommended 5 Fruits and Vegetables a Day	Nothing, I Eat 5 or More Servings a Day n (%)	Too Expensive n (%)	Go Bad Before Eaten n (%)	Don't Think About It n (%)	Do Not Have Time to Fix It n (%)
2012 Wilkes CHOS	376 (40.7)	293 (31.7)	238 (25.8)	213	176 (19)

The top three substance abuse problems considered by the 933 responded survey respondents were abusing prescription drugs, meth and using someone else’s prescription medications.

Table 54. Top 3 Substance Abuse Problems, N=933

2012 Wilkes CHOS	Abusing Prescription Drugs n (%)	Meth n (%)	Using Someone Else’s Prescription Drugs n (%)
	664 (71.2)	411 (44.1)	283 (30.3)

Second hand smoking was considered to be the top environment health concern by the largest number of survey respondents. Air quality, drinking water and food safety followed.

Table 55. Top Environmental Health Concerns, N=864

2012 Wilkes CHOS	Second Hand Smoking	Air Quality	Drinking Water	Food Safety
	n (%)	n (%)	n (%)	n (%)
	210 (24.3)	124 (13.2)	119 (13.8)	114 (13.2)

The vast majority of survey respondents indicated that they or their family recycle.

Table 56. Recycling Information, N=880

Do You and Your Family Recycle?	Yes n (%)	No n (%)
2012 Wilkes CHOS	729 (82.8)	151 (17.2)

The services that Wilkes County residents are more likely to use when seeking mental health support were ministers/religious officials. This is followed by doctors, private counselors or therapists and crisis hotlines.

Table 57. Mental Health Referrals, N=848

2012 Wilkes CHOS	Minister/Religious Official	Doctor	Private Counselor or Therapist	Crisis Hotlines
	n (%)	n (%)	n (%)	n (%)
	191 (22.5)	146 (17.2)	109 (12.9)	103 (12.1)

High blood pressure, overweight and high cholesterol were the three most cited health conditions that respondents reported having. Depression and anxiety ranked high on the list as well.

Table 58. Health Condition of Survey Respondents, N=848

2012 Wilkes CHOS	Yes n (%)	No n (%)	Don't Know n (%)
High Blood Pressure	329 (36)	581 (62)	3 (0.3)
Overweight	310 (33)	597 (64)	5 (0.5)
High Cholesterol	293 (31)	615 (67)	5 (0.5)
Depression/Anxiety	266 (29.1)	643 (70.4)	4 (0.4)
Asthma	135 (14.8)	775 (84.9)	3 (0.3)
Diabetes	112 (12.3)	798 (88)	2 (0.2)
Osteoporosis	75 (8)	834 (91)	4 (0.4)
Cancer	61 (6.7)	846 (92.8)	5 (0.5)
Angina/Heart Disease	52 (5.7)	854 (93.6)	6 (0.7)

In the online survey format, there was not an option for “Not over 50” provided, which meant the respondents had to choose either “Yes” or “No”. The result based on age information provided was subsequently adjusted to account for this. If the respondents choose “No” and they were less than 50 years old (less than 35); we consider their choice to be “No, not over 50”. However, due to the age interval defined in the survey is 35-54, we could not separate the group between 35-50 and 50 years old above.

Table 59. Colonoscopies in Respondents Over 50, N=906

2012 Wilkes CHOS	No	Yes	No, Not Over 50
	n (%)	n (%)	n (%)
	335 (37)	314 (34.7)	227 (25.1)

Almost two-thirds (64.9%) of male respondents over 40 years old reported that they had an annual prostate exam, while 35.1% reported that they did not have an annual exam.

Table 60. Annual Prostate Exam, N=899

2012 Wilkes CHOS	No, Female or Under 40	Yes	No
	n (%)	n (%)	n (%)
	688 (76.5)	124 (14.1)	67 (7.6)

Almost two-thirds (65.2%) of women respondents over age 40 reported having an annual mammogram. Over one-third (34.8%) of women respondents over age 40 reported not having annual mammogram.

Table 61. Annual Mammogram, N=888

2012 Wilkes CHOS	Yes	No	N/A, Male or Under 40
	n (%)	n (%)	n (%)
	369 (37.3)	118 (13.3)	307 (34.6)

(Note: percentages in the table count in all respondents, the percentage given in the description only count women over 40).

Over 80% (81.1) of the women respondents reported that they have Pap Smear every other year, 17.6% of the women respondents reported that they do not have Pap Smear every other year.

Table 62. Bi-Annual Pap Smear, N=888

2012 Wilkes CHOS	Yes	N/A, Male	No
	n (%)	n (%)	n (%)
	538 (61.5)	220 (25.1)	117 (13.4)

(Note: Percentages in the table count in all respondents, the percentage given in the description only count women respondents.)

The majority of the survey respondents went to doctor's office when they got sick. Only 7.1% of them went to health department and 4.3% indicated they do not receive care.

Table 63. Places to Go When Sick, N=885

2012 Wilkes CHOS	Doctor's Office	Health Department	Do Not Receive Care	Urgent Care Center
	n (%)	n (%)	n (%)	n (%)
	692 (78.2)	63 (7.1)	38 (4.3)	22 (2.5)

The majority of survey respondents did not experience problems getting care. Of the respondents

who indicated they had a problem with receiving care, 73 (44.8%) of them had a problem getting care from the dentist, 67(41.1%) from the general doctor, 26(16.6%) with the pharmacy and 25 (15.3%) from the hospital.

Table 64. Problems in Getting Health Care, N=904

2012 Wilkes CHOS	No n (%)	Yes n (%)
	739 (81.7)	165 (18.3)

Table 65. Provider or Facility where Problem Occurred Getting Health Care, N=762

2012 Wilkes CHOS	Dentist n (%)	General Doctor n (%)	Pharmacy/ Prescriptions n (%)	Eye Care n (%)
	81 (10.6)	70 (9.2)	27 (3.5)	22 (2.9)

The problems that prevented survey respondents from getting care were mostly related to cost. The most frequently reported problem was lack of insurance, under-insured or unaffordable co-pays. Long wait times were cited as problematic as well.

Table 66. Problems with Getting Care, N=801

2012 Wilkes CHOS	No Health Insurance n (%)	Insurance Doesn't Cover What I Need n (%)	Share of Cost Was Too High n (%)	The Wait Was Too Long n (%)
	140 (17.5)	70 (9.2)	64 (8)	29 (3.6)

The majority of the survey respondents kept themselves and their families up-to-date on vaccinations. For those that were not up-to-date on their vaccinations, the top three reasons were being afraid of possible side effect, high costs of vaccines and the belief that vaccines cause disease.

Table 67. Reasons Impeding Vaccinations to be Up-to-Date, N=862

2012 Wilkes CHOS	I Keep Me and My Family Up-To-Date On Vaccine n (%)	I Am Afraid of Possible Side Effect n (%)	Vaccines Costs Too Much n (%)	I Believe the Vaccine Cause Disease n (%)
	718 (83.3)	46 (4.9)	33 (3.8)	25 (2.9)

More than half of the survey respondents indicated they only had smoke detector installed in their household, 36.7% had both smoke and carbon monoxide detectors installed and 3.7% had neither.

Table 68. Smoke and Carbon Monoxide Detector Use, N=898

2012 Wilkes CHOS	Smoke Detector Only n (%)	Yes, Both n (%)	No n (%)	Don't know n (%)
	500 (55.7)	330 (36.7)	33 (3.7)	25 (2.7)

In the event of large-scale disasters or emergencies the main way survey respondents received information was via TV, radio and Internet.

Table 69. Large-Scale Disaster Information Sources, N=922

2012 Wilkes CHOS	TV n (%)	Radio n (%)	Internet n (%)
	661 (71.6)	557 (60.3)	448 (48.6)

The vast majority of survey respondents indicated that they would evacuate if a mandatory evacuation were to be issued.

Table 70. Mandatory Evacuation Reported by the Survey, N=902

2012 Wilkes CHOS	Yes n (%)	Don't Know, Not Sure n (%)	No n (%)
	728 (80.6)	143 (15.8)	32 (3.5)

Concerns about family safety, leaving property behind, personal safety and leaving pets were the top four reasons why respondents may not evacuate.

Table 71. Evacuate Concerns, N=859

2012 Wilkes CHOS	Concern About Family Safety n (%)	Concern About Leaving Property Behind n (%)	Concern About Personal Safety n (%)	Concern About Leaving Pets n (%)
	396 (46.1)	339 (39.5)	255 (29.7)	215 (25.0)

Figure 9. Services Requiring Improvement in Rank Order by Geographic Location (WCHD CHOS data)

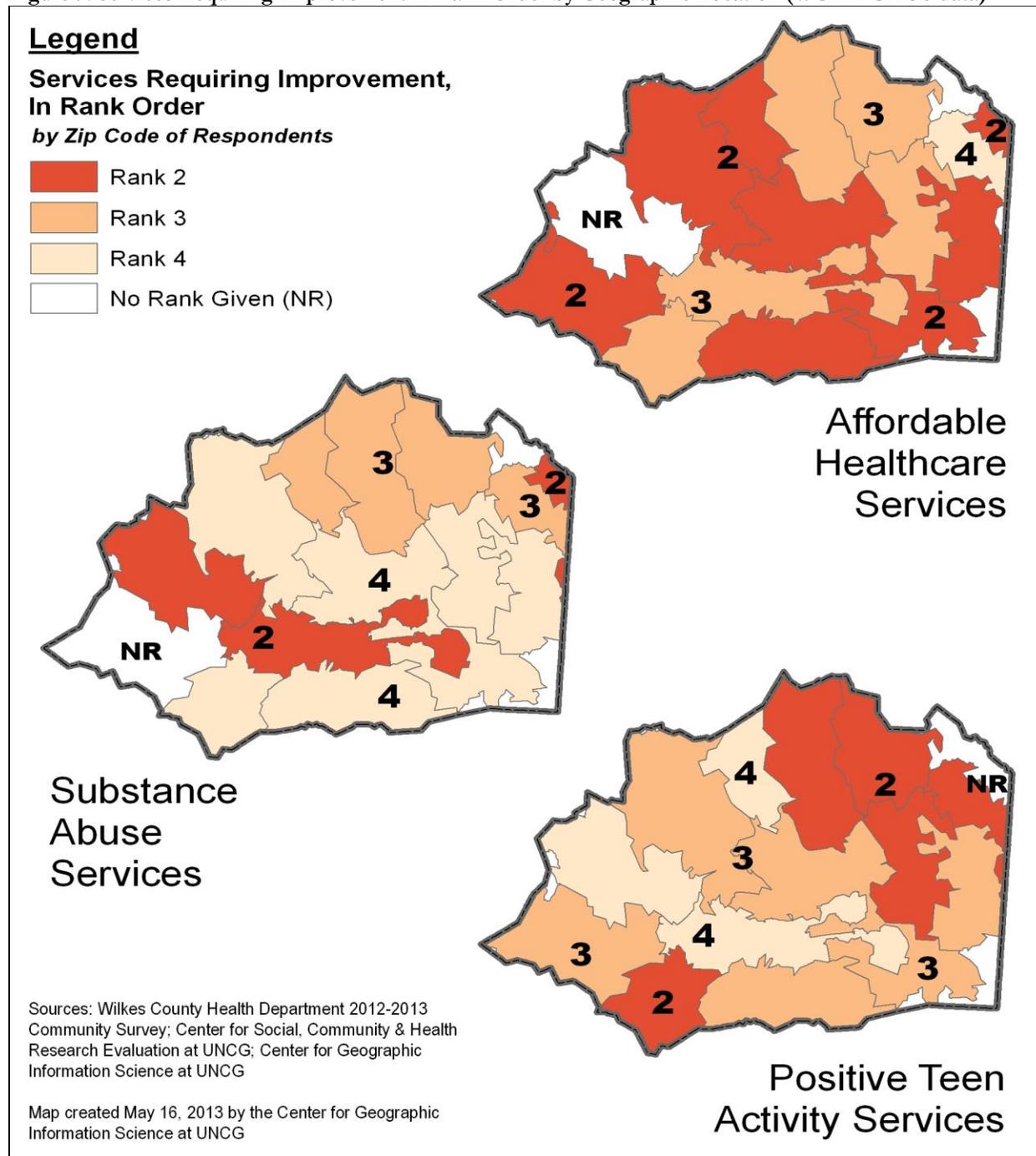


Figure 9 displays the rank order of services needing improvement in Wilkes County as determined by Community Health Opinion Survey respondents. Employment was the number one concern from respondents in all zip codes. Affordable healthcare services were ranked number two throughout much of the county. Substance abuse services ranked second in the central and western part of the county. Positive teen activity services ranked second in the northeast part of the county.

Figure 10. Behaviors requiring more Information in Rank Order by Geographic Location (WCHD CHOS data)

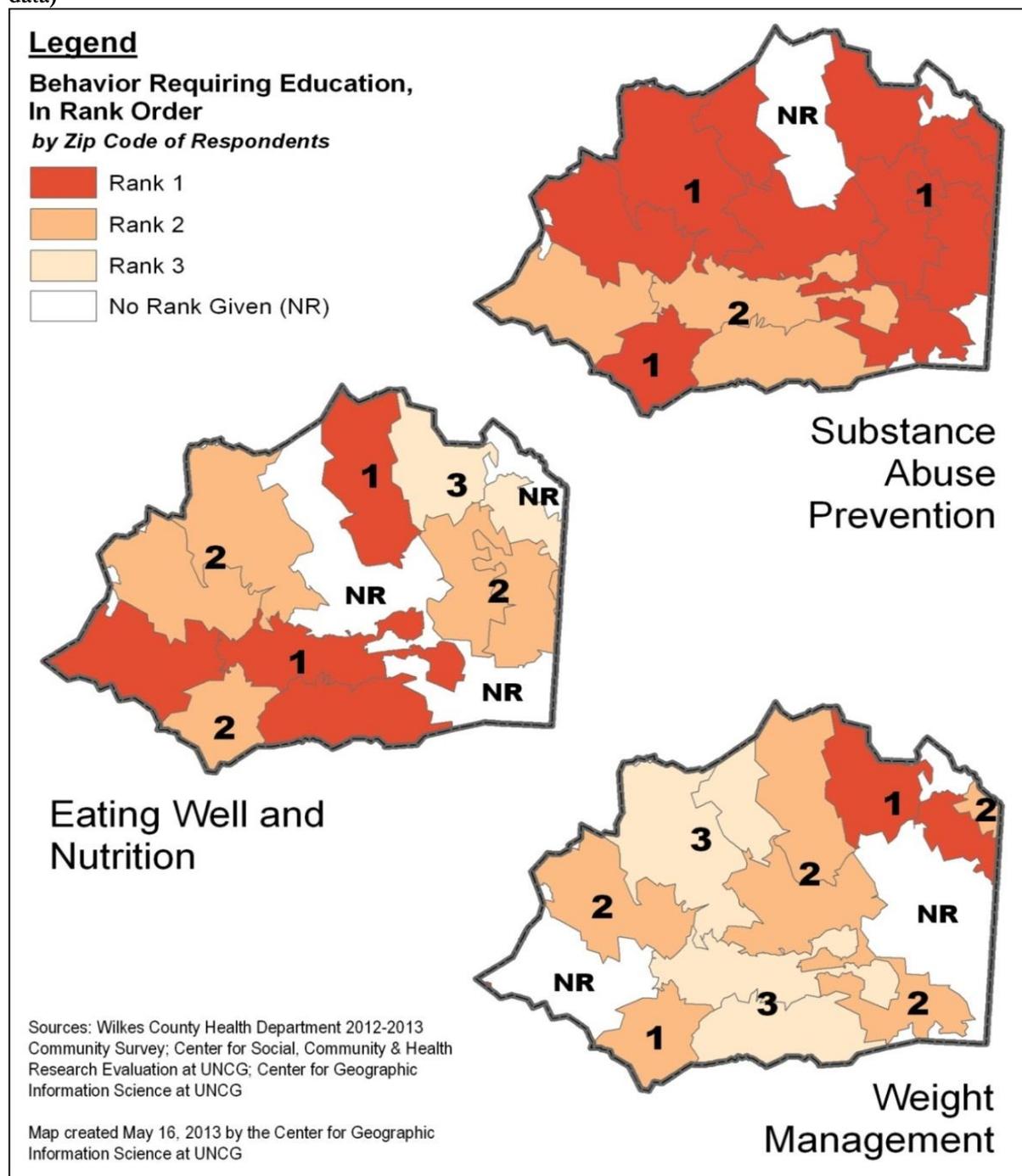


Figure 10 displays the rank order of health behaviors requiring more information in Wilkes County as determined by Community Health Opinion Survey respondents. Substance abuse prevention was ranked number one throughout much of the county. Eating well and nutrition were ranked number one throughout most of the southwestern part of the county and part of the north. Weight management ranked number one in the northeast part of the county.

Figure 11. Reasons for not Exercising Regularly in Rank Order by Geographic Location (WCHD CHOS data)

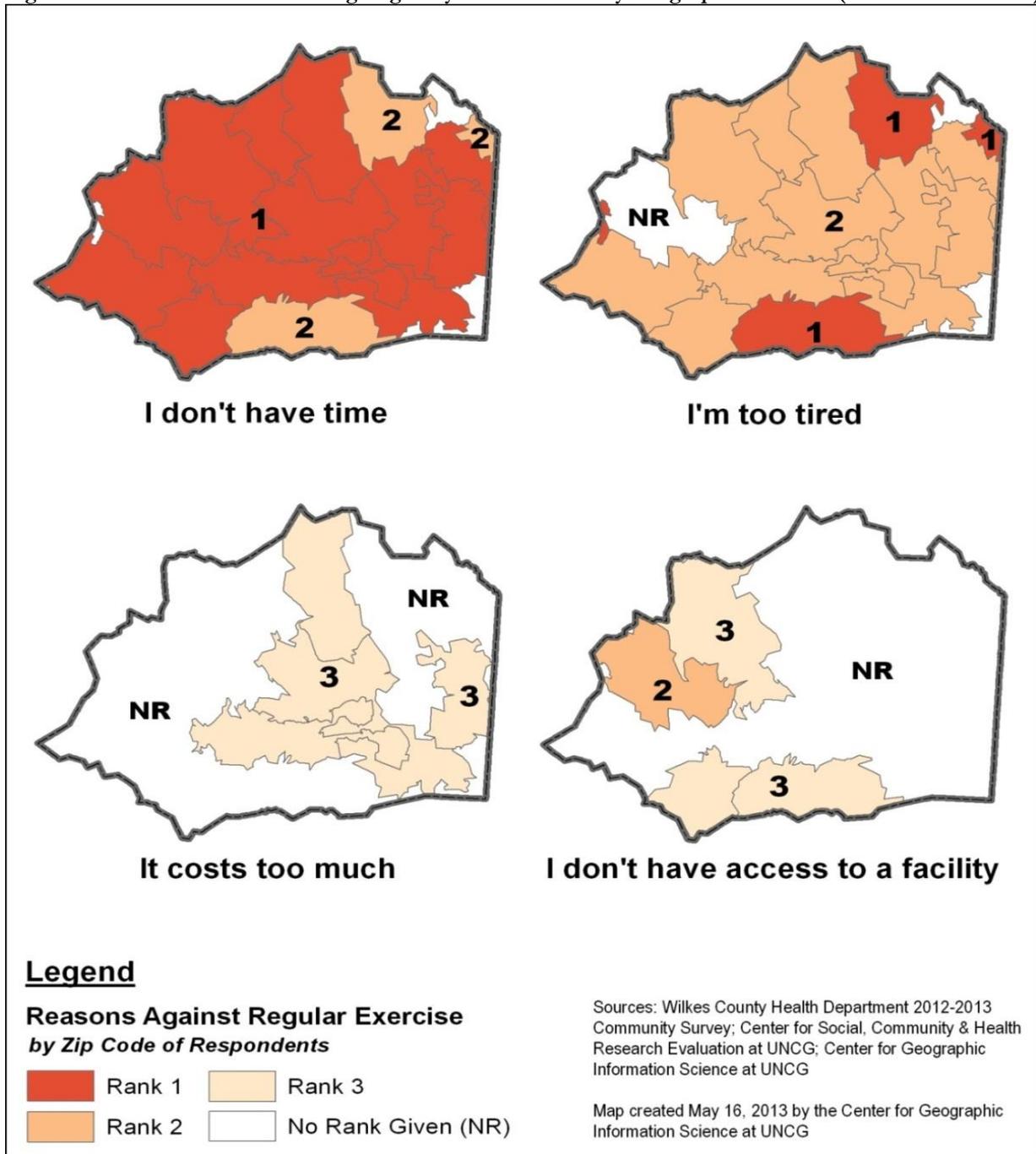


Figure 11 displays the rank order of reasons for not exercising regularly in Wilkes County as determined by Community Health Opinion Survey respondents. Lack of time was cited as the number one reason for not exercising throughout the majority of the county. The second reason given was that respondents were too tired. In central and southeastern parts of the county the costs associated with exercising regularly ranked third. Lack of access to a workout facility ranked third in the northeastern and south central parts of Wilkes County.

Figure 12. Reasons that Deter Healthy Eating in Rank Order by Geographic Location (WCHD CHOS data)

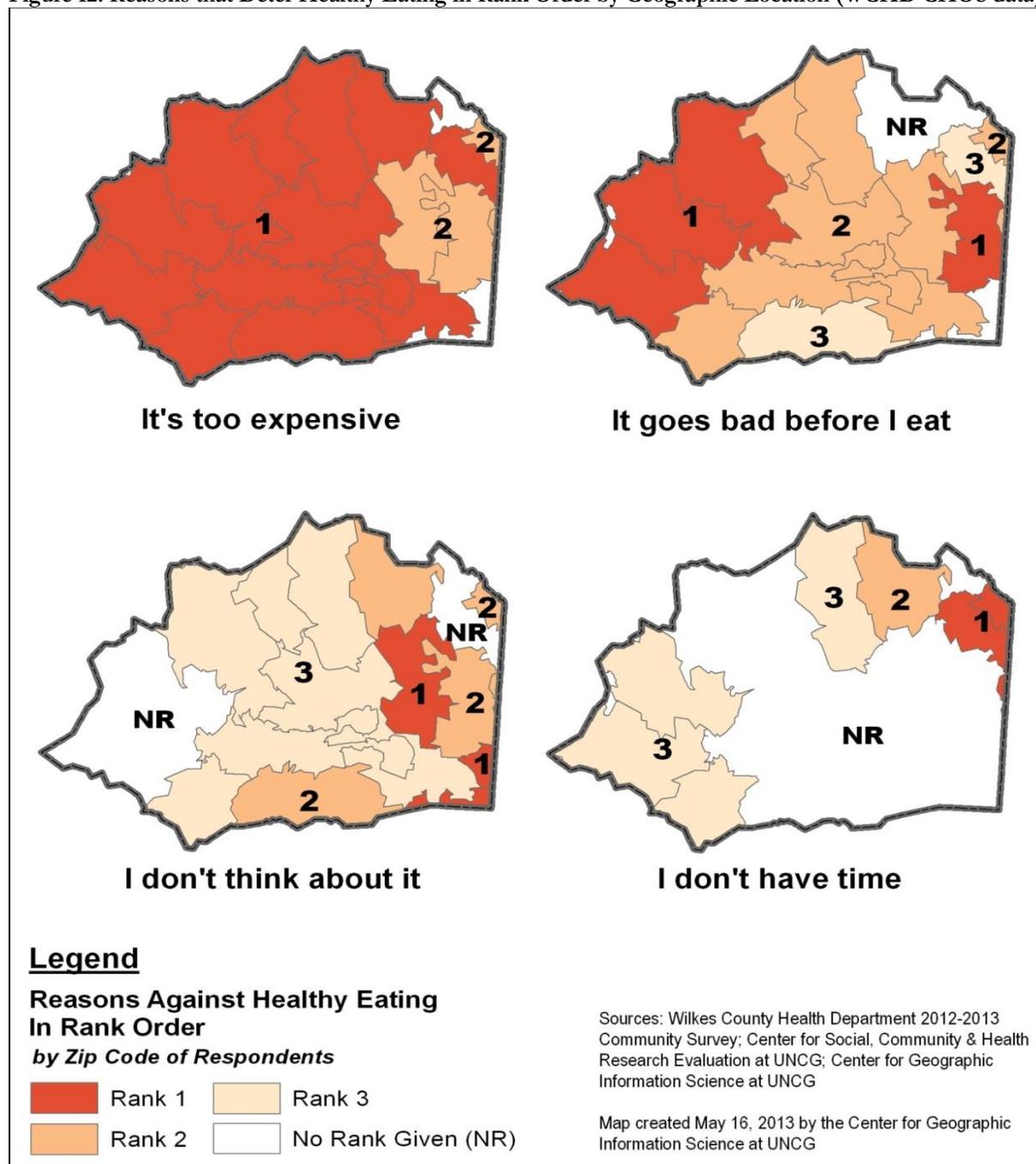


Figure 12 displays the rank order of reasons that deter healthy eating in Wilkes County as determined by Community Health Opinion Survey respondents. Respondents across Wilkes County stated that eating healthy was too expensive. Much of Wilkes County stated that the food went bad before having the opportunity to eat it (the response tied for number one in the northeast part of the county). Other responses provided included not thinking about eating healthy and not having the time to prepare healthy foods.

Figure 13. Provider/Facility Access Problems by Geographic Location (WCHD CHOS data)

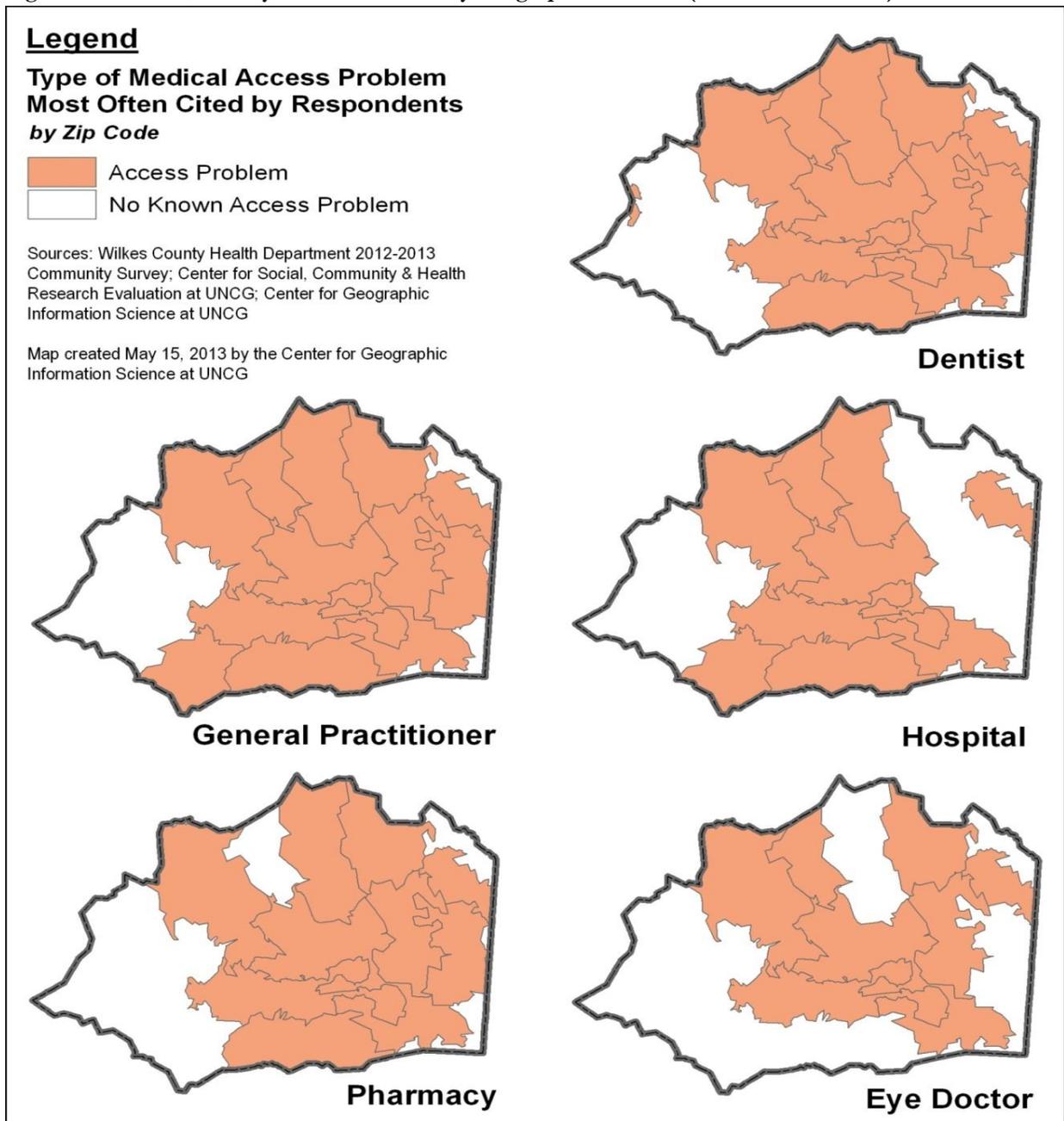


Figure 13 displays areas of the county in which it is difficult to access certain healthcare services as determined by Community Health Opinion Survey respondents. Throughout the central and eastern parts of Wilkes County, respondents noted problems accessing general practitioners, pharmacies and dentists. Accessing the hospital was also problematic for much of the central part of the county as was accessing an eye doctor.

Figure 14. Problems Preventing Receipt of Necessary Healthcare Services by Geographic Location (WCHD CHOS data)

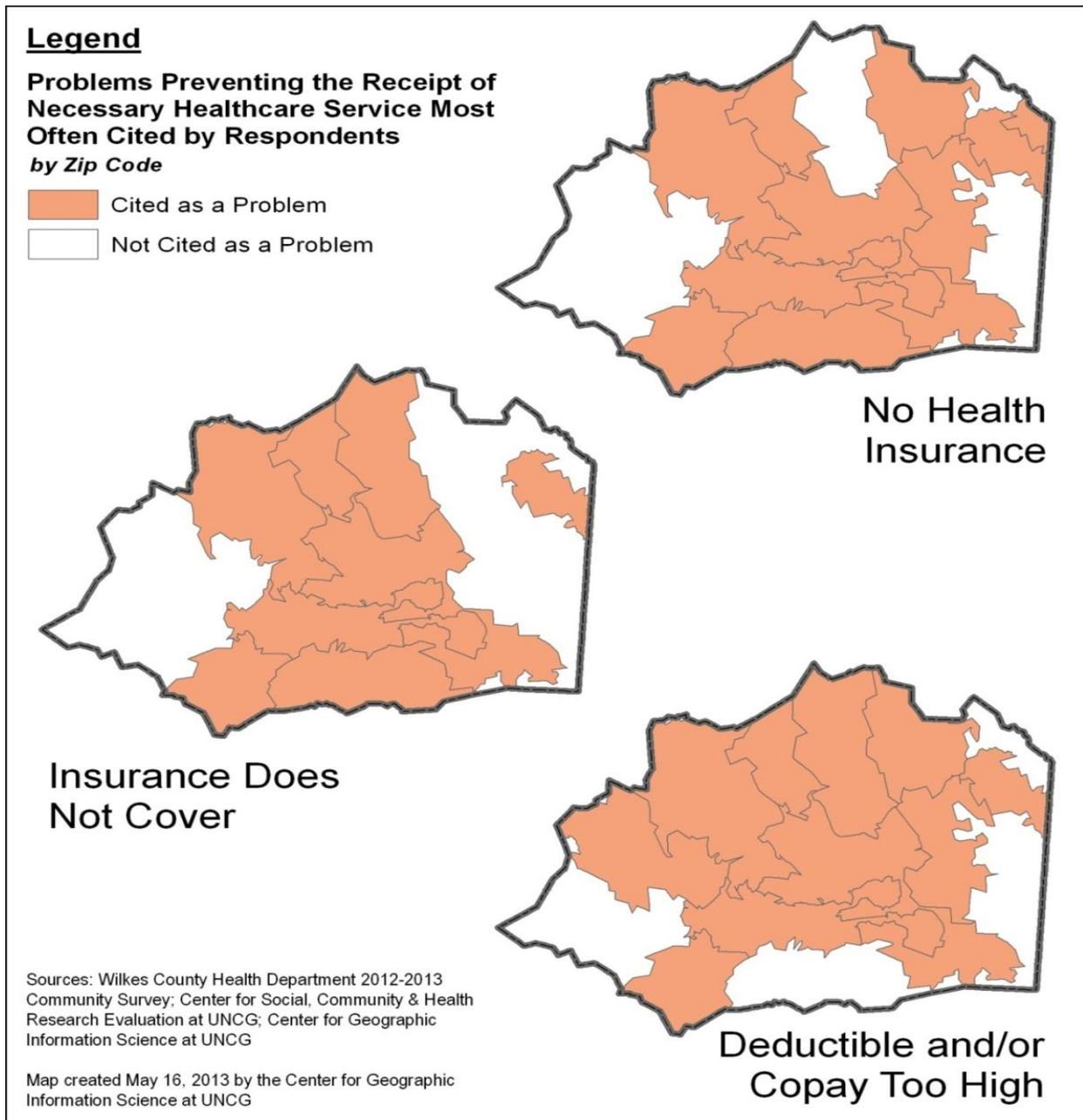


Figure 14 displays the problems that prevent the receipt of necessary healthcare most often cited by Community Health Opinion Survey respondents. All challenges were due to the costs associated with seeking care. Lack of health insurance was a significant problem throughout much of the central part of Wilkes County as was underinsurance or insurance not covering the procedures that were needed. Respondents also cited that their deductibles or copays were too high.

Wilkes Regional Medical Center Patient Data

A de-identified dataset was retrieved for all patients who used Wilkes Regional Medical Center facility during from June 2011 to September 2012. As a result, 79,165 patients' records were retrieved. Patient demographic information is displayed in table below.

Demographic

Table 72. Demographic Table by Sex, Race, Ethnicity and Age

Sex (n=79465)	n (%)
Female	48253 (61.0)
Male	30894 (39.0)
Unknown	18 (0.0)
Race (n=79165)	n (%)
Caucasian	71847 (90.8)
Black or African American	4574 (5.8)
Asian	1826 (2.3)
Other Race	717 (0.9)
Declined/unavailable	155 (0.2)
American Indian	46 (0.1)
Ethnicity (n=79144)	n (%)
Non-Hispanic	74537 (94.2)
Declined/unavailable	2509 (3.2)
Hispanic	2092 (2.6)
Age (n= 79165)	n (%)
0	800 (>1)
1-19	10699 (13.5)
20-34	13646 (17.3)
35-54	20145 (25.5)
55-64	10685 (13.5)
65-74	10714 (13.5)
75 or older	12476 (15.8)

During the period of June 2011 to September 2012, the majority (61%) of WRMC service users was female and almost all of the users of WRMC services were Caucasian (91%) and non-Hispanic (94.2) (see Table 74). Users were mostly over the age of 55 (43%) with the next highest age group being those between the ages of 35-54.

Users of the Wilkes Regional Medical Center (WRMC) were mostly from the Wilkesboro/North Wilkesboro area (55%) with the next most common area being Millers Creek (12%). The remaining eight areas in the county each represented 5% of the users of the WRMC during the June 2011 to September 2012 period.

Table 73. Top 10 Patient Zip Code, N = 79,162

Rank	Zip Code	City	n (%)
1	28659	North Wilkesboro	27629 (34.9)
2	28697	Wilkesboro	15786 (19.9)
3	28651	Millers Creek	9210 (11.6)
4	28635	Hays	4285 (5.4)
5	28654	Moravian Falls	4201 (5.3)
6	28665	Purlear	2972 (3.8)
7	28606	Boomer	2341 (3.0)
8	28669	Roaring River	2073 (2.6)
9	28624	Ferguson	1817 (2.3)
10	28649	MC Grady	1350 (1.7)

Over a third (34.9%) of the residents surveyed lived in North Wilkesboro.

Table 74. Patient Marital Status, N= 23,165

Marital Status	n (%)
Married	10240 (44.2)
Single	7618 (32.9)
Widowed	2512 (10.8)
Divorced	1975 (8.5)
Separated	706 (3.0)
Unknown	96 (0.4)
Life Partner	1 (0.1)

During the period of June 2011 to September 2012, 44% of WRMC patients married, 33% were single and less than 23% of others were widowed, divorced, separated or unknown.

The great majority (90%) of the patients' billing type is outpatient only, this is followed by inpatient billing (9%).

Table 75. Billing Type, N= 79,165

Bill Type	n (%)
Outpatient only	71532 (90.4)
Inpatient bill type	7421 (9.4)
Skilled Nursing	201 (0.3)
Renal Dialysis	9 (0.0)
Inpatient Bill Type	2 (0.0)

Table 76. Patient Country Code, N =23,138

Country Code	n (%)
USA	23137 (99.999)
CAN	1 (0.0)

Virtually all (100%) patients were from the United States.

During the period of June 2011 to September 2012, users of WRMC services were more often unemployed (37%) than employed (full or part-time, 26%) or retired (28%). Only a small percentage was identified as disabled (8%).

Table 77. Employment Status Code, N =76,431

Type of Employment	n (%)
Not Employed	28440 (37.2)
Retired	21215 (27.8)
Employed Full-time	17499 (22.9)
Disabled	6166 (8.1)
Employed Part-time	1732 (2.3)
Self Employed	1333 (1.7)
Unknown	28 (0.0)

Table 78. Admission Type, N=79,165

Admission Type	n (%)
Emergency	37777 (47.7)
Elective	22186 (28.0)
Urgent	18523 (23.4)
Newborn	679 (0.9)

During the period of June 2011 to September 2012, the majority of the admission to WRMC were for acute reasons (emergency or urgent: 61%). One-third (28%) were for voluntary reasons.

Table 79. Top Ten Patient Status (Discharge Status), N= 79,160

Rank Order	Patient Status	n (%)
1	Discharged to home or self-care	73371 (92.7)
2	Discharged/transferred to another short term hospital	1411 (1.8)
3	Discharged/transferred to an SNF	1411 (1.8)
4	Discharge/transferred to an ICF	999 (1.3)
5	Discharge/transferred to another facility	855 (1.1)
6	Discharged/transferred to home under a hospice plan	360 (0.5)
7	Left against medical advice	243 (0.3)
8	Admitted to hospital	213 (0.3)
9	Expired	66 (0.1)
10	Discharged/transferred to court/law enforcement	53 (0.1)

During the period of June 2011 to September 2012, almost all of the users of WRMC services (93%) were discharged to home or self-care

During the period of June 2011 to September 2012, almost all of the users of WRMC services (94.5%) were admitted from a non-health care facility point of origin.

Table 80. Admission Source N= 79,165

Admission Source	n (%)
Non-health care facility point of origin	74821 (94.5)
Clinic or physician's office	3521 (4.4)
Transfer from a skilled nursing facility or intermediate care facility	653 (0.8)
Transfer from a hospital	127 (0.2)
Court/Law Enforcement	15 (0.0)

During the period of June 2011 to September 2012, 30.8% WRMC services at admission had diagnoses that were not defined suggesting the initial admitting diagnosis was for testing and observation with the purpose of arriving at a diagnosis. The most common reasons for this diagnosis among the 6,907 patients with this admitting diagnosis code were: symptoms involving respiratory system and other chest symptoms (1,830, 26.4% of the cases), generalized symptoms (1,353, 19.6%), and other symptoms involving the abdomen and pelvis (1,342, 19.4%). It

followed that the second most common reason for admission was for patients who had a diagnosis of “Disease of The Musculoskeletal System and Connective Tissue” (2,736, 12%, e.g., arthropathies and related disorders, dorsopathie). The third most common reason is Injury and Poisoning (1,823, 9%, e.g., sprains and strains of joints and adjacent muscles, open wound of upper limb). The fourth most common reason is persons without reported diagnosis encountered during examination and investigation of individuals and populations (2,012, 8.7%, e.g., general medical examination, observation and evaluation for suspected conditions not found and special screening for malignant neoplasm). The fifth most common reason is diseases of the genitourinary System (1,163, 5.8%, e.g., such as other disorders of urethra and urinary, calculus of kidney and ureter and breast disorders).

Table 81. Top Ten Admitting Diagnosis Code, N= 23061

Rank Order	Admitting Diagnosis Codes	n (%)
1	Symptoms, Signs, And Ill-Defined Conditions	6907 (30.8)
2	Diseases Of The Musculoskeletal System And Connective Tissue	2736 (11.9)
3	Injury And Poisoning	1823 (9.0)
4	Persons Without Reported Diagnosis Encountered During Examination And Investigation Of Individuals And Populations	2012 (8.7)
5	Diseases Of The Genitourinary System	1163 (5.8)
6	Diseases Of The Circulatory System	1125 (4.9)
7	Diseases Of The Respiratory System	978 (4.2)
8	Persons Encountering Health Services For Specific Procedures And Aftercare	870 (3.8)
9	Diseases Of The Digestive System	815 (3.5)
10	Diseases Of The Nervous System And Sense Organs	799 (3.5)

During the period of June 2011 to September 2012, 20% of the patients of the users of WRMC services had principal diagnosis that was not defined. The most common diagnoses among the 15,789 patients were: symptoms involving respiratory system and other chest symptoms (4,252, 26.9%), other symptoms involving abdomen and pelvis (3,257, 20.6%), and general symptoms (2,742, 17.4%). The second most common diagnosis was Injury and Poisoning (9,865, 12.5%).

Table 82. Top Ten Principal Diagnosis Code, N= 79,165

Rank Order	Principal Diagnosis Codes	n (%)
1	Symptoms, Signs, And Ill-Defined Conditions	15789 (20.0)
2	Injury And Poisoning	9865 (12.5)
3	Diseases Of The Musculoskeletal System And Connective Tissue	6792 (8.6)
4	Persons Without Reported Diagnosis Encountered During Examination And Investigation Of Individuals And Populations	5941 (7.5)
5	Diseases Of The Genitourinary System	5489 (7.0)
6	Diseases Of The Respiratory System	5175 (6.6)
7	Diseases Of The Circulatory System	4946 (6.3)
8	Diseases Of The Nervous System And Sense Organs	4835 (6.1)
9	Diseases Of The Digestive System	4149 (5.3)
10	Persons Encountering Health Services For Specific Procedures And Aftercare	2632 (3.3)

During the period of June 2011 to September 2012, of the 25,007 patients utilizing Wilkes Regional Medical Center services whose principal procedure codes are available, service was the collection of venous blood by venipuncture (9.6%) and the top remaining procedures (7%) were for technical screening procedures such as computer-aided detection (3.7%), and cardiac ultrasound (3.5%).

Table 83. Top 10 Principal Procedure Code, N=25,007

Rank Order	Principal Procedure	n (%)
1	Collection of venous blood by venipuncture	2393 (9.6)
2	Computer-aided detection (computer algorithm analysis of digital image data for lesion detection) with further review for interpretation, with or without digitization of film radiographic images)	937 (3.7)
3	dx ultrasound-heart	868 (3.5)
4	Prophylactic administration of vaccine against other diseases	749 (3.0)
5	Emergency department visit for the evaluation and management of a patient, which requires these 3 key components: An expanded problem focused history; An expanded problem focused examination; and Medical decision making of moderate complexity. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, <u>the presenting problem(s) are of moderate severity.</u>	570 (2.3)
6	Radiologic examination, chest, 2 views, frontal and lateral	482 (1.9)
7	Emergency department visit for the evaluation and management of a patient, which requires these 3 key components: An expanded problem focused history; An expanded problem focused examination; and Medical decision making of low complexity. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, <u>the presenting problem(s) are of low to moderate severity.</u>	431 (1.7)
8	Closure of skin and subcutaneous tissue of other sites	400 (1.6)
9	Application of splint	369 (1.5)
10	Office or other outpatient visit for the evaluation and management of an established patient, which requires at least 2 of these 3 key components: A problem focused history; A problem focused examination; Straightforward medical decision making. Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are self-limited or minor. Typically, 10 minutes are spent face-to-face with the patient and/or family.	308 (1.2)

During the period of June 2011 to September 2012, 32.7% of the outpatient users of WRMC services at visiting had a secondary diagnosis that was not defined. The most common symptoms among the (33%) patients at visiting are: Symptoms involving respiratory system and other chest symptoms (26.0%). Other symptoms involved abdomen and pelvis (1,235, 20.5%) and general symptoms (16.5%). It followed that the second most common reason for outpatient visiting was for patients who had a diagnosis of “Disease of The Musculoskeletal System and Connective Tissue” (12%).

Table 84. Top 10 Reasons for Outpatient Visiting, N =18,379

Rank Order	Reasons for Visiting	n (%)
1	Symptoms, Signs, And Ill-Defined Conditions	6015 (32.7)
2	Diseases Of The Musculoskeletal System And Connective Tissue	2534 (13.8)
3	Persons Without Reported Diagnosis Encountered During Examination And Investigation Of Individuals And Populations	2022 (11.0)
4.	Injury And Poisoning	1473 (8.0)
5	Diseases Of The Genitourinary System	958 (5.2)
6	Diseases Of The Circulatory System	828 (4.5)
7	Persons Encountering Health Services In Other Circumstances	770 (4.2)
8	Persons Encountering Health Services For Specific Procedures And Aftercare	647 (3.5)
9	Diseases Of The Nervous System And Sense Organs	480 (2.6)
10	Diseases Of The Digestive System	473 (2.6)

Table 85. Length of Stay In Hospital N=23, 260

Number of Days	n (%)
0-2 days	20315(87.7)
3-13 days	2319(10)
14-24 days	209(0.5)
≥25 days	417(1.8)

The length of patients staying in hospital range from 0 days to 292 days, with an average of 2-day staying, and a standard deviation of 10.89. As shown in above table, the majority patients (87.7%) stayed 0-2 days in the hospital, 10 percent of the patients stayed 3-13 days in the hospital.

The length of hospital stay for each of the top five principal diagnosis codes is shown in Table 86. As we can observe from the table, distributions of length of hospital stay are similar across the five diagnosis codes. The majority of the patients (over 85%) stay in the hospital for 0-2 days, the second most patients stay in hospital for 3-13 days, and the least patients stay in hospital for 14-24 days(less than 1%).

Table 86. Length of stay by Principal Diagnosis, N= 79,160

	Persons Without Reported Diagnosis Encountered During Examination And Investigation Of Individuals And Populations	Injury and poison)	Symptoms, Signs, And Ill-Defined Conditions	Diseases Of The Musculoskeletal System And Connective Tissue	Disease of The genitourinary System
Number of Days in Hospital	N (%)	N(%)	N (%)	N(%)	N(%)
0-2 days	977(85.8)	3058(88.6)	3629(88.7)	1419(88.1)	1483(88.2)
3-13 days	129(11.3)	306(8.9)	386(9.4)	164(10.2)	167(9.9)
14-24 days	5(0.4)	26(0.8)	12(0.3)	5(0.3)	6(0.4)
≥25days	28(2.5)	63(1.8)	66(1.6)	23(1.4)	26(1.5)

Maps and Narratives for Wilkes County

Figure 15. Top 5 Admitting Diagnosis by Gender and Geographic Location per 1,000 persons (WRMC data)

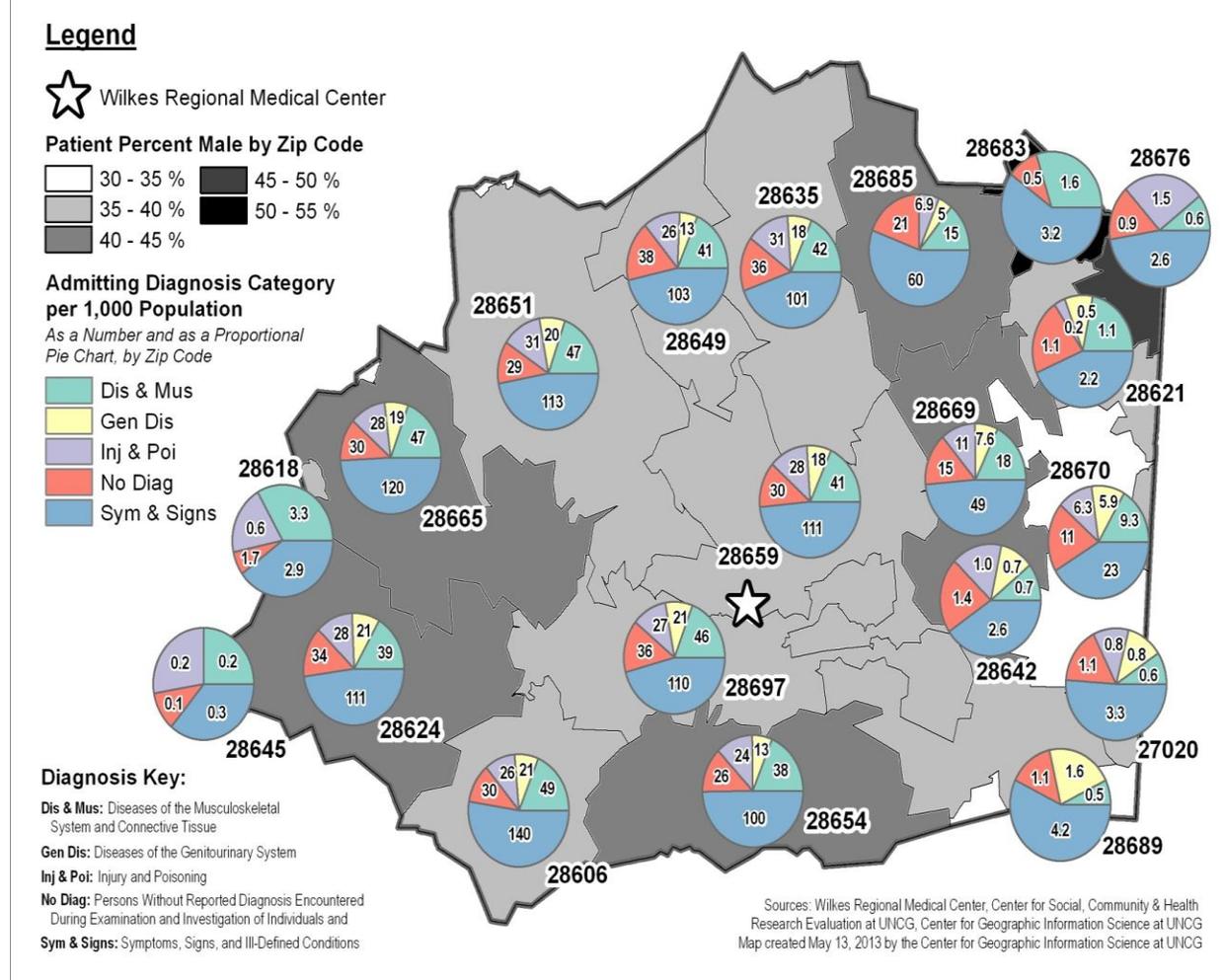


Figure 15 displays the distribution of the persons served by WRMC during the period of June 2011 to September 2012 and illustrates that the most persons served were females (>55%) from the Western and Central parts of the county admitted for observation and additional testing for to-be-defined conditions (average 127 per 1,000 persons).

Figure 16. Top 5 Admitting Diagnosis by Median Age and Geographic Location per 1,000 persons (WRMC data)

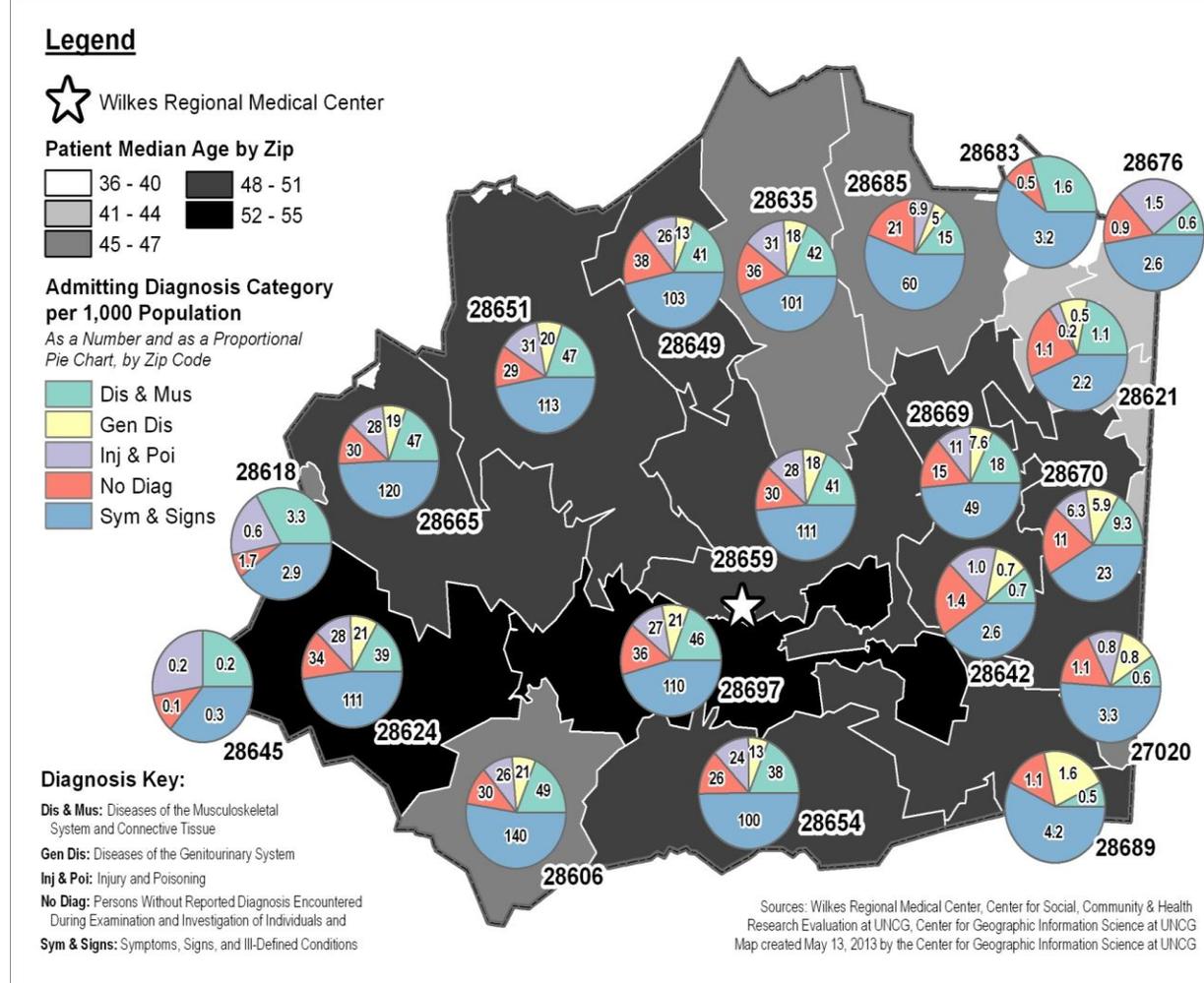


Figure 16 displays the distribution of the persons served by WRMC during the period of June 2011 to September 2012 and illustrates that the most persons had a median age of 48-55.

Figure 17. Top 5 Admitting Diagnosis by Race and Geographic Location per 1,000 persons (WRMC data)

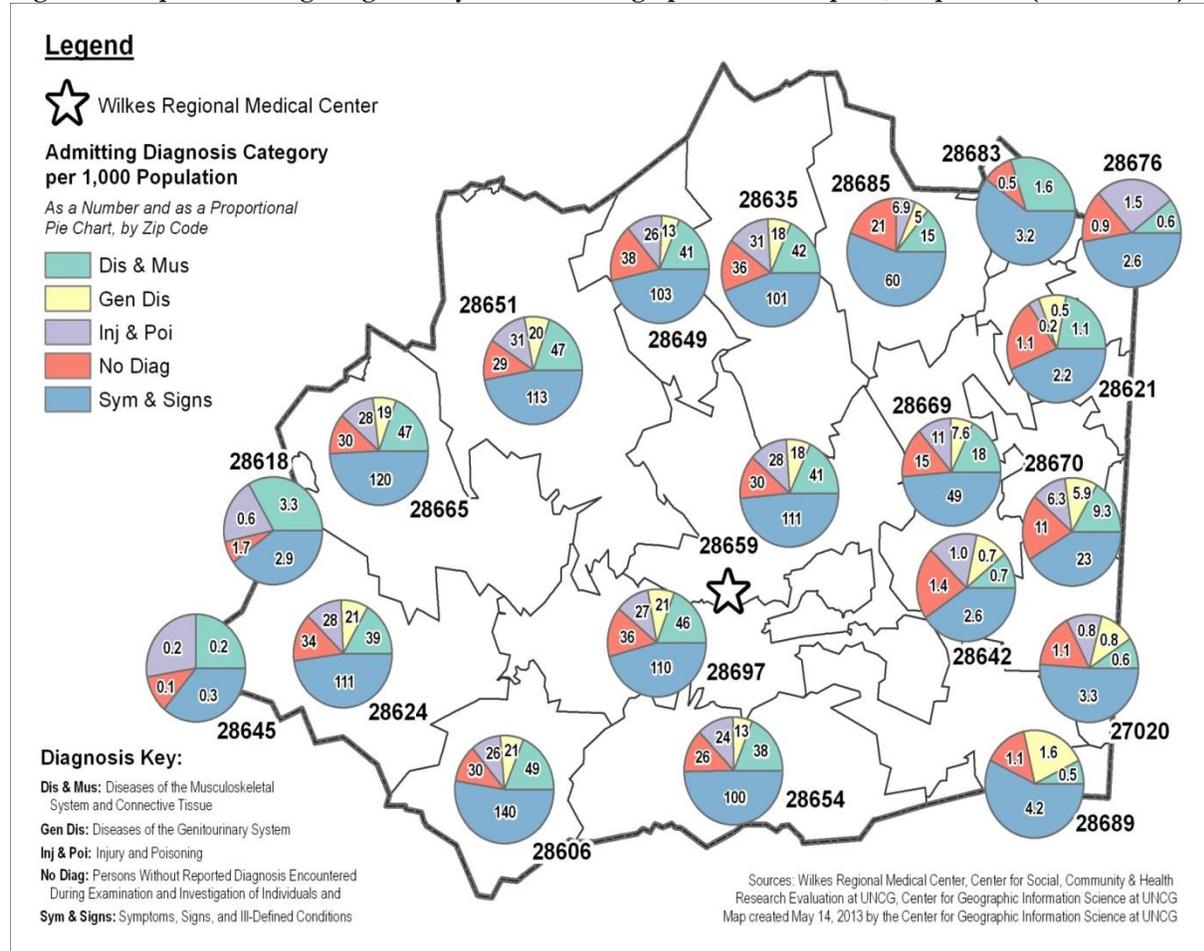


Figure 17 displays the distribution of the persons served by WRMC during the period of June 2011 to September 2012 and illustrates that the most persons were white (93%) from all regions of the county admitted for observation and additional testing for to-be-defined conditions (average 127 per 1,000 persons).

Figure 18. Top 5 Outpatient DRGs by Gender and Geographic Location per 1,000 persons (WRMC data)

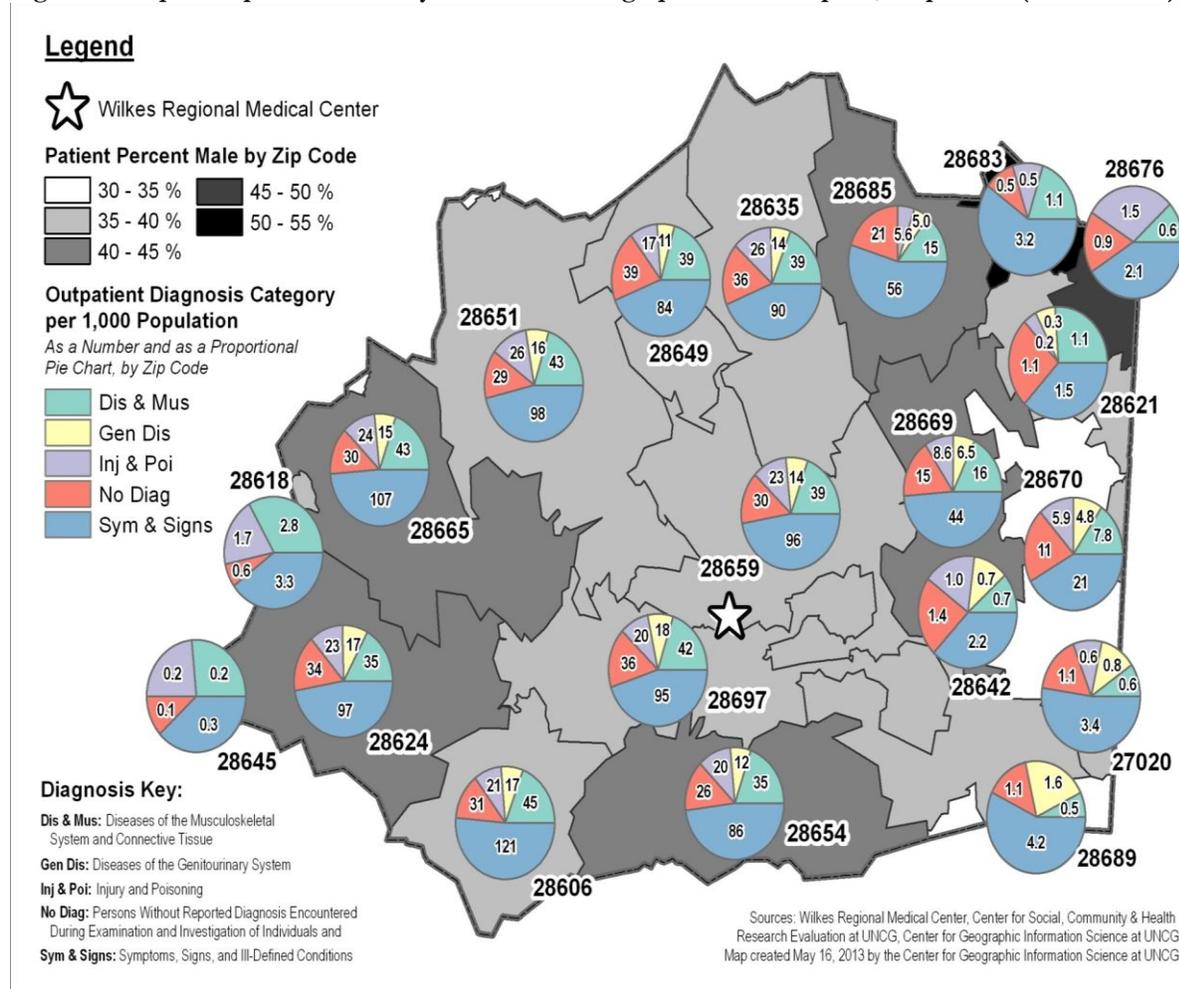


Figure 18 displays the distribution of outpatient persons served by WRMC during the period of June 2011 to September 2012 and illustrates that most persons were female from all regions of the county except for zip code 28683.

Figure 19. Top 5 Outpatient DRGs by Median Age and Geographic Location per 1,000 persons (WRMC data)

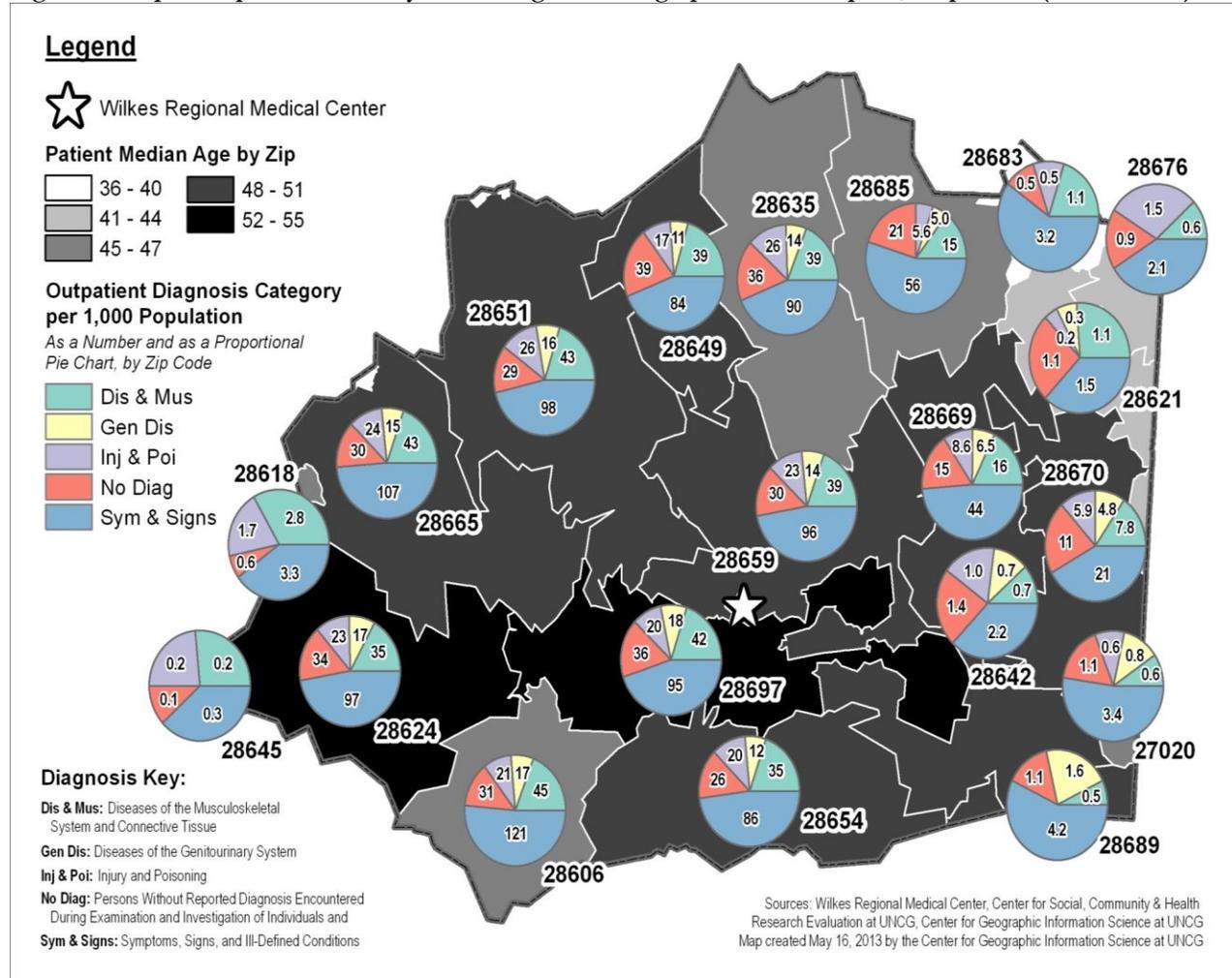


Figure 19 displays the distribution of outpatient persons served by WRMC during the period of June 2011 to September 2012 and illustrates that the most persons had a median age of 48-55 from the areas immediately surrounding WRMC and Central parts of the county seen for additional testing for to-be-defined conditions (average 127 per 1,000 persons).

Figure 20. Top 5 Outpatient DRGs by Geographic Location per 1,000 persons (WRMC data)

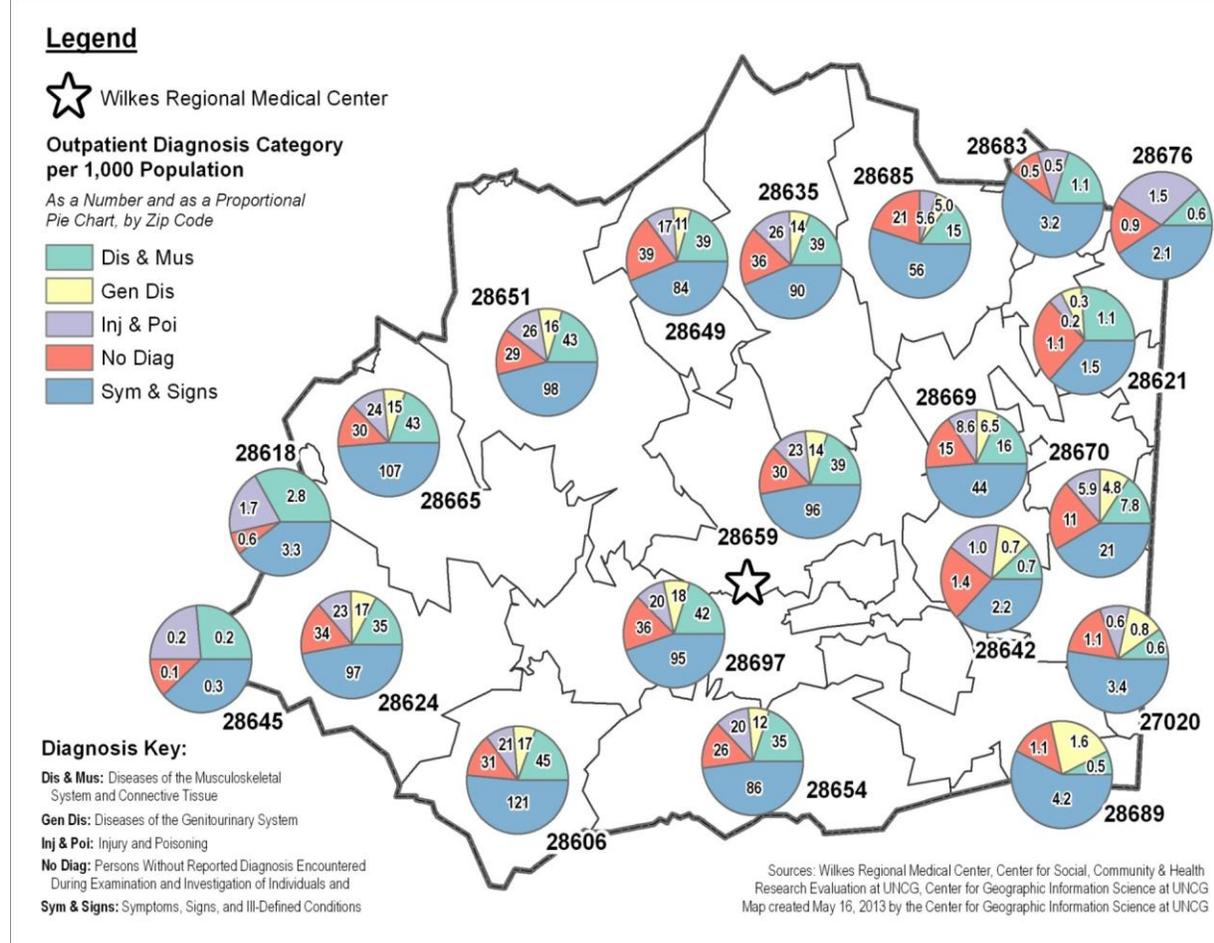


Figure 20 displays the distribution of outpatient persons served by WRMC during the period of June, 2011 to September 2012 and illustrates that the most persons were white (93%) from the all regions of the county seen for additional testing for to-be-defined conditions (average 127 per 1,000 persons).

Utilization of Conceptual Triangulation for the Identification of Wilkes County Health Priorities

As part of the joint CHA/CHNA process, priority health issues in Wilkes County were identified. These issues were identified so that community efforts and initiatives can be developed to begin to address some of these concerns. To identify the top health priorities, a modified conceptual triangulation process was used. The triangulation and integration of data reflected data synthesized from multiple data sources. Steps of the triangulation process are outlined below.

1. ***Collect available data for Wilkes County health outcomes.*** The CSCHRE worked with the Wilkes County Health Department and Wilkes Regional Medical Center to collect health data from various sources to provide a comprehensive assessment of health needs. Final data collection sources consisted of the Wilkes County Stakeholder Survey, Wilkes County Community Health Opinion Survey, Wilkes Regional Medical Center, and Wilkes County Secondary Data. Quality control procedures were implemented for qualitative and quantitative data. Quantitative data was checked for variable appropriateness, accuracy, and completeness. Procedures to assure sample representativeness were also implemented for both qualitative and quantitative data.

2. ***Determine pertinent results within each data collection method.*** Health priorities were determined by triangulating identified health issues/concerns from community stakeholders, community members, Wilkes Regional Medical Center, and leading causes of death in Wilkes County. Top ten health issues/concerns identified by community stakeholders in the Community Stakeholder's Survey were determined by the largest percentages of community stakeholders reporting "services needed" and "major health concerns." Top ten health issues/concerns identified by community members in the Community Health Opinion Survey were determined by the largest percentage of community members reporting, "biggest health concerns," "issues affecting quality of life most," and "self-reported condition or diagnosis." The ten most reported diagnosis-related groups (DRGs) were determined as the top health issues/concerns identified by Wilkes Regional Medical Center. Lastly, the ten leading causes of death in Wilkes County were determined by secondary data analysis.

3. ***Develop criteria for inclusion of results in the development of priorities.*** Data collected from the Wilkes County Stakeholder Survey and the Wilkes County Community Health Opinion Survey was condensed to represent input from community stakeholders and community residents. Each health issue/concern received a priority score. Top health concerns/issues were given a score a score of 1-10. The most reported health issue/concerns in the Wilkes County Stakeholder Survey and the Wilkes County Community Health Opinion Survey were given a score of 10 while the least reported health issue/concern received a score of 1. Each score was weighted with emphasis on community expressed needs. Issues/concerns identified by community stakeholders as "services needed but currently unavailable" and "major health concerns for residents" were weighted 30% and 70%, respectively. Issues/concerns identified by community members as "biggest health concern," "issues affecting quality of life most" and "condition or diagnoses" were weighted 30%, 50% and 20%, respectively. Community stakeholders and members health concerns/issues were integrated with the top 10 DRGs at Wilkes Regional Medical Center and Wilkes County leading causes of death to create four categories for triangulation.

4. **Constructing Wilkes County Priorities.** Weighted data from community stakeholders (30%), community members (45%), Wilkes Regional Medical Center (10%) and Wilkes County Secondary Data (15%) were integrated to determine top health priorities in Wilkes County. Weighted scoring was repeated for each health/issue within the four categories. Scores for similar health issues/concerns across categories were combined to increase scores for issues/concerns identified among multiple sources. Health issues/concerns with top overall scores were identified as the top priorities for Wilkes County.

Table 87. Wilkes County Joint CHA / CHNA Triangulation Table

Wilkes County Stakeholder Survey		Community Health Opinion Survey			Wilkes Regional Medical Center	Wilkes County Secondary Data
Q. 10 Services Needed but Currently Unavailable	Q. 13 Major Health Concerns for Residents	Q. 1 Biggest Health Concern	Q2. Issues affecting quality of life most	Q. 16 Condition Diagnoses	Top 10 DRGs	Leading Cause of Death in Wilkes County (2011)
Mental Health / Substance Abuse (1)	Obesity (1)	Obesity / Healthy Eating (1)	Drug/ alcohol abuse (1)	High Blood Pressure (1)	Normal Newborn (1)	Cancer (1)
Specialty Care (cardiology, palliative) (2)	Substance Drug Abuse (2)	Drug/ Alcohol Abuse (2)	Job Opportunities (2)	Overweight (2)	Septicemia or Severe Sepsis (2)	Disease of Heart (2)
Coordinated Resources and Services (3)	High cost of health care / affordable health care (2)	Affordable Health care (3)	Low Income (3)	High Cholesterol (3)	Vaginal Delivery w/o Complicating Diagnosis (3)	Chronic Lower Respiratory Diseases (3)
Medicaid assistance and indigent care (3)	No Insurance (4)	Cancer (4)	Lack of Higher Paying Jobs (4)	Depression / Anxiety (4)	Major Joint Replacement or Reattachment (4)	Cerebrovascular Disease (4)
Housing Resources (incl. Independent senior living) (3)	Specialty Care (4)	Economy / Poverty (5)	No/inadequate Health Insurance (5)	Asthma (5)	Rehabilitation with CC/MCC (5)	Pneumonia and Influenza (5)
Nutrition and Obesity awareness/classes (3)	Prescription Drug Abuse (6)	Diabetes (6)	Drop out of school (6)	Diabetes (6)	Septicemia or Severe Sepsis (6)	Other Unintentional (6)
Affordable Transportation (7)	Aging (6)	Lack of physicians and specialists(6)	Neglect and abuse (7)	Osteoporosis (7)	Esophagitis, Gastroent. & Misc. Digest. Diso. (7)	Diabetes Mellitus (7)
Child Bullying (cyber bullying) (7)	Limited Mental Health (6)	Elder Care (8)	Theft (8)	Cancer (8)	Cesarean Section w/o CC/MCC (8)	Nephritis, Nephrotic Syndrome and Nephrosis (8)
Sex Education (9)	Comprehensive Cardiac Care (9)	Mental Health (9)	Child Abuse (9)	Angina / Heart Disease (9)	Simple Pneumonia & Pleurisy w/ MCC (9)	Alzheimer's Disease (9)

Crisis Intervention Services (9)	Meth Use (9)	Heart Disease (9)	Domestic Violence (10)		Rehabilitation w/o CC/MCC (10)	Septicemia (10)
Wound Care (9)					Cellulitis w/o MCC (11)	Motor Injury (10)

Table 88. Wilkes County Joint CHA / CHNA Triangulation Table

Wilkes County Stakeholder Survey (30%)	Community Health Opinion Survey (45%)	Wilkes Regional Medical Center (10%)	Wilkes County Secondary Data (15%)	Wilkes County Priority Health Issues
1. Mental Health / Substance Abuse (300)	1. Economy / Poverty (450)	1. Normal Newborn (100)	1. Cancer (150)	1. Mental Health / Substance Abuse (840)
2. Affordable Healthcare / Indigent Care (270)	2. Drug / Alcohol Abuse (405)	2. Septicemia or Severe Sepsis (90)	2. Disease of Heart 135	2. Affordable Health Care / Indigent Care (585)
3. Specialty Care (cardiac, palliative) (240)	3. Obesity / Healthy Eating (360)	3. Vaginal Delivery w/o Complicating Diagnosis (80)	3. Chronic Lower Respiratory Diseases (120)	3. Economy / Poverty (450)
4. Obesity / Nutrition Education (210)	4. Affordable Healthcare (315)	4. Major Joint Replacement or Reattachment (70)	4. Cerebrovascular Disease (105)	4. Cardiovascular Disease (Heart & Cerebrovascular Disease, High Blood Pressure) (375)
5. Aging (180)	5. Neglect / Abuse (incl. child abuse) (270)	5. Rehabilitation with CC/MCC (60)	5. Pneumonia and Influenza (90)	4. Cancer (375)
6. Coordinated Resources and Services (150)	6. Cancer (225)	6. Septicemia or Severe Sepsis (50%)	6. Other Unintentional (75)	6. Obesity/Nutrition Education (370)
7. Housing Resources (120)	7. Diabetes (180)	7. Esophagitis, Gastroent. & Misc. Digest. Diso. (40)	7. Diabetes Mellitus (60)	7. Elder Care/Aging (270)
8. Affordable Transportation (120)	8. Mental Health (135)	8. Cesarean Section w/o CC/MCC (30)	8. Nephritis, Nephrotic (45) Syndrome and Nephrosis	7. Neglect/Abuse (270)
8. Child Bullying (120)	8. High Blood Pressure (135)	9. Simple Pneumonia & Pleurisy w/ MCC (20)	9. Alzheimer's Disease (30)	9. Diabetes (240)
10. Sex Education (90)	10. Elder Care (90)	10. Rehabilitation w/o CC/MCC (10)	10. Septicemia (15)	9. Specialty Care (240)
10. Crisis Intervention Services (90)			10. Motor Injury (15)	11. Coordination of Resources and Services (150)

Chapter 5: Priority Health Issues

Based on the triangulation table above, Wilkes County priority health issues are as follows:

1. Mental Health / Substance Abuse
2. Affordable Health Care / Indigent Care
3. Economy / Poverty
4. Cardiovascular Disease (Heart & Cerebrovascular Disease, High Blood Pressure)
4. Cancer
6. Obesity / Nutrition Education
7. Elder Care / Aging
7. Neglect / Abuse
9. Diabetes
9. Specialty Care
11. Coordination of Resources and Services

Resources to Address Priority Health Issues

The following is a list and descriptions of resources to address the priority health issues in Wilkes County.

Overall, Wilkes County is served by Wilkes Regional Medical Center, a 130-bed (including a 10-bed skilled nursing unit) facility located in North Wilkesboro. The Medical Center also manages the Wilkes County Wellness Center, a facility for fitness and rehabilitation. There are three rural health centers in Wilkes County: Boomer, West Wilkes and Mountain View Medical Centers. According to 2006 data (14), the number of health professionals per 10,000 in Wilkes County fell below state averages as well as below the averages for peer county of Surry with the exception of Certified Nurse Midwives and Psychological Associates. Averages for Wilkes were above or equal to the peer county of McDowell in Dentists, Optometrists, Physical Therapist Assistants, Physical Therapists, Physicians, Podiatrists, Primary Care Physicians, Psychological Associates, Psychologists and Registered Nurses.

Table 89. Health Professionals per 10,000 Population for Wilkes and Comparison Counties

	Wilkes	McDowell	Surry	State
Certified Nurse Midwives	N/A	N.A.	N/A	0.2
Chiropractors	0.9	1.4	0.7	1.4
Dental Hygienists	4.7	4.6	6.2	5.4
Dentists	2.7	2.3	3.3	4.4
Licensed Practical Nurses	12.0	28.1	22.9	19.8
Nurse Practitioners	2.1	2.5	2.6	3.0
Optometrists	0.7	0.5	1.7	1.1
Pharmacists	4.7	5.3	7.9	9.0
Physical Therapist Assistants	2.1	1.8	2.9	2.2
Physical Therapists	2.1	1.6	3.4	4.6

Physician Assistants	2.4	2.8	2.6	3.2
Physicians	10.3	6.6	14.5	20.8
Podiatrists	0.1	N/A	0.3	0.3
Primary Care Physicians	6.3	4.8	8.2	9.0
Psychological Associates	0.9	0.9	0.1	1.0
Psychologists	0.3	N/A	0.3	2.0
Registered Nurses	61.3	60.2	81.1	94.4
Respiratory Therapists	2.2	2.5	3.9	4.1

Several of the priority health areas are currently being addressed directly by or through coalitions with the Wilkes Healthy Carolinians Council (WHCC) of the Wilkes County Health Department. Where applicable each priority section below will outline the Council’s work toward these issues.

Mental Health

The Substance Abuse Task Force (SATF) is a subdivision of WHCC and its purpose is as follows: Between 2005 and 2007, Wilkes County Medical Examiners documented 59 unintentional drug deaths, mainly attributed to prescription drug misuse or abuse. This makes Wilkes County rates 5 times greater than national and 3 times the NC State averages.

The SATF community coalition is comprised of the following organizations/networks: Northwest Community Care Network, Wilkes Regional Medical Center, Wilkes County Sheriff’s Department, Wilkes County Health Department, Smoky Mtn. LME and New River, Wilkes Ministerial Association, Wilkes County Schools, Parents and Youth of Wilkes.

The SATF offers a resource guide with a full list of community resources for substance abuse treatment and mental health care and treatment with an indication of the nature of the resource and of which counties they serve. The resources address the following key areas: substance abuse, co-occurring disorders, methadone maintenance, detoxification, methadone detoxification, adolescents, DWI/DUI offenders, The list is inclusive of crisis helplines, mental health centers, senior adults, women, men, gays and lesbians, criminal justice clients, self-payment of services, military insurance, Medicaid, Medicare, state financed insurance, private health insurance, payment assistance, Spanish-accommodating services, residential beds for client’s children, pregnant women, persons with HIV/AIDS, outpatient care, partial hospitalization, residential long-term treatment (more than 30 days), residential short-term treatment (30 days or less), halfway house, hospital inpatient and assistance for the hearing impaired.

The institutions addressing these issues range from private practices, to non-profit community mental health organizations, youth advocacy groups, HIV prevention/treatment agencies, and state funded efforts, Smokey Mountain Center, WRMC Emergency Department Triage Evaluations/Referrals to Community Resources, Daymark Recovery Services, Synergy Detox and Recovery Center, The Rainbow Center Pastoral Care and Counseling Center, AlAnon/AlaTeen and Wilkes Mental Health Task Force

Affordable Health Care/Indigent Care

To address issues of affordability of care, among other access issues, the Access to Care Task Force (ACTF) was formed by WCHD. ACTF is comprised of advocates who aim to improve and to provide adequate access to health care for uninsured citizens of Wilkes who are at a greater risk of not seeing a physician or not having a yearly routine checkup due to cost.

The Wilkes County Health Department established an integrated system working with the medical community, rural health centers, and the local hospital to provide access to comprehensive healthcare to low-income, uninsured persons. The HealthCare effort includes the provision of a medical home for primary and preventive care, specialty care, lab, diagnostic services, outpatient services, low-cost pharmaceuticals, and patient navigation. Subsidies are available for persons with acute active health problems, those with no access to health insurance, Medicaid, Medicare or VA benefits. Additionally, qualifying persons are those living with a total gross household income at or below 200% federal poverty level. All qualifying persons must also be between ages 21 and 64 and have been a Wilkes County resident for at least the past 30 days.

Services are inclusive of affordable/attainable pharmaceutical drugs through the Care Connection Pharmacy, obtainment of primary care physician, and resource lists of physicians and primary care providers accepting new patients.

Economy/Poverty

The unemployment rate in Wilkes County has continued to remain significantly higher than the rate of the state for the past several years. Statewide, there has been reduction in funding for public health and other human services agencies, decreasing assistance for persons in need. Given that low socioeconomic status is directly related to poorer health outcomes, unemployment and poverty are now critically recognized emerging issues of concern to the public health community in Wilkes County.

Cardiovascular disease (Heart & Cerebrovascular Disease, High Blood Pressure)

Cardiovascular disease prevention primarily takes place through the nutrition and exercise promotion (discussed below as another key priority health issue). Several organizations address issues of cardiovascular disease. Some of the organizations include Wilkes Fitness and Nutrition Task Force, WRMC Participation and Accreditation Pursuit with the Society of Cardiovascular Patient Care, American Heart Association, and the WRMC Heart Center which provides non-invasive Cardiac care to the Community. Further, WRMC shares information to the community on Cardiovascular Disease and other educational opportunities through Community media resources including radio, internet and in-house overhead systems. WRMC Community Employers Workplace Wellness Programs is provided by the hospital with services that include: educational information, screenings, follow-up sessions, and information on locating a primary care medical home.

Cancer

Recognized as being one of the highest ranking contributors to mortality rates in Wilkes County for the past several years, various healthcare entities offer services to help address this critical issue. The Breast and Cervical Cancer Control program is a federal effort, offering breast and cervical cancer screening, education and prevention and very low cost. The goal of the program is to offer women who do not qualify for these services under any other type of coverage the opportunity to obtain the needed services. The Susan G. Komen Race for the Cure NC Triad is a grant funded program which

offers mammograms at a reduced/no cost. It should be noted that the Komen program is an effort the health department applies for annually. WRMC also provides support through outpatient services to those with cancer within Wilkes County. Additionally, Wilkes YMCA Live Strong Program provides a structured class for adult cancer survivors. This 12 week program provides support services including physical assistance while undergoing recovery. Northwest Tobacco Prevention Coalition initiates community education through billboards and other avenues to prevent teen smoking and provide assistance with smoking cessation. This is in addition to Public Health Smoking Cessation Classes and Education that provide on demand to organizations, school, and faith based organizations to assist with smoking cessation as well as smoking prevention.

Obesity/Nutrition Education

In an effort to address issues of a large overweight population and poor nutrition, the WCHD established The Fitness and Nutrition for Disease Prevention Task Force (FNTF). The Taskforce aims to improve awareness about the rising obesity-related health issues and ways to improve the health of the community.

In Wilkes County, one out of every two children that are middle school age is at an unhealthy weight. The FNTF wants to lessen the burden of obesity and unhealthy lifestyle choices in our community through education of healthy lifestyle choices, resource education, and education of the benefits of regular exercise. The FNTF has worked with community partners to establish a county wellness committee, make free or low cost exercise opportunities available for the public, and assist companies to develop healthy worksite practices. These include the increase in availability of walking and fitness trails at local schools and implementation of appropriate curriculums in Wilkes County Schools such as the Wilkes County Schools BMI Project that monitors annually the Body Mass Index of students K-8th Grade through the Health and Physical Education Program. Efforts also include developing wellness policies with local businesses for their employees such as the WRMC Employee Program "Biggest Loser". Wilkes County Health Department Medical Nutrition Therapy through the Wilkes Diabetes and Nutrition Center employ registered Dietitians to counsel clients on behavioral and lifestyle changes required to impact long-term eating habits and health.

As part of the Community Transformation Grant, awarded to North Carolina by the CDC for \$7.4 million for 5 years other efforts are and will continue to be made toward these issues. This equates to 400,000 per year being spent in the Wilkes County public health region to create policies and impact healthy eating, physical activity, tobacco free living, and chronic disease management. Specifically, in terms of nutrition, WCHD will be collaborating local Farmer's Markets, Wilkes Cooperative Extension and produce vendors to accept EBT/SNAP benefits.

Elder Care/Aging

The senior resources in Wilkes County include a number of organizations and services which cover the following: assisted living, transportation, eye and vision care, medical care, alcohol treatment, drug addiction, dental care, Alzheimer's patient care, outpatient surgery, senior retirement, recreation, smoker's treatment, adult day care, cancer treatment, family planning, debt counseling, mammography, STD testing, fitness and exercise, urgent care and a number of leisurely activity services.

Neglect/Abuse

In addition to the Wilkes County Department of Social Services, which especially addresses issues of child and elder abuse and neglect, Wilkes County specifically addresses these issues through foster care, protective services and crisis intervention programs.

Diabetes

Similar to cardiovascular health, diabetes prevention is addressed through nutrition and exercise efforts. Once an individual has been diagnosed with diabetes Wilkes County offers a number of education efforts. During the first session with a nurse information is offered on insulin and medications, blood sugar, complications and risk reduction, how to cope on sick days, signs of low blood sugar, and exercise. The second session, with a dietician, includes information on good and bad fats, carbohydrate counting, cholesterol and blood pressure, fiber, getting to a healthy weight and reading food labels. Lastly, the diabetes class focuses on how to fit all foods into a diet, exercise, monitor blood sugar, manage stress, set goals and problem solve. After these efforts a follow-up appointment is offered with a dietician and a monthly support group is available free of charge.

Specialty Care

Specialty care access is addressed in many of the similar ways addressed in the affordable health care/indigent care section of these priority areas. Some internal medicine and primary care is provided by the Wake Forest Baptist Medical Center in Wilkes County.

Coordination of Resources and Services

Care coordination in the county is primarily focused on coordination on services for children. Care Coordination for Children, through the Wilkes County Health Department, offer information on what to expect at different milestones of the child's development, help understand the child well and identify familial strengths and needs, offer free developmental screenings, work closely with doctors, hospitals, schools and others involved in the child's life, find needed services and resources and offer encouragement and support. Currently the Wilkes County Health Department provides assistance with federal, state, and local resources to the community. Currently, Wilkes Regional Medical Center Case Management/Social Work provides coordination of community resources for those who are being discharged from the facility. Blue Ridge Opportunity Commission provides assistance with basic needs of food, financial assistance with medications, and fuel for heating with referrals to community resources. Wilkes Cares Inc. also provides food and clothing for those in need with referrals to community resources. Wilkes Regional Medical Center has a program to promote health education/awareness in the Community. HOPE Ministries provides heating fuel, food, faith-based counseling and community resource referrals for families in need. Wilkes Senior Center provides resources internally and referrals externally to the senior population of the community in the areas of health care, nutrition, and wellness. Safe Inc. provides emergency shelter, education, and community resource referrals for women, men, teens and children. Lastly there is Public Health "Health Care Connection Coordination Program", Care Connection Pharmacy, and the Wilkes County Resource Guide of Available Services Published by the WCHD.

Chapter 6: Identifying Strategies for Improvement

Wilkes County Health Summit

On May 22, 2013, WCHD and WRMC hosted a Wilkes County Health Summit. The Health Summit served a dual purpose in which community partners and stakeholders received information about the community health assessment and engaged to identify strategies for addressing six potential health priorities. For each of the six potential priorities, participants were able to suggest enhancement of current programs, new strategies, and prospective partnerships. These suggestions were recorded by note takers and subsequently consolidated into a set of priority recommendations. These recommendations are below.

Wilkes County Health Summit Recommendations		
Health Issue/Challenge	Recommendations	Solutions
Access to Care	Hospital Systems should work to review and expand existing efforts to provide supplemental support for those who have limited access to care.	<p>Hospital systems can address this recommendation by considering the following suggested solutions:</p> <ol style="list-style-type: none"> 1. Expand and/or enhance existing programs to provide care at a reduced cost for patients with limited access to care due to financial limitations. 2. Collaborate with community organizations to increase awareness of available healthcare resources within schools, churches, food pantries, and media venues. 3. Partner with community organizations to develop an application for a federally qualified health center that increases access to care in rural areas of Wilkes County.
Chronic Disease	Community organizations should work with employers to develop comprehensive worksite health promotion programs.	<p>Community organizations can address this recommendation by considering the following suggested solutions:</p> <ol style="list-style-type: none"> 1. Partner with Wilkes County employers to develop a plan to provide health education and physical activity within the worksite.

	<p>Hospital systems should work with community partners to enhance health promotion and outpatient care efforts.</p>	<p>Hospital systems can address this recommendation by considering the following suggested solutions:</p> <ol style="list-style-type: none"> 1. Partner with community organizations, such as Wilkes County School System, to support and enhance community health education for health issues such as smoking, asthma, nutrition and physical activity. 2. Expand and/or enhance existing programs to provide low-cost prescriptions to low income patients. 3. Partner with community organization to develop a plan to increase outpatient follow up with uninsured and underinsured patients after discharge.
<p>Mental Health</p>	<p>Community and hospital systems should collaborate to review gaps in mental health service provision and resources.</p>	<p>Hospital systems and community organizations can address this recommendation by considering the following suggested solutions:</p> <ol style="list-style-type: none"> 1. Develop partnerships that focus on enhancing mental health education within schools, churches, community organizations and places of employment in Wilkes County. 2. Enhance and expand existing partnerships between mental health organizations and law enforcement agencies to increase awareness of mental resources. 3. Expand and/or enhance existing programs to provide mental health services at reduced costs for low income patients, particularly for youths and young adults.
<p>Physical Activity and Nutrition</p>	<p>Community organizations should collaborate to expand and/or enhance existing programs for physical activity, nutrition education and access to health food in Wilkes County.</p>	<p>Community organizations can address this recommendation by considering the following suggested solutions:</p> <ol style="list-style-type: none"> 1. Partner with Wilkes County School System to support existing physical activity and nutrition education within the community. 2. Expand and enhance partnerships with community organizations such as farmer markets and Community Supported Agriculture (CSA) to increase access to healthy food.

	Hospitals should work to review and enhance existing prevention and nutritional efforts for patients.	Hospital systems can address this recommendation by considering the following suggested solutions: 1. Enhance clinic care management programs to include preventative care and nutritional counseling.
Substance Abuse	Community organizations should expand or enhance existing partnerships to increase community awareness and drug reporting within Wilkes County.	Community organizations can address this recommendation by considering the following suggested solutions: 1. Develop partnerships to improve the timing of substance abuse interventions, such as S.B.I.R.T (Screening, Brief Intervention, Referral into Treatment), by enhancing and/or expanding substance abuse screening efforts, particularly among faith-based organizations. 2. Develop partnerships with law enforcement agencies to enhance substance awareness and reporting of drug activity.
	Hospital Systems should work to review and expand existing substance abuse treatment services.	Hospital Systems can address this recommendation by considering the following suggested solutions: 1. Enhance and/or expand existing efforts to increase substance abuse education and awareness. 2. Review and identify gaps in substance abuse treatment services.
Unintentional Injury	Hospital systems and community organizations should review and enhance existing efforts to reduce unintentional injuries.	Hospital systems and community organizations can address this recommendation by considering the following suggested solutions: 1. Expand and/or enhance existing prevention and educational programs targeting unintentional falls among elderly residents. 2. Expand and/or enhance existing efforts to prevent domestic abuse, particularly elder abuse.

Priority Health Areas Excluded from Action Plans

Three specific health priority areas will be excluded from both WCHD’s and WRMC’s action and implementation plans. These areas, justified below, include elder care and aging, neglect and abuse, and specialty care.

Elder Care and Aging

Elder care and aging is a prominent health concern, primarily because of the aging population in Wilkes County. However, there are numerous organizations, such as the High Country Council of Services, that provide an array of services for the elderly in Wilkes County.

Neglect and Abuse

Safe Inc. and the Wilkes County Department of Social Services currently address neglect and abuse within Wilkes County. Wilkes Regional Medical Center has previously established working relationships with these agencies and continues to work closely with them as needed.

Specialty Care

Wilkes Regional Medical Center maintains a working relationship with other agencies and entities that provide specialty care within Wilkes County. By continuing to maintain and further develop relationships with specialty care agencies within the community, WRMC will continue to indirectly impact this issue.

Priority Health Areas Addressed Primarily by Wilkes County Health Department

Affordable health care, the economy and poverty and diabetes are priority health areas of focus that will be primarily addressed by WCHD. WRMC will not have a primary role in addressing these issues as stated below.

Affordable Health Care

WRMC currently provides care to those less fortunate in the Community. Providing funding for indigent care remains a priority. WRMC coordinates efforts with the Wilkes County Health Department's Access to Care Representative to assist in the effort to provide affordable care for patients who cannot afford traditional care and/or are uninsured. This relationship with WCHD allows WRMC to assist in providing physicians and/or other medical services needed.

Economy and Poverty

Wilkes Regional Medical Center is currently the fourth largest employer within the County and continues to provide care to those within the population who are indigent through funding and other sources of charitable care. By maintaining WRMC's current status, this issue is still being addressed.

Diabetes

Wilkes Diabetes and Nutritional Center, operated by Wilkes County Health Department, is located adjacent to Wilkes Regional Medical Center and provides a wide variety of services to those in the county who are diabetic or pre-diabetic. Additional resources are provided by local pharmacists and are listed in the Community Resource Guide.

Cancer

Cancer screening, prevention and treatment is currently offered in Wilkes County through a federally funded effort, as well as through grant funds provided by the Susan G. Komen Race for the Cure NC Triad. WCHD continues to prioritize and fund primary prevention education and will continue to expand the focus on cancer prevention.

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