



Novant Health Kernersville Medical Center

Community Health Needs Assessment

Forsyth County, North Carolina

2016-2018

Approved by the Novant Health Triad Region Board of Trustees on October 11, 2016

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I. Introduction

Novant Health Forsyth Medical Center, in partnership with the Forsyth County Department of Public Health, Forsyth County Healthy Community Coalition and Wake Forest Baptists Health conducted a community health needs assessment in FY 2014-2015 to identify the most pressing health needs in our community. Novant Health Kernersville Medical Center will enhance the community's health by offering health and wellness programming in response to the specific health needs identified.

a. Organization Overview

Novant Health Kernersville Medical Center is an integral part of the Novant Health system (collectively known as "Novant Health"). Novant Health is a non-profit integrated health care system of 14 medical centers and a medical group with over 500 clinic locations. Other facilities and programs include outpatient surgery and diagnostic centers, charitable foundations, rehabilitation programs, and community health outreach programs. Novant Health and its affiliates serve their communities with programs including health education, home health care, prenatal clinics, community clinics and immunization services. Novant Health's over 25,000 employees and physician partners care for patients and communities in North Carolina, Virginia, South Carolina and Georgia.

Mission

Novant Health exists to improve the health of our communities, one person at a time.

Our employees and physician partners strive every day to bring our mission, vision and values to life. We demonstrate this commitment to our patients in many different ways. Our organization:

- Maintains an active community health outreach program.
- Demonstrates superior outcomes for many health conditions as indicated by our state and national quality scores.
- Creates innovative programs that address important health issues, with many of our programs and services being recognized nationally.
- Believes in its role as a good corporate citizen, working with community agencies and organizations to make our communities better places to live and work.

Novant Health Kernersville Medical Center (NHKMC), a department of Novant Health Forsyth Medical Center, is a 50-bed community facility that provides surgery, emergency care, diagnostic testing, inpatient care and other medical services.

b. Our Community

Primary and Secondary Service Areas

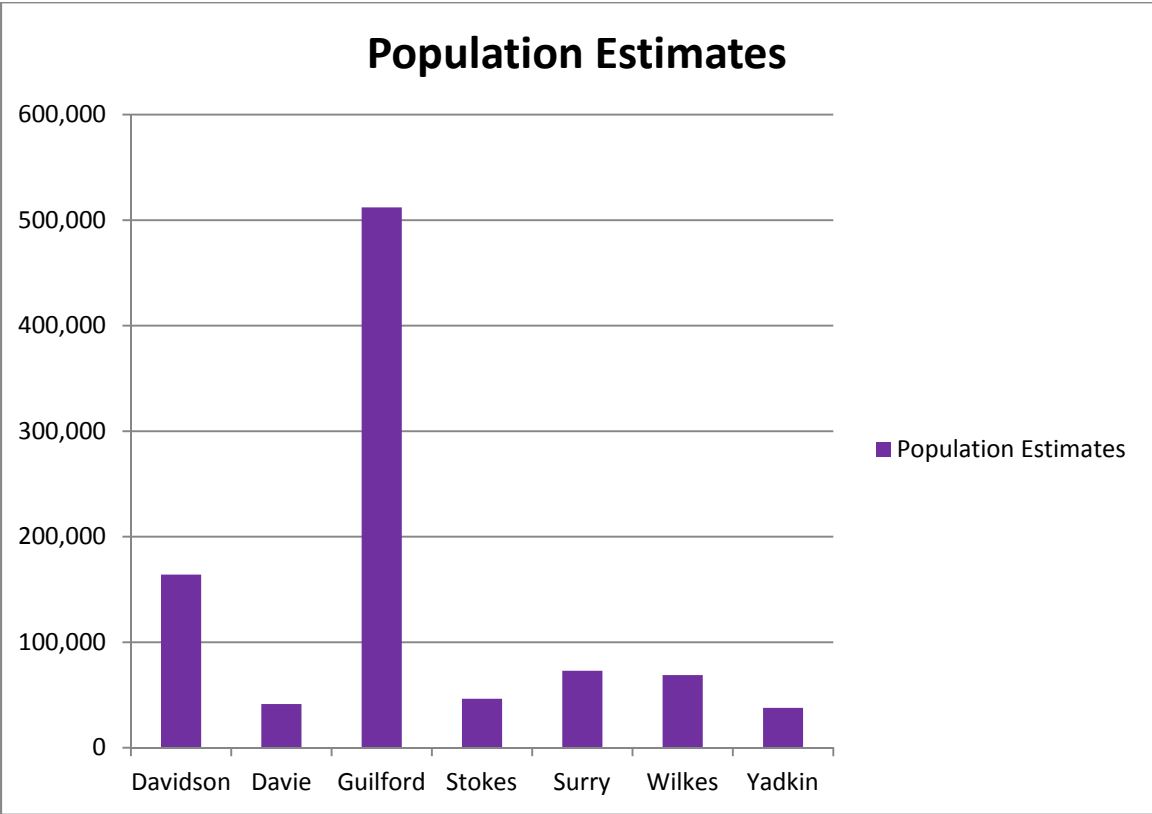
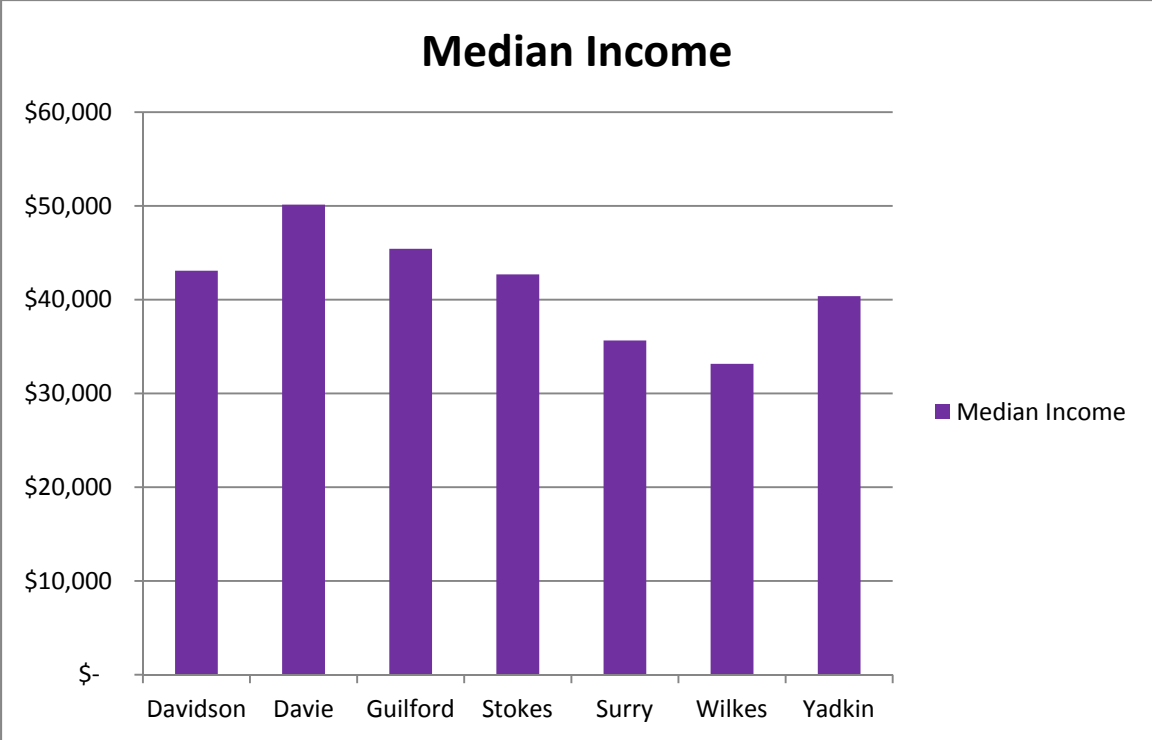
The Primary Service Area for Novant Health Kernersville Medical Center is defined by the zip codes that represent 75% to 85% of the hospital’s in-patient population as outlined below:

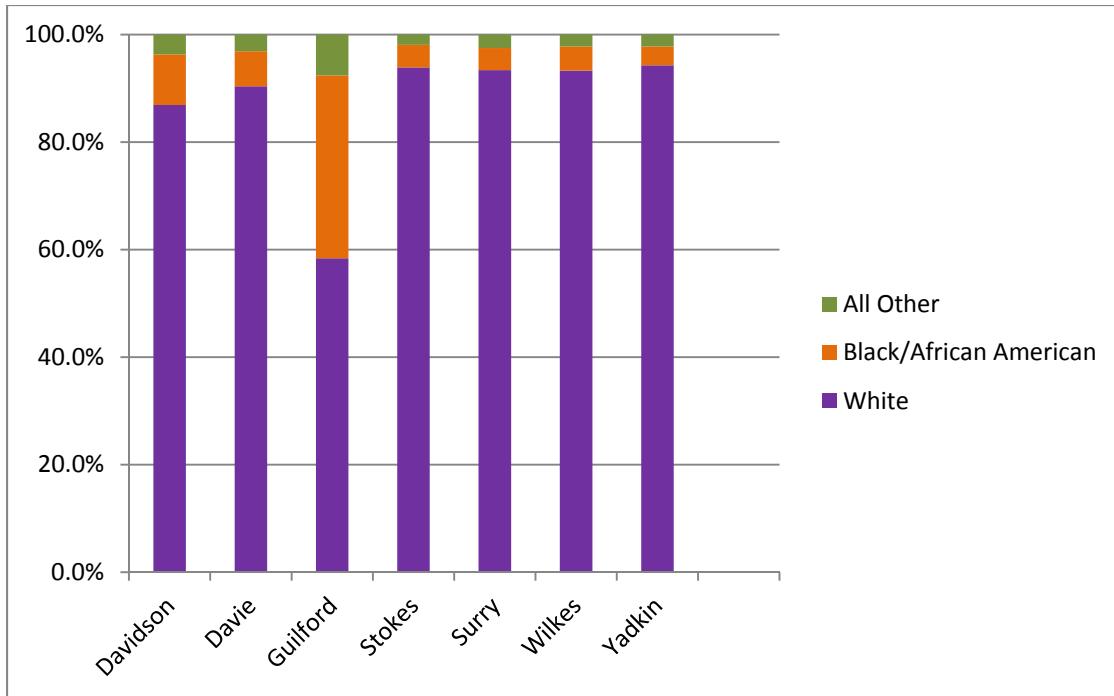
Zip Code	City	County	Zip Code	City	County
27009	Belews Creek	Forsyth	27110	Winston Salem	Forsyth
27010	Bethania	Forsyth	27111	Winston Salem	Forsyth
27012	Clemmons	Forsyth	27112	Winston Salem	Forsyth
270253	Lewisville	Forsyth	27113	Winston Salem	Forsyth
27040	Pfafftown	Forsyth	27114	Winston Salem	Forsyth
27045	Rural Hall	Forsyth	27115	Winston Salem	Forsyth
27050	Tobaccoville	Forsyth	27116	Winston Salem	Forsyth
27051	Walkertown	Forsyth	27117	Winston Salem	Forsyth
27094	Rural Hall	Forsyth	27120	Winston Salem	Forsyth
27098	Rural Hall	Forsyth	27127	Winston Salem	Forsyth
27099	Rural Hall	Forsyth	27130	Winston Salem	Forsyth
27101	Winston Salem	Forsyth	27150	Winston Salem	Forsyth
27102	Winston Salem	Forsyth	27152	Winston Salem	Forsyth
27103	Winston Salem	Forsyth	27155	Winston Salem	Forsyth
27104	Winston Salem	Forsyth	27157	Winston Salem	Forsyth
27105	Winston Salem	Forsyth	27198	Winston Salem	Forsyth
27106	Winston Salem	Forsyth	27199	Winston Salem	Forsyth
27107	Winston Salem	Forsyth	27284	Kernersville	Forsyth
27108	Winston Salem	Forsyth	27285	Kernersville	Forsyth
27109	Winston Salem	Forsyth			

Forsyth County, NHKMC’s primary service area and defined community, includes the county seat of Winston-Salem. Based on 2014 estimates, Forsyth County remained the fourth largest county in the State of North Carolina with just over 365,000 residents¹. Forsyth County’s population grew 4.2% since the 2010 US Census when there were an estimated 350,670 county residents. The County covers a 408 square mile area, with an average of 859.5 persons per square mile.

The Primary Service Area includes the City of Winston Salem, the Towns of Bethania, Kernersville, Lewisville, Rural Hall, Walkertown and the Village of Clemmons, which are all located in Forsyth County. The Secondary Service Area for Novant Health Kernersville Medical Center covers a seven county radius, including: Davidson, Davie, Guilford, Stokes, Surry, Wilkes and Yadkin counties. According to the 2014 U.S. Census estimates, the aforementioned counties include the following demographic profiles:

¹ U.S. Census Bureau (2015). State & County QuickFacts. <http://quickfacts.census.gov/qfd/states/37/37067.html>





Population

Forsyth County is more urban in nature, with only 7.4%² of the population living in rural areas. The county consists of a large urban center surrounded by smaller, more rural communities. Demographic data for Forsyth County is outlined below:

Forsyth County Population By Race & Ethnicity (2014)

	Forsyth County	North Carolina
Population Estimate	365,298	9,943,964
Persons Under 5 Years, percent 2014	6.3%	6.1%
Persons Under 18 Years, percent 2014	23.7%	23.0%
Person 65 Years & Over, percent 2014	14.4%	14.7%
Female Persons, percent 2014	52.5%	51.3%
White Alone, percent 2014	67.5%	71.5%
Black/African-American Alone, percent 2014	27.1%	22.1%
American Indian & Alaska Native Alone, percent 2014	0.8%	1.6%
Asian Alone, percent 2014	2.3%	2.7%
Native Hawaiian & Other Pacific Islander Alone, percent 2014	0.1%	0.1%
Two or More Races, percent 2014	2.1%	2.1%
Hispanic or Latino, percent 2014	12.6%	9.0%

Source: U.S. Census Bureau (2014).

²NC Economic Data and Site Information, 2015, <http://accessnc.commerce.state.nc.us/docs/countyProfile/NC/37067.pdf>

Children and adolescents make up an estimated one-third (30.0%) of the population in Forsyth County, while seniors make up 14.4% of the population. From 2014 to 2019, the population of Forsyth County is projected to grow by 0.8%. Non-white minorities currently make up almost half (45%) of the racial demographic in Forsyth County.

Forsyth County residents earn a median income that is slightly lower than the North Carolina state average. According to the U.S. Census 2014 American Community Survey, roughly one-third (32.1%) of Forsyth County residents have attained a bachelor’s degree or higher³. A key indicator to evaluate economic condition of Forsyth County is the poverty rate. The poverty rate for Forsyth County residents is higher than the North Carolina state average by 2.5%, and the poverty rate for children (ages 0-17) in Forsyth County is 3.5% higher than the NC State average.

Median Household Income		Population Educational Attainment (≥ 25 yrs old)		Poverty Rate	
Forsyth County	\$45,944	< HS diploma/GED	7.7%	All ages (Forsyth County)	19.7%
		HS diploma/GED	26.1%	All ages (North Carolina)	17.2%
North Carolina	\$46,596	Some college or associate's degree	28.5%	Children (0-17)	27.6%
		Bachelor's degree	20.7%	Children (0-17) (North Carolina)	24.1%
		≥ Graduate degree	11.4%		

II. Assessment

The following are excerpts and findings from the 2014 Forsyth County Community Health Assessment. To access the full report, please visit www.forsyth.cc/PublicHealth/Documents/2014_CHA_REPORT.pdf

a) Collaborative community partners

Local Health Departments in North Carolina are required to conduct a comprehensive community health needs assessment to maintain local health department accreditation. The 2014 Forsyth County Community Health Assessment (CHA) is a collaborative effort of the Forsyth County Department of Public Health (FCDPH), Novant Health Forsyth Medical Center and Wake Forest Baptist Health, and community members. As part of this assessment process, special attention was paid to the needs of the underserved. The process emphasized collaboration among community partners to improve the overall health of the community.

The assessment process was initiated by the FCDPH, community not-for-profits, Winston Salem/Forsyth

³ U.S. Census Bureau, Small Area Income and Poverty Estimate Program. December 2015. <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>

County Schools, and other city/county agencies and community members. Novant Health Forsyth Medical Center and Wake Forest Baptist Medical Center were jointly involved as collaborative partners in the process. To ensure input from public health professionals, leaders of medically underserved communities, and persons with broad knowledge of the community, invitations were distributed to a large number of individuals and community groups. The FCDPH staff worked with community partners to recruit members of the Community Health Assessment Team. Different working groups were formed from this team:

- The Advisory Group met regularly to advise each phase of the CHA process and made recommendations for data collection
- The CHA Primary Data Group consisted of the CHA survey administrators, Youth Risk Behavior Survey (YRBS) facilitators and focus group facilitators and note takers
- The CHA Secondary Data Group met monthly to review the secondary data
- The Data Team met monthly to review both primary and secondary data and identified social, clinical, and behavioral health outcomes, and then prioritized the top health issues

(See Appendix A and B for a complete list of agencies that were represented on the advisory and data groups. Please see the FCDPH 2014 CHA Report at www.forsyth.cc/PublicHealth/Documents/2014_CHA_REPORT.pdf for a listing of individual participant names).

b) Solicitation

We solicited input from persons who represent the broad interest of Forsyth County, NC including Hispanics, persons living in poverty and those without a high school degree. Through the two-stage cluster sampling methodology that was employed for the Community Health Opinion Survey, 40 census blocks were randomly selected with a probability proportionate to the population size of Forsyth County. Compared to the 2010 Census and the 2008-2012 American Community Survey, demographic information from survey respondents indicated that the sample population from the Community Health Opinion Survey differs only slightly from the Forsyth County population. The median age of survey respondents was 52 years. All age groups were well represented in the survey with the exception of 18-24 year olds.

c) Data collection and analysis

Primary Data

The Community Health Opinion Survey

With guidance from the CHA Advisory Group, the Community Health Opinion (CHO) Survey was developed for Forsyth County residents. Input for the survey was solicited from a variety of leaders in city and county government, community-based organizations, foundations, churches, colleges/universities, coalitions and other social service agencies. The leaders included experts in public health, minority populations, health disparities and social services. The survey questionnaire consisted of 66 questions and was divided into the following nine sections: *Quality of Life Statements, Community*

Improvement, Health Information, Personal Health, Access to Care/Family Health, Emergency Preparedness, Food Security, Health Department Services and Demographic Characteristics.

The Community Health Opinion Survey was conducted between April 23rd and May 23rd, 2014. To select the sample population, a two-stage cluster sampling methodology was employed, using population-based sampling weights from each census block. The North Carolina Institute for Public Health (NCIPH) staff trained FCDPH staff, public health students and other volunteers in survey methodology using a handheld computer with mobile GIS technology as well as a handheld geographic position systems (GPS) unit. The data was analyzed in SAS 9.3 (Cary, NC).

Focus Groups

For additional primary data for the 2014 CHA, the FCDPH employed focus groups for reproductive and mental health, highlighting community issues or concerns that were not previously considered. The Forsyth County Infant Mortality Reduction Coalition convened five focus groups to examine the issues that were influencing reproductive health. These focus groups were conducted during Summer 2014 at various locations throughout the community. The North Carolina Council for Women conducted several focus group discussions in different counties in North Carolina regarding challenges faced by discharged military veterans and their families. Two focus groups were convened in Forsyth County in Clemmons in September 2013. Participant discussion and responses were recorded. An assessment was made of group responses to all the questions addressed in the meeting. The focus group's qualitative and exploratory data was not used for statistical validity. The qualitative analysis of the data was prepared by staff of the FCDPH.

Secondary Data

Along with the outlined primary data, secondary data was collected from other sources and reviewed. Health data was gathered and analyzed from the following sources:

- North Carolina Department of Health & Human Services, State Center for Health Statistics
- 2013 Winston Salem/Forsyth County High School and Middle School Youth Risk Behavior Survey
- CenterPoint Human Services
- The United Way
- The US Bureau of Census
- Forsyth Futures
- The North Carolina Uniform Crime Reporting (UCR) Program
- The County Health Rankings & Roadmaps
- The Piedmont Triad Regional Council (PTRC)
- The North Carolina Coalition to End Homelessness (NCCEH)
- Novant Health Forsyth Medical Center
- Wake Forest Baptist Health
- The Environmental Protection Agency (EPA)
- NC Department of the Environment and Natural Resources

III. Identification & Prioritization of Health Needs

a) Identified Significant Health Needs

From participant responses, several social, behavioral, and clinical health needs were identified based

on highest rank in responses after analyzing and interpreting Forsyth County's primary and secondary data. Overall findings included the following:

- The top three issues that most affect the quality of life of Forsyth County residents are low income/poverty, homelessness and violent crime/dropping out of school
- The top three services that needed improvement were availability of employment, positive teen activities and high paying employment.
- Regarding personal health responses, 75% reported their health was good to excellent; 70% reported engaging in physical activity for 30 minutes in the past 30 days; 47% did not receive the flu shots and the top three chronic health conditions previously diagnosed were high blood pressure, high cholesterol and depression or anxiety.
- Regarding access to care/family health responses, when sick, 70% visit the doctor's office; 10% hospitals and 10% urgent care. Barriers cited to receiving healthcare were lack of insurance, insurance did not cover what I needed and cost too high
- The top health issues were overweight/obesity, mental health and chronic disease
- The top social issues were poverty, homelessness, unemployment and access to care.

Based on these identified health needs, the CHA Data Team identified these issues as 17 social, clinical, behavioral and health outcomes. The identified health outcomes included the following:

1. Access to Care
2. Alcohol abuse
3. Cancer
4. Depression
5. Heart Disease
6. Homelessness
7. Inequities
8. Infant Care
9. Overweight/Obesity
10. Physical inactivity
11. Poor diet
12. Poverty
13. Risky sexual activity
14. Smoking
15. Stroke
16. Suicide
17. Unemployment

b) Prioritization

In July 2015, a combination of online surveys and paper surveys were conducted to ask community members and stakeholders to rank the top three health issues according to years of potential life lost and magnitude of these issues. The calculated scores were used to rank the focus areas, and the weighted rankings from the community opinion surveys and the priority focus exercise were combined with the following results:

- 1) Cancer
- 2) Heart Disease
- 3) Stroke
- 4) Infant Mortality
- 5) Suicide

Recommended Prioritized Health Outcomes

For each of the identified areas, recommendations were made for the three broad health outcomes priorities of chronic disease, maternal and infant health and mental health. Below is a summary of those recommendations:

- *Chronic Disease:* Increase programming of chronic disease self-management programs that are delivered by lay individuals in community settings or via computer or phone applications or messaging. Potential outcomes to achieve include increased healthy behaviors, improved quality of life, improved mental health, reduced hospital utilization, and improved chronic disease management.
- *Maternal and Infant Health:* develop an approach to improving infant mortality focusing on the collective impact model that will foster a sense of community, create a shared vision amongst community members, coordinate efforts through reinforcing activities, improve organizational support dedicated to the work of groups supporting infant health.
- *Mental Health:* integrate behavioral health into primary care practices, bring substance abuse screenings and treatments into a primary care setting, carefully collaborate between providers, case managers, behavioral health consultants and mental health specialists to help improve mental health, patient engagement and reduce drug and alcohol use.

Facility prioritization

In addition to the community rankings, leadership from Novant Health Kernersville Medical Center reviewed the top five diagnosis codes for inpatient and outpatient hospital emergency room visits at Novant Health Forsyth Medical Center year-to-date January to July 2015.

Novant Health Forsyth Medical Center Emergency Department
Top 5 Diagnoses YTD Jan-July 2015

Inpatient		Outpatient	
Diagnosis	Volume	Diagnosis	Volume
Septicemia NOS	814	Chest pain NOS	1,331
Pneumonia, organism NOS	400	Chest pain NEC	896
Urinary tract infection NOS	219	Urinary tract infection NOS	895
Chest pain, NEC	69	Headache	806
Syncope and collapse	65	Abdominal pain oth spcf st.	628

A review of the hospital emergency room visits indicated that many of the top inpatient diagnosis codes are correlated with chronic issues affecting the aging population. Upon analysis of the outpatient diagnosis codes, it was apparent that many of the patients seen had symptoms that could be related to a number of chronic conditions, including (but not limited to) heart disease, obesity, diabetes and chronic issues related to aging.

Upon a comprehensive review of the community’s recommended prioritized outcomes and NHFMC’s ED top 5 diagnosis codes, the Kernersville Medical Center leadership team and Board of Trustees evaluated this information based on the scope, severity, health disparities associated with the need, and the estimated feasibility and effectiveness of possible interventions. Through this thorough evaluation, the team agreed on the following two top significant health priorities for Novant Health Kernersville Medical Center:

1. Diabetes
2. Obesity

IV. Addressing needs

Novant Health Kernersville Medical Center is committed to working to address each of the identified areas of need through resource allocation and support of the following programs:

Diabetes:

- Diabetes (A1C) community screenings
- Diabetes education

Obesity:

- BMI screening
- Community education

In addition to the programs and services offered to the community through Novant Health Kernersville Medical Center, there are several existing community assets available throughout the Forsyth County community that have additional programs and resources tailored to meet all of the identified health needs. The following is a list of those existing community assets:

Identified Significant Health Need	Local Community Resources Addressing Need
<ul style="list-style-type: none"> - Access to care - Alcohol abuse - Physical Inactivity - Risky sexual activity - Smoking 	<ul style="list-style-type: none"> - Addiction Recovery Care Association - A Greater Divine Place, Inc. - Advanced Placement - Alcoholics Anonymous - Mark Recovery Services, Inc. - Epiphany Family Services - Essential Life Connections - Glenn’s Assessment and Counseling Service - Insight Human Services - Ivy House Center for Self-Sufficiency - LifeSkills Counseling Center

	<ul style="list-style-type: none"> - OSA Assessment & Counseling Services - The Recovery Center of the Triad, LLC - Top Priority Care Services - Triad Homes-NC/ ED-CORE, Inc. - Twin City Area Narcotics Anonymous - Winston Salem Rescue Mission - YWCA Hawley House - Barb Andresen, R.D., L.D.N.: Medical Nutrition Services - Forsyth Medical Center Diabetes and Nutrition Counseling - Wake Forest Baptist Medical Center- Outpatient Clinical Nutrition - WomanCare Nutrition Services - Forsyth County Parks and Recreation - YMCA of Northwest North Carolina - Gateway YWCA - AIDS Care Services - Back to Basics - Forsyth County Department of Public Health - Northwest Care Consortium - Positive Wellness Alliance - Planned Parenthood - No’bacco (United Way of Forsyth County) - TRU campaign - Forsyth County Department of Public Health Freedom From Smoking Course
<ul style="list-style-type: none"> - Depression - Overweight/Obesity - Suicide 	<ul style="list-style-type: none"> - Advanced Placement BHHS, Inc. - Associates in Christian Counseling - A Sure House, Inc. - CenterPoint Human Services - The Children’s Home, Inc - Counseling, Catholic Social Services - Direct Care Community Base Services, LLC - Essence of Care, Inc. - Forsyth Medical Center Behavioral Health - Foundation Strong, LLC - Hands to Hands Rehabilitation Center, LLC - Inspirationz, LLC - Lutheran Family Services in the Carolinas-TAP Program - Mental Health Association - My Sister’s Place Community Services, Inc. - New-Lite Living Choices, Inc.

	<ul style="list-style-type: none"> - Old Vineyard Behavioral Health Services - People Helping People of North Carolina, LLC - PQA Healthcare, Inc. - Triumph, LLC, V.I.P. Care Services, Inc. - Vision Behavioral Health Services, LLC - Wake Forest Baptist Health-Psychiatry and Behavioral Medicine - Wilson’s Constant Care, LLC - Youth Opportunities - Barb Andresen, R.D., L.D.N.: Medical Nutrition Services - Forsyth Medical Center Diabetes and Nutrition Counseling - Wake Forest Baptist Medical Center- Outpatient Clinical Nutrition - WomanCare Nutrition Services - YMCA of Northwest North Carolina - Gateway YWCA
<ul style="list-style-type: none"> - Access to Care - Homelessness - Inequities - Poverty - Stroke - Unemployment 	<ul style="list-style-type: none"> - Bethany Baptist Church Medical Clinic - Community Care Center - Community Mosque Clinic - Downtown Health Plaza - Forsyth County Department of Public Health - Green Street United Methodist Church Clinic - Healthcare Access - Northwest Community Care Network - Planned Parenthood - Southside United Health and Wellness Center - Sunnyside Clinic—Trinity Moravian Church - Today’s Woman Health and Wellness Center - Winston-Salem Rescue Mission, Inc: Medical and Dental Clinic - Advocacy for the Poor, Inc. - Community Action Agency - Transitional Services to Homeless Families - Bethesda Center for the Homeless - Family Services, Inc. - Samaritan Ministries - Winston Salem Rescue Mission Shelter - Crisis Control Ministries - Sunnyside ministries - Experiment in Self-Reliance - Second Harvest Food Bank - Goodwill Inc. - Winston Salem Urban League

V. Impact Evaluation of 2013-2015 Community Health Needs Assessment

Based on the previously reported health data from the 2013-2015 Community Health Needs Assessment, the Novant Health Triad Board of Trustees did a collective review of community feedback and prioritization, and determined the top health priorities for Clemmons Medical Center as the following: **Diabetes and Obesity.**

To address these priorities, Kernersville Medical Center committed to providing community education, screenings and support groups to address these needs, as well as youth-focused physical activity and nutrition programs. From 2013-2015, Novant Health Kernersville Medical Center was successful in implementing selected outreach programs for each of the defined priority areas while meeting the goals established for each program. The major program goal that was set for each priority area was to increase the number of community members reached through screenings and health education. This goal was exceeded by almost double for the majority of each community outreach program. Specific objectives and measures achieved are described below:

- 1) Priority Area: Diabetes— Over 12,000 community members in Forsyth County were reached through screenings that included cholesterol, glucose and A1C exams to measure one’s risk for diabetes. In addition, over 12,700 community members received health education specific to diabetes management and prevention. Screenings and educational classes were made available in the community at community centers, senior centers, local YMCA’s, the YWCA, Churches, schools, and at local community events as requested.
- 2) Priority Area: Obesity – Over 12,000 community members were reached through Body Mass Index screenings to provide an assessment of overweight and obesity. In addition, over 9,800 community members were received health education specific to nutrition and weight management, while over 300 participants were enrolled in “The Weigh for You”, a 10-week comprehensive weight loss program. Several sessions of “The Weigh for You” were offered in the Kernersville area. Screenings and educational classes were offered throughout the Forsyth County community at various locations.

Appendix A: Primary and secondary working group – represented agencies

CHA Primary Data Working Group	CHA Secondary Data Working Group
Agency	Agency
United Way	Forsyth Futures
Exchange Scan	FCDPH
Novant Health	Winston Salem Police Department
WakeHealth	Winston Salem Forsyth County Schools
Winston Salem State University (WSSU)	Northwest Community Care
Various Community Members	YMCA NWNC
Forsyth Futures	HealthCare Access Inc.
Community Care Clinic	Youth Service
CenterPoint	WSSU
YMCA NWNC	
Housing Authority of Winston-Salem	
City of Winston-Salem	

Appendix B: CHA Advisory Group and Data Team – represented agencies

CHA Advisory Group	CHA Data Team
Agency	Agency
WakeHealth	Forsyth County Dept of Public Health (FCDPH)
Novant Health	United Way
Forsyth County Dept of Public Health (FCDPH)	Forsyth Futures
Winston Salem State University (WSSU)	MapForsyth
Gramercy Research	Piedmont Regional Triad Regional Council
Downtown Health Plaza: WakeHealth	Kate B Reynolds
Various Community Members	Gramercy Research
Forsyth Futures	Piedmont Triad Regional Council