



Novant Health Clemmons Medical Center

Community Health Needs Assessment

Forsyth County, North Carolina

2019-2021

Approved by the Novant Health Triad Region Board of Trustees on October 15, 2019

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I. Introduction

Novant Health Clemmons Medical Center, in partnership with the Forsyth County and Davie County Departments of Public Health, Forsyth County and Davie County community partners and Wake Forest Baptist Health, conducted community health needs assessments in 2017 to identify the most pressing health needs in our community. Novant Health Clemmons Medical Center will enhance the community's health by offering health and wellness programming, clinical services and financial support in response to the specific health needs identified.

a) Organizational Overview

Forsyth Memorial Hospital, Inc. DBA Novant Health Clemmons 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 15 medical centers and a medical group with over 575 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 28,000 employees and 2,500 physician partners care for patients and communities in North Carolina, South Carolina, and Virginia.

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 socially responsible organization, working with community agencies and organizations to make our communities better places to live and work.

Novant Health Clemmons Medical Center (NHCMC), a department of Novant Health Forsyth Medical Center, opened in April 2013. Some of the services offered at Novant Health Clemmons Medical Center include:

- An emergency department that is open to serve patients daily 24/7 and staffed with experienced nurses, board-certified doctors and medical staff
- Surgical services that offer outpatient procedures in state-of-the art operating rooms
- The latest diagnostic technology and a comprehensive range of imaging services including CT scan, X-ray, ultrasound, and mobile MRI

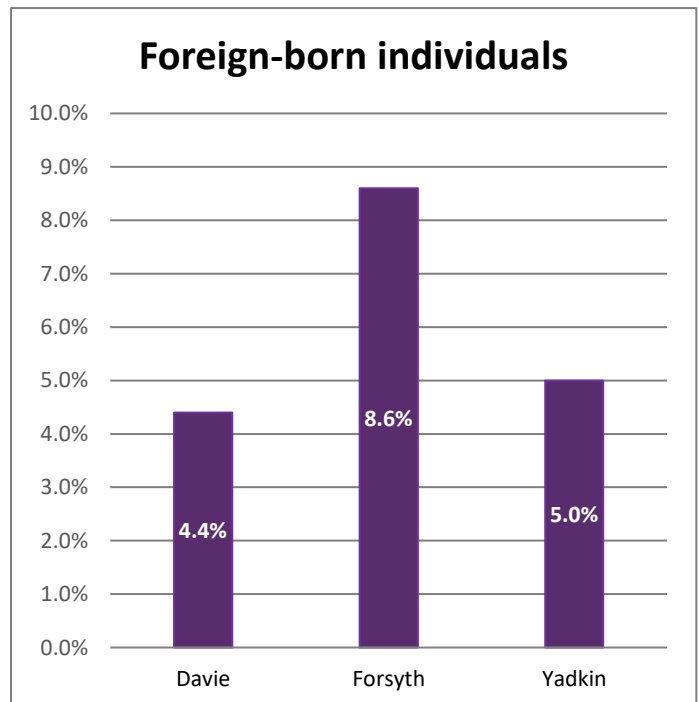
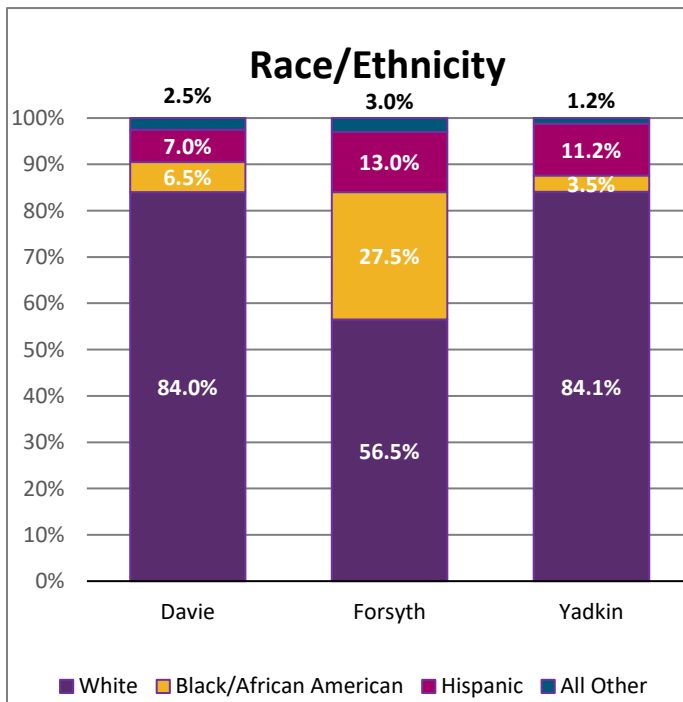
b) Our Defined Community

Primary Service Area

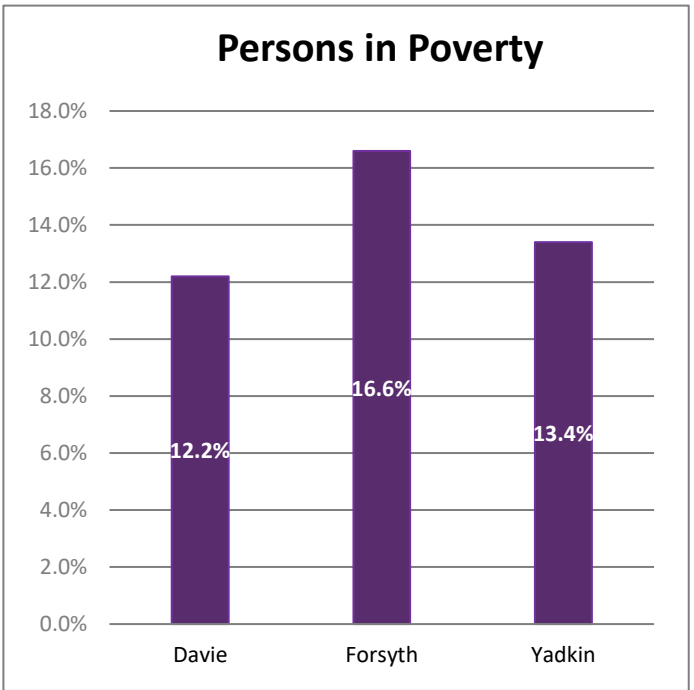
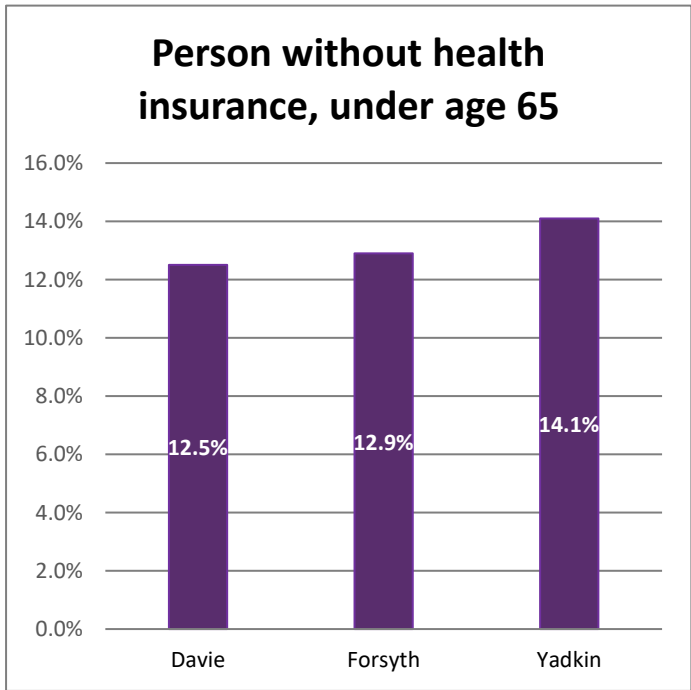
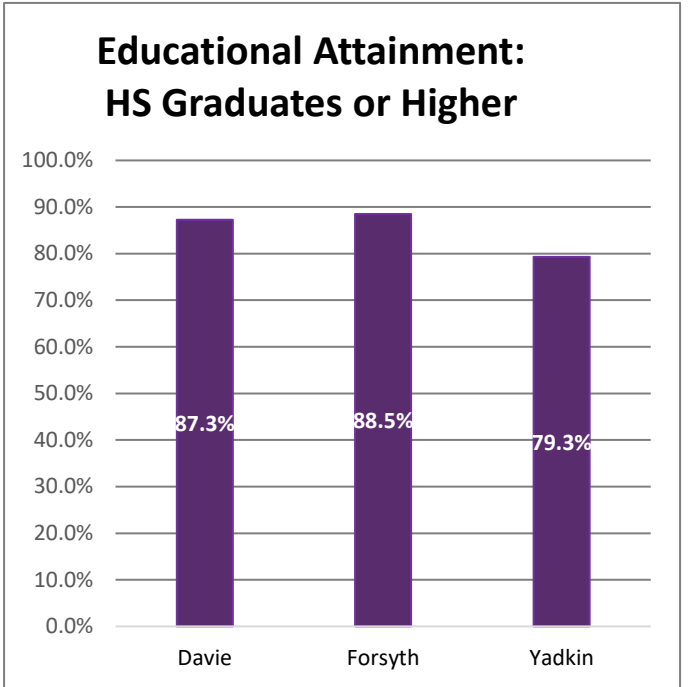
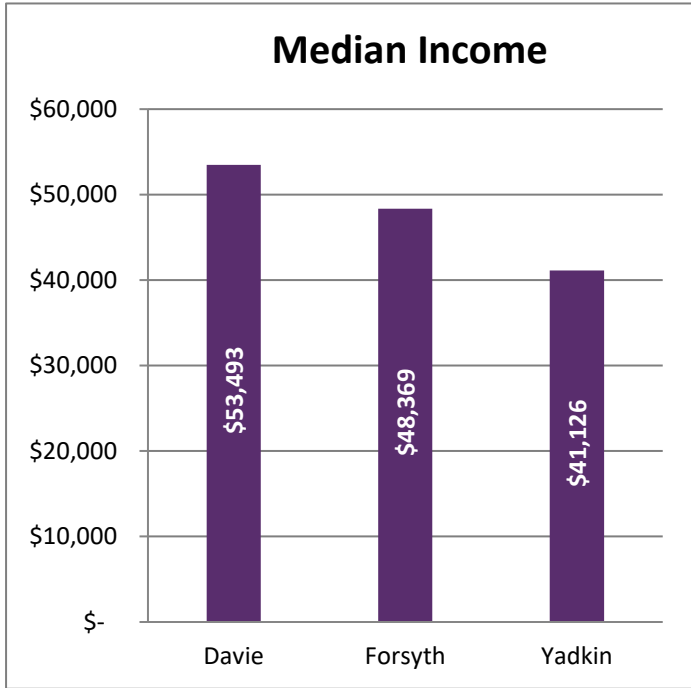
The Primary Service Area for Novant Health Clemmons Medical Center is defined by the zip codes that represent more than 75% of the hospital’s in-patient population as outlined below:

Zip Code	City	County
27006	Advance	Davie
27012	Clemmons	Forsyth
27018	East Bend	Yadkin
27023	Lewisville	Forsyth
27028	Mocksville	Davie
27055	Yadkinville	Yadkin
27103	Winston Salem	Forsyth
27104	Winston Salem	Forsyth
27106	Winston Salem	Forsyth
27127	Winston Salem	Forsyth

Novant Health Clemmons Medical Center’s Primary Service Area includes Davie, Forsyth and Yadkin counties while the Secondary Service Area includes Davidson and Stokes counties. 66% of the patients in the Primary Service Area reside in Forsyth County and 30% reside in Davie County, while 66% of the patients in the Primary and Secondary Service Areas reside in Forsyth County. A comparison of county data from each geographic area from which the hospital draws its patients was conducted. Based on comparison of race/ethnicity, median income, educational attainment, persons in poverty and foreign-born individuals, Forsyth County represents the highest population of potentially underserved, low-income and minority individuals from the Primary Service Area.



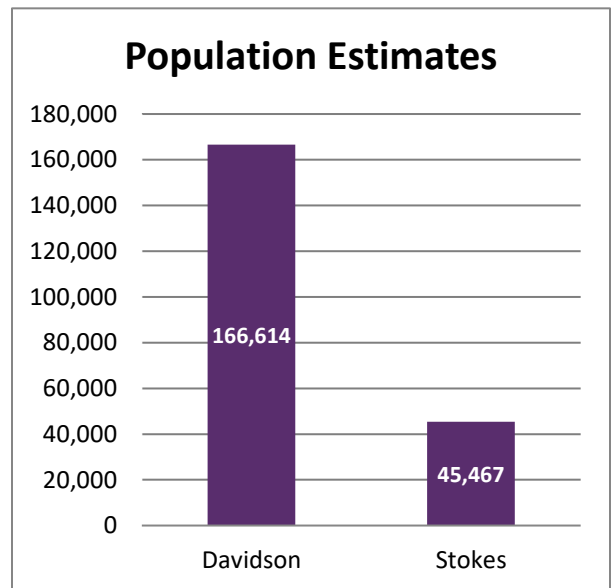
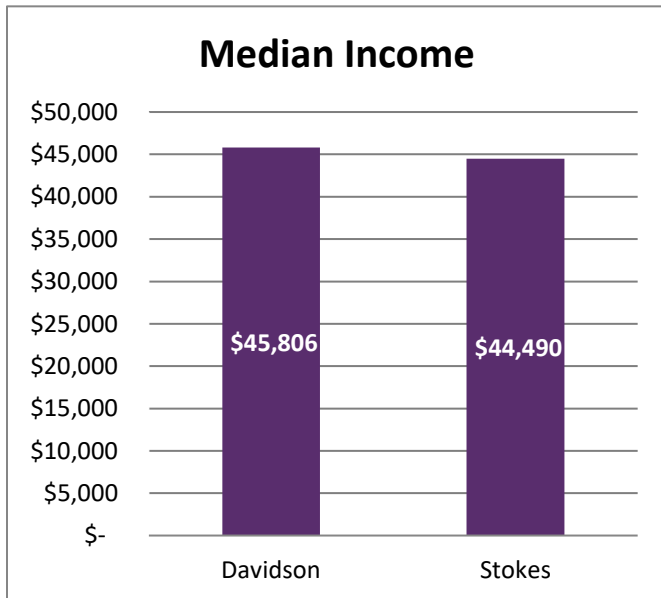
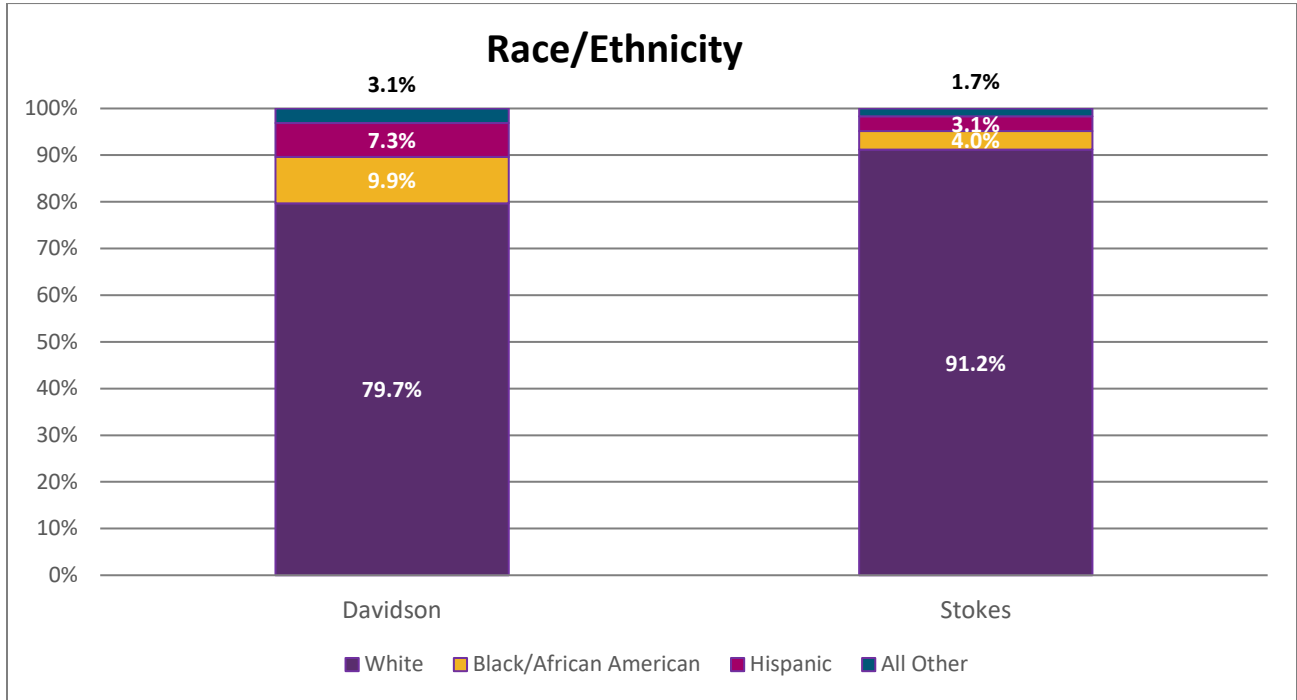
Source for all graphs: U.S. Census Bureau (2018)



Source for all graphs: U.S. Census Bureau (2018)

Secondary Service Area

The Secondary Service Area for Novant Health Clemmons Medical Center covers Davidson and Stokes counties. According to the 2018 U.S. Census estimates, the aforementioned counties include the following demographic profiles:



Source for all graphs: U.S. Census Bureau (2018)

Forsyth County Population: Demographics

As outlined in the charts above, Forsyth County represents the highest population of potentially underserved, low-income and minority individuals from the Primary Service Area. As the majority of patients also reside in Forsyth County, this county will be the sole focus of demographic, health and social indicators.

Forsyth County is mostly urban in nature, with only 7.4%¹ of the population living in rural areas. The county consists of a large urban center surrounded by smaller, more rural communities. Based on 2018 estimates, Forsyth County remained the fourth largest county in the State of North Carolina with 379,099 residents². From 2020 to 2030, the population of Forsyth County is projected to grow by 4.0% which is down from 7.0% for the 2010-2020 period.

Adolescents (individuals 18 and younger) make up an estimated 22.9% of the population in Forsyth County, while seniors (individuals 65 and older) make up 16.0% of the population³. Median age continues to increase, and we can see a shift in the population from adolescents to seniors as our population continues to age. This trend may put a strain on healthcare services in Forsyth County because health care for older persons is different from that provided to other age groups in several respects: greater resource demands, the intertwining of professional health services with social services, the frequent occurrence of important ethical conundrums, and a higher prevalence of physical and mental disabilities.⁴ Non-white minorities currently make up almost half (43.5%) of the racial demographic in Forsyth County.

¹NC Economic Data and Site Information, February 2019, <https://accessnc.ncommerce.com/DemoGraphicsReports/pdfs/countyProfile/NC/37067.pdf>

² U.S. Census Bureau, 2018 American Community Survey 1-Year Estimates <https://www.census.gov/quickfacts/fact/table/forsythcountynorthcarolina/POP060210>

³U.S. Census Bureau (2018). State & County QuickFacts. <https://www.census.gov/quickfacts/fact/table/forsythcountynorthcarolina,US/PST045218>

⁴ National Center for Biotechnology Information (NCBI). The Health of Aging Populations. <https://www.ncbi.nlm.nih.gov/books/NBK98373/>

Demographic data for Forsyth County is outlined below:

Forsyth County Population by Race & Ethnicity (2018)

	Forsyth County	North Carolina
Population Estimate	379,099	10,383,620
Persons Under 5 Years	5.9%	5.9%
Persons Under 18 Years	22.9%	22.2%
Person 65 Years & Over	16.0%	16.3%
Female Persons	52.6%	51.4%
White Alone,	56.5. %	62.8%
Black/African-American Alone	27.5%	22.2%
American Indian & Alaska Native Alone	0.9%	1.6%
Asian Alone	2.6%	3.2%
Native Hawaiian & Other Pacific Islander Alone	0.1%	0.1%
Two or More Races	2.3%	2.3%
Hispanic or Latino	13.0%	9.6%

Source: U.S. Census Bureau (2018)

Forsyth County Population: Health Indicators

In the 2018 County Health Rankings¹, Forsyth County ranks 39 out of 100 counties for health outcomes.

Areas where Forsyth County performs particularly poorly are quality of life and health behavior. Key findings are listed below:

Quality of Life (Ranked 64 out of 100)	Forsyth County	Top U.S. Performers	North Carolina
Age-adjusted % of adults reporting fair or poor health	19%	12%	18%
Average number of physically unhealthy days reported in past 30 days (age-adjusted)	3.7	3.0	3.6
Average number of mentally unhealthy days reported in past 30 days (age-adjusted)	4.2	3.1	3.9
Percentage of live births with a low birthweight (<2500 grams)	10%	6%	9%
Health Outcomes & Behaviors (Ranked 62 out of 100)	Forsyth County	Top U.S. Performers	North Carolina
HIV Prevalence	465	49	355
Adult obesity	32%	26%	30%
Alcohol-impaired driving deaths	37%	13%	31%
Sexually transmitted infections	827.0	145.1	647.4
Limited access to healthy foods	14%	2%	7%
Drug overdose deaths	19	10	16

Source: County Health Rankings & Roadmaps <http://www.countyhealthrankings.org/app/north-carolina/2018/rankings/forsyth/county/outcomes/overall/snapshot>

Forsyth County’s leading cause of death in 2017 was diseases of the heart followed closely by cancer. Heart disease, cancer, and chronic lower respiratory disease have been the three leading causes of death for the last 7 years in Forsyth County:

Leading Causes of Death in Forsyth County in 2017			
Rank	Cause of Death	Number	%
1	Diseases of heart	719	19.9
2	Cancer	716	19.8
3	Chronic lower respiratory diseases	221	6.1
4	Cerebrovascular diseases	219	6.1
5	All other unintentional injuries	196	5.4
6	Alzheimer's disease	189	5.2
7	Diabetes mellitus	106	2.9
8	Nephritis, nephrotic syndrome and nephrosis	81	2.2
9	Influenza and pneumonia	72	2.0
10	Septicemia	55	1.5
	All other causes (Residual)	1,043	28.9
	Total Deaths – All Causes	3,617	100.0

Source: NC State Center for Health Statistics

Forsyth County Population: Social Indicators

Forsyth County residents earn a median income that is slightly lower than the North Carolina state average. According to the U.S. Census 2017 American Community Survey, roughly one-third (33.3%) 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 continues to be higher than the North Carolina state average by 3.0%, and the poverty rate for children (ages 0-17) in Forsyth County, is 5.8% higher than the NC State average.

Median Household Income		Population Educational Attainment (≥ 25 yrs. old)		Poverty Rate	
Forsyth County	\$48,369	< HS diploma/GED	11.5%	All ages (Forsyth County)	19.1%
		HS diploma/GED	25.3%	All ages (North Carolina)	16.1%
North Carolina	\$50,320	Some college or associate's degree	29.4%	Children (0-17) (Forsyth County)	28.7%
		Bachelor's degree	20.7%	Children (0-17) (North Carolina)	22.9%
		≥ Graduate degree	12.6%		

Source: U.S. Census Bureau (2018)

Source: ACS (2013-2017)

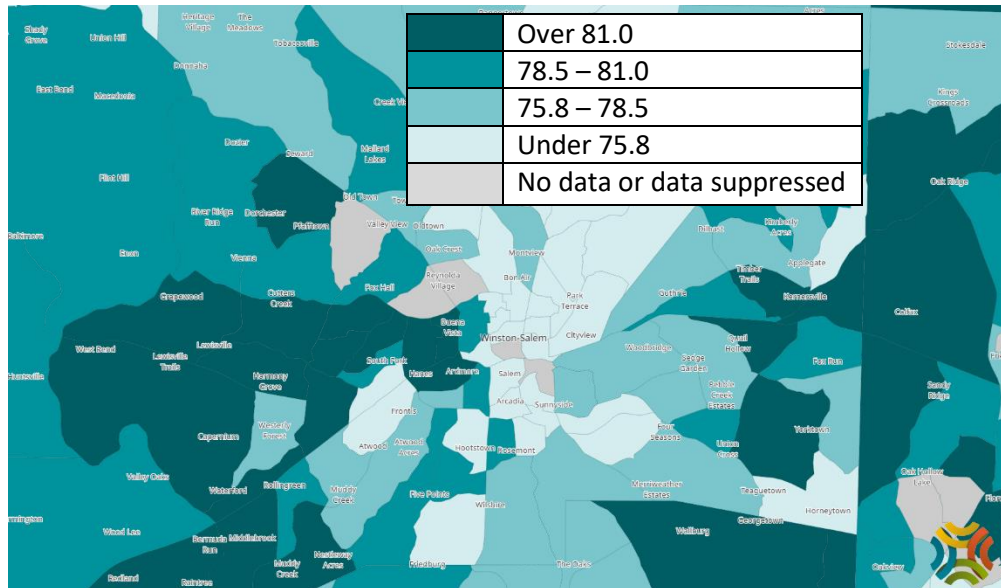
Source: ACS (2013-2017)

³ U.S. Census Bureau, Small Area Income and Poverty Estimate Program. December 2017. <http://factfinder.census.gov/faces/tableservices/isf/pages/productview.xhtml?src=bkmk>

The Forsyth County unemployment rate snapshot from February 2019 shows a rate just above the NC overall rate⁴. According to Robert Wood Johnson Foundation (RWJF’s) County Health Rankings and Roadmaps, 14% of Forsyth County residents struggle with access to healthy foods, double the state percentage.⁵ Additionally, more than half of renters in Forsyth County spend more than 30% of their household income on rent. With more than 55,000 people (or 38.3% of the population) renting, this figure represents more than 25,000 individuals. Forsyth County residents also have a higher than average percentage of households without access to a vehicle.

Unemployment Rate ⁶		Limited Access to Healthy Foods ⁷		Renters spending more than 30% Of Household Income on Rent ⁸		Percent of Households without a Vehicle ⁸	
Forsyth County	4.4%	Forsyth County	14%	Forsyth County	50.8%	Forsyth County	7.7%
North Carolina	3.9%	North Carolina	7%	North Carolina	48.7%	North Carolina	6.1%

Life expectancy varies widely in Forsyth County, from over 81.0 in the western section of Winston-Salem and western and eastern county peripheries to under 75.8 in east Winston Salem census tracts. As seen in the map below, there is a larger volume of older adults living in the more rural areas of Forsyth County.



Source: Community Commons www.communitycommons.org

⁴ NC Bureau of Labor Statistics <https://www.bls.gov/eag/eag.nc.htm>

⁵ County Health Rankings and Roadmaps <http://www.countyhealthrankings.org/app/north-carolina/2018/rankings/forsyth/county/outcomes/overall/snapshot>

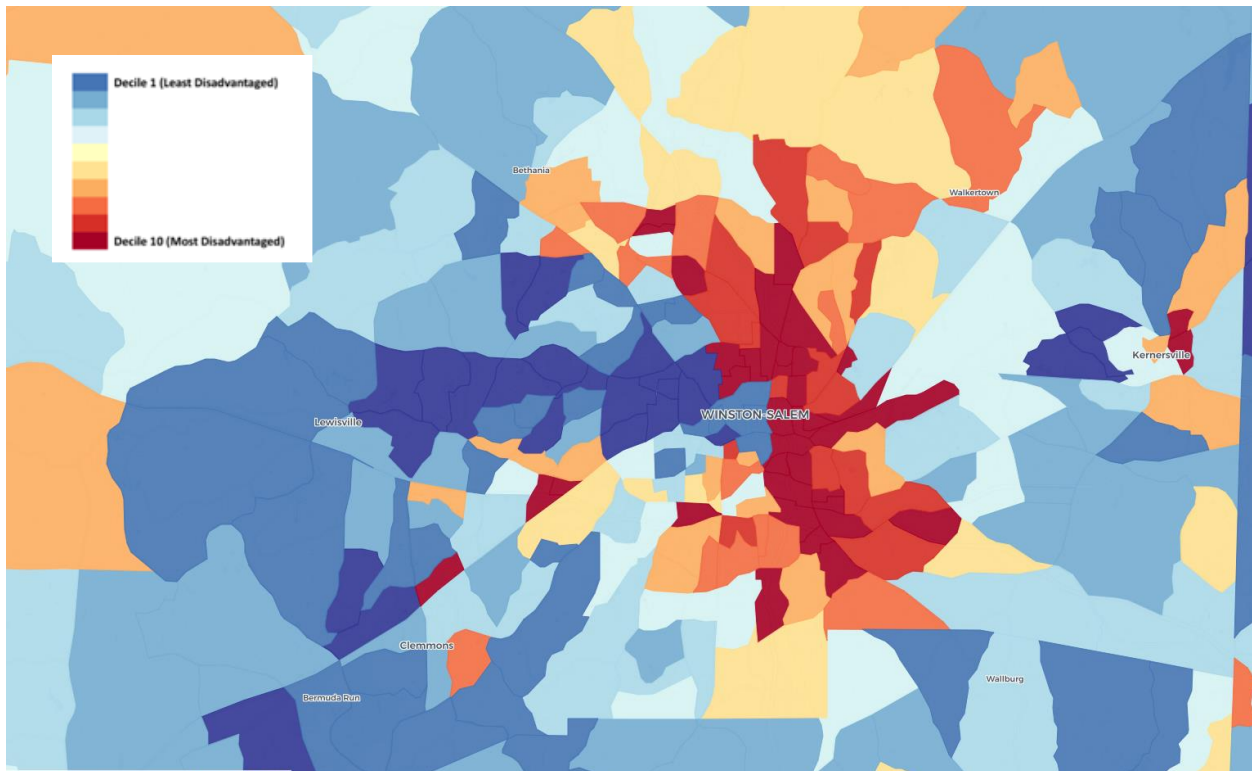
⁶ NC Bureau of Labor Statistics <https://www.bls.gov/eag/eag.nc.htm>

⁷ County Health Rankings and Roadmaps <http://www.countyhealthrankings.org/app/north-carolina/2018/rankings/forsyth/county/outcomes/overall/snapshot>

⁸ US Census Bureau ACS 2013-2017 <http://factfinder.census.gov>

Forsyth County residents display a wide range along the Area Deprivation Index (ADI). The ADI is a factor-based index which uses 17 US Census poverty, education, housing and employment indicators, including those above, to characterize census-based regions and has been correlated with a number of health outcomes including all-cause, cardiovascular, cancer and childhood mortality, and cervical cancer prevalence⁹.

The map below shows ADI scores from within NC that were ranked from lowest to highest, then divided into deciles (1-10). The least advantaged decile is represented by dark blue; the most disadvantaged in dark red. It's important to note the lower life expectancy census tracts overlap with the highest deprivation areas. These same deprivation areas are widely mirrored when looking at individual social factors, whether limited access to food, unemployment, limited transportation, or less than ideal housing circumstances. When segmented by race, African American residents of Forsyth County skew to the more disadvantaged side; white residents skew to less disadvantaged.



University of Wisconsin School of Medicine and Public Health. Area Deprivation Index. 5/1/2018. Available at: <https://www.neighborhoodatlas.medicine.wisc.edu>

II. Assessment process

Forsyth County, NC

The following are excerpts and findings from the **2017 Forsyth County Community Health Assessment**.

⁹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4251560/>

To access the full report, please visit

http://www.oneclhealth.org/content/sites/onecharlotte/2017_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. As part of the Patient Protection and Affordable Care Act of 2011, not-for-profit hospitals are also now required to conduct a Community Health Needs Assessment (CHNA) once every three years.

A Community Health Assessment (CHA) advisory group guided the 2017 CHA process. Members of the advisory group represented leadership and practitioners from other local agencies, hospitals, law enforcement, faith-based organizations, universities, the local school system, non-profit service organizations, other health providers, and neighborhood associations. The advisory group recommended the formation of 2017 CHA data teams to identify, gather and review Forsyth County's population health data. As part of this assessment process, special attention was paid to the needs of the underserved.

The 2017 Forsyth County Community Health Assessment Process

The 2017 CHA was conducted between August 2016 and December 2017. Between August and November 2016, community members were invited by the Forsyth County Department of Public Health (FCDPH) to discuss and plan the 2017 CHA process.

The 2017 CHA process consisted of eight (8) phases:

1. Establish Work Groups
2. Collect and review secondary data
3. Create survey for primary data collection & Collect primary data
4. Analyze and interpret primary county data
5. Determine health priorities
6. Create the CHA Report
7. Disseminate the CHA Report
8. Develop the Forsyth County community health action plans

The continuous health assessment of Forsyth County's population health was facilitated through the use of passive and active surveillance instruments. These instruments include the North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT), the North Carolina Electronic Disease Surveillance System (NCEDSS), the Forsyth County Community Health Opinion Survey, and the Winston Salem/Forsyth County Schools Youth Risk Behavior Survey (WSFCS YRBS):

- 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 Community Health Opinion survey administrators, 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 for a complete list of agencies that were represented on the advisory and data groups).

b) Solicitation

Input was solicited from persons who represent the broad interest of Forsyth County, NC including Hispanics, persons living in poverty and those without a high school degree. A two-stage cluster sampling methodology was employed for the Community Health Opinion Survey. Three vulnerable population surveys were developed and conducted at the request of the participating agencies. Forsyth Technical Community College's Minority Male Success Initiative, The Salvation Army Center of Hope, and the Bethesda Center for the Homeless requested that specific questions be asked for the populations that they serve which are underserved compared to the 2010 Census and the 2013-2017 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.

c) Data collection & 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.

This CHO Survey was meant to provide additional information on oral health, chronic diseases (excluding oral health and mental health), sexual health, and maternal and infant health. Using convenience sampling, the 2017 CHO Survey was administered in Spanish and English from January 31st, 2017 to May 31st, 2017. To increase access, links to both versions of the 2017 CHO Survey were posted to the Forsyth County Department of Public Health's Facebook page and, QR coded cards were handed out at supermarkets and strip malls throughout the county by volunteers who offered an incentive for participants to take the survey at that time. Four hundred and twenty-seven (427) residents responded to the survey. Black, non-Hispanic and Hispanic/Latino populations were oversampled because both of these populations were identified as disproportionately at risk for at least one of the major health issues that required additional information. The response rate for survey questions ranged from 87% to 94%.

Work Groups

Members of the data team were assigned to work groups. A work group was established for chronic diseases with a focus on physical activity, oral health among population ages 0-5 years, sexual health, and maternal & infant health particularly as it relates to maternal stress. Each was tasked with identifying previously tested survey questions that would help to fill identified health information gaps. Healthy People 2020 was used to guide semi-structured work group discussions. A work group was also formed to assist with the vulnerable populations' questions.

Based on the results of the CHO Survey and the results from the Work Groups the following health issues were identified.

- Chronic Diseases with a focus on physical activity that can improve outcomes for cancer, heart disease, stroke, and chronic lower respiratory diseases.
- Oral Health with a focus on what is known or unknown about access to and the need for oral health care for populations age 5 years and younger.
- Sexual Health with a focus on chlamydia prevention.
- Maternal & Infant Health with a focus on maternal health because it influences healthy birth outcomes.
- Quality of Life in Forsyth County with a focus on how residents feel about living in Forsyth County.

A community collaborative of Novant Health, Wake Forest Baptist Health and Forsyth Futures in support of the Forsyth Department of Public Health CHA process was formed to better understand root causes of infant mortality and chronic disease, particularly focusing on health outcomes disparities among racial minority populations. The following were the findings of the group:

- Lack of Trust – Due to lack of cultural competency of clinical staff, poor treatment or misdiagnosis from clinical staff and stress influenced by political environment.
- Lack of Resources – Due to lack of time, money and overwhelmed by cost of care, insurance, healthy foods, and by feeling of stress/anxiety.
- Lack of Awareness – Due to limited understanding of how to access care, limited health literacy, hesitancy to take medication and learning how/where to access available resources is challenging.

Secondary Data

Based on the advisory group's recommendation, the data team reviewed secondary data to identify the major health issues. The secondary data reviewed were from agency reports, databases or websites including The State Center for Health Statistics, The North Carolina Electronic Disease Surveillance System (NCEDSS), The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NCDETECT), The 2015 Winston-Salem/Forsyth County High School Youth Risk Behavior Survey, The US Bureau of Census, The North Carolina Uniform Crime Reporting (UCR) Program, and the North Carolina Coalition to End Homelessness (NCCEH).

The 2017 CHA data team's data identification and analysis of secondary data focused on the major health issues that community partners sought to resolve since the 2014 CHA. The health data sets examined were grouped into the following major areas:

Drug Overdose

- Between 2012 and 2016, the number of drug overdose cases seen in the Forsyth County Emergency Departments (ED) increased about 46% from 1,107 (2013) to 1,621 (2016).
- From 2012 to 2016, the majority of the drug overdose ED cases (800 or more) were from zip codes 27284 (Kernersville), 27107 (Winston-Salem), and 27105 (Winston Salem).
- From 2012 to 2016, the majority of the ED drug overdose patients were between ages 31-40 years.

Mental Health

- About 28% of high school students experienced hopelessness or sadness continuously for two weeks or more in the 12 months prior to the survey.
- There was a slight increase in the percentage of high school students who reported that they made a suicide plan from 12.2% (2013) to 13.2% (2015).
- The percentage of high school students who attempted suicide during the 12 months prior to the survey increased from 18.1% (2013) to 22.2% (2015).
- In 2015, Black, non-Hispanic high school students were more likely than White, non-Hispanic or Hispanic/Latino high school students to report that they had attempted suicide in the 12 months prior to the survey.

Chronic Diseases including Oral Health

- Although their rates have decreased, cancer, heart disease, chronic lower respiratory disease and stroke remain the major causes of death in Forsyth County.
- Between 2008-2012 and 2012-2016, there was about a 19% increase in deaths due to unintentional injuries (includes drug overdose related deaths), and about a 17% increase in deaths due to kidney diseases.
- Forsyth County's death rates due to cancer (all sites), heart disease, cerebrovascular disease (stroke), diabetes, and kidney disease were slightly lower than State of NC's for 2012-2016.
- Forsyth County's death rates for heart disease, cancer (all sites), chronic lower respiratory disease (CLRD), cerebrovascular disease (stroke), unintentional injuries, pneumonia and influenza, and septicemia were greater than all peer counties' for 2012-2016.

Communicable Diseases

- Between 2012 and 2016, the number of infectious disease cases in Forsyth County exceeded 4,000 annually. Sexually transmitted infections (STI), particularly chlamydia, accounted for more than 90% of each year's total case count. Chlamydia cases for populations ≤ 24 years represented between 67% and 88% of all chlamydia cases during the period. Females accounted for between 71% and 74% of the ≤ 24 years positive cases.
- Forsyth County's 2016 chlamydia and gonorrhea rates were about 23% and 45% higher, respectively, than State of NC's.
- Forsyth County's 2016 early syphilis (primary, secondary and early latent) and HIV (all stages) rates were also higher than State of NC's by about 25% and 62%, respectively.

- Forsyth County's 2016 chlamydia and HIV (all stages) rates were lower than Durham, Guilford and Mecklenburg Counties' but higher than Wake County's.
- Forsyth County's 2016 gonorrhea rate was lower than Durham and Guilford Counties' but higher than Mecklenburg and Wake Counties'.

Maternal & Infant Health

- From 2008-2012 to 2012-2016, Forsyth County's teen (age 15-17) pregnancy rate per 1,000 population declined almost 40% from 29.5 (2008-2012) to 17.8 (2012-2016).
- Forsyth County's 2012-2016 age 15-17 pregnancy rate per 1,000 population exceeded that of State of NC's. Also, it was the 2nd highest rate of the five (5) urban counties.
- Between 2008-2012 and 2012-2016, Forsyth County's overall live birth rate per 1,000 population declined almost 9% from 13.6 per 1,000 population to 12.4 per 1,000 population.
- Although, the Hispanic live birth rate per 1,000 population declined about 24% from 2008-2012 (27.4) to 2012-2016 (20.9), it remained at almost two times the Total, non-Hispanic live birth rate per 1,000 population during each period.
- Hispanic babies were born disproportionately to mothers who have a lower formal education level than Black, non-Hispanic or White, non-Hispanic mothers.
- From 2011 to 2016, between 71% and 92% of infant deaths were due to extreme immaturity, prematurity and congenital abnormalities.

Health Disparities/Quality of Life

- The life expectancy of someone born in Forsyth County between 2013 and 2015 was estimated to be about 78 years. This 78-year life expectancy remained relatively unchanged from 2011-2013 to 2013-2015.
- Forsyth County's life expectancy for populations born between 2013 and 2015 was lower than those for Durham, Guilford, Mecklenburg, and Wake Counties' but higher than State of NC's.
- Based on Forsyth County's 2016 chronic disease rates, a Black, non-Hispanic person was:
 - 1.4 times more likely to die from cancer than a White, non-Hispanic person
 - 1.6 times more likely to die from diabetes mellitus than a White, non-Hispanic person
 - 1.4 times more likely to die from heart disease than a White, non-Hispanic person
 - 2.2 times more likely to die from kidney disease than a White, non-Hispanic person.
 - 1.4 times more likely to die from cerebrovascular disease (stroke) than a White, non-Hispanic person.
- In 2016, a Black, non-Hispanic child was 1.8 times more likely to die within the first year of its life than a White, non-Hispanic child.

Davie County, NC

The following are excerpts and findings from the **2017 Davie County Community Health Assessment**. To access the full report, please visit

<https://www.daviecountync.gov/DocumentCenter/View/4986/Community-Health-Assessment-5-29-2018>.

The 2017 Community Health Assessment report was prepared by Davie County Department of Public Health staff with support from the Davie County Board of Health and Community Health Assessment Team in a partnership formed through Healthy Davie. The Healthy Davie Initiative was launched in December 2014 by the Davie Community Foundation and Mebane Charitable Foundation to encourage communication and collaboration among agencies and organizations to positively impact the areas of education, poverty, and wellness. The vision of Healthy Davie is to achieve a “healthy community”. This already established team, focused on making Davie County a healthy community, made the perfect committee for addressing community health and health assessment efforts. As part of this assessment process, special attention was paid to the needs of the underserved. The process included collaboration and input from community partners, to improve the overall health of the community. Members of each team and agencies, organizations, systems, or businesses represented are listed in Appendix B. Please see the Davie County Community Health Assessment for a listing of individual participant names: <https://www.daviecountync.gov/DocumentCenter/View/4986/Community-Health-Assessment-5-29-2018>.

c) Collaborative community partners

Input for survey data was solicited from individuals that include public health professionals and persons with broad knowledge of the community (See Appendix B for a complete list of represented departments and agencies that provided guidance for the CHA). Community Health Assessment team members determined that survey dissemination and collection would be most effectively and efficiently completed through clients, contacts and staff of agencies within the county, and those represented on the assessment team.

d) Solicitation

Input was solicited from persons who represent the broad interest of Davie County, NC, including Hispanics, persons living in poverty and those without a high school degree. Residents/Participants could choose to complete the survey online or on paper. A targeted distribution of paper surveys was utilized in an effort to reach areas of the population that may not have been able to access the online survey. Residents/Participants answered questions regarding health status, health behaviors, and factors impacting quality of life.

e) Data collection and analysis

Primary data

The Community Health Needs Assessment

With guidance from the Community Health Assessment Team, a community health opinion survey for Davie County residents was created. The Davie County Health Assessment was made available to Davie County residents electronically through SurveyMonkey and in paper copy. Surveys were emailed and/or hand delivered – and delivered to additional service agencies and organizations within the county. For the Spanish-speaking community, Community Health Assessment surveys were translated to Spanish and disseminated through Davie County Health Department and Saint Francis Assisi Catholic Church, where interpreter services are also provided.

There were 253 health assessment surveys completed, representing a minimum of 673 residents. Approximately 80% of survey respondents were White, 7% African American, 10% Hispanic and 3% other races. 48% of respondents had a Bachelor's Degree or Higher, while 12% of participants had less than a HS diploma or GED. The age range among survey participants was 18 – 75+, with the highest percentage falling between 45-54 years of age.

Areas identified as gaps in the quantitative data sampling included an underrepresentation of African Americans and persons 65 and older.

Secondary data

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

- North Carolina State Center for Health Statistics
- County Health Data Books
- US Census Bureau

III. Identifying and Prioritizing Health Needs

a) Identified Significant Health Needs

Through various data collection measures, and after analyzing and interpreting Forsyth County's primary and secondary data these issues have been identified as social, clinical, behavioral and health outcomes. The identified health needs included the following:

- Drug Overdose
- Mental Health
- Chronic Diseases including Oral Health
- Communicable Diseases & Sexual Health
- Maternal & Infant Health
- Health Disparities/Quality of Life
- Lack of Trust
 - Lack of cultural competency of clinical staff
 - Poor Treatment or misdiagnosis from clinical staff
 - Stress influenced by political environment

- Lack of Resources
 - Lack of time
 - Lack of Money
 - Overwhelmed by cost of care, insurance, and /or healthy foods
 - Overwhelmed by feeling of stress/anxiety
- Lack of Awareness
 - Limited understanding of how to access care
 - Limited health literacy
 - Learning how/where to access available resources is challenging
 - Hesitancy to take medication

From participant responses in Davie County, it was apparent that chronic disease management, drug misuse and abuse prevention and education, and access to affordable healthcare were the most important concerns of county residents. Other key data points included:

- Davie County Community Health Assessment survey results for questions about individuals residing in households that have chronic diseases show: 40% of respondents report someone in the household has arthritis; 36% reported having someone in the household with Diabetes; 30% with asthma; 17% with heart disease; 14% with mental illness; 10% with cancer.
- When asked about getting the recommended amount of physical activity each week, Davie County survey results show: 38% of survey participants responded that time was the main reason for not receiving recommended physical activity. 5% indicated it was too costly to receive recommended physical activity.
- When asked about getting the recommended nutrition intake each week, results show: 18% of Davie respondents indicated fruits and vegetables were too expensive; 16% indicated fruits and vegetables would go bad before the respondent could eat them; and 12% reported not having time to prepare them
- The majority of drug overdoses in Davie County occur among individuals age 20-49, and primarily from opioids. 38% of Davie County Community Health Assessment survey respondents indicated substance abuse prevention education was needed.
14% or nearly 6,000 Davie County residents are uninsured. 18% - or nearly 8,000 (7,789) are on Medicaid or other assistance, leaving 28,000 (assumed) with private insurance.

b) Analysis and Prioritization

In Forsyth County in 2017, a combination of online surveys and paper surveys were conducted to ask constituents to rank the top health issues impacting the community. 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.

The findings of the health assessment were shared with Forsyth County residents and they were given the opportunity to rank the health issues that they believe the County should address first, second, third

and fourth. Priority setting events were held at the W.R. Anderson, Jr. Recreation Center in zip code 27127, and at the Head Start Gymnasium in zip code 27105. A priority setting email survey was also sent to people who live and/or work in Forsyth County. Five hundred and forty-six (546) persons completed the Health Issue Priority Survey. Fifty nine percent (59%) of the respondents were Black, non-Hispanic, 35% were White, non-Hispanic, and 6% were Hispanic/Latino. Seventy one percent (71%) of the total number of respondents were females.

In Davie County, the community health assessment committee reviewed primary and secondary data and identified recurring themes to develop three priority areas.

Recommended Prioritized Health Outcomes

Based on the results of the Forsyth County priority setting survey, the following health needs were recommended for prioritization in Forsyth County:

- Chronic Diseases with a Focus on Physical Activity
- Oral health (age 0-5 years)
- Sexual Health
- Maternal and Infant Health

Based on the assessment of the Davie County community health assessment committee, the following health needs were recommended for prioritization in Davie County:

- Chronic Disease Management
- Drug misuse and abuse prevention and education
- Access to affordable care

Facility prioritization

In addition to the community rankings, Novant Health Clemmons Medical Center reviewed the top five diagnosis codes for inpatient and outpatient hospital emergency room visits year-to-date July to December 2018.

Novant Health Clemmons Medical Center Emergency Department
Top 5 Diagnoses July – December 2018

Inpatient		Outpatient	
Diagnosis	Volume	Diagnosis	Volume
Sepsis, unspecified organism	25	Headache	165
Pneumonia, unspecified organism	18	Other chest pain	163
Pneumonia due to other Gram-negative bacteria	16	Acute upper respiratory infection, unspecified	144
Acute kidney failure, unspecified	15	Chest pain, unspecified	144
Chronic obstructive pulmonary disease w (acute) exacerbation	14	Unspecified abdominal pain	137

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, chronic stress, and chronic issues related to aging.

Upon a comprehensive review of the community’s recommended prioritized outcomes and NHCMC’s ED top 5 diagnosis codes, the Novant Health Clemmons Medical Center leadership team and Novant Health Triad 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 top significant health priority for Novant Health Clemmons Medical Center:

1. Chronic Disease

IV. Addressing needs

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

<u>IDENTIFIED PRIORITY:</u>	<u>PROGRAM:</u>	<u>ACTION:</u>	<u>INTENDED OUTCOME:</u>
1. Chronic Disease	Remarkable You screenings (A1C, Cholesterol, BMI, Blood Pressure) and educational programs	Early detection of chronic disease and connection to a system of care in target populations	Improved health

In addition to the programs and services offered to the community through Novant Health Clemmons 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 community agencies that address those prioritized and non-prioritized needs:

Identified Community Health Needs	Local Community Resources Addressing Need
<ul style="list-style-type: none"> • Drug Overdose • Mental Health 	<p>Addiction Recovery Care Association Advanced Placement Alcoholics Anonymous Alpha Acres Center Point Catholic Social Services Daymark Recovery Services The Children’s Home Family Services Foundation Strong Insight Human Services LifeSkills Counseling Center Mental Health Association Next Step Ministries Old Vineyard Behavioral Health Services OSA Assessment & Counseling Services Recovery Center of the Triad, LLC Safe on Seven Top Priority Care Services WFBH Psychiatry and Behavioral Health Medicine YWCA Hawley House</p>
<ul style="list-style-type: none"> • Chronic Diseases including Oral Health • Maternal & Infant Health • Communicable Diseases & Sexual 	<p>Baby Love Bethany Baptist Church Medical Clinic Birthright CC4C Cleveland Avenue Dental Health Center Community Care Center Downtown Health Plaza Dental Clinic Forsyth Tech Dental Education Clinic Forsyth County Department of Public Health Health Check Positive Wellness Alliance Smart Start Smile Starters Shalom Clinic Today’s Woman Health and Wellness Center United Health Centers Winston-Salem Rescue Mission, Inc: Medical and Forsyth County Parks and Recreation YMCA of Northwest North Carolina Gateway YWCA AIDS Care Services</p>

<ul style="list-style-type: none"> ● Lack of trust <ul style="list-style-type: none"> ○ Lack of cultural competency of clinical staff ○ Poor Treatment or misdiagnosis ○ Stress influenced by political environment ● Lack of resources <ul style="list-style-type: none"> ○ Lack of time ○ Lack of money ○ Overwhelmed by cost of care, insurance, and/or healthy foods ○ Overwhelmed by feelings of stress/anxiety ● Lack of awareness <ul style="list-style-type: none"> ○ Limited understanding of how to access care ○ Limited health literacy ○ Learning how/where to access available resources is challenging ○ Hesitancy to take medication ● Health Disparities/Quality of Life 	<p>Ardmore United Methodist Transportation Ministry Cancer Services Crisis Control Ministry Experiment in Self Reliance Healthcare Access Advocacy for the Poor, Inc. Legal Aid Shepherd’s Center of Kernersville Shepherd’s Center of Winston Salem 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 Hispanic League</p>
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For a full list of community resources, visit www.novanthealth.org/mycommunity

V. Impact Evaluation of 2016-2018 Community Health Needs Assessment

Based on the previously reported health data from the 2016-2018 Community Health Needs Assessment, the Novant Health Triad Board of Trustees did a collective review of community feedback, prioritization and determined the top health priorities for Novant Health Clemmons Medical Center as **diabetes and obesity**.

No written comments were received from the most recently conducted CHNA and implementation strategy.

To address these priorities, Novant Health Clemmons 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 2016-2018, Novant Health Clemmons 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. As NHKMC and NHCMC are both affiliate hospitals of NHFMC, combined efforts toward specific objectives and measures achieved are described below:

Priority Area	Program	Intended Outcome	Actual Outcome
Diabetes	Community A-1C Screenings: Remarkable You community screening initiative in high African American populations	Early detection of undiagnosed prediabetic and diabetic participants will increase	9,450 community members were reached through 326 Remarkable You + Biometric screenings that included cholesterol, glucose and A1C exams to measure one's risk for diabetes. Of those, 2,750 (29%) were African American. Screenings were conducted on site at NHCMC as well as in local public schools, YMCA/YWCAs, homeless shelters, corporations, faith communities, and senior centers.
Diabetes	Community health education: Lecture series on diabetes prevention	Knowledge level of participants will increase, and participants will learn new skills to change unhealthy behaviors	Additionally, educational classes and support groups were made available to 1,612 community members, providing tips on diabetes management and prevention. Among attendees, 63% stated they had learned new information or reinforced information about diabetes they previously did not know and 78% stated they had learned new skills regarding diabetes that they would begin applying in their life.
Obesity	Community Body Mass Index (BMI) screenings: Remarkable You Community Screening	Early detection of undiagnosed obese participants will increase, and participants will learn new skills to change unhealthy behaviors	12,299 community members were reached through 465 Remarkable You and body mass index screenings and 266 RY Clinics to provide an assessment of overweightness and obesity. Among those screened, 94% stated they were previously aware of their risk factors. 99% of individuals indicated they were more aware of their risk factors as a result of the screening. All individuals with abnormal screening results were offered one-on-one education regarding skills to change unhealthy behaviors.
Obesity	Community nutrition education: Lectures on healthy eating and weight management	Knowledge level of participants will increase, and participants will learn new skills to change unhealthy behaviors	6,683 interactions occurred with community members to provide health education specific to nutrition and weight management. Among more than 3,000 surveyed participants, 92% stated they had learned new information or reinforced information about diabetes they previously did not know and 99% stated they had learned new skills regarding diabetes that they would begin applying in their life. Health education and screenings were conducted on campus at NHCMC as well as in local public schools, YMCA/YWCAs, homeless shelters, corporations, faith communities, and senior centers.

VI. Appendix

Appendix A: Primary working group – represented agencies

CHA Primary Data Working Group	
Agency	
	The Bethesda Center**
	City of Winston Salem
	Downtown Health Plaza
	Forsyth County Parks and Recreation
	Forsyth Technical Community College
	MapForsyth
	Salem College
	The Salvation Army**
	School Health Alliance**
	Smart Start**
	UNC, School of the Arts
	United Health Centers**
	Wake Forest University
	Winston Salem State University**
	Family Services**
	Novant Health Forsyth Medical Center
	Novant Health System
	Imprints Cares
	Forsyth County Department of Public Health*
	Today's Woman**
	Wake Forest University Baptist Medical Center
	Exchange SCAN**
	North Carolina Baby Love Plus**
	Neighbors for Better Neighborhood**
	Outreach Alliance for Babies**
	Heartstrings**
	Care Coordination for Children**
	Healthy Coalitions
	Nurse Family Partnership**
	Pregnancy Care Management
	Prevent Ongoing Spread of STIs**
	Centers for Disease Control & Prevention (CDC) Public Health Associate Program Dental Clinic (PHAP)*
	HIS/Epidemiology and Surveillance*

Appendix B: Community Health Assessment Team – Represented Agencies

Community Health Assessment Team – Davie County	
	Davie County Health Department*
	Davie County Schools
	Davie County Senior Services**
	Novant Health
	WFBMC – Davie Medical Center

Davie Community Foundation**
Mebane Charitable Foundation**
Davie County Cooperative Extension
Davie YMCA

- *Representative of a state, local, tribal, or regional governmental public health department (or equivalent department or agency)
- ** Members of medically underserved, low-income, and minority populations in the community served by the hospital facility, or individuals or organizations serving or representing the interests of such populations

Appendix C: Secondary Data Sources

CHA Secondary Data Sources - Agency
The State Center for Health Statistics
The North Carolina Electronic Disease Surveillance System (NCEDSS)
The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NCDETECT)
The 2015 Winston-Salem/Forsyth County High School Youth Risk Behavior Survey
The US Bureau of Census
The North Carolina Uniform Crime Reporting (UCR) Program
North Carolina Coalition to End Homelessness (NCCEH)