



Novant Health Matthews Medical Center

Community Health Needs Assessment

Mecklenburg and Union County, North Carolina

2022-2024

Approved by the Novant Health Southern Piedmont Region Board of Trustees on October 19, 2022

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I. Introduction

Novant Health Matthews Medical Center, in partnership with the Mecklenburg County Health Department, Union County Health Department, and other community partners conducted a community health needs assessment in 2022 to identify the most pressing health needs in our community. Novant Health Matthews 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) Organization Overview

Novant Health is an integrated network of hospitals, physician clinics, and outpatient facilities that delivers a seamless and convenient healthcare experience to communities in North Carolina, South Carolina, and Georgia. The Novant Health network consists of more than 1,800 physicians and over 35,000 team members who provide care at more than 800 locations, including 15 hospitals and hundreds of outpatient facilities and physician clinics. Diversity MBA Magazine ranked Novant Health first in the nation on its 2021 list of "Best Places for Women & Diverse Managers to Work." In 2021, Novant Health provided more than \$1.1 billion in community benefit, including financial assistance and services.

Mission

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

Our team members and physician partners strive every day to bring our mission, vision, and values to life. We demonstrate this commitment to our patients in many 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 Matthews Medical Center (NHMMC) is a 157-bed hospital offering a wide range of services in cardiovascular, surgery, maternity, cancer, hospice and palliative care, outpatient and high-level diagnostic capabilities.

b) Our Defined Community

Primary and Secondary Service Areas

The Primary Service Area for Novant Health Matthews Medical Center is defined by the zip codes that represent at least 75% of the hospital's in-patient population as outlined below:

Zip Code	City	County
29707	Fort Mill	LANCASTER
28105	Matthews	MECKLENBURG
28227	Charlotte	MECKLENBURG
28277	Charlotte	MECKLENBURG
28270	Charlotte	MECKLENBURG
28212	Charlotte	MECKLENBURG
28226	Charlotte	MECKLENBURG
28215	Charlotte	MECKLENBURG
28079	Indian Trail	UNION
28110	Monroe	UNION
28104	Matthews	UNION
28173	Waxhaw	UNION
28112	Monroe	UNION

The Primary Service Area (PSA) includes Mecklenburg, Union and Lancaster Counties. 47% of patients in the PSA reside in Union County, and 50% of patients in the PSA reside in Mecklenburg County. 38% of patients overall reside in the Primary and Secondary Service Areas of Union County and 45.5% of patients overall reside in the Primary and Secondary Service Areas of Mecklenburg County.

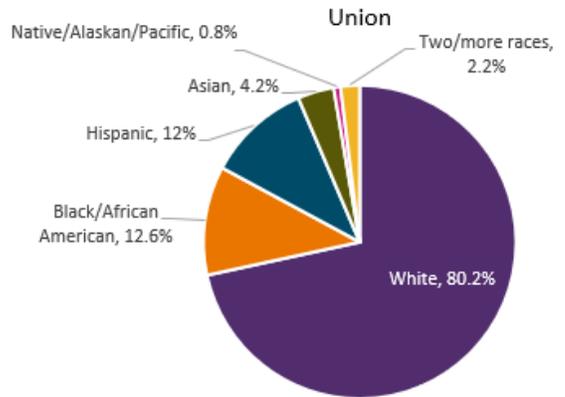
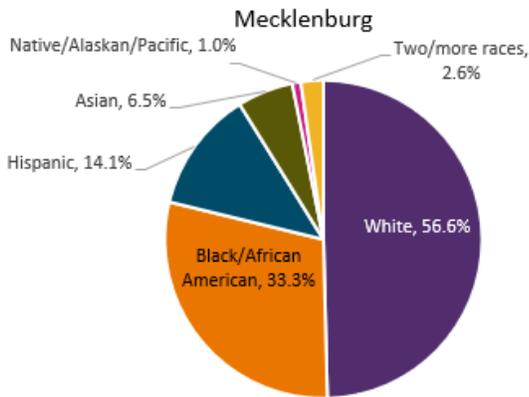
Mecklenburg County represents the highest population of potentially underserved, low-income and minority individuals from the Primary Service Area, but demographic data is included below from Union and Mecklenburg Counties.

The Secondary Service Area covers a 7-county radius, including Anson, Cabarrus, Chesterfield, Lancaster, Mecklenburg, Union, and York Counties.

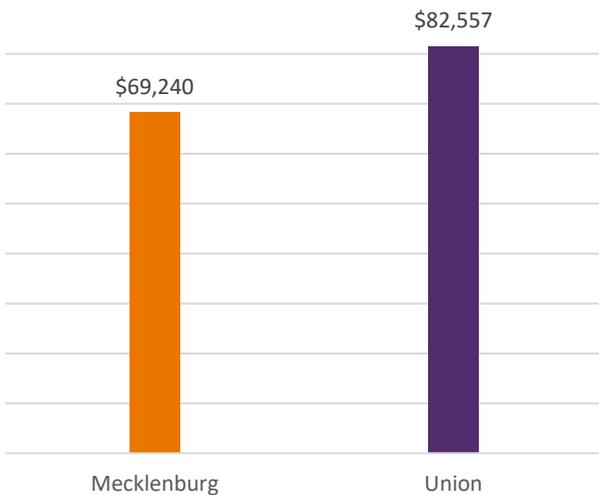
Mecklenburg & Union County Population: Demographics

Union County has a population of 243,648 compared to the Mecklenburg County population of 1,122,276. North Carolina has a total population of 10,551,162.

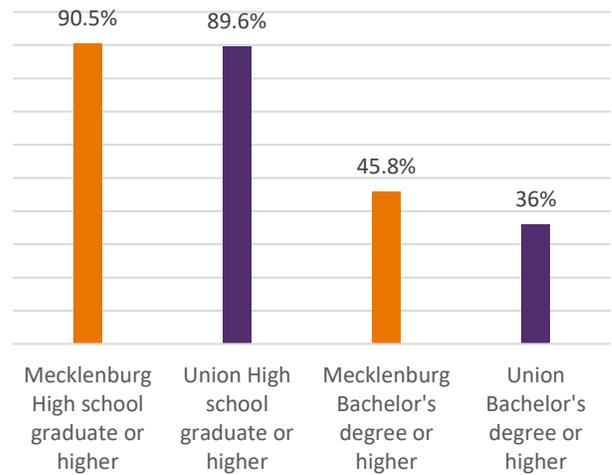
Race and Ethnicity



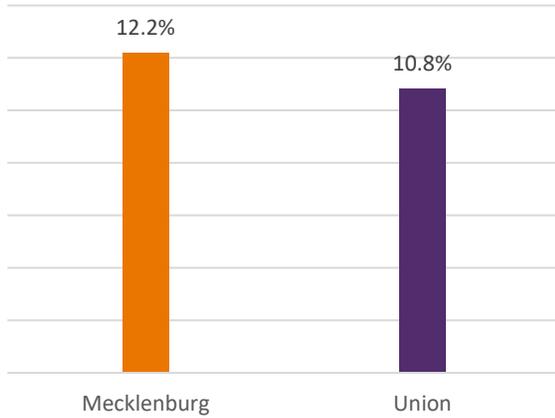
Median Income



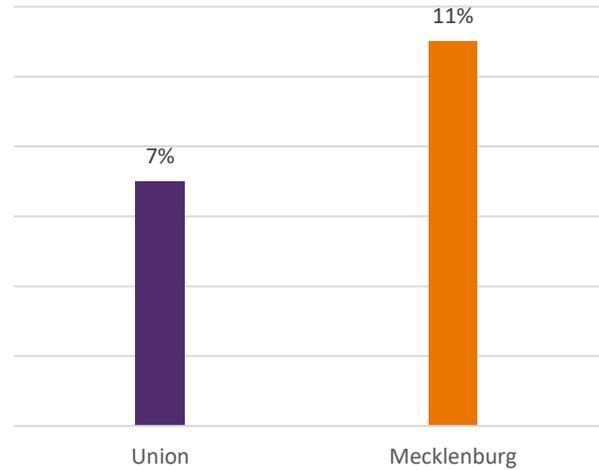
Education Attainment



Person without insurance under age of 65



Poverty



Source for above graphs: US Census Bureau 2021

Demographics	Union County		Mecklenburg County		North Carolina	
	Population	Percentage	Population	Percentage	Population	Percentage
Persons Under 5 Years	13,397	5.7%	72,857	6.7%	605,299	5.8%
Persons Under 18 Years	63,318	26.9%	257,739	23.5%	2,301,596	22.2%
Person 65 Years & Over	29,768	12.6%	122,780	11.2%	1,688,354	16.3%
Female Persons	119,655	50.8%	568,717	51.9%	5,333,560	51.4%

Sources: ACS North Carolina, ACS Mecklenburg County, ACS Union County

Length of Life	Top U.S. Performers	North Carolina	Union County	Mecklenburg County
Years of potential life lost before age 75 per 100,000 population (age-adjusted).	5,600	8,000	5,500	6,100
Clinical Care	Top U.S. Performers	North Carolina	Union County	Mecklenburg County
Ratio of population to primary care physicians	1,010:1	1,400:1	1,440:1	1,130:1
Ratio of population to dentists	1,210:1	1,710:1	3,400:1	1,430:1
Ratio of pop. to mental health providers	250:1	360:1	790:1	300:1
Physical Environmental	Top U.S. Performers	North Carolina	Union County	Mecklenburg County
Air Pollution – Particulate Matter (micrograms per cubic meter)	5.9	7.5	8.7	9.0
Percentage of households with overcrowding, high costs, lack of kitchen, or lack of plumbing	9%	15%	11%	16%

Sources: County Health Rankings Union County, County Health Rankings Mecklenburg County

Mecklenburg & Union County Population: Health Indicators

Mecklenburg and Union County leading causes of death in 2019 were cancer and heart disease. NHMMC will consider these health indicators but will also consider how to impact root causes with an analysis of social determinants of health, social risks, and social needs.

Leading Causes of Death in Mecklenburg County 2019				Leading Causes of Death in Union County 2019			
Rank	Cause	Number	%	Rank	Cause	Number	%
1	Cancer	1359	21.0	1	Cancer	368	23.7
2	Diseases of heart	1235	19.1	2	Diseases of heart	295	19.0
3	Cerebrovascular diseases	371	5.7	3	Alzheimer's disease	117	7.5
4	Alzheimer's disease	347	5.4	4	Cerebrovascular diseases	80	5.1
5	All other unintentional injuries	322	5.0	5	Chronic lower respiratory diseases	65	4.2
6	Chronic lower respiratory diseases	251	3.9	6	All other unintentional injuries	61	3.9
7	Diabetes mellitus	214	3.3	7	Nephritis, nephrotic syndrome and nephrosis	42	2.7
8	Nephritis, nephrotic syndrome and nephrosis	145	2.2	8	Diabetes mellitus	41	2.6
9	Assault (homicide)	105	1.6	9	Septicemia	32	2.1
10	Motor vehicle injuries	98	1.5	10	Parkinson's disease	28	1.8
	All other causes (Residual)	2012	31.3		All other causes (Residual)	427	27.4
	Total Deaths -- All Causes	6459	100.0		Total Deaths -- All Causes	1556	100.0

Sources: State Center for Health Statistics Union County, State Center for Health Statistics Mecklenburg County

Social Indicators Definitions and Overview

Social Determinants of Health (SDOH) are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health functioning, and quality-of-life outcomes and risks.

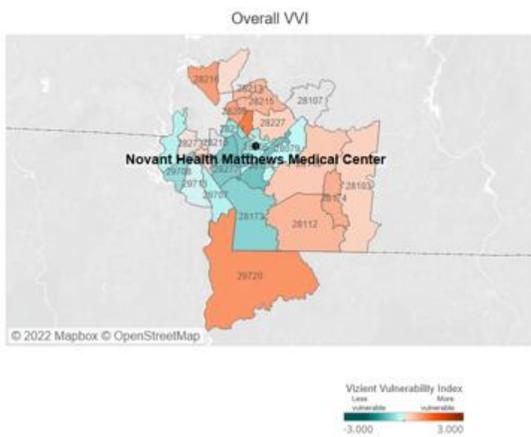
Social Risk is adverse social conditions associated with poor health outcomes, such as food insecurity and housing instability.

Social Needs are the nonclinical needs that individuals identify as essential to their well-being.

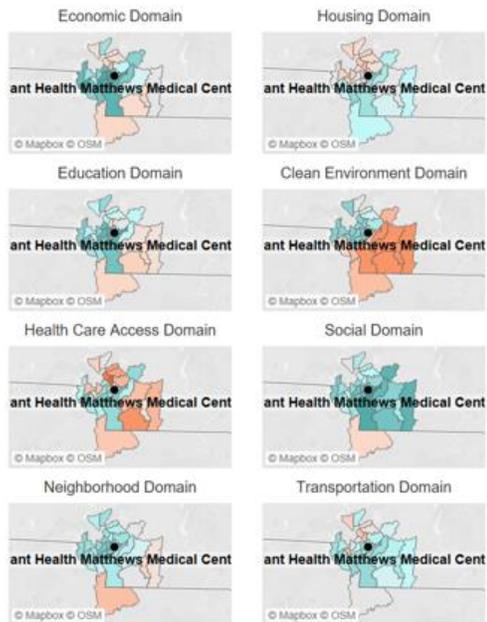
Source for definitions: Healthy People 2030, Health Affairs, The Milbank Quarterly

Domains and Components: Novant Health Matthews Medical Center

Each of these maps illustrates the regional variation in the overall VVI, the eight specific domain vulnerabilities, and three selected components that will be referenced in the clinical outcomes and utilization section.



Data source: CDB distinct patients of any age seen in this hospital in any setting 2019-2020, identified by zip code. Zip codes representing less than 0.5% of all hospital patients are omitted from map.



In addition to the domains, two specific components were identified for inclusion in this analysis due to their reliable relationships with specific metrics across member hospitals.

In particular, the Food Desert component shows a relationship with Diabetes metrics, while the Single Parents component shows a relationship with ED metrics and Maternal Care metrics.



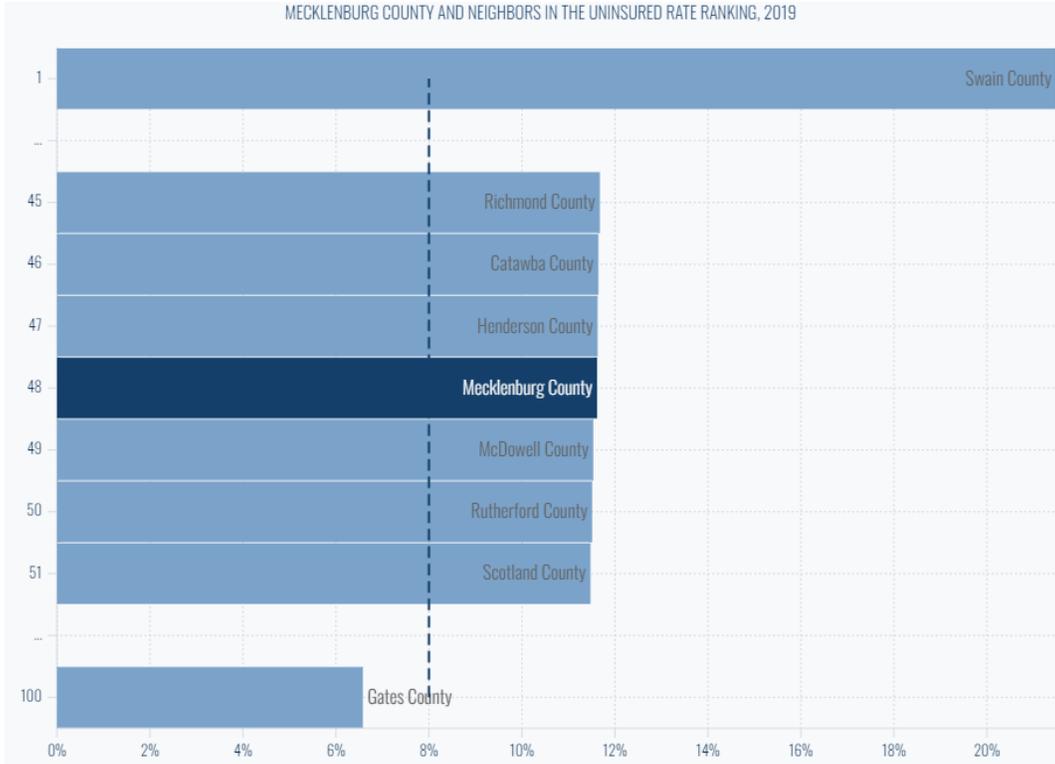
According to the Vizient Vulnerability Index (screenshot provided above) released in January 2022, patients admitted to Novant Health Matthews Medical Center experience the most profound social risks if they live in zip codes 28216, 28205, 28213, 28215, 29720, and 28212. These zip codes experience disproportionately high social risks when compared to their counterpart neighborhoods. Areas of particular concern include access to healthcare, housing, poverty, and food insecurity.

When segmented by race and ethnicity, Hispanic and Black patients tend to skew more vulnerable than other groups.

Mecklenburg County Population: Social Indicators

Access To Care

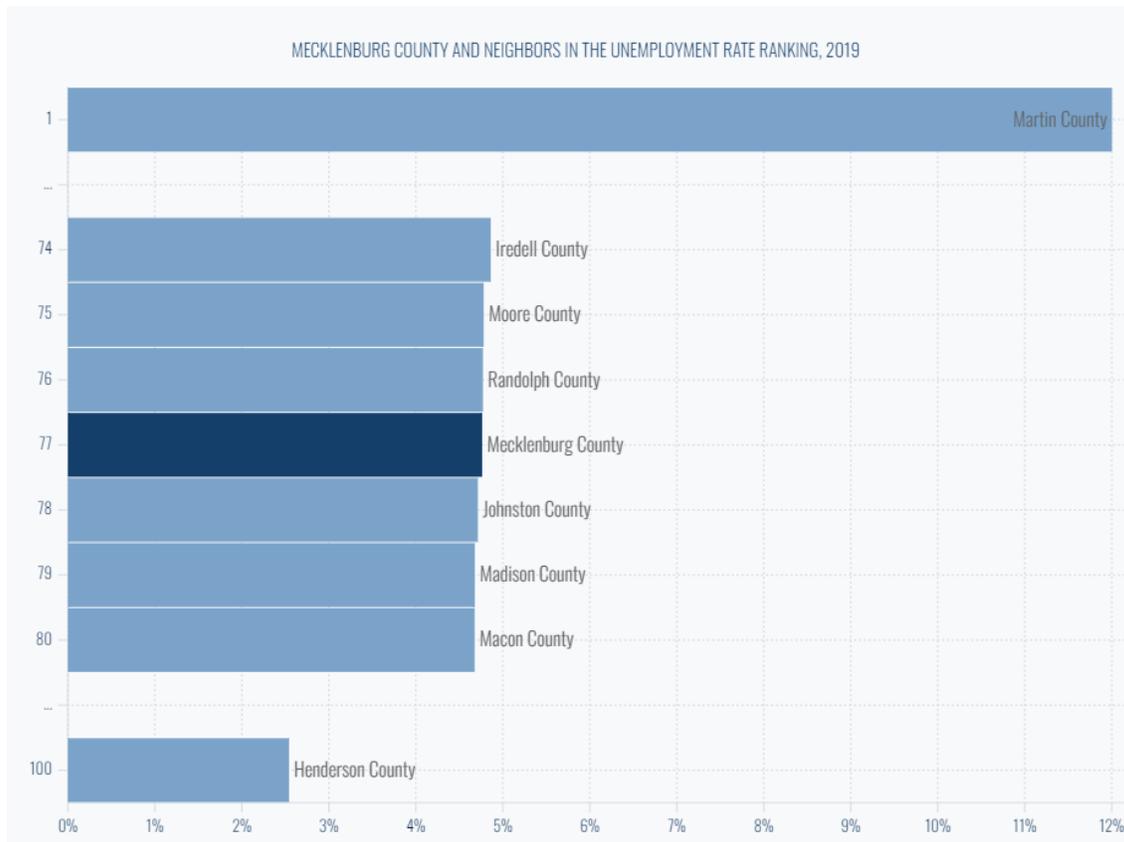
In 2019, 11.6% of the population in Mecklenburg County did not have health insurance. The dotted line in the graph below shows the aim target of 8% for Mecklenburg County by 2030. A higher rate of individuals with healthcare insurance would lead to improved health outcomes and a higher quality of life for this population.



Source: Healthy Communities NC

Workforce Development

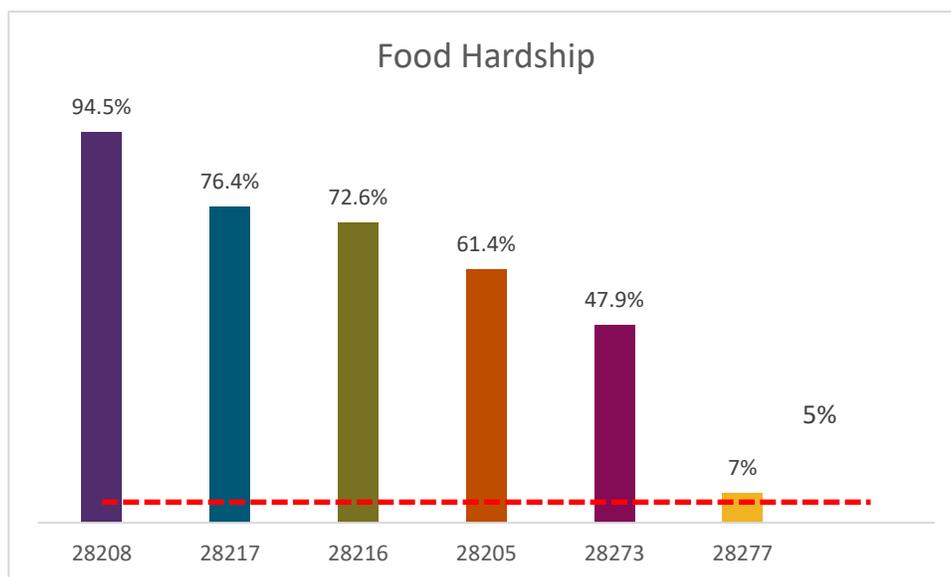
In 2019, Mecklenburg County had a 4.76% unemployment rate. Healthy Communities NC aims to bring the unemployment rate down to 1.7% by 2030. Improving the employment rates in Mecklenburg County would lead to an increase in insured residents and reduce barriers to accessing health care.



Source: Healthy Communities NC

Food Hardship

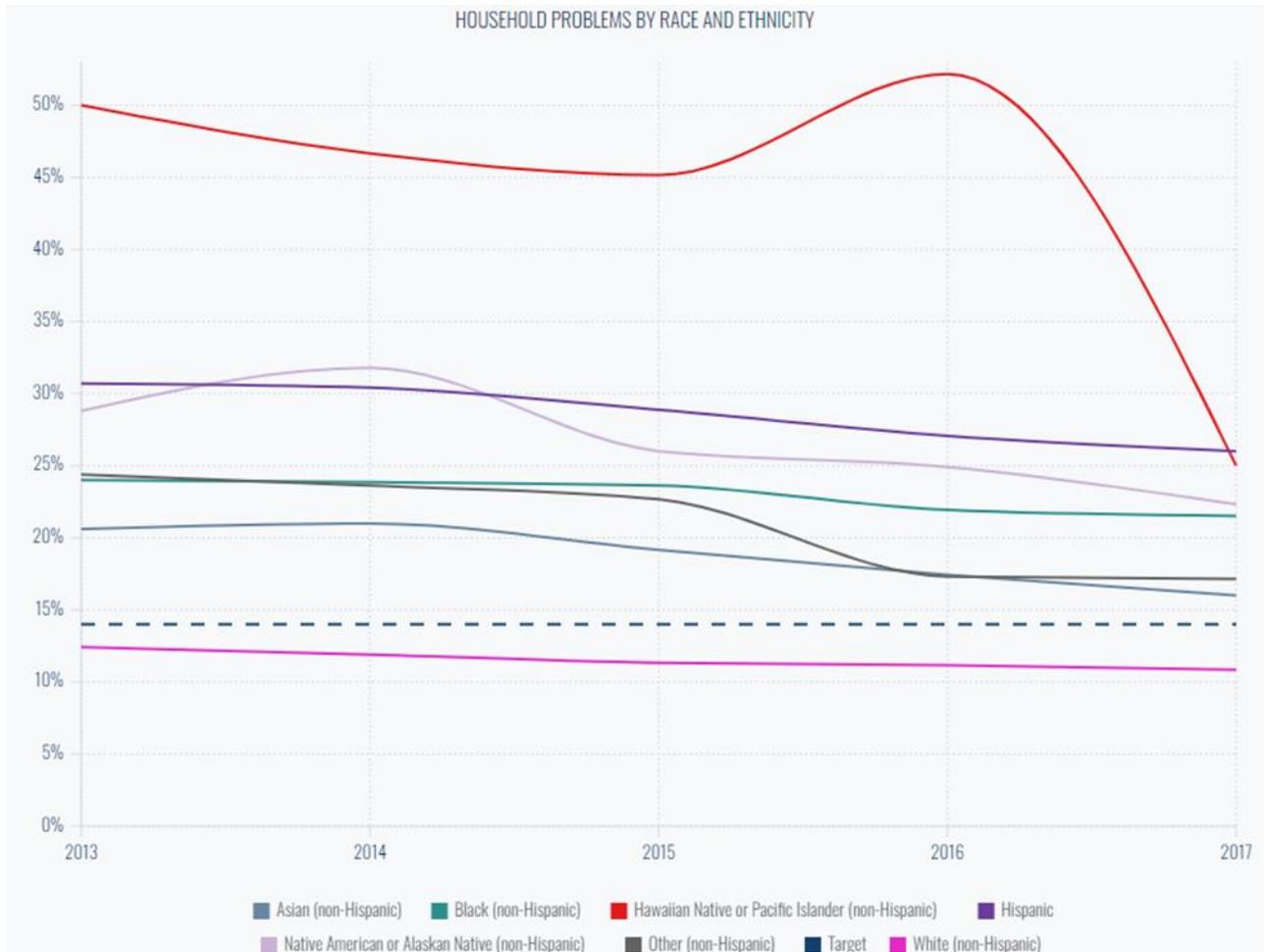
In Mecklenburg County, several regions are facing food hardship. Healthy Communities NC has a target goal of keeping that rate below 5% in Mecklenburg County by 2030. Addressing food hardship would lead to improved health outcomes in Mecklenburg County.



Sources: Cape Fear Collective, North Carolina Food Hardship, Healthy Communities NC, One Charlotte Health Alliance

Housing Hardship

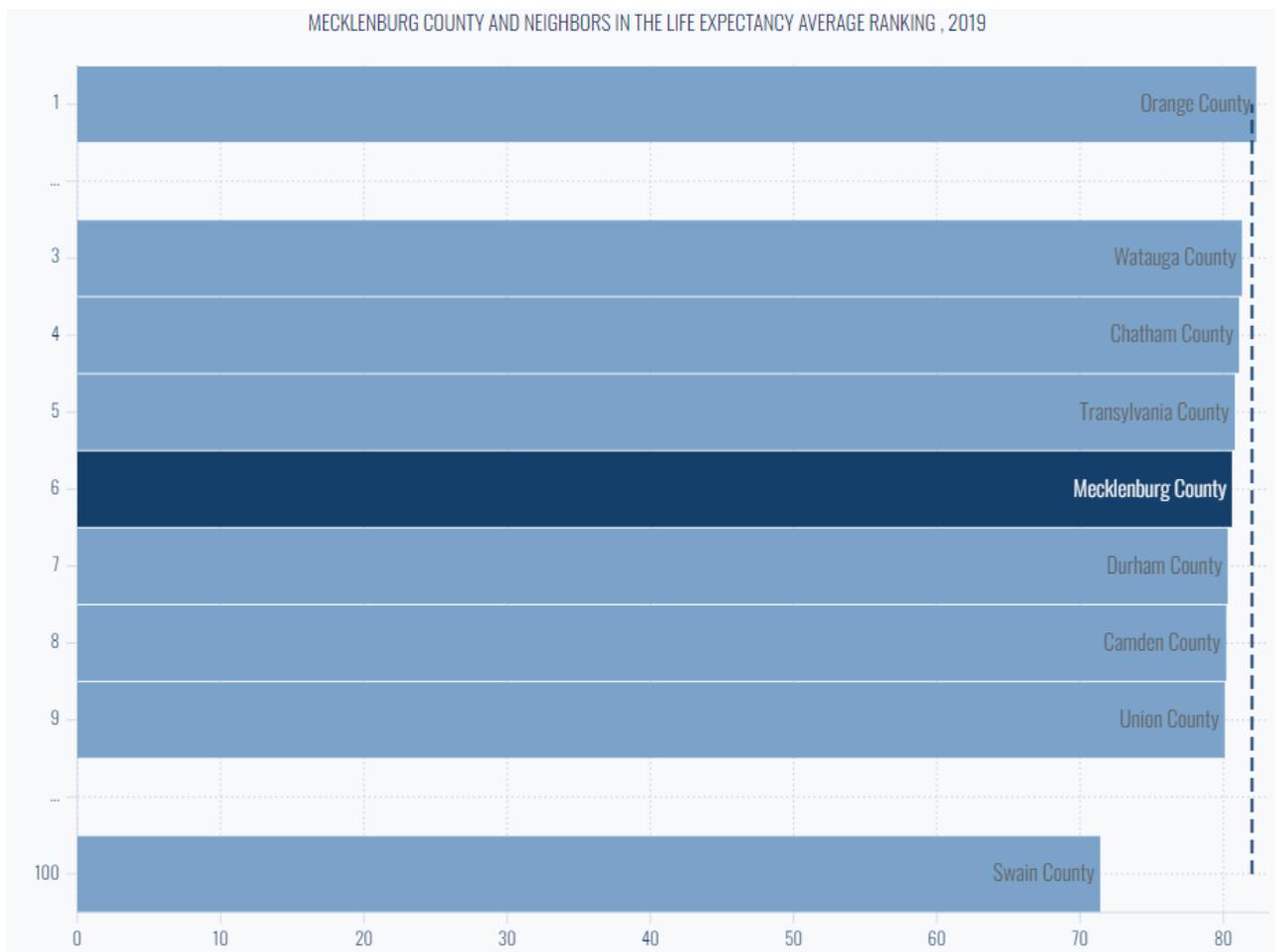
In 2017, Hawaiian Native/Pacific Islanders and Hispanic populations were facing the highest rate of housing hardship in Mecklenburg County, at a rate of 25%. Healthy Communities NC goal is to reduce that rate to 14% by 2030.



Source: Healthy Communities NC

Life Expectancy

In 2019, Mecklenburg County had a life expectancy of 80 years. Healthy Communities NC aims to increase that to 82 years by 2030. Improving access to care and addressing food hardship faced by residents of Mecklenburg County can help in reaching that goal.

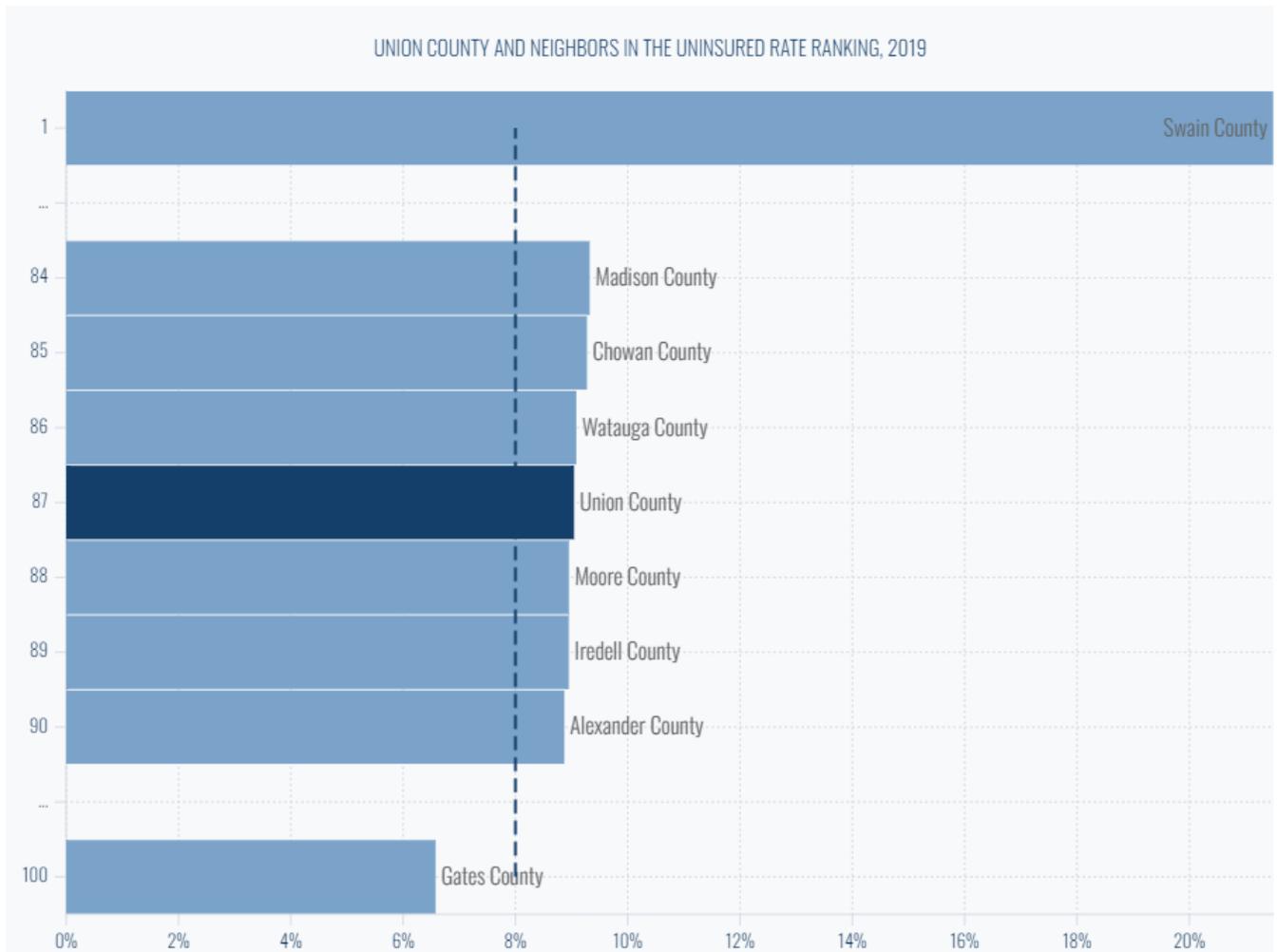


Source: Healthy Communities NC

Union County: Social Indicators

Access to Care

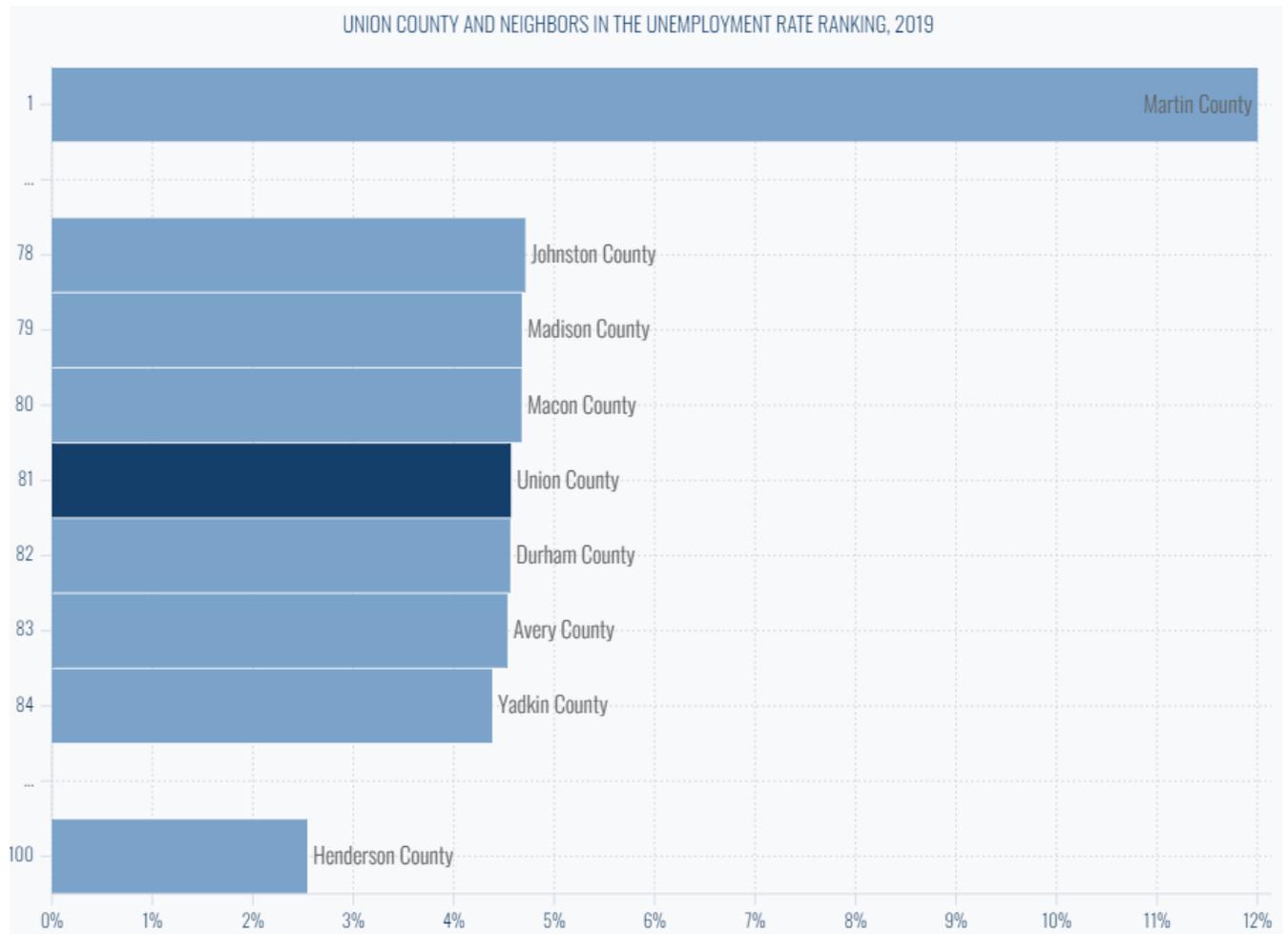
In 2019, the Union County uninsured rate was 9.04%. The Healthy Communities NC target is to reduce that rate to 8% by 2030 (shown by the dotted line in the graph below). A higher rate of individuals with healthcare insurance would lead to improved health outcomes and a higher quality of life for this population.



Healthy Communities NC

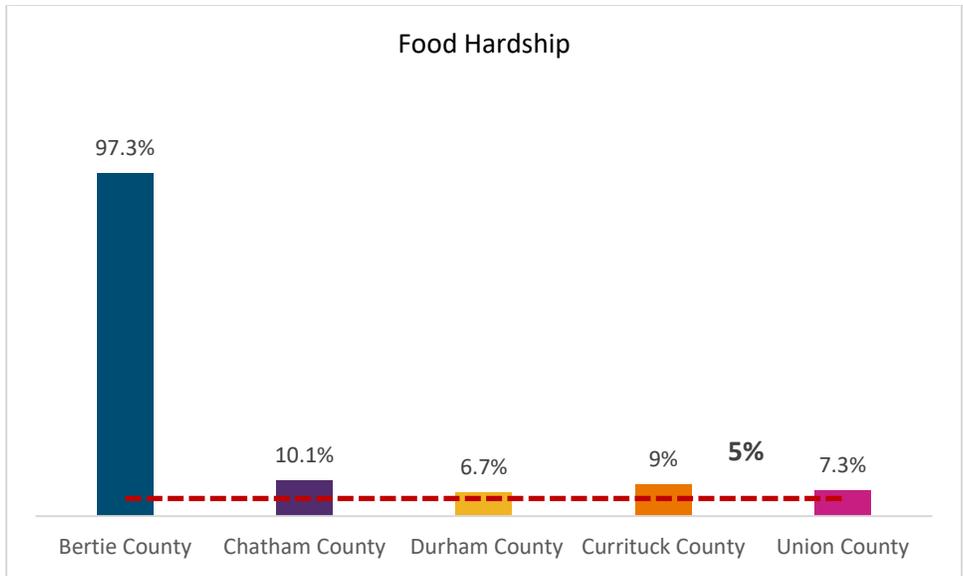
Workforce Development

In 2019, Union County had a 4.57% unemployment rate. Healthy Communities NC aims to bring that rate down to 1.7% by 2030. Improving the employment rates in Union County would lead to an increase in insured residents and reduce barriers to accessing health care.



Food Hardship

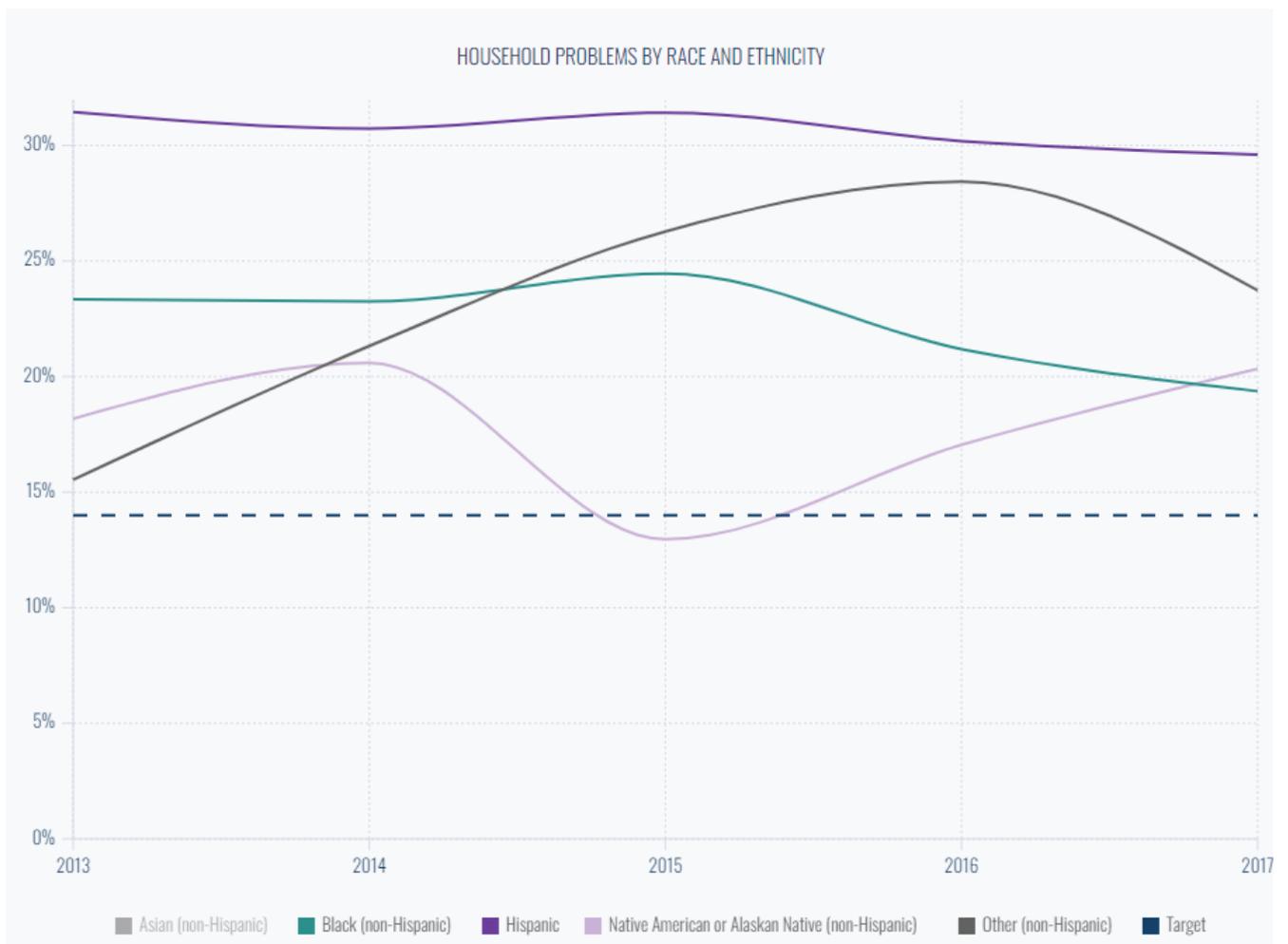
In Union County, 7.3% of the population is currently facing food hardship. The Healthy Communities NC target aims to bring that percentage to 5% by 2030.



Source: Healthy Communities NC, Cape Fear Collective, North Carolina Food Hardship Index

Housing Hardship

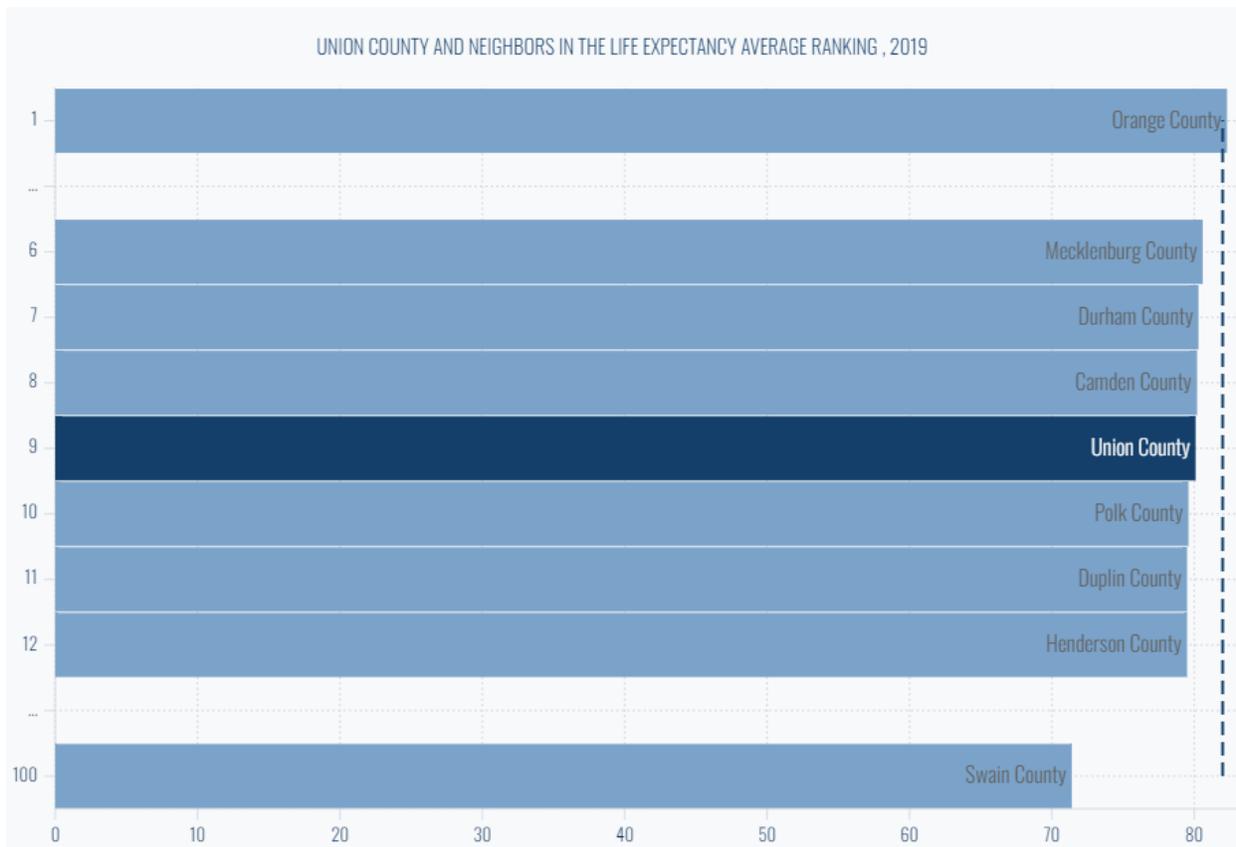
In Union County, the demographic groups facing the most significant housing hardship are black, Hispanic, Native American or Alaskan Native. Most notably, 28% of Union County’s Hispanic population faces housing hardship. The target goal for Union County is to reduce the percentage of the overall population facing housing hardship to 14% by 2030.



Source: Healthy Communities NC

Life Expectancy

Overall, Union County is at an 80-year life expectancy, while North Carolina's target life expectancy is 82 years. Improving access to care and addressing food hardship faced by residents of Union County can help in reaching that goal.



Source: Healthy Communities NC

II. Assessment process

COVID-19 impact on the CHNA assessment process:

The COVID-19 pandemic has been a global public health emergency, requiring the diversion of significant resources from hospital systems, public health departments, clinical healthcare providers, community organizations, and local, state, and national government agencies. In each of the communities we serve, Novant Health has worked tirelessly to keep our patients, team members and community members safe and healthy, delivering free/accessible COVID-19 education, masks, and vaccines.

The pandemic further exposed health inequities, and other problems associated with Social Determinants of Health, including those experienced by the medically underserved, low-income, and minority populations. In its COVID-19 response, Novant Health conducted targeted outreach and education to build trust with—and increase access for—these particularly vulnerable communities and individuals, as well as with the community organizations that serve them.

As it relates to the CHNA process, significant COVID-19 impact and interruption were in the areas of survey distribution and input solicitation as well as the availability of collaborating community partners

to be involved in the planning and prioritization process. Every effort was made to engage with and solicit input from individuals and organizations serving or representing the interests of medically underserved, low-income, and minority populations, but these efforts were sometimes hindered by limited resources and capacity because of COVID-19 pandemic response and heightened safety precautions. While this CHNA cycle process was impacted by COVID-19, Novant Health will continue to inclusively incorporate and serve the interests of all community members in our community response and community benefit work, including those of the medically underserved, low-income, and minority populations.

Mecklenburg County

The following are excerpts and findings from the **2022 Mecklenburg County Community Health Assessment**.

The 2022 Mecklenburg County Community Health Assessment and corresponding CHIPs were still being drafted at the time the NHMMC CHNA was written. A final assessment in the form of a written report will be submitted to the State in March 2023 to fulfill accreditation standards. CHA data and community input will serve as the foundation for community action planning around priority health areas beginning in Spring 2023. Interested individuals from the priority setting activities, the public and from organizations and any coalitions already addressing the issues will be invited to participate in the planning process. Community Health Improvement Plans (CHIPs) will be submitted by MCPH to the State in Early September 2023.

a) Collaborative community partners

Local Health Departments in North Carolina are required to conduct a comprehensive Community Health Assessment (CHA) every four years to maintain local health department accreditation. As part of the Patient Protection and Affordable Care Act of 2010, not-for-profit hospitals are also now required to conduct a Community Health Needs Assessment (CHNA) once every three years.

Every four years, Mecklenburg County Public Health (MCPH) with a steering committee of community partners has led an extensive examination of the community's health. The CHA includes a review of community health indicators, a community opinion survey, priority setting activities and action planning to address top identified priorities.

Building from that process, MCPH, Novant Health, Atrium Health and One Charlotte Health Alliance collaborated on the 2022 Mecklenburg County Community Health Assessment to update existing data and receive feedback from the community. This work included the 2022 CHA Health Opinion Survey.

The recognition that significant change usually takes more than three years, as well as COVID -19 disrupting community initiatives and services, resulted in the decision to retain previously identified leading health priorities, as long as data review and community input validated their continued concern and interest. Going forward, the CHA process will take place every 3 years and new priorities will be revisited during the 2025 CHA.

In Spring 2023 MCPH will publish an online interactive dashboard to communicate finalized results of the 2022 CHA. Action planning for this CHA cycle will begin Summer 2023.

b) Solicitation

The CHA Steering Committee, in partnership with the MCPH Epidemiology program, collected primary and secondary health data. Examination of the community data overview suggested the prior priority focus areas remained of current concern and interest. Health Disparities and Social Determinants of Health were considered overarching issues rather than individual categories.

Methods used to collect community feedback included the 2022 CHA Health Opinion Survey and CHA Community Virtual Meetings.

The 2022 CHA Health Opinion survey was open for responses between April 22, 2022 and July 8, 2022. Additional responses were collected during a community-wide virtual meeting on July 27, 2022.

The CHA Health Opinion Survey was available to Mecklenburg County residents only. Residency was determined by reported zip code and city/town of residence. Persons with zip codes outside of Mecklenburg County were excluded from participation in the survey. Surveys were administered electronically through Qualtrics™ via survey links and QR codes along with paper copies using English and Spanish languages.

The sampling method used for this survey was convenience sampling which is an inexpensive and quick way to collect data. A nonprobability form of snowball sampling was employed to reach a wide range of residents. Links to the online survey were sent via email to leaders of neighborhood associations; organizations that provide low- and no cost health care; and assorted mailing lists for agency and community members associated with human services and health related initiatives.

The survey link was also posted on the county website, county Facebook and Twitter pages, the Board of County Commissioners newsletter and employee newsletters for the county and Public Health. All recipients of the email and those viewing it on social media were encouraged to share the link among their own contacts.

In addition to outreach through community initiative email lists, professional networks and social media, residents were recruited through partnering with community-based organizations, such as Mecklenburg Interfaith Network, International House, Senior Centers and the Association for the Blind. Community health workers from MCPH, Atrium and Novant promoted the surveys to clients via QR links and paper surveys.

MCPH staff attended community events/meetings to solicit resident participation using printed flyers and table-top billboards featuring QR codes as well as printed copies.

Two virtual meetings were held on July 27, 2022 (1:30 p.m. and 7:00 p.m. sessions) to provide preliminary findings and further solicit community input. Meeting times were selected to promote community involvement among residents often excluded from early-day meetings due to work schedules. 128 participants registered, with most persons (97) selecting the 1:30 p.m. afternoon slot. 86

participants logged into the virtual sessions and were provided opportunities to report on top health issues impacting their community, as a part of final survey results to be published in December 2023.

Residents were asked to reflect on various issues and challenges facing their communities (defined as the resident's neighborhood or place of immediate residence, as opposed to the entire county). The latter portion of the survey asked participants their opinions on ten identified health focus areas, health concerns related to the social determinants of health, and finally, demographic information.

Every effort was made to broadly distribute the survey and collect responses from persons who represent the broad interests of Mecklenburg County, including those who represent the interests of members of the medically underserved, low-income, and minority populations. The demographic profile of survey respondents is represented in the table in the following section.

c) Data collection and analysis

Primary data

The Community Health Opinion Survey

The Health Opinion Survey opened on April 22, 2022, with a soft launch occurring during the preceding weeks. As of July 8, 2022, a total of 792 surveys were completed by Mecklenburg residents.

A limitation of this survey is the sampling selection bias. Because most of the surveys were completed online it is likely that populations who do not have access to or feel comfortable using a computer may have been missed. This issue was addressed by use of scanned QR codes and distributing paper copies.

Every attempt was made to gather a sample that resembled the demographic makeup of the county; however, Males and Asians were underrepresented. The survey is also not representative of youth (0 - 17 yrs.) since less than 1% of the survey was completed by this population. Caution must be exercised in attempting to weight a convenience sample as one cannot hope to bring it in line with a probability sample and, as such, we would be hesitant to perform such an adjustment and say this survey is totally representative of our county. It does, however, represent the opinion of a wide variety of county respondents as seen in the participant profile below.

Survey Demographic Category	2022 Survey Participants		County Population (ACS 2020)		
	Number	Percent	Demographics	Number	Percent
Total Participants	792	100%	Total Population	1,095,170	100%
Gender			Gender		
Male	117	17.7%	Male	526,453	48.1%
Female	540	81.7%	Female	568,717	51.9%
Other	4	0.6%			
Race/Ethnicity			Race/Ethnicity		
White/Caucasian	253	38.7%	White/Caucasian	506,691	46.3%
African American/Black	309	47.3%	African American/Black	340,835	31.1%
Of Hispanic or Latino Origin	75	11.7%	Of Hispanic or Latino Origin	146,710	13.4%
Asian	5	0.8%	Asian	65,898	6.0%
American Indian and Alaska Native	2	0.3%	American Indian and Alaska Native	2,351	0.3%
Two or More Races	51	7.8%	Two or More Races	28,282	2.6%
Native Hawaiian or Pacific Islander	N/A	N/A	Native Hawaiian or Pacific Islander	380	0%
Other Race	34	5.2	Some other Race	4,023	0.4%
Age			Age		
0-24	18	2.8%	Under 5 years	72,857	6.7%
			5 to 9 years	71,529	6.5%
			10 to 14 years	71,343	6.5%
			15 to 19 years	69,272	6.3%
			20 to 24 years	71,418	6.5%
25-44	219	33%	25 to 34 years	187,428	17.1%
			35 to 44 years	160,963	14.7%
45-64	315	47.5%	45 to 54 years	146,983	13.4%
			55 to 59 years	63,972	5.8%
			60 to 64 years	56,625	5.2%
65-84 yrs.	109	16.4%	65 to 74	75,426	6.9%
			75 to 84	33,207	3.0%
85+	2	0.3%	>85	14,147	1.3%
Household Income			Household Income		
\$0-\$19,000	42	6.7%	\$1 to \$9,999 or loss	5,487	1.3%
			\$10,000 to \$14,999	11,436	2.6%
\$20,000-\$29,999	41	6.5%	\$15,000 to \$24,999	43,543	9.9%
\$30,000-\$44,999	100	15.9%	\$25,000 to \$34,999	63,428	14.5%
			\$35,000 to \$49,999	85,852	19.6%
\$45,000-\$64,000	108	17.2%	\$50,000 to \$64,999	63,312	14.5%
\$65,000-\$90,000	109	17.4%	\$65,000 to \$74,999	29,844	6.8%

> \$90,000	228	36.3%	\$75,000 to \$99,999	49,287	11.3%
			>\$100,000	85,518	19.5%
Educational Attainment			Educational Attainment (Population 25 years and over)		
12th grade or less, no diploma or equivalent	11	1.7%	9 th to 12 th , no diploma	35,842	4.6%
High school graduate or equivalent	41	6.3%	High School graduate (includes equivalency)	122,643	16.6%
Some college, but no degree (includes vocational training)	99	15.2%	Some college, no degree	145,308	19.7%
Trade school or vocational training	25	3.8%			
Associate degree in college	63	9.7%	Associate degree	62,112	8.4%
Bachelor's degree in college	193	29.6%	Bachelor's degree	338,590	45.8%
Advanced college degree beyond bachelor's degree	217	33.3%	Graduate or professional degree	115,561	15.6%
Employment					
Employed full time	492	75.1%			
Employed part time	32	4.9%			
Unemployed	12	1.8%			
Caregiver/Homemaker	11	1.7%			
A Student	11	1.7%			
Retired	87	13.3%			
Unable to Work	10	1.5%			

Sources: ACS 2020 Census Bureau Table, ACS 2020 Census Bureau Income, and 2022 Mecklenburg County CHA

Secondary data

The data used in MCPH's report comes from a variety of sources which are collected differently and operate on varying reporting cycles. Delayed reporting, often for a year or more, due to data cleaning and analysis can impact the timeliness of data. The report represents preliminary findings and should not be taken as an exhaustive review of all data compiled during the CHA process.

Along with the primary data outlined above, secondary data was primarily collected and analyzed from the following sources:

- Behavioral Risk Factor Surveillance Survey (BRFSS)
- Charlotte Mecklenburg Police Department (CMPD)
- Mecklenburg County
 - Department of Social Services (DSS)
 - Geographic Information Systems (GIS)
 - Land Use & Environmental Services Agency (LUESA)
- Mecklenburg Youth Drug Survey (YDS)
- Mecklenburg Youth Risk Behavior Survey (YRBS)
- North Carolina Electronic Disease Surveillance System (NCEDSS)
- North Carolina Disease Event Tracking & Epidemiologic Collection Tool (NC DETECT)

- National Institute of Mental Health (NIMH)
- North Carolina Department of Health & Human Services (NC DHHS)
 - Communicable Disease Program
 - HIV/STD Prevention and Care
 - State Center for Health Statistics (SCHS)
 - Vital Statistics
- US Census, American Community Survey
- US Department of Transportation (US DOT)
- FBI Uniform Crime Reporting (UCR) Program
- Center for Disease Control and Prevention (CDC)
- Global Rise in Human Infectious Disease Outbreaks (Katherine F. Smith, Michael Goldberg, et al.)
Journal of the Royal Society Interface (Vol 11, Issue 101)

Union County

The 2022 Union County Community Health Assessment and corresponding CHIP were still being drafted at the time the NHMMC CHNA was written. The following are excerpts and findings from the **2022 Union County Community Health Assessment** process.

a) Collaborative community partners

The 2022 Union County Community Health Assessment (CHA) was initiated by the Union County Health Department (UCHD) with assistance from a multidisciplinary collaboration of an established Steering Committee from the Healthy Union Advisory Coalition (made up of representatives from community organizations, local government agencies, hospitals including Novant Health and Atrium Health, and the Union County Health Department). As part of the assessment process, special attention was paid to the needs of the underserved. The process emphasized collaboration among various community partners to improve the overall health of the community.

b) Solicitation

The CHA Steering Committee, in partnership with Union County Public Health, collected community input on health issues to determine top priorities. The two methods used to collect community feedback were:

- (1) The Community Health Survey: distributed from January – April 2022
 - 2,392 responses total
 - 2,206 adult surveys
 - 186 teen surveys
- (2) Focus Groups: 9 focus groups were conducted virtually and in person from January 2022 through April 2022, targeting those who represent the broad interests of Union County

c) Data collection and analysis

Primary data

The Community Health Survey

With guidance from the CHA Steering Committee, the UCHD developed teen and adult surveys for Union County residents that was open from January – April 2022. The survey instruments used in the Union County Community Health Assessment process were built in Alchemer and distributed electronically throughout the Union County Community following the convenience sampling model. Links to the survey were posted on the Union County Government and Human Services websites. Stakeholders shared links to the survey and paper copies of the survey were also available at the Union County Government Center, Union County Human Services, libraries, community and faith organizations, and hospitals. Paper copies were collected by Human Services staff and entered manually into Alchemer. A total of 2,392 surveys were collected via Alchemer (2,206 adult surveys and 186 teen surveys).

The CHA Steering Committee contracted with Annika Pfaender, Independent Consultant, to analyze the results of the 2022 survey and prepare a report summarizing the responses.

Every attempt was made to gather a sample that resembled the demographic makeup of the county. Demographics of a wide variety of teen and adult survey participants are shown in the tables below, but compared to their proportion in the total population of Union County, the teen survey under-represents White residents and males and the adult survey under-represents males, Hispanic/Latino residents, and the less well-educated. The adult survey over-represents those earning more than \$50,000 and those with a BA or higher.

Survey Demographic Category	Teen 2022 Survey Participants		County Population (ACS 2020)		
	Number	Percent	Demographics	Number	Percent
Total Participants	186	100%	Total Population	235,767	100%
Gender			Gender		
Male	66	36.1%	Male	116,112	49.2%
Female	106	57.9%	Female	119,655	50.8%
Transgender	1	0.5%			
Prefer not to answer	7	3.8%			
Other (Gender fluid, non-binary)	3	1.6%			
Unanswered	3				
Race/Ethnicity			Race/Ethnicity		
White/Caucasian	31	16.9%	White/Caucasian	168,665	71.5%
African American/Black	64	35%	African American/Black	26,605	11.3%
Of Hispanic or Latino Origin	75	41%	Of Hispanic or Latino Origin	26,526	11.3%
Asian	4	2.2%	Asian	7,804	3.3%
American Indian and Alaska Native	1	0.5%	American Indian and Alaska Native	474	0.2%
Other Race	7	3.8%	Two or More Races	5,126	2.2%
Native Hawaiian/Pacific Islander	0	0.0%	Native Hawaiian/Pacific Islander	57	0
Eastern European/Russian/Post Soviet Union States	0	0.0%	Some other Race	510	0.2%
Arab American/Middle Eastern	1	0.5%	Two races excluding Some other race, and Three or more races	4,871	2.1%
Unanswered	3				
Age			Age		
10-12	13	7.7%	10 to 14 years	20,415	8.7%
12-14	73	43.5%	15 to 19 years	14,177	6.0%
15-17	82	48.8%			
Unanswered	18				

Survey Demographic Category	Adult 2022 Survey Participants		County Population (ACS 2020)		
	Number	Percent	Demographics	Number	Percent
Total Participants	2,206	100%	Total Population	235,767	100%
Gender			Gender		
Male	515	23.5%	Male	116,112	49.2%
Female	1656	75%	Female	119,655	50.8%
Transgender	2	0.1%			
Prefer not to answer	19	0%			
Other	0	0.0%			
Race/Ethnicity			Race/Ethnicity		
White/Caucasian/ European American	1,548	70.7%	White/Caucasian	168,665	71.5%
African American/Black	336	15.3%	African American/Black	26,605	11.30%
Of Hispanic or Latino Origin	214	9.8%	Of Hispanic or Latino Origin	26,526	11.30%
Asian	21	1%	Asian	7,804	3.30%
American Indian and Alaska Native	12	0.5%	American Indian and Alaska Native	474	0.20%
Eastern European/ Russian/Post Soviet Union States	10	0.5%	Two or More Races	5,126	2.20%
Native Hawaiian/ Pacific Islander	2	0.1%	Native Hawaiian/ Pacific Islander	57	0.0%
Arab American/Middle Eastern	1	0%	Some other Race	510	0.2%
Other	45	2.1%			
Age			Age		
18-24	73	3.3%	20 to 24 years	14,177	6%
25-34	162	7.4%	25 to 34 years	22,750	9.6%
35-44	378	17.2%	35 to 44 years	31,990	13.6
45-54	478	21.8%	45 to 54 years	38,395	16.3%
55-59	198	9.0%	55 to 59 years	16,726	7.1%
60-64	232	10.6%	60 to 64 years	11,456	4.9%
65-74	386	17.6%	65 to 74 years	18,505	7.8%
75-84	236	10.7%	75 to 84 years	8,346	3.5%
85+	54	2.5%	85 years and over	2,917	1.2%
Unanswered	9				
Household Income			Household Income		
Less than \$10,000	80	3.7%	\$1 to \$9,999 or loss	988	1.2%
\$10,000 to \$14,999	128	6.0%	\$10,000 to \$14,999	2031	2.4%
\$25,000 to \$34,999	175	8.2%	\$15,000 to \$24,999	6601	7.9%
\$35,000 to \$49,999	229	10.7%	\$25,000 to \$34,999	11,106	13.3%
\$50,000 to \$74,999	328	15.3%	\$35,000 to \$49,999	16,516	19.8%

\$75,000 to \$99,999	293	13.7%	\$50,000 to \$64,999	12,847	15.4%
\$100,000 to \$149,999	346	16.1%	\$65,000 to \$74,999	5,754	6.6%
\$150,000 to \$199,999	192	8.9%	\$75,000 to \$95,000	9,136	11.0%
\$200,000 or more	165	7.7%	\$100,000 or more	18,319	22%
Unknown	133	6.2%			
Unanswered	60				
Education			Education		
			25 years and older		
Less than 9th grade	48	2.2%	Less than 9 th grade	5,891	3.9%
9 th -12 th grade no diploma	93	4.2%	9 th to 12 th grade no diploma	9,840	6.5%
High school graduate	288	13.2%	High School graduate	35,678	23.6%
Associate degree or Vocational Training	267	12.2%	Some college, no degree	31,772	21.0%
Some College	361	16.5%	Associate degree	13,507	8.9%
Bachelor's degree in college	621	28.4%	Bachelor's Degree	37,178	24.6%
Advanced college degree beyond bachelor's degree	493	22.5%	Graduate's or professional degree	17,219	11.4%
Other	18	0.8%			

Sources: ACS 2020 Census Bureau Union County, Union County Health Department Survey

Focus group sessions

The 9 focus group sessions between January 24, 2022 and April 27, 2022 consisted of a wide array of county residents varying in demographics and location of county residence, and included homeless shelter residents, Latino community members, a teen health services coalition, the African American faith community, and others. The intended purpose was to have representation of as much of the county population as possible.

Participants were asked to discuss 8 questions such, including “What are the most important issues for your community to address?,” “What things concern you the most about living in Union County?,” and “Are there any resources or activities you would like to see in Union County that are not here now?”

Secondary data

Along with the primary data outlined above, secondary data was collected and reviewed from sources such as:

- Union County Health Department
- North Carolina Vital Statistics
- North Carolina Department of Health and Human Services, State Center for Health Statistics
- NC SCHS County Health Data Book 2021
- NC Violent Death Reporting System
- US Census Bureau Household Pulse Survey 2020-2022

III. Identification and Prioritization of Health Needs

Mecklenburg County

a) Identified Significant Health Needs

The nine topic areas included in the 2017-18 CHA were selected by reviewing the data and validated using a survey tool that was administered to community leaders and representatives of key health agencies in the county. The survey included 15 health topics for consideration and asked respondents to rank the issues in order of importance. In 2022, the same top nine issues were identified as those included in the 2017 CHA and a new category informed by the data, was added. Emerging Health Issues characterizes the impact of emerging or re-emerging health conditions that pose major public threats, such as COVID-19. Health disparities and social determinants of health are not called out specifically as health issues but rather incorporated within each. In alphabetical order, the 10 health issues are:

1. Access to care
2. Chronic disease prevention
3. Emerging health issues
4. Healthy environment
5. Healthy pregnancy
6. HIV and other STIs
7. Injury Prevention
8. Mental health
9. Substance use disorder
10. Violence prevention

b) Analysis & Prioritization

Prioritized Health Outcomes

Consideration of these topic areas—and the data alongside community input—resulted in the following top four priority health issues for MCPH:

1. Mental Health
2. Access to Care
3. Chronic Disease
4. Violence Prevention

Union County

a) Identified Significant Health Needs

Select highlights from Annika Pfaender's analysis of the teen and adult survey responses are below:

Physical health/access to care:

- More than 70% of Union County respondents across the Teen and Adult surveys rated their physical health as good or excellent
- Adults were more likely than teens to have a medical and dental home:
 - 28% of teens respondents and 15% of adult respondents did not see a doctor on a regular basis
 - 27% of teen respondents and 36% of adult respondents did not see a dentist on a regular basis
- Across both surveys, the majority of respondents received health care services when they needed them
 - Teens were more likely to report a time when they needed to see a healthcare provider but did not
 - Adults were slightly more likely than teens to report a time when they needed prescription medication but did not get it

Mental health/substance use:

- Teens were more likely than adults to rate their mental health as poor or very poor
- Teens were more likely to rate their mental health as neither good nor bad compared to adults
- Both adults and teens felt that depression was the most critical mental health concern in Union County
- Anxiety and Alcohol Addiction were also leading mental health concerns among both teens and adults, with teens more likely to select anxiety and adults more likely to select alcohol addiction
- A higher proportion of adults identified opioid or drug addiction as an important mental health concern while higher proportions of teens chose sleep issues and suicide as important issues

Unhealthy behaviors:

- Poor eating habits and lack of exercise were the most frequently chosen unhealthy behaviors among adults, while stress and bullying were the leading unhealthy behaviors identified by teens
- Teens were more likely than adults to feel that domestic violence and instability at home were critical unhealthy behaviors in Union County
- Reported physical activity is similar across both surveys, with teens slightly more likely to report no exercise or on only one day a week
- The majority of teen and adult respondents eat between one and three servings of fruits and vegetables per day
- More than half of respondents across both surveys reported 3 or more hours per day of screen time

- Vape or E-cigarette products were the most common substance used among teen respondents and tobacco was the most common substance used among adult respondents
- Teens were more likely to report smoking marijuana compared to adults

The most frequent discussion topics from the 9 focus group sessions are listed below, in order of most frequently mentioned to least frequently mentioned:

1. Mental health
2. Affordable housing
3. Lack of public transportation
4. Community safety
5. Drug/substance use disorders
6. Chronic disease prevention and education
7. Better access to healthcare providers
8. High costs of healthcare
9. Healthy eating habits/nutrition
10. Language barriers
11. Food insecurities/deserts
12. More parks/sidewalks
13. Drinking water quality

b) Analysis and Prioritization

Union County prioritized health needs will be identified as the assessment process continues, and action plans from the UCHD will be developed to address each priority.

Facility prioritization

In addition to the primary and secondary data, Novant Health Matthews Medical Center reviewed the top five diagnosis codes for inpatient and outpatient hospital emergency department visits.

Novant Health Matthews Medical Center Emergency Department
Top 5 Diagnoses July 2021-June 2022

Inpatient Diagnosis	Volume	Outpatient Diagnosis	Volume
COVID-19	641	Other Chest Pain	1677
Sepsis, unspecified organism	426	Covid -19	1424
Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	323	Headache, unspecified	522
Non-ST elevation (NSTEMI) myocardial infarction	194	Dizziness and giddiness	492

Hypertensive heart disease with heart failure	178	Syncope and collapse	467
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The top 5 diagnoses from July 2021 to June 2022 were greatly impacted by the Covid-19 pandemic in the outpatient and inpatient settings. As a result of Covid-19 and encouraging virtual visits for patient safety, when possible, the inpatient diagnosis trend for adults was more serious diagnoses like heart and kidney failures. Outpatient trending diagnoses were severe symptoms and side effects of Covid-19.

Upon a comprehensive review of the primary and secondary data and NHMMC’s ED top 5 diagnosis codes, the Novant Health Matthews 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 significant health priorities for Novant Health Matthews Medical Center:

1. Mental health
2. Access to care
3. Chronic disease
4. Violence prevention

IV. Addressing needs

Novant Health Matthews Medical Center is committed to working to address each of its prioritized areas of need through resource allocation and support of the following programs and actions:

Priority Need:	Program / Initiative:	Action:	Intended Outcome:
Mental Health	Mental Health TIC/Resiliency Training/Screenings Investment	<ul style="list-style-type: none"> • Provide information and training to individuals in various sectors including nonprofit, faith, and education communities, to include our own teams • Support aligned community organizations and events 	<ul style="list-style-type: none"> • Increase general mental health awareness, the impact of trauma, and provision of tools and/or skills to build resiliency • Increase individual's ability to access resources, and the number of individuals connected to appropriate treatment and/or services
Access to Care	Education and Health Screenings Mobile Outreach Investment	<ul style="list-style-type: none"> • Host health education and screening events and facilitate referrals to care and/or resources • Host childhood immunizations and health assessment events via mobile outreach program • Support aligned community organizations and events 	<ul style="list-style-type: none"> • Increased number of community stakeholders connected to a primary medical home and appropriate care
Chronic Disease	Wellness Education Health Screenings/ Resources Investment	<ul style="list-style-type: none"> • Wellness Webinars and speaker's bureau program • Host health and SDoH screenings • Provide related referrals, assessment of resources and food insecurity support • Support aligned community organizations and events 	<ul style="list-style-type: none"> • Increased access to health resources and screenings • Increased awareness of health risks and prevention tools/methods
Violence Prevention	Education Public awareness Investment	<ul style="list-style-type: none"> • Wellness Webinars and speaker's bureau program • Public safety and trauma programs with community partners • Collaboration with community partners, board affiliations, and committees • Support aligned community organizations and events 	<ul style="list-style-type: none"> • Increased awareness of violence prevention tools/methods and resources

Again, NHMMC will focus resource allocation on these prioritized needs based on careful consideration of estimated feasibility and effectiveness of possible interventions. While NHMMC will not prioritize the remaining significant health needs (listed above in Section III), it will support and collaborate with community partners as appropriate for the purpose of improving outcomes for identified needs that are better aligned with their scope of service.

In addition to the programs and services offered to the community through Novant Health Matthews Medical Center, there are various existing community assets available throughout the Mecklenburg and Union County community that have additional programs and resources tailored to meet all the identified health needs. The following is a list of valued community agencies that address those prioritized and non-prioritized needs:

Identified Significant Health Needs	Local Community Resources Addressing Needs
<ul style="list-style-type: none"> • Access to care • Chronic disease prevention • HIV & other STIs • Healthy pregnancy 	<p>Mecklenburg County: Mecklenburg County Health Department, One Charlotte Health Alliance, Charlotte Community Health Clinic, Care Ring, Center for Prevention Services, RAIN, CW Community Health Center, DeAngelo Williams Foundation, Carolina Breast Friends, Claire’s Army, Colon Cancer Coalition, Healthy Charlotte Alliance, Heartbright, Hospitality House, Madelyn’s Fund, MS Society, LLS, Zero End Prostate, Matthews Free Medical Clinic, Bright Blessings</p> <p>Union County: Community Health Services of Union County, Bright Blessings, Matthews Free Medical Clinic, Community Shelter of Union County</p>
<ul style="list-style-type: none"> • Emerging health issues (outbreaks of infectious diseases that pose major public health threats, such as COVID-19 and Monkey Pox) 	<p>Mecklenburg County: Mecklenburg County Health Department, One Charlotte Health Alliance</p> <p>Union County: Matthews Free Medical Clinic, Bright Blessings, Community Health Services of Union County, Union County Health Department</p>
<ul style="list-style-type: none"> • Healthy environment (including pollution, clean water, poverty, housing, and food access) • Violence prevention • Injury prevention 	<p>Mecklenburg County: Heal Charlotte, Second Harvest, Loaves and Fishes, Catawba Riverkeepers, Catawba Lands Conservancy, Roof Above, Sustain Charlotte, Pat’s Place, Shelter Health Services, Safe Alliance, Rebuilding Together, The Bulb, YWCA, Angels and Sparrows, Habitat for Humanity of Greater</p>

	<p>Matthews, Common Heart Food Pantry, Community Shelter of Union County</p> <p>Union County: Common Heart Food Pantry, Habitat for Humanity of Greater Matthews, Community Shelter of Union County</p>
<ul style="list-style-type: none"> • Mental health • Substance use disorder 	<p>Mecklenburg County: Charlotte Rescue Mission, Crisis Assistance Ministry, Mental Health America, Living Waters, RAIN, Dilworth Center, Center for Prevention Services, Lake Norman Community Medical Clinic</p> <p>Union County: Matthews Free Medical Clinic, Community Health Services of Union County</p>

For a full list of community resources, visit www.novanthealth.org/mycommunity.

V. Impact Evaluation of 2019-2021 Community Health Needs Assessment

No written comments were received from the 2019 - 2021 CHNA and implementation strategy.

Based on the previously reported health data from the 2019-2021 Community Health Needs Assessment, the Novant Health Southern Piedmont Region Board of Trustees did a collective review of community feedback and prioritization and determined the top health priorities for Novant Health Matthews Medical Center as the following: Mental Health/Substance Use Disorder and Access to Care.

The specific commitments, objectives, measurements, and successes for Novant Health Matthews Medical Center addressing their 2019-2021 priorities are described in the table below.

Of note, in 2020 and 2021, the COVID-19 pandemic diverted our focused response on priority needs to meet new, unexpected, and urgent priorities in our community. Our COVID-19 response, including education, free mask distribution, and vaccines, addressed issues of access to care and chronic disease by targeting vulnerable communities. While intended outcomes identified in 2019 were not always able to be met, Novant Health provided access to critical and life-saving services to all our communities through dedicated COVID-19 response efforts.

Priority	Program / Action	Intended Outcome	Actual Outcome
Mental Health - Substance Use Disorder	<p>Mental Health TIC/Resiliency Training and Screenings: provide information and train individuals from various sectors including the nonprofit and faith community.</p> <p>Substance Use recovery and prevention: Develop database of regional resources for appropriate behavioral health and SDoH referrals.</p>	<p>Awareness of the impact of trauma and provision of tools/skills to build resiliency.</p> <p>Awareness of ways to access resources and increased number of individuals connected to appropriate treatment and services within the community.</p>	<p>Various support and exercise groups—including for bereavement, Parkinson’s, injuries, and diabetes--provided additional support to 1,354 community members and their families, to bolster their resilience, mental, emotional and physical health, and sense of community.</p> <p>76 community members benefited from educational programming on stress management and depression.</p> <p>The MyCommunity platform—summarized below—serves as a free searchable database for local resources addressing needs, including behavioral health needs and SDoH referrals, for community members, patients, and providers searching on behalf of/referring patients.</p>
Access to Care	Wellness Education and Screenings: Host screenings and provide related referrals, assessment of resources	Increased number of community stakeholders connected to a primary medical home and appropriate care	<p>10,986 participants were served through 138 educational events, classes and programming, including financial checklist for new parents classes, Dinner with a Doctor and other health talks on various topics, CPR classes, wellness coaching and weight management, health fairs, and self-help series and exercise classes.</p> <p>5,285 participants were served through 46 screening events, including for blood pressure, mammography, body fat, and Remarkable You (which includes cholesterol, glucose and A1C exams to measure diabetes risk).</p>

		<p>The MyCommunity platform—an online platform to search for local free and reduced-cost social service programs addressing SDoH areas like access to food, work, housing, transit, and healthcare services—is provided for free, and intended to increase trust and access to resources. From 2019 – 2021, there were 19,913 searches performed in Mecklenburg County and 1,026 searches performed in Union County, and the most common search terms included “food pantry,” “primary care,” “help pay for housing,” “help pay for utilities,” and “prescription assistance.” More than 5,000 “connections” (or information about health and social needs resources) were sent to patients or community members in this time period via MyCommunity.</p> <p>Additionally, NHMMC contributed \$230,168.50 toward addressing this priority through charitable contributions to the following organizations: Town of Matthews, Senior Activities and Services, Matthews Free Medical Clinic, and Matthews Help Center.</p>
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VI. Appendix

Steering Committee for Mecklenburg County CHA
Agency
Atrium Health
Mecklenburg County Public Health*
Novant Health
One Charlotte Health Alliance

- *Representative of a state, local, tribal, or regional governmental public health department (or equivalent department or agency)
- For a full list of agencies involved in the CHA process, including those representing underserved, low-income, and minority populations, please see the MCPH 2022 CHA report.

Steering Committee for Union County CHA
Agency
Healthy Union Advisory Coalition
Union County Department of Public Health*
Novant Health
Atrium Health

- *Representative of a state, local, tribal, or regional governmental public health department (or equivalent department or agency)
- For a full list of agencies involved in the CHA process, including those representing underserved, low-income, and minority populations, please see the UCHD 2022 CHA report.