FY2019-2021

NORTHSIDE HOSPITAL

Community Health Needs Assessment

Adopted by the Northside Hospital, Inc. Planning Committee, July 16, 2019

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Executive Summary

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Executive Summary

About Us

Northside's commitment to health and wellness in the Atlanta community began in 1970 with the opening of Northside Hospital Atlanta. Since then, the Northside Hospital System has grown to include three general acute care hospitals, 1,051 inpatient beds, a network of more than 2,900 physicians, and 15,000 employees. Additionally, Northside operates more than 150 outpatient locations in counties across the greater metropolitan Atlanta area.

Northside's commitment to health and wellness extends well beyond those patients with the ability to pay, as demonstrated by the $451M in uncompensated indigent and charity care provided by NHA, NHF and NHC combined in 2017. This amount represented 8.3% of the hospital system's 2017 adjusted gross revenue.

Our Community Benefit

This Community Health Needs Assessment ("CHNA") marks Northside's third cycle of assessing, prioritizing and addressing our Community's health needs. As a not-for-profit entity, Northside always has been mission driven to improve the health and wellbeing of our community members and to serve all, regardless of ability to pay. Northside has a long history of community outreach whether through education, support groups or screenings and health fairs. Through the CHNA process, Northside's outreach efforts are becoming more strategic in nature and more collaborative. Also, there is now a formal framework and structure surrounding Northside's outreach efforts which enables improved capture and reporting. Since FY 2016, Northside has increased the number of people reached via its community benefit program activities by thirteen percent (13%) and has increased the reported value of these efforts by seventy-six percent (76%).

Northside Hospital
Community Benefit Program Activities
FY 2016 to FY 2018

Our Community

Northside began this CHNA process by defining the Northside Community. A multi-step process revealed significant overlap between the communities served by each Northside Hospital facility. Thus, NHA, NHF and NHC developed a single community definition, in compliance with IRS Section 501(r) Final Rule.

FY 2019 – FY 2021 CHNA Community Definition

The Northside Community consists of Cherokee, Cobb, Dawson, DeKalb, Forsyth, Fulton, Gwinnett, and Pickens Counties.

Population Characteristics:

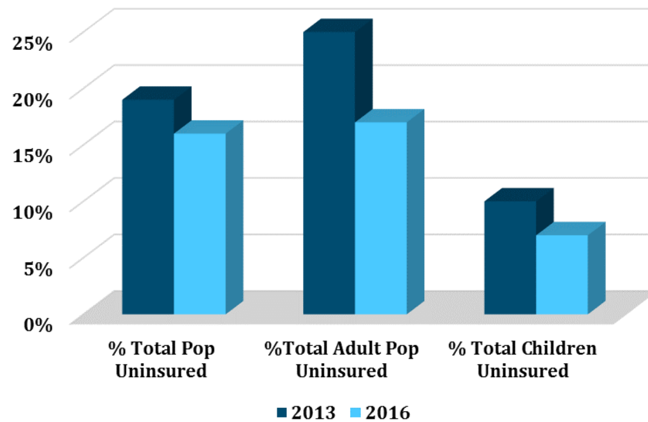
- ✧ 3.9 million residents or 38% of Georgia's total population.
- ✧ Slightly younger than Georgia; median age 35.9 compared to Georgia's 36.5.
- ✧ Predominantly White (50%) with the Black population (34%) comprising the 2nd largest racial group.
- ✧ 48% of Georgia's total Hispanic population resides in the Community; comprises 12% of the Community.

Socioeconomic Characteristics:

- ✧ High level of educational attainment and affluence.
- ✧ 44% of the Community's residents hold a Bachelor's Degree or higher, compared to 30% for Georgia.
- ✧ Median disposable income, household income, household net worth, and housing unit value in the Northside Community are all higher than Georgia's averages.
- ✧ However, disparities do exist especially along racial and ethnic lines.
    - o Black, Native American, Hispanic, Native Hawaiian, and "Other" racial/ethnic groups all have poverty rates of 19% or higher in the Community, while the non-Hispanic White poverty rate in the Community sits at just 9%.
    - o The Black population accounts for 47% of the Community's population in poverty, while only comprising approximately 34% of the Community's total population.

Our Community's Access to Care

Lack of health insurance poses a significant access barrier to preventive and specialty care. Persons who are uninsured are less likely to seek out or receive preventive care and are more likely to be admitted to the hospital for preventable conditions. While uninsured rates improved from 2013, sixteen percent (16%) of the Community's population remained uninsured. Also, there are significant disparities in insurance coverage by racial and ethnic groups.



Access to a Primary Care Physician ("PCP") is an important step in maintaining good health. There are many reasons that a person may or may not have a regular PCP, including economics, transportation, or geographic access. Geographic access can, in part, be measured by the rate of PCPs within the population. The Northside Community's PCP/100,000 population rate is higher than Georgia's and equivalent to the national rate. However, there is a misdistribution of PCPs/100,000 population throughout the Community as noted by the select counties with low PCP rates. As a result, the Community's utilization of PCPs was 4% below the national average.

Rate of PCPs within the Community
(PCPs per 100,000 People)

Community: 88
Georgia: 73
U.S.: 88

Counties with Low PCP Rates

Cherokee: 36
Forsyth: 42
Pickens: 43
Dawson: 61
Gwinnett: 64

= 10 PCPs

Not surprisingly, the U.S. Department of Health & Human Services has designated several areas within the Community as Medically Underserved Areas ("MUAs") and Medically Underserved Populations ("MUPs").

- The Community's MUAs are located largely in the northern portion of the Community, including portions of Cherokee, and all of Pickens, Dawson and Forsyth Counties.
- The Community's MUPs are concentrated in the southern portion of the Community, including portions of Cobb, DeKalb, Fulton, and Gwinnett Counties.

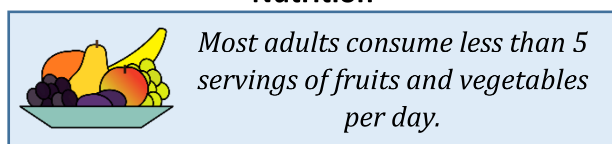
These vulnerable populations often rely on Federally Qualified Health Centers ("FQHC") for healthcare services. Unfortunately, the Community is still underserved by FQHCs compared to Georgia and national use rates.

In order to help combat some of these access issues, the 24 general acute care hospitals located in the Community contributed a total of $2.7 billion in net uncompensated indigent and charity care. This combined amount accounts for an approximate 61% increase in net uncompensated indigent and charity care in the Community since 2014. Northside Hospital Atlanta contributed the third largest amount in 2017, totaling $277 million.

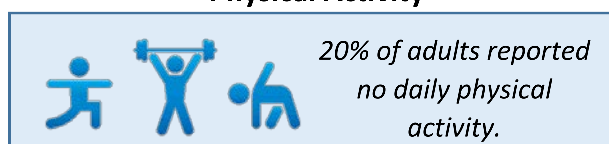
Our Community's Health Status

Healthy lifestyle behaviors can help reduce risk factors for numerous diseases such as coronary artery disease, cancer, diabetes, and other chronic conditions. Northside's Community had higher rates of participating in healthy lifestyle behaviors when compared to Georgia and the United States. However, despite outperforming the state on most healthy lifestyle measures, the Community still has several areas for improvement.

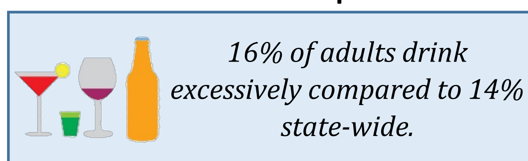
Nutrition



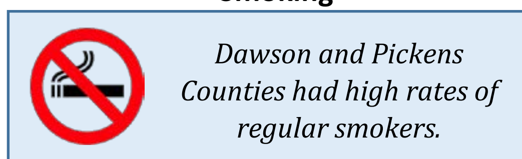
Physical Activity



Alcohol Consumption



Smoking



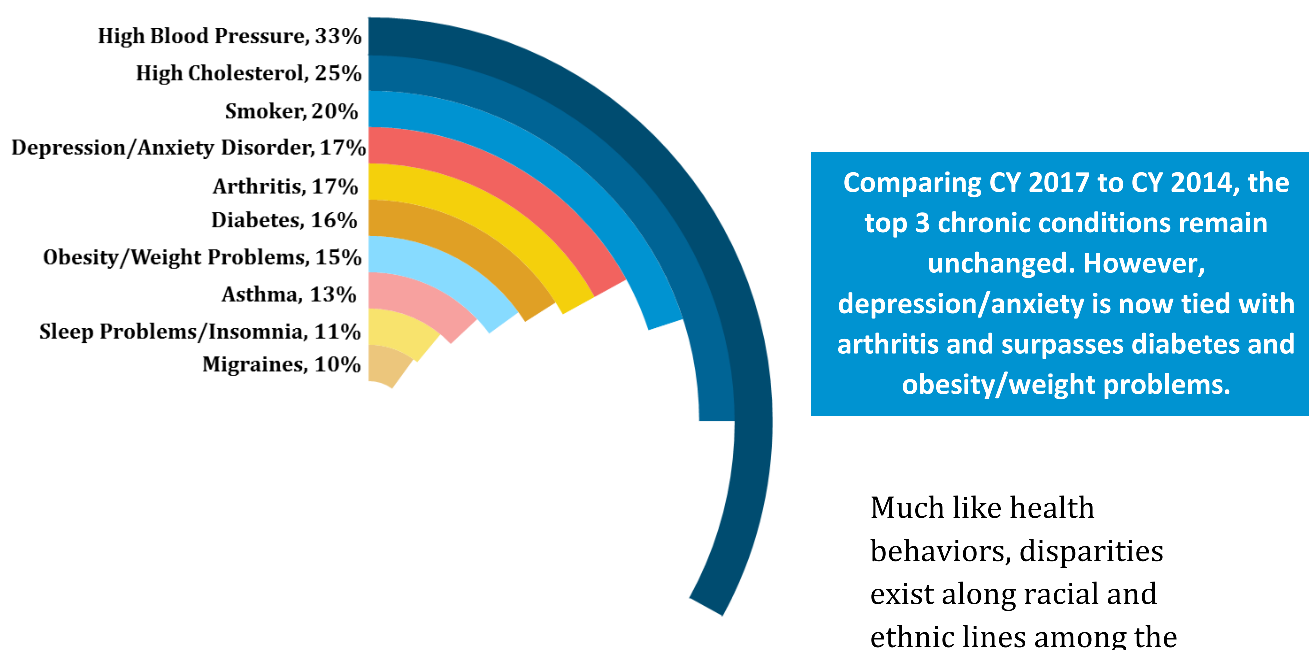
Preventive screenings also play an important role in maintaining good individual and community health. According to the National Research Corporation's ("NRC") 2017 Survey, the top 10 preventive health behaviors in the Northside Community are:

Community's Top 10 Preventive Health Behaviors	
1. Blood Pressure Test (52%)	2. Dental Exam (46%)
3. Eye Exam (46%)	4. Routine Physical Exam (40%)
5. Flu Shot (35%)	6. Cholesterol Test (34%)
7. Mammogram (26%)	8. Pap Smear (22%)
9. No Service or Test (21%)	10. BMI Screening (17%)

Much like other health behaviors, there are disparities in the practice of preventive screening between low-income and high-income populations, between racial and ethnic groups, as well as between the uninsured and those with insurance.

Health behaviors and other health determinants, like social and economic factors, converge to produce specific health outcomes for a community. High blood pressure, high cholesterol, and smoking were the most common chronic conditions in the Northside Community, each impacting more than 20% of Community members. The incidence of these chronic conditions align with the two leading causes of death in the Northside Community: cardiovascular disease and cancer.

2017 Northside Community's Top Ten Chronic Conditions, Percent of Households Reporting the Condition



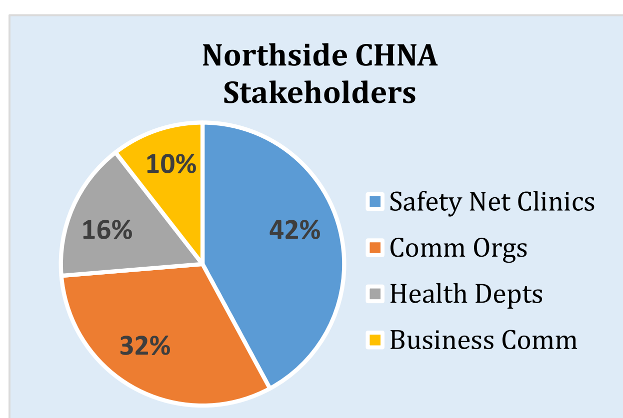
Much like health behaviors, disparities exist along racial and ethnic lines among the top chronic conditions and causes of death. For instance, the Black population in the Northside Community has higher rates of being overweight or obese, as well as higher hospital discharge rates for diabetes than other racial groups. In addition, non-Hispanic Black males have the highest incidence rate of cancer in the Community, largely driven by a high incidence of prostate cancer. Depression/anxiety disorders were more common in White and Hispanic households, and less common in Black and Asian ones; smoking was more common in Hispanic households. These disparities also exist among levels of income and insurance as well. For example, smoking and depression/anxiety disorders were more common in low-income and uninsured populations.

Another important measure of our Community's health status is the health status of our Community's mothers and babies, a population of particular concern to Northside. As a

recognized leader in obstetrical and neonatal care, Northside consistently delivers more babies than any other Georgia hospital, and often more than any hospital nationally. According to America's Health Rankings, Georgia has one of the highest rates of infant mortality in the U.S, ranking 45th out of 50 states in 2018. The Northside Community's Infant Mortality Rate ("IMR") of 6.6 was slightly lower than Georgia's of 7.2. Within Georgia and the Community, there were significant disparities in infant mortality between racial groups. Within the Northside Community, the IMR for Black infants (10.7) was more than double that of White infants (4.3), Asian infants (3.9), and Hispanic infants (4.9). Northside analyzed IMRs over a 10-year period, 2008 – 2017, and although rates did not show a clear growth/decline, the disparity between the Black population and other racial/ethnic groups was consistent across the 10-year time period. Similar racial disparities are also seen for premature births and low-birth weight babies.

Our Community's Stakeholders

Stakeholder interviews were conducted for this CHNA in order to provide additional insight into the health needs of the Community. Northside identified individuals in the Community who could provide a unique perspective and connection to the Community's health needs. Special efforts were made to identify individuals who fit this description and also possessed a special knowledge or expertise in public health. In this process, Northside reached out to 44 stakeholders, which included representatives at all county-level public health departments in the Community. These efforts resulted in the completion of 19 stakeholder interviews. Each interview was conducted using Northside's Stakeholder Assessment Discussion Guide, a copy of which is included in Appendix A. Stakeholders offered insight on a variety of topics related to the health needs of the Community, including positive health assets within the Community, negative health factors within the Community, physical health needs, barriers to accessing primary/specialty healthcare, and more. This information was invaluable in helping to prioritize the health needs of the Community and develop an implementation plan to address those needs.



Needs Northside Will Address

Northside began the needs prioritization process by creating a crosswalk that condensed the 19 identified needs into 12 different need categories. Northside then developed a 5-step prioritization process that prioritized those needs that impact the greatest number of Community members, that disproportionately impact the most vulnerable populations, that are most severe and/or prevalent, and that Northside has the capacity to address. This process resulted in the following needs being selected for the current CHNA cycle.

Northside's FY 2019 – FY 2021 CHNA Top Identified Health Needs
1) Cancer
2) Cardiovascular Disease
3) Healthy Lifestyle Behaviors
4) Maternal & Infant Health
5) Diabetes & Obesity
6) Affordability, Access to Care, & Insurance Coverage Status
7) Mental Health & Addiction

Needs Northside Will Not Address

Unfortunately, Northside is not able to directly address all of the identified Community needs due to limited resources, the magnitude/severity of the issue, or the presence of existing resources already in place to address the need. The Community needs Northside will not address are:

Community Needs Northside Will Not Address
1) Respiratory Disease and Smoking
2) Transportation
3) HIV/AIDS
4) Affordable/Adequate Housing/Homelessness
5) Culturally Competent Services

Overview of Northside's Implementation Strategy

Northside intends to utilize myriad community benefit strategies to address the prioritized health needs including:

1) Financial assistance on behalf of uninsured, underinsured and low-income persons.
2) Community health improvement services, including:
    a. Community health education outreach
    b. Community-based clinical services for reduced cost or free
    c. Healthcare support services such as enrollment assistance for government-funded health programs.
3) Health professions education.
4) Subsidized health services.
5) Medical and healthcare research.
6) Cash and in-kind contributions to assist partner organizations in addressing community health needs.

Northside also intends to continue using the Community Benefit Steering Committee to oversee Northside's community benefit program activities to ensure that activities are reaching the most vulnerable populations, are using evidenced-based medicine interventions and to improve capture and reporting.

Introduction to the Northside Hospital System

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Part I: Introduction to Northside Hospital System

About Us

In 1970, Northside began its commitment to the health and wellness of the Atlanta community with the opening of Northside Hospital Atlanta; a 250-bed general acute care hospital located in North Atlanta with a network of 240 physicians. In 2019, the Northside Hospital System ("Northside") is now a not-for-profit healthcare system composed of three general acute care hospitals. The Northside System's 1,051 CON-authorized inpatient beds are supported by a network of nearly 2,900 on-staff physicians and more than 15,000 employees, who serve more than 3 million patient visits annually at more than 150 outpatient locations across Georgia (Northside Hospital, 2019).

Northside is committed to serving all patients regardless of their ability to pay, as evidenced by the $451M in uncompensated indigent and charity care provided by NHA, NHF, and NHC combined in 2017. This amount represented 8.3% of the hospital system's 2017 adjusted gross revenue.

Our Mission

Through all of the growth, Northside has remained steadfast and committed to its mission. Northside Hospital is committed to the health and wellness of our community. As such, we dedicate ourselves to being a center of excellence in providing high-quality healthcare. We pledge compassionate support, personal guidance and uncompromising standards to our patients in their journeys toward health of body and mind. To ensure innovative and unsurpassed care for our patients, we are dedicated to maintaining our position as regional leaders in select medical specialties. And to enhance the wellness of our community, we commit ourselves to providing a diverse array of educational and outreach programs.

Our Values

Northside's outstanding reputation in its industry is fueled by an instinctive devotion to a unique set of values. This statement of values defines and communicates those guiding, motivating philosophies that have led us to distinction:

- Excellence
- Compassion
- Community
- Service
- Teamwork
- Progress & Innovation

Northside Hospital Atlanta

Northside Hospital Atlanta opened in 1970 with 250-inpatient beds in a then sparsely populated area north of downtown Atlanta. Today, NHA is a 621-bed general acute care hospital serving as the System's tertiary-level care provider. NHA is a leading provider of obstetrical and newborn care, cancer care, surgical services, emergency services, and radiology services. NHA frequently delivers more babies than any other hospital in the country; diagnoses and treats the most new cancer cases in Georgia (and is among the top 5 programs in the U.S.); and has one of the largest surgical programs in Georgia.

Northside Hospital Forsyth

In 2002, Northside Hospital, Inc. acquired then Georgia Baptist Medical Center; a 41-bed community hospital located in Forsyth County, Georgia. Today the facility, now known as Northside Hospital Forsyth, is a 304-bed general acute care hospital located in Cumming, GA. As the only hospital located in Forsyth County, NHF provides critical access services such as emergency services, Level III Neonatal Intensive Care services, and therapeutic cardiac catheterization. Additionally, NHF provides other important hospital-based services like radiology, surgery, and cancer care. NHF also features state-of-the-art technology like the Gamma Knife, which is used to treat brain tumors with high precision, and a robust surgery program, performing more same-day joint replacements than any other Georgia hospital.

Northside Hospital Cherokee

In 1960, R.T. Jones Memorial Hospital was established by the Cherokee County Hospital Authority as a 64-bed general acute care hospital. In 1997, this hospital became known as Northside Hospital Cherokee. In May 2017, the new $280 million, Northside Hospital Cherokee opened in Canton, GA (Cherokee Tribune & Ledger-News, 2017). This new, state-of-the-art Cherokee hospital campus includes 126 inpatient beds, a Cancer Institute (providing infusion and radiation therapy services), and a distinct Women's Center (offering comprehensive perinatal services including neonatal intensive care services). As the only hospital in Cherokee County, NHC provides critical access services such as emergency services, neonatal intermediate care services and therapeutic cardiac catheterization as well. Additionally, NHC provides other important hospital-based services such as surgery, cancer care, and radiology.

CHNA Methodology

NORTHSIDE HOSPITAL

Part II: CHNA Methodology

Our Community Health Needs Assessment Process

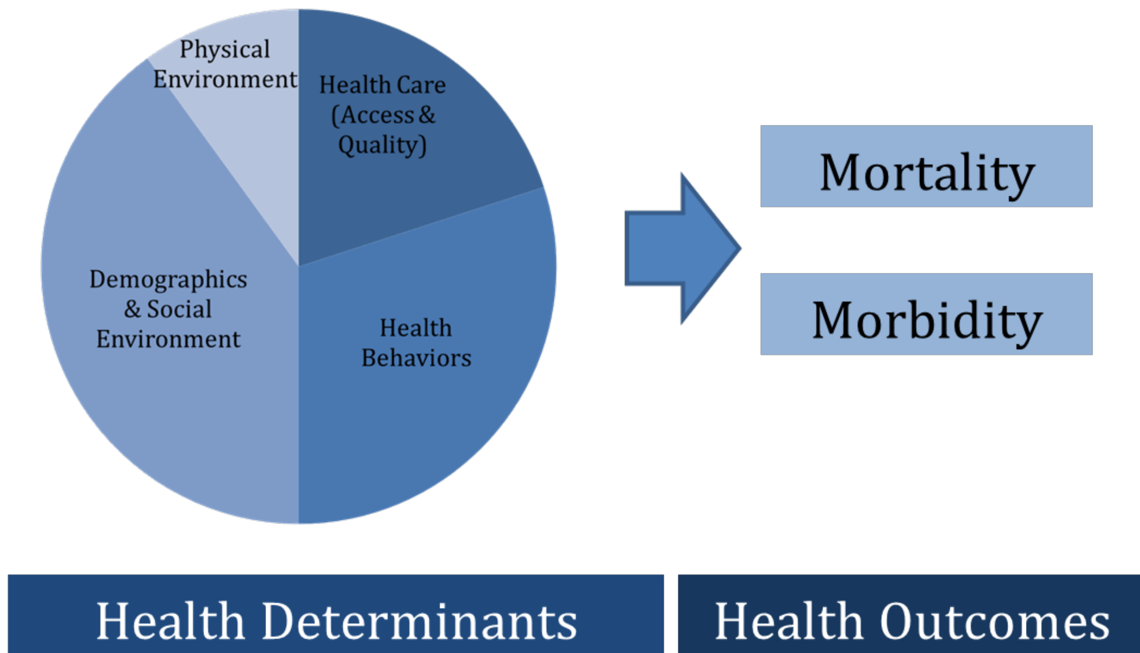
Northside developed a standardized process for conducting its Community Health Needs Assessment ("CHNA"). In short, Northside's CHNA process included:

1) Defining the Northside Community.
2) Reviewing Northside's internal data.
3) Reviewing publicly available health data.
4) Reviewing proprietary quantitative consumer research data.
5) Performing stakeholder interviews.
6) Summarizing and prioritizing the health needs identified within Northside's Community.
7) Developing an implementation plan to address the identified needs.
8) Presenting the finalized CHNA and Implementation Plan to the Board of Directors of Northside Hospital, Inc. for adoption.
9) Providing continued public access to Northside's CHNA via www.Northside.com/Community and providing an opportunity for public feedback via Northside.chna@northside.com.

Framework for CHNA

To perform its FY 2019 – FY 2021 CHNA, Northside utilized an evidence-based model of population health adapted from the Wisconsin Population Health Institute and also utilized by County Health Rankings and Roadmaps (County Health Rankings & Roadmaps, 2015). This model illustrates the complexity of assessing a community's health status by outlining the factors that act in combination to determine the current status of a community's health. The evidence-based model, illustrated in **Figure 1**, outlines the health determinants (demographics and social environment, healthcare access & quality, health behaviors, and the physical environment) that lead to the health outcomes in a community (morbidity and mortality).

Figure 1: Population Health Framework for Northside's FY 2019 – FY 2021 CHNA



Source: http://www.countyhealthrankings.org/our-approach

The Center for Disease Control and Prevention ("CDC") performed a systematic literature review to determine a common set of health metrics that should be used to measure both the health determinants and health outcomes presented in **Figure 1**. Northside used the CDC's list of "Most Frequently Recommended Health Metrics" to determine what variables to consider for Northside's FY 2019 – FY 2021 CHNA. Northside utilized the CDC's recommended variables and metrics when they were readily available at the county level (U.S. Centers for Disease Control and Prevention, 2013). The variables analyzed for Northside's FY 2019 – FY 2021 CHNA for each health determinant and outcome category are outlined in Table 1.

Table 1: Health Metrics for Northside's FY 2019 – FY 2021 CHNA	
Health Determinant	**Variables Considered**
Demographics & Social Environment	Total Population Population Growth Gender Age Race Ethnicity Foreign Born Language at Home Limited English Proficiency Urban/Rural Educational Attainment Employment Status Income Poverty Level Marital Status/Social Support Violence and Crime
Healthcare (Access & Quality)	Health Professional Shortage Areas and MUAs Federally Qualified Health Center Preventable Hospital Events Physician Access Dental Care Access Prenatal Care Access Health Insurance Coverage Hospitals and Number of Beds per 10,000 Healthcare Utilization Indigent and Charity Care
Health Behaviors	Preventive Health Behaviors Preventive Cancer Screenings Sexually Transmitted Infections Substance Use (Tobacco, Alcohol) Nutrition Physical Activity
Physical Environment	Housing Transportation Food Access Access to Recreational Facilities
Health Determinant	**Variables Considered**
Morbidity	Cancer Rates Chronic Conditions Health Status AIDS
Mortality	Leading Cause of Death Maternal/Infant Health Suicide Homicide

Our Community

NORTHSIDE HOSPITAL

Part III: Our Community

Defining Northside's Community Geographically

Northside defined the scope of its community, for the purposes of this CHNA, by using the following methodology for each hospital:

1) Defined the facility's (NHA, NHF, and NHC) primary patient catchment area based on a contiguous area that represented approximately 80% of each facility's inpatient and outpatient volume.
2) Determined where the medically underserved areas were in and around each facility's patient catchment area to ensure no medically underserved, low-income, or minority populations within or near the facility's catchment area were excluded.
3) Mapped each facility's distribution of outpatient locations across the region.

The results of defining each hospital's community separately revealed significant overlap in the communities served by each Northside Hospital facility. Given the geographic proximity of Northside's three hospitals, this result is not surprising. Thus, NHA, NHF and NHC developed a single community definition for the FY 2019 – FY 2021 CHNA. With a single community definition and in compliance with IRS Section 501(r) Final Rule, NHA, NHF and NHC conducted a joint CHNA on what will be referred to as the Community or the Northside Community for FY 2019 – FY 2021.

Northside Community Defined:
Cherokee, Cobb, Dawson, DeKalb, Forsyth, Fulton, Gwinnett, and Pickens Counties

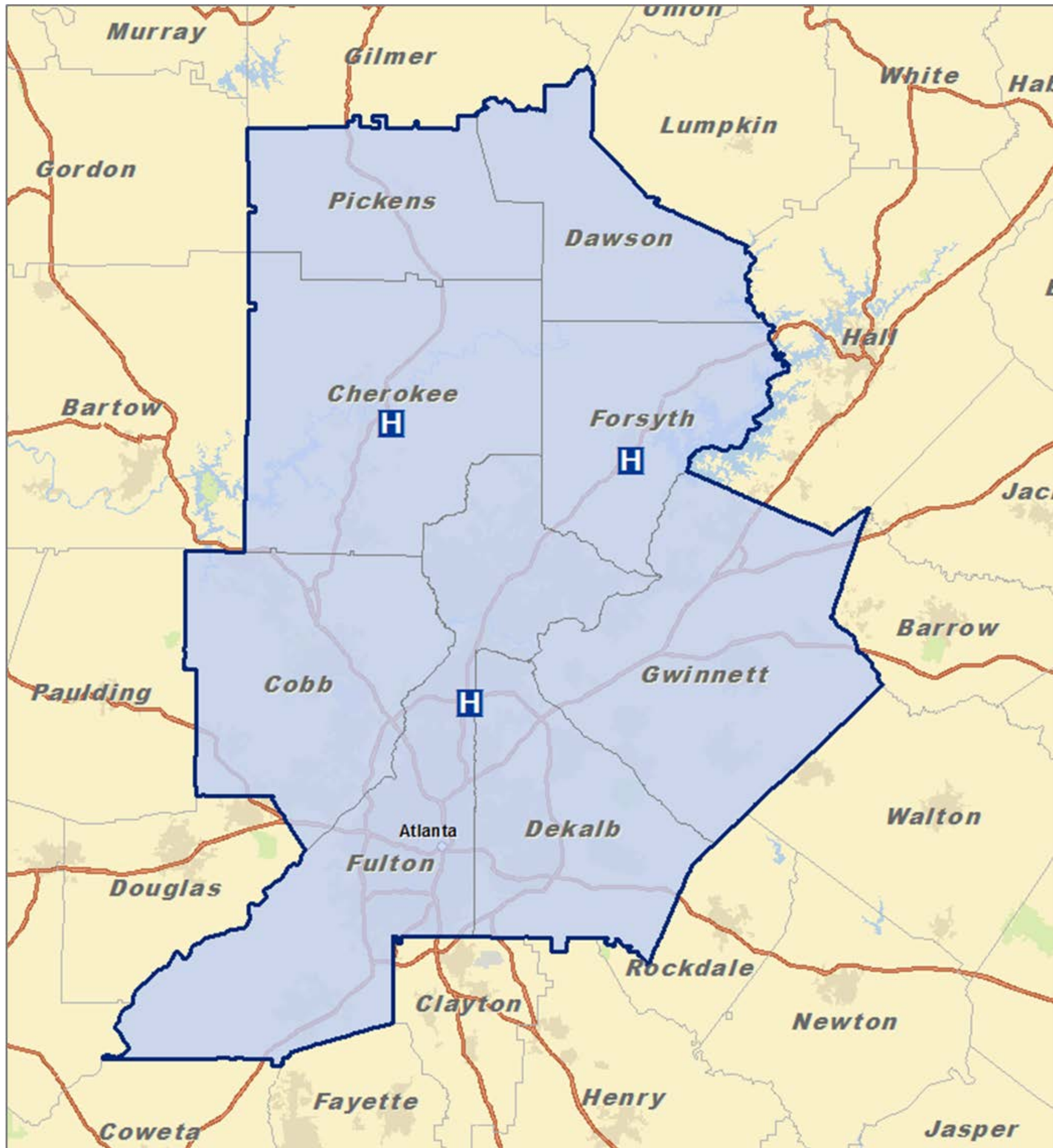
From CY 2015 to CY 2017, patients from the Northside Community represented 80% of the System's total patient volume, 78% of NHA's, 85% of NHF's and 90% of NHC's respective patient volumes. Dawson and Pickens Counties represented a much smaller portion of total Northside cases; however, both counties have limited access to other hospitals or healthcare facilities beyond NHF and NHC.

Table 1: Northside Patient Origin Within the Northside Community (CY '15 - CY '17)

County	% Total Northside Cases
Fulton	23%
Gwinnett	11%
DeKalb	11%
Forsyth	11%
Cherokee	10%
Cobb	10%
Dawson	2%
Pickens	1%
Total	**80%**

Still, Dawson County cases represent 7% of NHF's total patient volume and Pickens County cases represent 8% of NHC's total patient volume. Furthermore, NHA serves as an important tertiary hub for residents of these counties.

Figure 2: Northside's FY 2019 – FY 2021 CHNA Community Definition



Demographics of Northside's Community

Background and Overview

In 2017, the Northside Community represented over a third of Georgia's population while being slightly younger than and growing at a faster rate than Georgia's population overall. As will be illustrated throughout this report, populations within the Community counties varied greatly, ranging from 24,006 population to 1,022,768 in population. The Northside Community is also more racially and ethnically diverse than Georgia overall. For example, within the Community, there is a 71% chance that two people randomly chosen will belong to different racial or ethnic groups, compared to a 65% chance in Georgia overall (ESRI, 2017). Additionally, nearly half (48%) of Georgia's total Hispanic population lives within the Northside Community.

Population

In 2017, the estimated **3,947,006** residents of the Northside Community represented 38% of Georgia's total population. The county-level populations in Northside's Community, illustrated in **Figure 3**, vary greatly in size, with the four most populous counties, Fulton, Gwinnett, Cobb, and DeKalb, accounting for 87% of the Community's total population (ESRI, 2017).

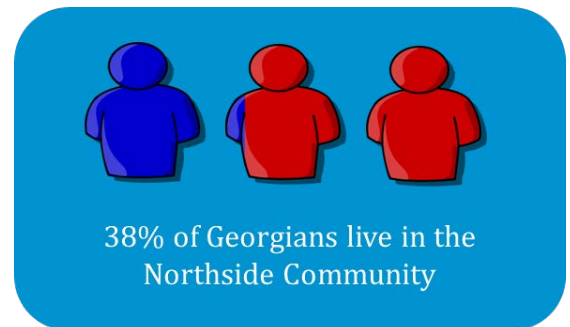
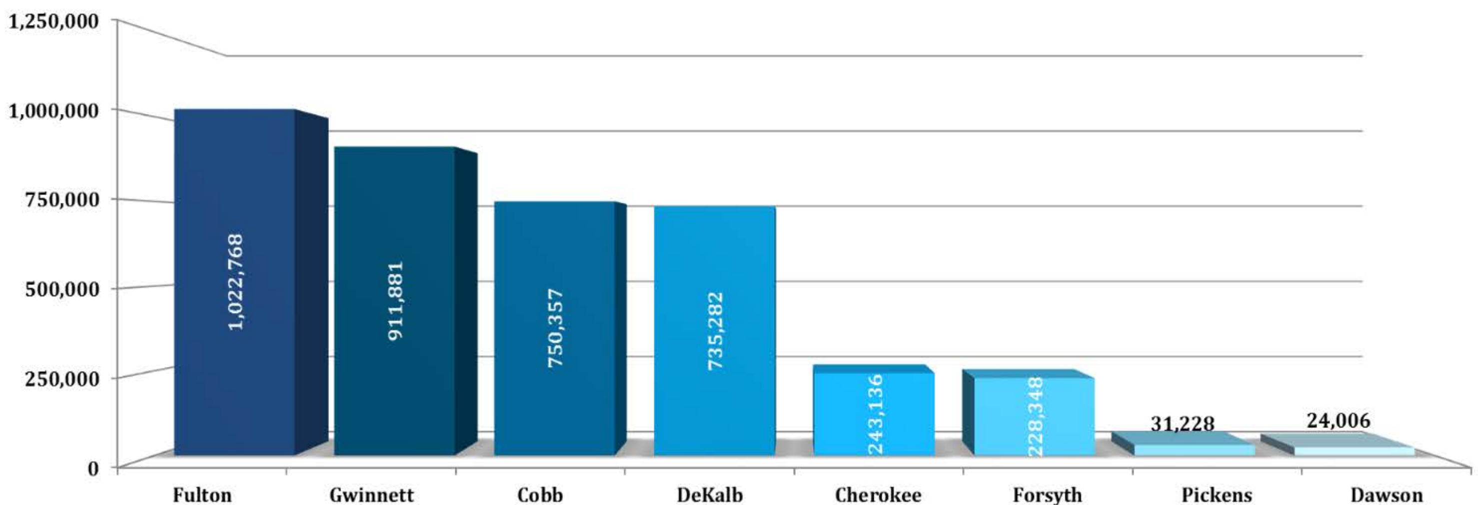


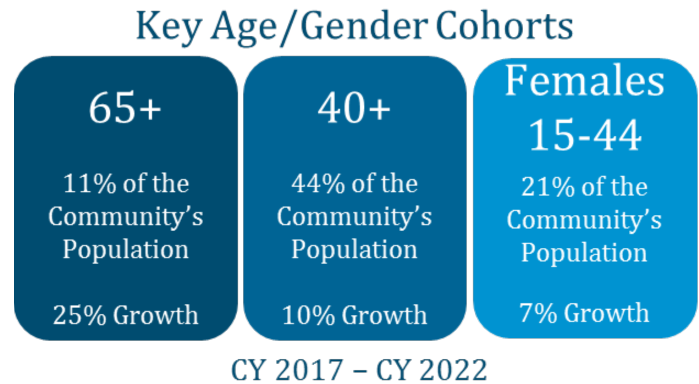
Figure 3: CY 2017 Northside Community Total Population by County



Source: ESRI, 2017

Population growth projections between 2017 and 2022 estimate an 8% population increase in the Northside Community compared to 5% in Georgia overall. Within the Northside Community, Forsyth County's population is projected to grow the fastest of all counties at 20% and DeKalb County the slowest at 5% (ESRI, 2017).

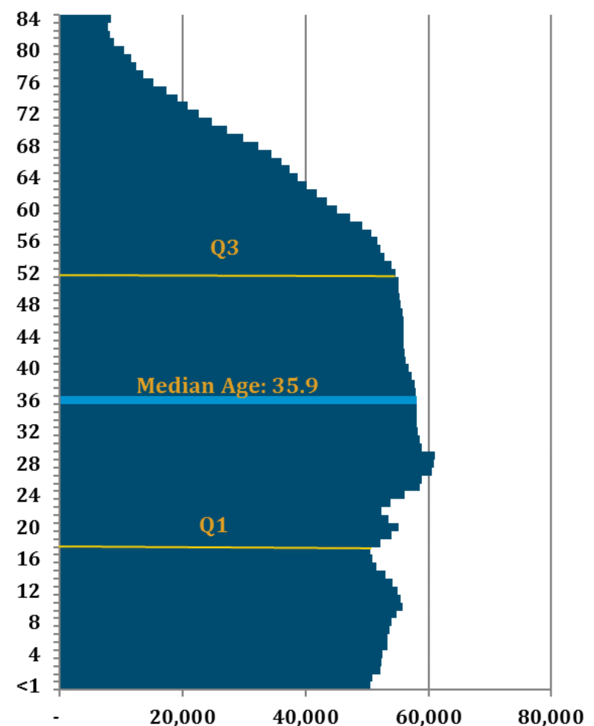
Age and Gender



Gender and age both play a part in understanding the type of preventive and medical services needed within a community. For example, the 65+ cohort typically utilizes healthcare services at a higher rate than the general population. Additionally, other age groups (e.g. 40+) have milestones like recommended preventive screenings, or they represent the target population of a key service (e.g. women ages 15-44 and obstetric services). Based on this knowledge, the age and gender patterns of the Community, along with certain key age/gender groups are highlighted in this section.

In 2017, the median age in the Northside Community was 35.9, slightly younger than Georgia's median age of 36.5. However, several counties within the service area were comprised of much older populations, most notably Dawson and Pickens Counties with median ages of 42.8 and 44.3, respectively. Just over 11% of the Community's population was aged 65 or older; within the Community, this cohort's size ranged from 9% in Gwinnett County to 20% in Pickens County. The 65 or older age cohort is projected to grow at a faster rate than any other age cohort in the Community with 25% projected growth between 2017 and 2022. As aforementioned, this cohort typically utilizes healthcare services at a higher rate than the general population, and is thus important to consider in health planning efforts.

Figure 4: CY 2017 Age Breakdown of the Northside Community



Note: The 85+ age cohort is not represented in the figure; however, this age cohort was taken into account for median and quartile calculations.
Source: Esri, 2017

As for the other key age cohorts, the 40+ cohort represented 44% of the population in 2017, while females ages 15-44 represented 21% of the community's population. These cohorts were projected to grow by 10% and 7%, respectively, between 2017 and 2022. It is noteworthy that the females ages 15-44 cohort was projected to grow at a rate nearly

identical to the total Northside Community (8%) over the same time period. In 2017, the Northside Community also was 51% female and 49% male, and each county in the Community reflected a similar 50/50 gender split.

Race and Ethnicity

It is essential that all Community members regardless of race and ethnicity have access to and receive quality healthcare. Despite this goal there are well-documented health disparities that exist along racial and ethnic lines in the United States, and the Northside Community is no different. It is important to understand the racial and ethnic make-up of the Northside Community in order to fully understand any health disparities that exist along racial and ethnic lines and properly tailor community benefit programs to the most appropriate populations within the Community.

In 2017, the Northside Community was predominately White (50%), with the Black population (34%) comprising the 2nd largest racial group. The remaining minority groups included, Asian (8%), other races (5%), two or more races (3%), Pacific Islander (<1%), and American Indian (<1%). Within the Northside Community, there was a probability of 71% that two population, randomly chosen, belong to different race or ethnic groups. This probability is known as the Diversity Index. The racial make-up of each county within the Community varied greatly and is displayed in **Table 3** (ESRI, 2017).

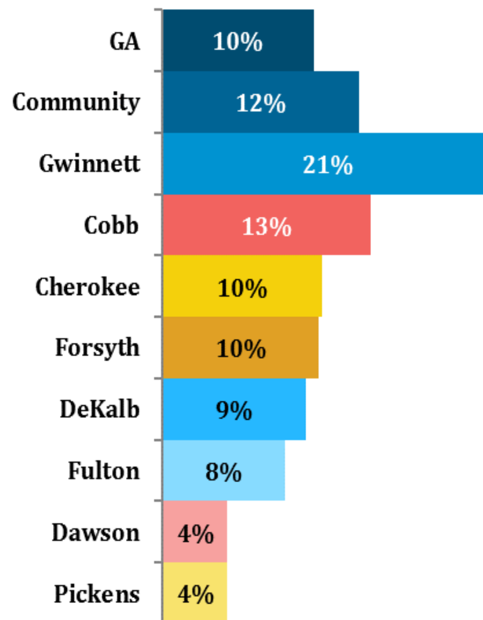
Table 3: Northside Community CY 2017 Total Population by Race

Variable	Gwinnett	Cobb	Fulton	DeKalb	Forsyth	Cherokee	Dawson	Pickens	Total
Diversity Index	79.0	68.2	67.2	66.6	49.1	41.7	17.4	17.3	70.9
White	47%	58%	43%	33%	78%	84%	95%	94%	**50%**
Black	28%	28%	44%	54%	4%	7%	1%	2%	**34%**
Asian	12%	5%	7%	6%	12%	2%	1%	0%	**8%**
Other Race	9%	6%	3%	4%	4%	4%	2%	2%	**5%**
Two or More Races	4%	3%	3%	3%	2%	3%	2%	2%	**3%**
American Indian	0%	0%	0%	0%	0%	0%	0%	0%	**0%**
Pacific Islander	0%	0%	0%	0%	0%	0%	0%	0%	**0%**

As illustrated through each county's diversity index, Gwinnett, Cobb, Fulton, and DeKalb Counties have the most racial/ethnic diversity within the Community. Pickens and Dawson Counties have relatively low diversity indices, with over 90% of their populations belonging to one racial group (ESRI, 2017).

In 2017, close to half (48%) of Georgia's total Hispanic population lived within the Northside Community and represented approximately 12% of the Community's population. The Hispanic population ranged from comprising 4% of the population in Pickens and Dawson Counties to 21% in Gwinnett County (ESRI, 2017).

Figure 5: CY 2017 Hispanic Population as a Percent of Total Population in Georgia and the Northside Community Counties



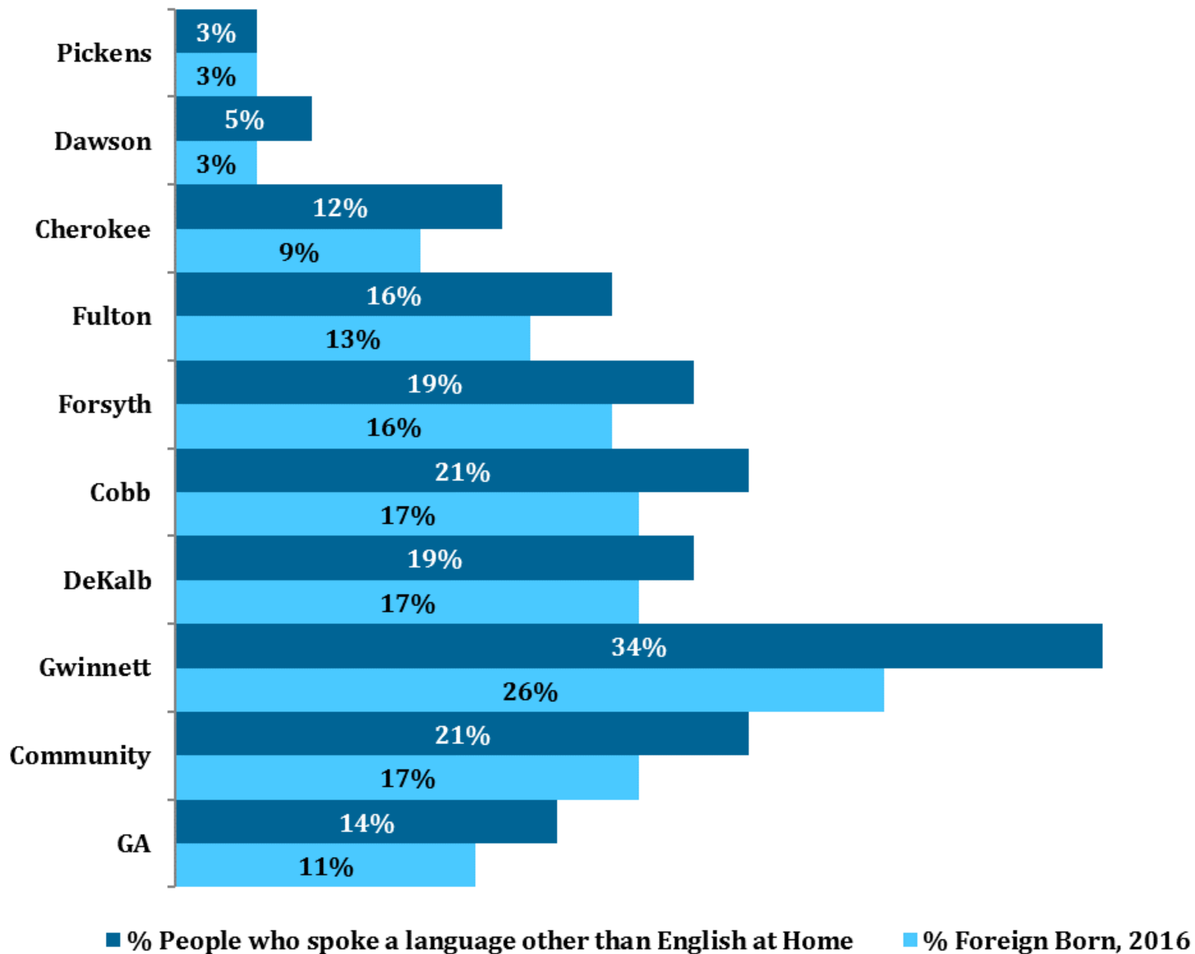
Source: ESRI, 2017

Foreign Born/Language at Home

Seventeen-percent (17%) of Northside's Community was foreign born based on the 2016 American Community Survey, compared to 11% in Georgia and 14% in the United States. This demonstrates not only the diversity of the Northside Community, but also the importance of culturally competent healthcare services for the Community's residents. Further demonstrating this point, in 2016, 21% of population within the Community spoke a language other than English within their home, compared to only 14% state-wide. This percentage varied greatly by county, as illustrated in **Figure 6** (U.S. Census Bureau, 2016).

Figure 6: CY 2016 Percent of Georgia and the Northside Community's Population that were Foreign Born and who Spoke a Language Other than English at Home

Source: US Census Bureau, The American Community Survey, 2016



Limited English proficiency can constitute a significant barrier to accessing healthcare for segments of the population. "Limited English proficiency" is defined by the American Community Survey as persons, aged 5 and older, who speak a language other than English at home and speak English less than "very well". Within Northside's Community, 9% of the population had limited English proficiency; this rate was higher than the rate of Georgia's population overall, 6%. Within the Community, 56% of those with limited English proficiency spoke Spanish, 22% an Asian or Pacific Island language, 15% a different Indo-European language, and 7% other languages. Gwinnett County had the highest rate of limited English proficiency with 15% of the population considered as such, followed by DeKalb County with 9%. Conversely, only 2% and 1% of Dawson and Pickens Counties' populations had limited English proficiency, respectively (U.S. Census Bureau, 2012-2016).

Urban/Rural

Urban and rural populations are classified based on differences in population density, count and size. Urban areas typically are much more developed than rural areas as well. Based on population, only 3% of the Community's population was considered to live in a rural setting. However, 80% and 73% of Dawson and Pickens Counties' population, respectively, lived in a rural area (US Census Bureau, 2010).

Socioeconomic Characteristics of Our Community

Background and Overview

Socioeconomic characteristics such as income, poverty level, and educational attainment were examined for this CHNA because of their known correlation/impact on the health status of a population.

Overall, the Northside Community's population had a high level of educational attainment and affluence compared to Georgia. This was illustrated through 44% of the population holding a Bachelor's Degree or higher, compared to 30% state-wide, as well as the Community's median disposable income, household income, household net-worth, and housing unit value all being higher than Georgia's. Unfortunately, this affluence does vary by county within the Community, with DeKalb having a high unemployment rate (7%) and Dawson and Pickens having similar educational attainment levels to Georgia rather than Community totals. Furthermore, there are significant disparities in poverty by race and ethnicity. Black, Native American, Hispanic, Native Hawaiian, and "Other" racial/ethnic groups all have poverty rates of 19% or higher in the Community, while the non-Hispanic White poverty rate in the Community sits at just 9%. Likewise, the Black population accounts for approximately 34% of the Community's population, but 47% of the Community's population in poverty.

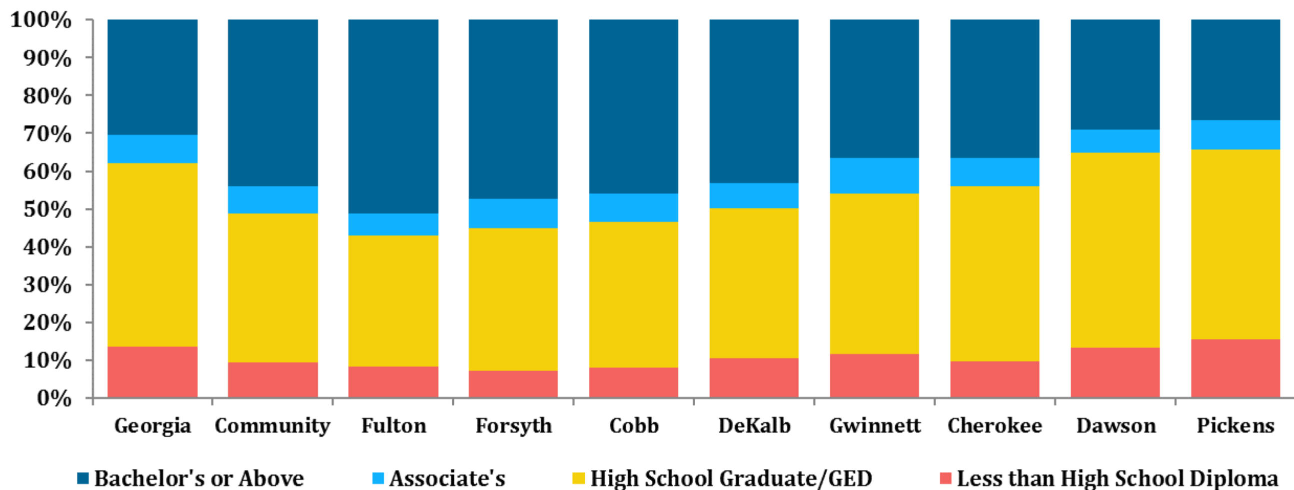
Educational Attainment

As more and more research has been conducted, evidence for the link between educational attainment (years/level of schooling) and living a longer, healthier life has become increasingly clear. Education can lead to better health as a result of a person having increased health knowledge and better health behaviors; improved employment and income prospects; and additional protective social/psychological factors (social standing, social networks, etc.) (Robert Wood Johnson Foundation, 2011).

In 2017, the Northside Community had a much higher level of educational attainment than Georgia overall as 44% of the population (aged 25 or older) had a Bachelor's Degree or above compared to only 30% state-wide. Fourteen percent (14%) of Georgians did not have their high-school diploma or GED, compared to only 10% of the Northside

Community. Although, 10% is better than the state's average, this still represented over 260,000 Community residents over the age of 25 who had not completed high-school. Several counties within the Community had high rates of low-educational attainment, with 13% of Dawson County adults having less than a high-school diploma, followed by Gwinnett County with 12%, and Pickens and DeKalb Counties, both with 11% (ESRI, 2017).

Figure 7: CY 2017 Highest Level of Educational Attainment of the Northside Community by County

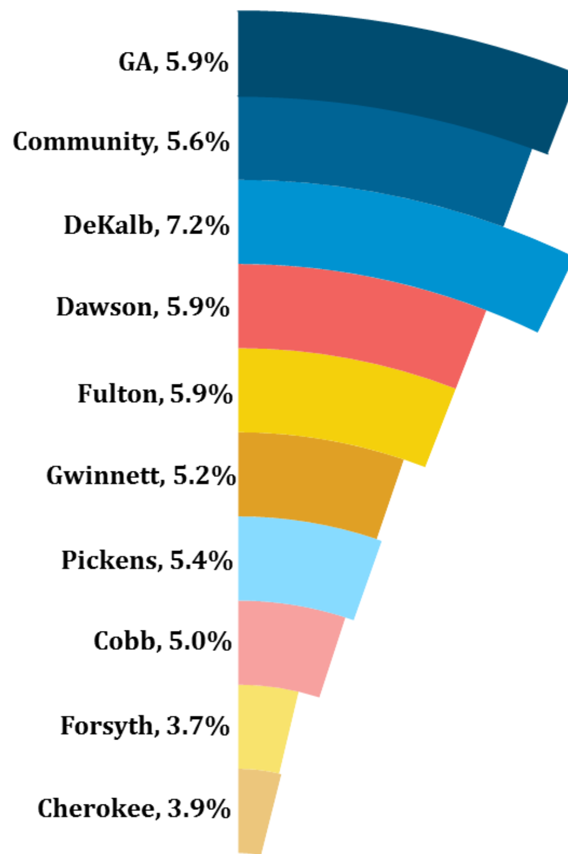


Source: ESRI, 2017

Employment

In the U.S., employment often implies a stable income and benefits (i.e., health insurance), both of which can lead to better health status. Furthermore, unemployment has been linked to poor health due to loss of health insurance, increased stress, unhealthy behaviors, and increased depression (Robert Wood Johnson Foundation, 2013). Northside's Community had a higher percentage of its population in the workforce than state-wide, with 53% compared to 49%. However, the unemployment rate within the Community closely mirrored Georgia's rate, 5.6% versus 5.9%, respectively. This is a marked improvement since 2015, when both the Community and Georgia had unemployment rates over 8%. Unemployment rates between the counties within the Community ranged from a low of approximately 4% in Cherokee and Forsyth Counties to a high of 7% in DeKalb County (ESRI, 2017).

Figure 8: CY 2017 Civilian Unemployment Rate in the Community by County



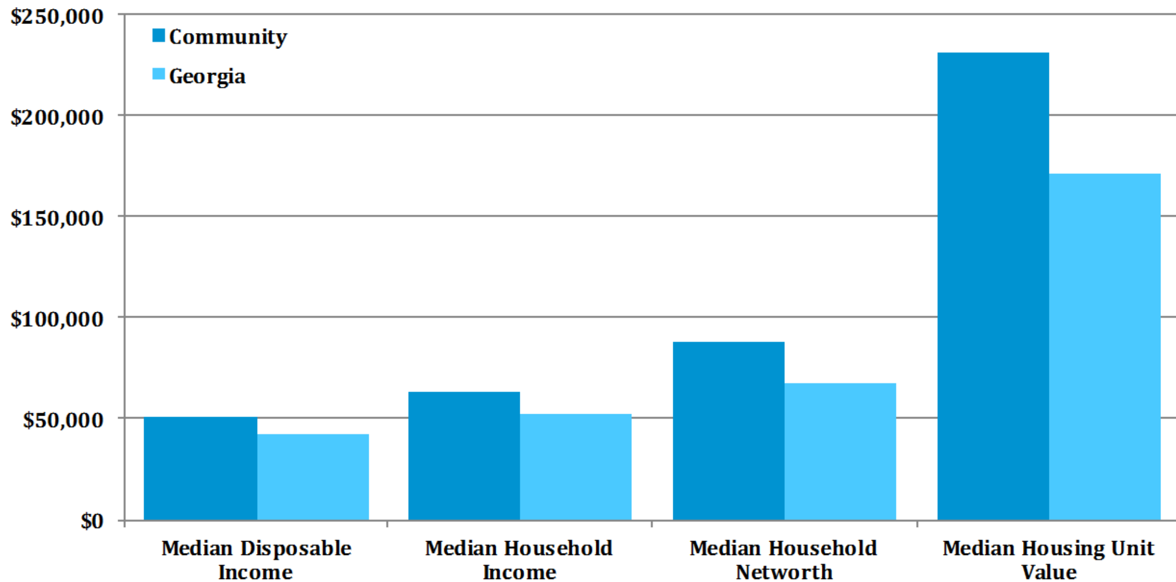
Source: ESRI, 2017

Financial Status

Many choices families make surrounding their housing, education, nutrition, medical care, and many other factors are based on household income. Public health research has illustrated that families in higher income brackets, on average, are healthier and will live longer than families in lower-income brackets because of the many barriers and stresses related to poverty (County Health Rankings & Roadmaps, 2015).

Based on the financial indicators analyzed for this CHNA, the Northside Community appeared relatively affluent compared to Georgia on most variables. An overview of the Community's financial status compared to Georgia is displayed in **Figure 9**.

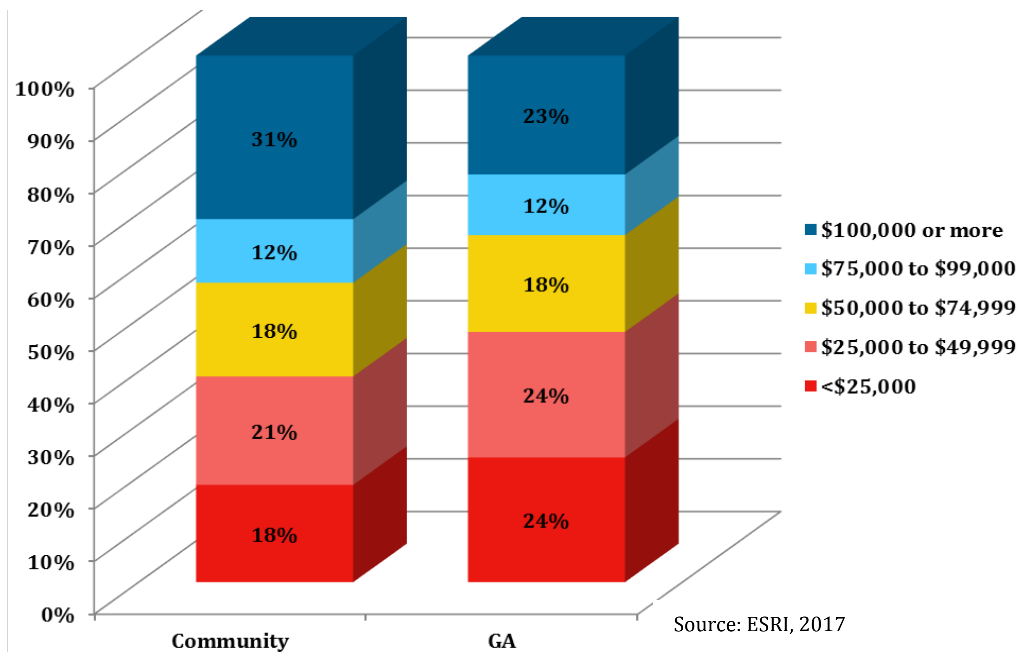
Figure 9: CY 2017 Comparison of the Northside Community to Georgia on Key Financial Indicators



Source: ESRI, 2017

On all income measures analyzed, the Community was better off financially compared to Georgia overall. Median household income for the Community was $63,062, approximately $10,000 more than Georgia's. Furthermore, the largest household income cohort in Northside's Community was households with incomes of $100,000 or more (31% of households), compared to the largest cohorts in Georgia, where households with incomes less than $25,000 and households with incomes between $25,000 and $49,999 are tied with 24% of households (ESRI, 2017).

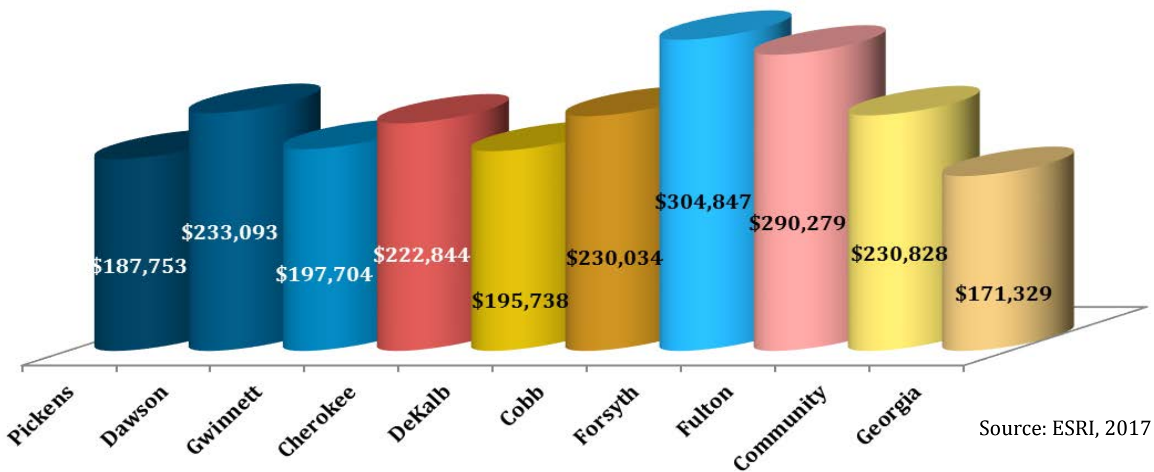
Figure 10: CY 2017 Comparison of the Percent of Households in each Income Bracket between the Northside Community and GA



Source: ESRI, 2017

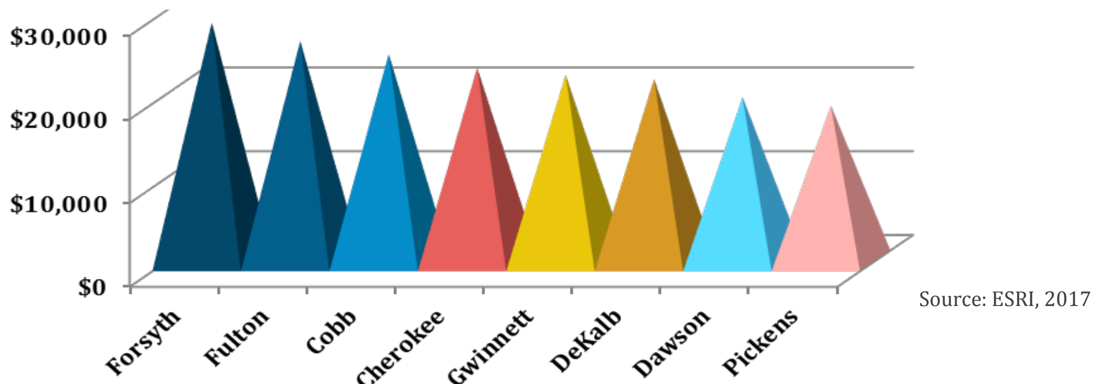
An additional measure to estimate the purchasing power of the Community is through a measure of household disposable income (after tax-income). The median household disposable income within the Community was $51,481 compared to the State's median of $42,339. Within the Community, Pickens County had the lowest median disposable income at $43,242. Forsyth County had the highest level of disposable income with a median of $69,028, over $25,000 more than the state median (ESRI, 2017). The average housing unit value followed a comparable trend to the other financial indicators, with the Community's median household value estimated to be $230,828 compared to Georgia's median of $171,329. The Community's high percentage of college degree holders versus Georgia's may explain why many of the Community's financial indicators exceed state-wide rates (ESRI, 2017).

Figure 11: CY 2017 Median Housing Unit Value in the Community by County



High housing-unit values illustrate affluence in the Northside Community; however, they were also linked to a high cost of living within the area. Community members, on average, spend approximately 13% more than the national average on housing costs; compared to Georgians that spend about 9% less per year than the national average. The average amount spent per year on housing per County is displayed in **Figure 12** (ESRI, 2017).

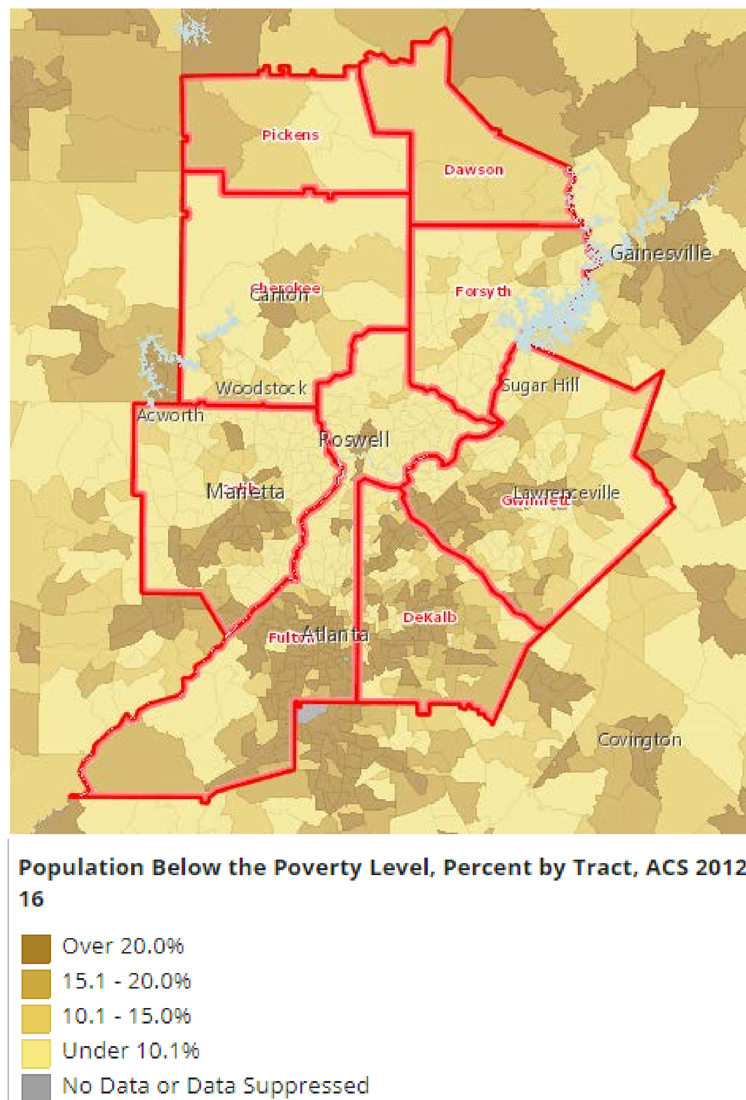
Figure 12: CY 2017 Average Spending on Annual Housing Costs within the Northside Community by County



Poverty

The United States Census Bureau defines poverty based on a set of income thresholds that vary based on family size and composition (age of family members). Overall, the Northside Community had a smaller portion of its population below 100% the federal poverty level (FPL) than Georgia, 14% compared to 18%. However, 14% of the Northside Community represented nearly 400,000 population, illustrating that poverty does still exist within the Community at a significant rate. Furthermore, within the Northside Community poverty varied greatly county-to-county. Forsyth County had the lowest poverty level within the Community at 6%, compared to the counties with the highest poverty levels, DeKalb (19%) and Fulton (17%) (U.S. Census Bureau, 2012-2016).

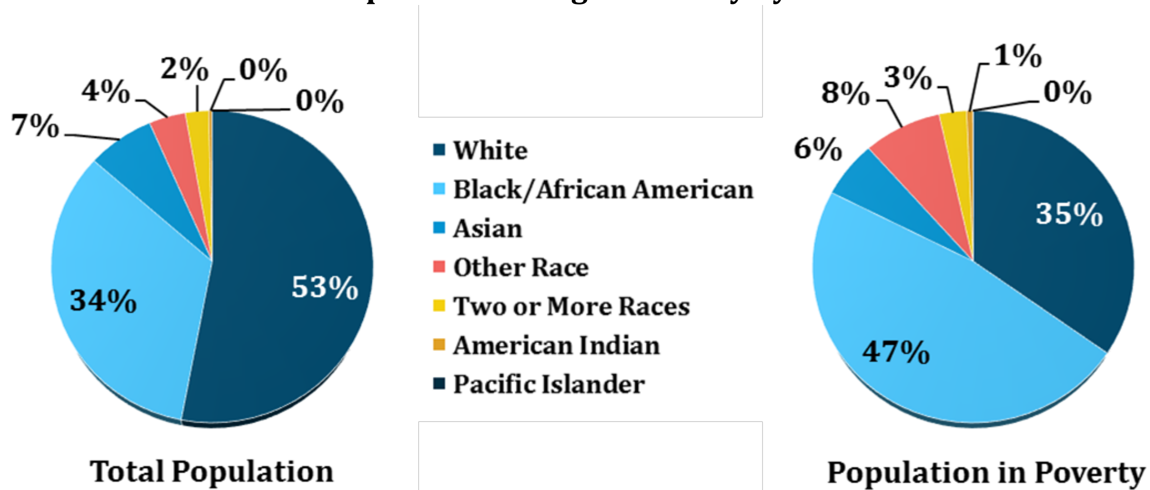
Figure 13: Rates of Poverty within the Northside Community
American Community Survey CY 2012 – 2016



Source: US Census Bureau, The American Community Survey, 2012-2016 5-year Estimates

Throughout the Community and Georgia, clear disparities in poverty rates by race and ethnicity exist. Within the Northside Community, the overall poverty rate was 14%; however, among Blacks (the largest minority group) the rate was 19% compared to 9% for Whites. Similarly, the poverty rate among Hispanics was 25% compared to 12% for non-Hispanics (U.S. Census Bureau, 2012-2016). These disparities are further illustrated in **Figure 14**, which compares the Community's total population by race to the Community's population in poverty by race. Although the Black population only makes up 34% of the Community's total population, they represent 47% of the Community's population in poverty (U.S. Census Bureau, 2012-2016).

Figure 14: Total Community Population by Race Compared to Total Community Population Living in Poverty by Race



Source: US Census Bureau, The American Community Survey, 2012-2016 5-year Estimates

Marital Status/Social Support

A growing body of research has illustrated that social and emotional support systems have a positive effect on health. Public Health studies have found that social support is linked to decreased risks of mortality, improved health behavior, and hospital re-admittance and recovery (Reblin & Uchino, 2008). In 2017, within the Northside Community, 48% of the population (15 and older) was married, 37% had never been married, 10% was divorced, and 4% was widowed (ESRI, 2017). To further analyze the Community's social support systems, the percentage of adults who self-reported on the CDC's Behavioral Risk Factor Surveillance System survey that they do not have adequate social/emotional support was analyzed. Nineteen percent (19%) of the Community's population indicated they did not have ample support, compared to 21% in Georgia and the U.S. Cherokee County had the highest level of adults who self-reported adequate social/emotional support (86%) and DeKalb County the least (78%). No information was available for Dawson and Pickens Counties on this measure (U.S. Census Bureau, 2012-2016).

Violence and Crime

The fear of crime adversely impacts both the physical and mental health of Community members through increased stress levels, restricted movement, and restricted amount of time spent outside of the home. These factors can then lead to limited social ties, limited time spent outdoors pursing physical activity and can produce unwanted stress on the nervous and immune system (Stafford, Chandola, & Marmot, 2007). Violent crimes include homicide, rape, robbery, and aggravated assault. Northside's Community had a much lower rate of violent crimes per 100,000 population (187) than Georgia (357) or the United States (383). Within the Community, however, violent crime rates ranged widely. DeKalb County had the highest rate of violent crime at 433 incidents per 100,000 population, while Cherokee, Forsyth and Fulton Counties all had rates below 100 incidents per 100,000 population. (FBI, 2017).

Healthcare Access and Quality

Background and Overview

Several variables determine whether healthcare is easily accessible to a community, including the availability of health insurance, local healthcare options and the ability to obtain a regular source of care. When populations do not have proper access to healthcare resources their preventive care, dental care, mental health, and chronic disease management needs are usually the first to suffer. Without proper management of health through preventive and routine care, emergency and inpatient services are often used at a higher rate and patients are first seen at a more advanced stage of their disease (County Health Rankings & Roadmaps, 2015).

Within the Northside Community, healthcare access is a significant issue. The Community has several geographic areas and populations that have been identified by the U.S. Department of Health & Human Services as Medically Underserved Areas ("MUAs") and Medically Underserved Populations ("MUPs"). The Community's MUAs are located largely in the northern portion of the Community (except for a portion of central Fulton County). This includes portions of Cherokee, and all of Pickens, Dawson and Forsyth Counties. Conversely, the Community's MUPs are concentrated in the southern portion of the Community, including portions of Cobb, DeKalb, Fulton, and Gwinnett Counties. These vulnerable populations often receive healthcare services from Federally Qualified Health Centers ("FQHC"); however, the Community is underserved by federally qualified health centers compared to Georgia overall. Utilization of general/family practitioners within the Community was approximately 4% less than the national average. Cobb, DeKalb, Fulton, and Gwinnett Counties had both a low general/family practitioner use rate *and* a low ratio of primary care physicians to population compared to Georgia overall. This highlights the critical access barriers that the Community's MUPs face.

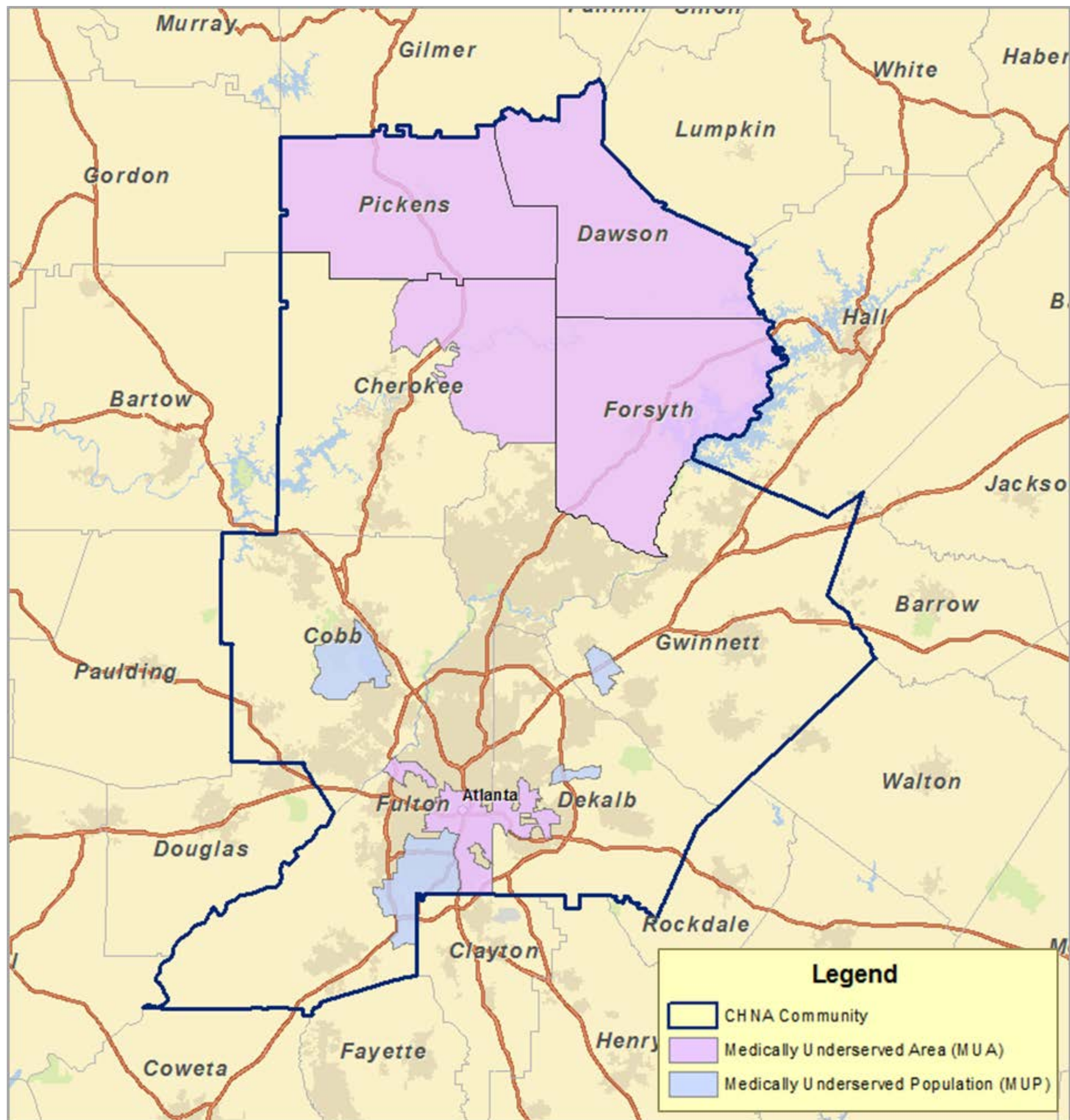
Contributing to access difficulties, the Northside Community, like Georgia, has a large uninsured population compared to the United States and spends approximately 7% more than the national average on health insurance. Within the Community, minority ethnic and racial groups have much higher uninsured rates than non-Hispanic whites. Furthermore, the multi-racial and Black-racial groups had the highest use rates for inpatient hospitalizations and emergency room use, while the White and Asian racial groups had the lowest. High rates of inpatient and emergency room utilization point to a problem in obtaining the proper primary and preventive care services. Use of emergency room services was higher among lower-income Community members when compared to higher-income Community members, illustrating an access barrier based on finances. This same pattern occurred when comparing the uninsured and Medicaid populations to managed care and fee-for-service populations.

As a result of many of these accessibility needs, the hospitals located in the Community contributed a combined $2.7 billion in indigent and charity care to Community members, with Northside Hospital Atlanta providing the third largest amount of $277 million.

MUAs/MUPs and Federally Qualified Health Centers

To highlight areas with low access to healthcare resources, Northside examined the location of Medically Underserved Areas (MUAs) and Populations (MUPs), along with locations of Federally Qualified Health Centers. According to the U.S. Department of Health Resources and Services Administration, MUAs may be a whole county or a group of contiguous counties, a group of county or civil divisions or a group of urban census tracts in which residents have a shortage of primary care providers, high infant mortality, high poverty or a high elderly population (Health Resources and Services Administration, 2016). MUPs are similar to MUAs; however, instead of pertaining to the entire geographic area, MUPs are specific to a population group within the area. MUPs are usually limited to population groups with economic barriers, or cultural and/or linguistic access barriers to primary medical care services. The location of MUAs and MUPs within the Northside Community are illustrated in **Figure 16** (U.S. Department of Health & Human Services, Health Resources and Services Administration, 2016).

Figure 16: Location of MUAs and MUPs within the Northside Community

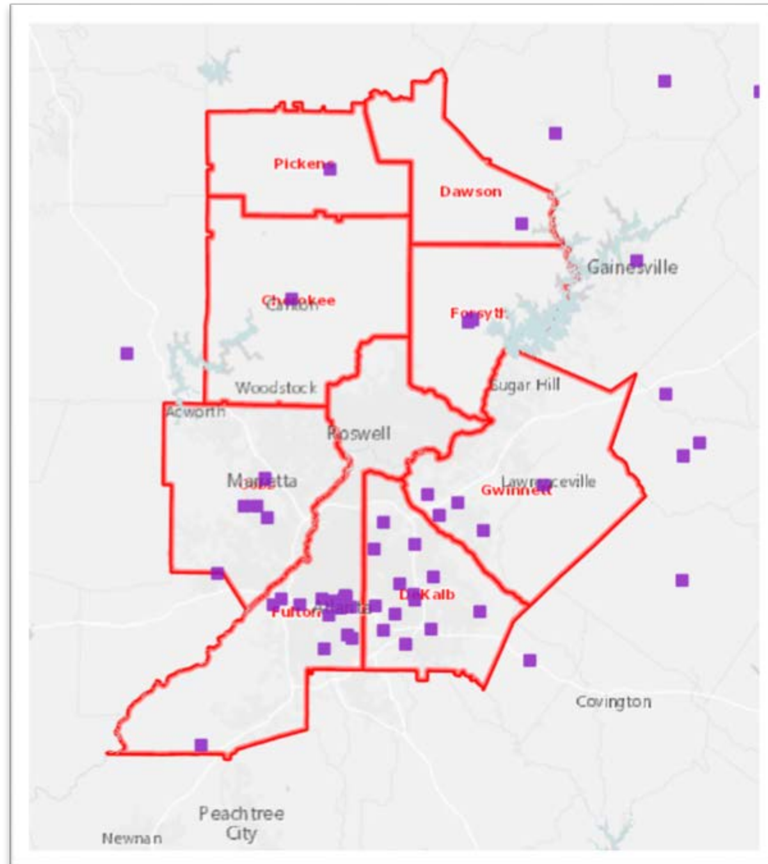


Source: U.S. Department of Health & Human Services, HRSA Data Warehouse, MUA Finder, 2017; ESRI 2017

Federally Qualified Health Centers include organizations that serve an underserved population or area by offering services on a sliding fee scale, providing comprehensive services, and ensuring the delivery of high quality services. FQHCs are assets to the community because of the care they provide disparate/vulnerable populations (Health Resources and Services Administration, 2016). Within the Northside Community there were 48 FQHCs in 2018; which equates to approximately 1.35 FQHCs per 100,000 population. This rate is significantly lower than Georgia's overall rate of 2.37 FQHCs and the U.S. rate of 2.67 FQHCs per 100,000 population. The rate of FQHCs varied across the Community's counties from 0 per 100,000 population in Pickens County to 4.48 per

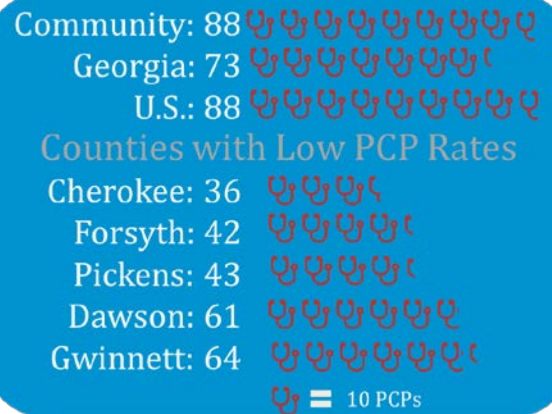
100,000 population in Dawson County. The locations of the FQHCs are shown in **Figure 17** (US Department of Health & Human Services, Center for Medicare & Medicaid Services, 2014).

Figure 17: Location of FQHCs within the Northside Community, CY 2018



Source: US Department of Health & Human Services, Center for Medicare & Medicaid Services, *Federally Qualified Health Centers,* Accessed through communitycommons.org, 2018

Physician Access and Utilization – Primary Care

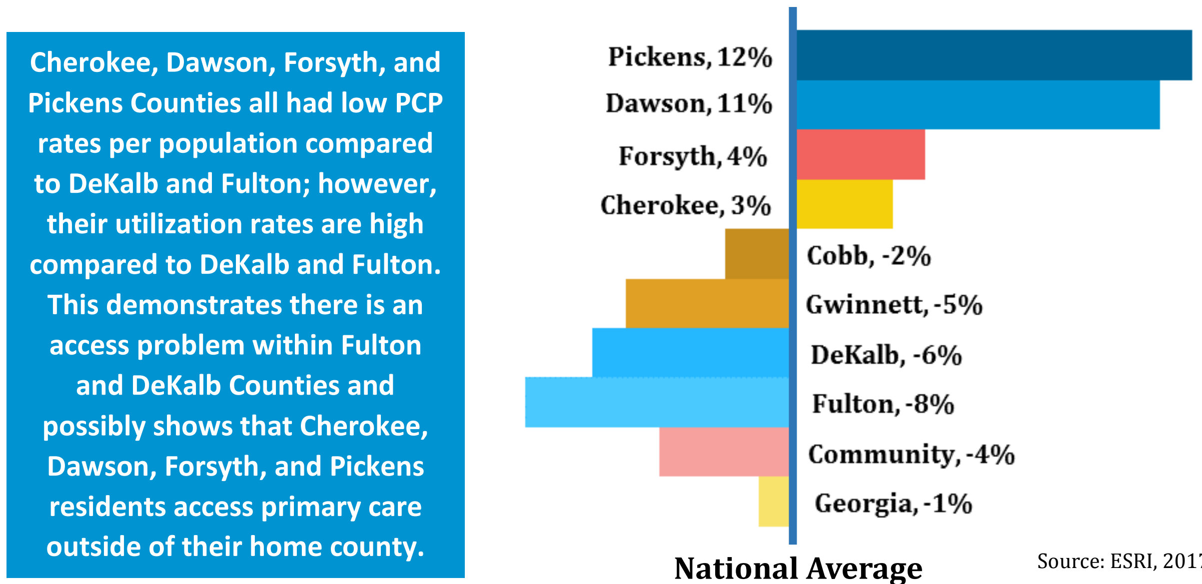


Access to a Primary Care Physician ("PCP") is an important step in maintaining good health. There are many reasons that a person may or may not have a regular PCP, including economics, transportation, or geographic access. Geographic access can, in part, be measured by the rate of PCPs within the population. The Northside Community had approximately 88 PCPs per 100,000 population based on 2014 estimates. This rate was higher than the Georgia rate of 73 and equivalent to the U.S. rate. However, a few counties within the Community had much lower rates of physician access, including Cherokee, Forsyth, Pickens, Dawson, and Gwinnett Counties with 36, 42, 43, 61, and 64 PCPs per 100,000 population, respectively. All of these rates were lower than the state-wide rate. When considering these numbers, it is important to remember these rates were calculated at the county-level, and that even within counties where there appears to be a significant number of PCPs (example: DeKalb County with 118.8 per 100,000 population), there could be pockets within the county where there is low access, especially where there are MUAs/MUPs (US Department of Health & Human Services, 2014).

To understand if access translates to utilization, the ESRI 2017 Market Potential Index was used to compare the Community and Georgia to national averages for the percent of the population to visit a general or family practitioner within the year. Members of the Northside Community visited a general/family doctor approximately 4% less than the national average. As previously discussed, despite some counties within the Community having high rates of PCPs for their overall population, the percent of the population who visited a general/family practitioner did not always align with PCP rates. Each county's utilization of these services compared to the national average is displayed in **Figure 18**. Cobb, Gwinnett, DeKalb, and Fulton Counties utilized general/family practitioners less than the national average and were also the counties in the Community with the highest rates of uninsured population, illustrated in **Figure 23** (US Census Bureau, 2016; ESRI, 2017).

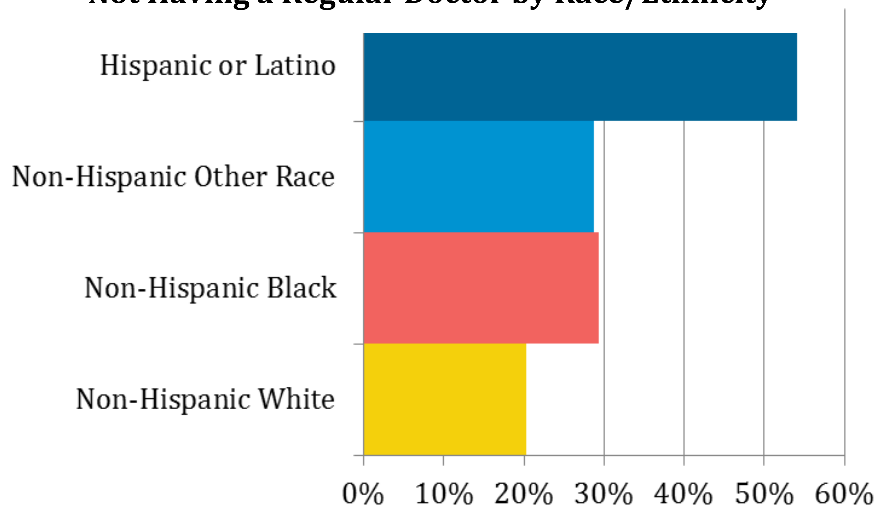
Figure 18: Percent of Population in the CHNA Community who visited a General/Family Practitioner in 2017 Compared to the National Average

(Figure illustrates the county's percent use above/below national use rate)



Persons without access to primary care physicians are more likely to have major health issues that could have been caught at an earlier stage and are more likely to use the emergency department. County level data was not available that stratified access to a consistent source of primary care by race; however, the data was available at the state-level and may broadly represent the Northside Community. Within Georgia, 54% of Hispanics indicated they do not have a consistent source of primary care. Considering 48% of Georgia's Hispanic population is within the Northside Community, this disparity is most likely present within the Community as well as Georgia (Center for Disease Control and Prevention, 2011-2012).

Figure 19: Percent of Adults in Georgia Who Reported Not Having a Regular Doctor by Race/Ethnicity



Source: Center for Disease Control and Prevention, "Behavioral Risk Factor Surveillance System," 2011-2012, Accessed through CHNA.org

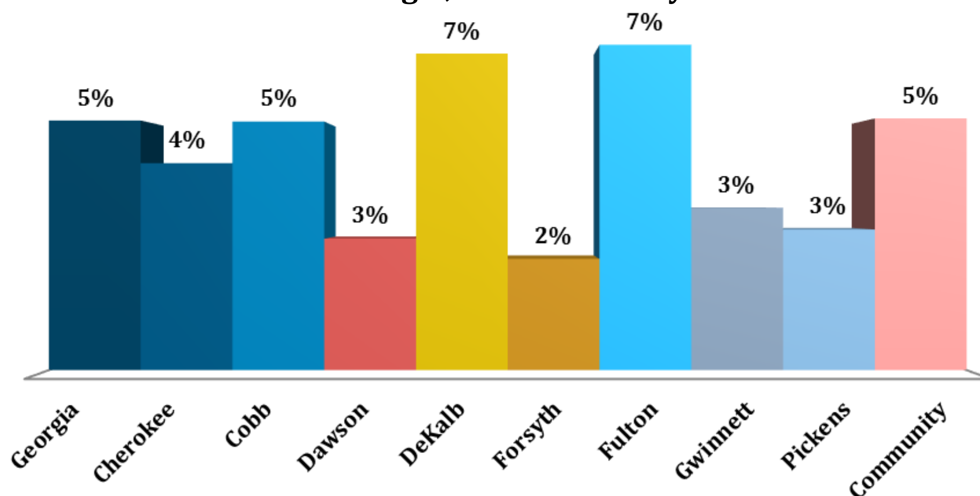
Dental Care: Access and Utilization

Dental health is closely associated with overall health. Certain oral conditions can exacerbate other chronic conditions, while certain chronic conditions also worsen many oral health conditions. Based on 2015 data, within the Community, there were 60 dentists per 100,000 population. The Northside Community had a higher density of dentists than Georgia overall, 49 per 100,000 population, but less than the United States, 66 per 100,000 population. Pickens, Forsyth and Dawson Counties all had dentist densities below the Georgia average, while Cherokee's was nearly equivalent to the Georgia average (US Department of Health & Human Services, 2013). Additionally, approximately one quarter of the Community's adults had not visited a dentist, hygienist or dental clinic in the past year. This rate was similar across all counties in the Community, peaking at 29% in Pickens County. The Community and all counties in the Community had better rates of dental care utilization than Georgia and the U.S, with 29% and 30%, respectively, of adults not receiving dental exams within the year (Center for Disease Control and Prevention, 2006-2010).

Access to Prenatal Care

Prenatal care is a key component to maternal and infant health. Regular prenatal care is associated with reduced risk of pregnancy complications and complications during infancy by ensuring the mother is following a healthy and safe diet, controlling existing medical conditions, reducing or eliminating harmful substance use during pregnancy, and monitoring for more serious complications (National Institutes of Health, 2013). Within the Northside Community, 5% of mothers received late or no prenatal care, the equivalent of 2,671 mothers. Rates varied by county, from a high of 7% of mothers having received late or no prenatal care in DeKalb and Fulton Counties to a low of 2% in Forsyth County (Georgia Department of Public Health, 2017).

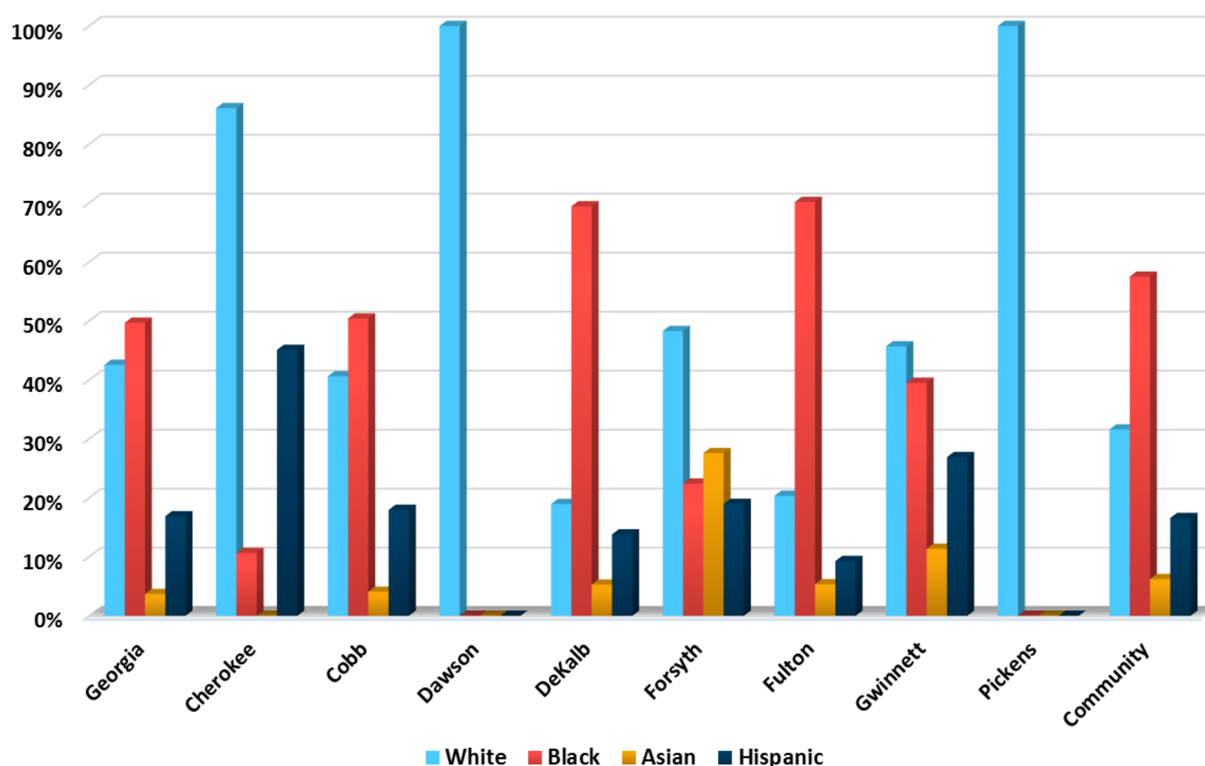
Figure 20: Percent of Total Births to Mothers with Late or No Prenatal Care in Georgia, the Community and its Counties



Source: Georgia Department of Public Health, Online Analytical Statistical Information System, 2017

Rates of late or no prenatal care also differed along racial and ethnic lines. In both Georgia and the Community, black mothers accounted for 50% or more of births with late or no prenatal care. Additional variables related to maternal and infant health are discussed in the Health Outcomes section of this CHNA.

Figure 21: Percent of Total Births to Mothers with Late or No Prenatal Care in Georgia compared to the Community and its Counties by Race/Ethnicity



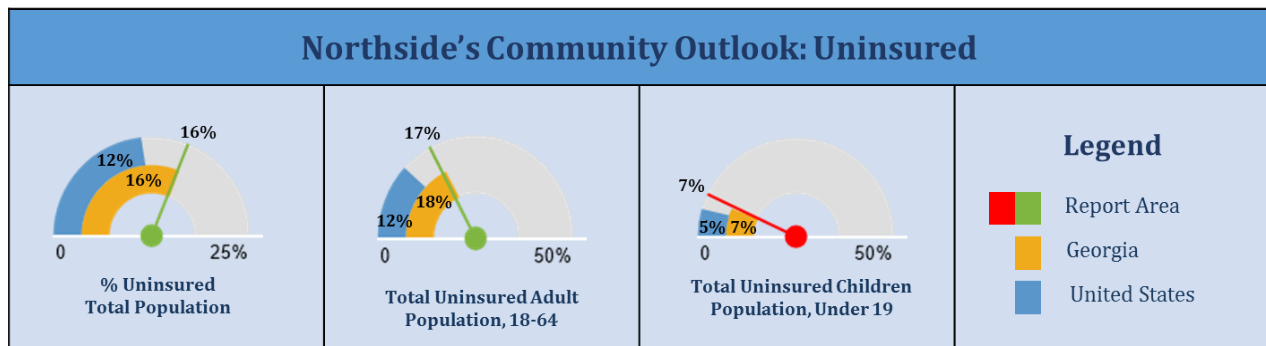
Source: Georgia Department of Public Health, Online Analytical Statistical Information System, 2017

Preventable Hospital Events

One indicator that illustrates if sufficient primary care resources are available and accessible to community members is the number of preventable hospital events that occurred among residents. The conditions considered to be preventable include hospital admissions for pneumonia, dehydration, asthma, diabetes, and other similar conditions, because with access to proper primary care they would not have resulted in a hospital stay. The Northside Community had a preventable hospital discharge rate of 45 per 1,000 Medicare enrollees. This rate was slightly lower than the Georgia rate of 52 and the U.S. rate of 50. Cherokee, Cobb and Dawson Counties had the highest preventable hospital discharge rates of the Community's counties at 56, 52, and 60 per 1,000 Medicare enrollees (Dartmouth College Institute for Health Policy & Clinical Practice, 2014).

Health Insurance Coverage

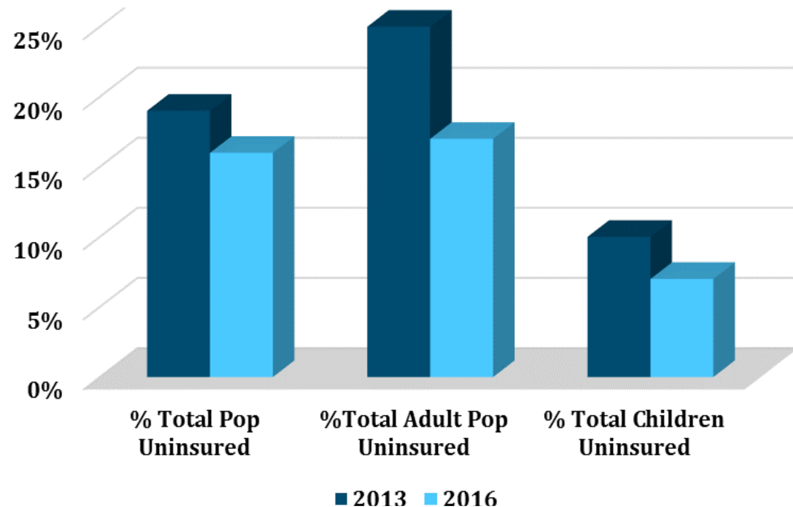
In terms of access to healthcare, having no health insurance is a large barrier to medical care. Persons who are uninsured are less likely to seek out or receive preventive care, are more likely to be admitted to the hospital for preventable conditions, and are also more likely to die in the hospital compared to the insured (Majerol, 2014). Pathways to health insurance in the United States generally vary by age; the elderly in the United States are nearly all covered through Medicare and populations under 65 usually receive health insurance as a benefit through their job, a family member's job, or through an exchange-based plan offered on the federally run healthinsurance.org. Additional programs, designed to help the low-income populations, include Medicaid (limited) and Peachcare for Kids. The uninsured rate within the Community was similar to Georgia overall. Georgia and the Community had higher rates of uninsured than the United States overall for all three populations analyzed (total population, adults 18-64, and children).



Source: US Census Bureau, American Community Survey, 2012-16, Accessed via CHNA.Org.

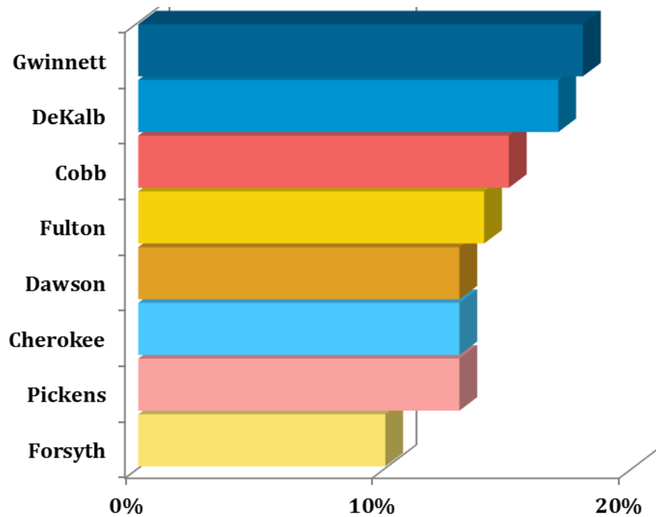
These uninsured rates show a marked improvement from 2013, when 19% of the Community was uninsured, 25% of Community adults were uninsured, and 10% of Community children were uninsured.

Figure 22: Northside Community's Uninsured Rates for Total Population, Total Adult Population, and Total Child Population, CY 2013 and CY 2016



Source: US Census Bureau, American Community Survey, 2012-16, Accessed via CHNA.Org.

Figure 23: CY 2016 Percent of Civilian Non-Institutionalized Population without Health Insurance by Northside Community County

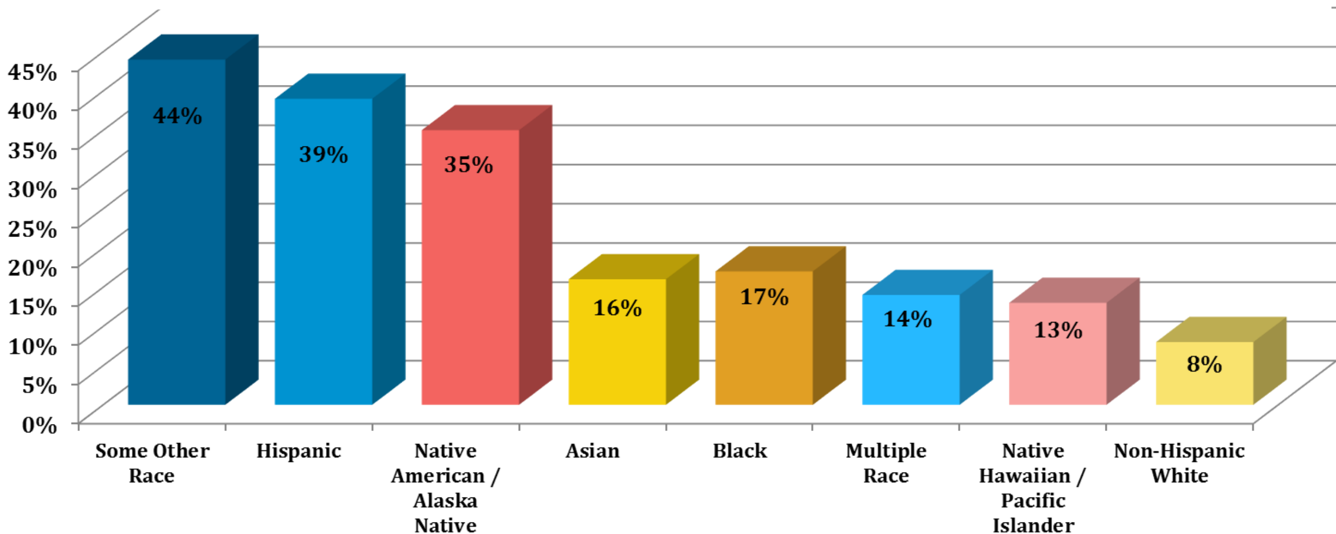


Gwinnett and DeKalb Counties had the highest rates of uninsured populations with 18% and 17%, respectively; the Community's top performing counties, Forsyth and Pickens, had uninsured rates close to or below the national average (12%) with 10% and 13% uninsured, respectively. When isolating these totals by age group, the adult population (aged 18-64) had an uninsured rate of 17% in the Community and children (aged under 19) had an uninsured rate of 7% (US Census Bureau, 2016).

Source: US Census Bureau, The American Community Survey, 2012-2016 5-year Estimates, Accessed via CHNA.org

Health insurance rates varied greatly by race and ethnicity within the Northside Community. This disparity was largest within the "some other race" and Hispanic groups, as illustrated in **Figure 24**. The Community's total population had an uninsured rate of 16%; however, only 8% of non-Hispanic Whites were uninsured, compared to all other racial/ethnic groups with between 13-44% uninsured (US Census Bureau, 2016).

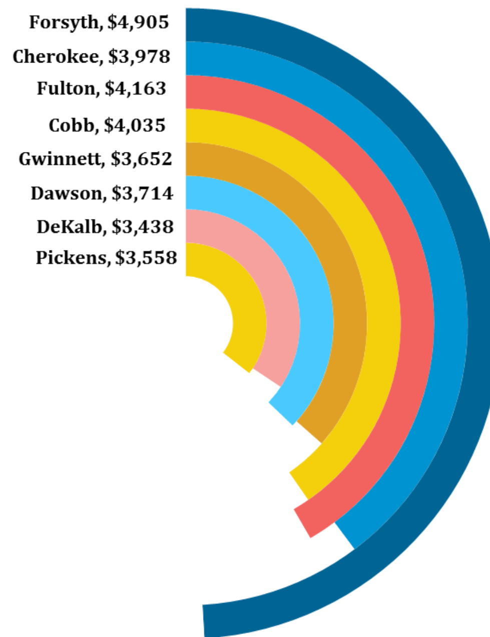
Figure 24: Northside's Community Rate of Uninsured by Race and Ethnicity



Source US Census Bureau, The American Community Survey, 2012-2016 5-year Estimates, Accessed via CHNA.org

One cause for the high rates among the uninsured in the Community may be costly insurance plans. Members of the Community, in 2017, on average spent 7% more than the national average on health insurance, or approximately $3,914 for the year (ESRI, 2017). **Figure 25** represents the average amount spent on health insurance by county in the Community.

Figure 25: CY 2017 Avg. Amount Spent on Health Insurance within Northside's Community



Source: ESRI, 2017

Hospitals and Number of Beds per 10,000

In 2017, there were 24 general acute care hospitals[1] with a total of 8,828 approved beds located in the Northside Community. This resulted in 22 general acute care hospital beds per 10,000 population in the Community compared to 24 general acute hospital beds per 10,000 population for the state. Northside's Community members generated approximately 1,896,258 general acute care inpatient ("IP") days. Based on an optimal utilization rate of 75%, the Community generated a total need for 6,926 general acute care IP beds. Thus, the Community has fewer beds per person as compared to Georgia; however, based on the Community's utilization, there is a slight surplus of general acute care inpatient beds as defined by the Georgia Department of Community Health (Georgia Department of Community Health, 2017).

[1] Excluded all specialty hospitals, including, long-term acute care, mental health or psychiatry, geriatric, orthopedic & spine, or rehabilitation

Healthcare Utilization

In 2017, Community members generated 345,547 inpatient discharges from non-Federal acute-care inpatient facilities representing 34% of Georgia's total inpatient discharges and 1,197,173 emergency room ("ER") visits representing 30% of Georgia's total ER visits. The Community had a lower IP discharge rate than Georgia with 8,634 inpatient discharges per 100,000 population compared to 9,828; similarly, the Community's ER visit rate of 29,913 per 100,000 population was lower than Georgia's of 38,516. The top causes of IP hospitalizations and ER visits for the Community are listed in **Table 4** (Georgia Department of Public Health, 2017).

Table 4: Northside Community's Top 5 Causes for Hospital Utilization			
IP Discharges		ER Visits	
Cause	%	Cause	%
Pregnancy & Childbirthing Complications	15%	External Causes	18%
Cardiovascular Diseases	12%	Respiratory Disease	11%
Digestive System Diseases	8%	Bone and Muscle Disease	8%
Respiratory Disease	7%	Reproductive & Urinary System Diseases	6%
Mental & Behavioral Diseases	5%	Digestive System Diseases	6%

Source: Georgia Department of Public Health, Online Analytical Statistical Information System, 2017

Healthcare Utilization by Race

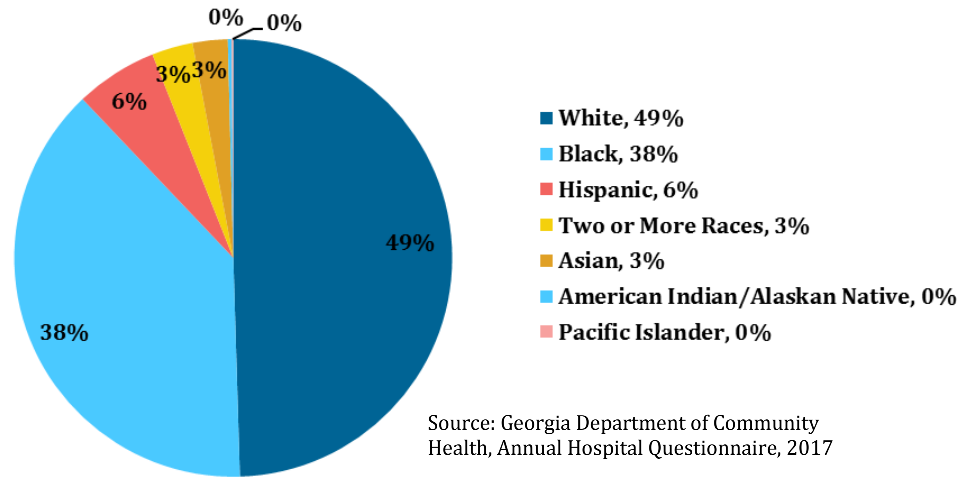
To determine if there were differences in healthcare utilization by race, three resources were utilized including the 2017 Annual Hospital Questionnaire, the Georgia Department of Public Health's ("GDPH") Online Analytical Statistical Information System ("OASIS") and the National Research Corporation's ("NRC")[2] 2017 Market Insights Survey results.

For the 24 hospitals in the Northside Community, admissions by race are presented in **Figure 26**, and largely reflect the demographic make-up of the Community. The Hispanic and Asian populations were possibly underserved based on a comparison of their population figures in the Community compared to admissions by race. However, the GA Department of Community Health classifies Hispanic as a race, whereas the U.S. Census classifies it as an ethnicity, which may account for some of the difference, 6% of total admissions versus 12% of the total population. Northside Hospital Atlanta's admissions by race largely reflect the averages within the Community; while Northside Hospital Cherokee and Northside Hospital Forsyth's admissions by race are more reflective of their home-county's demographics. For example, the two largest racial groups in Cherokee County

[2] The NRC was founded in 1981 as a healthcare research and quality improvement firm with extensive experience in designing, conducting, tabulating, and reporting consumer market research. With a client roster including more than 2,000 hospital facilities and 6,000 long-term care providers, NRC is well-respected in the healthcare industry.

were White, representing 84% of Cherokee County residents, and Black, representing 7% of residents. NHC's 2017 admissions were 82% White and 6% Black, very reflective of the hospital's local population (Georgia Department of Community Health, 2017). NHF's 2017 admissions, though, also reflect some of the disparity seen at the Community level in the Asian population. Asians were the second largest racial group in Forsyth in 2017, accounting for 12% of the county's population, but only account for 4% of NHF's 2017 admissions.

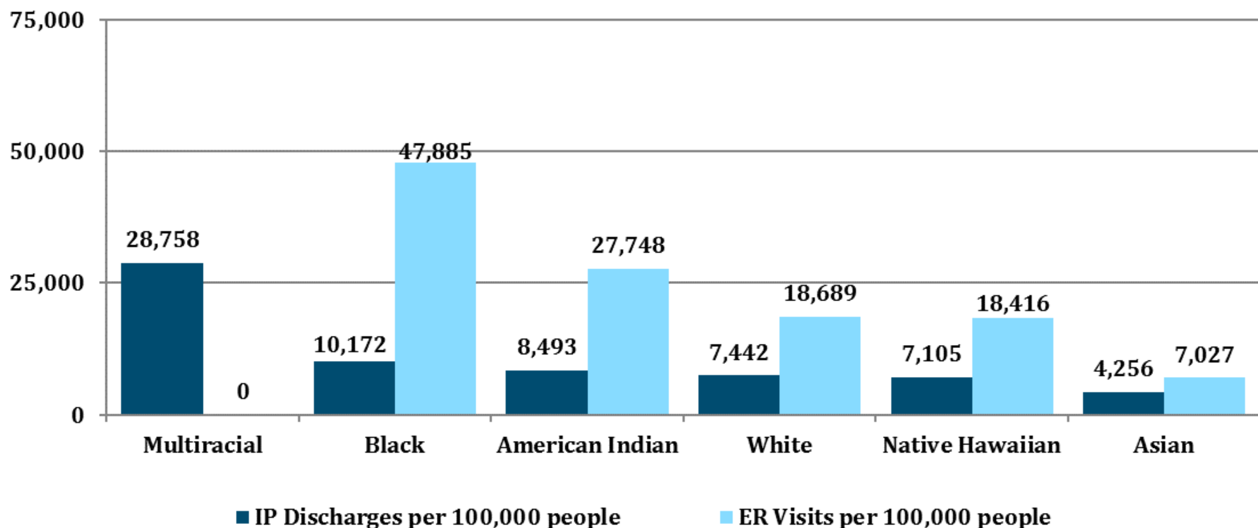
Figure 26: CY 2017 Inpatient Admissions to the 24 General Acute Care Hospitals Located in Northside's Community by Race



Source: Georgia Department of Community Health, Annual Hospital Questionnaire, 2017

While total IP admissions largely reflect the demographics of the Community, data from the GDPH OASIS reveal that use rates for IP hospitalizations and ER visits vary by race within the Community. These results are illustrated in **Figure 27.** The multi-racial and Black racial groups had the highest use rates for both inpatient hospitalizations and ER visits. This data was not available by ethnicity, nor was data available for the multi-racial ER visit rate (Georgia Department of Public Health, 2017).

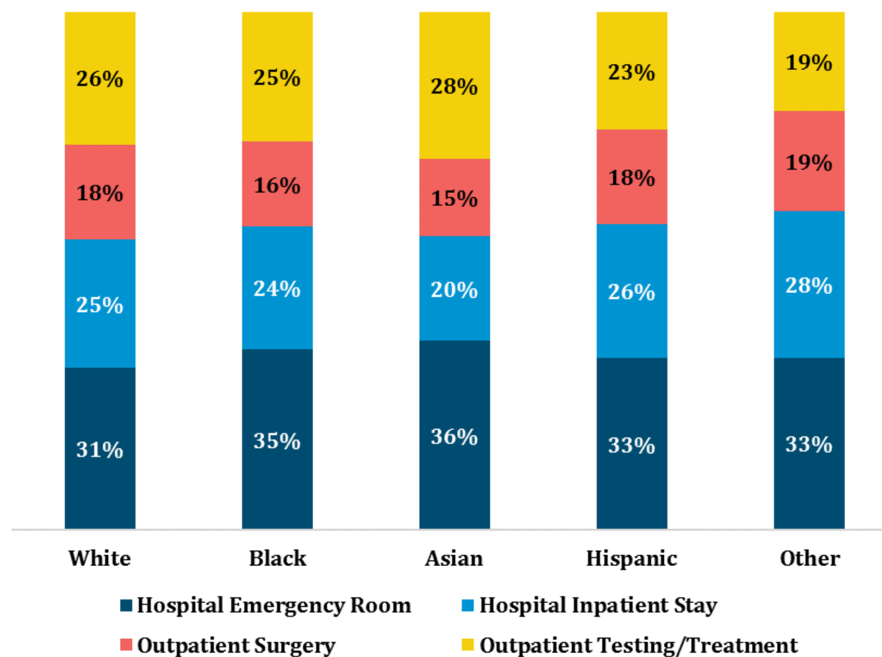
Figure 27: Northside's Community Hospital Utilization Rate (IP & ER) by Race



Source: Georgia Department of Public Health, Online Analytical Statistical Information System, 2017

NRC data was utilized to analyze what services were used by each race and ethnicity to determine if there were any differences between races or ethnicities. The NRC Survey asked households to report their healthcare utilization by type of service (e.g., Hospital Inpatient Stay, Hospital Emergency Room, Outpatient/Same-Day Surgery and Outpatient Testing/X-Rays). When analyzing this data, the responses revealed that the Black and Asian populations had a higher utilization of ER services, accounting for 35% and 36% , respectively, of these populations' total healthcare utilization compared to only 31% in the White population and 33% in the Hispanic and "Other" populations. Additionally, the Black and Asian populations' use of same-day surgery services was lower than the White, Hispanic, and "Other" populations', as illustrated in **Figure 28** (National Research Corporation, 2017).

Figure 28: 2017 Northside Community's Healthcare Utilization by Service Type and Race/Ethnicity

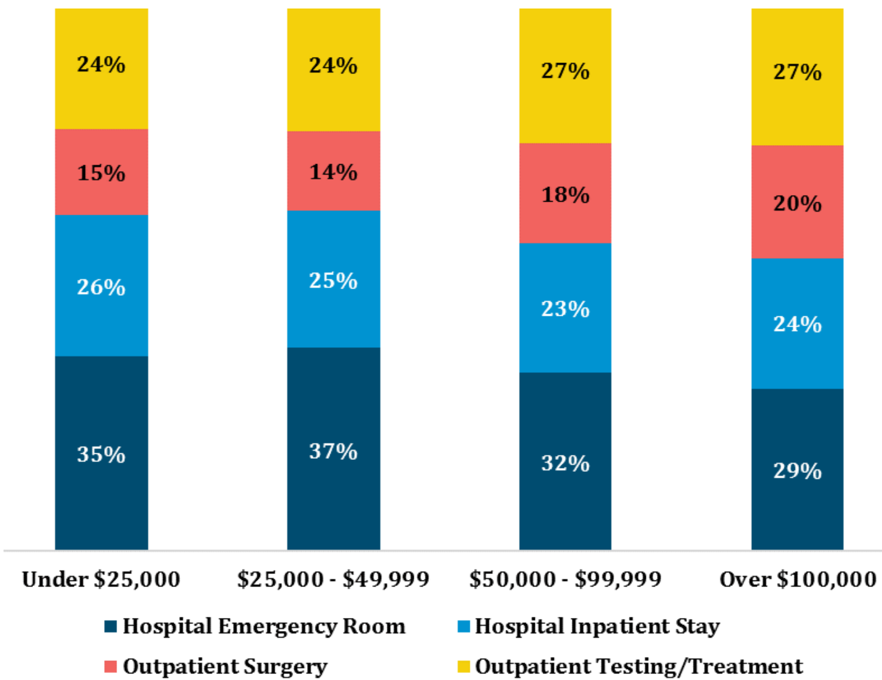


Source: The National Research Corporation, Market Insights, 2017

Healthcare Utilization by Household Income

According to the NRC Survey, in 2017 across all income levels, the hospital emergency room was the most frequently utilized healthcare service. While households of all income levels had access to the four types of healthcare services, it is important to note that a larger percentage of households with incomes under $50,000 reported utilizing the hospital ER compared to the higher income brackets. This illustrates a potential lack of

Figure 29: 2017 Northside Community Utilization of Healthcare Services by Household Income



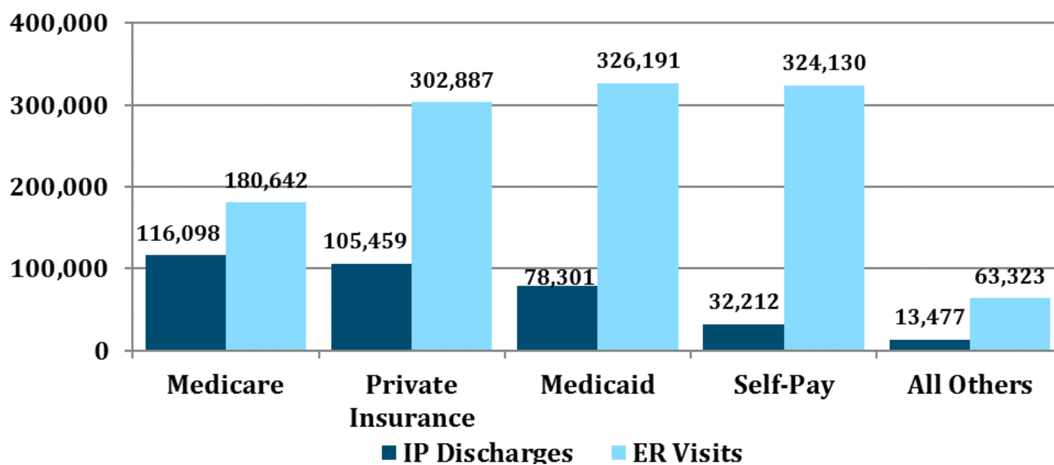
Source: The National Research Corporation, Market Insights, 2017

access to preventive care among Community members in lower income brackets. Furthermore, as household income increases so too does utilization of Outpatient/Same-Day Surgery and Outpatient Testing/X-Rays. This further indicates access barriers to care to these services for lower income households in the Northside Community (National Research Corporation, 2017).

Healthcare Utilization by Insurance Type

Based on data from GDPH OASIS and the NRC 2017 Survey, the patients receiving inpatient care varied from those visiting the ER when considering payor type. Privately insured and Medicare patients made up 65% of inpatient hospitalizations and only 40% of ER visits. Comparatively, self-pay and Medicaid patients comprised 32% of inpatient hospitalizations and 54% of ER visits (Georgia Department of Public Health, 2017).

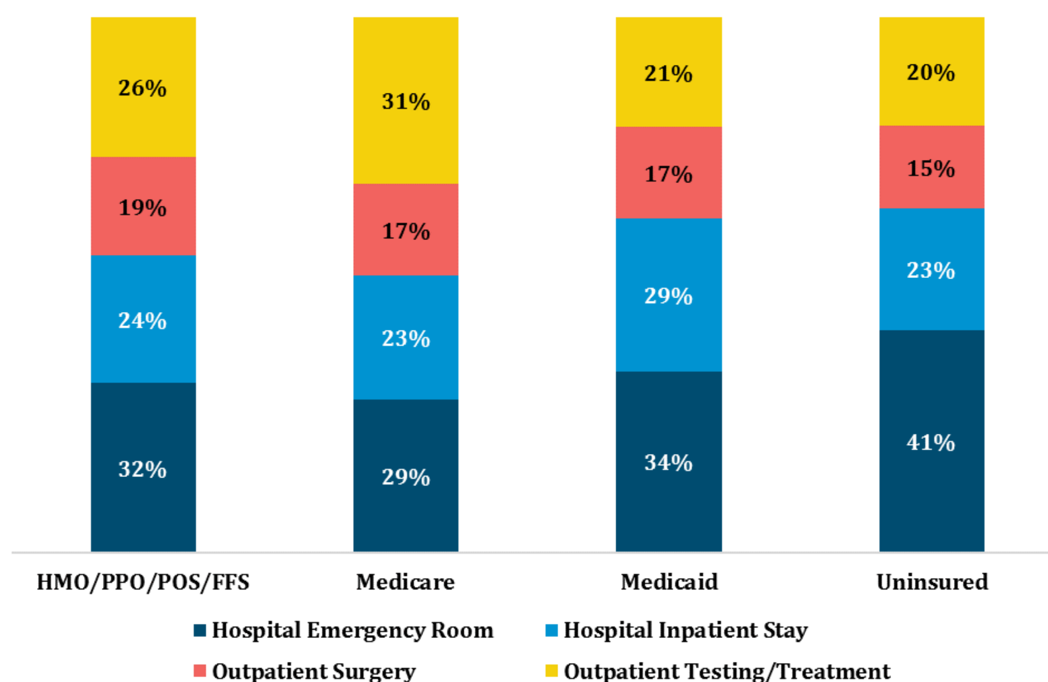
Figure 30: Northside's Community Hospital Utilization (IP & ER) by



Source: Georgia Department of Public Health, Online Analytical Statistical Information System, 2017

Northside compared the type of healthcare utilization by populations with various types of health insurance based on NRC 2017 Survey results as well. The results of the analysis in **Figure 31** were in line with industry experience, in that the uninsured population had much higher rates of ER use than the other populations with health insurance. This is in large part a result of it being the only means of accessing healthcare for the uninsured. Since the uninsured population is likely to delay obtaining healthcare services until their condition becomes emergent. The uninsured population also had lower rates of same-day surgery, outpatient testing/treatment and inpatient stays compared to the managed care and Medicare populations. The Medicaid population exhibited high rates of ER use and IP hospital stays, illustrating that the Medicaid population was not accessing preventive healthcare resources until they were emergent or severe enough for an inpatient hospital stay (National Research Corporation, 2017).

Figure 31: 2017 Northside Community Utilization of Healthcare Services by Insurance Type

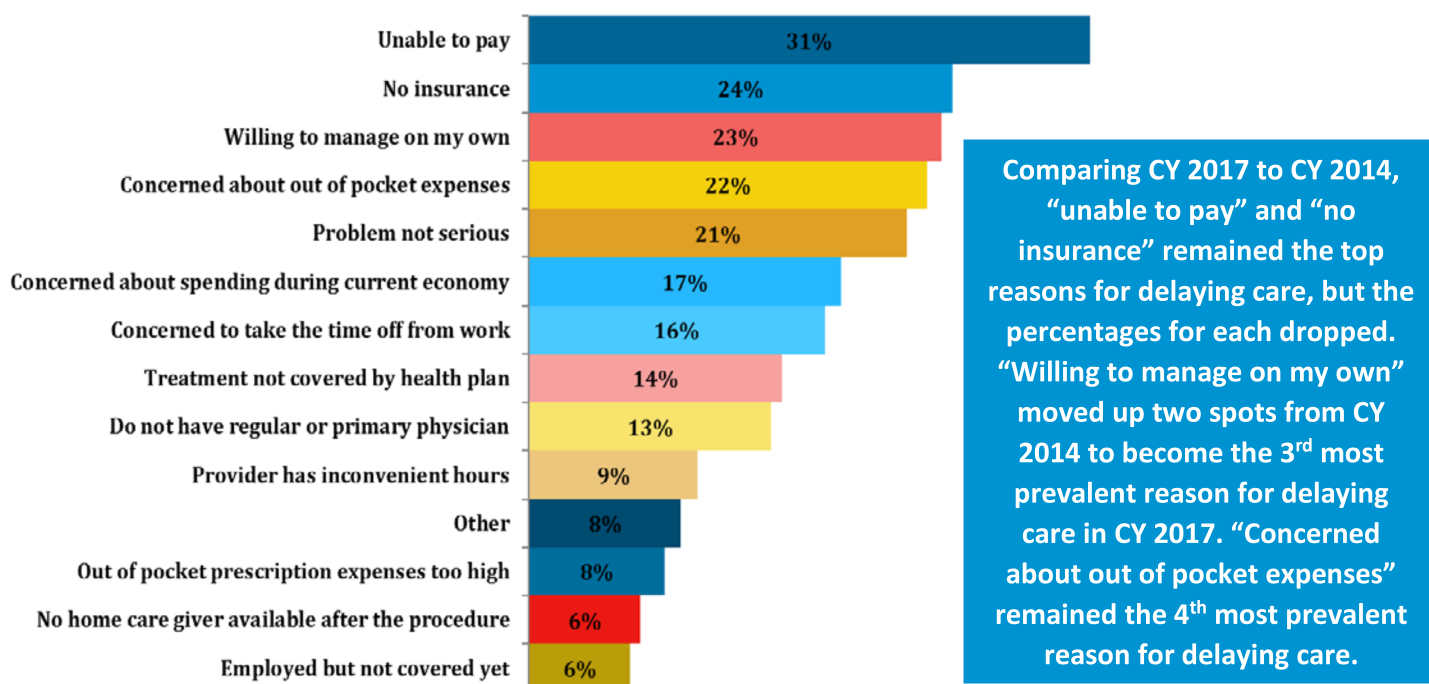


Source: The National Research Corporation, Market Insights, 2017

Reason for Delaying Medical Care

The number one reason Community members indicated they delayed medical care was because they were unable to pay. The additional reasons for delayed care are provided in **Figure 32**. In this survey, more than one reason could be chosen by each survey respondent. Three of the top four responses were related to insurance or cost (National Research Corporation, 2017).

Figure 32: Reasons for Delaying Medical Care over the Past 6-Months, Percentage of Households Surveyed among Northside's Community Members, CY 2017

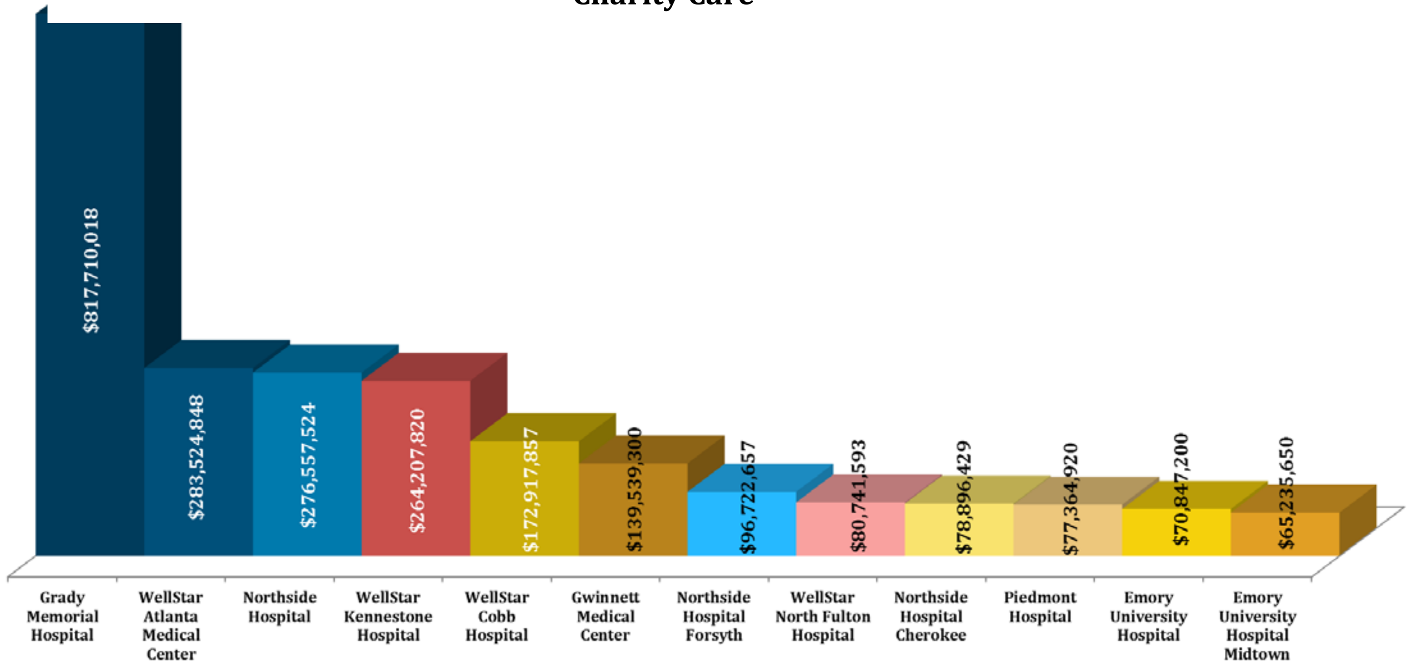


Source: The National Research Corporation, Market Insights, 2017

Indigent and Charity Care

Indigent and charity care is often used as a metric for assessing a community's access to healthcare services, particularly for individuals with limited financial means. The amounts of indigent and charity care provided by the 24 general acute care hospitals in the Community varied widely. In 2017, the 24 general acute care hospitals in the Community provided more than $2.7 billion in net uncompensated indigent and charity care combined. This $2.7 billion accounts for an approximate 61% increase in net uncompensated indigent and charity care in the Community since 2014. Northside Hospital Atlanta provided the third largest dollar amount (approximately $277 million) in 2017, behind Grady Memorial Hospital (approximately $818 million) and WellStar Atlanta Medical Center (approximately $284 million), in indigent and charity care of all general acute care providers in the Community. Northside's indigent and charity care performance demonstrates that Northside is providing community benefit and serving all patients regardless of their ability to pay (Georgia Department of Community Health, 1999-2017).

Figure 33: CY 2017 Indigent and Charity Care by Hospitals for All Hospitals in Northside's Community with over $50M in Net Uncompensated Indigent and Charity Care

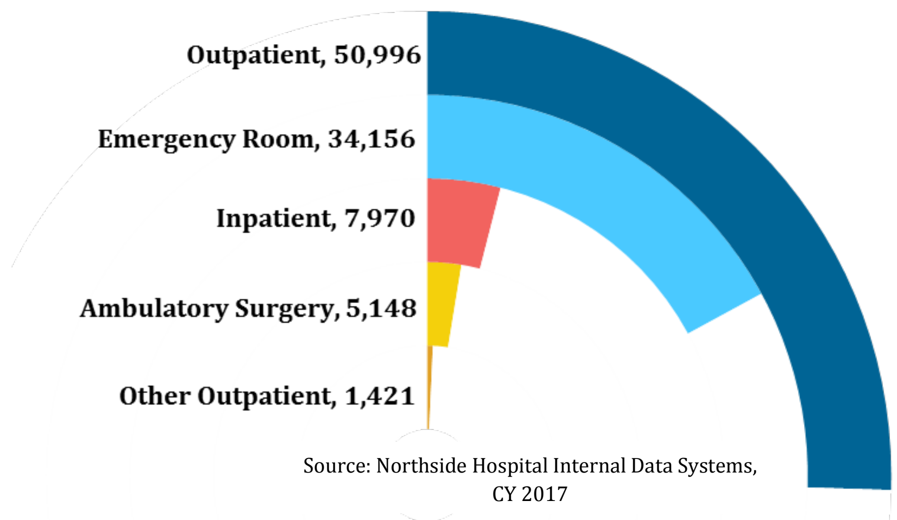


Source: The Georgia Department of Community Health, Hospital Financial Surveys,

In 2017, the Northside Health System provided $452,176,610 in net uncompensated indigent and charity care. Broadly, services rendered can be grouped into ambulatory surgery, emergency room, inpatient services, outpatient services, and other outpatient services with 86% of indigent and charity cases falling under outpatient services and the emergency room.

Upon further analysis of the outpatient services utilized by the indigent and charity patients, 3,084 of the 50,996 outpatient indigent and charity cases, utilized Northside's mental health services.

Figure 34: Indigent and Charity Care Cases Generated by Northside Hospital System Patients, CY 2017



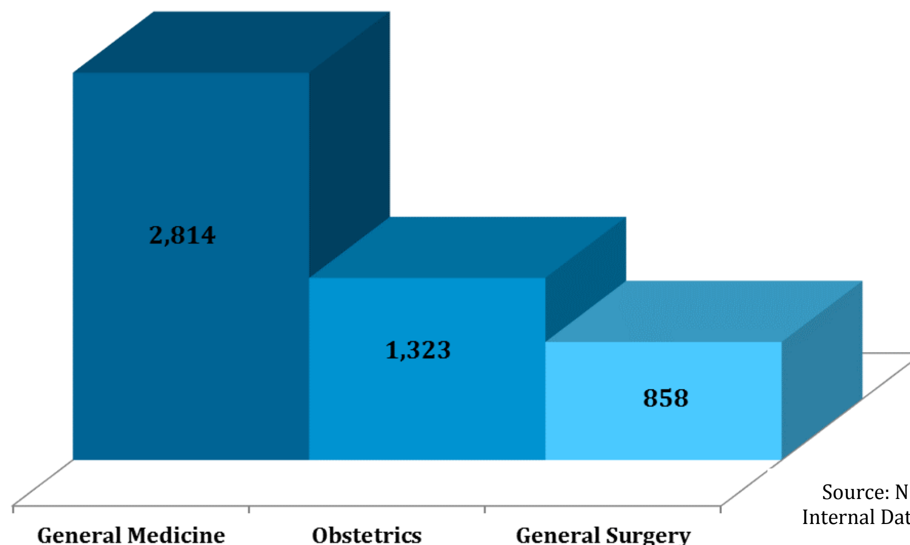
Source: Northside Hospital Internal Data Systems, CY 2017

In stark contrast, it is challenging to identify a leading cause or two of ER utilization by Northside's indigent and charity patients as the 127,987 emergency charity cases had a very large range of principal diagnoses; in fact, they were too numerous to list separately. The top ten diagnoses by case volume represented approximately 10% of total indigent and charity emergency cases and are summarized in the table below.

Table 5: CY 2017 Northside Indigent and Charity ER Cases Top 10 Diagnoses			
Princ. Dx	**Description**	**Cases**	**% Total**
R51	HEADACHE	681	2%
R07.89	OTHER CHEST PAIN	673	2%
N39.0	URINARY TRACT INFECTION, SITE NOT SPECIFIED	620	2%
R07.9	CHEST PAIN, UNSPECIFIED	617	2%
R10.9	UNSPECIFIED ABDOMINAL PAIN	598	2%
R11.2	NAUSEA WITH VOMITING, UNSPECIFIED	596	2%
J06.9	ACUTE UPPER RESPIRATORY INFECTION, UNSPECIFIED	524	2%
J20.9	ACUTE BRONCHITIS, UNSPECIFIED	440	1%
S16.1XXA	STRAIN OF MUSCLE, FASCIA AND TENDON AT NECK LEVEL, INIT	429	1%
M54.5	LOW BACK PAIN	382	1%
Total Top 10 Diagnoses		**5,560**	**16%**

On the inpatient side, Northside's indigent and charity patients had high utilization of general medicine, obstetrics and general surgery. These three inpatient service lines represented 63% of the inpatient indigent and charity utilization.

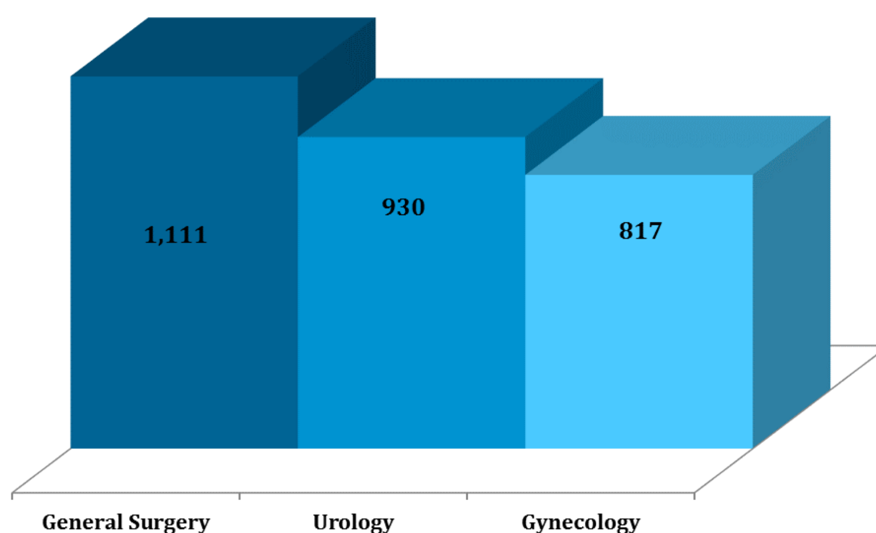
Figure 35: CY 2017 Northside System's Top Three IP Services Utilized by Indigent and Charity Patients



Source: Northside Hospital Internal Data Systems, CY 2017

Similar to the demand for inpatient services, demand for outpatient surgical services was concentrated among three service lines as indicated in the graph below. Together, these three service lines comprised 56% of Northside's need for indigent and charity ambulatory surgical services in CY 2017.

Figure 36: CY 2017 Northside System's Top Three Ambulatory Surgery Services Utilized by Indigent and Charity Patients



Source: Northside Hospital Internal Data Systems, CY 2017

Health Behaviors

Background and Overview

Poor health behaviors such as poor diet, lack of exercise and substance abuse can contribute to an individual's and a community's poor health status. The Community's population had higher rates of participating in preventive health behaviors when compared to Georgia and the United States; however, within the Community, preventive health behaviors were less common in low-income households, among minority racial and ethnic groups and among the uninsured. The Northside Community had lower smoking rates, slightly better nutritional habits, and higher physical activity rates than Georgia overall; however, it had a larger percent of adults who drink excessively than the state. Despite the Community outperforming Georgia for most preventive health behavior indicators, several health needs in the Community were revealed through this analysis. Most Community adults consumed less than 5 servings of fruits and vegetables every day, 19% of adults within the Community reported no physical activity as part of their leisure time routine and Dawson and Pickens Counties had particularly high rates of regular smokers. These

findings suggest the need for improved tobacco control, alcohol or substance control, nutrition, and physical activity in the Community.

Preventive Health Behaviors - Overview

Preventive screenings are an important part of routine care and maintaining good health. In addition, high rates of preventive screenings can be signs of health knowledge, provider outreach, and other indicators. The types of preventive health screenings necessary for each person varies based on age, gender, health status, and family and personal history. The goal of preventive health is to identify health problems early, while they are easier to treat and usually result in better outcomes (United Healthcare). For this CHNA, Northside utilized multiple resources to identify preventive health behavior patterns in the Community. The first set of data is from the NRC 2017 Survey, which did not limit the population looked at to the ages/genders appropriate for each behavior, but instead provides a broad look at household member's preventive health behaviors. This dataset allowed for comparison between respondent races, household income and insurance status. The second set of data is from Community Commons and draws from multiple different data sources that limit their scope to key demographic populations (e.g. Pap test for women 18 or older).

Preventive Health Behaviors – Overview of NRC Survey

The NRC provides a comprehensive list of preventive health behaviors ("PHBs") to respondents of its survey. Respondents are asked "Has any household member used or had any of the following healthcare services or tests in the last 12 months".

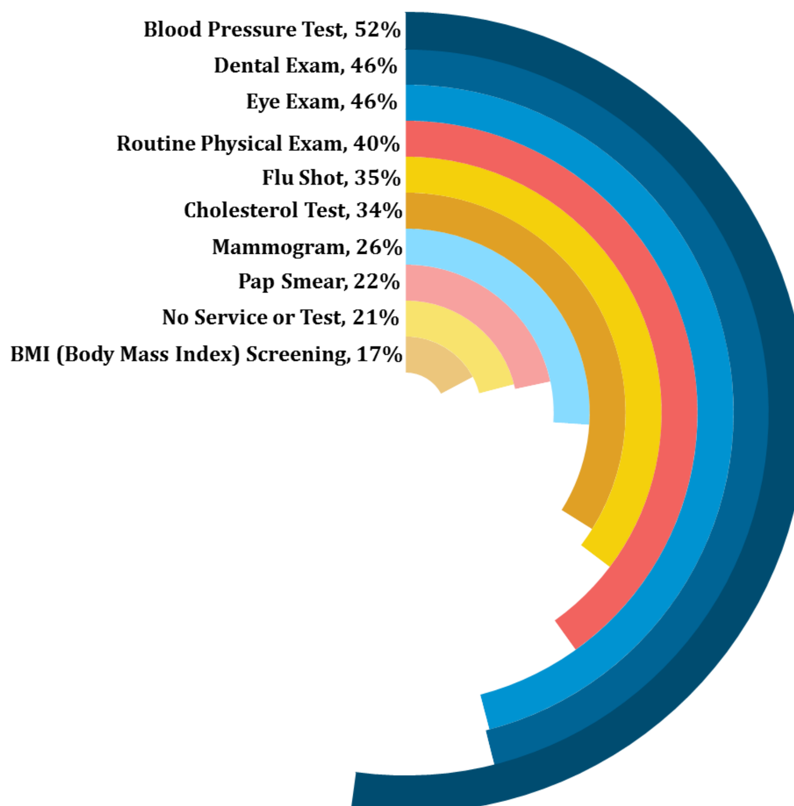
Table 6: National Research Corporation List of Preventive Health Behaviors Provided to NRC Survey Respondents		
Blood Pressure Test	BMI Screening	Cardiovascular Stress Test
Child Immunization	Cholesterol Test	Colon Screening
Dental Exam	Diabetes Screening	Eye Exam
Flu Shot	Hearing Test	Mammogram
Mental Health Screening	Osteoporosis Testing	Pap Smear
Prenatal Care	Prostate Screening	Routine Physical Exam
Stop Smoking Program	Weight Loss Programs	No Service or Test

Given that this survey question pertained to any member in the household and not just the NRC Survey respondent, the results provided a broad representation of the Community's PHBs.

The top 10 PHBs (i.e. most frequently utilized) for all respondents in the Northside Community are summarized in **Figure 37**. Almost half of the households surveyed had a member that had received a blood pressure test, the top preventive health behavior. Furthermore, household members in over a quarter of all households had received a dental

exam, eye exam, routine physical exam, flu shot, cholesterol test, or mammogram (National Research Corporation, 2017).

Figure 37: 2017 Northside Community Top Ten Preventive Health Behaviors, % of Households Reporting Behavior



Source: National Research Corporation, Market Insights, 2017

In addition to reviewing the top preventive health behaviors, the least common health behaviors were also important to explore as possible opportunities to improve access to care and the overall health status of the Community. Less than 10% of total households in the Community had members that took part in mental health screenings, osteoporosis testing, weight loss programs, prenatal care, or stop smoking programs (National Research Corporation, 2017).

Preventive Health Behaviors by Income

Preventive health behaviors of Northside's Community members varied based on their household income. Prostate screenings, child immunizations, weight loss programs, osteoporosis testing, Pap smears, mammograms, and cardiovascular stress tests were among the preventive health behaviors with the highest average income tied to them. The top 5 PHBs with the largest difference between low and high income household participants are presented in **Table 7**. This chart illustrates some of the key preventive

health behaviors that are not accessible to low-income Community members (National Research Corporation, 2017).

Table 7: Northside Community, Preventive Health Behaviors with the Largest Differential between Low and High Income Households		
	% Households with <$25,000 HHI	% Households with >$75,000 HHI
Dental Exam	30%	55%
Eye Exam	31%	53%
Routine Physical Exam	30%	46%
Mammogram	15%	30%
Flu Shot	27%	41%

Preventive Health Behaviors – Race/Ethnicity

There were several differences in the top preventive health behaviors when results were stratified by race or ethnicity. This stratification for the top 10 PHBs in the Community are displayed in **Table 8** (National Research Corporation, 2017).

Table 8: 2017 Northside Community, Top 10 Preventive Health Behaviors within the Northside Community by Race/Ethnicity				
Top 10 Preventive Behaviors	% White Households	% Black Households	% Asian Households	% Hispanic Households
Blood Pressure Test	57%	51%	32%	50%
Dental Exam	53%	41%	37%	41%
Eye Exam	50%	43%	37%	45%
Routine Physical Exam	46%	36%	22%	34%
Flu Shot	44%	27%	28%	32%
Cholesterol Test	40%	29%	25%	33%
Mammogram	28%	29%	13%	20%
Pap Smear	23%	24%	9%	19%
No Service or Test	15%	23%	39%	17%
BMI (Body Mass Index) Screening	17%	18%	12%	16%

Overall, the percent of White households participating in the top 10 PHBs was higher than all minority groups, with the exception of household members receiving "No Service or Test" (National Research Corporation, 2017).

In addition to analyzing the top PHBs by race, the least reported behaviors by race are presented in **Table 9**. Mental health screenings, weight loss programs and stop smoking programs were in the bottom 5 for each racial/ethnic group analyzed. Lack of participation

in prenatal care stood out for White, Black and Hispanic households; lack of mental health screening in Asian and Hispanic households; and the lack of osteoporosis testing in Black, Asian and Hispanic households stood out among the top 5 least reported behaviors. In terms of cancer screening, all races had colon screening as one of the least reported PHBs, and all minority groups had prostate screening as a least reported PHB (National Research Corporation, 2017).

Table 9: 2017 Northside Community Top 10 Least Reported Preventive Health Behaviors within the Northside Community by Race/Ethnicity (% Households)			
White Households	Black Households	Asian Households	Hispanic Households
Colon Screening (13%)	Colon Screening (15%)	Pap Smear (9%)	Child Immunization (14%)
Hearing Test (13%)	Hearing Test (9%)	Diabetes Screening (9%)	Hearing Test (13%)
Cardiovascular Stress Test (12%)	Cardiovascular Stress Test (9%)	Osteoporosis Screening (5%)	Cardiovascular Stress Test (11%)
Prostate Screening (12%)	Child Immunization (8%)	Colon Screening (4%)	Colon Screening (11%)
Child Immunization (12%)	Prostate Screening (7%)	Prenatal Care (4%)	Prostate Screening (10%)
Mental Health Screening (6%)	Mental Health Screening (7%)	Prostate Screening (4%)	Osteoporosis Screening (8%)
Osteoporosis Testing (6%)	Weight Loss Programs (4%)	Mental Health Screening (3%)	Mental Health Screening (7%)
Weight Loss Programs (4%)	Osteoporosis Testing (4%)	Cardiovascular Stress Test (2%)	Weight Loss Programs (6%)
Prenatal Care (2%)	Prenatal Care (2%)	Weight Loss Programs (2%)	Prenatal Care (3%)
Stop Smoking Program (1%)	Stop Smoking Program (1%)	Stop Smoking Program (1%)	Stop Smoking Program (2%)

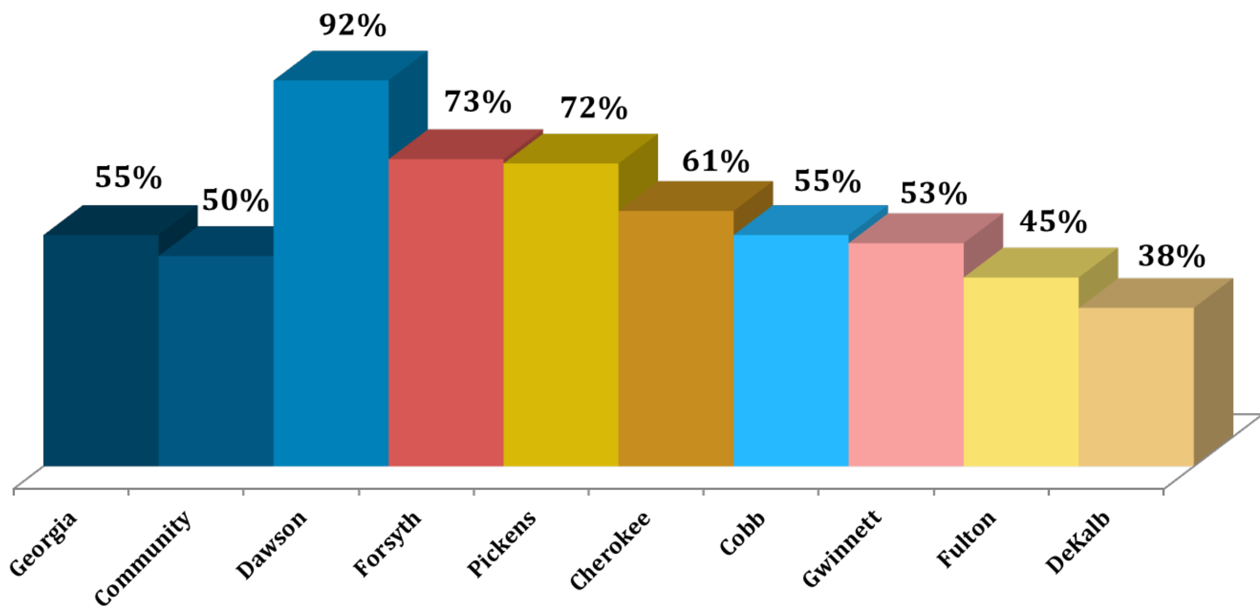
Preventive Health Behaviors – Uninsured

In households that do not have health insurance, the most common NRC survey response was that **no preventive health behaviors** had been taken by any members of the household. This response accounted for **39% of the uninsured households compared to only 21% of the total households** surveyed. Uninsured respondents participated to a lesser extent than the overall Community in all preventive health behaviors, except mental health screening, prenatal care and stop smoking programs. The least utilized services by the uninsured were very similar to the overall Community's totals, with the addition of hearing tests, child immunization, cardiovascular stress tests, colon screening, and prostate screening (National Research Corporation, 2017).

Sexually Transmitted Infections

The frequency and types of Sexually Transmitted Infection (STI) testing recommended by physicians varies based on many personal risk factors; however, the CDC encourages HIV testing be incorporated into routine medical care for adolescents and adults aged 15 to 65 (Mayo Clinic, n.d.). Screening is especially important in the Northside Community because in 2018, the Atlanta metro-area, which is largely encompassed by Northside's Community definition, was ranked number 4 of all major U.S. cities in HIV rate, yet in the Northside Community, 50% of adults over the age of 18 had never been screened for HIV/AIDS. Rates of screening within the Community varied drastically and are illustrated in **Figure 38**. As illustrated, 92% of Dawson County's adult population had never been screened for HIV/AIDS, compared to only 38% of DeKalb County adults (Center for Disease Control and Prevention, 2011-2012; McKenzie, AIDS in Atlanta, 2018). Screening rates were not available stratified by race or income; however, the HIV epidemic "disproportionately affects the black community in Atlanta" (McKenzie, AIDS in Atlanta, 2018).

Figure 38: Percent of Adults Never Screened for HIV for Georgia Compared to the Community and its Counties



Source: Center for Disease Control and Prevention, BRFSS, 2011-2012, Accessed via CHNA.org

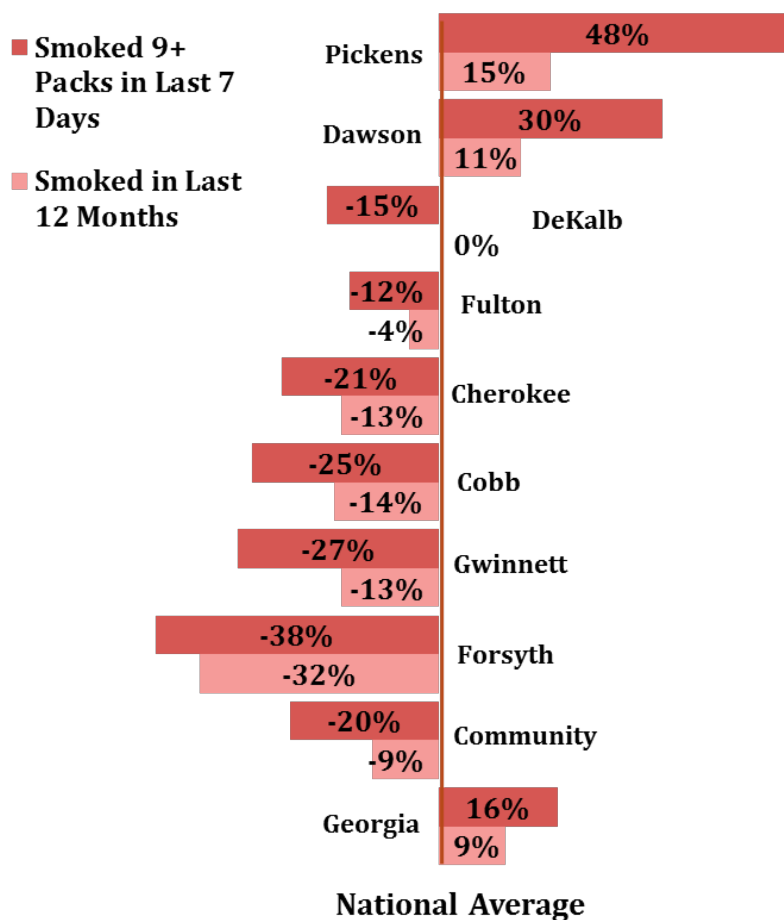
Substance Use - Tobacco

Cigarette smoking is linked to many of the leading causes of death within the Community, including cancer and cardiovascular disease. Also, according to the National Institutes of Health, the most common irritant in the United States that causes chronic obstructive pulmonary disease is cigarette smoke. Within the Community, 13% of adults, age 18 or

older, self-reported to actively smoking cigarettes some days or every day. This was better than the state-wide and U.S. averages of 18%. Two counties within the Community had a significantly higher rate of regular smokers than the Community average, including Dawson and Pickens Counties with 31% and 24%, respectively (Centers for Disease Control and Prevention, 2006-2012). This was further illustrated through a 2017 Market Potential Survey that compared the Community and its counties to the national averages for population who smoked 9+ packs of cigarettes within the week prior to the survey and those who smoked in the last 12 months. These results are displayed in **Figure 39.**

Figure 39: CY 2017 Smoking Habits of the Community Compared to the National Average

(Figure illustrates the percent that the local use rate is above or below the national use rate)



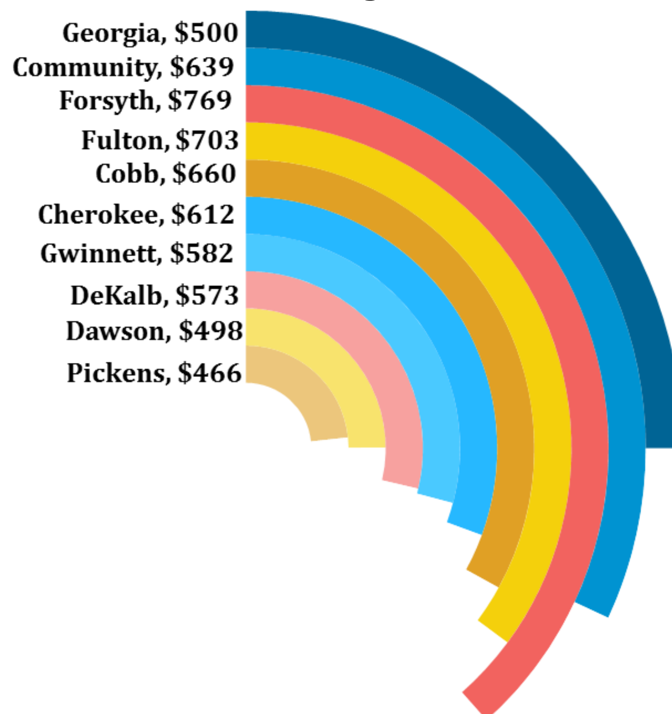
Source: ESRI, 2017

Substance Use - Alcohol

Conversely to smoking, the Community underperformed compared to the state for estimated adults who drink excessively (more than 2 drinks per day for males and one drink per day for females) (Centers for Disease Control and Prevention, 2006-2012).

Excessive drinking and alcohol dependence have been tied to several health effects, both short term and long term on your body, including a weakened immune system, damage to organs, and links to cancer (Nation Institute on Alcohol Abuse and Alcoholism, Published 2010, Revised 2015). Within the Community, 16% of adults indicated they drink excessively, compared to 14% state-wide. All counties within the Community, except Gwinnett (14%) and Pickens (12%) Counties exceeded the state-wide average (Centers for Disease Control and Prevention, 2006-2012). Within Georgia, there were approximately 10 liquor stores per 100,000 population; this aligned with the Community's rate of 10 as well. However, within the Community, five counties had much higher densities of liquor stores than the Community overall: Dawson, DeKalb, Forsyth, Fulton, and Pickens Counties, with rates between 12.0 and 22.3 liquor stores per 100,000 population (U.S. Census Bureau, 2016). The ratio of liquor stores to population did not always align with drinking rates or consumer spending, however. Community members on average spent $139 more a year on alcoholic beverages than Georgians. Dawson and Pickens Counties were the only two counties that spent less than the state-average on alcoholic beverages.

Figure 40: 2017 Consumer Spending (Average) within the Community on Alcoholic Beverages



Source: ESRI, 2017

Nutrition

According to the Center for Disease Control and Prevention, consuming fruits and vegetables can reduce a person's risk for several chronic diseases (heart disease, stroke, and some cancers), as well as help maintain a healthy body weight. Unhealthy eating habits can lead to significant health issues such as diabetes, obesity, and cardiovascular disease (Moore & Thompson, 2015). The USDA recommends a daily serving of fruits for adults of approximately 1.5-2 cups and 2-3 cups for vegetables. Additionally, it is recommended that population try to make half of their meal plate fruits and vegetables. To examine if the Northside Community is meeting this recommendation, fruit and vegetable consumption data from BRFSS was utilized. In the Northside Community, 73% of adults (age 18 or older) self-reported they consumed less than 5 servings of fruits/vegetables every day. This rate was slightly better than the state-wide rate of 76%. Pickens County ranked the worst of Community counties for this indicator, with 82% of adults consuming inadequate fruit/vegetable servings in a day (due to a small sample size, no information was available for Dawson County). Even though the Community ranked higher than the state average for fruit and vegetable consumption, a Community rate of 73% translates to nearly 3 million residents of the Northside Community not receiving adequate nutrition every day (Centers for Disease Control and Prevention, 2005-09).

Physical Activity

Regular physical activity has been linked to a long list of positive health effects, including controlled weight, lowered risk of cardiovascular disease, reduced risk of type 2 diabetes and several cancers, strengthened bones and muscles, improved mental health, and improved mobility while aging (Center for Disease Control and Prevention, 2015). Conversely, a sedentary lifestyle can lead to significant health problems such as obesity or cardiovascular disease. Despite all of the positive health outcomes associated with physical activity, 19% or approximately 750,000 Community members self-reported that they did not participate in **ANY** physical activity or exercise (adults 20 and older). The Community and all of its counties had rates of physical inactivity lower than Georgia's rate of 23%. The county rates were all very similar with a small amount of variance from 18% (Fulton) to 21% (Pickens) (Centers for Disease Control and Prevention, 2013). Furthermore, Community members exercise and utilize exercise facilities more than Georgians overall. Dawson and Pickens Counties were the only two Community counties that consistently underperformed the state averages on the physical activity measures analyzed (ESRI, 2017).

Physical Environment

Background and Overview

Conditions of the physical environment can shape the health of a community by influencing the choices community members make surrounding physical activity, nutrition and safety. This section will focus on some key features of the physical environment that influence health, including housing, transportation, food access, and access to resources for recreational activity.

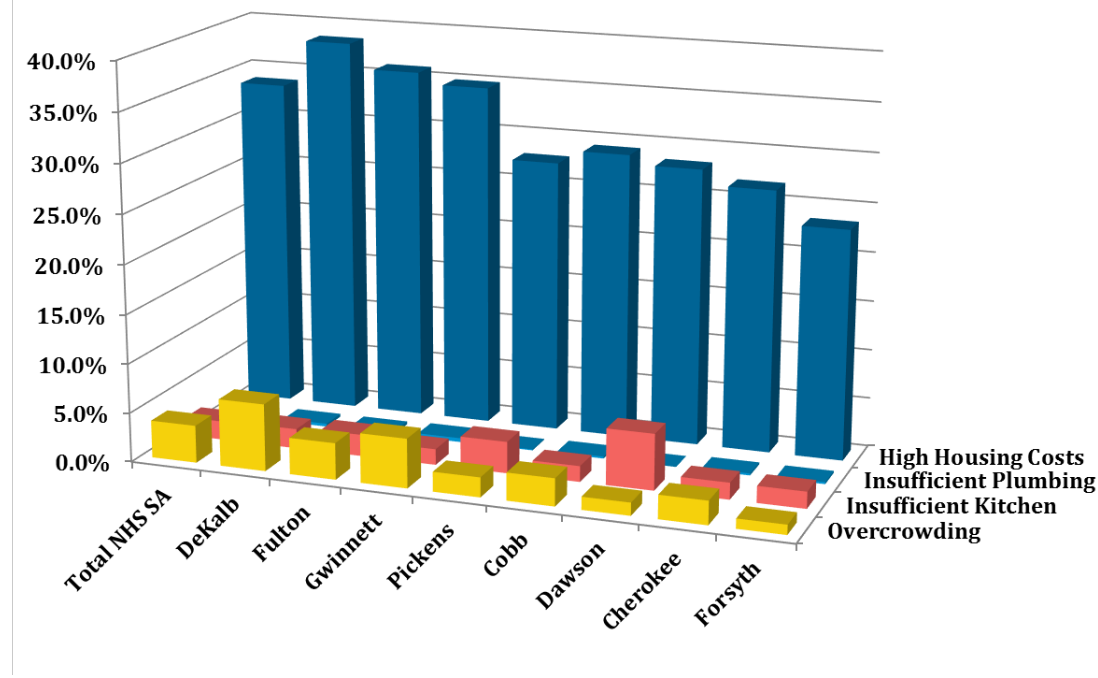
Within the Community, high housing cost and a lack of transportation options were the two most severe physical environment problems facing the Community compared to Georgia. DeKalb and Fulton Counties both stood out in the Community for their high housing costs on multiple measures (overall housing costs and HUD-assisted housing units) and lack of access to motor vehicles. Furthermore, the Community has fallen behind Georgia overall in terms of access to food. Much of the population within the Community that does not have reliable access to affordable and nutritious food is located in Fulton, DeKalb, Gwinnett, and Cobb Counties.

Housing

Housing in America represents the number one expense for most Americans and a place where Americans spend approximately 60% of their time (Braveman, Dekker, Egerter, Sadegh-Nobari, & Pollack, 2011). Public health research has shown a connection between chronic diseases management and access to affordable housing. Affordable housing allows families enough money to cover other needs that are also associated with health, including medical expenses, food and transportation. Furthermore, when individuals cannot afford housing for themselves or their families, they are often forced into living situations that are not appropriate for their family's needs. These conditions can lead to stress, high blood pressure and other illnesses (Johns Hopkins Center to Eliminate Cardiovascular Health Disparities).

To explore the state of housing in Northside's Community, a measure of severe housing problems provided by County Health Rankings and Roadmaps was utilized. This measure indicated the percent of households that had at least one of the following 4 problems: housing as a severe cost burden (monthly housing costs exceeded 30% of household income), overcrowding (>1 persons per room), and lack of kitchen or plumbing facilities. Within the Community, an estimated 17% of households had severe housing problems, compared to 18% in Georgia. Severely high housing cost was the leading housing problem within the Community, affecting 34% of all households. The other 3 severe housing problems affected between 0.3% and 4% of households in the Community. Dawson and DeKalb are notable outliers in insufficient kitchen facilities (6%) and overcrowding (7%), respectively (U.S. Department of Housing and Urban Development, 2016).

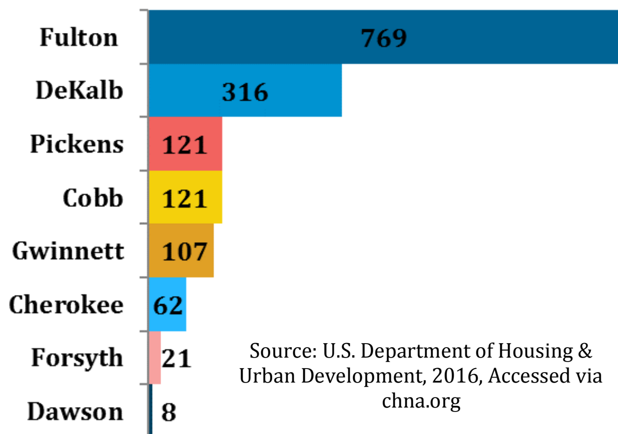
Figure 41: Severe Housing Problems by County within the Northside Community



Source: U.S. Department of Housing & Urban Development, Comprehensive Housing Affordability Strategy, 2012-2016, Accessed via http://www.countyhealthrankings.org

The United States Department of Housing and Urban Development (HUD) exists to help secure affordable housing for all Americans. Based on the knowledge that approximately 34% of households in the Northside Community spend over 30% of their household income on housing, one might expect the Community to have a proportionally high rate of HUD-funded assisted housing units; however, in 2016, the Community only had 340 HUD assisted units per 10,000 housing units. This was slightly higher than Georgia's rate of 328, yet lower than the U.S. rate of 375 per 10,000 housing units. The Community's county rates are displayed in **Figure 42** (US Department of Housing and Urban Development, 2013). The high housing costs within the Community paired with an under supply of HUD housing puts low-income Community members at risk of living in substandard housing situations that can contribute to poor health outcomes.

Figure 42: CY 2016 HUD-Assisted Units per 10,000 Housing Units in the Northside Community by County



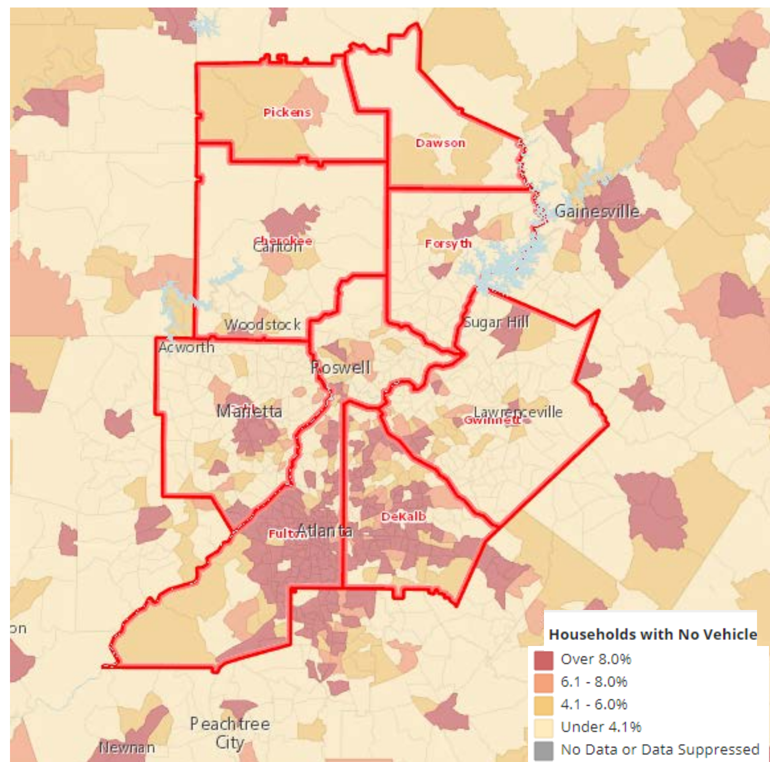
Source: U.S. Department of Housing & Urban Development, 2016, Accessed via chna.org

Homelessness is another facet of the housing issues facing the Community and Georgia. In 2017, there were an estimated 3,716 homeless persons in Georgia, down 36% from the previous year assessed (2015). Of this total homeless population, approximately half were "sheltered" (residing in an emergency shelter or transitional/supportive housing) and half were "unsheltered" (primary nighttime residence is a public or private place not designed or ordinarily used as a sleeping accommodation) (Georgia Department of Community Affairs, 2017).

Transportation

Access to healthcare and preventive care resources can be dictated by a person's ability to actually get to the physical location of service; therefore, a person's access to a motor vehicle or public transportation can play an important role in maintaining a healthy lifestyle.

Figure 43: Map of the Percent of Households with No Motor Vehicle in the Northside Community, 2012-2016



Source: U.S. Census Bureau, American Community Survey, 2012 – 2016, Accessed via CHNA.org

Within the Northside Community, 7% of households were estimated to have no motor vehicle; Georgia's rate was also 7%. Fulton and DeKalb Counties were the only counties in the Community that had rates of households without motor vehicles higher than 5%, with 12% and 9%, respectively; however, there were pockets in most of the counties within the Community where over 8% of the households did not have a vehicle, illustrated in **Figure 43**. Fulton and DeKalb Counties are also largely within the area served by Georgia's largest public transportation system: MARTA. The Northside Community overall had a slightly higher use rate of public transit compared to Georgia, with approximately 4% of the population commuting to work on public transit in the Community compared to only 2% in Georgia. The public transit users in the Community represented 77% of all Georgians using public transit to commute to work. In Fulton and DeKalb Counties, approximately 7% and

8% of the population commuted to work using public transit, respectively. There were portions of Cherokee, Dawson, Forsyth, Gwinnett, and Pickens Counties that had high rates of no vehicles for the household and these counties also have limited access to public transit, as demonstrated by less than 1% or less of their populations reportedly using public transit to get to work (U.S. Census Bureau, 2012-2016). The combination of these two factors could create a barrier to healthcare access for these populations.

Food Access

Key Food Access Definitions

Food Insecurity

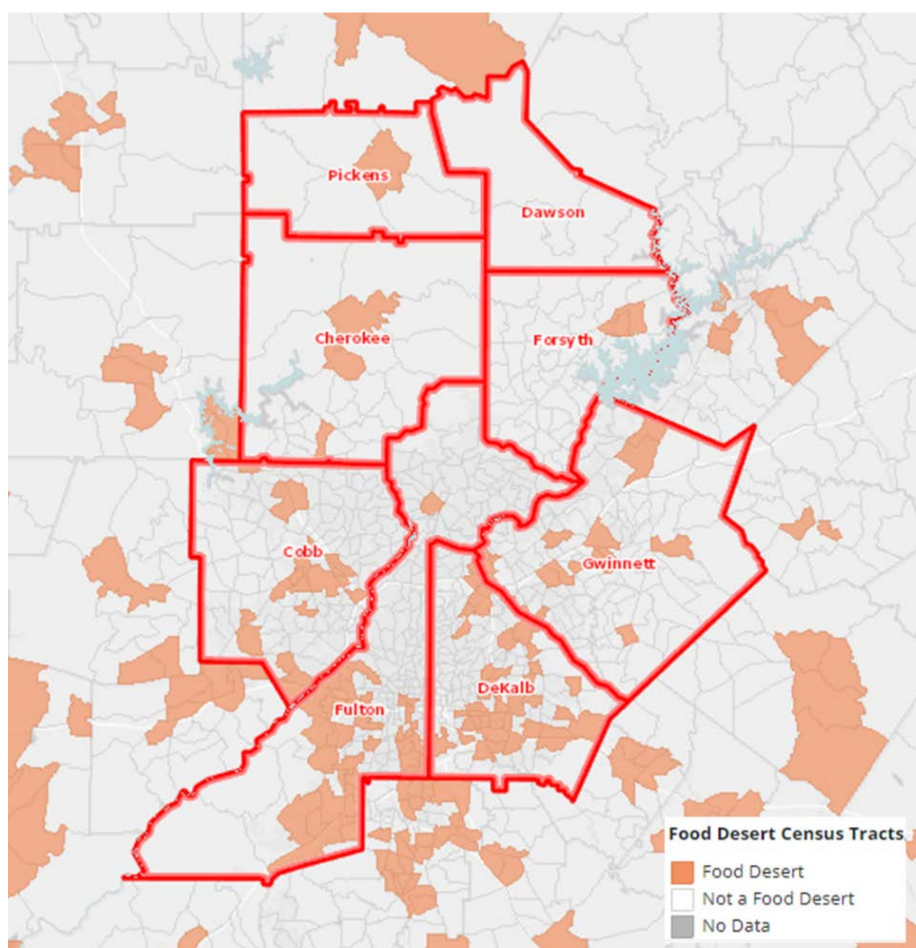
Being without reliable access to a sufficient quantity of affordable and nutritious food

Food Deserts

Areas that are considered "low-income communities" (poverty rates and median family income) combined with areas that are considered "low-access communities" (large portions of the population live more than 1-mile (urban) or 10 miles (rural) from a supermarket or large grocery store)

Increasingly, nutrition advice and dietary guidelines are being provided to patients by doctors, becoming part of prevention strategies in cancer, and are being viewed as a first line of defense against many chronic diseases. Public health research has illustrated that communities without supermarkets have higher rates of obesity, diabetes, and other diet-related health problems when compared to communities with access. Food security occurs when all residents of a community are able to obtain food that can provide a nutritional diet that is both safe and culturally relevant to the individual. Food insecurity can be a result of several factors including poverty and food access based on the physical environment. Food deserts represent the geographic application of food insecurity. Within the Northside Community, 30% of the low-income population was considered to *also* have low food access, compared to 27% of the population in Georgia. This amount translates to over 1 million residents of the Community. Approximately 89% of this low income/low food access population lives in Fulton, DeKalb, Gwinnett, and Cobb Counties (U.S. Department of Agriculture, 2015). There were several areas within the Northside Community that the USDA considered food deserts in 2015. The food deserts in the Community are illustrated in **Figure 44** (United States Department of Agriculture, 2015).

Figure 44: Map of Food Desert Locations in the Northside Community, CY 2015



Source: USDA, Food Access Research Atlas, 2015, accessed via http://www.ers.usda.gov/data/fooddesert

Access to Recreational Facilities

When people have access to recreational/fitness facilities they are more encouraged to practice healthy behaviors related to physical activity. The Community had an average of 14 recreation and fitness facilities per 100,000 population. This was higher than both the Georgia and national averages of 10 and 11, respectively. All counties in the Community except for Dawson County (9 facilities per 100,000 population) exceeded the state and national rates, with Fulton County having the most recreational and fitness facilities with an estimated 18 facilities per 100,000 population (U.S. Census Bureau, 2016).

Health Outcomes

Background and Overview

To gain a better understanding of how the health factors analyzed (social & economic factors, health behaviors, healthcare access, and the physical environment) for this CHNA manifest within the Community, the health outcomes of the population were also analyzed. Mortality and morbidity measures of the Northside Community are discussed in the subsequent sections to determine how healthy community members are and why Community members are dying.

High blood pressure, high cholesterol and being a smoker were the most common chronic conditions among Community members, all estimated to affect at least 20% of the Community. In addition to those chronic conditions, the Community had a higher incidence of cancer than Georgia, with breast, prostate, lung and bronchus, colon and rectum, and melanoma cancers having the highest incidence within the Community. These findings align with the two leading causes of death within the Community, which were cardiovascular disease and cancer. Additional chronic conditions include depression/anxiety disorders and diabetes, which were more prevalent in the lowest-income households within the Community and among the uninsured. Some differences in health outcomes were found between races, with depression/anxiety being more prevalent in White and Hispanic households compared to Black and Asian households. Smoking was most common among Hispanic households. Additionally, non-Hispanic Black Males had the highest incidence rate of cancer in the Community, of the populations analyzed, largely driven by a high incidence rate of prostate cancer. The Black population was also found to have higher rates of being overweight/obese and higher hospital discharge rates for diabetes than other racial groups. Furthermore, large disparities existed for infant mortality rates within the Community, with the infant mortality rate among Black infants more than double that of White, Asian or Hispanic infants.

Health Outcomes: Morbidity

Morbidity provides a look at health outcomes related to sickness and illness. The Community's health behaviors, access to clinical care, social and economic factors, and physical environment should be considered when exploring the prevalence of many of the health conditions discussed in the following section.

Chronic Conditions

The NRC provided a comprehensive list of chronic conditions to respondents of its NRC Survey. Respondents were asked "Has any household member been diagnosed as having any of the following health problems?" Below is a table of the conditions presented to respondents.

Table 10: National Research Corporation List of Chronic Conditions Provided to 2017 Survey Respondents	
Arthritis	High Cholesterol
Asthma	Migraines
Cancer (Other Than Skin)	Obesity/Weight Problems
Chronic Headaches	Osteoporosis
Chronic Heartburn	Sciatica/Chronic Back Pain
Depression/Anxiety Disorder	Skin Cancer
Diabetes	Sleep Problem/Insomnia
Heart Disease	Smoker
High Blood Pressure	Stroke
No Chronic Conditions in HH	

Given that this survey question pertained to any member in the household and not just the NRC Survey respondent, the results provide a broad representation of the Community's health status.

Within the Community, the top ten conditions (i.e. most frequently mentioned) are presented in **Figure 45**. Respondents in 35% of the households surveyed indicated no one in the household had a chronic condition. Approximately 33% of respondents reported a household member had high blood pressure (National Research Corporation, 2017).

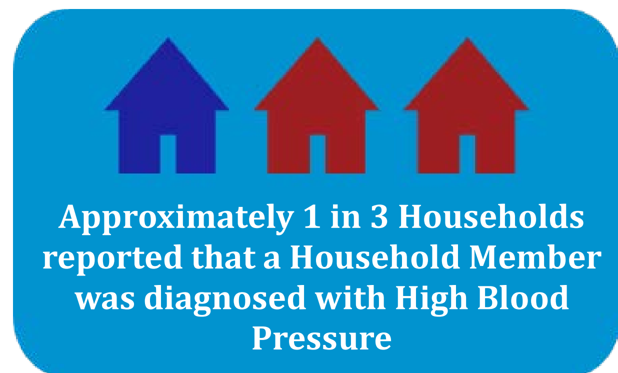
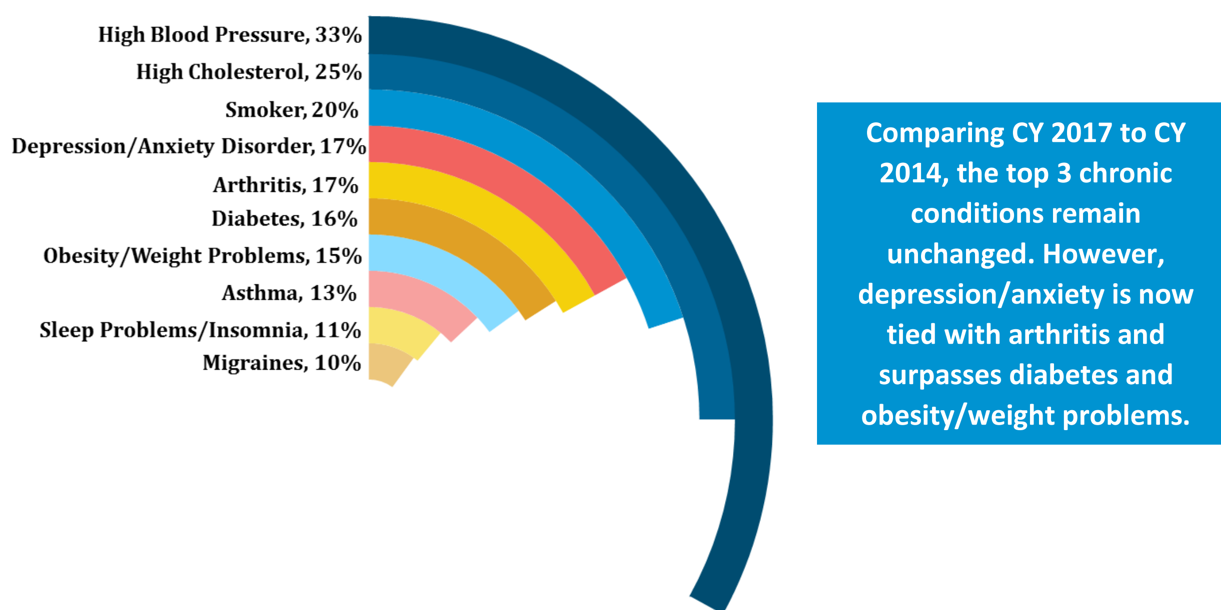


Figure 45: 2017 Northside Community's Top Ten Chronic Conditions, Percent of Households Reporting the Condition



Source: National Research Corporation, Market Insights, 2017

Chronic Conditions by Household Income

Northside analyzed the top chronic conditions by household income to determine if there were any differences between households based on income levels. **Table 11** compares the top 5 chronic conditions in the Community to those of the lowest (<$25,000) and highest (>$75,000) income brackets.

Table 11: 2017 Northside Community Top 5 Reponses for Chronic Conditions by Income (% of Households)		
All Households, All Income Levels	**Households with HHI <$25,000**	**Households with HHI >$75,000**
No Chronic Condition (34%)	High Blood Pressure (35%)	No Chronic Condition (37%)
High Blood Pressure (34%)	No Chronic Condition (31%)	High Blood Pressure (32%)
High Cholesterol (26%)	Depression/Anxiety Disorder (26%)	High Cholesterol (27%)
Smoker (21%)	Smoker (25%)	Smoker (20%)
Depression/Anxiety Disorder (18%)	High Cholesterol (24%)	Diabetes (15%)

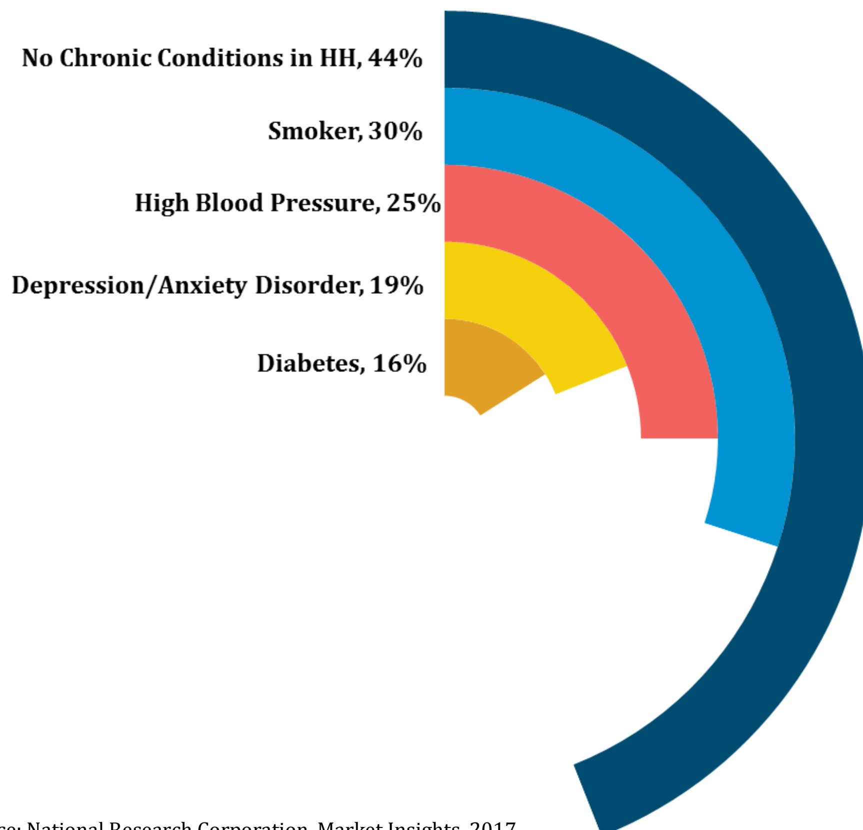
While many chronic conditions affecting all households also affected the low-income households, there were subtle differences in the ranking or hierarchy of the chronic conditions. Of note, "No Chronic Condition" was the most common response in the

Community and high-income households, whereas high blood pressure was the most common response for low-income households. This could illustrate a lack of preventive health behaviors and low access to preventive care among members of low-income households. Additionally, smoking was the fourth most common response across both income groups and the Community overall, but the prevalence differed between low and high-income households. Smoking was listed as a chronic condition in 25% of low-income households compared to 20% in high-income households. Cigarette smoking is linked to heart disease, hypertension and increased blood pressure. In fact, about 30% of all deaths from heart disease in the U.S. are directly related to cigarette smoking. In addition to smoking, depression/anxiety was among the top 5 health conditions in the low-income household group and was not in the top 5 for high-income households. This again illustrates the need for mental health services for the economically vulnerable populations within the Community (National Research Corporation, 2017).

Chronic Conditions among the Uninsured

The top 5 chronic conditions are the same among low-income households and the uninsured with some slight differences in rankings.

Figure 46: 2017 Top 5 Chronic Conditions among Uninsured Households in the Northside Community, Percent of Households Reporting Condition



Source: National Research Corporation, Market Insights, 2017

Chronic Conditions by Race/Ethnicity

There were several differences in the top chronic conditions when the results were stratified by race or ethnicity. This stratification for the top 10 chronic conditions in the Community is displayed in **Table 12** (National Research Corporation, 2017).

Table 12: 2017 Northside Community, Top 10 Chronic Conditions within the Northside Community by Race/Ethnicity

Top 10 Chronic Conditions	% White Households	% Black Households	% Asian Households	% Hispanic Households
No Chronic Conditions in HH	30%	35%	55%	33%
High Blood Pressure	35%	36%	23%	24%
High Cholesterol	30%	20%	20%	27%
Smoker	23%	17%	12%	29%
Depression/Anxiety Disorder	23%	11%	3%	17%
Arthritis	20%	15%	4%	12%
Diabetes	15%	19%	10%	17%
Obesity/Weight Problems	17%	14%	3%	12%
Asthma	14%	14%	8%	11%
Sleep Problem/Insomnia	14%	8%	2%	9%

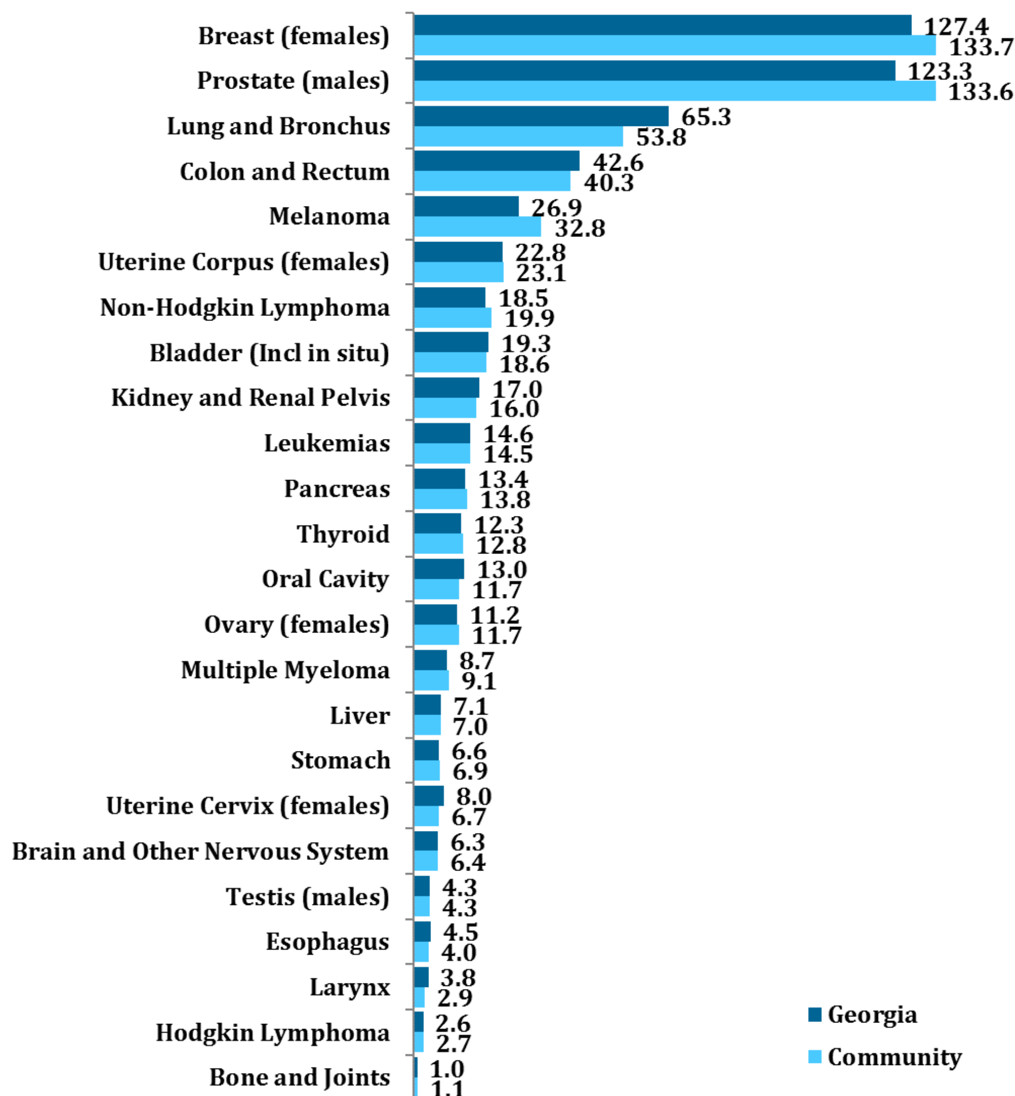
Minority groups indicated “No Chronic Conditions” present in the household most often; however, it is difficult to determine if this was the result of another factor (e.g. lack of screening and primary care to diagnose chronic conditions) or if minority populations truly have less chronic conditions. The White and Black populations have the highest prevalence of high blood pressure, with 35% of White households and 36% of Black households indicating a household member suffers from high blood pressure, compared to only 23% of Asian households. The Hispanic population has the most households with a reported smoker, with 29% of households having a smoker in Hispanic households compared to only 12% of Asian households. It is important to remember, smoking often affects the health of all household members as a result secondhand smoke (National Research Corporation, 2017).

Cancer Rates

The Georgia Comprehensive Cancer Registry (GCCR) collects information on all cancer cases diagnosed among Georgia residents. Northside utilized GCCRs age-adjusted incidence rates for 2012-2016 to compare the Northside Community to Georgia. Between 2012 and 2016, the Northside Community’s incidence of cancer was nearly identical to that of Georgia overall, with approximately 474 new cases of cancer per 100,000 population for both. Breast (females), prostate (males), lung and bronchus, colon and rectum, and melanoma were the tumor sites with the highest incidence rates in both the Community

and Georgia. All tumor site incident rates are displayed in **Figure 47** (Georgia Department of Public Health, Georgia Comprehensive Cancer Registry, 2012-2016).

Figure 47: Age-Adjusted Cancer Incidence Rates for the Northside Community Compared to Georgia, 2012-2016



Source: The Georgia Department of Public Health, Georgia Comprehensive Cancer Registry, 2012-2016

The Community's incidence rates of prostate, breast, and melanoma cancers were significantly higher than Georgia's ($p<0.05$), while the rates of lung and bronchus and colon and rectum cancers were significantly lower ($p<0.05$) (Georgia Department of Public Health, Georgia Comprehensive Cancer Registry, 2012-2016).

GCCR also provided cancer incidence stratified by gender and for the two largest racial groups in the Community, non-Hispanic Whites and non-Hispanic Blacks. Northside

analyzed differences in these incidence rates for the top 6 tumor sites in the Community in **Table 13** (Georgia Department of Public Health, Georgia Comprehensive Cancer Registry, 2012-2016).

Table 13: Age-Adjusted Cancer Incidence Rates for the Northside Community by Race/Ethnicity, 2012-2016

	Total	Males	Non-Hispanic Black Males	Non-Hispanic White Males	Females	Non-Hispanic Black Females	Non-Hispanic White Females
All Sites	474.2	540.6	571.0	555.3	429.4	410.9	460.0
Prostate	--	133.6	194.5	117.2	--	--	--
Breast	--	--	--	--	133.7	135.6	138.9
Lung and Bronchus	53.8	63.8	72.3	64.0	46.6	43.2	51.0
Colon and Rectum	40.3	47.3	54.6	45.6	34.8	39.1	33.5
Melanoma	32.8	44.3	1.1	68.5	24.9	0.9	45.0
Uterine Corpus	--	--	--	--	23.1	25.6	22.9

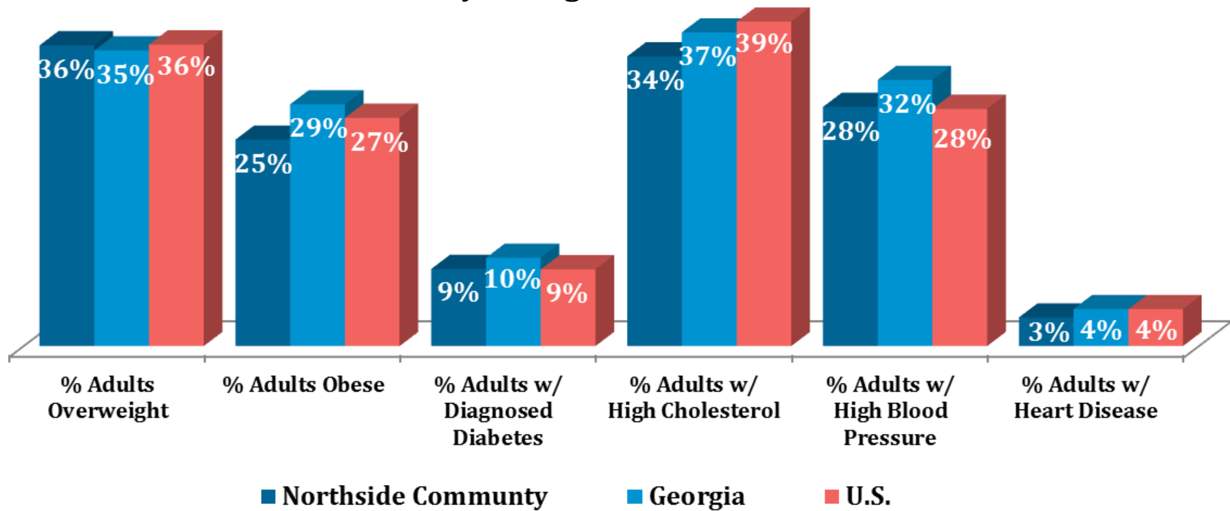
Source: The Georgia Department of Public Health, Georgia Comprehensive Cancer Registry, 2012-2016

Based on overall cancer incidence rates, non-Hispanic Black males have the highest incidence of cancer within the Community; this in large part is a result of the high incidence of prostate cancer among non-Hispanic Black males. Among females, the non-Hispanic White population had a higher rate of cancer compared to Non-Hispanic Black females, with the exception of cancer of the colon and rectum and uterine corpus (Georgia Department of Public Health, Georgia Comprehensive Cancer Registry, 2012-2016). Comparing these rates to the rates from the last CHNA period (2009-2013), male rates have dropped significantly while female rates, namely Non-Hispanic White female rates, have risen significantly. The cancer rate for "All Sites" for Non-Hispanic White females rose from 449.7 per 100,000 population in the last period to 460.0 per 100,000 population in the current period. This overall increase was largely driven by increases in the rates of colon and rectal cancer, melanoma, and uterine corpus cancer.

Chronic Disease/Health Status

Within the Community, 36% of adults (aged 18 or older) self-reported that they were overweight (BMI 25-30), and 25% were obese (BMI over 30). Within the Community, the percent of overweight adults was slightly higher than the Georgia rate, 35%; however the percent of obese adults was slightly lower than the Georgia rate, 29% (Center for Disease Control and Prevention, 2011-2012; Centers for Disease Control and Prevention, 2013).

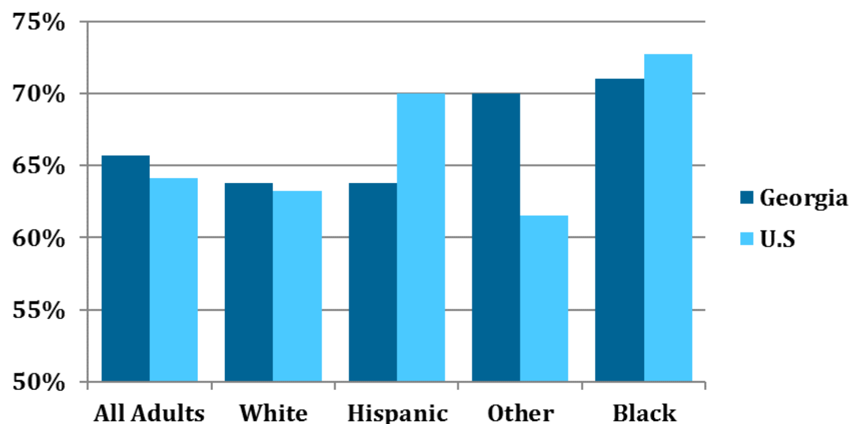
Figure 48: Comparison of Chronic Disease and Health Status Indicators between the Community, Georgia and the United States



Source: CDC BRFSS, 2011-2012, Accessed via CHNA.org and CDC, National Center for Chronic Disease Prevention and Health Promotion, 2012, Accessed via CHNA.org

Data on overweight/obese adults was not available stratified by race or ethnicity at the county-level; however, it was available at the state-level. In Georgia, 64% of White and Hispanic adults were overweight or obese (all adults with BMI over 25); this was lower than the overall adult rate of 66%. Within the Black population in Georgia, 71% of adults were considered overweight or obese. Not enough data was available to determine the rate for Asian adults in Georgia. Although all racial/ethnic groups analyzed have high rates of overweight/obese adults; within Georgia, the Black population had the highest percentage (Center for Disease Control and Prevention Behavioral Risk Factor Surveillance System, 2014).

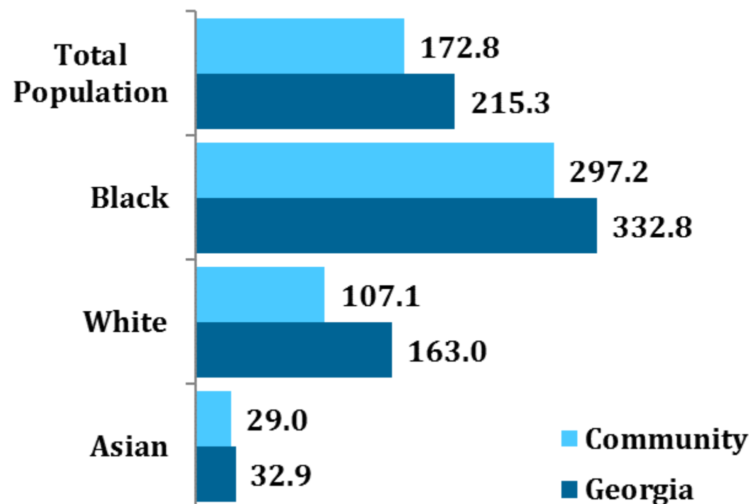
Figure 49: Percent of Adults who were Overweight/Obese in 2014 by Race/Ethnicity in Georgia and the U.S.



Source: CDC BRFSS, Overweight & Obesity Rates for Adults by Race/Ethnicity, 2014 Accessed via the Kaiser Family Foundation

Nearly 250,000 adults in the Northside Community were diagnosed with diabetes in 2013; representing approximately 9% of the total population. Rates were especially high in DeKalb, Pickens and Forsyth Counties with diagnosis rates of 10% or more. The rate of diabetes within the Community's population increased from 8% in 2004 to 9% in 2012. The Community has consistently (2004 – 2013) maintained a lower rate of diabetes than the state overall (Centers for Disease Control and Prevention, 2013). Although the rate of diabetes was not available stratified by race/ethnicity at the county-level, hospital discharge rates for diabetes (based on principal diagnosis) was available based on race. The diabetes discharge rate for the Black population was significantly higher than White and Asian populations in both the Community and Georgia. These rates are displayed in **Figure 50** (Georgia Department of Public Health, 2014).

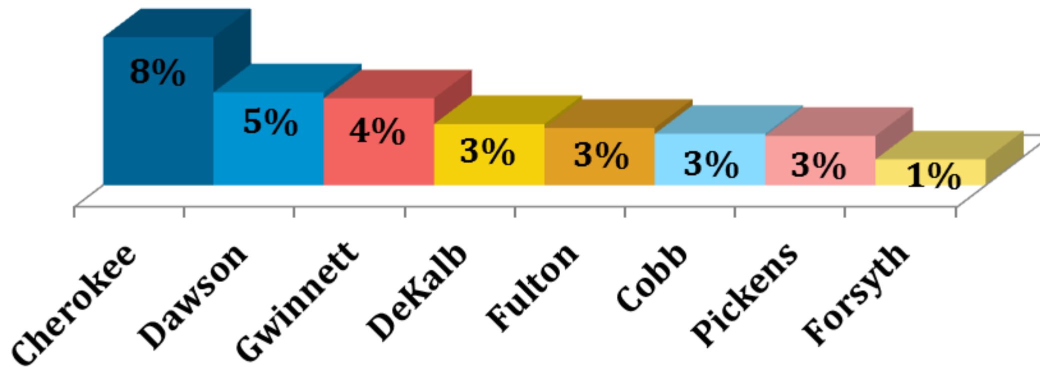
Figure 50: CY 2017 Diabetes Hospital Discharge Rate (per 100,000 population) by Race for the Community Compared to Georgia



Source: Georgia Department of Public Health, Online Analytical Statistical Information System, 2017

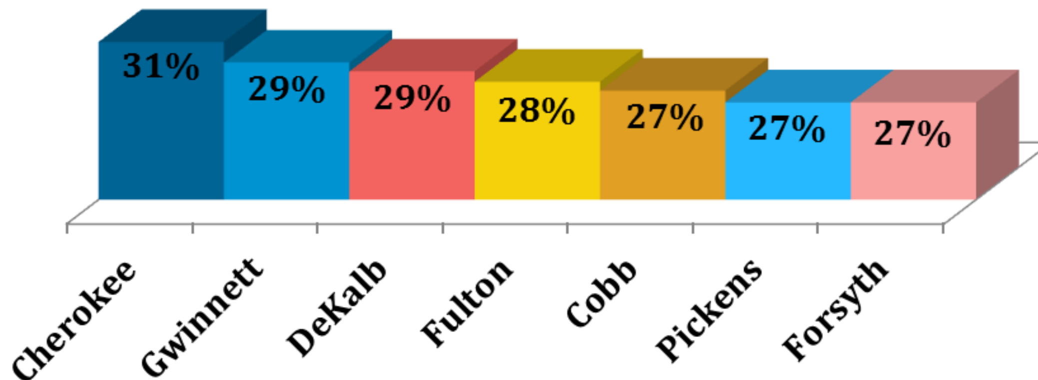
According to the American Heart Association, controlling high blood pressure, cholesterol and blood glucose are essential to managing the risk of heart disease. Based on survey results from the CDC, 3% of the adult population in the Community suffered from heart disease, 34% had high cholesterol and 28% had high blood pressure. Within the Northside Community, these rates varied widely between counties. In general, counties with high rates of high blood pressure also had high rates of heart disease (high blood pressure rates were not available for Dawson County) (Center for Disease Control and Prevention, 2011-2012).

Figure 51: Percent of Adults within the Community with Heart Disease by County



Source: CDC BRFSS, 2011-2012, Accessed via CHNA.org

Figure 52: Percent of Adults within the Community with High Blood Pressure by County



Source: CDC BRFSS, 2011-2012, Accessed via CHNA.org

AIDS

In 2018, the Atlanta metro-area, which is largely encompassed by Northside's Community definition, was ranked number 4 of all major U.S. cities in HIV rate (McKenzie, AIDS in Atlanta, 2018). This is a rise in ranking from 2015 when the Atlanta metro-area was ranked number 5 in HIV rate. In 2012, there were 21,752 population living with an HIV infection in the Community. By 2016, that number had increased by 19.5% to 25,983 population living with an HIV infection in the Community. The rate of HIV infections varied greatly between counties in the Community in 2017, as it has in previous years. Only 2 counties had rates higher than 500 persons infected per 100,000 population, including DeKalb and Fulton Counties with rates of 1,167 and 1,599 per 100,000 population, respectively. In contrast,

Forsyth and Dawson Counties had the lowest rates, at 64 and 126 per 100,000 population, respectively (AIDSVu, 2015, 2016). There were 336 deaths caused by HIV/AIDS in Georgia, and 38% (129) were within the Northside Community. Of the Community's HIV/AIDS deaths, 78% were from residents of Fulton (53%) and DeKalb (25%). Cherokee, Dawson and Pickens Counties had no deaths caused by HIV/AIDS (Georgia Department of Public Health, 2017).

Health Outcomes: Mortality

Mortality measures were also evaluated for this CHNA to understand the cause-specific death rates within the Community. When available, the data was stratified by age, sex and race/ethnicity.

Leading Cause of Death

In 2017, according to the Georgia Department of Public Health, there were 83,122 deaths in Georgia. The Community accounted for approximately 28% of Georgia's deaths (23,243). When comparing age-adjusted death rates in 2017, Dawson County had the highest death rate at 862 deaths per 100,000 population and DeKalb and Forsyth the least, both with 623 deaths per 100,000 population.

In 2017, Georgia and the Community differed slightly in their leading causes of death, as indicated in **Table 14**. The Community had a higher percentage of deaths by cancers, nervous system diseases, and external causes (which did not even rank in Georgia's top 5 causes of death), while also having a lower percentage of deaths by respiratory disease. Additionally, endocrine, nutritional and metabolic disease did not rank in the Community's top 5 causes of death for 2017.

Table 14: CY 2017 Leading Causes of Death within the Northside Community Compared to Georgia

Table 14: CY 2017 Leading Causes of Death within the Northside Community Compared to Georgia			
Georgia		Community	
Major Cardiovascular Diseases	30%	Major Cardiovascular Diseases	28%
Cancers	21%	Cancers	22%
Respiratory Disease	10%	Nervous System Diseases (Alzheimer's, Parkinson's, etc..)	10%
Endocrine, Nutritional, and Metabolic Disease (including Diabetes)	9%	External Causes	9%
Nervous System Diseases (Alzheimer's, Parkinson's, etc.)	9%	Respiratory Disease	8%

Source: Georgia Department of Public Health, Online Analytical Statistical Information System, 2017

Within the Northside Community, the top causes of death varied based on race and ethnicity, as shown in **Table 15**.

Table 15: Mortality by Race within the CHNA Community, CY 2017					
Variable	Northside Community	White	Black	Asian	Hispanic
Major Cardiovascular Diseases	28%	28%	29%	25%	21%
Cancers	22%	22%	22%	24%	26%
Respiratory Disease	8%	10%	6%	7%	4%
External Causes	9%	9%	9%	12%	19%
Mental and Behavioral Disorders	3%	3%	3%	1%	1%
Nervous System Diseases (Alzheimer's, Parkinson's, etc..)	10%	12%	6%	8%	6%
Endocrine, Nutritional, and Metabolic Disease (including Diabetes)	5%	4%	6%	9%	5%
Digestive System Diseases	3%	4%	3%	3%	4%
Infectious and Parasitic Disease Deaths	3%	2%	4%	3%	4%
Reproductive and Urinary System Disease	3%	2%	4%	3%	2%
Fetal and Infant Conditions	1%	0%	1%	1%	3%
Birth Defects	0%	0%	1%	1%	2%
All Other Causes (n=4)	0%	0%	1%	0%	1%

Source: Georgia Department of Public Health, Online Analytical Statistical Information System, 2017

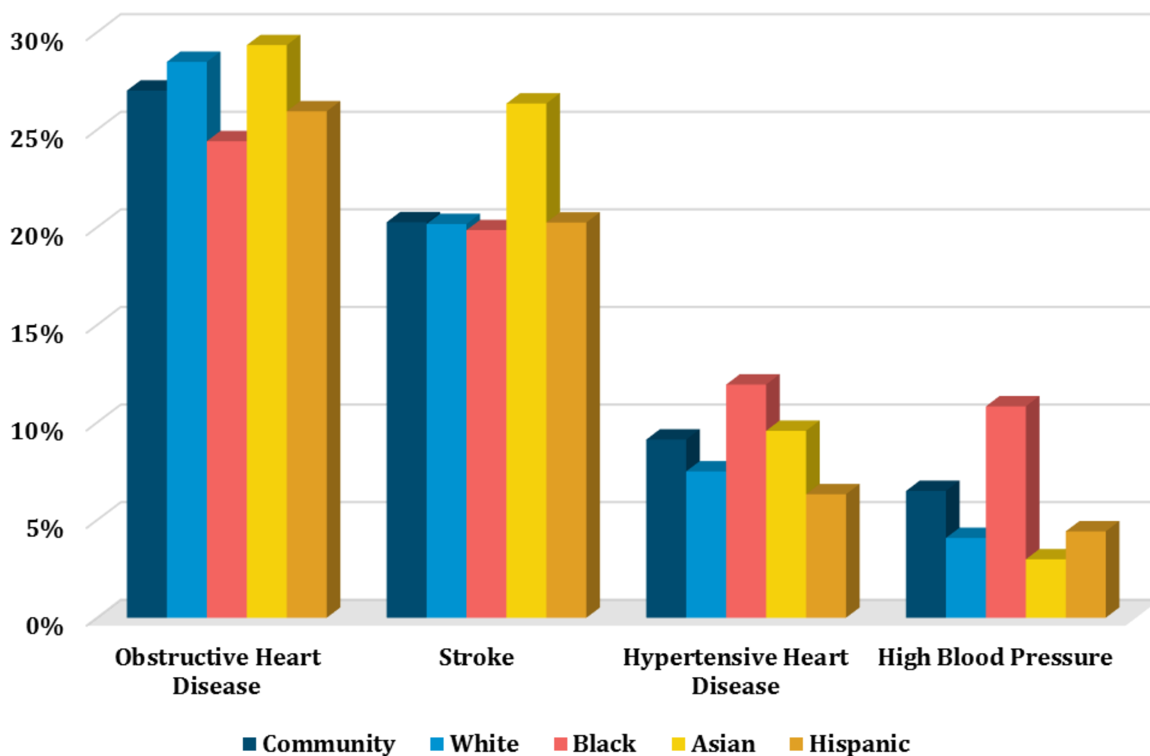
Causes of death among the Hispanic population differed from the Community the most. Cardiovascular disease and cancer were still the top two causes of death among the Hispanic population; however, they were swapped, with cancer being the leading cause of death among the Community's Hispanic population and the major cardiovascular diseases accounting for a lower percentage of deaths than the rest of the Community. External causes, fetal and infant conditions, birth defects, infectious and parasitic disease, and digestive system disease all constituted a higher portion of deaths in the Hispanic population than in the Community as a whole.

Racial groups varied in their leading causes of death as well. The White population suffered from more respiratory disease, nervous system disease and digestive system disease deaths than the Community overall. Major cardiovascular disease; endocrine, nutritional, and metabolic disease; infectious and parasitic disease; reproductive and urinary system disease; and birth defects comprised a larger percentage of deaths among the Black population than the Community as a whole. The Asian population suffered from a larger percentage of cancers, external causes, endocrine, nutritional, and metabolic diseases, and birth defects when compared to the Community as a whole. One commonality for all three minority groups analyzed (Hispanic, Black, and Asian) was that the percentage of deaths related to fetal and infant conditions and birth defects was higher among minority groups than the Community's totals (Georgia Department of Public Health, 2017).

Major Cardiovascular Disease

Major cardiovascular disease was the most common cause of death for Georgians and Community members. Obstructive heart disease, stroke and hypertensive heart disease were the most common types of major cardiovascular disease within the community leading to death. **Figure 53** illustrates the 4 most common types of major cardiovascular disease deaths within the Northside Community by race and ethnicity. A larger percentage (26%) of the Asian population's cardiovascular disease deaths were caused by strokes compared to the Community (20%). Similarly, hypertensive heart disease and high blood pressure caused larger percentage of cardiovascular disease deaths in the Community's Black population. Hypertensive heart disease and high blood pressure caused 12% and 11% of cardiovascular disease deaths in the Community's black population, respectively, compared to 9% and 6% in the Community.

Figure 53: CY 2017 Percent of Major Cardiovascular Disease Deaths by Cause and Race/ Ethnicity within the Northside Community



Source: Georgia Department of Public Health, Online Analytical Statistical Information System, 2017

Cancer

Cancer was the second leading cause of death within the Community and was either the leading cause or second leading cause of death across all racial/ethnic groups. As **Table 15** illustrates, there is some difference in the type of cancers causing the most cancer deaths by race and ethnicity. Lung cancer causes the most deaths across all races/ethnicities in the Community; however, lung cancer causes a slightly smaller percentage of total cancer deaths in all minority groups compared to the Community. In contrast, the Black population has a higher percentage of breast, colon and prostate cancer deaths compared to the Community; the Asian population has a higher percentage of colon, liver and stomach cancer deaths compared to the Community; and the Hispanic population has a higher percentage of liver and brain cancer deaths compared to the Community.

Table 15: Percent of Cancer Deaths Caused by Top 5 Cancers by Race/Ethnicity within the Northside Community CY 2017

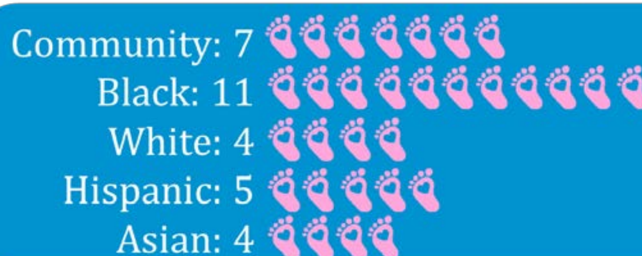
Community	White	Black	Asian	Hispanic
Lung (21%)	Lung (22%)	Lung (20%)	Lung (20%)	Lung (10%)
Colon (10%)	Colon (9%)	Breast (12%)	Colon (13%)	Liver (10%)
Breast (10%)	Breast (8%)	Colon (12%)	Liver (12%)	Brain (10%)
Pancreatic (8%)	Pancreatic (8%)	Prostate (7%)	Stomach (9%)	Breast (9%)
Prostate (6%)	Prostate (5%)	Pancreatic (7%)	Pancreatic (7%)	Colon (9%)

Maternal and Infant Health

Northside is recognized as a leader in obstetrical and newborn care and consistently delivers more babies than any other Georgia hospital, and often even across all hospitals nationally. Another important measure of the Community's health status is the health status of the Community's mothers and babies, a population of particular concern to Northside.

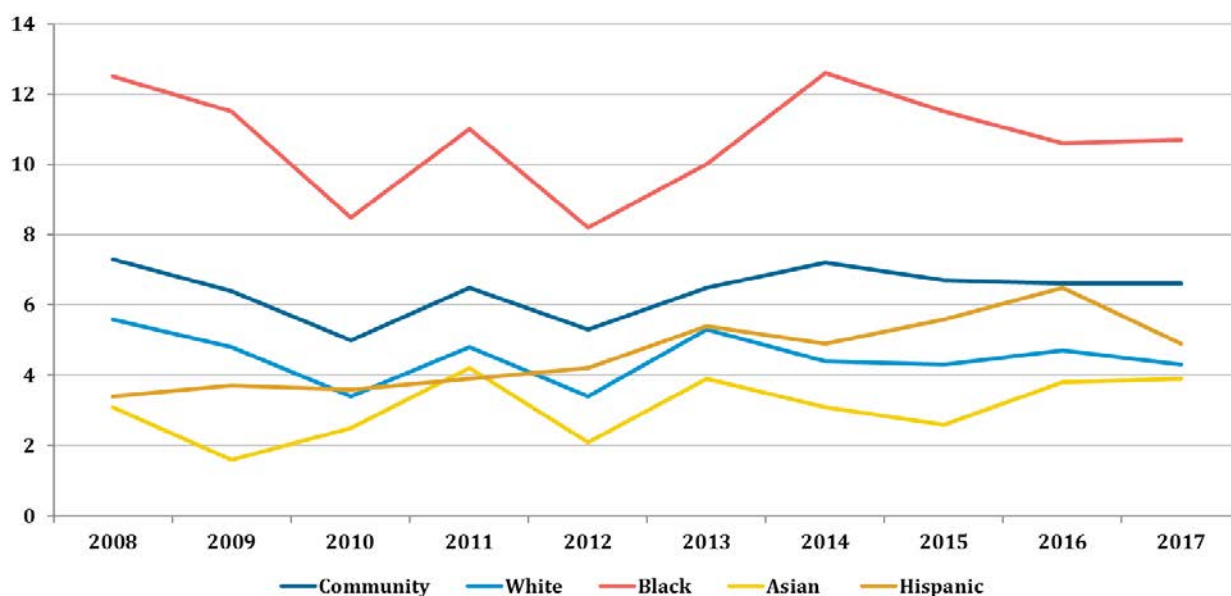
Infant mortality rates count the number of infant deaths per 1,000 live births before the age of 1. According to America's Health Rankings, Georgia has one of the highest rates of infant mortality in the U.S., ranking 45th out of the 50 states in 2018 (America's Health Rankings, United Health Foundation, 2018). The main causes of infant mortality are that babies are

Community Infant Mortality Rates, 2017
(Infant Deaths per 1,000 Live Births)



born prematurely, that they do not weigh enough at birth, or both. In 2017, Northside's Community Infant Mortality Rate ("IMR") was 6.6, compared to Georgia's of 7.2. Still, Georgia has made steady progress, with a decline in its infant mortality rate from 10.1 in 1994. The Community's rate also declined in this time frame from a high of 8.7. Within Georgia and the Community there were significant racial differences in infant mortality rates. In 2017 in Georgia, Black infants had more than double the infant mortality rate of White infants with an IMR of 11.6 compared to 4.8. A similar disparity was observed within the Community, with Black infants' IMR of 10.7 and White infants' IMR of 4.3. Asian and Hispanic infants within the community had lower IMRs of 3.9 and 4.9, respectively. Northside analyzed IMRs over a 10-year period, 2008 – 2017, and although rates did not show a clear growth/decline, the disparity between the black population and other racial/ethnic groups was consistent across the 10-year time period. This is illustrated in **Figure 54**.

Figure 54: Infant Mortality Rates within the Community by Race and Ethnicity between CY 2008 - 2017



Source: Georgia Department of Public Health, Online Analytical Statistical Information System, 2008-2017

Premature birth and low birth weight are closely related measures to infant mortality, contributing not only to infant mortality, but also long-term health problems in infants who survive. Georgia received a "D" on the 2018 March of Dimes Report Card on Premature Births, a grade the state has maintained since 2015 (Miller, 2018). In 2017, Northside's Community had the same percentage of premature births as Georgia overall (11%), while performing just slightly better than Georgia overall in percentage of babies born with a low birth weight (Georgia: 10%, Community: 9%). Similarly to IMR, there were racial disparities for premature births and low birth weight babies within the Community with

13% of Black infants born premature, compared to 9% of White, Asian and Hispanic infants. Likewise, 13% of Black infants were born at a low birth weight, compared to 9% of Asian infants, 7% of White infants and 7% of Hispanic infants (Georgia Department of Public Health, 2017).

Suicide

According to the CDC, there is one suicide for every estimated 25 suicide attempts with an estimated 250,000 population each year becoming suicide survivors. This illustrates how suicide mortality rates represent a small portion of the population that is actually battling depression and suicidal thoughts. In 2017, there were a total of 1,452 suicides in Georgia, 466 (32%) of which were in the Community. The Community had an age-adjusted suicide rate of 11.6 per 100,000 population in the Community. This rate peaked in Pickens County, a county with only 10 suicides, but a rate of 31.7, compared to DeKalb County that had the lowest rate of suicide at 9.3 per 100,000 population with 70 suicides (Georgia Department of Public Health, 2017).

Homicide

Homicide mortality rates are an outcome of violent crime in a community. In 2017, there was a total of 809 homicides in Georgia, 301 (37%) of which were in the Community. This resulted in an age-adjusted homicide rate of 7.5 per 100,000 population in the Community. This rate was highest in DeKalb and Fulton Counties. These two counties accounted for 70% of the Community's homicides with a rate of 12.3 homicides per 100,000 population in DeKalb County and 11.2 homicides per 100,000 population in Fulton County. Several counties in the Community had a number of homicides too low to calculate a rate for (less than 5 homicides) in 2017, including Dawson (which had no homicides), Forsyth, and Pickens Counties (Georgia Department of Public Health, 2017).

Community Stakeholders

NORTHSIDE
HOSPITAL

Part IV: Community Stakeholders

Process for Identifying Stakeholders

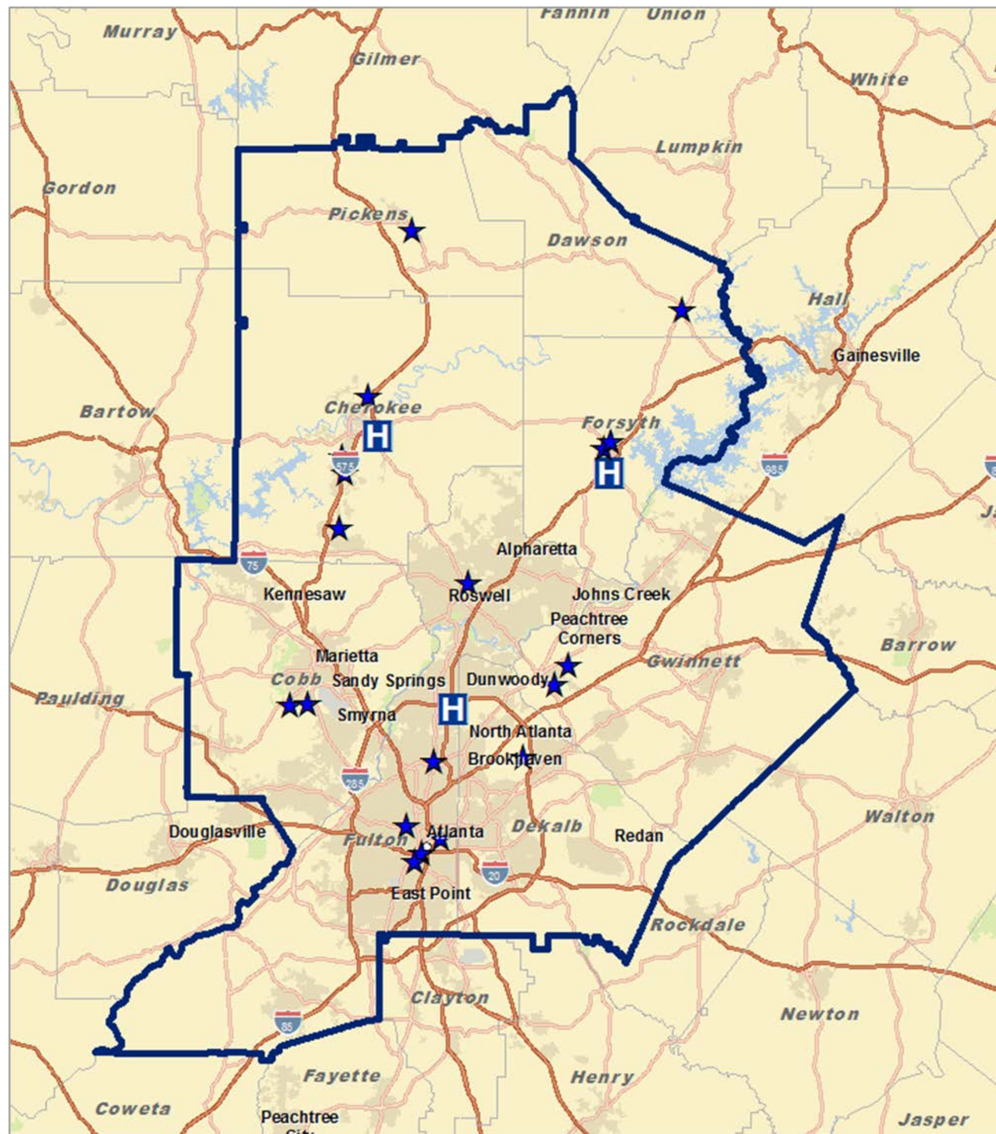
Stakeholder interviews provided additional insight into the health needs of the Community for this CHNA. Northside identified individuals in the Community who could provide a unique perspective and connection to the Community and its members' health needs. Northside made specific efforts to identify stakeholders with special knowledge of or expertise in public health. After identifying stakeholders to interview, Northside developed the Stakeholder Assessment Discussion Guide, a copy of which is included in Appendix A. This guide was used to lead a discussion with each stakeholder to learn about the needs and resources within the Northside Community. For this process, Northside reached out to 44 stakeholders, including representatives at all county-level public health departments in the Community. This outreach effort resulted in the completion of 19 stakeholder interviews. **Table 16** summarizes the completed stakeholder interviews by organization and type.

Table 16: Summary of Stakeholder Interviews					
Safety Net Clinics		Community Organizations		Health Departments	Business Community
Bethesda Community Clinic	Good Samaritan Atlanta	United Way - Forsyth	Cherokee County School District	Cherokee County Health Department	Cherokee County Chamber of Commerce
Good Samaritan Cobb	Good Samaritan Gwinnett	LifeLink Foundation	La Amistad	Cobb/Douglas County Health Department	Cumming/Forsyth Chamber of Commerce
Center for Black Women's Wellness	Community Advanced Practice Nurses	North Fulton Community Charities	Healthy Mothers Healthy Babies Coalition of Georgia	Pickens County Health Department	
Urban Health and Wellness	Good Shepherd of Dawson County				

Description of Our Participating Stakeholders

The map below is a general representation of the various Community stakeholders from whom Northside sought input during the CHNA process. The map includes the stakeholders' office locations; however, many of the stakeholders served communities and populations beyond their direct location or home-county. Thus, the map is not intended to be a literal representation of the population served by the stakeholders interviewed.

Figure 55: Office Locations of Northside Community Stakeholders who participated in Northside's FY 2019 – FY 2021 CHNA



Northside conducted interviews with 19 stakeholders from across the Community, after contacting nearly 50 stakeholders and inviting them to participate. The stakeholders that Northside contacted represented a broad range of perspectives from local health departments, safety-net clinics, Federally Qualified Health Centers, community organizations, and the business community. **Table 17** provides a summary of each stakeholder's mission and population served. Northside sought stakeholders who represent the medically underserved, uninsured, and disparate populations within the Community. Northside reached out to these stakeholders via phone and email in September 2018, and again in January and February 2019. Twelve (12) interviews were

completed during the first round of outreach, and seven (7) interviews were completed in the following round. These multiple outreach efforts culminated in interviews with stakeholders from eight (8) safety-net clinics, three (3) Federally Qualified Health Centers, and six (6) community organizations in addition to three (3) interviews with health department officials.

Table 17: Northside Community Stakeholder Summaries				
Type	**Organization**	**Stakeholder's Title**	**Geographic Area Focus for Interview**	**Mission**
Business Community	Cherokee County Chamber of Commerce	President and CEO	Cherokee County	To promote business and the community while expanding the economy and enhancing the quality of life.
Business Community	Cumming/Forsyth Chamber of Commerce	President and CEO	Forsyth County	Dedicated to fostering job creation and capital investment within our community
Community Org	United Way - Forsyth	Executive Director	Forsyth and Dawson Counties	Every child in every country should have a good education. Every citizen should feel financially stable. Every community should be healthy and strong.
Community Org	LifeLink Foundation	Outreach/ Education Specialist	CHNA Community	LifeLink Foundation is a non-profit community service organization dedicated to the recovery of life-saving and life-enhancing organs and tissue for transplantation therapy. The Foundation works in a sensitive, diligent, and compassionate manner to facilitate the donation of desperately needed organs and tissues for waiting patients, support research efforts to enhance the available supply of organs and tissue for transplant patients, improve clinical outcomes of patients post transplantation and work closely with the United Network For Organ Sharing (UNOS) to support its goals.
Community Org	North Fulton Community Charities	Executive Director	Fulton County	To build self-sufficiency and prevent homelessness and hunger in our community by providing emergency assistance and enrichment programs.
Community Org	Cherokee County School District	Chief Communications Officer	Cherokee County	We, the School Board of the Cherokee County School District, are committed to educating the emerging generation through learning environments designed to increase the performance of all students.
Community Org	La Amistad	Executive Director/Parent Partnership Director	Fulton County	Our Mission is to prepare Latino students and families for success through academic and life enrichment programs.
Community Org	Healthy Mothers Healthy Babies Coalition of Georgia	Executive Director/ Quality Assurance Fellow	CHNA Community	Our Mission is to improve maternal and infant health through advocacy, education, and access to vital resources.

Table 17: Northside Community Stakeholder Summaries, Continued				
Type	**Organization**	**Stakeholder's Title**	**Geographic Area Focus for Interview**	**Mission**
Health Department	Cherokee County Health Department	Co-Nurse Manager	Cherokee County	Our mission is to promote and protect the health of the people in the North Georgia Health District wherever they live, work and play, through population-based preventive programs including: Prevention of epidemics and the spread of disease, Protection against environmental hazards, Injury prevention, Promotion and encouragement of healthy behaviors, Responding to disasters and assisting communities to recover, and Assisting communities in assessing the quality and accessibility of health services
Health Department	Cobb/Douglas County Health Department	Deputy Director/ Epidemiology & Health Assessment Director	Cobb County	Cobb & Douglas Public Health, with our partners, promotes and protects the health and safety of the residents of Cobb and Douglas counties. We work to achieve healthy people in healthy communities by: preventing epidemics and spread of disease, protecting against environmental hazards, preventing injuries, promoting and encouraging healthy behaviors, responding to disasters and assisting in community recovery, assuring the quality and accessibility of health care. By excelling at our core responsibilities, we will achieve healthier lives and a healthier community.
Health Department	Pickens County Health Department	Nurse Manager	Pickens County	The Pickens County Health Department is an integral part of the quality health care system in Pickens County, and provides core public health services and innovative health care solutions for residents of our community. The Health Department works to protect and improve the health of all citizens and to make our community a safe and healthy place to live.
Safety Net Clinic	Bethesda Community Clinic	Executive Director	Cherokee County	To demonstrate the compassion of Christ by providing quality healthcare to those in need.
Safety Net Clinic	Good Samaritan Atlanta	Chief Medical Officer	Fulton County	Good Sam is working to remove the barriers preventing low-income families from obtaining access to quality healthcare in the Atlanta area. Providing full circle of health services including: medical, dental, mental, nutrition and health education we are helping to reverse the healthcare gap in our community and set families on a path to achieving long-term health.
Safety Net Clinic	Good Samaritan Cobb	CEO	Cobb County	To spread the love of Christ by providing quality healthcare to those in need.
Safety Net Clinic	Good Samaritan Gwinnett	Executive Director	Gwinnett County	Demonstrate the love of Christ through providing quality, affordable, and accessible health and dental services to the poor and uninsured.
Safety Net Clinic	Community Advanced Practice Nurses	Executive Director	Fulton County	We believe that access to healthcare for the medically underserved is fundamental to empowering people and restoring communties.

Table 17: Northside Community Stakeholder Summaries, Continued II				
Type	Organization	Stakeholder's Title	Geographic Area Focus for Interview	Mission
Safety Net Clinic	Center for Black Women's Wellness	Program Manager	Fulton County	CBWW is a premier community based family service center committed to improving the health and well-being of underserved black women and their families
Safety Net Clinic	Good Shepherd of Dawson County	Executive Director	Dawson County	Committed to make Dawson County a better place by providing health care for those who have none.
Safety Net Clinic	Urban Health and Wellness	Executive Director	Fulton County	Provides Indigent healthcare to uninsured population in Atlanta

Summary of Stakeholder Input

The following sections summarize the stakeholders' responses to the Stakeholder Assessment Discussion Guide. A thematic analysis was performed to analyze the interview sessions in aggregate. While the stakeholders provided a wide range of responses to all questions, there were several recurring themes or sentiments that were mentioned more frequently than others. The thematic analysis allowed frequencies to be applied to the recurring themes. Frequencies represent the total number of times a particular theme arose, versus the number of unique respondents. For example, many of the questions were phrased to have the respondent name the top three factors within the stakeholder's community. If the respondent named three unique economic factors, the frequency of the theme "economic" was counted three times. This methodology was chosen to illustrate the relative importance of a category versus a respondent count. The stakeholders' responses are summarized throughout the next sections based on the question that was asked.

Positive Health Assets within the Community

Stakeholders were asked "What are the top three factors or assets that positively impact the health of the community you serve?" This question was designed to identify areas of strength currently existent within the stakeholder's community. Additionally, by identifying areas of strength within the Community, possible areas for collaboration between organizations in the Community could be formed. The following chart illustrates the frequency of the stakeholders' responses.

Table 18: Positive Social Factors Impacting Health	
Themes	**Frequency**
Education/Good Schools	7
Access for Uninsured/Indigent	6
Amount/Quality of Providers	6
Community Org Partnerships & Collaboration	5
Strong Economy/Financial Stability	4
Access to Primary/Preventive Care	3
Access to Low-Cost Medications	3
Green space/Parks & recreation	3
Community Redevelopment/Investment	3
Access to Specialty Care	2
Access to Labs & Imaging	2
Physical Activity	2
Community/Social Support	2
Good Policy (Government)	2
School Nurses	2
Safety	1
Senior Services	1
Access to Prenatal Care & Education	1

Education and access to good schools was the most commonly discussed asset within the Northside Community. Respondents noted that, as supported by research, education is positively correlated with better health outcomes (Hanh & Truman, 2015). Respondents also considered the presence of health resources for the uninsured and indigent in the Community an asset. The availability of resources for these particularly vulnerable groups was related to another asset of Community: partnerships and collaboration between organizations. Most participants noted their partnerships with Northside, as well as with other organizations in the Community, as essential components to their ability to serve. These partnerships allowed respondents, especially safety-net clinics and FQHCs, to provide low-cost medications, labs, imaging, primary care and specialty care to their patients. Other stakeholders noted their community's green space and recreational opportunities as positive factors, which help to promote physical activity.

Negative Health Factors

Stakeholders were asked, "What are the top three factors/hindrances that negatively impact the health of the community you serve?" This question was intended to assess what the stakeholder thought the most pressing health needs in their community were, as well as help prioritize these factors. The responses are represented in the following chart:

Table 19: Negative Social Factors Impacting Health	
Themes	Frequency
Transportation	8
Lack of Access to Specialty Care/Surgery	8
Behavioral/Mental Health & Addiction	7
Lack of Affordable/Adequate Housing	6
Lack of Awareness/Knowledge of Resources	5
Economic/Financial Factors	5
Limited Resources/Understaffing (of clinics)	4
Immigration Status (e.g. Undocumented)	4
Lack of Health Insurance	3
Unhealthy Diet/Poor Nutrition	2
Lack of Prenatal & Postpartum Support	2
Lack of Access to Primary/Preventive Care	1
Lack of Follow-Up Care	1
Lack of Child Care	1
Smoking	1
Obesity/Physical Inactivity	1
Overuse of ER	1
Stigma (re: Mental Health)	1
Lack of Resources for Homeless	1
STD/STI	1

Responses to this question largely focused on social determinants of health (access to health resources, socioeconomic conditions, transportation options, health behaviors) versus health outcomes (chronic diseases, illnesses, death). Transportation was the most frequently mentioned theme. Respondents noted that a lack of public transportation options prevented many Community member from being able to make it to medical appointments. Respondents also noted that a lack of access to specialty care (e.g. oncology, orthopedics, endocrinology) had a significant negative impact on the Community. Often, patients could access primary or diagnostic care, but were then unable to afford the necessary follow-up specialty care. This condition was often related to patients being uninsured or underinsured, which ties into another frequently mentioned theme: economic and financial factors. A lack of economic resources prevented many Community members from having adequate housing, adequate child care, and from accessing insurance and health services. Under such conditions, behavioral and mental health issues like addiction and depression abound, and many respondents noted this as well. Many of the negative health factors are strongly interconnected, illustrating the complexity of issues leading to negative health outcomes in the Community.

Respondents also noted non-citizen/undocumented immigration status as a significant hindrance for many Community members in accessing healthcare services. Often, these

patients would go without routine care, and resort to the emergency room only when a condition became severe enough. Unfortunately, many of the Community's vulnerable populations go without routine care, including prenatal and postpartum care. The needs of the Community's vulnerable populations will be discussed further in a later section.

Physical Health Needs

Stakeholders were asked, "Could you describe and prioritize the top three physical health-needs that negatively impact the health of the community members you serve." This question was intended to identify the major physical health needs (health outcomes) within the Community.

Table 20: Physical Health Needs	
Themes	**Frequency**
Diabetes	9
Mental/Behavioral Health	7
Physical Activity/Health Lifestyles & Behaviors	6
Hypertension	6
Obesity	6
Heart Disease	5
Smoking	4
STIs	3
Cancer	3
Prenatal Care	2
Injuries	2
Dental Care	1
High Cholesterol	1
Women's Health	1
Infectious Disease (Flu, Cold, Viral Infection)	1
Asthma	1
Genetic Disorders	1
Dementia (in Seniors)	1

Stakeholders identified diabetes, mental and behavioral health, and physical activity and healthy lifestyle behaviors (e.g. – eating a healthy diet) as the top 3 health needs within the Community. With regards to mental and behavioral health, it should be noted that respondents saw these needs spanning socioeconomic and age groups. Many of the stakeholders also acknowledged the interconnectedness of these needs, and how one of the conditions can easily cause or exacerbate one of the others.

Barriers to Accessing Primary/Specialty Healthcare

Stakeholders were asked, "Can you identify any barriers that community members face in obtaining healthcare services (e.g. preventive/routine, specialty)?" This question was asked to identify barriers to access within the Community. Many of the barriers to care were initially discussed as a negative health factor and further expounded upon during discussions surrounding this question.

Table 21: Barriers to Care	
Themes	**Frequency**
Transportation	10
Financial Factors	6
Insurance-Related Barriers	5
Knowledge/Awareness of Health Resources	5
Provider Factors (e.g. Scheduling, Having Bilingual Staff/Interpreters)	4
Language Barrier	3
Immigration Status (e.g. Undocumented)	3
Geographic Access (e.g. - Rural, too far from resources)	2
Stigma (re: Incarceration, Poverty)	2
Work-Related Barriers (e.g. - unable to take time off)	2
Lack of Access to Specialists & Diagnostics	1
Unemployment/Underemployment	1
Lack of Affordable/Adequate Housing	1
Lack of Child Care	1
Communication	1
Access to Healthy Food	1

Transportation was most frequently mentioned as a barrier to care. Many of the stakeholders again cited the lack of public transportation availability. Financial factors was also cited as a frequent barrier to care. Many Community members were unable to prioritize spending for healthcare on tight budgets. Stakeholders also mentioned insurance-related issues as a significant barrier to care. Several respondents spoke about Community members being unable to access diagnostic and specialty care due to a lack of sufficient insurance coverage, with many only being able to afford high-deductible "catastrophic" insurance.

A noteworthy barrier that was mentioned is provider factors. For instance, one stakeholder told the story of a mother with Medicaid coverage who was unable to make an appointment for her sick child for two weeks. Other stakeholders shared about how many providers in the Community require forms of documentation that many non-citizen and homeless Community members do not have.

This particular barrier highlights the incessant need for providers to ensure that their services are accessible to their Community's most vulnerable members.

Vulnerable Populations

Many of the stakeholders that were interviewed for Northside's CHNA work directly with vulnerable/disparate populations within the Community. Each stakeholder was asked, "Would you consider any population within your community to be vulnerable or disparate?" This question was designed to identify the vulnerable populations within the Northside Community and subsequent questions were then asked to gain an understanding of this population's unique health needs. The way stakeholders defined "disparate/vulnerable population" is summarized in **Table 22**.

Table 22: Definition of Vulnerable Population	
Themes	Frequency
Low-Income	9
Non-Citizen/Undocumented	7
Hispanic	5
Black	4
Children/Adolescents	3
Homeless	2
Drug Addicts	2
Uninsured/Under-insured	2
Mentally Ill	2
Elderly	1
Unemployed	1
Recently Incarcerated	1
Young Mothers	1
Disabled	1
Medicaid Recipients	1

Stakeholders were then asked to identify negative factors that uniquely impact the health of the vulnerable. The ways in which the stakeholders considered the needs of the vulnerable to be different from the general population are outlined in **Table 23**.

Table 23: Negative Factors Impacting the Health of the Vulnerable	
Themes	**Frequency**
Transportation	6
Lack of Insurance Coverage	6
Lack of Access to Primary/Preventive Care	5
Lack of General Access to Care	5
Lack of Affordable/Adequate Housing	2
Lack of Access to Specialty Care	2
Unemployment/Underemployment	2
Lack of Awareness/Knowledge of Resources	2
Language Barrier	1
Behavioral/Mental Health/Addiction	1
Domestic Violence	1
Implicit Bias	1
Work-Related Barriers (e.g. - unable to take time off)	1
High-Risk Pregnancies	1

Most stakeholders stated that they considered the negative health factors for the vulnerable population to be the same as the general population's, but often at a more severe or pronounced level. Based on the analysis, lack of transportation, lack of insurance coverage, and lack of access to primary/preventive care were the top three factors negatively influencing the health of vulnerable populations within the Community.

Similarly, stakeholders were asked if they considered the physical health needs of the vulnerable populations they mentioned to be different than the overall population; their responses are displayed in **Table 24**.

Table 24: Physical Health Needs of the Vulnerable	
Themes	**Frequency**
Mental Health	2
Hypertension	1
High Cholesterol	1
Prenatal Care/Birth Defects	1
Lice	1

Again, most stakeholders reiterated the congruence of the health needs of the vulnerable and the general population, while caveating the pronounced rates of illnesses found in the vulnerable population. The top physical health concerns among the vulnerable were very similar to those of the overall population, as outlined in **Table 24**, but with birth defects and lice (in schoolchildren) making an appearance.

Additional Stakeholder Comments

In addition to the formalized questions, each discussion ended with an opportunity for the stakeholder to share any additional thoughts or comments regarding the health status of their community that had not been discussed during the interview. Many stakeholders took this opportunity to mention health needs they saw in the Community, but they had not ranked in the "top three."

Two stakeholders mentioned the need for additional resources for impoverished members of the Community. An additional stakeholder emphasized the need for an increased focus on maternal mental health. This stakeholder noted that post-partum anxiety is just as common as the more frequently discussed post-partum depression, but that both conditions often go untreated in the Community. Two stakeholders mentioned the great need in non-citizen/undocumented immigrant communities. These stakeholders felt that it was both fiscally-responsible and morally imperative to direct resources to this vulnerable population. Finally, another stakeholder highlighted the presence of food deserts in many of metro Atlanta's low-income areas.

Opportunity for Public Comment

In addition to conducting stakeholder interviews, Northside provided an opportunity for members of the general public to provide feedback on its FY 2016 – FY 2018 CHNA. Northside published its FY 2016 – FY 2018 on its website and also created a dedicated email, Northside.chna@northside.com so that members of the public could provide feedback on Northside's prioritized health needs. The email address is prominently listed in its FY 2016 – FY 2018 CHNA. To-date, no emails have been received.

Needs Prioritization

NORTHSIDE HOSPITAL

Part V: Needs Prioritization

Our Prioritization Process

Northside developed a 5-step process for prioritizing the health needs identified through this CHNA as illustrated in **Figure 56** and described throughout this section.

Figure 56: Northside Hospital System's Community Health Needs Prioritization Process

Step 1: Create a Crosswalk of all the Identified Needs

An array of health needs was identified through Northside's CHNA process. Oftentimes, the needs overlapped in meaning, support, and populations affected. With 19 needs identified, Northside grouped these needs into 12 different categories that were then prioritized. The list of 12 needs is provided in **Table 25**.

Table 25: Northside's FY 2019-2021 CHNA Needs Categories
Affordability, Access to Care, & Uninsured
Affordable/Adequate Housing/Homelessness
Cancer
Cardiovascular Disease
Culturally Competent Healthcare Services
Diabetes & Obesity
Healthy Lifestyle Behaviors
HIV/AIDS
Maternal & Infant Health
Mental Health & Addiction
Respiratory Diseases/Smoking
Transportation

Step 2: Define the criteria used to guide the ranking process

After researching various methodologies for establishing the criteria against which the identified needs would be scored, Northside adopted the Catholic Health Associations ("CHA") guidance (Catholic Health Association of the United States, 2015 Edition II). According to CHA, examples of criteria could include:

1) Magnitude. The magnitude of the problem includes the number of population impacted by the problem.

2) Severity. The severity of the problem includes the risk of morbidity and mortality associated with the problem.

3) Historical trends.

4) Alignment of the problem with the organization's strengths and priorities (mission).

5) Impact of the problem on vulnerable populations.

6) Importance of the problem to the community.

7) Existing resources addressing the problem.

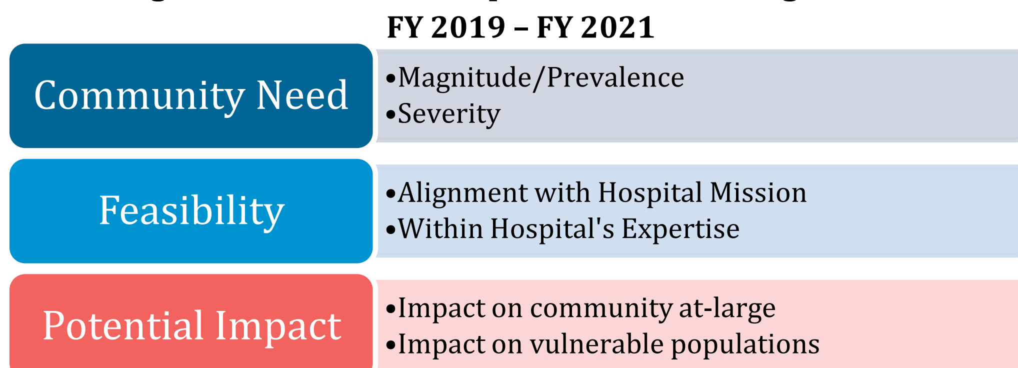
8) Relationship of the problem to other community issues.

9) Feasibility of change, availability of tested approaches.

10) Value of immediate intervention versus any delay, especially for long-term or complex threats (Catholic Health Association of the United States, 2015 Edition II).

For Northside's prioritization process, Northside elected to focus on the criteria presented in **Figure 57.**

Figure 57: Northside Hospital's CHNA Ranking Criteria FY 2019 – FY 2021



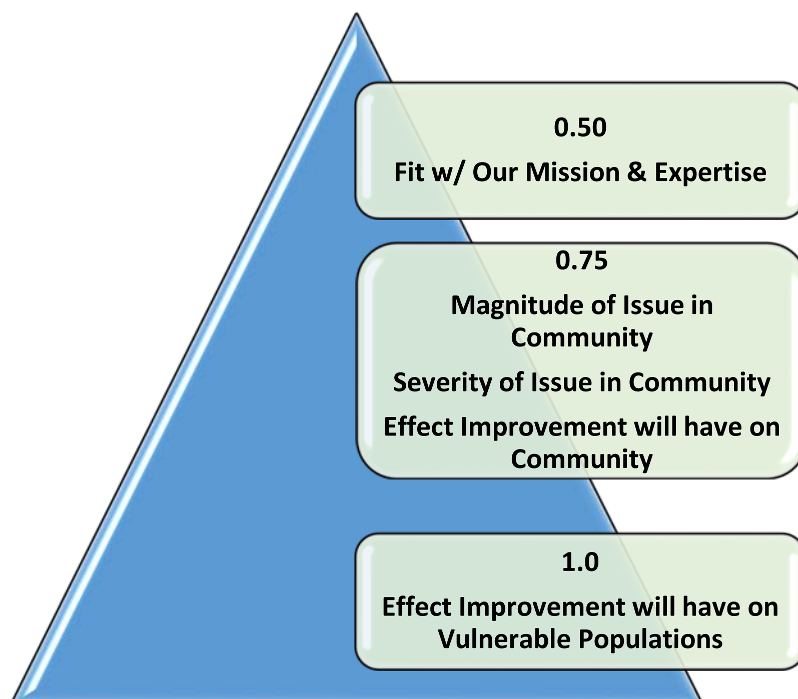
Step 3: Determine the weight of each criterion

Based on the CHA guidance, Northside researched ranking methodologies and decided to utilize the National Association of County and City Health Officials ("NACCHO") for guidance regarding the common practices used by county and city health departments for prioritizing the needs in their communities. NACCHO outlined five commonly-used prioritization techniques:

1) Multi-Voting Technique
2) Strategy Grids
3) Nominal Group Technique
4) The Hanlon Method
5) Prioritization Matrix

Northside adopted the prioritization matrix methodology given the number of prioritization criteria selected and the number of community needs identified. This methodology assisted Northside in prioritizing the health needs which will have the greatest impact on the Community. Northside's weight assignment to the prioritization criteria is provided in **Figure 58.**

Figure 58: Northside's CHNA Prioritization Criteria Weight Assignment



Step 4: Rate each identified need against the prioritization criteria

Throughout the CHNA Process, Northside compiled and analyzed a variety of quantitative and qualitative data from a myriad of sources. After thoughtful consideration of the prevalence, frequency, and severity of the identified needs combined with any disparities and disproportionate impact an identified need may have on vulnerable populations, Northside evaluated each need category against each prioritization criterion and assigned that need category a priority score of 1 through 4.

1 = Not a Priority

2 = Low Priority

3 = Medium Priority

4 = High Priority

Table 26 summarizes the rating of each identified need for Northside's Community.

Table 26: Northside's FY 2019-2021 CHNA Prioritization Matrix					
Need Category	**Fit with NH Mission & Expertise**	**Magnitude of Issue in Community**	**Severity of Issue in Community**	**Effect Improvement will have on Community**	**Effect Improvement will have on Vulnerable Populations**
Weight	**0.5**	**0.75**	**0.75**	**0.75**	**1.0**
Affordability, Access to Care, & Insurance Coverage Status	4	3	3	3	4
Affordable/Adequate Housing/Homelessness	1	4	1	2	3
Cancer	4	4	4	4	4
Cardiovascular Disease	4	4	4	4	4
Culturally Competent Healthcare Services	3	2	1	2	3
Diabetes & Obesity	3	4	3	3	4
Healthy Lifestyle Behaviors	4	4	3	4	4
HIV/AIDS	2	2	2	2	4
Maternal & Infant Health	4	4	4	3	4
Mental Health & Addiction	2	3	3	3	4
Respiratory Diseases/Smoking	3	2	3	3	4
Transportation	1	4	1	2	4

Step 5: Summarize the identified needs according to the prioritization methodology employed

The table below summarizes the final prioritization score of each identified need. The priority score of each need (e.g., 1, 2, 3, or 4) is multiplied by the prioritization criterion's assigned weight (e.g., 0.50, 0.75, or 1.00); the results are then summed for the total priority score for each identified need.

Table 27: Northside's FY 2019 – FY 2021 CHNA's Prioritization Matrix Total Score

Need Category	Total Score
Cancer	15
Cardiovascular Disease	15
Healthy Lifestyle Behaviors	14.25
Maternal & Infant Health	14.25
Diabetes & Obesity	13
Affordability, Access to Care, & Insurance Coverage Status	12.75
Mental Health & Addiction	11.75
Respiratory Diseases/Smoking	11.5
Transportation	9.75
HIV/AIDS	9.5
Affordable & Adequate Housing/Homelessness	8.75
Culturally Competent Healthcare Services	8.25

The Needs Northside Will Address

Ideally, Northside would have unlimited resources to address all of the Community's identified needs. However, it is not realistic for any single organization to address all of a community's needs, hence the importance of prioritizing the identified needs. Northside selected those needs that impact the greatest number of population in the Community; those needs that disproportionately impact the most vulnerable populations; those needs that are most severe and/or prevalent; and those needs that Northside has the wherewithal to address.

1) Cancer
2) Cardiovascular Disease
3) Healthy Lifestyle Behaviors
4) Maternal and Infant Health
5) Obesity and Diabetes
6) Affordability, Access to Care & Insurance Coverage Status
7) Mental Health and Addiction

Table 28: Northside's FY 2019 – FY 2021 CHNA Prioritization Matrix Total Score	
Need Category	**Total Score**
Cancer	15
Cardiovascular Disease	15
Healthy Lifestyle Behaviors	14.25
Maternal & Infant Health	14.25
Diabetes & Obesity	13
Affordability, Access to Care, & Insurance Coverage Status	12.75
Mental Health & Addiction	11.75
Respiratory Diseases/Smoking	11.5
Transportation	9.75
HIV/AIDS	9.5
Affordable & Adequate Housing/Homelessness	8.75
Culturally Competent Healthcare Services	8.25

Available Resources in Our Community

There are a rather sizeable number of existing and available resources in the Community to help meet the identified needs of Community members. This abundance of existing resources is not surprising given that the majority of Northside's Community is located in a densely populated metropolitan area. A summary of the number of resources in the Community is provided in **Table 29.** The community resources identified by Northside were divided into groups based on the health needs found in the Community, several categories were combined.[3]

Table 29: Count of Existing Resources	
Need Category	**Count**
Cancer	16
Cardiovascular Resources	5
Healthy Lifestyle	28
Maternal and Infant Health	47
Preventive Health, Access to Care, Primary Care	53
Obesity and Diabetes	12
Behavioral and Mental Health	22
HIV/AIDS Services	19
Additional Community Health Resources	224
Total Community Resources	**426**

[3] Given the large number of community resources available in the Northside Community, a detailed listing is not provided in the Appendix, but will instead be made available on Northside's website at https://www.northside.com/oth/Page.asp?PageID=OTH006561 for the Community to easily access it.

The Needs Northside Will Not Address

Unfortunately, Northside is unable to address directly all of the identified community needs due to limited resources, magnitude/severity of the issue, or the presence of existing resources already in place to address the need.

1) Respiratory Disease and Smoking
2) Transportation
3) HIV/AIDS
4) Affordable/Adequate Housing/Homelessness
5) Culturally Competent Services

1. Respiratory Disease and Smoking

Although respiratory disease and smoking is a health need within the Community, the Northside Community performs better than the United States and Georgia on most related metrics. The Community's rate of lung cancer is significantly less than Georgia's rate and the rate of smoking among adults in the Community is only 13% compared to 18% in Georgia and the U.S. Even though respiratory disease and smoking will not be adopted as a formal health need that Northside plans to address directly, Northside's does offer smoking cessation resources to the Community, including educational materials and smoking cessation classes. Furthermore, Northside's community benefit efforts targeting cancer within the Community will also help address respiratory disease and smoking in the Community.

2. Transportation

Transportation will not be addressed as a part of Northside's FY 2019 – FY 2021 CHNA initiatives. Despite being frequently mentioned as by stakeholders as a barrier to accessing care, Northside has determined that there is little that it can do with its resources and expertise to impact transportation, namely the availability of public transit options.

3. HIV/AIDs

After analyzing the various data collected for Northside's FY 2019 – FY 2021 CHNA, HIV/AIDS was not determined to be a high priority need in the Northside Community. There are 19 community organizations within the Community that specialize in education, outreach, awareness, and/or screening for HIV/AIDs. Additionally, the Georgia Department of Public Health coordinates an HIV Prevention Program that implements an HIV Prevention Plan, testing program, and funds community-based organizations

committed to HIV prevention throughout the state. This GDPH program is funded by the CDC and the Substance Abuse and Mental Health Administration Services. Thus, in order to efficiently utilize its resources and to make the biggest positive impact on the Community's health, Northside is not directly addressing HIV/AIDs in its CHNA initiatives.

4. Affordable/Adequate Housing/Homelessness

Based on quantitative and qualitative data collected for Northside's FY 2019 – FY 2021 CHNA, affordable/adequate housing was not determined to be a high priority need within the Northside Community. High housing costs affect 34% of the Community, and adding to this burden is a shortage of HUD-assisted housing units in the Community compared to the national rate. While realizing the impact that housing has on overall health, Northside has determined that there is very little that it can do within the scope of its mission to address affordable/adequate housing in the Community.

5. Culturally Competent Services

Northside is committed to serving patients regardless of their race, ethnicity, or culture. Thus, Northside makes every effort to make its services accessible, such as providing translation services and employing a diverse staff. Additionally, Northside conducts outreach and education in many languages and cultural settings, in order to best serve our Community. Thus, culturally competent services was not determined to be a high priority need for the FY 2019 – FY 2021 CHNA.

Evaluation of Impact

NORTHSIDE HOSPITAL

Part VI: Evaluation of FY 2016 – FY 2018 Activities

Introduction

Northside Hospital published its most recent Community Health Needs Assessment in September 2016 which was the end of its 2016 fiscal year. Northside determined the health needs of the Community, and then used a five-step prioritization process to identify the Community's most pressing health needs. This process evaluated each identified need based on its magnitude, severity, fit with the hospital system's mission/expertise, and effect improvement would have on the broader Community, as well as the vulnerable populations therein. This process resulted in the identification of six high-priority health needs for Northside to address:

1) Cancer
2) Cardiovascular Disease
3) Healthy Lifestyle Behaviors
4) Maternal & Infant Health
5) Preventive Health Behaviors
6) Obesity & Diabetes

Implementation Strategy

Overview

In its FY 2016 – FY 2018 Implementation Strategy, Northside outlined several initiatives that it would undertake in order to address the above high-priority health needs of its Community. Those initiative are as follows:

1) Northside will continue its commitment to meeting the needs of all patients, regardless of their ability to pay through providing significant indigent and charity care to Community members, fulfilling or exceeding Northside's indigent and charity commitments, and expanding Northside's Financial Access Surgery Program (FASP) to a new location in 2018.

2) Creating a Community Benefit Steering Committee that will include the Northside Charity Outreach Coordinator and representatives from various departments throughout the hospital system. The purpose of the work group will be to:
    a. Evaluate Northside's current community benefit programs to ensure the programs are effectively meeting the health needs of the Community,

targeting the highest priority needs and populations, and utilizing evidence-based interventions.

b. Identify any gaps (geographic, population, or subject matter) in Northside's community benefit activities and make appropriate modifications.

c. Connect Northside employees who implement and plan Northside's community benefit programs, allowing them to share their talents, expertise, and resources.

d. Provide a channel for discussing community feedback on Northside's community health needs assessment, prioritized needs, and community benefit programs.

3) The refinement and/or expansion of Northside's current community benefit programs to meet the needs of the vulnerable populations and geographies identified in the FY 2016 – FY 2018 CHNA. The focus will be on tailoring Northside's community benefit programs to vulnerable populations, creating new partnerships with organizations that currently work with these groups, refining existing programs to meet the current needs identified, and creating new programs where none currently exist.

The impact derived from each of these initiatives will be evaluated below.

Results: Charity Care & Financial Access Surgery Program ("FASP")

Northside has fulfilled its commitment to meet the needs of all patients, regardless of their ability to pay, by continuing to provide significant amounts of indigent and charity care to its Community members. Northside increased its indigent and charity care provision (in dollars) by 22% from 2016 to 2017. **In 2017, the Northside System provided $451 million in net indigent and charity care** compared to $372 million in 2016. Also, in 2017 Northside served 9,790 indigent and charity inpatients and 104,586 indigent and charity outpatients.

With **maternal and infant health** identified as a **priority health need** in the FY 2016 – FY 2018 CHNA, Northside ensured that all obstetrical patients, regardless of their ability to pay, had access to our high-quality maternity services. This focus was reflected in Northside's 2017 and 2018 **inpatient indigent/charity utilization**, where **obstetrics** was the **second most utilized service line** (17% and 13%, respectively). Northside plans to continue this trend of investment into the care of its Community members, including those most vulnerable due to financial hardship.

Additionally, Northside continued to provide access to (non-emergent yet medically-necessary) outpatient surgical and endoscopy services through its FASP. **Northside partnered with twenty different safety-net clinics and Federally Qualified Health Centers** from across the metro-Atlanta region to improve access to much needed specialty care. Over the course of 2017-2018, **the FASP served 915 uninsured/underinsured patients** who otherwise would have gone untreated until their need became so great that they would have no option but to seek care in a local hospital's emergency room. Also, as noted in its FY2016 – FY 2018 Implementation Strategy, **Northside did expand the FASP** by opening a north Georgia location in Woodstock, Cherokee County. This latest FASP location became operational in April 2018.

Results: Community Benefit Steering Committee

Northside's **Community Benefit Steering Committee** ("CBSC") convened for its first meeting on October 27, 2016 and over the course of 2017-2018, the Committee **met seven times representing 109 hours of community benefit activity**. The committee features representatives from the hospital's Cardiology, Oncology, Corporate & Community Health Solutions, Diabetes Education, Women's Services, and Strategic Planning departments.

CBSC Accomplishment: Evidence-Based Interventions, Targeting Highest Priority Needs
Spotlight: Cherokee County Cardiovascular Screening Targeting Hispanic Population

Northside's FY2016-FY2018 CHNA highlighted that:

- The top three (3) chronic conditions reported in Hispanic households were 30% high blood pressure (30%), high cholesterol (25%) and smoking (27%).
- In Northside's Community, Cherokee County had the highest percentage of adults with heart disease (8%) and high blood pressure (31%).
- Carotid artery screening was one of the least utilized preventive health behaviors in Hispanic households.
- Also, the percent of Hispanic deaths due to obstructive heart disease was slightly higher than the Community's overall rate.

In light of these statistics, **the CBSC identified coronary artery disease, Cherokee County and the Hispanic population as key target areas for increased cardiovascular screening.** In order to diagnose coronary artery disease (CAD), testing specifically targeting the coronary arteries and potential disease would need to be performed. Currently, Northside provides the Community with advanced cardiovascular screenings which include EKG, cardiac echocardiogram, carotid ultrasound, peripheral vascular ultrasound, and abdominal ultrasound. Although important in the overall screening for

cardiovascular diseases, none of these modalities are specific to the identification of coronary artery disease.

Coronary Calcium Scoring CT Scan is an advanced, non-invasive, radiology CT scan used for the identification of potential coronary artery disease. This CT scan can visualize the coronary arteries and identifies the presence of calcium plaque located within arteries. The extent of the calcium build up within the artery is calculated. Once the calcium is detected, further treatment and/or diagnostic testing may be indicated.

In addition, the CBSC recommended that promotional materials be produced in English and Spanish and worked with the marketing department to ensure that the event was promoted at numerous Hispanic faith-based organizations, Hispanic radio stations and community safety net clinics.

The program design and planning occurred over the course of 2017-2018 with the actual event occurring in February 2019. In all, **seventy two (72) community members were screened with twenty seven (or 37%) being Hispanic.** The event resulted six (6) participants (or 8%) receiving the Coronary Calcium Scoring CT Scan based on their risk factors. Of these six participants: (1) had very significant coronary disease, (1) had mild aortic plaque and (1) had fibrous tissue in the lung. In addition, (1) screening participant had a very abnormal EKG and (1) participant was referred for follow-up for external carotid disease. In all, significant findings for five (5) screening participants (or 7% of attendees), and one of **Northside's cardiologists working the event commented that "We probably saved a life today."** Northside cardiovascular leadership was extremely pleased with the event and results, and noted that this was the most successful screening held to-date; particularly so for the number of Hispanic members who attended.

CBSC Accomplishment: Identify Gaps in Current Programming
Spotlight: Prostate Cancer Screening Targeting African American Males

Northside's FY2016-FY2018 CHNA highlighted that:

- ✧ Prostate cancer screening was one of the least reported preventive health behaviors in African American households.
- ✧ The age-adjusted prostate cancer rate for Non-Hispanic Black Males was 66% higher than the rate for Non-Hispanic White Males.
- ✧ Of cancer-related deaths, prostate cancer represents a higher percentage of deaths in Black men than in any other race or ethnic group.

In light of these statistics, **the CBSC identified prostate cancer and the need to specifically target African American males for increased prostate cancer screening.** Currently, Northside offers free prostate cancer screenings in the Community but these

programs are not designed to specifically target the at-risk population identified. Thus, the CBSC worked in 2017 to design and implement a prostate cancer screening event dedicated to this at-risk population.

The Oncology representative on the CBSC noted that the Oncology outreach team was focusing their efforts on numerous faith-based organizations and noted that the team was encountering difficulties building trust within the African American community. The outreach team also explored a partnership with Clarke Atlanta University, a historically black university, which is still in the development stage.

Through dedication and persistence, the Oncology outreach team was able to **form a relationship** with New Mercies Christian Church, **a primarily African American church**, located in Gwinnett County. **Over the course of 2 years** (FY2018-FY2019), and what has become the church's annual prostate cancer screening event, **177 men received free prostate screenings resulting in eleven (11) abnormal results (i.e., 6%).** Men with abnormal results received notification via certified mail as well as a follow-up phone call from a nurse who ensured that the men had access to follow-up care. If any of the men were in need of financial assistance, a Northside representative helped them complete the hospital's Financial Assistance application. The Oncology outreach team continues to work to foster additional relationships within the African American community in order to expand its prostate cancer screening program.

Results: Refinement/Expansion of Existing Community Benefit Programs

From FY 2016 to FY 2018, Northside also focused on refining or expanding its existing programs to better meet the needs of our vulnerable populations.

Northside's FY2016-FY2018 highlighted that:

- Within the Community, Fulton County had a higher percentage (15%) of mothers with late or no prenatal care compared to Georgia (14%) and both Fulton (15%) and DeKalb (12%) had higher rates than the Community overall (11%).
- Prenatal care was the fourth highest least reported preventive health behavior among Hispanic households; the highest rank across all races and ethnicities.
- Diabetes was cited as chronic condition in 18% of Hispanic households; the highest percentage across all races and ethnicities.
- Among Northside's Community stakeholders, diabetes was the most frequently mentioned physical health need.

Northside's Diabetes Education Program is accredited by the American Diabetes Association. Through this comprehensive program, Northside offers services for individuals with Type I, Type II, diabetes prevention, and gestational diabetes programming. While Northside routinely offers these services to the Community, currently, it does not have any targeted efforts focusing on an at-risk population. Also, Northside is

widely-known as the leader in maternity services, often delivering more babies than any other hospital in United States.

Given the statistics above, coupled with Maternal and Infant Health and Obesity and Diabetes being two of Northside's top identified health needs in its FY2016-FY2018 CHNA, **the decision was made to develop a gestational diabetes education program targeting the Hispanic population.**

One member of the CBSC had a working relationship with CIMA, an international Women's Center. CIMA has office locations in Fulton, DeKalb and Gwinnett counties and primarily serves a Hispanic population. Committee members were able to leverage their existing relationship and began building a partnership with CIMA to help CIMA improve their diabetes education services. Currently, CIMA offers their self-pay patients diabetes education provided by a nutritionist but the nutritionist's time is limited as she has numerous other responsibilities within the center. Also, given the center's limited resources, the educational materials the clinic is using are not based on the most recent standards. **Thus, Northside committed to design a new diabetes education curriculum, provide culturally-sensitive educational materials and provide certified diabetes educators on-site at CIMA clinics to teach the classes.** Over the course of FY2018, Northside spent twenty-one hours developing the program design and defining its goals.

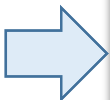
Addressing Identified Health Needs

Following are high-level summaries of the community benefit program activities Northside engaged in over the course of FY 2017 and FY 2018 in order to address its Community's highest priority health needs.

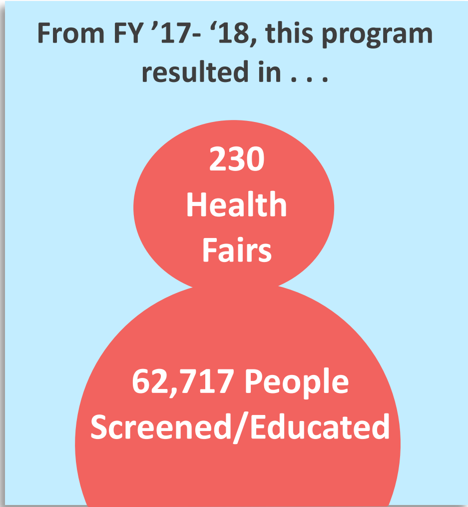
Cancer
FY 2017 – FY 2018 Activities

Community Health Education

Northside's Oncology department attended **230 health fairs/community events**, where they distributed educational materials regarding cancer risk, treatment, and prevention as well as provided screenings in FY '17 – FY '18. Educational materials and screenings were provided to approximately **62,717 attendees**, accounting for **$94,352 in community benefit.**



From FY '17- '18, this program resulted in . . .



Northside's Oncology department made **59 educational presentations** throughout the community to **10,231 attendees** from FY '17 – FY '18, accounting for **$14,875 in community benefit.**

Northside facilitated **25 Smoking Cessation Courses** from FY '17 –FY '18 where **100%** of participants (87) **QUIT**

Cancer
FY 2017 – FY 2018 Activities

Community-Based Clinical Health Services

The **Prostate Cancer Program** targeting Black men provided **94 screenings** at a 2017 event, accounting for $1,688 in community benefit. **14 attendees with abnormal results** were linked to follow-up care.

19

Outside of health fair settings, Northside's Oncology department held **19 screening events** (10 skin cancer, 9 prostate cancer) from FY '17 – FY '18. Approximately **2,376 people** were screened, accounting for **$67,879 in community benefit.**

Health Professionals Education

From FY '17 to FY '18, Northside held 3 cancer-related conferences that provided continuing education credits to health professionals:

- **NHCI Symposium 2017: Oncology for Primary Care Physicians**
- **NHCI Symposium 2018: A Multidisciplinary Approach to Gastrointestinal Cancer**
- **Global Breakthroughs: Breast & Ovarian Cancer**

These conferences had a total of **214 attendees** and accounted for **$97,941 in community benefit.**

Cardiovascular Disease
FY 2017 – FY 2018 Activities

Community-Based Clinical Services

- NHF's Cardiology Department hosted an **Annual Cardiovascular Screening** in FY '17 and FY '18 where **166 attendees** received screenings, accounting for **$9,993 in community benefit**.
- NH's Corporate & Community Health Solutions department hosted **112 screening events** where cardiovascular screenings were provided.
  - **73 "Community" Screenings**
  - **39 "Employer" Screenings**
  - **8,474 attendees**
  - **$356,615 in Community Benefit**

Community Health Education

- NH's Marketing Department hosted its **Speaker's Bureau** series in FY '17 and FY '18, where 7 of the presentations were related to cardiovascular diseases. There were **240 attendees** accounting for **$3,002 in community benefit.**
- NHF's Cardiology Department attended **7 community events** from FY '17 – FY '18 where educational materials were distributed. Approximately **652 attendees** received these materials, accounting for **$5,165 in community benefit.**

Health Professionals Education

From FY '17 to FY '18, Northside held 4 cardiovascular-related conferences that provided continuing education credits to health professionals:

- **5th & 6th Annual Cherokee Cardiovascular Summit**
- **5th & 6th Annual Women & Stroke Conference: Unique Risks & Uncommon Symptoms**

These conferences had a total of **518 attendees.**

Healthy Lifestyle Behaviors
FY 2017 – FY 2018 Activities

Community Health Education

8,222

Community members were educated on healthy lifestyle behaviors by Northside through the following programs from FY '17 to FY '18:

- **NHC's Learning & Educational Development Department: Middle & High School Outreach**
- **NH Marketing Department's Speaker's Bureau**
- **Health Fair(s)**

Maternal and Infant Health FY 2017 – FY 2018 Activities

Community Health Education

Northside offers low-cost educational courses on several subject matters related to **maternal and infant health**, over 1,200 classes were offered between FY '17 and FY '18 in the following subjects:

Baby Essentials, 333

Infant & Child CPR, 390

Childbirth, 243

Breastfeeding, 241

14,722

People attended these courses.

Northside supported

22,781

women with breastfeeding advice through Northside's free

Lactation Support Line

Another **3,408** mothers attended Northside's

Mom-Me Connection Lactation Support Group

Northside's Women's Services department host an **online library of maternity resources**, which it paid **$4,808** in FY '18 to offer.

Northside's Perinatal Department provides support to mothers and families grieving the loss of an infant through:

- **Perinatal Loss Support Groups**
- **Atlanta Walk to Remember**

These programs reached **954 attendees** and accounted for **$11,216 in community benefit** from FY '17 to FY '18.

Maternal and Infant Health FY 2017 – FY 2018 Activities

Community Health Education

Northside's Community Benefit Steering Committee (CBSC) is developing a program aimed at **reducing the incidence of gestational diabetes in Hispanic mothers.** Committee members spent approximately 21 staff hours on planning activities for this program in FY 2018.

Advocacy for Community Health Improvement and Safety

Northside's Women's Services and Strategic Planning Departments participated in **two** committees that advocated for improvements in maternal and infant health in Georgia:

- **The Georgia Perinatal Quality Collaborative**
- **The Georgia Maternal Mortality Review Committee**

Northside representatives dedicated **127 staff hours** to these efforts, accounting for **$8,985 in community benefit.**

Obesity and Diabetes
FY 2017 – FY 2018 Activities

Community Health Education

NHC's Learning & Educational Development department hosted **30 events** at community elementary schools in FY 2018 related to obesity prevention. These events were attended by approximately **4,955 students**, accounting for **$17,257 in community benefit.**

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