AUGUSTA
UNIVERSITY

AU MEDICAL CENTER, INC.

FY 2019

COMMUNITY HEALTH

NEEDS ASSESSMENT

TABLE OF CONTENTS

1. INTRODUCTION

The Patient Protection and Affordable Care Act (ACA) enacted March 23, 2010, requires hospitals to complete a Community Health Needs Assessment (CHNA) every three years. A CHNA outlines the facility's implementation strategy for meeting the community's health needs as identified through key stakeholders and research data. The original CHNA for Georgia Regents University (now Augusta University) was completed in Fiscal Year 2012 with a focus on pediatric asthma within the limited service area of Richmond County. In 2016, the Community Health Needs Assessment team focused on stroke care and prevention in the Central Savannah River Area (CSRA). For the most recent CHNA, AU Health System, Inc. (AU Health) will focus on expanding programs to meet more community mental health needs in the expanded service area of the 18-county CSRA.

2. BACKGROUND

2.1 Organization Structure and History

AU Health is part of a consolidated university comprised of liberal arts and medical education as well as patient care. This not-for-profit enterprise has a nearly 200-year history of training health professionals who will serve communities in Georgia and throughout the nation. Augusta University strives to be a top-tier university with a mission of providing leadership and excellence in teaching, discovery, clinical care, and service as a student-centered comprehensive research university and academic health center. Augusta University embodies the application of and produces tangible and measureable results for research, education, and service to enhance the health of the community. AU Health is well regarded for the health-related activities and contributions of its faculty, staff, and students to uninsured and under-insured members of the community.

The core of AU Medical Center, Inc. is comprised of a 478-bed Level 1 trauma center as well as 154-bed children's facility, The Children's Hospital of Georgia. AU Health is recognized both nationally and internationally in programs areas such as cancer, neurology, stroke, women's health, pediatrics and preventative care. AU Health houses a Critical Care Center, which includes a Level 1 adult trauma center and a 16-bed level 2 pediatric trauma center, which serve a 13-county region. Additionally, the Children's Hospital maintains the highest designated levels of care in its NICU (Level 4) and PICU (Level 1).

AU Medical Associates, Inc. is the health system's faculty practice plan, which has over 80 outpatient practice sites in the state. This clinical effort includes telehealth services and remote clinic sites for adult and pediatric patient populations.

2.2 The 2019 Augusta University Community Health Needs Assessment Team

AU Health's Population Health department, led by AU Health's Chief Transformation Officer, Dr. Janis Coffin. Population Health is a new department to the institution and assists the executive leadership team with community-based initiatives that affect the population served at the facility as well as the community at large. Members of the team included:

- Family Medicine Resident, Dr. Brandon Hagopian

- Decision Support, Business Development and Strategic Planning,
- College of Nursing
- Population Health
- Pharmacy
- Key constituents in the organization that have a strong interest in community health improvement

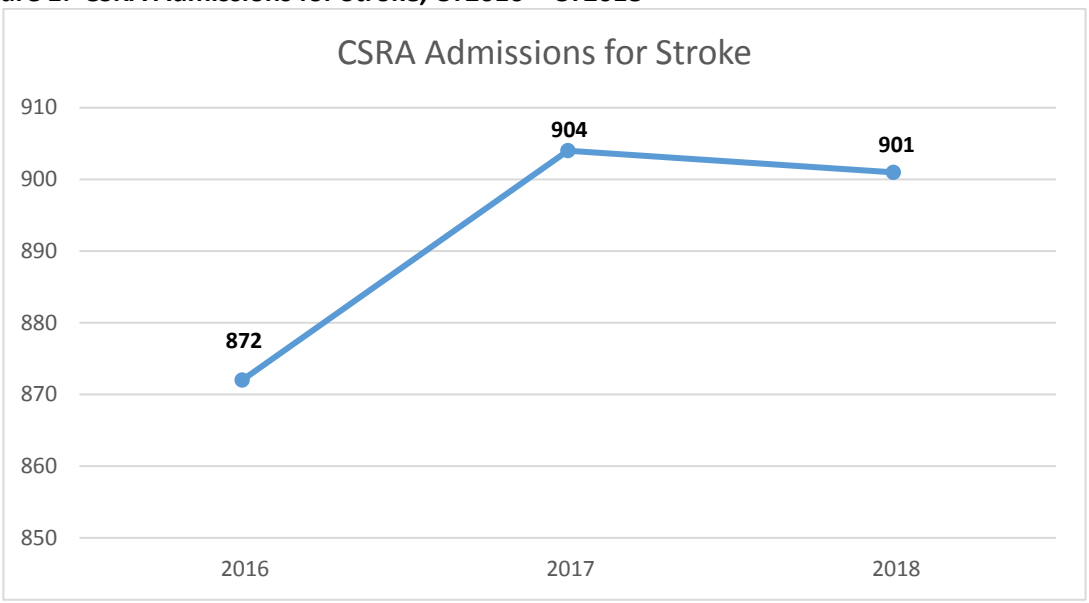
2.3 Community Health Needs Assessment Strategy

The 2019 Community Health Needs Assessment strategy determined areas of interest and identified opportunities for improvement, education, and intervention at the community and facility level. We evaluated a number of data sets and interviewed faculty to identify an area that could meet a significant need in our local population. The overall goal of the 2019 CHNA is to enhance collaboration with the community to expand access, services and education in the area of mental health disorders.

2.4 Results of the 2016 CHNA – Stroke Care and Prevention

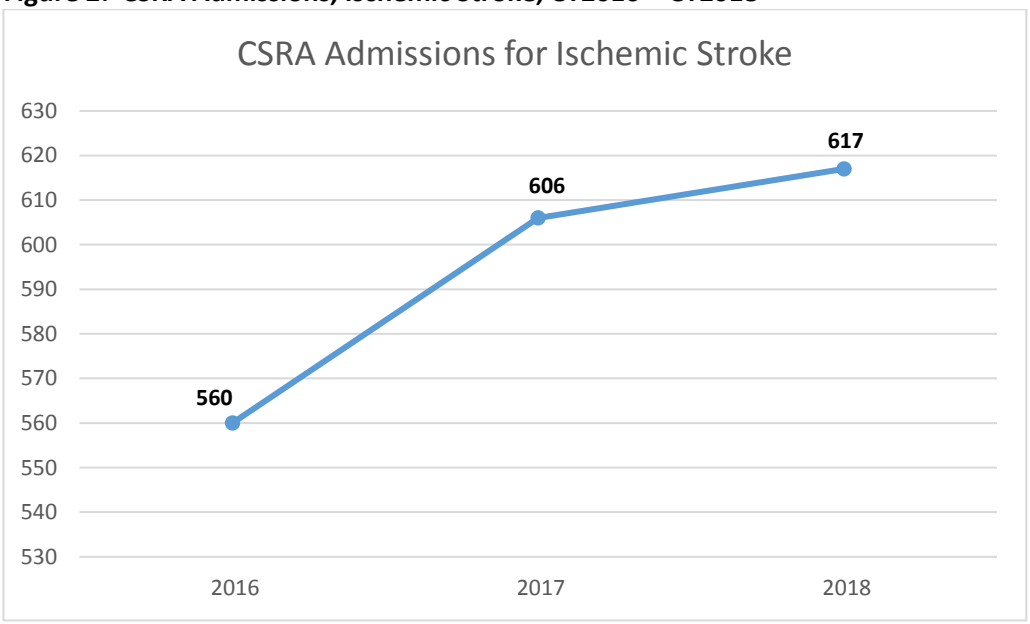
In the 2016 Community Health Needs Assessment from AU Health, the hospital joined with AU's Comprehensive Stroke Center, the American Heart Association and the Remote Evaluation for Acute Ischemic Stroke or REACH program to improve the quality of care for comprehensive stroke care and prevention. Our actions included community health fairs educational programs about stroke symptoms with partners such as American Heart Association and Wal-Mart. Our goal was to assist in early detection of stroke symptoms to ultimately reduce admissions for stroke related conditions. The focus area for the project was Richmond County, Georgia. The number of stroke related admissions did not decline as significantly as we had hoped. In calendar year 2017, stroke related admissions increased by 32, but did slightly decrease in calendar year 2018 (Figure 1). For Ischemic Stroke admissions, the admission rate has continued to increase since calendar year 2016 (Figure 2). Mortality rates also increased for strokes and ischemic strokes year over year (Figure 3).

Figure 1: CSRA Admissions for Stroke, CY2016 – CY2018



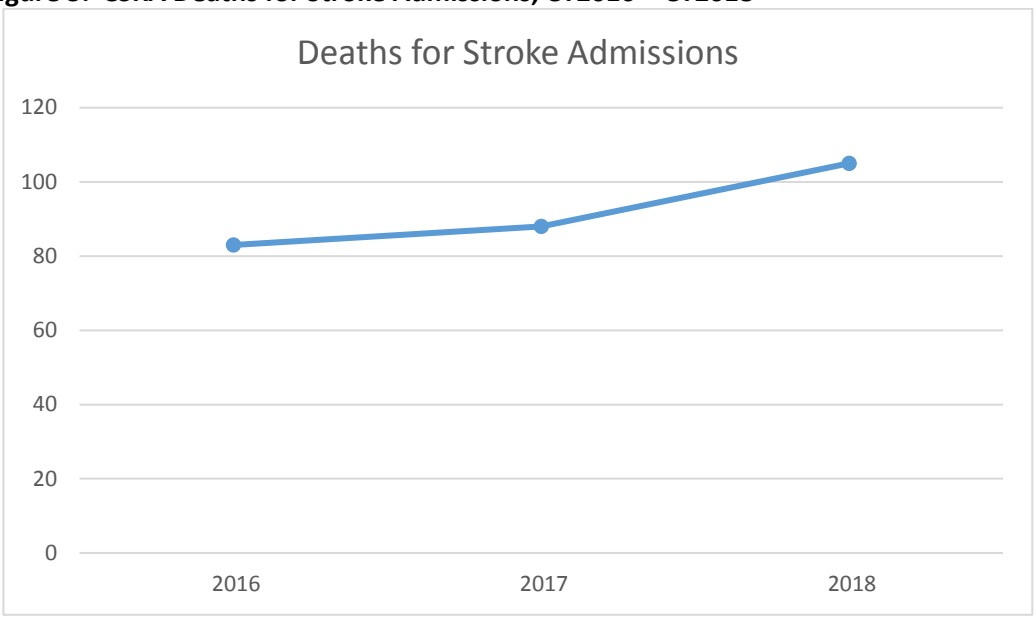
Source: GHA Inpatient Dataset, CY2016 – CY2018

Figure 2: CSRA Admissions, Ischemic Stroke, CY2016 – CY2018



Source: GHA Inpatient Dataset, CY2016 – CY2018

Figure 3: CSRA Deaths for Stroke Admissions, CY2016 – CY2018



Source: GHA Inpatient Dataset, CY2016 – CY2018

2.5 Service Area

AU Health has identified the Central Savannah River Area (CSRA) as our area of focus.. The CSRA encompasses 13 Georgia counties and 5 South Carolina counties representing a diverse mix of urban and rural areas, comprising the bulk of the primary, secondary, and tertiary market areas for AU Health (Figure 4).

Figure 4: Primary, Secondary, and Tertiary Market Area Designations of CSRA Counties

The CSRA census, as of 2015, was 756,453. AU Health's market share stretches across the state of Georgia and South Carolina. For patient seen within the CSRA market, AU Health treated 131,678 unique patients in CY2018.

3. CURRENT PROJECT

3.1 Methods

This Community Health Needs Assessment utilized both primary and secondary data to determine the focus for the project.

As part of the secondary data analysis, data from the Census Bureau's 2018 American Community Survey was used to identify the overall population trends of the 18 CSRA counties as well as the demographic (e.g., race, gender, age) and socioeconomic (e.g., poverty levels, education) make-up of these counties. A comparative trend analysis was made for this aggregate CSRA area against data for Georgia, South Carolina, and the nation.

Health conditions were examined at the county or the state level, dependent upon the parameters of the data source. In order to narrow down the potential scope of the CHNA, we began with the most prevalent conditions in Georgia and South Carolina and further refined the list using recent data from the CDC, Census Bureau, Healthy People, Robert Wood Johnson Foundation, Health Communities, state led health agencies, and the Agency for Health Research and Quality (AHRQ). Each of these organizations have either synthesized available local and national health data or have conducted large scale surveys of individuals about health conditions, access, and behaviors.

In conjunction with our quantitative analysis of internal data, a qualitative and mixed methods study was conducted. AU Health's Adult Primary Care Departments have a sizable patient panel of over 25,000. This department was provided a questionnaire about the composition of their clinic and challenges to the patient care experience. (Appendix A). Responses were recorded, transcribed, and recurrent themes were identified.

Primary and secondary data was analyzed together to the most significant health related needs. This information was reviewed by AU Health's senior leadership team and a focus area for the CHNA was selected. Within the report narrative, justification for any significant needs that are identified but not included will be addressed.

3.2 Analysis of Findings

3.2.1 Analysis of Findings – Secondary Data

3.2.1a Population Analysis

The prevalence and severity of disease states within a community depends on several factors, including the demographics of the population. The differences in population groups require different types and approaches to health care and inform the resulting project for this needs assessment.

Gender

Georgia, South Carolina, and the United States all follow the pattern of a predominantly female population (Table 1)

Table 1: Gender Breakdown for Georgia, South Carolina, and the United States of America

	Georgia	South Carolina	USA
Females	5,407,010 (51.4%)	2,618,325 (51.5%)	166,201,056 (50.8%)
Males	5,112,464 (48.6%)	2,465,801 (48.5%)	160,966,327 (49.2%)

Source: American Community Survey, Census Bureau, 2018

Similar to its state and national comparisons, according to the Census Bureau's 2018 American Community Survey, the aggregate count across the 18 county Central Savannah River Area (CSRA) also has more females (n = 365,969, 53.2%) than males (n = 322,200, 46.8%). However, when looking at the counties individually, this is not always the case (Table 2).

Table 2: Gender Breakdown of CSRA Counties, 2018

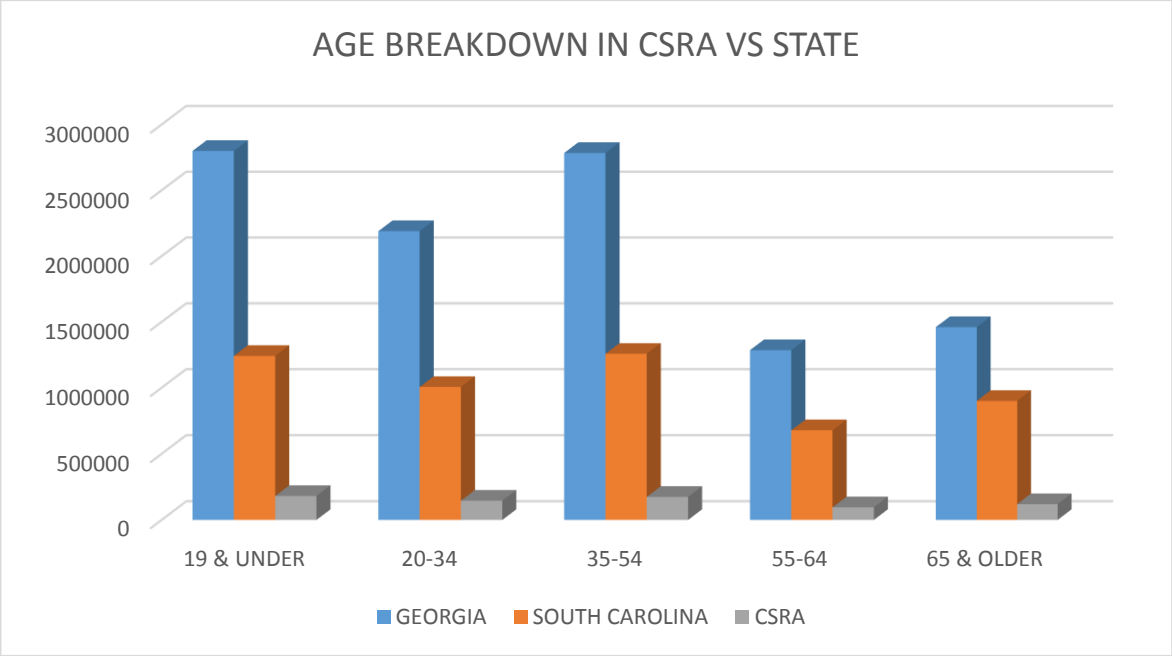
	Females	Males
Burke County, GA	11,750	10,673
Columbia County, GA	78,997	75,294
Glascock County, GA	1,513	1,482
Hancock County, GA	3,757	4,591
Jefferson County, GA	7,977	7,453
Jenkins County, GA	4,029	4,654
Lincoln County, GA	4,076	3,839
McDuffie County, GA	11,455	10,076
Richmond County, GA	104,002	97,552
Taliaferro County, GA	812	796
Warren County, GA	2,762	2,489
Washington County, GA	9,989	10,397
Wilkes County, GA	5,136	4,740
Aiken County, SC	87,580	81,821
Allendale County, SC	4,211	4,692
Barnwell County, SC	11,042	10,070
Edgefield County, SC	12,525	14,527
McCormick County, SC	4,356	5,054

Source: American Community Survey, Census Bureau, 2018

Age

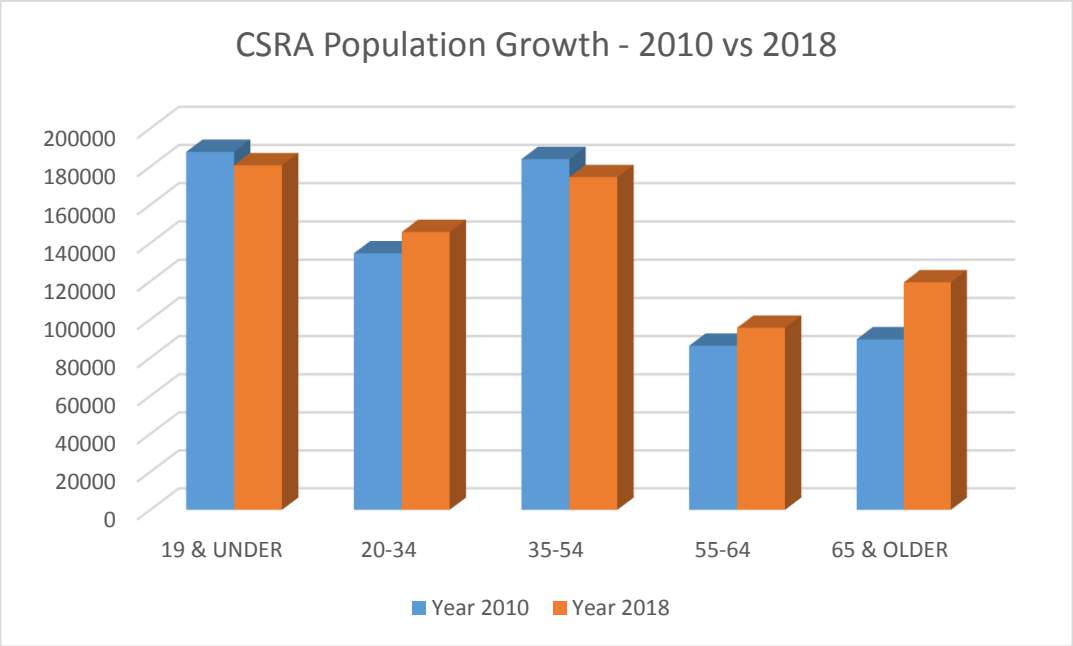
The age breakdown for the CSRA shows that in 2018 an estimated 25% of the population was 19 and under (Figure 5). Looking at growth trends for the CSRA, however, the pediatric population (19 and under) as well as the 35-64 population have both declined from 2010 to 2018. Both the 20-34 age group and those who are 55-64 have increased in population numbers by around 8% and 11% respectively, but the highest growth has been in the 65 years and older age group, which increased 33.3%. (Figure 6)

Figure 5: CSRA, Georgia and South Carolina Age Breakdown, 2018



Source: American Fact Finder, Census Bureau, 2018

Figure 6: CSRA Growth in Population, 2010 and 2018

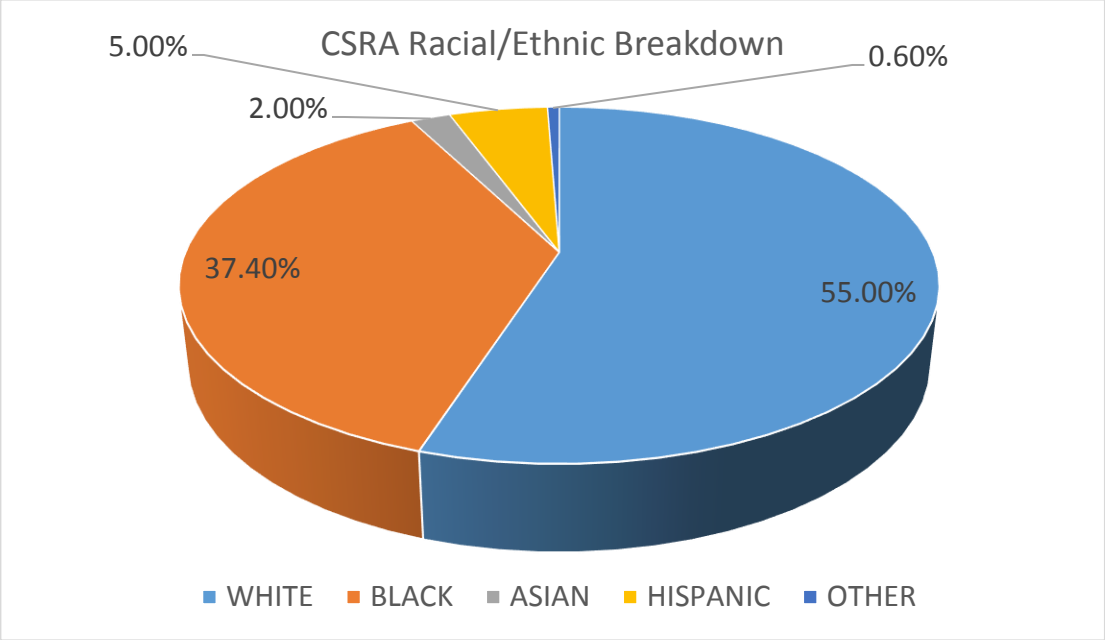


Source: American Fact Finder, Census Bureau, 2018

Race/Ethnicity

Nationally, the population is predominately white (n = 250,283,087; 76.5%). This trend is also the case for Georgia (60.5%), South Carolina (68.5%), and the CSRA (55.0%). However, for the CSRA, African American/Black accounts for approximately 37.4% of the population and the remaining 7.3% is split between Asian, Hispanic, and Other races (Figure 7).

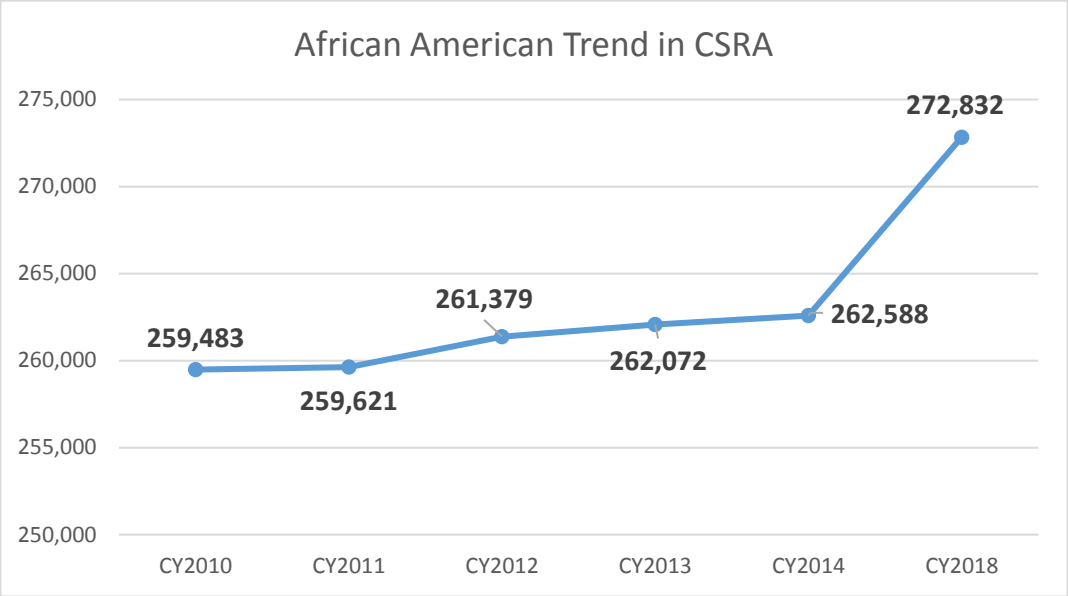
Figure 7: CSRA Racial/Ethnic Breakdown CY 2018



Source: American Community Survey, Census Bureau, 2018

African Americans/Black have a higher predisposition and risk factors for several chronic conditions, including certain cancers, stroke, cardiovascular disease, and diabetes. Looking at the trends from 2010 to 2018 for the CSRA, the overall number of African American/Blacks has increased by 3.8% (Figure 8). However, that increase is only within McDuffie, Columbia, Richmond, and Aiken counties.

Figure 8: Census of African Americans in CSRA, CY2010 – CY2014, CY2018



Source: American Community Survey, Census Bureau, 2010-2014, 2018

3.2.1b Social and Economic Determinants of Health

Income and Poverty

Within the United States, both Georgia and South Carolina are considered rural and lower income states with approximately 18% of their population living in poverty. Within the U.S., Georgia ranks #34 and South Carolina at #40 based on median household incomes from the 2018 Census Bureau's American Community Survey results (Table 3). As a small section of both of these states, it is not surprising that just less than one-fifth (18.2%) of the CSRA's population, all ages, is considered as living in poverty according to the 2018 numbers from the Census Bureau (Table 3). The median household income within this 18 county region is $38,375, with all but six of the counties (Columbia, Glascock, McDuffie, Aiken, Edgefield, and McCormick) making a median household income of under $40,000. Four of the counties actually make a median income below $30,000: Jenkins ($27,197), Hancock ($29,268), Jefferson ($29,640), and Allendale ($23,331).

Table 3: CSRA, Georgia, South Carolina, and USA Poverty and Income Comparisons

	CSRA	Georgia	South Carolina	USA
% Living in Poverty	18.2%	14.9%	15.4%	11.8%
Avg. Median Household Income	$38,375	$52,927	$48,781	$57,652

Source: American Community Survey, Census Bureau, 2018

Education

Approximately 9.9% (n = 72,936) of those aged 25 and older in the CSRA have less than a high school education. Breaking that percentage down by county, 17 of 18 CSRA counties have over 25% of their adult populations without a high school degree. In rural counties, such as Taliaferro County, that percentage reaches over 47%.

For Georgia and South Carolina as a whole, the percentage is 13.6% without a high school degree, and for the United States, it is 12.7%.

Access to Care (health insurance, rural pops, HPSAs/MUAs)

One aspect of access to care is being able to pay for the medical care using some form of health insurance. However, despite the Affordable Care Act initiatives that began in 2012, 12.0% of Georgians and 10.1% of those in South Carolina were still without health insurance in 2017 (Table 4). In the CSRA in 2017, 10.2% of the population were without health insurance. Five percent of the total population were employed without insurance. Only 59.2% of the total CSRA population had private insurance, whether with or without supplementing some form of public insurance.

Table 4: Comparison of Health Insurance Status for Adults 18-64 (Source: Census, 2017)

	CSRA	Georgia	South Carolina	USA
Overall				
Private Insurance	434,298	6,497,755	3,125,702	212,459,414
Public Insurance (i.e., Medicaid, Medicare)	249,197	3,037,676	1,734,552	106,925,261
No Health Insurance	74,581	1,264,208	515,033	28,338,960
Employed				
No Health Insurance	38,421	755,470	308,004	17,985,130
Unemployed				
No Health Insurance	11,686	155,991	67,881	3,165,880
Not in the Labor Force				
No Health Insurance	24,464	352,417	139,148	7,187,950

Source: American Fact Finder, Census Bureau, 2017

3.2.1c Chronic Disease States

Compiling data and national survey results from multiple sources (Appendix B) for a full list of and links to sources, the following chronic disease data were obtained and then ranked in order of incidence to then be analyzed against the primary data to determine focus.

Cancer

One of the leading and most well-known chronic conditions affecting Americans is cancer. Cancer comes in several forms and can be found in one or multiple areas of the body. According to the National Health Inventory Survey (2014), 586 participants said that they currently had cancer, of which 23.3% (n = 136) had been diagnosed within the last year. Looking at the immediate area around AU Health system using the Behavioral Risk Factor Surveillance System (BFRSS) metropolitan area tool, 5.93% of the population in the Augusta- Richmond County area have been told that they have or had some form of cancer either in or prior to 2016. Using BFRSS data from 2012 to 2016, Table 5 shows comparisons of cancer incidence.

Table 5: Cancer Incidence Rate Comparisons (new cancers per 100,000)

	Georgia	South Carolina	USA	Time Period
Cancer Incidence	466.4	457.3	448	2012-2016
Female breast	125.8	129.2	125.2	2012-2016
Prostate	122.3	115.4	104.1	2012-2016
Lung and bronchus	64.1	65.5	59.2	2012-2016
Colon and rectum	41.8	38.6	38.7	2012-2016
Corpus and uterus	23.0	23.6	26.6	2012-2016
Skin melanomas	26.6	23.3	21.8	2012-2016
Urinary bladder	18.3	19.3	20.1	2012-2016

Source: CDC, 2016 US Cancer Statistics

The above table shows that the overall incidence of cancer occurs more frequently in breast, prostate and lung. For the CSRA, the CDC data (2012-2016) demonstrates that all cancer incidence rates are lower than GA and SC rates and comparably to national rates (Table 6 and Table 7).

Table 6: CSRA Cancer Incidence Rate

	CSRA
Cancer Incidence	
Female breast	119
Prostate	105
Lung and bronchus	63
Colon and rectum	22
Corpus and Uterus	22
Skin melanomas	16
Urinary bladder	16

Source: CDC, 2016 US Cancer Statistics

According to Healthy People 2020, the 2020 target for mortality from overall cancer death in the US is 161.4 per 100,000 population whose goal is already met according to the CDC data according to 2016 data. The overall

cancer mortality trend has decreased by 6.3% from 2012 to 2016 in the US, but has only fallen 3.5% in Georgia and 6.1% in South Carolina.

Table 7. Cancer Mortality Trends 2012 – 2016, Healthy People 2020 (Age Adjusted)

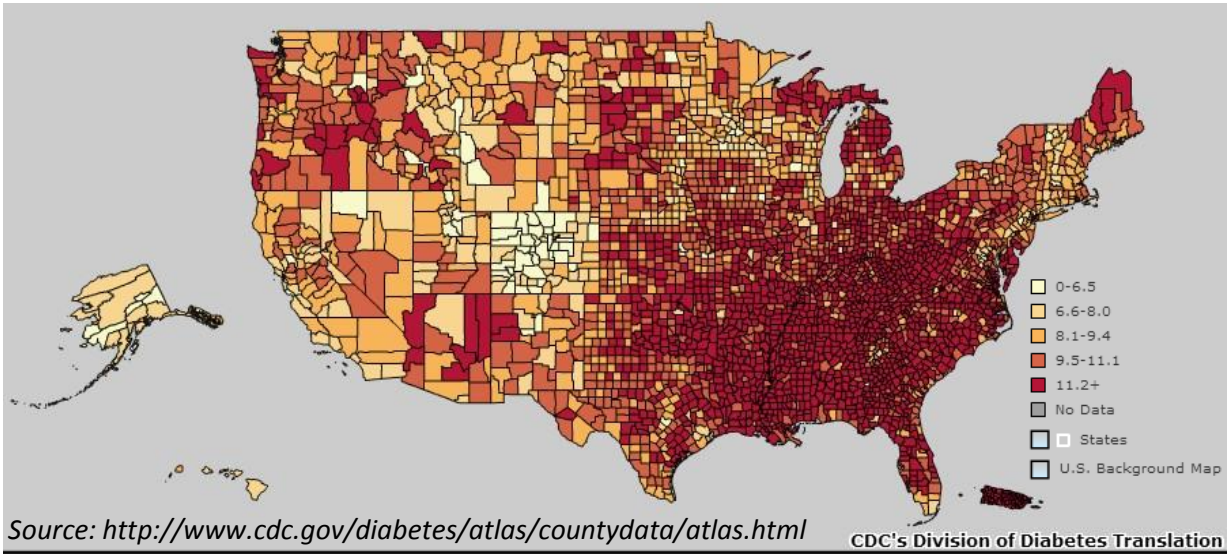
	2012	2013	2014	2015	2016	% Change
US	166.3	163.2	161.3	158.7	155.9	-6.3%
Georgia	169.6	168.2	166.2	163.8	160.7	-3.5%
South Carolina	179.0	174.1	171.7	167.0	168.1	-6.1%

Source: Healthy People, 2020

Diabetes

The overall incidence of diabetes in the United States has drastically increased over the past twenty years (Figure 9).

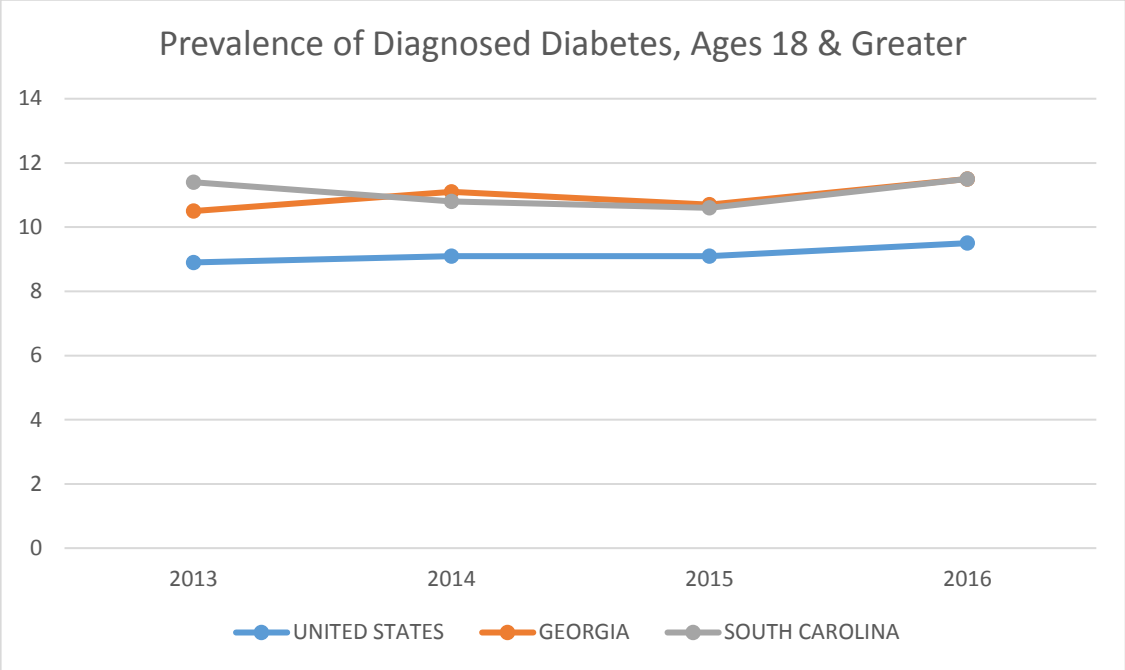
Figure 9: Diabetes Incidence County View, CDC, 2012



Source: http://www.cdc.gov/diabetes/atlas/countydata/atlas.html

With respect to diabetes, both Georgia and South Carolina demonstrate an incidence of 11.4% and 11.5% respectively by 2016. Since 2013, diagnosed diabetes has continued to increase in the South and across the United States. Since 1997, diabetes has been on the rise with over 23.35 Million Americans diagnosed with diabetes, which represents 7% of the overall population (Figure 10).

Figure 10: Prevalence of Diagnosed Diabetes in Ages 18 & Greater, 2013 - 2016



Source: CDC BFRSS, 2018

When examining mortality with diabetes as the main listed cause, Healthy People 2020 has a goal to reduce the number of diabetes-related deaths in the United States from 74.0/100,000 in 2007 to 66.6/100,000 by 2020. Overall the US, Georgia, and South Carolina are on a downward trend from 2014 to 2017; however, the diabetes mortality rates for South Carolina continue to rise at a greater rate than the national trend. Georgia showed a slight downtrend in diabetes mortality rate (Table 8).

Table 8: Diabetes Mortality Rate Trends 2009 – 2013, Healthy People 2020 (Age Adjusted, per 100,000 population)

	2014	2015	2016	2017	% Change
US	20.9	21.3	21.0	21.5	+2.8%
Georgia	22.3	21.4	21.2	21.5	-3.6%
South Carolina	21.8	23.4	22.3	24.5	+11.0%

Source: CDC Diabetes Mortality, 2014-2017

Heart and Vascular Disease

Heart and vascular diseases are also among the more prevalent chronic conditions in the United States with nearly a third of the population diagnosed with one or more of the conditions, including heart disease, hyperlipidemia, and hypertension. Hyperlipidemia prevalence rates are higher in South Carolina; however, hypertension prevalence rates are higher in Georgia (Table 9).

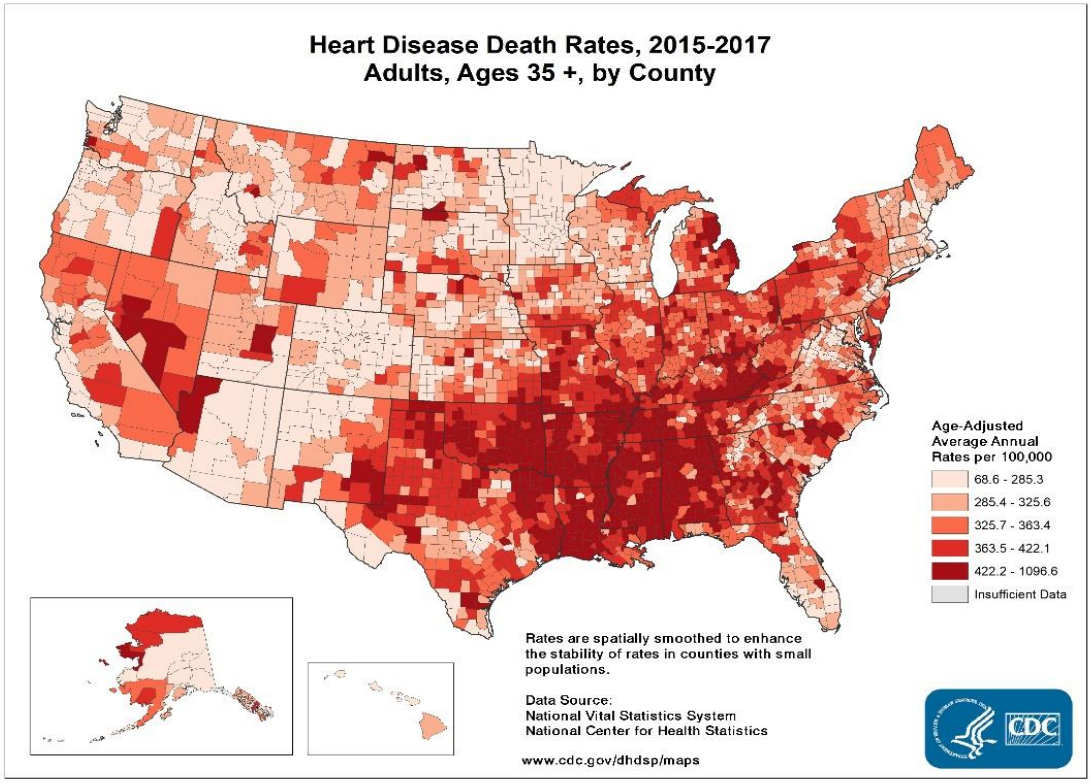
Table 9: Prevalence Rates of Heart and Vascular Diseases in Georgia, South Carolina and the United States

	Georgia	South Carolina	USA	Time Period
Hyperlipidemia Prevalence	31.1%	36.7%	33.0%	2017
Hypertension Prevalence	38.1%	33.1%	32.4%	2017
# of Hospitalizations from MI >65yo, per 1,000 beneficiaries	10.4-10.8 per	5.8-9.2	323,292	2014-2016

Source: CDC BFRSS

As with the other chronic conditions, overall death rates from the disease remain concentrated within the Southeastern portion of the United States (Figure 11).

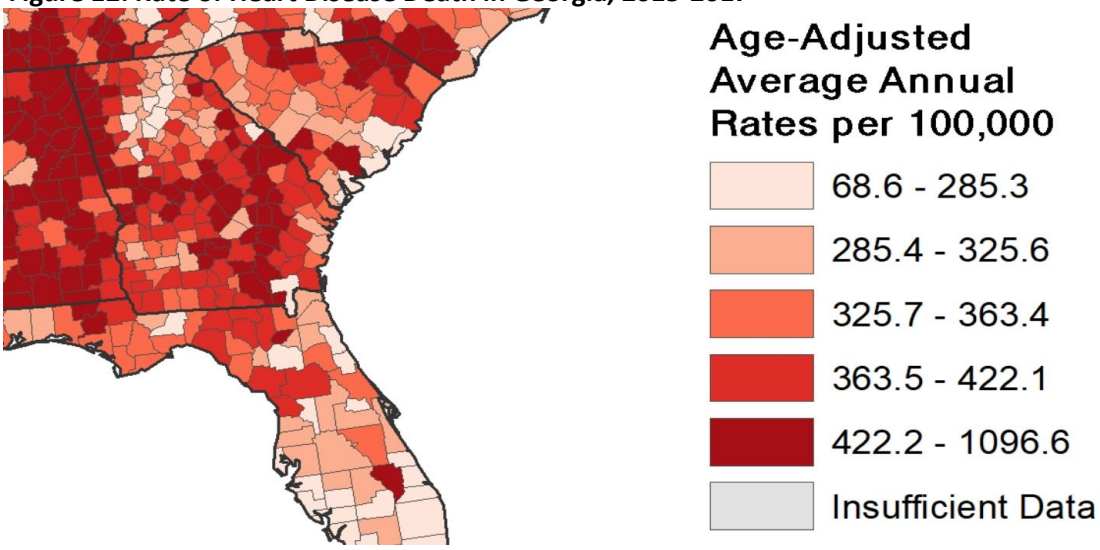
Figure 11: Death Rates per 100,000 from All Heart Disease, 2015 – 2017, Age 35+



Source: CDC Interactive Atlas of Heart Disease and Stroke, 2015-2017

Within Georgia and South Carolina, high rates of heart disease related death are more prevalent in the more rural sections of the state, including several of the CSRA counties (Figure 12).

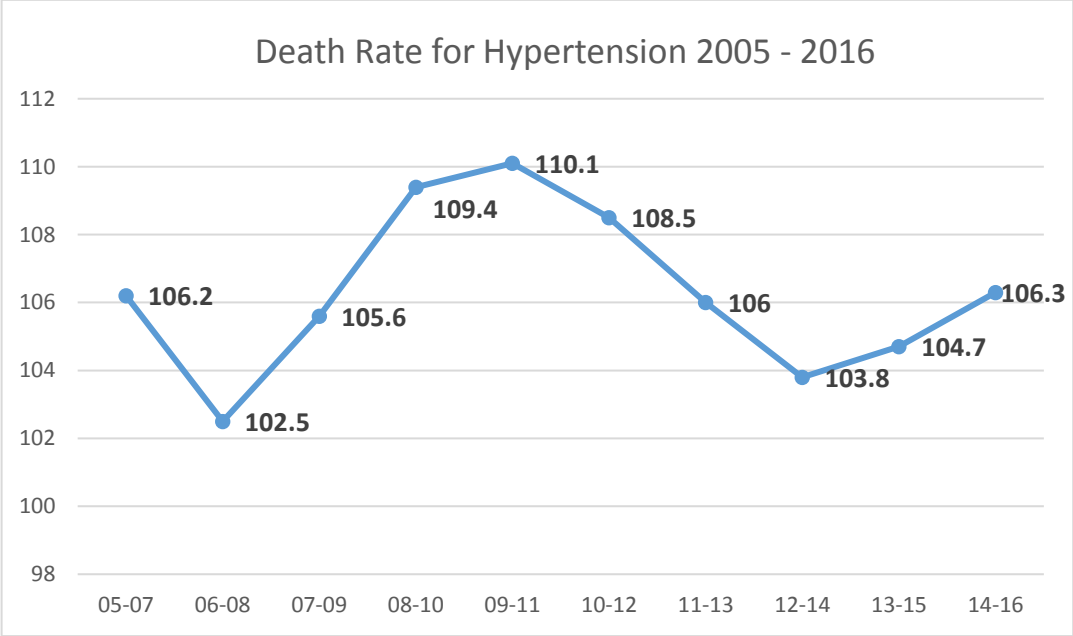
Figure 12: Rate of Heart Disease Death in Georgia, 2015-2017



Source: CDC Interactive Maps

According to CDC, death due to Major Cardiovascular Diseases is worse in Georgia than the United States (241.4 per 100,000 and 219.8 per 100,000 respectively). Death related to hypertension has remained steady since 2005 with a spike in 2008 – 2011 (Figure 13).

Figure 13: Death Rate (per 100,000) due to Hypertension in Georgia, 2005 – 2016

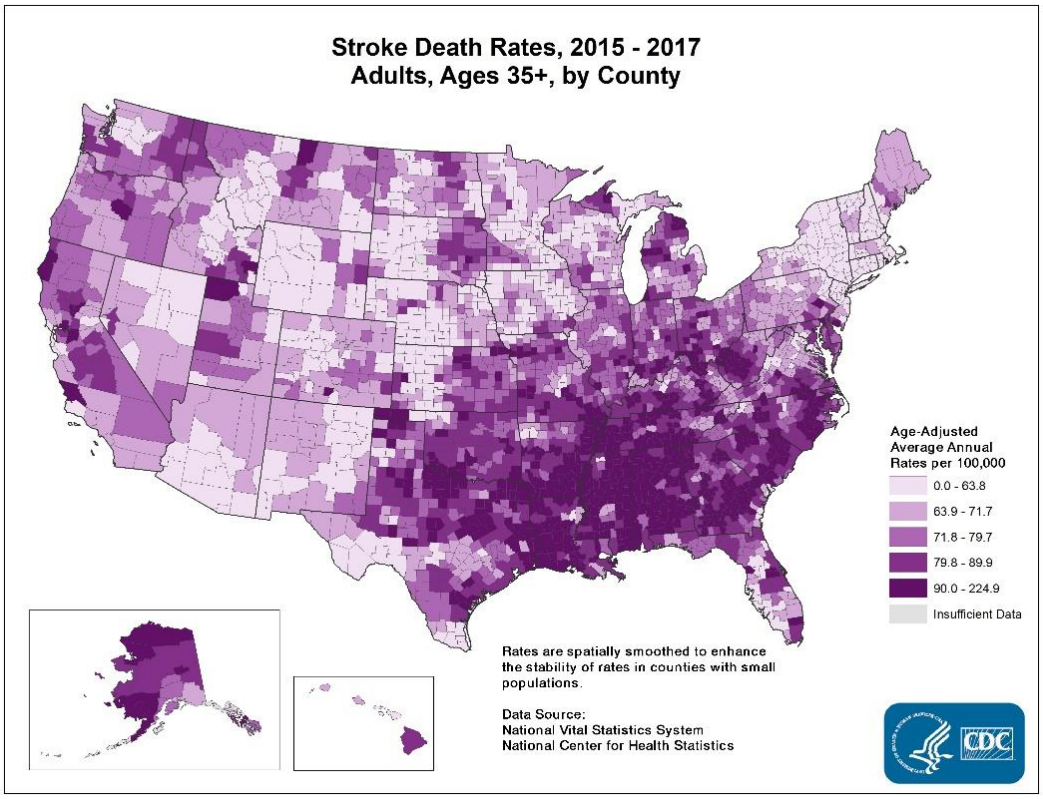


Source: CDC, Stats of the State of Georgia, 2005-2016

Stroke

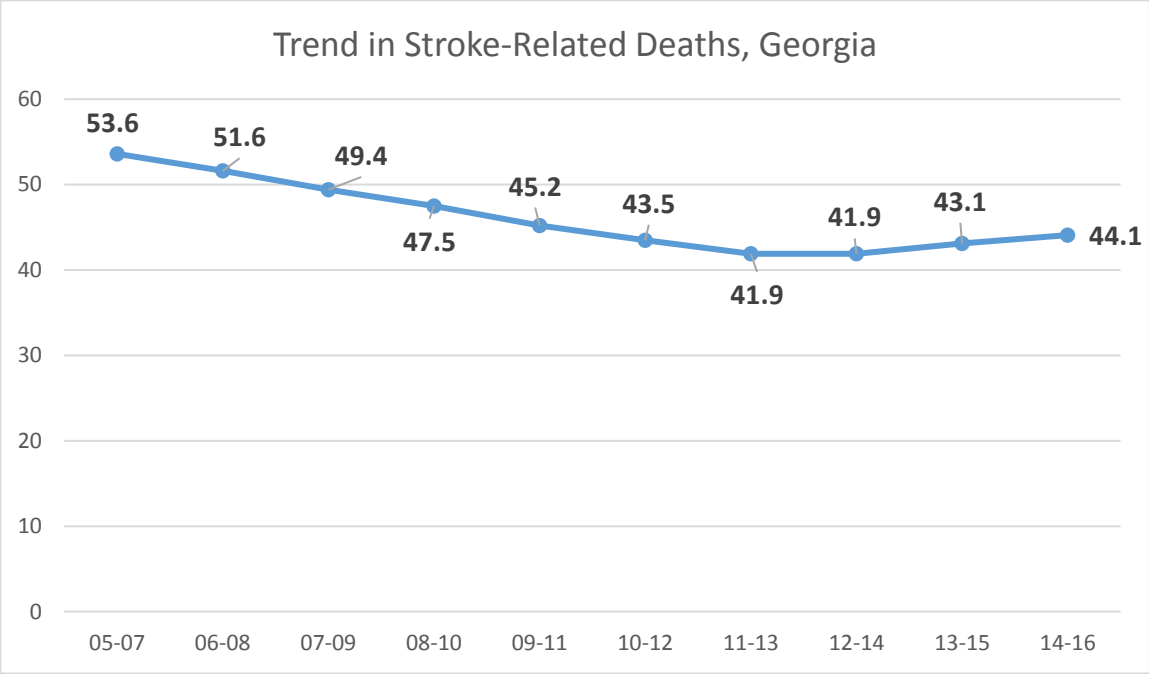
According to the American Stroke Association, stroke is the fifth leading cause of death and the leading cause of adult disability in the United States. While Healthy People 2020 does not have any goals specific to stroke, as with all other disease related topic areas, there is a desire to decrease the mortality rate from strokes. AU Health System and Georgia as a whole tend to appear on the higher end of the stroke mortality spectrum as it is located in the "buckle' of the southeastern "Stroke Belt". This "Stroke Belt", according to the Centers for Disease Control (CDC), is where the incidence and mortality from stroke is the highest in the United States (Figure 14). Looking at the mortality statistics from the CDC (2014-2016), Georgia's death rate is 85.5 out of a 100,000 for those 35 and older. The rate of hospitalization from stroke for those 65 and older is 23.8 per 1,000 Medicare beneficiaries (Georgia) compared to 22.5 per 1,000 (USA).

Figure 14: Stroke Death Rates, 2015 to 2017, Adults Aged 35+, by County (Source: CDC Interactive Maps)



Despite increased awareness of stroke prevention, the CDC data from 2005-2016 shows that Georgia stroke deaths rates show an overall improvement. There was an initial decline in stroke deaths between 2008 and 2011 but a slight upswing in stroke death has begun to occur over the last three years of available data (Figure 15).

Figure 15: Trend in Stroke-Related Deaths, Georgia, 2005-2016, all ages



Source: CDC, Stats of the State of Georgia, 2017

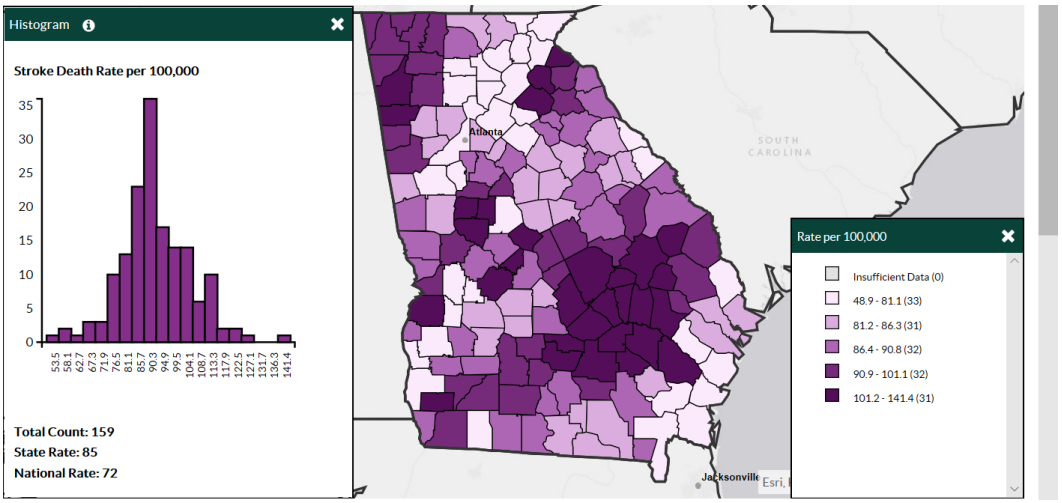
One-year mortality risk for stroke patients decreased by 23% for those who received follow-up neurological care. However, when filtered down to look only at Georgia with an overlay of hospitals offering neurological services, CDC's map of stroke mortality (Figure 16) shows that the majority of Georgia counties have a death rate from stroke of at least 85.5 per 100,000 adults aged 35 and over. Yet, despite this high mortality rate and the empirical evidence of the benefit of neurology care for stroke patients, only 48 hospitals within Georgia offer neurological specialty services, and only a handful of those also offer inpatient rehabilitation services equipped to handle this follow-up care of this population. Table 10 shows the trends for stroke mortality which shows that the CSRA matches Georgia which are both slightly lower than South Carolina.

Table 10: Stroke Mortality Rates, Comparison of the CSRA and States, 2014-2016, Adults 35+ (Source: CDC)

Area	Stroke Mortality Rate (out of 100,000)
Georgia	85.50
South Carolina	87.90
CSRA	85.45

Source: CDC, State Statistics

Figure 16: Map of Stroke Mortality in Georgia, 2014 – 2016, Aged 35+, by County



Source: CDC Interactive Map

Respiratory Diseases

Within the spectrum of respiratory diseases, both asthma and chronic obstructive pulmonary disease (COPD) have moderate prevalence in the United States. Georgia has lower prevalence and mortality rates in asthma and COPD as compared to South Carolina, but still slightly above national rates (Table 11).

Table 11: Asthma and COPD Prevalence and Mortality, GA, SC, and USA

	Georgia	South Carolina	USA	Time Period
Asthma Prevalence (Adults)	8.4%	9.2%	7.9%	2017
Asthma Mortality Rate	10.1%	12.4%	9.9%	2017
COPD Prevalence (Adults)	6.7%	6.7%	5.9%	2015
COPD Deaths (cases per 100,000)	45.7	48.5	40.3	2015

Source: CDC

Looking at a trend of state data from CDC, mortality rates for asthma are lower than Chronic Obstructive Pulmonary Disease (COPD). According to Healthy People 2020, more than 23 million people living in the United States have asthma). In a trend comparison from 2001 to 2009, the CDC found that there were 2.1 million asthma related ED visits in 2009 -- a number that stayed consistent throughout the whole trend period. Of those ED visits, more were in children and Black/African Americans (Figure 17).

Figure 17: Asthmas Emergency Department Visits Rates by Age, Sex, Race, Ethnicity, and Geographic Region, 2016

Table B. Emergency department visits (ED) with asthma as the primary diagnosis per 10,000 population, by selected patient characteristics: United States, 2016

Characteristics	2016 Emergency Department (ED) Visits		
	Weighted No. of Visits	Standard Error of Weighted No. of Visits	Rate* (SE)
Total	1,776,851	204,136	55.9 (6.4)
Child (aged 0-17 years)†	546,013	98,935	74.3 (13.5)
Adult (aged 18+ years)§	1,230,838	162,841	50.3 (6.7)
Sex			
Male	701,071	98,657	45.1 (6.3)
Female	1,075,780	149,922	66.2 (9.2)
Race, not considering ethnicity			
White	1,051,527	166,935	42.9 (6.8)
Black	670,940	94,570	161.1 (22.7)
Other¶	54,384	19,670	—
Ethnicity			
Hispanic or Latino	452,265	100,494	79.6 (17.7)
Not Hispanic or Latino	1,324,586	154,961	50.7 (5.9)
Age Group			
0–4 years	175,200	44,039	87.9 (22.1)
5–17 years	370,813	74,511	69.2 (13.9)
18–34 years	594,213	108,041	80.9 (14.7)
35–64 years	505,449	84,062	41.0 (6.8)
65+ years¶	126,480	50,342	—
U.S. Census Region			
Northeast	353,039	77,788	63.6 (14.0)
Midwest†	334,786	74,236	50.0 (11.1)
South	648,023	128,009	54.0 (10.7)
West	441,004	117,146	58.4 (15.5)
MSA status			
MSA	1,481,170	188,938	54.1 (6.9)
Non-MSA¶	295,682	122,585	—

Abbreviations: MSA, Metropolitan Statistical Area; SE, standard error.

Source: CDC, Most Recent National Asthma Data, 2017

Healthy People 2020's overall goal for respiratory diseases is to "promote respiratory health through better prevention, detection, treatment, and education efforts" (https://www.healthypeople.gov/2020/topics-objectives/topic/respiratory-diseases). Also, as with other conditions, Healthy People 2020 has specific data-driven target goals associated with the reduction of asthma associated deaths, hospitalizations, and emergency room visits (Table 12). However, these data were only available from Healthy People 2020 at the national level and not the state level, so comparisons between the service areas of Georgia with Healthy People 2020 data could not be made. Despite targets to reduce negative impacts of asthma, deaths due to asthma have remained either steady or have increased for anyone under 65. For ages 65 and older, mortality rates have declined, and for all age groups emergency room visits have declined.

Table 12: Healthy People 2020 Goals for Reduction of Asthma Related Deaths, Hospitalizations, and ED Visits

Reduction of Asthma Related Deaths by Age Group							
Age Range	2009	2010	2011	2012	2013	% Change	2020 Target
0-17	2.8	2.5	2.7	2.4	3	7.1	NA
18-34	4.7	4.3	4.4	4.7	4.5	-4.3	NA
35-64	10.8	11.3	10.8	11.9	12	11.1	4.9
65+	38.8	37.7	36	35.7	35.7	-8	21.5
Reduction of Hospitalizations from Asthma by Age Group							
Age Range	2006	2007	2008	2009	2010	% Change	2020 Target
0 - 4	43.3	41.4	35.4	40.6	null	-6.2	18.2
5 - 17	null	13.4	11.2	10.5	12.4	-7.5	NA*
18 - 44	null	7.1	7.7	8	7.2	1.4	NA*
45 - 64	null	16	17	16.7	14.7	-8.1	NA*
65+	23.7	25.3	25.2	29	25.5	7.6	20.1
Reduction of Emergency Room Visits from Asthma by Age Group							
	1995-1997	1998-2000	2001-2003	2005-2007	2009-2011	% Change	2020 Target
0 - 4	150	159.6	153.7	132.8	125.8	-16.1	98.7
5 - 17	null	null	null	73.6	91.1	23.8	NA*
18 - 44	null	null	null	62.3	59.6	-4.3	NA*
45 - 64	null	null	null	37.3	44.5	19.3	NA*
65+	29.5	31.5	30.9	21.9	26.8	-9.2	13.7

Source: Healthy People 2020

**Reduction of ED visits for ages 5-64 are rolled into one group at the high level where the target was listed (8.7 for hospitalizations and 49.6 for ED Visits). However, for sake of comparison and differences in age groups, data is listed using the expanded population data for the goal.*

In addition to asthma, according to Healthy People 2020, while 13.6 million adults in the US have had a diagnosis of COPD, it is estimated that nearly the same amount have yet to be diagnosed. COPD, the fourth leading cause of death in the United States, is preventable since most cases are related to cigarette use (CDC, National Center for Health Statistics, Compressed Mortality file 1999-2006). As with asthma, Healthy People 2020 has set data-driven target goals to reduce COPD-related deaths, hospitalizations and ED visits since data shows all have increased rather than decreased (Table 13).

Table 13: Reduction of COPD-related deaths, hospitalizations, and ED visits, age 45+

	2007	2008	2009	2010	2011	2012	2013	% Change	2020 Target
Deaths	113.9	123.5	117.9	116.6	117.7	114.8	116.5	2.3	102.6
Hospitalizations	56	61.4	62.4	58.7	null	null	null	4.8	50.1
ED Visits	81.7	110.1	117.3	92.9	103.1	null	null	26.2	56.8

Source: Healthy People 2020

Mental Health, Mental Disorders, & Addictive Behaviors

Mental health issues and addictive behaviors can be underlying issues for or could lead to chronic conditions later on. Unlike with other issues, Georgia and South Carolina are actually below the national average for alcohol usage, and Georgia is below average for current smoking behavior.

Table 14: Prevalence of Alcohol and Tobacco Use: GA, SC, and USA

Prevalence (%)	Georgia	South Carolina	USA	Time Period
Alcohol Use (Adults)	48.6%	48.5%	53.8%	2018
Binge Drinking Prevalence (Adults)	14.5	15.1	16.2	2018
Heavy Drinking Prevalence (Adults)	5.8	6.5	6.5	2018
Current Smokeless Tobacco Use (Adults), every day; some days	2.3	2.3	2.3	2018
Current Smoking (Adults)	16.1	18.0	16.1	2018

Source: CDC, BFRSS, 2018

Healthy People 2020 has a goal of reducing the proportion of adults who experience major depressive episodes from a baseline of 6.5% nationally to a target of 5.8%; however, the percentage has increased as of 2013 to 6.7%. Likewise, Georgia has experienced a 14.29% increase from 2008 to 2013. South Carolina has seen a reduction from 7.8% to 7.2% from 2008 to 2013, though it started much higher than the national average and remains higher than the US's rate of 6.7% in 2013 (Table 15).

Table 15: Major Depressive Episodes Trends 2011-2016, Healthy People 2020

	2011	2012	2013	2014	2015	2016
US	6.6	6.9	6.7	6.6	6.7	6.7
	2008-2011		2009-2012		2012-2015	
Georgia	6.3		6.4		7.0	
South Carolina	7.8		9		6.3	

Source: Healthy People 2020

Healthy People 2020 has a goal of decreasing the target in 2020 to 5.8%. Georgia is trending up from 2012 while South Carolina decreased from 2012. The prevalence of major depressive disorders in adults has increased since 2013. During 2013-2016, 8.1% of American adults aged 20 and over had depression in a given two-week period. About 80% of adults with depression reported at least some difficulty with work, home and social activities because of their depression (CDC, Prevalence of Depression Among Adults Aged 20 and Over: United States, 2013-2016). The Depression and Bipolar Support Alliance has reported depression often co-occurs with other illnesses and chronic conditions. Per the National Institute of Health, Heart disease and depression: A two-way relationship, 2017, adults with a depressive disorder or symptoms have a 64% greater risk of developing coronary artery disease.

Table 16: Adults Aged 18 years and older with Major Depressive Disorders who receive treatment

	2011	2012	2013	2014	2015	2016
US	68.1	68.0	68.6	68.6	67.2	65.3
	2008-2011		2009-2012		2012-2015	
Georgia	58.8		59.9		67.7	
South Carolina	73.2		71.0		69.3	

Source: Healthy People 2020

Healthy People 2020's desired targeted goal is to increase to 75.9% treatment. The state of Georgia has seen an increase in treatment, but with changes in legislation and reimbursement pressures on behavioral health providers, this number could decrease over time. There are significant limitations on behavioral health providers in the nation and that trend is expected to continue, especially in adult behavioral health providers. Psychiatrists are the primary caregivers in mental health, with an estimated 39,180 psychiatrists providing mental health services to adults (age 18 and over) and 6,210 providing care to children and adolescents (age <18) in 2016. By 2030, the supply of psychiatrists is expected to decrease by approximately 27% (Health Resources & Services Administration, 2019, Page 1-2).

Obesity, Oral Health, and Bone Diseases

As with mental health, obesity, poor oral health, and arthritis have also all been found to be underlying issues for other chronic conditions. Overall, Georgia and South Carolina have higher prevalence levels of adults being overweight or obese and on poor oral health. South Carolina also has higher prevalence of arthritis (Table 17).

Table 17: Prevalence of Arthritis, Obesity, and Poor Oral Health, GA, SC, and USA

	Georgia	South Carolina	USA	Time Period
Arthritis Prevalence (Adults)	23.7%	28.3%	23.7%	2013
Overweight or Obesity (Adults)	65.6%	66.5%	65.8%	2019
Obesity Only(Adults)	30.2%	32%	30.9%	2019
Tooth loss (Adults 18-64)	39.3%	43.2%	35.7%	2012
Six or More Teeth Loss (65+ years)	44.8%	47.4%	39.5%	2012

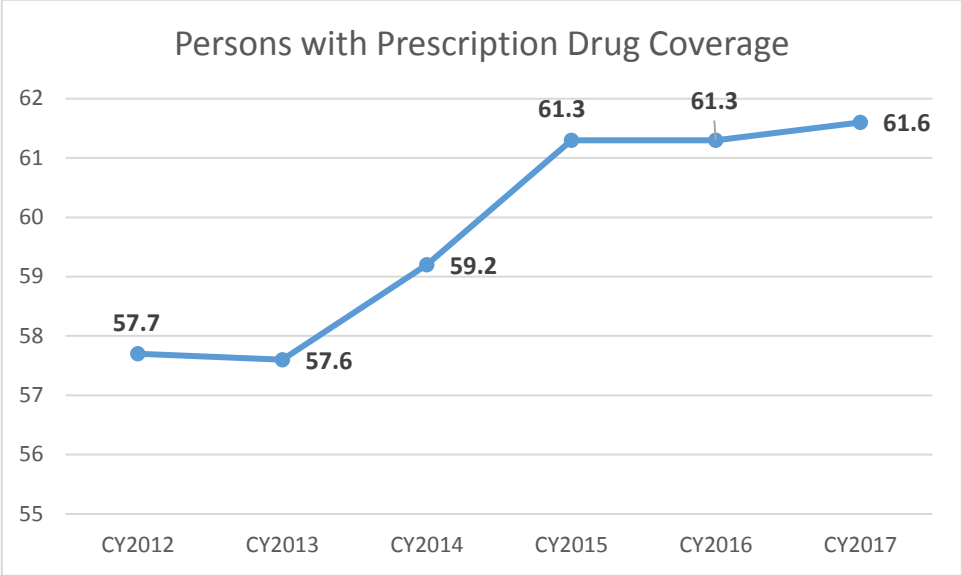
Source: CDC, BFRSS, 2018

Other Factors Influencing Healthcare in Georgia and South Carolina

In the United States, various factors directly affect a way a person can receive healthcare. This includes availability of health care providers in a community, access to specialty providers, access to primary care physicians, transportation, insurance coverage availability, and health literacy. Healthy People 2020 has several focuses around the above factors.

Access to insurance for health care, dental and prescription drug coverage is a large priority at the national and state levels. Healthy People 2020 set a target of 68.4% of all Americans having access to prescription drug coverage by 2020. The country is currently trending upward since 2012; however, the national average is still far from the target. In 2017, the percentage was at 61.6% (Figure 18).

Figure 18: Persons with Prescription Drug Coverage, National, 2012 - 2016

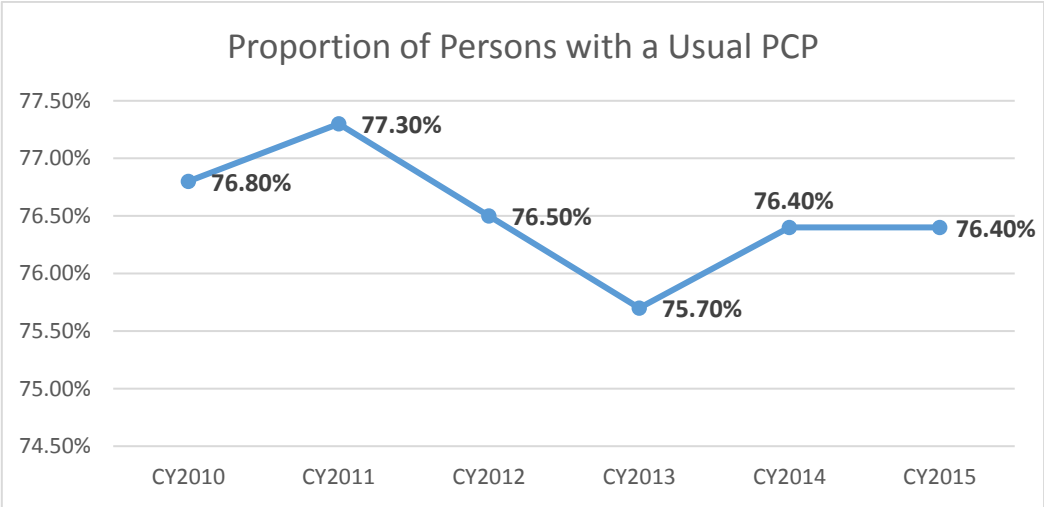


Source: Healthy People 2020

Another focus for Healthy People 2020 as related to Access to Health Services is increasing the proportions of persons who utilize a usual primary care provider. Health care insurance plans have changed in recent years to put more emphasis on relationships with the primary care provider. This relationship is vital to detecting diseases early by persons coming in for their routine wellness visit. This visit captures preventive services to help detect diseases such as diabetes, cancer, and heart disease.

The target for 2020 is 83.9% of persons to have a consistent, primary care provider by 2020. There was a decline in 2012 and 2013, but those percentages have begun to improve (Figure 19).

Figure 19: Proportion of Persons with a Usual Primary Care Provider, 2010 – 2015



Source: Healthy People 2020

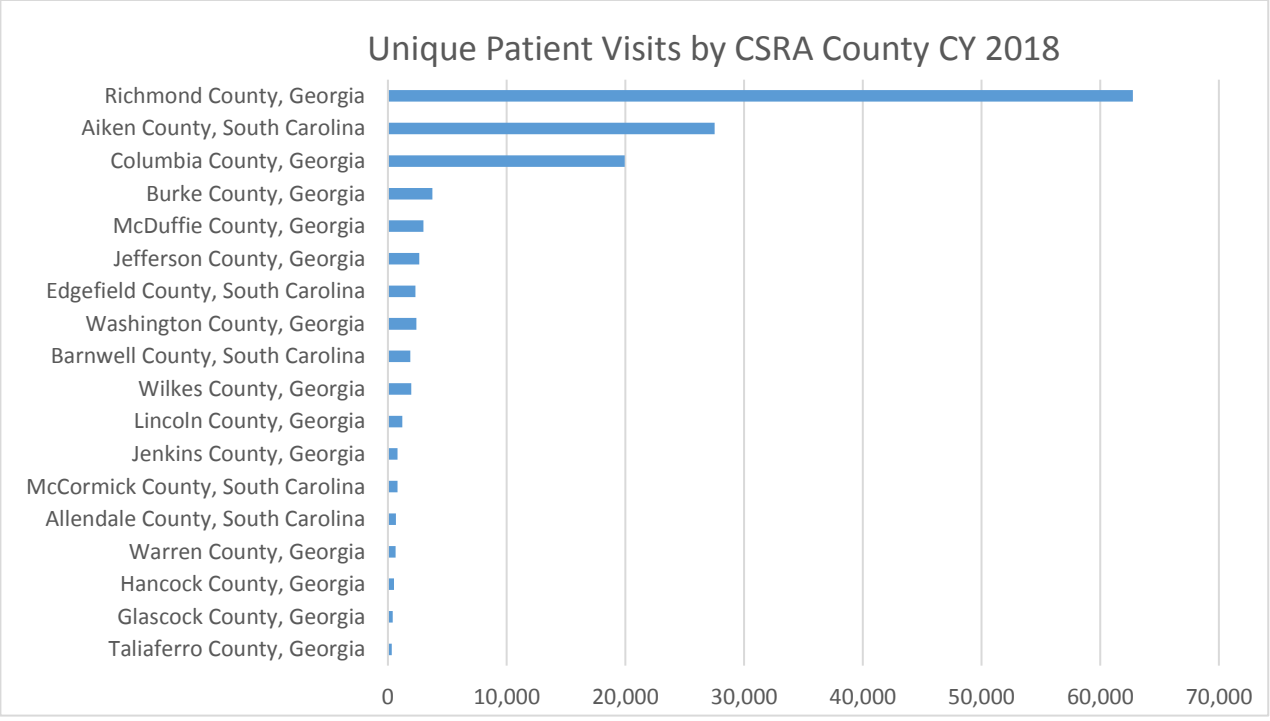
3.2.2 Primary Data Analysis

3.2.2a AU Health CSRA Patient Data

Within calendar year 2015, AU Health had approximately 1,294,747 visits from patients living in the CSRA, with a large portion of those having come from Columbia, Richmond and Aiken counties (Figure 20). For this same population, females represented 55.57% males comprised 44.43% (Figure 21). The percentage of females seen at AU Health decreased by almost 5% while males increased at a similar rate.

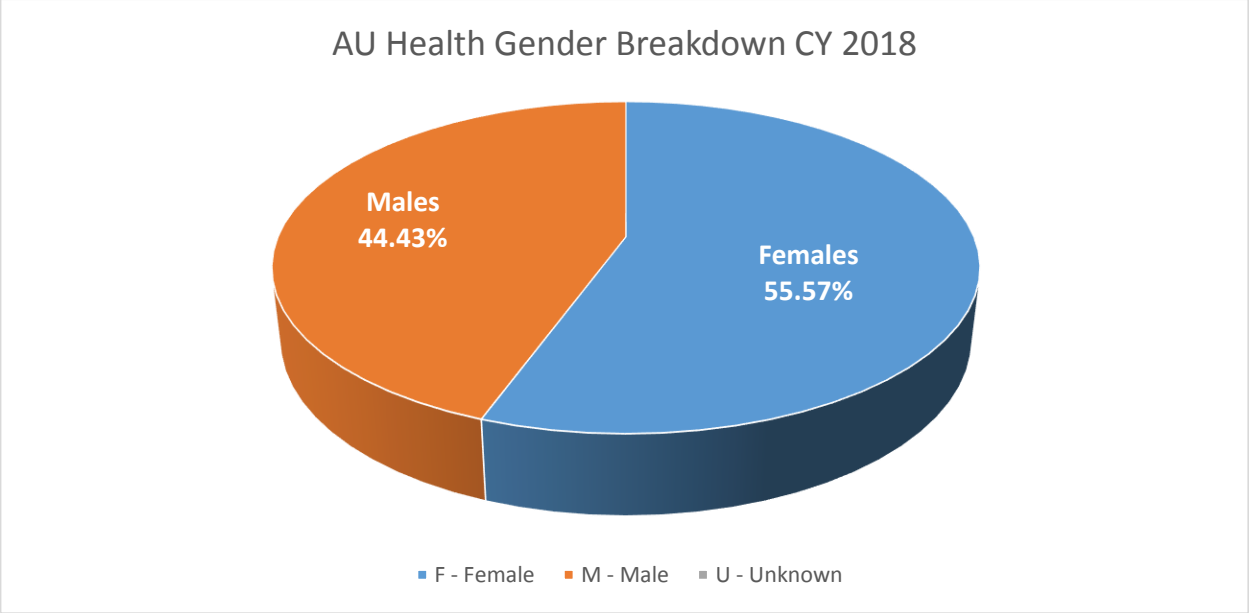
Figures 21, 22, and 23 represent the full demographic breakdown of unique patients seen at AU Health for calendar year 2018, including age and race breakdowns. Most notably in these breakdowns is the increase in the ages of patients seen. Age group 0-17 increased from 22% in CY 2017 to 30.47% in CY 2018, while age group 65+ decreased from 21% to 16.70%.

Figure 20: Total visits to AU Health by CSRA Population, CY2018



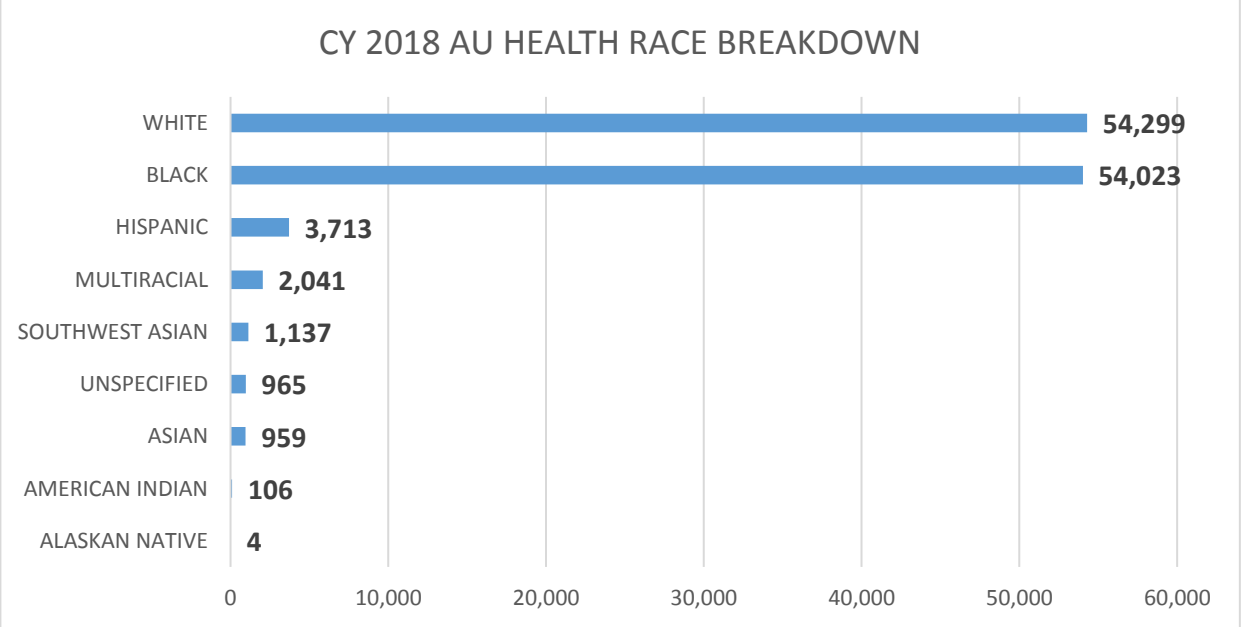
Source: Strata, CY 2018

Figure 21: Gender Breakdown AU Health population CY 2018



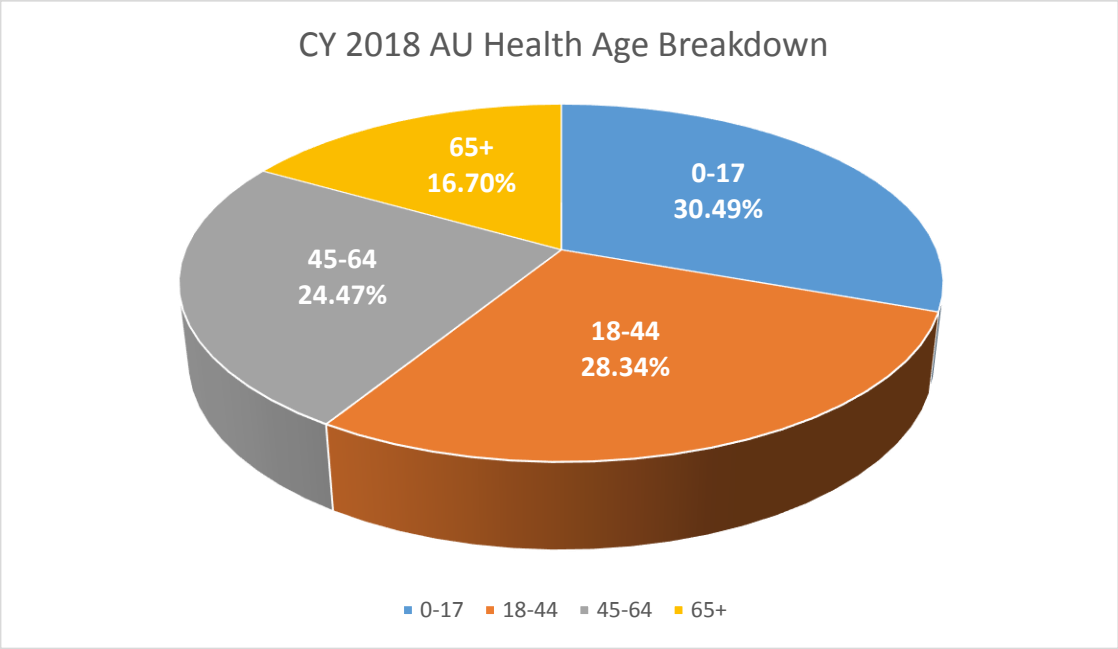
Source: Strata, CY 2018

Figure 22: Race breakdown CY 2018



Source: Strata, CY 2018

Figure 23: Age Breakdown for patients seen in CY 2018



Source: Strata, CY 2018

3.2.2b Key Informant Survey/Interviews

A total of 50 surveys were completed by the faculty, residents and attending physicians from AU Health's Primary Care and Emergency Medicine departments during the summer of 2018. The survey emphasized barriers to care and conditions treated in their department. The respondents practice across the CSRA and outside the CSRA. The survey results was compared to internal data to understand the greatest need and opportunities present in the community. Physician specialties included Pediatrics, Emergency Medicine, Family Medicine, and Internal Medicine. See Appendix A for the full questionnaire that was provided to the physicians.

The survey results are listed below based on the question which included ethnicity of patient population, age of populations served, primary insurance, chronic conditions, access to behavioral health resources, and what enhancement of resources would assist their practice.

For population served (n=50), 100% of all provider see ages 19-64, 86% see 65 and older, and 66% see ages less than 18. For the various ethnic groups seen in the practices, (n=50), 96% of respondents treat African Americans, 94% treat Caucasians, 70% treat Hispanic patients and only 62% treat Asian patients. Primary insurance of the population treated (n=50) 100% of all providers treat Medicaid patients, 98% treat Medicare beneficiaries, 96% treat the commercially insured population, and 62% treat self-pay.

The various types of chronic conditions treated by these providers are shown in Table 18.

Table 18: Chronic Conditions by Number of Community Providers Who Treat Condition in Their Practice

Chronic Condition	# of Providers Who Treat Condition	% of Providers Who Treat Condition
Diabetes	50	100%
COPD	50	100%
Hypertension	50	100%
Asthma	50	100%
Obesity	50	100%
CHF	50	100%
Depression	47	94%
Mental Health	44	88%
Stroke	40	80%

The next section of the questionnaire addressed what the providers felt were barriers to care in the population they served. Below are the results from the barriers to care section.

Table 19: Barriers to Care, Provider Questionnaire

Barrier	# of Providers with this Barrier	% of Providers with this Barrier
Cost of Care	48	96%
Non-Compliance	46	92%
Transportation	44	88%
Health Literacy	39	78%
Language Barriers	14	28%
Office Hours	13	26%

The next questions addressed resources available in their clinic such as behavioral health providers, telemedicine and chronic care management. For question around access to behavioral health providers in their practice (n=50), 76% answered “Yes” and 24% answered “No.” With all AU Health physicians being surveyed, this distribution was surprising with AU Health having access to a Department of Psychiatry with psychiatrists, psychologists and other mental health clinicians. For the next question, it addressed how familiar the provider was with community resources available to them. Only 26% of all providers surveyed answered they were Very Familiar with community resources, while 68% answered they were

Somewhat Familiar. Only 6% surveyed answered they were Not Familiar at All. The other two questions addressed whether telemedicine/technology would enhance their practice and if they promote the use of their chronic care management program. Of the providers surveyed, 92% answered "Yes" to the telemedicine/technology question while 98% answered "Yes" to promotion of their chronic care management program. The last question addressed additional resources needed to enhance their practice. Below are the results of the last survey question (Table 20).

Table 20: Resources Needed to Enhance Practice

Resource Need	Total # Responded as a need	% of Overall Resource Needs
Social Worker/Behavioral Health Providers	21	46%
No New Resources Needed	7	14%
Improved Patient Tools (self-scheduling, communication, walk-in clinics)	6	12%
Improved Clinic Tools/Resources (EMR Optimized, Standard processes, nursing protocols)	6	12%
Nurse Navigator	5	10%
Additional Clinical Staff (RNs, LPNs)	5	10%

This survey was helpful, because although there is access to behavioral health providers at AU Health and in the community, a large need still remains. The need for those resources coupled with the barriers to care for cost and non-compliance, suggest that social workers or behavioral health clinicians would be an added enhancement to our population and community.

3.3 Project(s) Design and Goals

After conducting our review, we feel that the most productive focus for the Augusta University FY19 CHNA and CHNA project lies in mental health disorders. While this is a narrowly focused issue that does not impact a large number of patients, this chronic condition comes in many forms and complicates and is complicated by other chronic conditions, including hypertension, heart disease, and obesity. In 2017, The Cleveland Clinic released an article stating that any chronic condition can trigger depression, but that risk increases if the severity of the illness is higher. In the same article, The Cleveland Clinic stated the prevalence of depression that occurs with other chronic conditions is high. Examples include stroke 10% to 27%, coronary artery disease 18%-20%, and diabetes 25% (The Cleveland Clinic, 2017, para. 8 and 10).

The cost of care for individuals who have a mental health disorder increased significantly, per a study by the Journal for American Medical Association. For those with a mental health disorder, their average cost of care was $38,250 annually, while those without a mental health disorder averaged to be $22,280 annually (Sporinova, B., et al., 2019, Results Section, Para. 1)

A further rationale for a focus on mental health disorders is the reimbursement rates and lack of insurance coverage for mental health services. Health Affairs state that most commercial insurance companies reimburse in-network mental health providers 13%-14% less than out-of-network mental health providers. (Pelech, D. & Hayford, T., 2019). Because of the historically low reimbursement rates, mental health providers have not accepted certain insurances, which impacts health care access and care coordination.

3.3.1 Tactics to Improve Overall Mental Health in the Community

AU Health is embarking on several initiatives and relationships to improve the community's overall mental health and well-being that include:

- Health Fairs. AU Health has a continual and ongoing presence at local health fairs at conducted at local businesses, schools, churches, and at homeless clinics within the CSRA. Nurses and other representatives discuss and provide materials on the signs and symptoms of mental health disorders and provide printed collaterals. Examples of this include a Medicare 101 Forum to educate Medicare beneficiaries and their families around their benefits and preventive services, encompassing mental health. Working with the Department of Communications and Marketing, an event calendar will be included on the institution's website to further promote the health fairs and other community education efforts highlighting mental health disorders.
- Suboxdone Clinic: AU Health will be opening a Suboxdone maintenance clinic for those opiate dependent patients who meet the American Society of Addiction Medicine (ASAM) level of care. The goal of this clinic is to empower individuals through their sobriety while working on strengthening their recovery through fellowship programs and therapy.
- Chronic Care Management program: AU Health has begun to provide chronic care management for patients who have more than two chronic conditions in the geriatric population. Part of this strategy is to provide care management services to these patients on a continuous basis which includes mental health and wellness focus. The care management team overseeing this program will assist the patient with their mental health concerns and assist in bringing those concerns to the patient's primary care physician in a timely manner. This should help to decrease non-necessary medical services for the patient and assist the patient in receiving timely access to care.
- Mental Health Medicine Clinic: The Department of Medicine at Augusta University will be opening a mental health clinic in November 2019. The clinic will focus on patients who have scored positive on the PHQ-9 survey tool. This tool is utilized in all primary care locations at AU Health to identify patients who are depressed or suicidal. The Depression Clinic will target patients who need assistance and maintenance of their mental health disorders.
- Uber Health: AU Health will be executing a contract with Uber Health in order to

provide transportation options for patients who have difficulty locating transportation on their own. By facilitating this option, patients will be able to receive the care they need in and avoid potentially major medical issues.

- Mobile Integrated Health: Program designed to provide in-home care for patients who experience barriers to care such as transportation, home bound, or are non-compliant with their care plan. A Nurse Practitioner provides in-home care to the patient following discharge from Inpatient or Emergency Department to educate patient, family, and ensure they have all needs met to stay at their home.
- Advance Care Planning: Pastoral Care Services has implemented a voluntary chaplain team that is deployed into various physician practice clinics at Augusta University Health system. This team is focused on educating and assisting the patient, their family or caregivers, with completion of their advanced care plan to include living will and durable medical power of attorney. By taking a proactive approach to advance care planning, it empowers the patient to have their wishes fulfilled around their end of life care. Having an advance care plan in place, can decrease stress and/or anxiety during a time of distress in a patient's and their family's life.
- Equality Clinic, Homeless Clinic, Latino Clinic, and the Women's Clinic: Augusta University, in collaboration with the Medical College of Georgia (MCG), operates clinics to provide care to the vulnerable populations that have limited resources and little to no insurance coverage. This includes preventive care as well as mental health screening and treatment. Pharmacy is involved in these clinics to assist patients with resources for prescription drug needs.
- The Free Mental Health Clinic: The Department of Psychiatry opened a free mental health clinic for the uninsured or underinsured that is solely focused on mental health.
- Patient & Family Advisory Group: Development with the Department of Patient-Family-Centered-Care (PFCC) and the Department of Psychiatry a patient and family advisory group dedicated to improving access, quality, and communication for patients of this clinic. This will enhance the satisfaction of the patients and ensure concerns and issues are being addressed with the clinic and providers.
- Marketing and Communication Efforts. Stroke Care specialists at AU Health work with the Marketing and Communications team to include more information on the website about community efforts, what it means to be a comprehensive stroke center, research being done in the department, and to provide online education information accessible to the general public.

3.3.2 Community Health Expansion

AU Health is dedicated to serving the surrounding community and CSRA, as well as the health and well-being of the state of Georgia. This includes expansion of primary care satellite locations, specialty care satellite clinics, and a broader telehealth strategy to provide access and care across the state.

- Telehealth programs. AU Health is working to implement a broader telehealth strategy to provide access and care to patients not only in the CSRA, but across the state. Plans would include access to behavioral health workers including psychologists and social workers. This would provide quicker access to address the

patient's mental health needs in the comfort of their home or work area. This will help to decrease barriers to care for certain patient populations by bringing modernized health care to their community and home.

AU Health currently provides telehealth coverage to 32 cities within Georgia and South Carolina (Figure 24) and provides eleven specialty services for adults and pediatric patients. AU Health is looking to expand this coverage to include more chronic disease management for movement disorders, cardiology care, mental health disorders, urgent care needs, and pharmacy coverage. Part of the current coverage is the REACH Program which is a tele-stroke program to connect physicians and hospitals to AU Health's Comprehensive Stroke Center.

Figure 24: Map of telehealth locations for AU Health

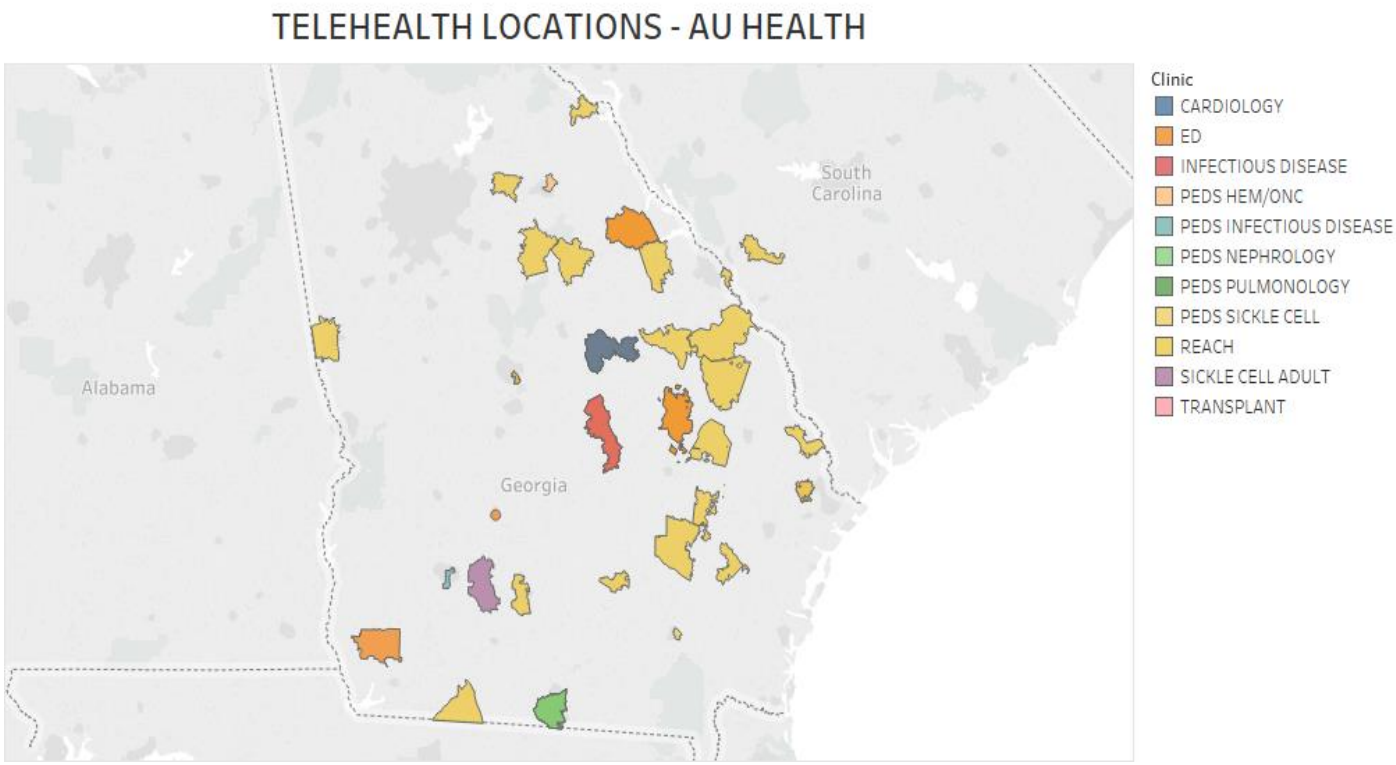
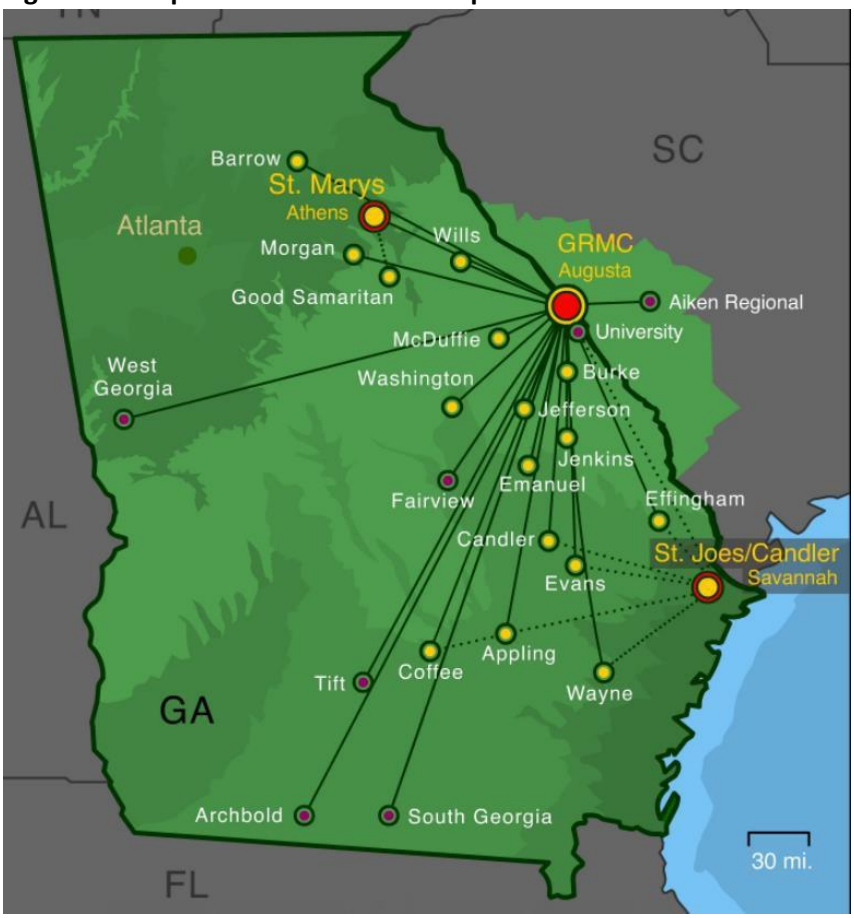


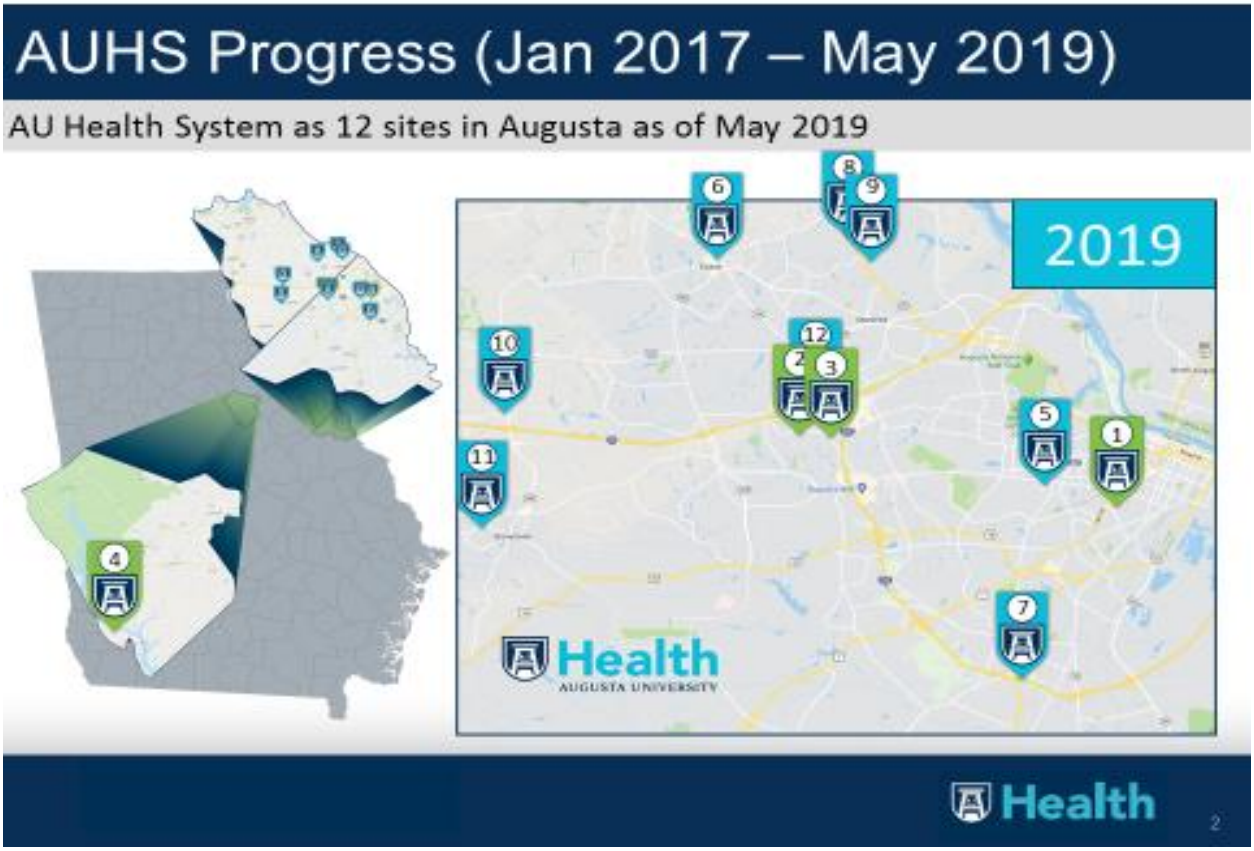
Figure 25: Map of REACH Member Hospital



- AU Health Ambulatory Expansion: AU Health has expanded ambulatory clinic access from three sites to twelve since 2017 (Figure 26). This expansion allows AU Health to partner with communities and physicians in those areas to provide specialty care. Four new primary care locations have opened in the CSRA which has yielded over 8,000 unique new visits for primary care and over 5,000 new patients to AU Health. By expanding these sites, this provides more preventive and mental health care to patients in the community. AU Health will work on a continued expansion strategy

to provide specialty care access points in the state.

Figure 26: AU Health System Community Expansion, CY 2017 through May 2019



Overall, AU Health is taking an approach to broaden access to care for patients across the state and region. We recognize that more patients could benefit from our specialty care physicians and programs in rural communities across the region and state. AU Health is dedicated to collaborating with community resources such as churches, schools, and employers to provide education, training, and health care access to ensure all populations, both insured and under-insured have access to modernized health care.

Appendix A: 2019 Community Health Needs Assessment Survey

2019 AUGUSTA UNIVERSITY COMMUNITY HEALTH NEEDS ASSESSMENT

1. What age groups do you see in your practice?

_____18 years & younger
_____ 19 - 64
_____ 65+ older

2. What racial/ethnic groups do you primarily see in your practice? (Check All that Apply)

_____ White
_____ African American
_____ Hispanic
_____ Asian

3. What insurance types do you see in your practice? (Check All that Apply)

_____ Medicare
_____ Medicaid
_____ Commercial
_____ Self-Pay

4. What major health conditions do you see in your practice? (Check All that Apply)

_____	Diabetes	_____	Asthma	_____	Obesity
_____	COPD	_____	Depression	_____	CHF
_____	Hypertension	_____	Stroke	_____	Mental Health

5. What are the major barriers to patient's health care in your practice? (Check All that Apply)

_____ Transportation
_____ Health Literacy
_____ Cost of Care
_____ Non-Compliance
_____ Language Barriers
_____ Office Hours

6. Do you have access to behavioral health providers in your practice?

_____ YES
_____ NO

7. How familiar are you with community resources available to you and your patients?

_____ Very Familiar
_____ Somewhat Familiar
_____ Not Familiar

8. Do you think telehealth/technology tools will enhance the healthcare delivery system?

_____ YES

_____ NO

9. Do you promote chronic care management within your practice?

_____ YES

_____ NO

10. If you could add one resource to the practice to enhance care, what would it be?

_____

_____

APPENDIX B: Community Resources

Medical (Free Clinics; Sliding Scale Clinics; Federally Qualified Health Centers)

- Burke County, Georgia
  - Burke County Health Department http://ecphd.com/?
  - Medical Associates (Waynesboro)
  - Medical Associates of Sardis
  - Medical Associates Plus - Keysville
- Columbia County, Georgia
  - Columbia County Health Department http://ecphd.com/?
  - FaithCare Medical Clinic http://wesleyumc.net/ministries/missions
  - Thomson Pediatrics and Internal Medicine
- Glascock County, Georgia
  - Glascock County Health Department http://ecphd.com/?
  - Tri-County Health System
  - Community Health Care Systems, Inc. (Gibson)
- Hancock County, Georgia
  - Hancock County Primary Health Care
  - Tri-County Health System
  - Community Health Care Systems, Inc. (Sparta)
- Jefferson County, Georgia
  - Jefferson County Health Department http://ecphd.com/?
  - Neighborhood Improvement Project, Inc. (Medical Associates Plus – Wrens)
  - Community Health Care Systems, Inc. (Wrens)
- Jenkins County, Georgia
  - Jenkins County Health Department http://ecphd.com/?
- Lincoln County, Georgia
  - Lincoln County Health Department http://ecphd.com/?
- McDuffie County, Georgia
  - McDuffie County Health Department http://ecphd.com/?
- Richmond County, Georgia
  - Richmond County Health Department http://ecphd.com/?
  - Belle Terrace Health and Wellness Center (Neighborhood Improvement Project, Inc.; Medical Associates Plus – Belle Terrace)
  - Beulah Grove Baptist Church – Lamar Medical Center http://bgcrcenter.org/lamarmedicalcent.html
  - Christ Community Health Services Augusta, Inc. (2 locations) http://www.christcommunityaugusta.org/
  - Augusta St. Vincent de Paul Health Clinic
  - Harrisburg Family Health Center http://mjstluke.wix.com/harrisburgfamily
  - Druid Park Community Health Center, Miracle Making Ministries
  - Southcare Medical Center
  - Medical Associates Plus – Augusta

    - Richmond County Medical Society Project Access www.rcprojectaccess.org
    - Augusta University Ryan White Outreach Team http://www.csrasafetynet.org/
- Taliaferro County, Georgia
    - Taliaferro County Health Department http://ecphd.com/?
- Warren County, Georgia
    - Warren County Health Department http://ecphd.com/?
    - Tri-County Health System
    - Community Health Care Systems, Inc. (Warrenton)
- Washington County, Georgia
    - Washington County Health Department
    - Sandersville Community Health Center (Community Health Care Systems, Inc.)
    - Tennille Community Health Center (Community Health Care Systems, Inc.)
- Wilkes County, Georgia
    - Wilkes County Health Department http://ecphd.com/?
- Allendale County, South Carolina
    - Lafitte and Warren Medical Center
    - Low County Health Care System, Inc. http://www.lowcountryhealthcaresystem.com/
    - Allendale County Health Department
- Aiken County, South Carolina
    - Margaret J. Weston Medical Center
    - Margaret J. Weston Community Health Center
    - Family Health Center http://findahealthcenter.hrsa.gov/
    - Clyburn Center for Primary Care
- Barnwell County, South Carolina
    - Barnwell County Health Department
    - Barnwell Pediatrics (Low County Health System, Inc.)
    - Barnwell Family Medicine
    - Best Chance for Women (mammograms)
    - Polly Best – Mental Health
- Edgefield County, South Carolina
    - Edgefield Medical Clinic
- McCormick County, South Carolina
    - McCormick Family Practice Center
    - McCormick Elementary School Health

Dental

- Burke County, Georgia
    - Burke County Health Department Dental Clinic
- Richmond County, Georgia
    - Dental College of Georgia student clinic
    - Richmond County Health Department Dental Clinic
    - Neighborhood Improvement Project, Inc. – Dental
    - Broad Street Ministry Center – Hope Dental Clinic http://www.bsmcaugusta.org/hope- dental-clinic
- Aiken County, South Carolina

- Rural Health Services, Inc. – Dental

APPENDIX C: Sources

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