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Amish M. Mody Date

A Needs Assessment for Obesity Prevention among the Adolescent African American Population in Richmond County, GA

By

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B.S., Georgia State University, 1994

Thesis Committee Chair: Dr. Shivani A. Patel, PHD

An abstract of
A thesis submitted to the Faculty of the
Rollins School of Public Health of Emory University
in partial fulfillment of the requirements for the
degree of Master of Public Health in Executive
MPH 2018

Abstract

A Needs Assessment for Obesity Prevention among the Adolescent African American Population in Richmond County, GA

By Amish M. Mody

Background: Obesity, which can have serious effects on a person's physical, metabolic and psychological health, has become a serious health problem in the United States. Nearly 35% of Americans are obese, and it is now considered a chronic disease by the American Medical Association. In Georgia, nearly one-third of adults in the state are obese, and childhood obesity rates are second only to those in Mississippi. Richmond County in Georgia has a high prevalence of obesity and ranks poorly in measures related to social, economic and environmental factors impacting obesity. Richmond County also has a large African American community, which is known to experience a disproportionately high burden of obesity.

Purpose: The purpose of this community needs assessment is to (1) describe the demographic, social, economic, and institutional context of Richmond County as it relates to the development of obesity; and (2) enumerate promising approaches to develop comprehensive, multilevel obesity prevention strategies for the African American population aged 13-19 years in Richmond County, GA.

Methods: We review community background factors and compile secondary health data to identify the context for multi-level interventions incorporating health behavior theories. No primary data were collected for this Community Health Needs Assessment (CHNA). Secondary demographic data sources such as the United States Census Bureau, County Health Rankings, Richmond CHNA, Richmond County Health Report, and Health databases were utilized. Additional secondary data sources such as city, county and state websites were also used. Information regarding community background, community organizations and coalitions were utilized to describe available community resources, partnerships, and health benchmarks from which to design the interventions.

Summary: 33.9% of adults in Richmond County are obese (BMI>30). Richmond County falls into the Augusta Public Health District, which reports obesity prevalence of 32% in the total population and 38% among African Americans. Obesity prevalence increased in both adults and youth during the 18 years between 1999-2000 and 2015-2016. Available evidence suggests that the promotion of healthy eating behaviors and regular physical activity from an early age are crucial for obesity prevention. We therefore focused our review on strategies that could be applied among adolescents aged 13-19 years. Drawing on the framewoks of the Health Belief Model (HBM) and the Social Ecological Model (SEM), we sought to identify school and community based educational programs as key strategies for advancing knowledge, modifying attitudes and behaviors, and empowering individuals for lifestyle modification. Based on this Community Health Needs Assessment, we conclude that the highest priority approach is to conduct an intervention within the Richmond County School System to implement 5 key recommendations: Got Water Campaign, Removing Sugary Sodas, 10-minute physical activity, Student Pledge Campaign and Parent Toolkit.

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Acknowledgement

I would first like to thank my thesis committee chair and advisor Dr. Shivani A. Patel of School of Public Health at Emory University. I'm grateful for her time and dedication to my success. She has been a great mentor and coach in guiding me throughout this entire process. She has consistently followed-up on my requests, allowed this paper to be my own work, and steered me in the right the direction whenever she thought I needed it.

I would also like to acknowledge Dr. Nita Patel from Centers for Disease Control and Prevention as the second reader of this thesis, and I am gratefully indebted to her for her very valuable comments on this thesis.

Without their passionate participation and input, the thesis could not have been successfully completed.

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Executive Summary

Background

Nearly 35% of Americans are obese, and obesity is now considered a chronic disease by the American Medical Association. Five of the ten states in the U.S. with the highest obesity rates are in the South, where people are more likely to be poorer, less educated, and uninsured (Trust for America's Health, 2016). People on low incomes face higher rates of food insecurity. Residents of low-resource communities often have limited access to sources of nutritious food, such as supermarkets that sell fresh produce and other healthful food options. They are more likely to live in neighborhoods with food deserts; an overconcentration of fast-food outlets, convenience stores, and liquor stores; and a shortage of restaurants that offer healthful food choices and menu labeling (Woolf et al., 2015). Their difficult living circumstances often preclude active recreational opportunities for regular exercise, and the cost of gym memberships or exercise equipment is often prohibitive. Many are uninsured and lack access to basic health care which results in lack of diagnosis and treatment of emerging chronic health problems like obesity. They may also face financial and other barriers to obtaining assistance with lifestyle changes.

In Georgia, nearly one-third of adults are obese, and childhood obesity rates are second only to Mississippi (CDC, 2012). Georgia has the 20th highest adult obesity rate in the nation, according to The State of Obesity: Better Policies for a Healthier America released August 2017. Georgia's African Americans obesity rate is 37.7 percent while the national rates for African Americans is 48.4 percentage (State of Obesity, 2018).

In particular, Richmond County in Georgia has one of the lowest annual County Health Rankings. The rankings measure vital health factors including obesity and access to healthy foods and income (Miller, 2016). The disparity in overall health also has a lot to do with social, economic and environmental factors, such as our genetics, behaviors, and access to health care. Race-ethnicity, gender, age, income, and other socio-demographic factors also can play a role in this complex health issue (FRAC, 2018). These inequities and disparate access to affordable, healthy food and safe places to be physically active contribute to higher rates of obesity and illnesses in Black communities who make-up 56% of the population in Richmond County (U.S. Census 2017; Trust for America's Health, 2014).

People of color are more disproportionate risk of being uninsured, face barriers to accessing care, and have higher rates of chronic conditions compared to White and those at higher incomes (Orgera, 2018). As a group, Black population are 80 percent more likely to be diagnosed with diabetes, men are 30 percent and women 60 percent more likely to have high blood pressure, twice the risk of first time stroke and more likely to have high rates of severe obesity. The underlying causes of health disparities have been linked to genetics, lack of economic resources, limited access to health care, delay in treatment, cultural beliefs, low literacy, and health literacy rates, and certain environmental factors (Cigna, 2016).

According to the Georgia Department of Public Health, the number one leading cause for death in Black or African American communities in Richmond County, Georgia between 2012-2016 was coronary heart disease. This is significant as ***obesity***, ***poor diet***, and ***lack of exercise*** are some of the risk factors that increase the potential to develop this disease.

Richmond County has made some progress in the last few years by allocating resources to promote physical activity and wellness and improved access to care. Recent statewide

economic initiatives include emphasis on improving health as part of economic developments projects, such as including walkable neighborhoods or transportation (The Augusta Chronicle, 2012). Additional initiatives include promoting nutrition based meals in Richmond County school systems (Richmond County Nutrition Services, 2018). However, there is much work that needs to be done to reflect positive health outcomes and quality of life indicators for African American residents of Richmond County. Without a network of support and a safe community, families cannot thrive. Ensuring access to social and economic resources provides a foundation for a healthy community (Community Health, 2016).

Problem Statement

There is a need to develop a community needs assessment with a focus on obesity to assist and support Richmond County Health Department to help low-income communities. Richmond County is considered rural and is among the lower income states where over 24% of the population are living in poverty (U.S. Census, 2017).

Purpose

The purpose of this community needs assessment is to (1) describe the demographic, social, economic, and institutional context of Richmond County as it relates to the development of obesity; and (2) enumerate promising approaches to develop comprehensive, multilevel obesity prevention strategies for the African American population aged 13-19 years in Richmond County, GA.

Aims

- Part I: Community Background
- Part II: Health Analysis - Obesity
- Part III: Recommendations

Part 1: Community Background

This section of the Community Health Needs Assessment (CHNA) report provides a comprehensive overview of factors that provide context to the health needs of individuals living in Richmond County, Georgia. These factors are as follows:

- Geographic location
- Socio-demographics
- Economics
- Physical and natural environment
- Culture and dynamics
- Politics and government

Methods

Secondary data sources such as the United States Census Bureau, County Health Rankings, Community Commons, Food Environment Atlas, American Community Survey, Online Analytical Statistical Information System (OASIS), Behavior Risk Factor Surveillance System (BRFSS), Public Health Information Portal (PHIP), and Richmond County's 2016 CHNA were reviewed for the purpose of this research. Additional secondary data sources were utilized, such as city, county, and state websites.

No primary data was collected for the purposes of the CHNA. Utilization of secondary data sources for this report presents limitations, as it is difficult to ensure adequate representation of all groups in a community. Furthermore, the second half of this report will identify areas of intervention with the assistance of retrospective data. This data may not account for critical needs that may have emerged since the last census or survey.

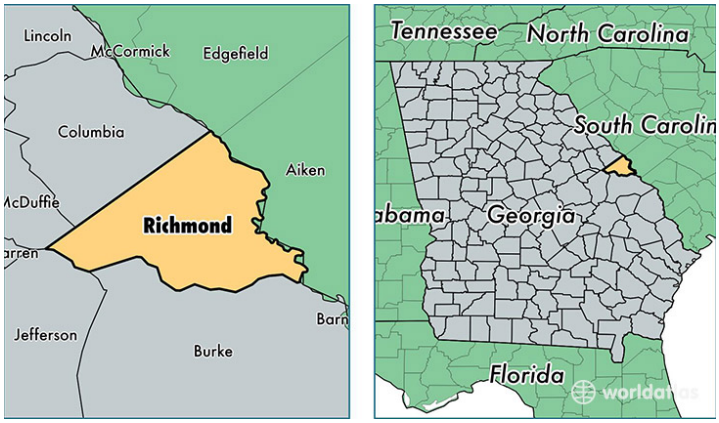
Chapter 1: Geographic Location

Geographic boundaries have played a major role in identifying the framework and defining the dimensional area considered within the scope of the community needs assessment. Understanding geographical data can reveal the dynamics of problems within a community and facilitate a more accurate representation of a designated region. Compiled health data can provide appropriate intervention within the community.

Geographic & Historical Context

As shown in Figure 1.1, Richmond County is located in east central Georgia, bordering the Savannah River and the South Carolina state line. The City of Augusta is considered the hub of Richmond County and the surrounding region. Augusta is the center point of the Central Savannah River Area (CSRA) and the second-largest and oldest city in Georgia. Richmond County is located within close proximity to many major Southern destinations, including Atlanta, Columbia, and Charlotte (The Chamber, 2016). In 1996, the governments of the City of Augusta and Richmond County combined to form a single governing body known as Augusta-Richmond County, GA.

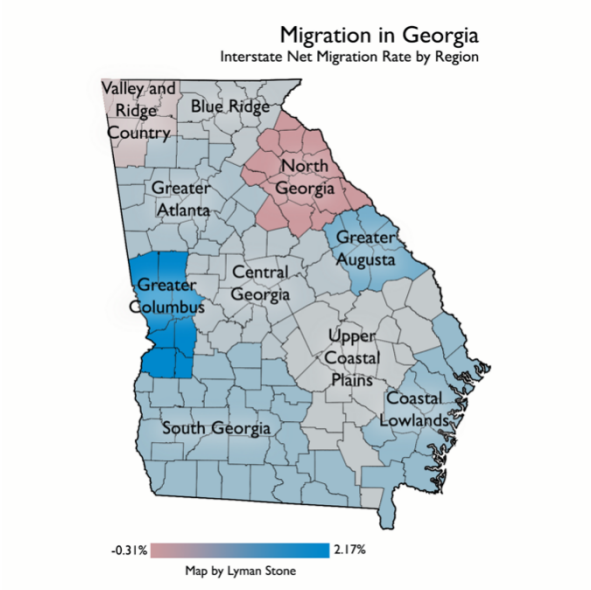
Figure 1.1 Geography of Georgia and Richmond County



Source: https://www.worldatlas.com/na/us/ga/c-richmond-county-georgia.html

According to the U.S. Census Bureau, Richmond County has a total area of 329 square miles (850 km^2), of which 324 square miles (840 km^2) are land and 4.3 square miles (11 km^2) (1.3%) are water. Richmond County is ranked the 90th largest county by area in Georgia. As shown in Figure 1.2, most regions in Georgia have positive total domestic migration. Richmond County has major military bases, and half of Georgia's migration record can be explained by military deployment decisions. This is imperative since these factors may contribute to the health status of the population of Richmond County (Stone, 2015).

Figure 1.2 Migration in Georgia



Source: https://medium.com/migration-issues/mapping-migration-in-georgia-69be8b22cc2b

Chapter 2: Sociodemographic Characteristics

Understanding the sociodemographic of Richmond County is an important step in planning public health interventions. Changes in population size, age, race, and ethnicity affect resource distribution, healthcare costs, and the type and severity of illnesses in Richmond County. Health disparities by gender, disability, and age group also make proper healthcare delivery in the county more complex (Rural Health Care Plan, 2000). Eventually, a quality healthcare framework can be addressed through this sociodemographic information and targeted interventions can be developed for specific populations.

Population Density

According to the United States Census Bureau, the population of Richmond County is 201,418, and residents reside in three communities (Augusta, Hephzibah, and Blythe). Richmond County is the 10th most populated county in Georgia (Georgia Demographics, 2016). The population density of Richmond County is 618 people per square mile. The racial make-up of the county is 56.5% black or African American, 38.4% white or Caucasian, and 4.9% Hispanic (U.S. Census Bureau, 2016). The Richmond County population increased by 0.02% between 2014 and 2015.

Overall Population Characteristics

Georgia has never seen a decline in population, and continued population growth is expected. Georgia continues to grow at a rate greater than 1 percent per year (World Population Review, 2017). Georgia has 159 counties and, in recent years, these counties have experienced significant growth. Georgia's counties noted population growth in the last five years, and the state's overall population grew to 10,099,320 according to Census Bureau data. Meanwhile, Richmond County's population growth is relatively low in comparison to

other counties in the state of Georgia. Recent forecasts by the U.S. Bureau of Economic Analysis (BEA) indicate that the total population of Augusta and Richmond County is declining slightly, even as the total number of households' increases. The decline in population growth could be attributed to many factors, such as the decline in economic prosperity, migration to cities for work, business relocations or expansions, Defense Department base realignment, and harsher penalties for undocumented immigrants (Monies, 2011; Brown, 2013). Many of these factors may have implications for the health profile and health needs of the population that continues to reside in Richmond.

Population by Gender

The gender breakdown in Richmond County is 51.6% female and 48.4% male. Richmond County continues to follow the national trend of a female-majority population (U.S Census, 2012-2016). Table 2.1 shows the gender distribution at the county, state, and national level.

Table 2.1 Population by Gender: Comparison of Richmond County, the State of Georgia, and the United States

Population by Gender	Richmond County	Georgia	United States
Male	97,454 (48.4%)	4,922,471 (48.7%)	156,765,322 (49.2%)
Female	103,964 (51.6%)	5,176,849 (51.3%)	161,792,840 (50.8%)
Total Population	**201,418**	**10,099,320**	**318,558,162**

Source: US Census Bureau (2012-2016)

Population by Race/Ethnicity

Race and ethnicity are integral to our understanding of health issues and health care disparities in Richmond County. Richmond County is 55.8% Black or African American, which is a significantly higher proportion than the state rate of 31.2% and the national rate of 12.6%. The White or Caucasian population in Richmond County is 38.5%, which is significantly lower than the state rate of 59.8% and the national rate of 73.3% (U.S. Census, 2012-2016). Table 2.2 presents the racial composition of Richmond County, the State of Georgia, and the United States.

Table 2.2 Population Distribution by Race/Ethnicity: Richmond County, Georgia, and the United States

Race	Richmond County	Georgia	United States
White	38.5%	59.8%	73.3%
Black or African American	55.8%	31.2%	12.6%
Hispanic or Latino	4.6%	9.2%	17.6%
American Indian and Alaska Native	0.3%	0.3%	0.8%
Asian	1.7%	3.7%	5.2%
Native Hawaiian and Other Pacific Islander	0.2%	0.0%	0.2%
Persons reporting two or more races	2.3%	2.2%	3.1%

Data Source: US Census Bureau (2012-2016)

Population by Age

The population over 65 years old in Richmond County follows the trend of the state and national data. However, Richmond County has a slightly higher percentage of children under five years old as compared to statewide and national data (U.S. Census, 2012-2016). Table 2.3 summarizes the findings. The population aged 65 and older represents 12.6% of Richmond County and 14.5% of the United States. According to the United States Census Bureau, the

national population of senior citizens will experience considerable growth between 2012 and 2050, and is projected to increase to 83.7 million.

2.3 Population Distribution by Age: Richmond County, the State of Georgia, and the United Sates

Age	Richmond County	Georgia	United States
Under 5 Years	7.1%	6.5%	6.2%
5 to 19 Years	19.7%	21.0%	19.6%
65 Years and Older	12.6%	12.3%	14.5%

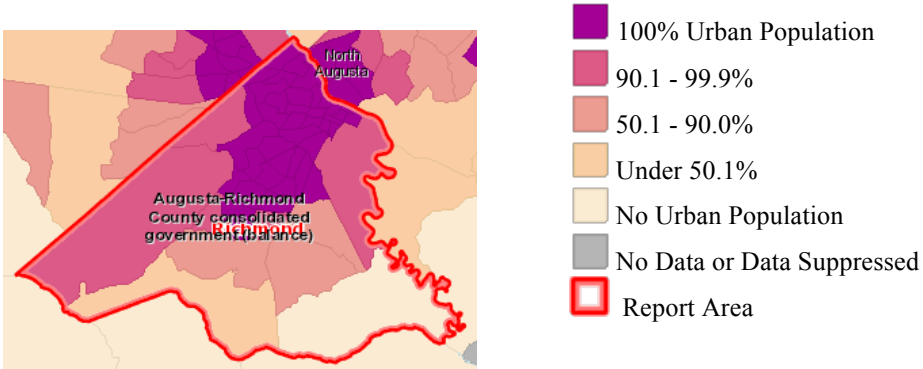
Data Source: US Census Bureau (2012-2016)

The overall median age for Richmond County is 34 years, which is lower than the state median age of 38 years and national median age of 38 years (U.S. Census, 2012–2016).

Urban and Rural Population

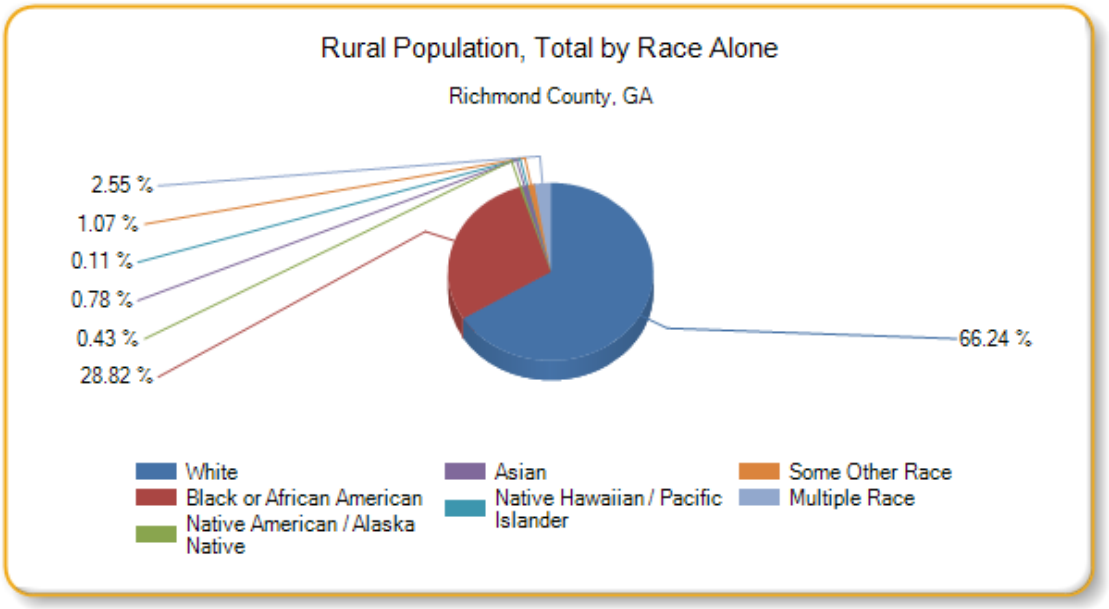
Rural areas experience higher rates of obesity since they do not have the resources to address critical health concerns (RHIhub, 2018). Richmond County has 90.78 percentage of population living in urban and 9.22 percentage living in rural areas. As highlighted in Figure 5.3 and Figure 5.4, 28.82 percentage of population living in rural area is African American or black (Community Commons, 2010).

Figure 5.3 Urban Population, Percent by Tract



Data Source: US Census Bureau, 2010

Figure 5. 4 Rural Population, Total by Race Alone



Data Source: US Census Bureau, American Community Survey. 2012-16.

Household and Family Characteristics

Table 2.5 illustrates some of the most important demographic characteristics in Richmond County. There are 76,924 households in Richmond County, and the average household size 2.47 persons. The state and national trends are similar, with an average household size of 2.63 persons and 2.58 persons for Georgia and the United Sates, respectively. The average family size is 3.09 persons, which is comparable to the average state and national family sizes (U.S. Census, 2010-2015). The household composition of all categories is consistent with the state and national averages. Table 2.5 summarizes these findings.

Table 2.5: Household and Family Characteristics: Richmond County, the State of Georgia, and the United States

Household Composition	Richmond County	Georgia	United States
Total Households	76,924	3,585,584	116,716,292
Average Size of Household	2.47	2.63	2.58
Average Family Size	3.09	3.17	3.14
Family households (families)	48,641 (63.23%)	2,457,810 (68.5%)	77,538,296 (66.43%)
With own children under 18 years	21,561 (44.5%)	1,157,619 (47.1%)	34,743,604 (44.8%)
Married-Couple Family	27,347	1,714,573	56,510,377
With own children under 18 years	10,122 (37.0%)	756,525 (44.1%)	23,588,268 (41.7%)
Female householder, no husband present, family	17,389	568,147	15,250,349
With own children under 18 years	9,813 (56.4%)	320,430 (56.4%)	8,365,912 (54.9%)

Data Source: US Census Bureau (2010-2015)

Language Spoken at Home

The most common languages spoken in the Richmond County are English and Spanish. The rate of speaking a non-English language is significantly lower than the national rate of 21.1% (U.S. Census, 2016). Table 2.6 shows the comparison of languages in home, as well as the proficiency/competency of the languages spoken by the county, state, and country.

Table 2.6: Language Spoken in Home: Richmond County, the State of Georgia, and the United States

Language Spoken in the Home	Richmond County		Georgia		United States	
English Only	176,068	94.1%	8,143,482	86.3%	235,519,143	78.9%
Language Other than English	11,105	5.9%	1,294,897	13.7%	63,172,059	21.1%
Spanish	5665	3.0%	748,955	7.9%	38,145,066	13.1%
Asian and Pacific Islander languages	2331	1.2%	214,060	2.3%	10,172,370	3.4%
Other Indo-European language	2502	1.3%	244,699	2.6%	10,827,536	3.6%

Data Source: US Census Bureau (2016)

Disability

The percent of the population with a disability in Richmond County is 17.3%, which is higher than the state rate of 12.3% and the national rate of 12.5%. Highest percentage of disability is for citizens who are at least 65 years old at 42.5% (U.S. Census, 2016). This information is relevant as patients with disabilities often require different health services.

Chapter 3: Economic Overview

Economic and social insecurity often are associated with poor health. Poverty, unemployment, and lack of educational achievement affect access to care and a community's ability to engage in healthy behaviors (Community Commons, 2016). Families in predominantly minority and low-income neighborhoods have limited food budgets and choices and must often stretch their dollars (Lee, 2012).

Top Employers and Industries

Economic conditions in Augusta-Richmond county has improved each year since 2010, adding an average of 3,000 jobs annually. The majority of job growth occurred in service-providing sectors, professional and business services, the education and health services and the leisure sectors (HUD, 2017).

A great diversity of companies is located in Augusta-Richmond County, both in the manufacturing sector and other sectors. According to the 2012 Survey of Business Owners, there are 16,003 companies. Table 3.1 and Table 3.2 outline the county's largest manufacturing and non-manufacturing employers. The largest employer is the U.S. Army Cyber Center of Excellent & Fort Gordon. The education and healthcare sectors also employ a great number of workers (Augusta Economic Development, 2017).

Table 3.1 Richmond County's Largest Manufacturing Employers

EZ GO Textron*	Golf Car/Utility Vehicles	1277
Covidien	Disposable Medical Supplies	850
International Paper	Bleached Paperboard	620
Kellogg's	Cookies and Crackers	535
FPL Food, LLC*	Beef Products	500
Morgan Thermal Ceramics	Ceramic Fiber	444
Resolute Forest Products*	Newsprint	374
Boral Brick	Bricks	363
PCS Nitrogen	Nitrogenous Fertilizer	350
Augusta Coca-Cola	Soft Drinks	315
Solvay Advanced Polymers	Plastic Material and Resins	303
Huntsman	Pigments	300
Carlole Fabrics*	Custom Draperies	250

Source: http://augustaeda.org/business-industry-largest-employer

Table 3.2 Richmond County's Largest Non-Manufacturing Employers

COMPANY	ACTIVITY	PRODUCT/SERVICE	EMPLOYEES
U.S. Army Cyber Center of Excellence & Fort Gordon	Government	Military	25,264*
Augusta University	Government	Education	4,656
Richmond County School System	Government	Education	4,418
NSA Augusta	Government	Government	4,000
University Hospital	Service	Health Care	3,200
Augusta University Hospitals	Service	Health Care	3,054
Augusta-Richmond County	Government	Municipal Services	2,612
VA Medical Centers	Government	Health Care	2,082
East Central Regional Hospital	Government	Health Care	1,488
Doctors Hospital	Service	Health Care	1,210

Source: http://augustaeda.org/business-industry-largest-employer

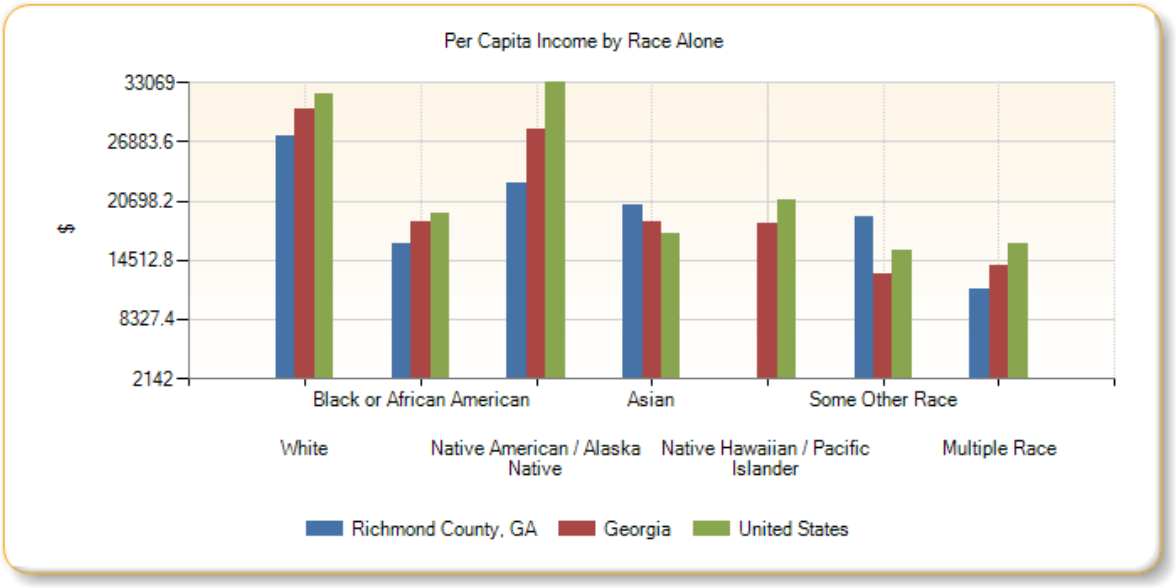
Income & Poverty

According to the U.S Census Bureau, the median household income (in 2016) in Richmond County, GA was $38,595 and the per capita income was $20,956 (Table 3.3). Both are lower than the national average and the state average. The per capita income includes all reported income from wages and salaries as well as income from self-employment, interest or dividends, public assistance, retirement, and other sources (Community Commons, 2016).

Table 3.3 Per Capita Income by Race

Report Area	White	Black or African American	Native American / Alaska Native	Asian	Native Hawaiian / Pacific Islander	Some Other Race	Multiple Race
Richmond County, GA	$27,527	$16,270	$22,539	$20,336	$2,142	$19,012	$11,566
Georgia	$30,372	$18,467	$28,117	$18,493	$18,350	$13,133	$13,902
United States	$31,801	$19,378	$33,069	$17,367	$20,735	$15,480	$16,164

Data Source: US Census Bureau, 2016.



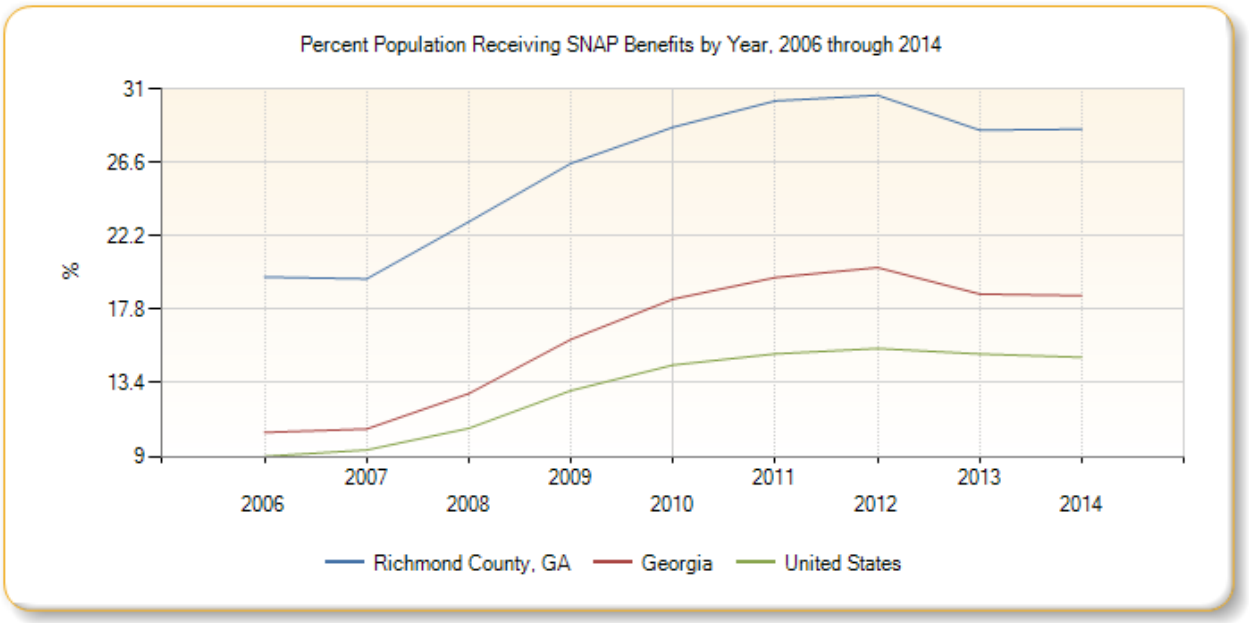
Data Source: US Census Bureau, 2016.

Persons who live in poverty in the community is 25.6%. According to the American Community Survey in 2015, 28.6% percent of households received SNAP benefits. This indicator is pertinent because it demonstrates vulnerable populations that are more likely to have health access and social needs. Table 3.4 highlights SNAP benefits from 2006 to 2014.

Table 3.4 Percent Population Receiving SNAP Benefits by Year, 2006 through 2014

Report Area	2006	2007	2008	2009	2010	2011	2012	2013	2014
Richmond County, GA	19.74%	19.63%	23.05%	26.55%	28.72%	30.29%	30.63%	28.54%	28.6%
Georgia	10.43%	10.64%	12.76%	16.01%	18.42%	19.71%	20.31%	18.72%	18.63%
United States	9%	9.38%	10.68%	12.94%	14.47%	15.14%	15.46%	15.13%	14.93%

Data Source: US Census Bureau, Small Area Income & Poverty Estimates. 2014.



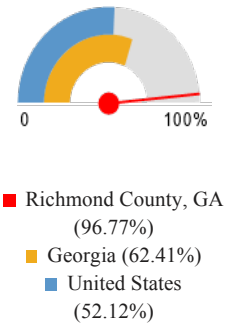
Data Source: US Census Bureau, Small Area Income & Poverty Estimates. 2014.

Children Eligible for Free/Reduced Price Lunch

Within the county, 30,835 public school students (96.77%) are eligible for Free/Reduced Price lunch out of 31,865 total students enrolled. This data is relatively important, as research has shown that children consuming reduced-price or free meals have higher rates of obesity (Walsh, 2013).

Table 3.5 Percent Free/Reduced Price Lunch Eligible

Report Area	Total Students	Number Free/Reduced Price Lunch Eligible	Percent Free/Reduced Price Lunch Eligible
Richmond County, GA	31,865	30,835	**96.77%**
Georgia	1,744,437	1,088,688	62.41%
United States	50,436,641	26,213,915	52.12%



Data Source: National Center for Education Statistics, NCES - Common Core of Data. 2014-15.

Educational Attainment

This indicator is important because poor education is often associated with low income and a lack of sufficient health care, and worse health outcomes. For the population 25 years and over, the high school graduation rate is 30.8%, which is above the national level and the state level of 28.1%. Only 13.0% of Richmond County residents have a bachelor's degree, compared to the national average of 18.8%, and only 8% have a graduate or professional degree, compared to the national average of 11.5%. Significantly, 16.4% of residents have not finished high school (U.S. Census, 2016). Table 3.6 summarizes the findings.

Table 3.6 Educational Attainment: Richmond County, the State of Georgia, and the United States

Educational Attainment	Richmond County	Georgia	United States
Population 25 years and over	129,729	6,589,462	213,649,147
Less than 9th grade	6,677 (5.1%)	344,716 (5.2%)	11,913,913 (5.6%)
9th to 12th grade, no Diploma	14,630 (11.3%)	588,094 (8.9%)	15,904,467 (7.4%)
High school Graduate (includes equivalency)	39,964 (30.8%)	1,850,601 (28.1%)	58,820,411 (27.5%)
Some College, no Degree	30,952 (23.9%)	1,383,193 (21.0%)	44,772,845 (21.0%)
Associate's Degree	10,206 (7.9%)	484,768 (7.4%)	17,469,724 (8.2%)
Bachelor's Degree	16,896 (13.0%)	1,208,700 (18.3%)	40,189,920 (18.8%)
Graduate or Professional Degree	10,404 (8.0%)	729,390 (11.1%)	24,577,867 (11.5%)

Data Source: US Census Bureau (2016)

Unemployment Statistics & Labor Force

The unemployment rate for the county as of December 2017 was 4.6% (Bureau of Labor Statistics, 2017). Unemployment creates financial instability and barriers to access including insurance coverage, health services, healthy food, and other necessities that contribute to poor

health status (Community Commons, 2016). Table 3.7 illustrates the average monthly unemployment rate for Richmond County for 2017. Per the Bureau of Labor Statistics, the labor force for the county was 89,379 individuals. The labor force has seen an upward trajectory from 2014-2017.

Table 3.7 Average Monthly Unemployment Rate, November 2016 - November 2017

Report Area	Nov. 2016	Dec. 2016	Jan. 2017	Feb. 2017	Mar. 2017	Apr. 2017	May 2017	Jun. 2017	Jul. 2017	Aug. 2017	Sep. 2017	Oct. 2017	Nov. 2017
Richmond County, GA	6.2	6.3	7.4	6.2	5.9	5.6	5.9	6.2	6.4	5.9	5.1	5.5	5.3
Georgia	5.1	5.2	5.6	5.1	4.8	4.7	4.7	5.1	5.1	4.8	4.2	4.4	4.3
United States	4.4	4.5	5.1	4.9	4.6	4.1	4.1	4.5	4.6	4.5	4.1	3.9	3.9

Data Source: US Department of Labor, Bureau of Labor Statistics. 2017 - November.

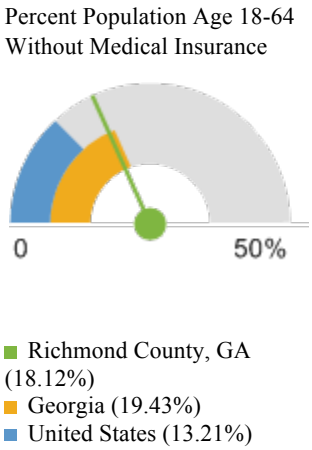
Health Insurance

An affordable way to get the care, where and when you need is through health insurance. However, a lack of health insurance is considered a *key driver* of health status. This is relevant because lack of insurance is a primary barrier to healthcare access including regular primary care, specialty care, and other health services that contributes to poor health status (Community Commons, 2016). According to U.S. Census, 18.12% of Richmond County were without health insurance in 2015 (Table 3.8).

Table 3.8 Percent Population Age 18-64 Without Medical Insurance

Report Area	Total Population Age 18 - 64	Population with Medical Insurance	Percent Population With Medical Insurance	Population Without Medical Insurance	Percent Population Without Medical Insurance
Richmond County, GA	119,563	97,893	81.88%	21,670	18.12%
Georgia	6,205,261	4,999,324	80.57%	1,205,937	19.43%
United States	194,584,952	168,884,012	86.79%	25,700,940	13.21%

Data Source: US Census Bureau, Small Area Health Insurance Estimates. 2015.



Housing

The cost of living in Richmond County, GA is 13% lower than the national average (Payscale, 2018). As of January 2018, the average rent for an apartment in Augusta, GA is $888 (Rent Jungle, 2018). The median price of a home is $101,900 (Data USA, 2018). In Richmond County, the largest share of households pay taxes in the $800-$1500 range. In 2015, 53.1% of the housing units in the county were occupied by their owner. This percentage of owner-occupation is lower than the national average of 63.9% (Data USA, 2018).

Commute Time

According to DataUSA, the largest share of households in Richmond County, GA have 2 cars, followed by 1 car. Employees in the county have a shorter commute time (20.1 minutes) than the normal US worker (24.8 minutes). Additionally, 1.31% of the workforce in Richmond County, have "super commutes" in excess of 90 minutes. In 2015, the most common method of travel for workers was Drove Alone (81.4%), followed by Carpooled (10.3%) and those who Walked (3.52%) (DataUSA, 2018).

Chapter 4: Physical and Natural Environments

A community's health is also affected by the physical environment. A safe, clean environment that provides access to healthy food and recreational opportunities is important to maintaining and improving community health (Community Commons, 2016). Maintaining a healthy environment in a community is relevant to increasing the quality of life and years of healthy life style. The World Health Organization (WHO) defines environment, as it relates to health, as "all the physical, chemical, and biological factors external to a person, and all the related behaviors" (EPA, 2018). Richmond County has averaged a moderate to good range for key environmental health statistics such as air & soil quality, pesticides, and infrastructure (HealthGrove, 2018).

Air Pollutants

A study published by the researchers at Columbia University's Mailman School of Public Health in 2012, discovered when pregnant women are exposed to a high concentration of the air pollutants, classified as polycyclic aromatic hydrocarbons, (PAHs), their children will be more than **twice** as likely to suffer from obesity by the age of seven (Jakuboski, 2012). Another study at the Public Health Ontario and the Institute of Clinical Evaluative Sciences in Canada suggest that pollution may trigger inflammation that interferes with the hormones and the brain processing that govern appetite. All of which disrupts the body's ability to burn energy, leading to a constellation of metabolic disorders, including diabetes and obesity, and cardiovascular problems such as hypertension (Robson, 2015).

The AQI is a measurement of how clean or polluted the air is, and it focuses on health effects that can happen. EPA uses the AQI for five major air pollutants regulated by the Clean

Air Act: ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide (Airnow, 2018). In 2015, Richmond County, GA experienced 268 days with an AQI in the "good" range, which is better than 55% of counties in Georgia that reported data. Last year, Richmond County experienced a median AQI of 40.0 (HealthGrove, 2018). In addition to the Air Quality Index, the EPA publishes data about particulate matter (PM) pollution, a component of the AQI calculation. PM pollution refers to solid and liquid particles found in the air, including dust, dirt, soot, and smoke. On average, Richmond County experienced 1.4% of days per year exceeding the maximum PM2.5 concentration for every year it reported data between 1999-2014 (HealthGrove, 2018).

Richmond County AQI

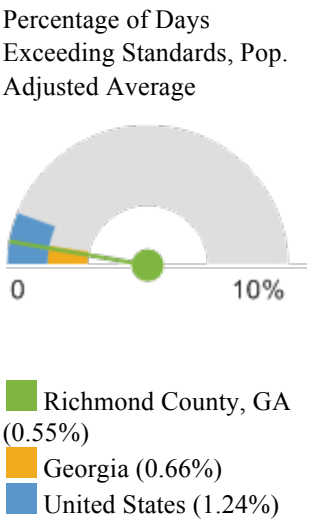
- Falls in the "good" range
- Greater than the Georgia average of 37.88
- Greater than the United States average of 36.00

Table 4.1 below highlights the percentage of days per year with Ozone (O3) levels above the National Ambient Air Quality Standard of 75 parts per billion (ppb). This indicator is relevant because poor air quality contributes to respiratory issues and overall poor health (Community Commons, 2016).

Table 4.1 Percentage of Days Exceeding Standards, Pop. Adjusted Average

Report Area	Total Population	Average Daily Ambient Ozone Concentration	Number of Days Exceeding Emissions Standards	Percentage of Days Exceeding Standards, Crude Average	Percentage of Days Exceeding Standards, Pop. Adjusted Average
Richmond County, GA	200,549	38.87	2.04	0.56%	0.55%
Georgia	9,687,653	40.09	2.28	0.62%	0.66%
United States	312,471,327	38.95	4.46	1.22%	1.24%

Data Source: Centers for Disease Control and Prevention, National Environmental Public Health Tracking Network. 2012.



There may be health risks associated with homes built between 1950 and 1979, as legislation was introduced in late 1970s banning the use of lead paint (HealthGrove, 2018). Percentage of homes built before 1950 in Richmond County, GA is 14% compared to Georgia's average of 12.71% and National Average of 25.35%.

Climate

According to the American Journal of Public Health, researchers at the University of Texas (Austin), found that local weather affects Americans' levels of exercise and their risk for obesity. The study

found that adults in counties with hot summers are less physically active and more likely to be obese, especially if the summers are also humid or rainy. Adults also get less exercise and are more likely to be obese in counties where winters are especially cold (Health24, 2014).

According to U.S. Climate Data, Richmond County weather averages 63.85^{o}F to 76.8^{o}F during the year. In 2014, the county experienced elevated heat index values (Table 4.2) and prolonged droughts between 2012 and 2014 (Table 4.3).

Table 4.2 Percentage of Weather Observations with High Heat Index Values

Report Area	Total Weather Observations	Average Heat Index Value	Observations with High Heat Index Values	Observations with High Heat Index Values*, Percentage
Richmond County, GA	2,555	95.59	273	10.68%
Georgia	343,465	94.69	30,434	8.9%
United States	19,094,610	91.82	897,155	4.7%

*Data Source: National Oceanic and Atmospheric Administration, North America Land Data Assimilation System (NLDAS) . Accessed via CDC WONDER. Additional data analysis by CARES. 2014. *The "heat index" is a single value that takes both temperature and humidity into account.*

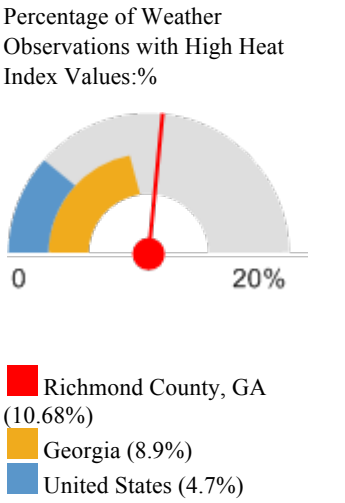
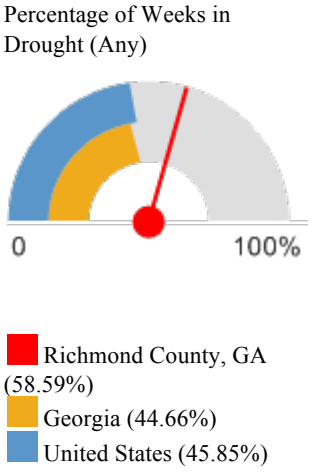


Table 4.3 Population-weighted percentage of weeks in drought between January 1, 2012 and December 31, 2014.

Report Area	Percentage of Weeks in D0 (Abnormally Dry)	Percentage of Weeks in D1 (Moderate Drought)	Percentage of Weeks in D2 (Severe Drought)	Percentage of Weeks in D3 (Extreme Drought)	Percentage of Weeks in D4 (Exceptional Drought)	Percentage of Weeks in Drought (Any)
Richmond County, GA	13.45%	11.46%	6.91%	20.84%	5.94%	58.59%
Georgia	13.35%	8.26%	10.01%	9.73%	3.31%	44.66%
United States	16.96%	12.59%	8.84%	4.92%	2.54%	45.85%

Data Source: US Drought Monitor. 2012-14. Source geography: County



Recreation and Fitness Facility Access

Public park and recreation facilities create healthy communities and play a fundamental role in enhancing the physical environments according to the National Recreation and Park Association. Through facilities, outdoor settings, and services provided, they support good health for people of all abilities, ages, socio-economic backgrounds, and ethnicities. They foster change through collaborative programs and policies that reach a vast population to help reduce obesity

and incidence of chronic disease by providing opportunities to increase rigorous physical activity in a variety of forms (NRPA, 2018).

As depicted in the tables (Table 4.4 and Table 4.5), the rate per 100,000 population for recreation and fitness facilities for Richmond County is lower than the state and the national average.

Table 4.4 Recreation and Fitness Facilities, Rate

Report Area	Total Population	Number of Establishments	Establishments, Rate per 100,000 Population
Richmond County, GA	200,549	15	7.48
Georgia	9,687,653	878	9.06
United States	312,846,570	32,712	10.46

Data Source: US Census Bureau, County Business Patterns. Additional data analysis by CARES. 2015.

Table 4.5 Recreation and Fitness Facilities, Rate per 100,000 Population by Year, 2010 through 2015

Report Area	2010	2011	2012	2013	2014	2015
Richmond County, GA	2.99	3.99	5.98	5.48	4.99	7.48
Georgia	8.12	7.7	7.82	7.88	8.5	9.06
United States	9.68	9.56	9.56	9.84	10.27	10.6

Data Source: US Census Bureau, County Business Patterns. Additional data analysis by CARES. 2015.

Food Access - Fast Food Restaurants & Grocery Stores

Studies have shown that over the past four decades, consumption of food eaten away from home has risen alarmingly and a major contributor to childhood obesity (Mandal, 2017). It is well known that eating out may lead to excess calorie intake and increases the risk of obesity because of large portion sizes and increased energy density of foods (Mandal,2017). Studies have also shown that alcohol consumption has contributed to excess energy intake and weight gain in some individuals (Tremblay, 2008).

The rate per 100,000 population for Liquor Stores and Fast Food establishments in Richmond County is ***higher*** than the national rate (Community Commons, 2016). Table 4.6 and Table 4.7 highlight

the rate differences between county, state, and national levels. Access rate to grocery stores (Table 4.8) is significantly ***lower*** than the national rate.

Table 4.6 Liquor Stores, Rate

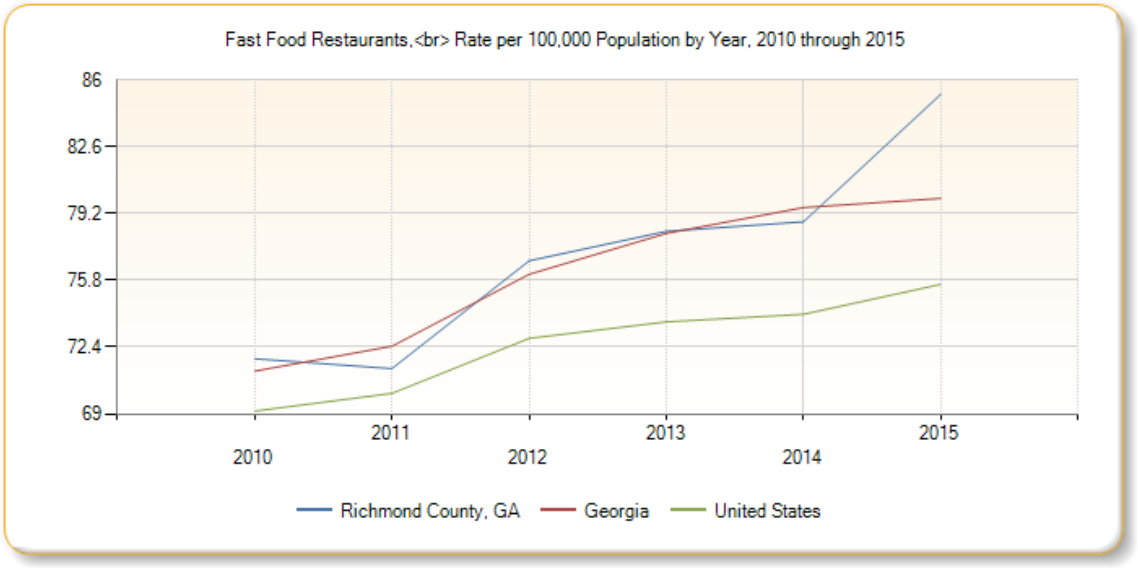
Report Area	Total Population	Number of Establishments	Establishments, Rate per 100,000 Population
Richmond County, GA	200,549	23	11.47
Georgia	9,687,653	928	9.58
United States	312,846,570	33,692	10.77

Data Source: US Census Bureau, County Business Patterns. Additional data analysis by CARES. 2015.

Table 4.7 Fast Food Establishments Rate

Report Area	Number of Establishments	Establishments, Rate per 100,000 Population
Richmond County, GA	171	85.27
Georgia	7,747	79.97
United States	233,392	74.6

Data Source: US Census Bureau, County Business Patterns. Additional data analysis by CARES. 2015.



Data Source: US Census Bureau, County Business Patterns. Additional data analysis by CARES. 2015.

Table 4.8 Grocery Store Access Rate

Report Area	Number of Establishments	Establishments, Rate per 100,000 Population
Richmond County, GA	32	15.96
Georgia	1,796	18.54
United States	66,284	21.19

Data Source: US Census Bureau, County Business Patterns. Additional data analysis by CARES. 2015.

Housing - Substandard Housing

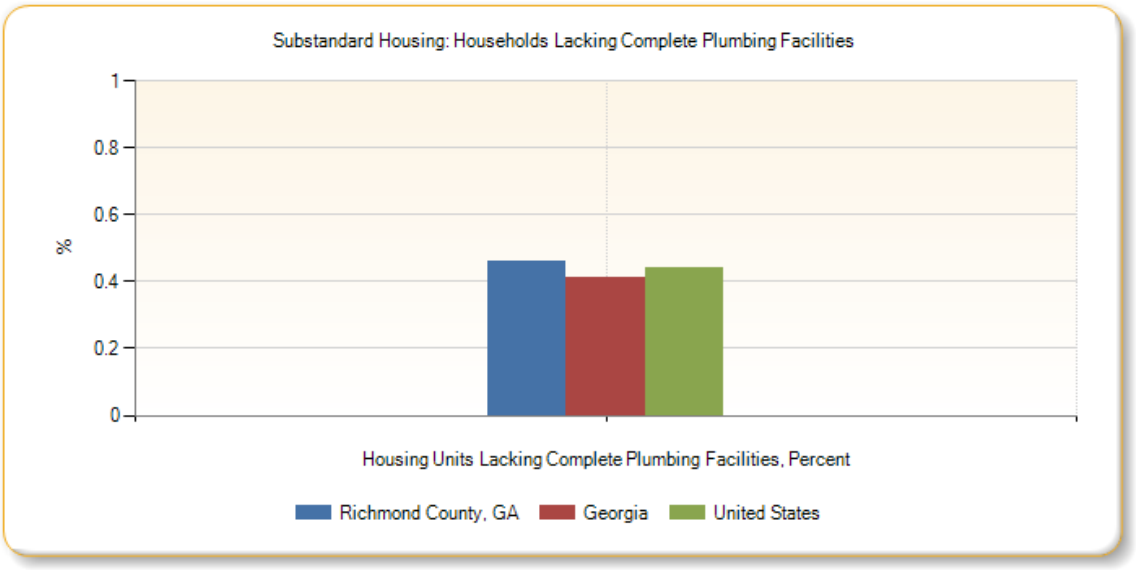
Housing is considered an important component of the built-environment influencing health behaviors. Identifying characteristics of housing structures that increase physical activity and reduce sedentary behavior can be helpful in reducing the risk of obesity (Fusters, 2012).

Table 4.9 data easily identifies homes where the quality of living and housing can be considered substandard. Richmond County rates are *higher* than the state and national rates. HUD-funded assisted housing units available to eligible renters in Richmond County is extremely high, as depicted in Table 4.10 (Community Commons, 2016).

Table 4.9 Housing Units with One or More Substandard Conditions

Report Area	Total Occupied Housing Units	Occupied Housing Units with One or More Substandard Conditions	Percent Occupied Housing Units with One or More Substandard Conditions
Richmond County, GA	71,724	27,065	37.73%
Georgia	3,574,362	1,212,442	33.92%
United States	116,926,305	40,585,236	34.71%

Data Source: US Census Bureau, American Community Survey. 2011-15.

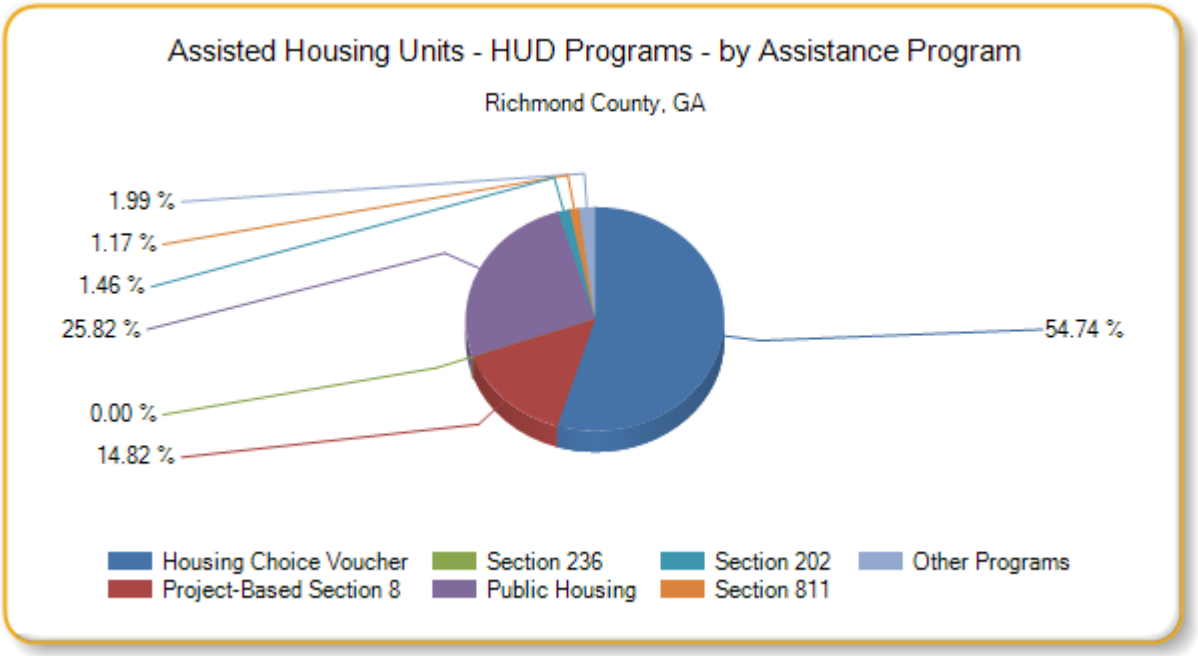


Data Source: US Census Bureau, American Community Survey. 2011-15.

Table 4.10 HUD-Assisted Units

Report Area	Total Housing Units (2010)	Total HUD-Assisted Housing Units	HUD-Assisted Units, Rate per 10,000 Housing Units
Richmond County, GA	86,331	7,441	861.92
Georgia	4,088,801	134,287	328.43
United States	133,341,676	5,005,789	375.41

Data Source: US Department of Housing and Urban Development. 2016.

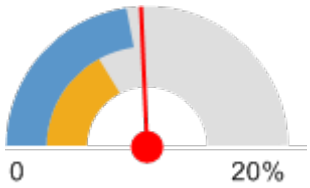


Data Source: US Department of Housing and Urban Development. 2016.

Transportation

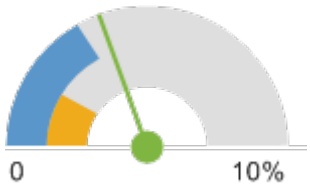
Transportation services is a crucial part of the community challenges which helps to bring a better quality of life. This data is very relevant as transit can demonstrate healthy behavior of physical activity.

Percentage of Households with No Motor Vehicle



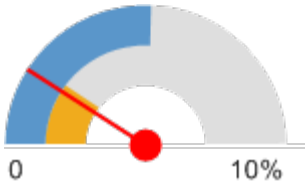
Richmond County, GA (9.75%) Georgia (6.89%) United States (9.09%)

Percentage Walking or Biking to Work



Richmond County, GA (3.88%) Georgia (1.8%) United States (3.38%)

Percent Population Using Public Transit for Commute to Work



Richmond County, GA (1.83%) **Georgia (2.09%)** United States (5.13%)

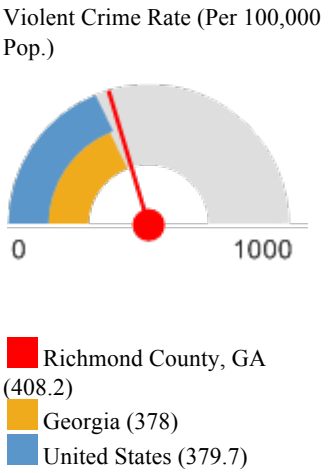
Violent Crime

Crime has important externalities on neighborhood qualities and community through reducing individual's participation in the most form of physical activity, walking. A number of studies have shown links between behavioral impacts and obesity (Janke, 2016). According to Neighborhood Scout, Richmond county has a crime index of 9 (100 is safest). Violent crime rate is 408.2 (Table 4.11) which is above the state and national rate.

Table 4.11 Violent Crime Rate

Report Area	Violent Crimes	Violent Crime Rate* (Per 100,000 Pop.)
Richmond County, GA	824	408.2
Georgia	37,160	378
United States	1,181,036	379.7

*Data Source: Federal Bureau of Investigation, FBI Uniform Crime Reports. Accessed via the Inter-University Consortium for Political and Social Research. 2012-14. * Violent crime includes homicide, rape, robbery, and aggravated assault.*



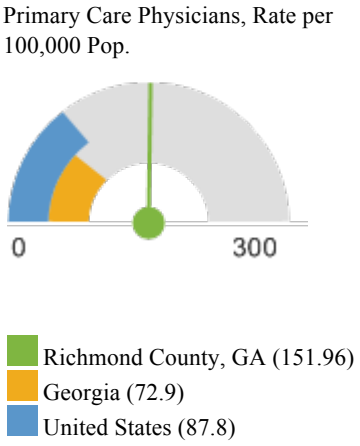
Access to Primary Care

A lack of access to care, accessibility of facilities and physicians presents barriers to good health. Rates of morbidity, mortality, and emergency hospitalizations can be reduced if community residents access services such as health screenings, routine tests, and vaccinations (Community Commons, 2016). Prevention indicators can call attention to a lack of access or knowledge regarding one or more health issues and can inform program interventions. According to the U.S. Department of Health Human Services, Richmond County primary care physicians rate per 100,000 population is 152 which is more than *double* the rate of state.

Table 4.12 Primary Care Physicians, Rate per 100,000 population

Report Area	Primary Care Physicians, 2014	Primary Care Physicians, Rate per 100,000 Pop.
Richmond County, GA	306	151.96
Georgia	7,364	72.9
United States	279,871	87.8

Data Source: US Department of Health Human Services, Health Resources and Services Administration, Area Health Resource File. 2014. Source geography: County



Public Health Implication

The physical environment, in particular, has been thought to play an important role in influencing obesity by creating a climate that promotes increased energy consumption and a reduction in energy expenditure (Hill, 2003). As broadly defined in the health literature, the environment can be thought of as "all that is external to the individual" (CDC, 2007), with the term "built environment" encompassing aspects of a person's surroundings which are human-made or modified, as compared with naturally occurring aspects of the environment. The many ways in which the built environment influences health include not only "direct pathological impacts of various chemical, physical, and biologic agents, but also… factors in the broad physical and social environments, which include housing, urban development, land use, transportation, industry, and agriculture" (CDC, 2007).

For children, environments might include both school and recreational space. For adults, environments of interest might include residential space, work space, and characteristics of the travel environment between work, shopping, and personal business, social, and recreational activities and the residence (Papas, 2007).

Poor persons, for example, are more affected by their built environments because their activity spaces are smaller and they are more constrained by lack of transportation and opportunities for mobility. Thus, the lack of healthful food purchasing choices in a lower-income neighborhood would be seen conceptually as having a greater impact on residents. The availability of certain types of food choices—one aspect of the food environment—food pricing, quality, and variety. Scientists say that a single environmental factor is by far the biggest cause

of obesity: food. Research shows that your "food environment" has a huge impact on what you eat—and how much you eat.

The problem is particularly serious in low-income black neighborhoods in Richmond County, where it has unhealthy food environments in which fattening foods are cheap and plentiful and difficult to find supermarkets who offer healthy foods such as fruit, vegetables and whole grains.

Chapter 5: Culture & Social Dynamics

Culture is the learned system of categories, rules and plans that people use to guide their behaviors (Soba, 2001). Culture may include all or a subset of characteristics such as ethnicity, religion and spiritual beliefs, socio-economic class, education, life experience, age, and geographic origin (Canadian Peadiatric Society, 2018). Studies confirm that cultural context and social dynamics are important in shaping beliefs and practices related to food and eating patterns, as well as attitudes and perceptions about weight and health (Dietz, Story, & Levinton, 2009) and the perceived need for weight control (Fitzgibbon & Beech, 2009; Kumanyika, 2008). Each ethnic group brings its own perspectives and values to health care beliefs (McLaughlin, 1998). With a poverty rate of 14%, the South is easily the most impoverished region in the country. "When you're poor, you tend to eat more calorie-dense foods because they're cheaper than fruits and vegetables," explains Jeff Levi, executive director of Trust for America. Southerners definitely enjoy their fried chicken (not to mention fried steak, fried onions, fried green tomatoes, fried pickles and fried corn bread). Even when their food isn't fried, they like to smother it in gravy (Suddath, 2009).

Findings

The culture of Richmond County, Georgia is influenced by the many different perspectives and histories of its community members, as well as its own history. The large African American population of the area as well as the rural surroundings have affected the types of festivals and culture produced within the county.

The county has strong religious institutions. The county's historic churches are diverse in their denominational affiliations and illustrate the importance of religion in the life of the community (NPS, 2018). The most-attended church is the Southern Baptist Convention, with

221 congregations with 114,351 members (Wikipedia, 2018). Other notable churches are the Catholic Church, the United Methodist Church, the National Baptist Convention and Presbyterian Church (USA). The Jewish community in Augusta dates back to the early 19th century. Today, there are two congregations, Congregation Children of Israel (Reform) and Adas Yeshurun (Conservative) (Wikipedia, 2018).

Culture and Recreation

Augusta is most famous for the internationally known, The Masters Tournament, also known as The US Masters, is one of the four major championships in professional golf which has been held since 1934 (Wikipedia, 2018). The city also hosts enough festivals, outdoor concert series, and sporting activities to keep the calendar pretty full all year long (The Newcomers Guide, 2018). Richmond County has a rich history of entertainment with regularly scheduled performances of live music, ballet, choral, dance, opera, theater, and symphony productions (Augusta Economic Development, 2018). The county honors their history through participation in several historical, preservation, neighborhood, and genealogical societies. More than a dozen museums and historic sites in Richmond County are open to the public. There's a homegrown quality to a lot of locally owned restaurants and specialty stores focusing on painting, sculpture, jewelry, and gifts (The Newcomers Guide, 2018).

Outdoor and recreational pursuits are practiced year around in Richmond County, thanks to mild temperatures, major water bodies, trails, and an overall active culture (Augusta Economic Development, 2018). Augusta-Richmond County, Georgia has been known as the Garden City because of the beauty of its public open spaces and private yards and gardens. As the community, has grown, however, land development has reduced the amount of open space within the urban area. With this growth, has come shopping centers and subdivisions where there

were once woods and fields, and outside the central city very few new areas have been created as permanent open space (Augustaga, 2018).

Social Associations

According to Count Health Rankings, social associations measures the number of organizations per 10,000 population in a county. Associations include membership organizations such as civic organizations, bowling centers, golf clubs, fitness centers, sports organizations, political organizations, labor organizations, business organizations, and professional organizations (County Health Rankings, 2018). Richmond County's ranking on social & economic factors was 113 out of 159 counties in Georgia. For social associations, Richmond County received a score of 10.6 a little higher than the state score of 8.9 but comparatively lower than the top U.S score performer of 22.1 (County Health Rankings, 2018).

Social support networks have been identified as powerful predictors of health behaviors, suggesting that individuals without a strong social network are less likely to make healthy lifestyle choices than individuals with a strong network (Kawachi, 1999). A study that compared Behavioral Risk Factor Surveillance System (BRFSS) data on health status to questions from the General Social Survey found that people living in areas with high levels of social trust are less likely to rate their health status as fair or poor than people living in areas with low levels of social trust (Kawachi, 1999).

Military & Veteran Culture

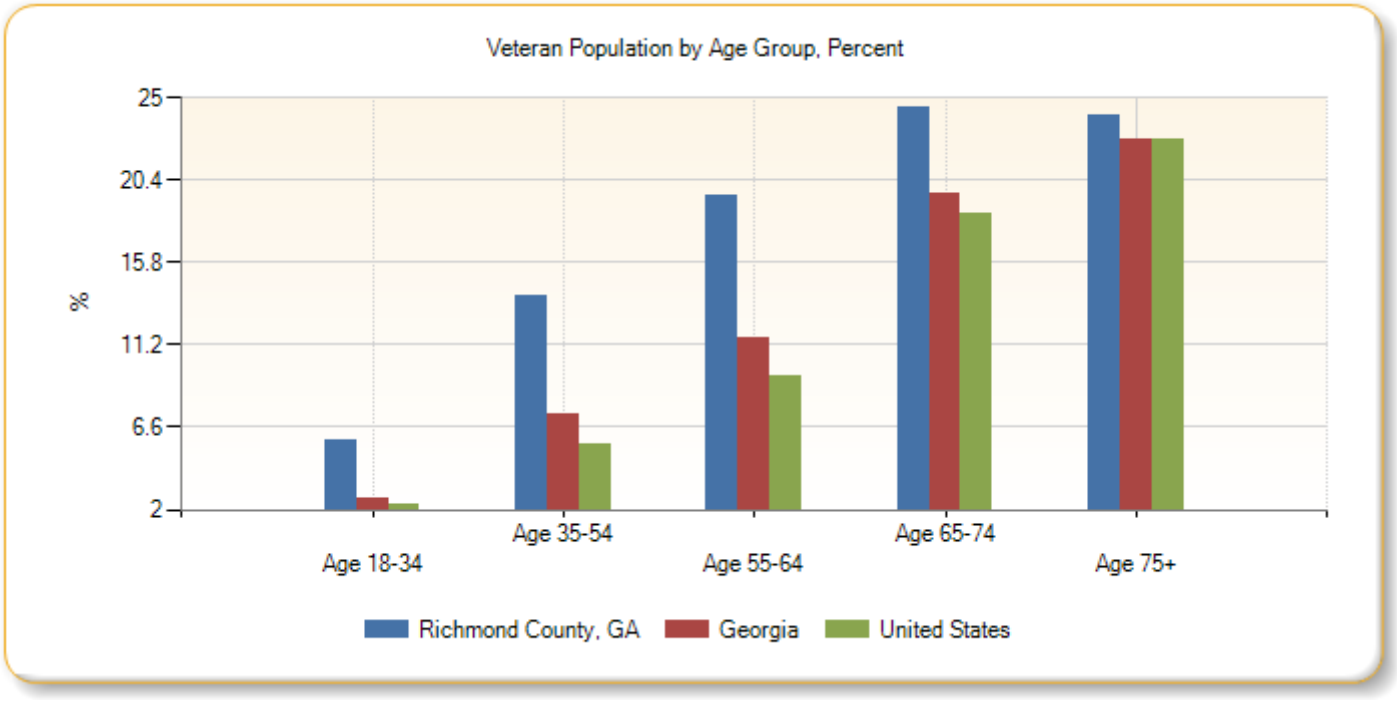
Richmond County has a rich history of military dating back to 1730s when Fort Augusta was garrisoned. Since 1948, United States Army Garrison Fort Gordon is the home of the U.S. Army Cyber Center of Excellence and a variety of units from all four military services. The fort is located about 8 miles southwest of Augusta, Georgia in Richmond County (Fort Gordon, 2018). Fort Gordon has approximately 30,000 military and civilian employees and currently has an estimated $1.1 billion economic impact on the Augusta-Richmond County economy (Wikipedia, 2018).

Fort Gordon provides a wealth of support and services to the community which includes law enforcement, fire protection, sports & recreational facilities, religious activities, child & youth programs and many more (Fort Gordon, 2018).

Veteran Population

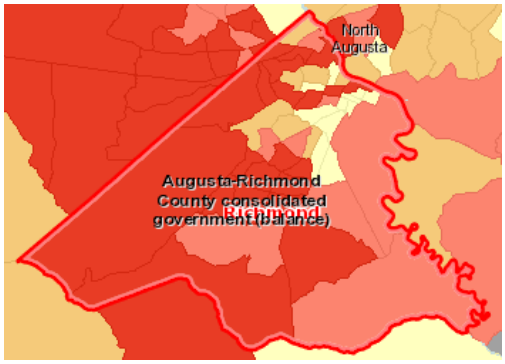
According to the U.S. Census Bureau, Veterans make-up approximately 10% of the total population of Richmond County, Georgia. Figure 5.1 and Figure 5.2 report the percentage of the population age 18 and older that served (even for a short time), in the U.S. Army, Navy, Air Force, Marine Corps, or the Coast Guard (Community Commons, 2018).

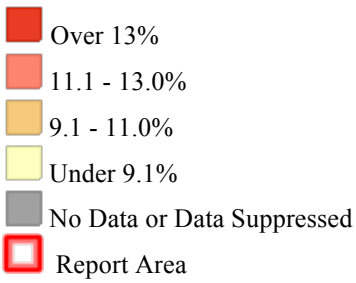
Figure 5.1 Veteran Population by Age Group, Percent



Data Source: US Census Bureau, American Community Survey. 2012-16

Figure 5.2 Veterans, Percent of Total Population by Tract, ACS 2012-2016



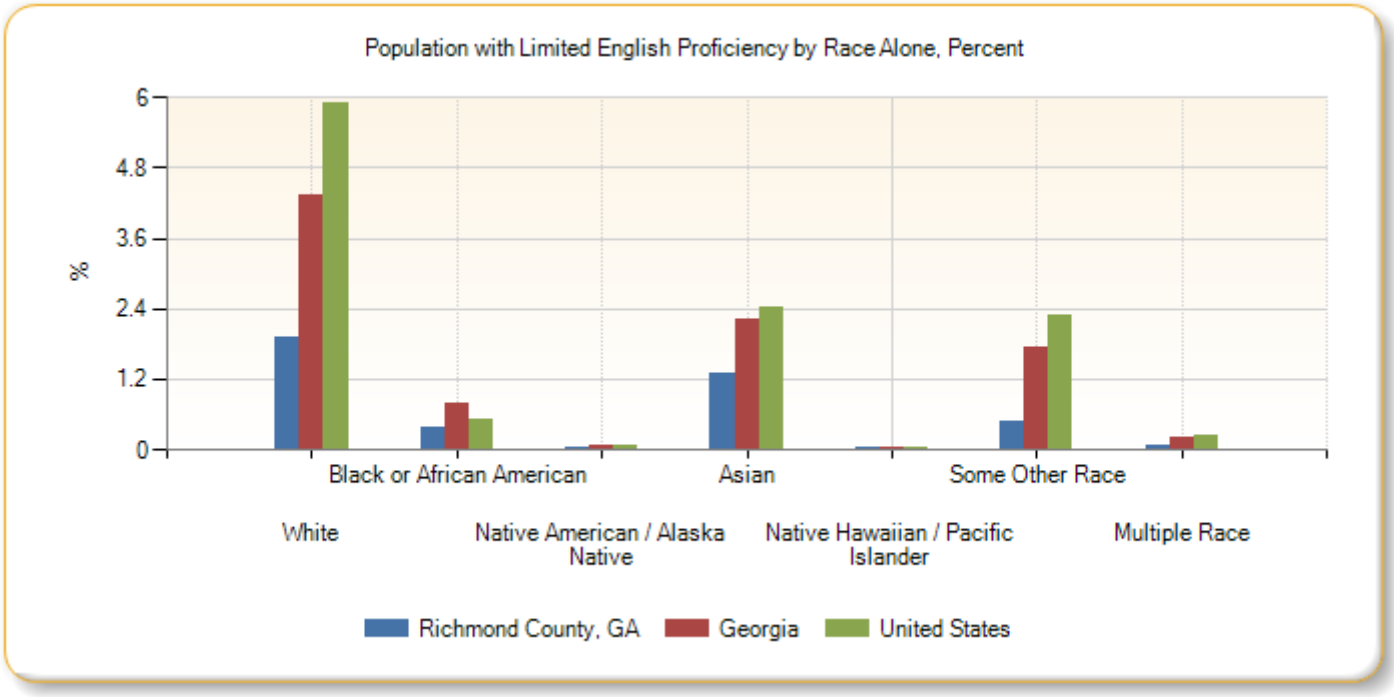


Data Source: US Census Bureau, American Community Survey. 2012-2016

Population with Limited English Proficiency

Figure 5.3 reports the percentage of the population aged 5 and older who speak a language other than English at home and speak English less than "very well." This indicator is relevant because an inability to speak English well creates barriers to healthcare access, provider communications, and health literacy/education (Community Commons, 2016).

Figure 5.3 Percent Population with Limited English Proficiency



Data Source: US Census Bureau, American Community Survey. 2012-16.

Foreign-Born Population

The foreign-born population includes anyone who was not a U.S. citizen or a U.S. national at birth. Figure 5.4 includes any non-citizens, as well as persons born outside of the U.S. who have become naturalized citizens (Community Commons, 2018). The latest figures from the U.S. Census Bureau show that 7,048 persons in the report area are of foreign birth, which represents 3.5% of the report area population. This percentage is less than the national rate of 13.18% (Community Commons, 2018).

Figure 5.4 Percent Population with Limited English Proficiency

Report Area	Total Population	Naturalized U.S. Citizens	Population Without U.S. Citizenship	Total Foreign-Birth Population	Foreign-Birth Population, Percent of Total Population
Richmond County, GA	201,418	3,532	3,516	7,048	3.5%
Georgia	10,099,320	402,905	591,724	994,629	9.85%
United States	318,558,162	19,979,407	22,214,947	42,194,354	13.25%

Data Source: US Census Bureau, American Community Survey. 2012-16. Source geography: Tract

Chapter 6: Government and Politics

Local government can have a strong and direct impact on people's health and well-being and make positive changes in communities. It is responsible for providing strategic leadership, managing and delivering range of quality services to the community such as public health and recreational facilities, improved access to healthy foods in lower-income areas, developing zoning laws to change local food environments, passing laws and policies that communicate the importance of health and funding to support high-quality health care (Good Governance, 2018).

Decision-making is central to a government. This requires strong partnership among federal, state, and local governments. How those decisions are made is important especially when there are competing priorities, existing policies, and legislation that can impact a public issue. Effective government requires an understanding of how government works and the law making and budgetary processes of political system (WHO, 2005).

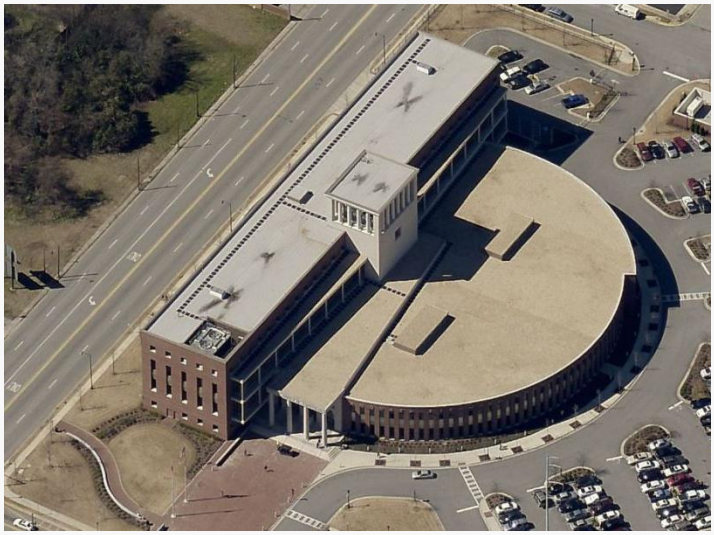
Local & County Government

Local government is the oldest form of government in Georgia, and there are three types of local governments in Georgia – counties, cities, and special districts. The constitution limits Georgia to 159 counties, although there is no limit on the number of cities and special districts (Stakes, 2017). Richmond County was an original headright county acquired from the Creeks Indians by treaty in 1733 and organized as the Colonial parish of St. Paul in 1758 (GeorgiaGov, 2018). The county was named after the Duke of Richmond, a politician who defended the colonists' cause in Parliament and advocated their independence (GeorgiaGov, 2018).

County government carry out many functions for the state, such as elections, road building, and repair, health and welfare programs, planning and zoning, public assistance,

hospitals, emergency management, police protection, record keeping and automobile licensing (Stakes, 2017). The state constitution requires that four officers be elected in each county: sheriff, clerk of the superior court, tax commissioner, and judge of the probate court (Stakes, 2017). Civil Court and Magistrate Court (Figure 6.1) of Richmond County Georgia are forums in which both criminal and civil matters are heard and decided (AugustaGa, 2018).

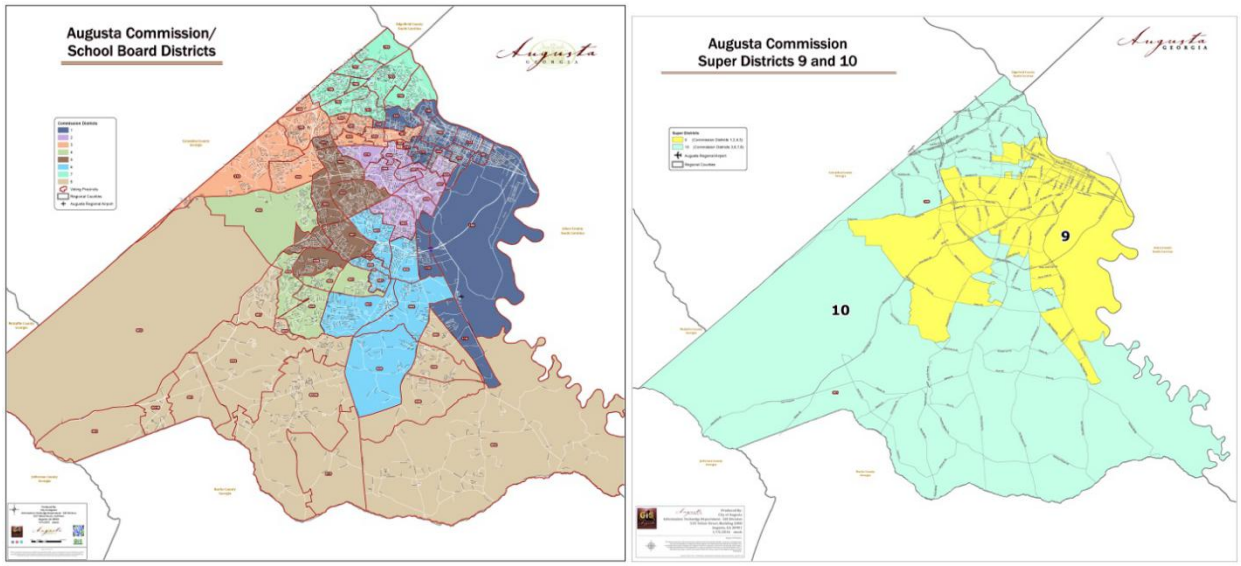
Figure 6.1 Augusta-Richmond County Judicial Center & John H. Ruffin, Jr. Courthouse



Source: http://www.augustaga.gov/1442/Augusta-Richmond-County-Judicial-Center

In 1996, the City of Augusta consolidated with Richmond County to form Augusta-Richmond County. This consolidated governing body consists of a Mayor and 10 Augusta-Richmond County commissioners. The current Mayor of Augusta-Richmond County is Hardie Davis and is the chief executive officer of the government and ensures that all laws, ordinances and resolutions are executed (AugustaGa, 2018). The commissioners serve and chair many committees where ordinances and other matters are discussed for considerations. Figure 6.2 illustrates the ten commission districts in Richmond County. Augusta-Richmond County is one of only four consolidated governments in Georgia (AugustaGa, 2018).

Figure 6.2 Richmond County Commission Districts



Source: http://www.augustaga.gov/524/District-Maps

State Government

Georgia's government resembles the federal model, with an executive, legislative and judicial branch maintaining a balance of power. The executive branch of government is by far the largest which consists of governor, lieutenant governor, secretary of state, attorney general, commissioner of agriculture, commissioner of labor, commissioner of insurance, and state school superintendent. (Stakes, 2017). The governor serves as the state's chief executive of the state of Georgia. Republican Nathan Deal is the 82nd and current Governor of the U.S. state of Georgia since 2011 (Georgiagov, 2018).

Furthermore, members of the Georgia Public Service Commission are elected statewide. These officers, along with other heads of state departments, agencies, commissions and boards,

administer departments that directly address areas of importance to state government (Stakes, 2017). There are more than twenty-five major departments in the executive branch and hundreds of agencies, boards and commissions.

The General Assembly consists of State Senate (56 members) and The House of Representatives (180 members) that form the legislative branch of state government. During the session, the legislators submit and pass bills and resolutions that affect the state of Georgia and its counties (Stakes, 2017). Georgia's judicial system consists of six different courts: Municipal Court, Magistrate Court, Probate Court, Juvenile Court, State Court and Superior Court (Stakes, 2017).

Figure 6.3 Georgia State Capitol, Atlanta, GA

Source: http://atlanta.cbslocal.com/2017/03/13/atlanta-bomb-squad-investigate-suspicious-package-at-georgia-state-capitol/

The city of Atlanta is the capital (Figure 6.3) of Georgia and is home to Georgia's State Government. Two senators and 14 representatives represent Georgia in the United States Senate and in the United States House of Representatives. The current members of the U.S. Senate from Georgia are: David Purdue and Johnny Isakson (Govtrack, 2018). The State senators are responsible for representing the interest of the citizens in their states and part of their job is to write and vote on new laws (Jackson-Arnautau, 2017). The U.S. House of representatives make

and pass federal laws (House, 2018). Rich Allen is the U.S. House of Representative for Augusta-Richmond County.

Obesity Initiatives

Recognizing that Georgia has the worst rates of childhood obesity, Gov. Nathan Deal launched Georgia's SHAPE partnership in 2011, a unique public-private partnership to promote childhood fitness and build a culture of wellness among Georgia's youth statewide. Other objectives set forth by the Governor and Georgia Shape include reaching disparate populations, increasing the aerobic capacity measure of Georgia's youth, increasing the breastfeeding rate across Georgia, and increasing the number of early care centers that excel in nutrition and physical activity measures (Georgiashape, 2018). Georgia Shape is governed by the 13 members of Governor's Advisory council on Childhood obesity. The various programs, work, strategies, and initiatives are divided into data collection, nutrition, physical activity, marketing and communications, and healthcare. Each sub group is comprised of experts, professionals and council members (Georgiashape, 2018).

Governance and Health

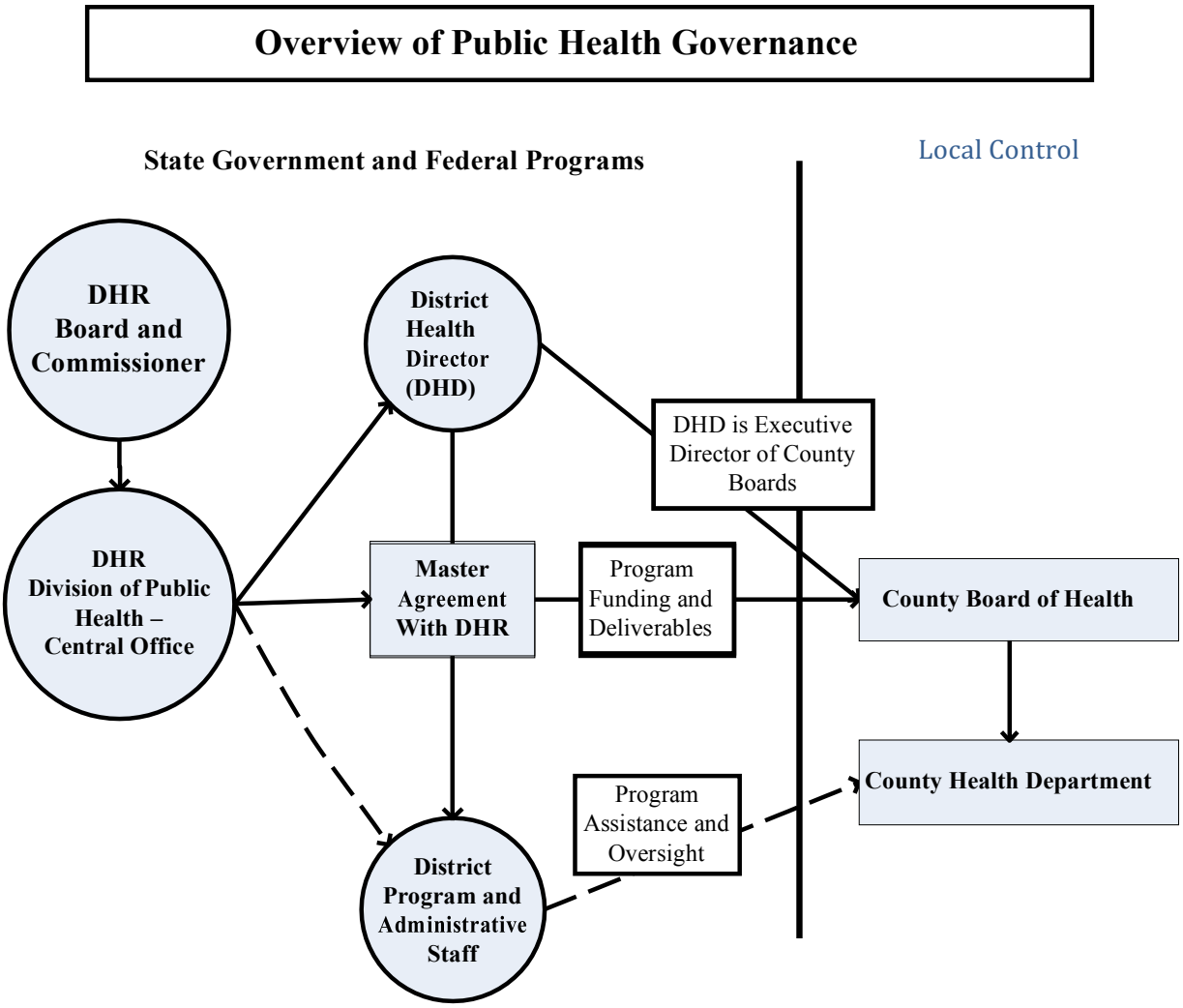
The Georgia Department of Public Health (DPH) is the lead agency in preventing disease, injury and disability; promoting health and well-being; and preparing for and responding to disasters from a health perspective (DPH, 2018). At the state level, DPH functions through numerous divisions, sections, programs and offices. Locally, DPH funds and collaborates with Georgia's 159 county health departments and 18 public health districts (DPH, 2018). Today, DPH's main functions include: Health Promotion and Disease Prevention, Maternal and Child Health, Infectious Disease and Immunization, Environmental Health, Epidemiology, Emergency Preparedness and Response, Emergency Medical Services, Pharmacy, Nursing, Volunteer Health

Care, the Office of Health Equity, Vital Records, and the State Public Health Laboratory (DHP, 2018).

The Georgia Department of Public Health (DPH) funds, and collaborates with, 18 separate public health districts throughout the state. Each is comprised of one or more of Georgia's 159 counties and county health departments (DPH, 2018). District 6 – East Central l is the health district for Richmond County. Dr. Goggans serves as the District Health Director for the East Central Health District. District directors balance the needs and roles of both the counties and the state by representing the interests of the County Boards to the Division of Public Health, and similarly, the Division's to the Boards (DPH, 2018).

The 18 District Health Directors serve as the executive director of the county Boards of Health in their districts, and are responsible for county and district plans and functions (Governor's Planning and Budget, 2008). County Health Department Funding is delivered from several sources: County Funds, State Funded General Grant-in-Aid, Mixed State and Federal Funding – Programmatic Grant-in-Aid (PGIA), Fee Revenue, and Grants and Donations. This funding supports specific programs areas, and can be comprised of all state funds, all federal funds, or a mix of both (Governor's Planning and Budget, 2008). Figure 6.4 gives an overview of the public health system's governance structure and organizational relationships.

Figure 6.4



Source: Governor's Office of Planning and Budget, 2007

Part 2: Community Health Analysis

Executive Summary

This section of the Community Health Needs Assessment (CHNA) report provides an analysis of key health indicators in Richmond County, Georgia. These categories are as follows:

- Vital Statistics & the Burden of disease
- Healthcare System
- Community Resources

Methods

The Community Health Analysis is based on secondary analysis of available data resources. No primary data was collected for the purposes of the CHNA. Utilization of secondary data sources for this report presents limitations, as it is difficult to ensure adequate representation of all groups in a community. This data may not account for critical needs that may have emerged since the last census or survey.

In addition to the demographic data sources utilized for Part 1: Community Background, community organizations and coalitions were utilized to perform a systematic review of available community resources, partnerships, and health benchmarks for which to design interventions as detailed in Part 3.

Chapter 7: Vital Statistics & the Burden of Disease

Introduction

Vital statistics, also known as vital events or vital records, are an important source of demographic data. They document demographic events such as births, deaths, marriages, divorces, etc (Divisha, 2017). According to N.B.Ryder, they "provide cumulative summaries for successive time periods of population movements like birth, death, migration, marriage and marital dissolution as well as demographic and other relevant characteristics of the individuals involved in these events". Vital statistics can be combined with data on health determinants, such as behavior, social and physical environments to provide a powerful source of information for public health practitioners, politicians, community planners, and other entities to gain insight on the population's health, influences on health, health outcomes and progress towards meeting goals (NVSS, 2016).

Sources of Information and Methods

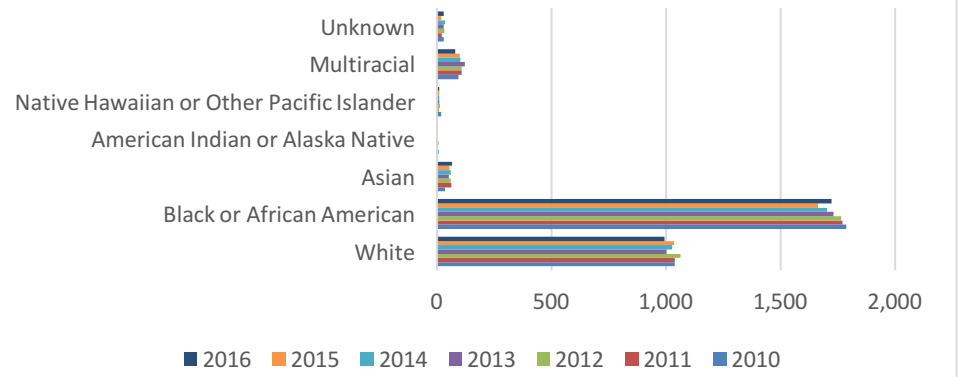
Information for this chapter was primarily obtained from the following national online data sources: County Health Rankings, Community Commons, the CDC's Community Health Status Indicator's dashboard, Behavioral Risk Factor Surveillance System (BRFSS), Health Indicator Waterhouse, State Cancer Profiles, National Center for Chronic Disease Prevention and Health Promotion Monitors and the National Vital Statistics System; as well as the following state sources: Georgia Department of Public Health – Online Analytical Statistical Information System (OASIS).

Findings

Births

In 2016 there were 2,905 live births in Richmond County, GA a decline from 2010-2014. The majority of the births were to Black or African Americans residents (1724), followed by White residents (994). The fewest births were to American Indians (4) (Figure 7.1 & Table 7.2). The average birth rate for Richmond County was 46.3 for 2010-2016.

Figure 7.1 Number of Births in Richmond County, GA by Residence 2010 - 2016



Data Source: Georgia Department of Health, Online Analytical Statistical Information System (OASIS). Retrieved from https://dph.georgia.gov/health-data-and-statistics

Table 7.2 Number of Births in Richmond County, GA by Race 2010 - 2016

Race	2010	2011	2012	2013	2014	2015	2016
White	1,037	1,039	1,063	1,001	1,026	1,036	994
Black or African American	1,786	1,770	1,766	1,730	1,702	1,664	1,724
Asian	36	63	59	52	59	55	65
American Indian or Alaska Native	6	5	8	4	2	2	4
Native Hawaiian or Other Pacific Islander	17	8	12	10	10	10	10
Multiracial	95	109	108	121	102	98	80
Unknown	30	21	33	28	34	19	28
Total Live Births	**3,007**	**3,015**	**3,049**	**2,946**	**2,935**	**2,884**	**2,905**

Data Source: Georgia Department of Health, Online Analytical Statistical Information System (OASIS). Retrieved from https://dph.georgia.gov/health-data-and-statistics

Deaths

Table 7.3 shows that in 2016, there were 1,992 deaths in Richmond County, GA a decline from 2015. The majority of the deaths were White residents (1036), followed by Black or African Americans residents (944). The average death rate for Richmond County was 951.1 for 2010-2016.

Table 7.3 Number of Deaths in Richmond County, GA by Race 2010 - 2016

Race	2010	2011	2012	2013	2014	2015	2016
White	1,020	987	1,027	1,021	997	1,041	1,036
Black or African American	839	789	867	864	891	959	944
Asian	15	17	19	9	9	18	8
American Indian or Alaska Native	1	0	0	0	1	1	1
Native Hawaiian or Other Pacific Islander	4	1	4	3	3	5	2
Multiracial	9	1	5	2	2	3	1
Total Deaths	**1,888**	**1,795**	**1,922**	**1,899**	**1,903**	**2,027**	**1,992**

Data Source: Georgia Department of Health, Online Analytical Statistical Information System (OASIS). Retrieved from https://dph.georgia.gov/health-data-and-statistics

Marriage and Divorce

Marriage and divorce rates are key indicators of social phenomenon and factors that depend on economic growth, cultural support, income, education, and demographics. According to demographics data from the Census Bureau 2017, Richmond County, GA has the largest proportion of percent of people never married at 42% of the total and is ranked #1 in GA. It also has the largest proportion of total percent of people divorced at 13% of the total and is ranked #1. The National Center for Family & Marriage Research with the Center for Family and Demographic Research showed that the marriage count for 2010 for Richmond was 1,556 while

the divorce count was 1,170. Table 7.4 shows marriage and divorce rates for Richmond County, Georgia and United States in 2016.

Table 7.4 Marriage and Divorce Rate Trends

	Marriage Rate	Divorce Rate
Richmond County	-	13
Georgia	6.8	-
United States	6.9	3.2

Data Sources: National Marriage and Divorce Rate Trends http://www.cdc.gov/nchs/nvss/marriage_divorce_tables.htm; http://www.towncharts.com/Georgia/Demographics/Richmond-County-GA-Demographics-data.html

Burden of Disease

Obesity is one of the biggest health concerns in communities across the country. Factors related to obesity are also rated as communities' priority health issues, including nutrition and physical activity at 58 percent, heart disease and hypertension at 57 percent and diabetes at 44 percent (The State of Obesity, 2017). Across United States, more than one in three adults and one in six children (ages 2-19) are obese — and one in 11 young children (ages 2-5) are obese. The trend for adult obesity rates in Georgia has increased from 1990-2016 (The State of Obesity, 2017). Obesity remains one of America's most deadly health problems (The Sate of Obesity, 2018). Overweight and obesity increases the risk of developing many health problems, including:

- heart disease and strokes
- high blood pressure
- type 2 diabetes
- certain types of cancer
- sleep apnea
- osteoarthritis
- fatty liver disease
- kidney disease
- mental health issues

- pregnancy problems, such as high blood sugar during pregnancy, high blood pressure, and increased risk for cesarean delivery (NIH, 2018)

Heart disease, stroke, and type 2 diabetes, are among the leading causes of death. Table 7.5 shows rates of obesity-related health issues in Georgia. Blacks have the highest rates of obesity at 37.7% in Georgia.

Table 7.5 Rates of Adult Obesity-Related Health Issues in Georgia

Current Adult Obesity Rate (2016) – **31.4%**	Rank Among States (2016) **20/51**
White (28.9%) **Black (37.7%)** Latino (28.4%)	Men (27.7%) Women (30.6%)
Diabetes (12.1%) Rank Among States (8/51)	**Hypertension (36.2%)** Rank Among States (9/51)
Heart Disease Cases in 2010 465,535	**Obesity-Related Cancer in 2010** 126,027

Data Source: https://stateofobesity.org/states/ga

Table 7.6 shows rates of obesity among adults in Richmond County, GA. 33.9% of adults aged 20 and older self-report that they have a Body Mass Index (BMI) greater than 30.0 (obese) in the report area (Community Commons, 2012). The rates in Georgia are closer to the National rates.

Table 7.6 Percent of adults 20 years or older whose self-reported (BMI > 30.0)

Report Area	Percent Adults with BMI > 30.0 (Obese)
Richmond County, GA	33.9%
Georgia	29.3%
United States	27.5%

Data Source: Centers for Disease Control and Prevention,
National Center for Chronic Disease Prevention and Health Promotion. 2013.

Table 7.7 shows rates by gender in Richmond County, GA. 36.7% of females aged 20 and older self-report that they have a Body Mass Index (BMI) greater than 30.0 (obese) in the report area (Community Commons, 2012). The rates for female are higher than males at county, state and national level.

Table 7.7 Adults Obese (BMI > 30.0) by Gender

Report Area	Percent Males Obese	Percent Females Obese
Richmond County, GA	30.8%	36.7%
Georgia	28.05%	30.52%
United States	27.92%	27.06%

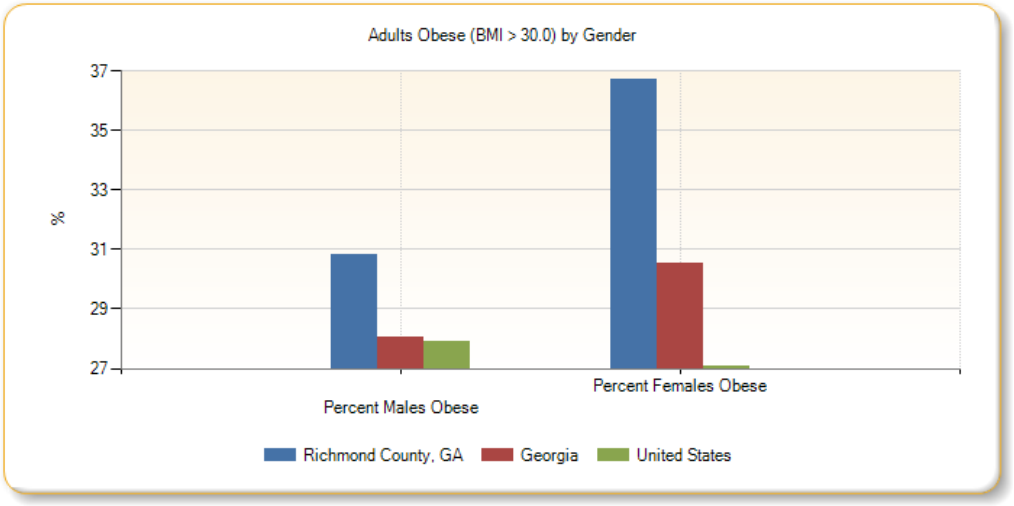
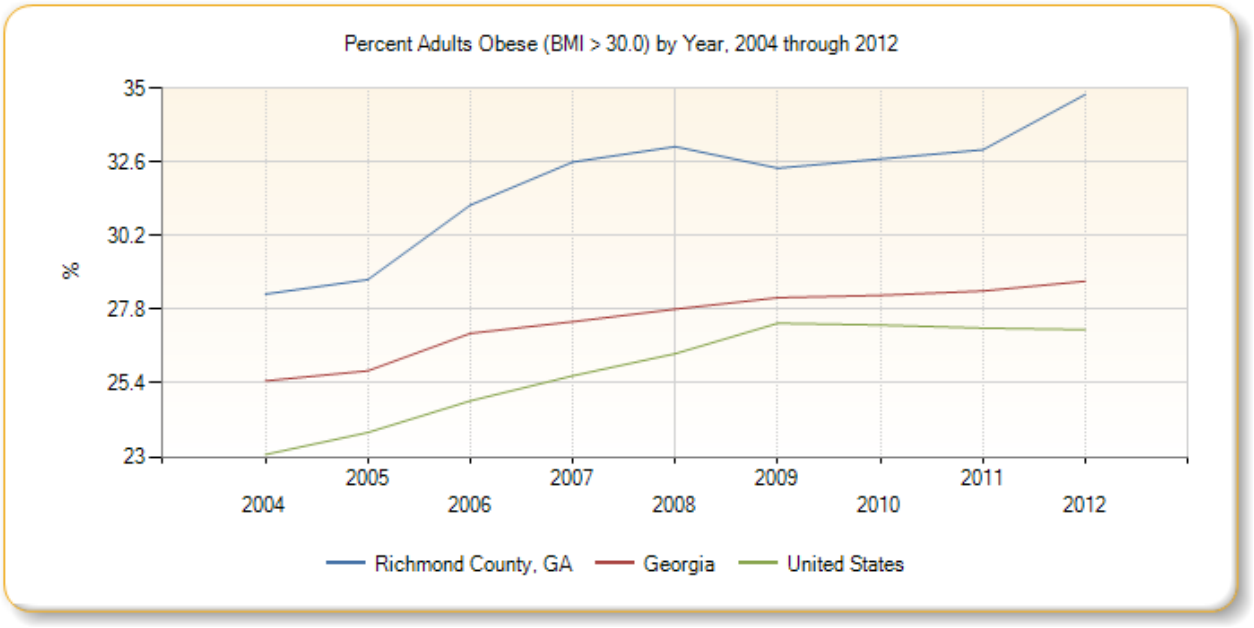


Table 7.8 shows rates by Year, 2004 through 2012. Obesity rates have steadily increased in the last 10 years at the county, state and national level.

Table 7.8 Percent Adults Obese (BMI > 30.0) by Year, 2004 through 2012

Report Area	2004	2005	2006	2007	2008	2009	2010	2011	2012
Richmond County, GA	28.3%	28.77%	31.2%	32.6%	33.1%	32.4%	32.7%	33%	34.8%
Georgia	25.47%	25.8%	27.02%	27.4%	27.81%	28.18%	28.26%	28.4%	28.72%
United States	23.07%	23.79%	24.82%	25.64%	26.36%	27.35%	27.29%	27.19%	27.14%



Data Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 2013.

Data and Statistics

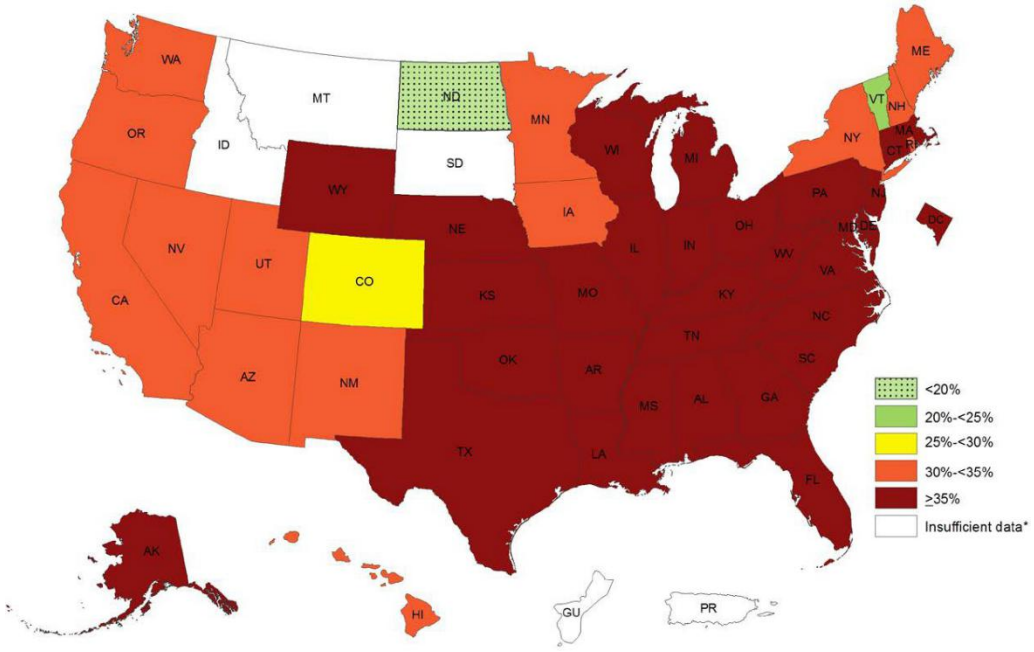
- According to CDC, more than one-third (36.5%) of U.S. adults have obesity.
- In 2014, Journal of American Medicine reported that **Non-Hispanic blacks have the highest age-adjusted rates of obesity (48.1%)** followed by Hispanics (42.5%), non-Hispanic whites (34.5%), and non-Hispanic Asians (11.7%).
- Estimated annual medical cost of obesity in the U.S. was $147 billion in 2008 U.S. dollars (CDC, 2018).

- Obesity is higher among middle age adults age 40-59 years (40.2%) and older adults age 60 and over (37.0%) than among younger adults age 20–39 (32.3%).

Obesity Prevalence in 2016

- Obesity risks decline by level of education. Adults without a high school degree or equivalent had the highest self-reported obesity (35.5%), followed by high school graduates (32.3%), adults with some college (31.0%) and college graduates (22.2%) (CDC, 2018).
- Obesity risks increase with age. Young adults were half as likely to have obesity as middle-aged adults.
- **For 2015-2016, the prevalence of obesity for children and adolescents aged 2-19 years was 18.5% and affected about 13.7 million children and adolescents (CDC, 2018).**
- **Obesity prevalence was 18.4% among 6 to 11-year-olds, and 20.6% among 12 to 19 year-olds (CDC, 2018).**
- **Adults aged 45-54 years had the highest prevalence (35.1%) (CDC, 2018).**
- The South had the highest prevalence of obesity (32.0%), followed by the Midwest (31.4%), the Northeast (26.9%), and the West (26.0%) (CDC, 2018).
- Combining data from 2014 through 2016, *non-Hispanic blacks had the highest prevalence of self-reported obesity (38.3%)*, followed by Hispanics (32.5%) and non-Hispanic whites (28.1%). See Figure 7.9.

Figure 7.9 Prevalence of Self-Reported Obesity Among Non-Hispanic Black Adults, by State and Territory, BRFSS, 2014-2016



**Sample size <50 or the relative standard error (dividing the standard error by the prevalence) ≥ 30%.*

Data Source: Behavioral Risk Surveillance System, CDC

Chronic Diseases

By comparing, for example, the prevalence of certain chronic diseases to indicators in other categories (e.g., poor diet and exercise) with outcomes (e.g., high rates of obesity and diabetes), various causal relationship may emerge, allowing a better understanding of how certain community health needs may be addressed in Richmond County, GA (Community Commons, 2016).

Heart Disease, High Blood Pressure, & High Cholesterol

Heart Disease

According to Healthy People 2020, heart disease is the leading cause of death in the United States. Risk factors for heart disease are: high blood pressure, high cholesterol, smoking, diabetes, unhealthy diet and physical inactivity, *overweight and obesity* (Community Commons, 2012). The #1 leading cause of death in African-American residence in Richmond County is heart disease according to Georgia Department for Public Health for 2012-2016. The prevalence of heart disease remains high in Richmond County and Georgia. Table 7.10 shows the percentage of surveyed adults who said they had been diagnosed with heart disease.

Table 7.10 Adults with Heart Disease

Report Area	Survey Population (Adults Age 18)	Total Adults with Heart Disease	Percent Adults with Heart Disease
Richmond County, GA	153,572	6,734	4.4%
Georgia	7,210,872	318,050	4.4%
United States	236,406,904	10,407,185	4.4%

Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES. 2011-12. Source geography: County

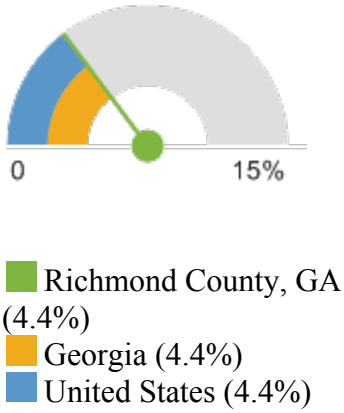
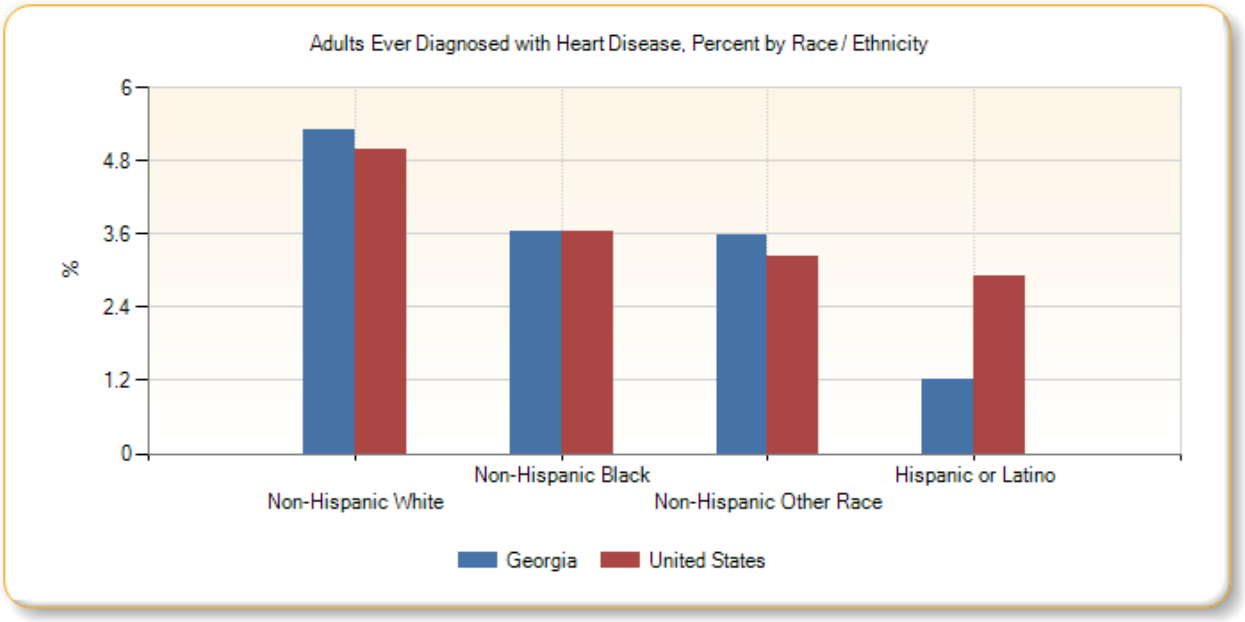


Table 7.11 shows the percentage of surveyed adults diagnosed with heart disease by race for Georgia and U.S.

Table 7.11 Adults Ever Diagnosed with Heart Disease, Percent by Race / Ethnicity

Report Area	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic Other Race	Hispanic or Latino
Georgia	5.3%	3.65%	3.58%	1.2%
United States	4.99%	3.63%	3.23%	2.92%

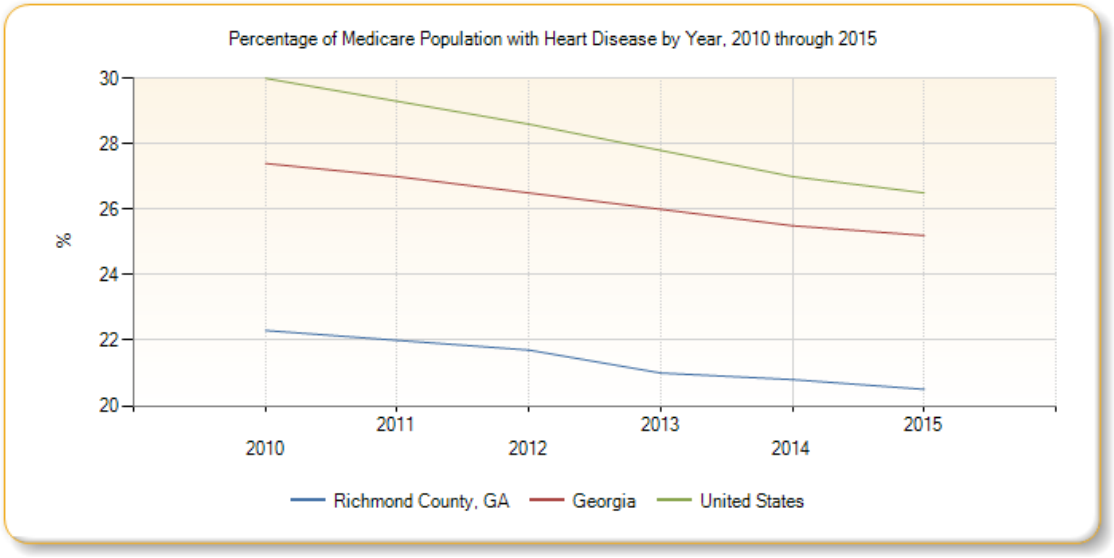


Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System.

Additional data analysis by CARES. 2011-12. Source geography: County

Table 7.12 shows percentage of Medicare population with heart disease. Richmond County percentage are significantly less then State and National percentage.

Table 7.12 Percentage of Medicare Population with Heart Disease



Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES. 2011-12. Source geography: County

High Blood Pressure (Adult)

Figure 7.13 shows the percent of surveyed adults who said they had high blood pressure. Of the surveyed, 33.8% of adults have High Blood Pressure in Richmond County. This is higher than State (31.6%) and National rates (28.16%).

Figure 7.13 Adults with High Blood Pressure

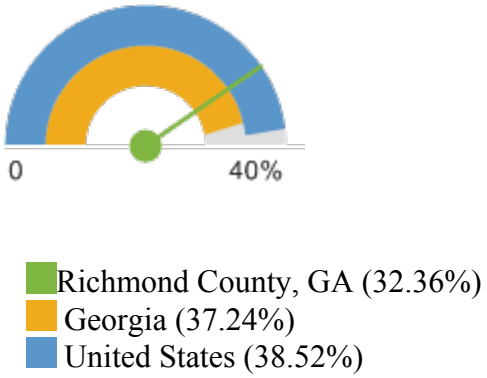
Report Area	Total Population (Age 18)	Total Adults with High Blood Pressure	Percent Adults with High Blood Pressure
Richmond County, GA	149,589	50,561	33.8%
Georgia	7,121,933	2,250,531	31.6%
United States	232,556,016	65,476,522	28.16%

Data Source: CDC,, Behavioral Risk Factor Surveillance System. US Department of Health Human Services, Health Indicators Warehouse. 2006-12.

High Cholesterol (Adult)

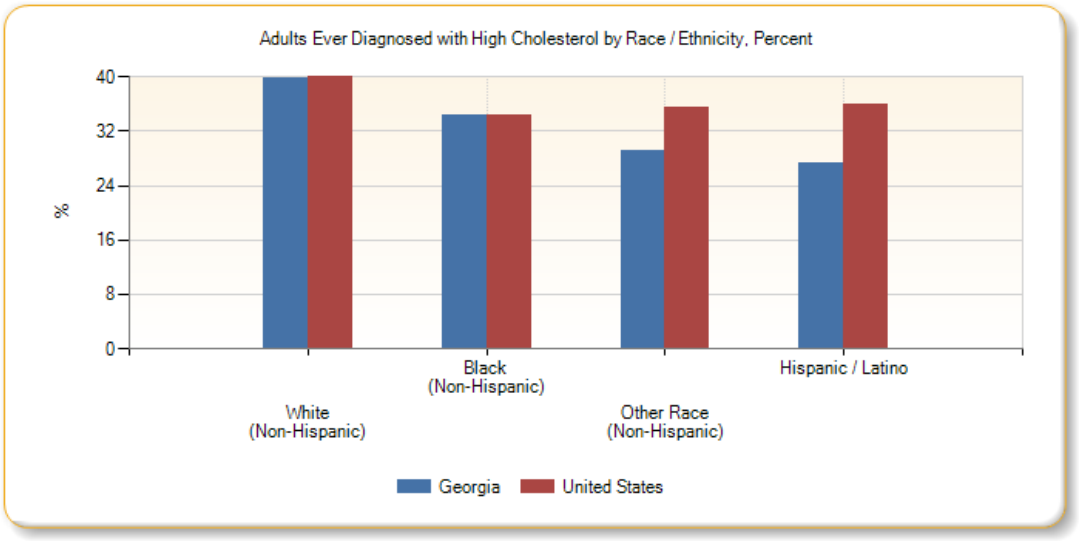
Figure 7.14 reports the percentage of adults aged 18 and older with high blood cholesterol. Richmond County residence comprised of 32.36% with High Cholesterol which was lower than the State and National rates. Figure 7.15 shows Black residence high blood cholesterol rates were 2nd to White for Georgia and U.S.

Figure 7.14 Adults with High Cholesterol



Data Source: CDC, BRFSS, Additional data analysis by CARES. 2011-2012.

Figure 7.15 Adults Ever Diagnosed with High Cholesterol by Race / Ethnicity, Percent



Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System.

Additional data analysis by CARES. 2011-12.

Diabetes (Adult)

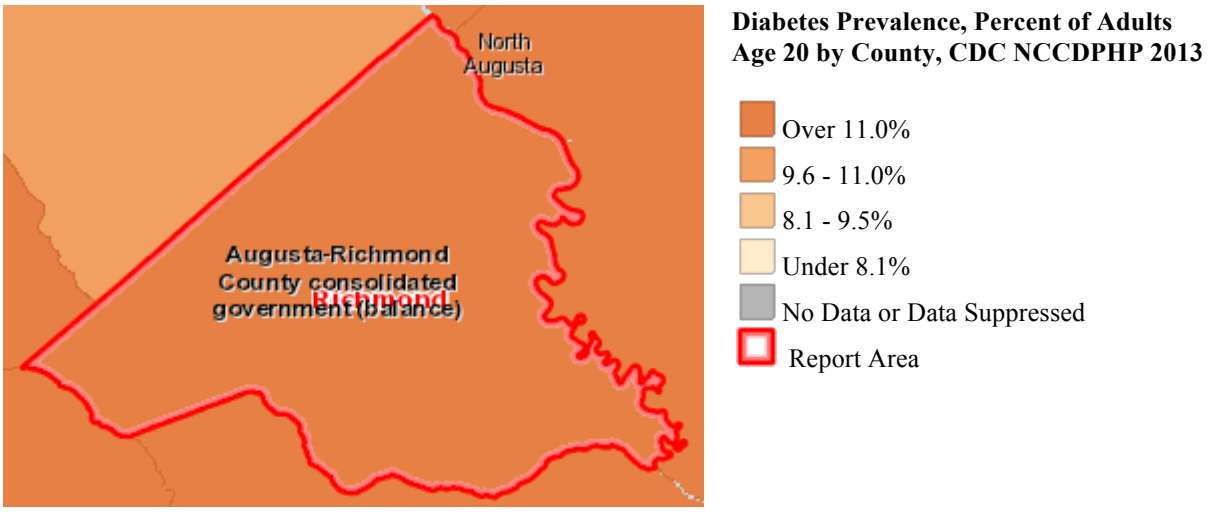
Diabetes ranked # 2 for death rate among Black or African-American residence in Richmond County according to Georgia Department for Public Health for 2012-2016. By far, the most common form of diabetes is type 2 diabetes, accounting for 95% of diabetes cases in adults. There are many risk factors for type 2 diabetes such as age, race, family history, high cholesterol, pregnancy and obesity. More than 87% of adults with type 2 diabetes are overweight or obese (National Diabetes Statistics Report, 2017). People who are overweight or have obesity have added pressure on their body's ability to use insulin to properly control blood sugar levels, and are therefore more likely to develop diabetes (Obesity Society, 2018). According to the 2012 Richmond County Community Health Status Assessment, the prevalence of diabetes in Richmond County (13.2%) remain higher than the state (10.64%), and national prevalence (9.19%). The indicator below (Table 7.16) reports the percentage of adults aged 20 and older with diabetes (Community Commons, 2016).

Table 7.16 Population with Diabetes

Report Area	Population with Diagnosed Diabetes, Age-Adjusted Rate
Richmond County, GA	13.2%
Georgia	10.64%
United States	9.19%

Data Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 2013.

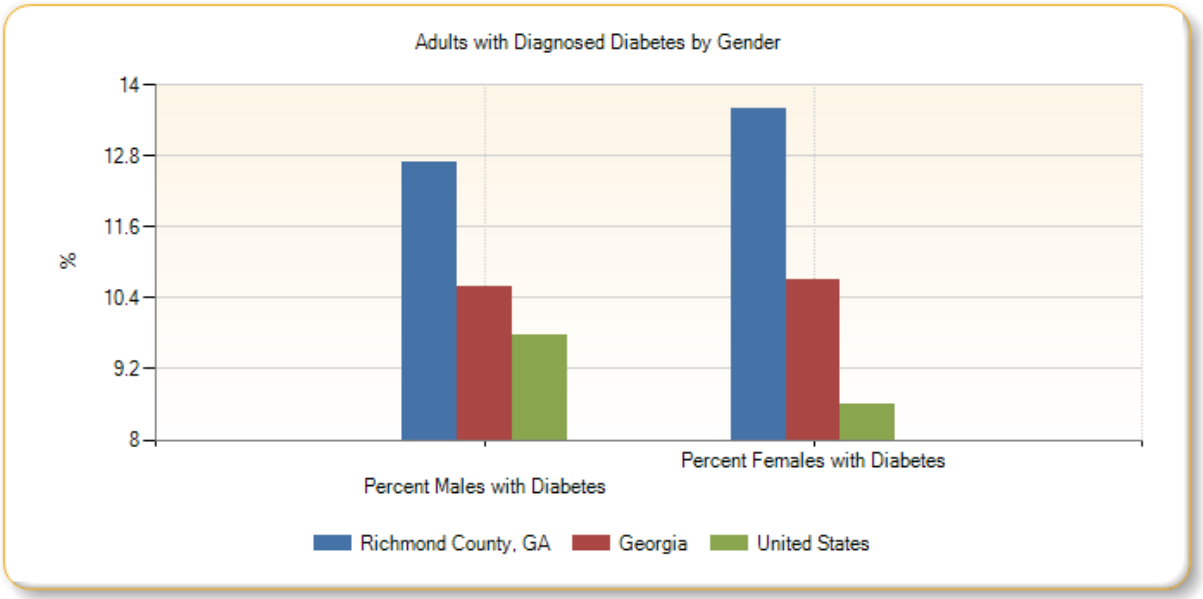
Figure 7.17 Diabetes Prevalence



Data Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 2013.

Figure 7.18 shows the number of people (by gender) diagnosed with diabetes in Richmond County, Georgia, and the United States.

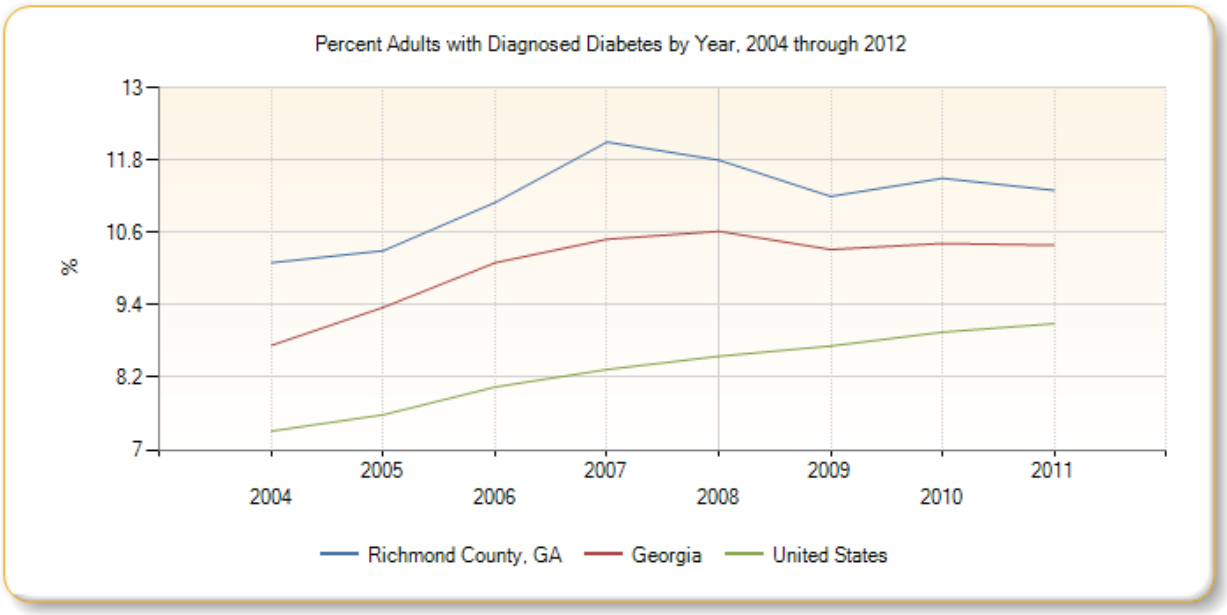
Figure 7.18 Diabetes by Gender



Data Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 2013.
Source geography: County

According to the National Center for Chronic Disease, the US, Georgia and Richmond County are on upward trend for diabetes from 2009 to 2011; the diabetes rates for Richmond County are still significantly higher than either Georgia or the US (Figure 7.19).

Figure 7.19 Adults with Diagnosed Diabetes Trends for Richmond County, Georgia, U.S.

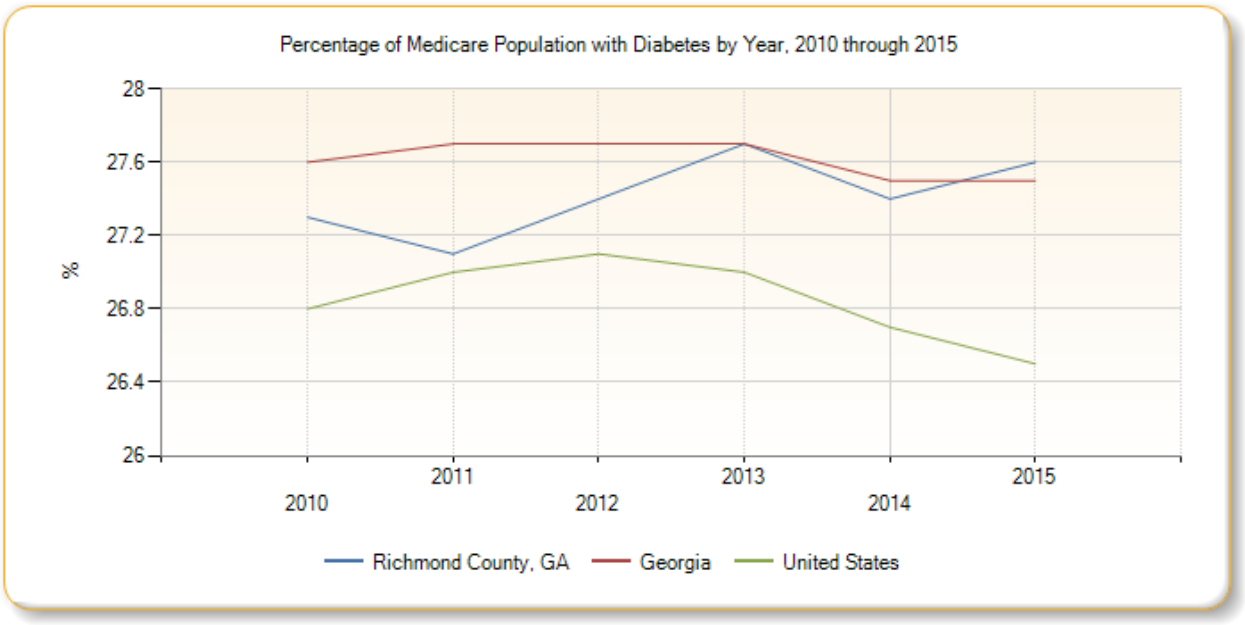


Data Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 2013. Source geography: County

While the percentage of Medicare Population with Diabetes has decreased for US from 2010 to 2015 (Table 7.20), the rates for Richmond County has remained high according to Centers for Medicare and Medicaid Services. According to American Diabetes association the total costs of diagnosed diabetes have risen to $327 billion in 2017 from $245 billion in 2012. The largest component of medical expenditures is: hospital inpatient care, prescription medication, supplies and physician office visits (American Diabetes Association, 2018). Total per-capita health

expenditures are higher among women and blacks. Per capita hospital inpatient costs are higher among blacks and blacks also have 65% more emergency department visits than the general population (American Diabetes Association, 2018).

Figure 7.20 Percentage of Medicare Population with Diabetes



Data Source: Centers for Medicare and Medicaid Services. 2015. Source geography: County

Cancer

In 2016, cancer was one of the leading causes of death among African-American residence in Richmond County, GA. Cancer is the second leading cause of death and a major health problem in the United States and Georgia, exceeded only by heart disease (CDC, 2016). According to Georgia Department of Health's Cancer Data Report 2016, about 45,000 Georgians are diagnosed with invasive cancer, and nearly 15,500 die from this disease each year. In 2013, cancer accounted for 22% of all deaths. Breast cancer is the leading cause of cancer incidence among Georgia females and accounts for 30% of all new cancers in women (SEER, 2018).

Black males in Georgia are 25% more likely than white males to die from cancer (SEER, 2018). According to National Cancer Institute, Richmond County's incidence rate for 2010-2014 among black residence was 424.7 which was lower than the State and National incidence rate of 452.9 (Table 7.21).

Table 7.21 Incidence Rate for Richmond County (Black, Both Sexes, All Ages)

Report Area	African American
Richmond County, GA	424.7
Georgia	452.9
United States	452.9

Data Source: State Cancer Profiles. www.statecancerprofiles.cancer.gov

During 2000-2013, cancer incidence rates in Georgia declined at an average annual rate of 0.3%. According to Healthy People 2020, much of the burden of death and disability from cancer is preventable by reducing risk factors such as use of tobacco products, physical inactivity and poor nutrition, ***obesity*** and UV light exposure. About 20% of cancers could be prevented by adopting healthy diet and exercise practices. Data from the Behavioral Risk Factor Surveillance System (BRFSS) and data from the Youth Risk Behavior Surveillance System (YRBS) show that in 2014, 31% of Georgia adults were obese and in 2013, 79% of Georgia adults did not meet aerobic and strength exercise recommendations on a regular basis.

Breast Cancer

Figure 7.22 shows the age adjusted incidence rate (cases per 100,000 population per year) of females with breast cancer adjusted to 2000 U.S. standard population. Richmond County

incidence rate of 135.2 was higher among blacks than the state (125.4) and national (122.8) rate (Community Commons, 2016).

Table 7.22 Breast Cancer Incidence Rate (Per 100,000 Pop.) by Race / Ethnicity

Report Area	White	Black	Asian / Pacific Islander	American Indian / Alaskan Native	Hispanic or Latino
Richmond County, GA	131.4	**135.2**	no data	no data	no data
Georgia	123.9	125.4	74.4	43.4	93.2
United States	124.5	122.8	90.2	72.7	92.3

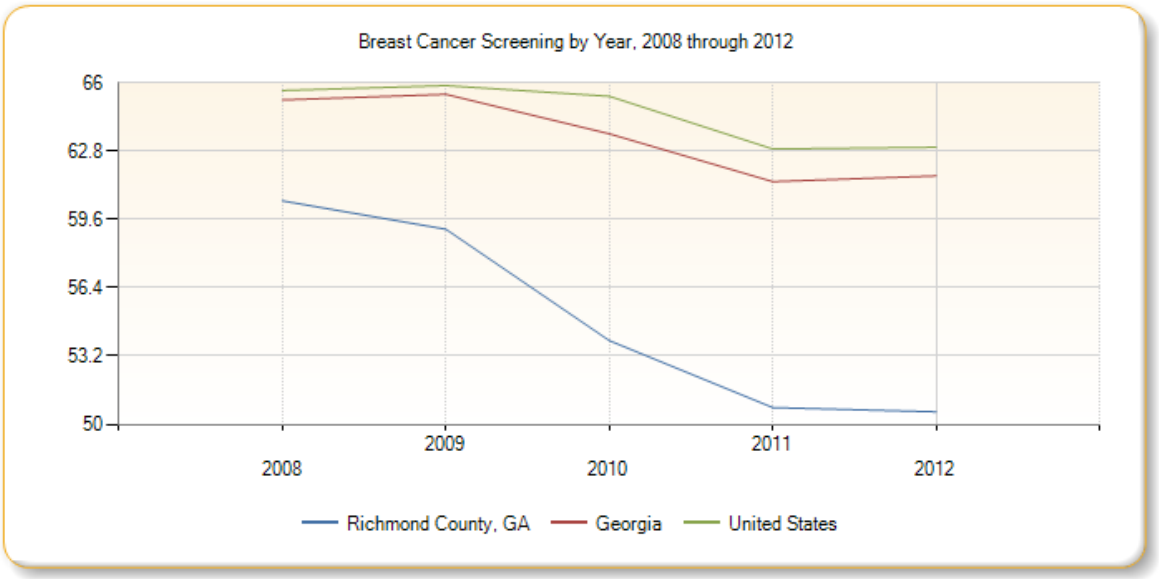
Data Source: Dartmouth College Institute for Health Policy Clinical Practice, Dartmouth Atlas of Health Care. 2014.

Source geography: County

Screening is effective in identifying some types of cancers (breast, cervical, and colorectal) if detected early (Healthypeople, 2018). According to BRFSS, during 2014, 80% of Georgia females ages 50 to 74 reported having had a mammogram within the past two years. Table 7.23 shows percentage of female who have received one or more mammograms in the past two years. Despite targets to improve preventative behaviors for early detection and treatment of breast cancer, Richmond County percentage have remained either steady or decreased for age 67-69.

Table 7.23 Percent of Female Medicare Beneficiaries Age 67-69 with Mammogram trend

Report Area	**2008**	**2009**	**2010**	**2011**	**2012**
Richmond County, GA	60.47	59.14	53.92	50.78	50.58
Georgia	65.2	65.46	63.61	61.37	61.64
United States	65.64	65.87	65.37	62.9	62.98



Data Source: Dartmouth College Institute for Health Policy Clinical Practice, Dartmouth Atlas of Health Care. 2014. Source geography: County

Using State Cancer Profiles from 2009-2013, Table 7.24 shows comparison of cancer incidence rates for County, State and National levels. Healthy People 2020 has specific data-driven target goals associated with the reduction of cervical cancer. However, the rates for cervical cancer remain high at 9.5 for Richmond County.

Table 7.24 Cancer Incidence Rate (Per 100,000 Pop.) Comparison

Report Area	**Cervical Cancer**	**Colon and Rectum Cancer**	**Lung Cancer**	**Prostate Cancer**
Richmond County, GA	**9.5**	34.9	**70.3**	125.2
Georgia	7.7	41.4	65.9	129.3
United States	7.62	39.8	61.2	114.8
HP 2020 Target	<= 7.1	<= 38.7		

Data Source: State Cancer Profiles. 2009-13. Source geography: County

Table 7.25 shows comparison cancer incidence rate specifically for African Americans at County, State and National levels. Incidence rates for African American remain high for cervical cancer and lung cancer in Richmond County in comparison to Georgia and the United States.

Table 7.25 Cancer Incidence Rate (Per 100,000 Pop.) for African American or Black

Report Area	**Cervical Cancer**	**Colon and Rectum Cancer Incidence**	**Lung Cancer**	**Prostate Cancer**
Richmond County, GA	10	37.7	62.9	163.6
Georgia	8.8	48.6	58	201
United States	9.5	46.7	63.9	182.9

Data Source: State Cancer Profiles. 2009-13. Source geography: County

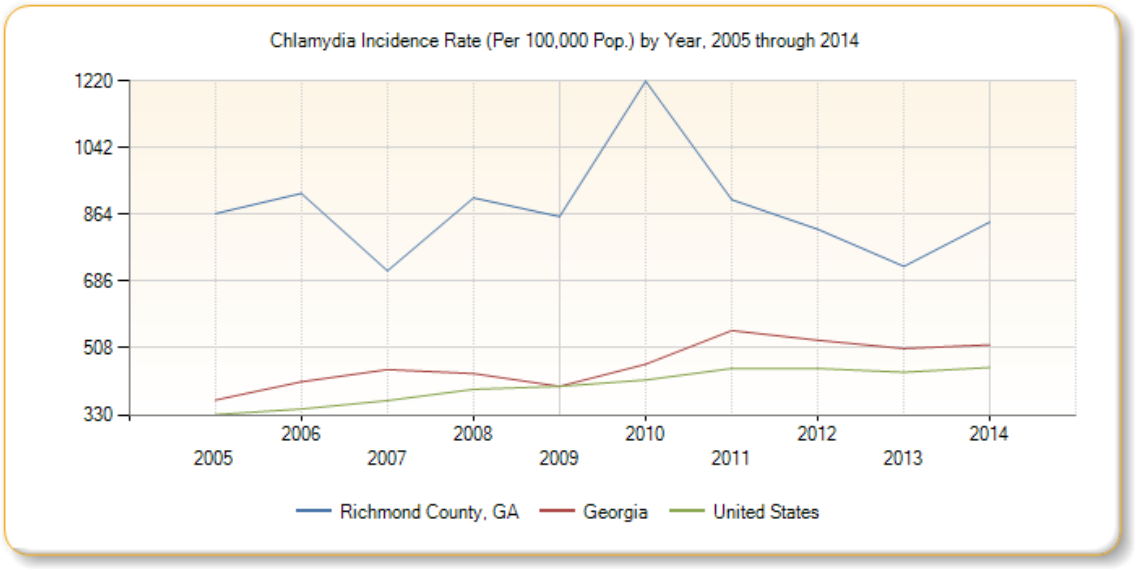
Infectious Diseases

Infectious diseases have changed the structure and numbers of people living in communities. HIV/AIDS has been identified as 1 of the 3 leading causes of death in black males, next to diseases of the heart and cancer. This has made a large contribution to the increasing difference between blacks and white in life expectancy (Richardus, 2001). African Americans in Richmond County have some of the highest incidence rates of sexually transmitted diseases.

Chlamydia and Gonorrhea

The rate of Chlamydia in Richmond County is much higher (Figure 7.26) than that of the state and the nation and continues to increase (Community Commons, 2016).

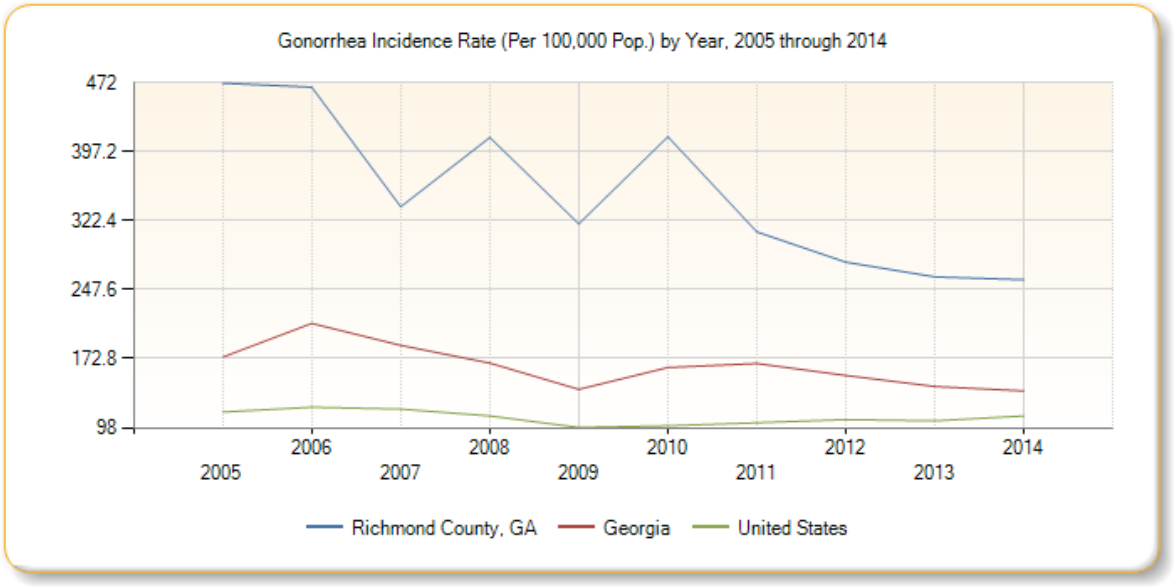
Figure 7.26 Chlamydia Incidence Rate (Per 100,000 Pop.) by Year, 2005 through 2014



Data Source: US Department of Health Human Services, Health Indicators Warehouse. Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. 2014. Source geography: County

The rate of Gonorrhea in Richmond County is significantly higher than the state rate and more than double the national rate. Despite the significant decline in gonorrhea incidence from 2010 to 2014, incidence rates remain high (Community Commons, 2016). These indicators suggest unsafe sex practices and potentially a lack of education on STI risks and prevention methods.

Figure 7.27 Gonorrhea Incidence Rate (Per 100,000 Pop.) by Year, 2005 through 2014

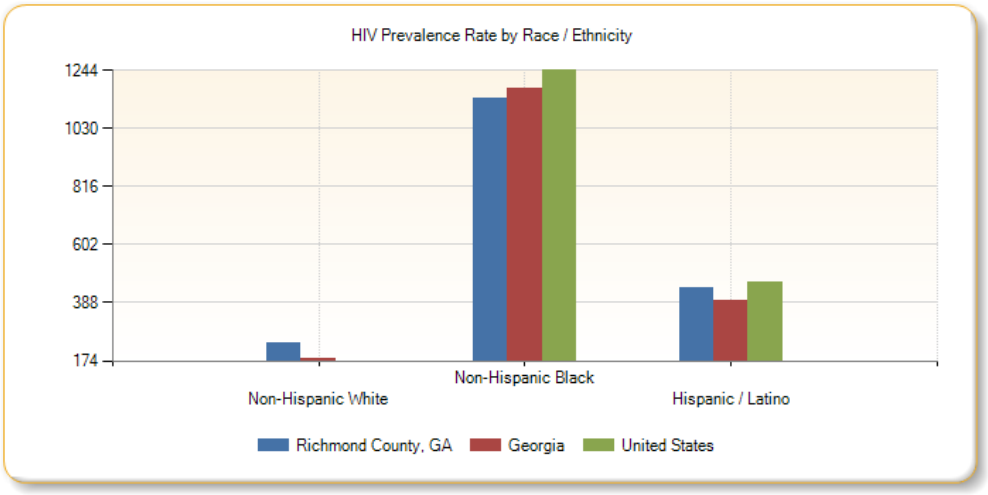


Data Source: US Department of Health Human Services, Health Indicators Warehouse. Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. 2014. Source geography: County

HIV

The rate of black individuals living with HIV in Richmond County is substantially higher than the state and national rates (Community Commons, 2016). This indicator is relevant because HIV is a life-threatening communicable disease that disproportionately affects minority populations and may also indicate the prevalence of unsafe sex practices.

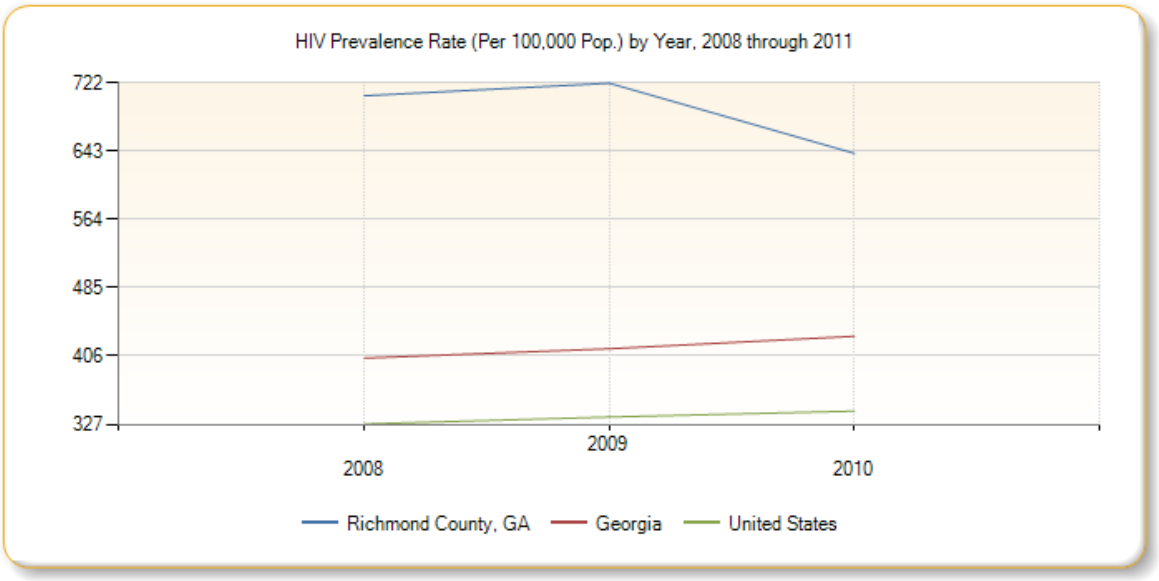
Figure 7.28 HIV Prevalence Rate by Race / Ethnicity



Data Source: US Department of Health Human Services, Health Indicators Warehouse. Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. 2013. Source geography: County

Figure 7.29 HIV Prevalence Rate (Per 100,000 Pop.) by Year, 2008 through 2011

Report Area	2008	2009	2010
Richmond County, GA	707	721.6	640.4
Georgia	403.56	414.4	428.78
United States	327.37	335.38	342.17



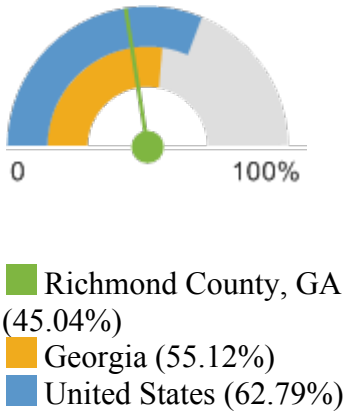
Data Source: US Department of Health Human Services, Health Indicators Warehouse. Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. 2013. Source geography: County

HIV Screenings

Table 7.30 shows the percentage of adults age 18-70 who self-report that they have never been screened for HIV. This indicator is relevant because engaging in preventive behaviors allows for early detection and treatment of health problems (Community Commons, 2016).

Table 7.30 Percent Adults Never Screened for HIV/AIDS

Report Area	Survey Population (Adults Age 18)	Total Adults Never Screened for HIV / AIDS	Percent Adults Never Screened for HIV / AIDS
Richmond County, GA	144,735	65,187	45.04%
Georgia	6,626,167	3,652,216	55.12%
United States	214,984,421	134,999,025	62.79%



Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES. 2011-12. Source geography: County

Table 7.31 summarizes the findings for chronic and infectious disease among adults in Richmond County, GA. High blood pressure and high cholesterol percentage were among the highest chronic conditions in Richmond County. These indicators suggest a need to improve healthy behaviors and utilization of health care system.

Table 7.31 Chronic and Infectious Disease Among Adults for Richmond County, Ga

Condition	**Percentage**	**Data Source**	**Year(s) of Data**
Heart Disease	4.4%	Behavorial Risk Factor Surveillance System (BRFSS)	2011-2012
High Blood Pressure	33.8%	Behavorial Risk Factor Surveillance System (BRFSS), Health Indicators Warehouse (HIW)	2006-2012
High Cholesterol	32.36%	Behavorial Risk Factor Surveillance System (BRFSS)	2011-2012
Diabetes	13.2%	National Center for Chronic Disease Prevention and Health Promotion monitors (NCCDPH)	2013
Obesity (BMI > 30)	33.9%	National Center for Chronic Disease Prevention and Health Promotion monitors (NCCDPH)	2013
Condition	**Incidence Rate** (Per 100,000 Pop.)	**Data Source**	**Year(s) of Data**
Cancer (Breast)	133.3	State Cancer Profiles	2010-2014
Cancer (Prostate)	125.2	State Cancer Profiles	2010-2014
Chlamydia	844.05	Health Indicators Warehouse, National Center for HIV/AIDS	2014
Gonorrhea	258.41	Health Indicators Warehouse, National Center for HIV/AIDS	2014
HIV	732.17	Health Indicators Warehouse, National Center for HIV/AIDS	2014

Data Background: The Behavioral Risk Factor Surveillance System (BRFSS) include data pertaining to health behaviors, chronic conditions, access and utilization of healthcare, and general health. Surveys are administered to populations at the state level and then delivered to the CDC and tabulated into county estimates by the BRFSS analysis team.

The Health Indicator Warehouse is the official repository of the nation's health data, providing public access to the information resources of the Centers for Disease Control and Prevention (CDC), the Environmental Protection Agency (EPA), the Health Resources and Services Administration (HRSA), and others.

The Centers for Disease Control and Prevention's National Center for Chronic Disease Prevention and Health Promotion monitors (NCCDPH) the health of the Nation and produces publically available data to promote general health. The division maintains the Diabetes Data and Trends data system, which includes the National Diabetes Fact Sheet and the National Diabetes Surveillance System.

Citation: Centers for Disease Control and Prevention, Diabetes Data & Trends: Frequently Asked Questions (FAQ). (2012).

Methodology: Indicator percentages are acquired from analysis of annual survey data from the Behavioral Risk Factor Surveillance System (BRFSS) for years 2011-2012.

Mortality

Leading Causes of Death

According to Georgia Department of Health, Ischemic Heart and Vascular Disease is the #1 cause for African American Death Rate in Richmond County followed by Hypertension and Heart Disease. Risks for coronary disease include overweight or obesity, physical inactivity, unhealthy diet, smoking, diabetes and high blood pressure. Table 7.32 and Table 7.33 shows the ranked causes for Richmond County for 2012-2016.

Table 7.32 Ranked Causes and State/County Comparison, Age-Adjusted Death Rate, Race: Black or African-American, Richmond County, 2012 - 2016

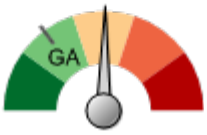
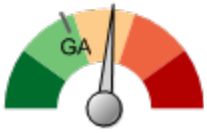
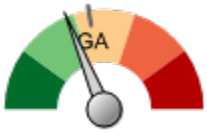
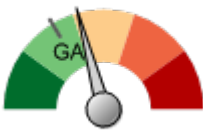
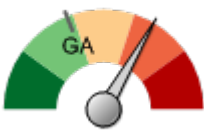
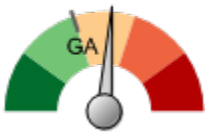
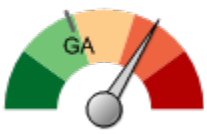
Ischemic Heart and Vascular Disease - 352	Essential (Primary) Hypertension and Hypertensive Renal, and Heart Disease - 298	Malignant Neoplasms of the Trachea, Bronchus and Lung - 232	Cerebrovascular Disease - 218	Diabetes Mellitus - 217
				
# 1	# 2	# 3	# 4	# 5
All Other Mental and Behavioral Disorders - 146	Nephritis, Nephrotic Syndrome and Nephrosis - 144	Septicemia - 136	All COPD Except Asthma - 128	Alzheimers Disease - 127
				
# 6	# 7	# 8	# 9	# 10

Table 7.33 Top 10 Causes of Death by selected age groups, Race: Black or African-American, Richmond County, 2012 - 2016

Rank	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75+ years
1	Assault (Homicide)	Essential (Primary) Hypertension and Hypertensive Renal, and Heart Disease	Ischemic Heart and Vascular Disease	Essential (Primary) Hypertension and Hypertensive Renal, and Heart Disease	Malignant Neoplasms of the Trachea, Bronchus and Lung	Ischemic Heart and Vascular Disease
	32	15	43	81	79	160
2	Motor Vehicle Crashes	Diabetes Mellitus	Essential (Primary) Hypertension and Hypertensive Renal, and Heart Disease	Malignant Neoplasms of the Trachea, Bronchus and Lung	Ischemic Heart and Vascular Disease	All Other Mental and Behavioral Disorders
	12	10	38	70	71	129
3	Accidental Poisoning and Exposure to Noxious Substances	Ischemic Heart and Vascular Disease	Diabetes Mellitus	Ischemic Heart and Vascular Disease	Essential (Primary) Hypertension and Hypertensive Renal, and Heart Disease	Alzheimers Disease
	10	10	33	68	63	114
4	Intentional Self-Harm (Suicide)	Cerebrovascular Disease	Malignant Neoplasms of the Trachea, Bronchus and Lung	Diabetes Mellitus	Diabetes Mellitus	Cerebrovascular Disease
	7	9	27	55	52	100
5	All Other Diseases of the Nervous System	Motor Vehicle Crashes	Cerebrovascular Disease	Cerebrovascular Disease	All COPD Except Asthma	Essential (Primary) Hypertension and Hypertensive Renal, and Heart Disease
	6	9	24	44	43	97
6	Pregnancy, Childbirth and the Puerperium	Assault (Homicide)	Human Immunodeficiency Virus (HIV) Disease	Nephritis, Nephrotic Syndrome and Nephrosis	Septicemia	Diabetes Mellitus
	6	9	20	33	38	61

7	Diabetes Mellitus 5	Septicemia 8	Malignant Neoplasm of the Breast 19	Septicemia 29	Cerebrovascular Disease 37	Nephritis, Nephrotic Syndrome and Nephrosis 61
8	Human Immunodeficiency Virus (HIV) Disease 3	Malignant Neoplasm of the Breast 8	Malignant Neoplasms of Colon, Rectum and Anus 15	Malignant Neoplasm of Pancreas 26	Nephritis, Nephrotic Syndrome and Nephrosis 34	All COPD Except Asthma 59
9	Malignant Neoplasms of Colon, Rectum and Anus 3	Nephritis, Nephrotic Syndrome and Nephrosis 8	All Other Endocrine, Nutritional and Metabolic Diseases 14	Malignant Neoplasm of the Breast 26	Malignant Neoplasm of Prostate, and Testis 19	Malignant Neoplasms of the Trachea, Bronchus and Lung 54
10	Malignant Neoplasm of the Breast 3	Intentional Self-Harm (Suicide) 8	Accidental Poisoning and Exposure to Noxious Substances 13	All Other Diseases of the Nervous System 26	All Other Diseases of the Nervous System 18	Pneumonia 49

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Table 7.34 table summarizes the mortality rates by race/ethnicity for Richmond County. Heart disease and cancer ranked high among blacks.

Table 7.34 Mortality Rates - Age-Adjusted Rate (Per 100,000 pop.) by Race/Ethnicity

Mortality	Non-Hispanic White	Non-Hispanic Black	Asian or Pacific Islander	American Indian/Alaskan Native	Hispanic or Latino	Data Source	Year(s) of Data
Coronary Heart Disease	88.82	77.23	suppressed	suppressed	No data	NVSS	2012-2016
Stroke	43.33	53.28	suppressed	suppressed	suppressed	NVSS	2012-2016
Cancer	**210.13**	**196.15**	suppressed	suppressed	111.71	NVSS	2012-2016
Heart Disease	**219.97**	**229.15**	suppressed	suppressed	suppressed	NVSS	2012-2016
Stroke	43.33	54.1	suppressed	suppressed	suppressed	NVSS	2012-2016

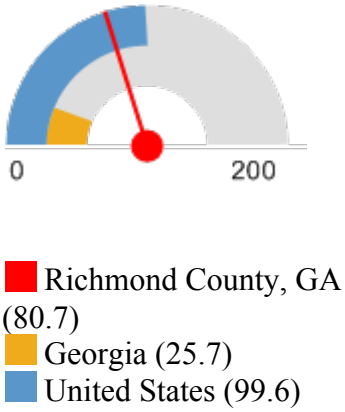
Data Source: Data are compiled for the National Vital Statistics System (NVSS) through a joint effort between the NCHS and various state and local health agencies, who are responsible for registering vital events – births, deaths, marriages, divorces, and fetal deaths.
Methodology: County population figures and death statistics are acquired using CDC WONDER from the Underlying Cause of Death database.
Data Suppression: Data is suppressed when the total number of cases is less than 10 (for each county/cause of death/population group) over the time period monitored.

Coronary Heart Disease

When examining mortality with coronary heart disease (ICD10 Codes I20-I25) per 100,000 population Richmond County is 80.7 three times the rate for Georgia (25.7). However, this rate is less than the Healthy People 2020 target of less than or equal to 103.4 (Community Commons, 2016). The following data (Table 7.35 and Table 7.36) is from National Vital Statistics System.

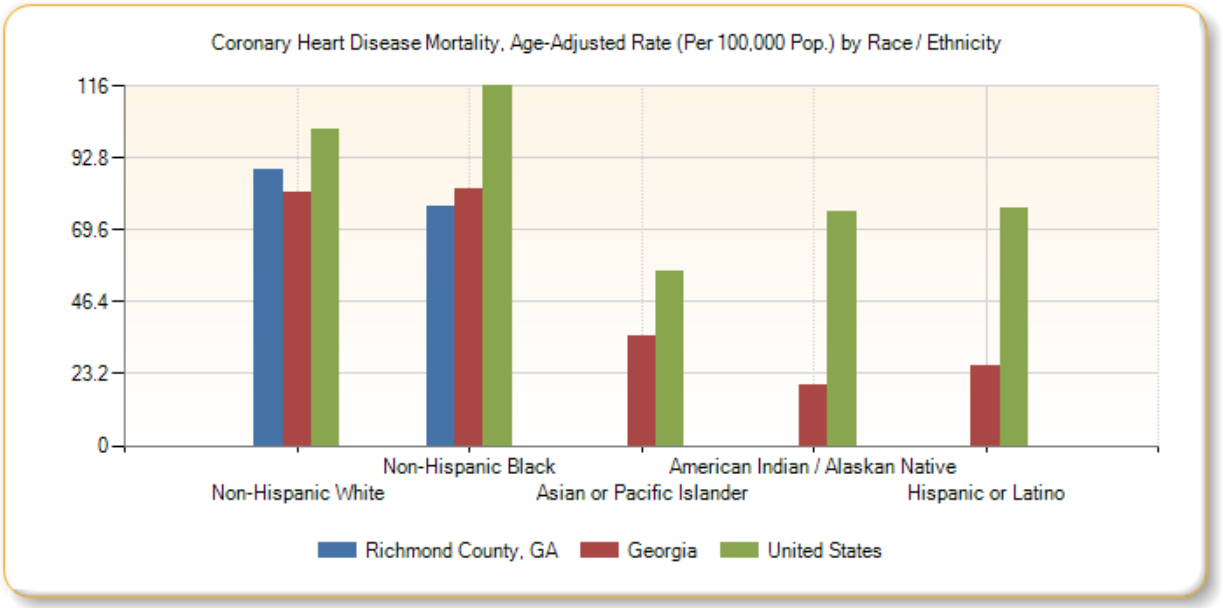
Table 7.35 Coronary Heart Disease Death Rate Comparison

Report Area	Average Annual Deaths, 2010-2014	Crude Death Rate (Per 100,000 Pop.)	Age-Adjusted Death Rate (Per 100,000 Pop.)
Richmond County, GA	158	78.4	80.7
Georgia	77	8.25	25.7
United States	367,306	115.3	99.6



Data Source: Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2012-16. Source geography: County

Table 7.36 Coronary Heart Disease Mortality, Age-Adjusted Rate (Per 100,000 Pop.) by Race / Ethnicity



Data Source: Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2012-16. Source geography: County

Heart Disease

According to CDC, for Richmond County, the rate of death due to heart disease (ICD10 Codes I00-I09, I11, I13, I20-I151) per 100,000 population is 217 (Table 7.37). This is more than three times the rate of Georgia. For Black or African Americans, the rate is significantly high at 229.15 (Table 7.38).

Table 7.37 Heart Disease Death Rate Comparison

Report Area	Average Annual Deaths, 2010-2014	Crude Death Rate (Per 100,000 Pop.)	Age-Adjusted Death Rate (Per 100,000 Pop.)
Richmond County, GA	430	212.8	217
Georgia	175	18.62	58.87
United States	618,853	194.2	168.2

Data Source: Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2012-16. Source geography: County

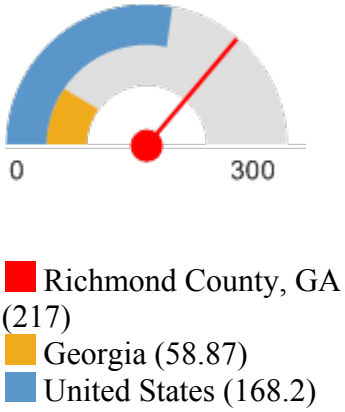
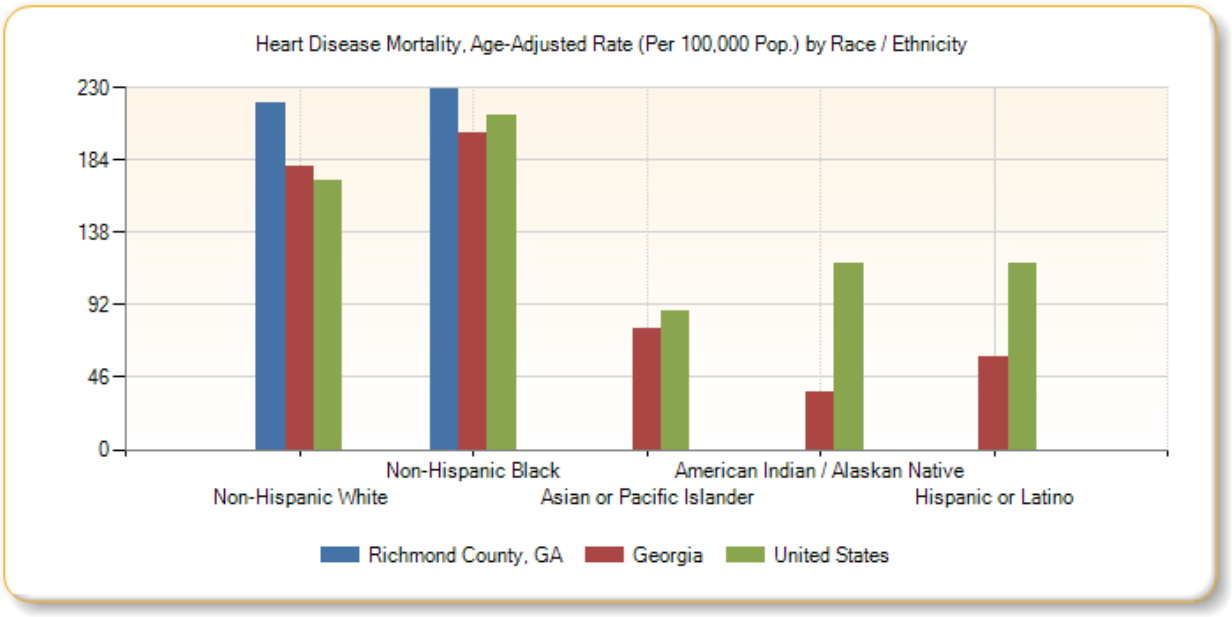


Table 7.38 Heart Disease Mortality, Age-Adjusted Rate (Per 100,000 Pop.) by Race / Ethnicity

Report Area	Non-Hispanic White	Non-Hispanic Black	Asian or Pacific Islander	American Indian / Alaskan Native	Hispanic or Latino
Richmond County, GA	219.97	229.15	-7,777	suppressed	-7,777
Georgia	179.24	201.31	76.24	36.93	58.87
United States	170.91	212.58	88.26	118.48	118.17



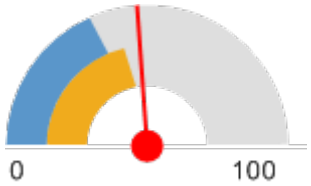
Data Source: Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2012-16. Source geography: County

Stroke

Stroke is the fifth leading cause of death in the United States (CDC, 2018). Strokes affect African-Americans and nonwhite Hispanic Americans much more than any group in the U.S. Together, heart disease and stroke, along with other cardiovascular disease, are among the most widespread health problems facing the Nation today (Healthy People, 2018). Looking at the mortality statistics from CDC, Richmond County's mortality rate is 47.8. This is greater than the Healthy People 2020 target of less than or equal to 33.8 (Table 7.39).

7.39 Stroke Mortality, Age-Adjusted Rate (Per 100,000 Pop.)

Report Area	Average Annual Deaths, 2010-2014	Crude Death Rate (Per 100,000 Pop.)	Age-Adjusted Death Rate (Per 100,000 Pop.)
Richmond County, GA	93	46.2	**47.8**
Georgia	3,992	39.5	43.15
United States	134,618	42.2	36.9
HP 2020 Target			<= 33.8



Richmond County, GA (47.8)
Georgia (43.15)
United States (36.9)

Data Source: Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2012-16. Source geography: County

According to National Vital Statistics System, stroke is higher among male compared to females (Table 7.40). Additionally, the rates for Blacks remain higher in Richmond County when compared against the rates in Georgia and the United States (Table 7.41).

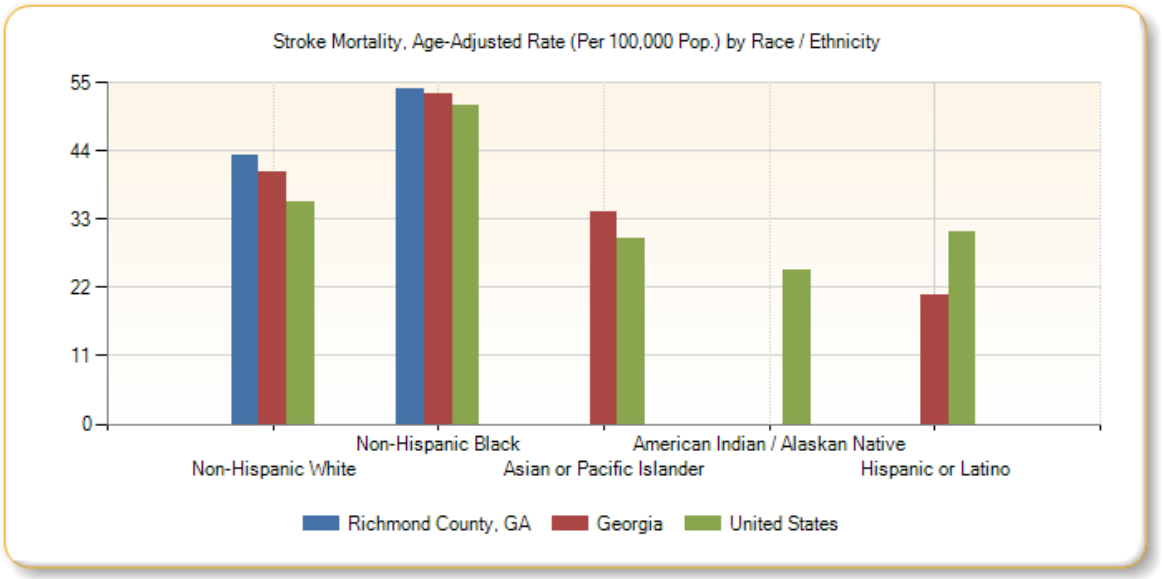
7.40 Stroke Mortality, Age-Adjusted Rate (Per 100,000 Pop.) by Gender

Report Area	Male	Female
Richmond County, GA	49	45.72
Georgia	43.54	41.97
United States	37.18	36.04

Data Source: Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2012-16. Source geography: County

7.41 Stroke Mortality, Age-Adjusted Rate (Per 100,000 Pop.) by Race / Ethnicity

Report Area	Non-Hispanic White	Non-Hispanic Black
Richmond County, GA	43.33	54.1
Georgia	40.61	53.28
United States	35.7	51.2



Data Source: Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2012-16.

Cancer

According to Healthy People 2020, the target is to reduce the overall cancer death rate to 161.4 deaths per 100,000 population. Table 7.42 shows a steady decrease from 2003 to 2014. Data was only available for state and national level, so comparison between the county level could not be made. Overall cancer deaths have decreased in Georgia by 3% from 167.6 in 2013 to 163 in 2015.

Table 7.42 Cancer Mortality, Age-Adjusted Rate (Per 100,000 Pop.) by Year, 2003 through 2014

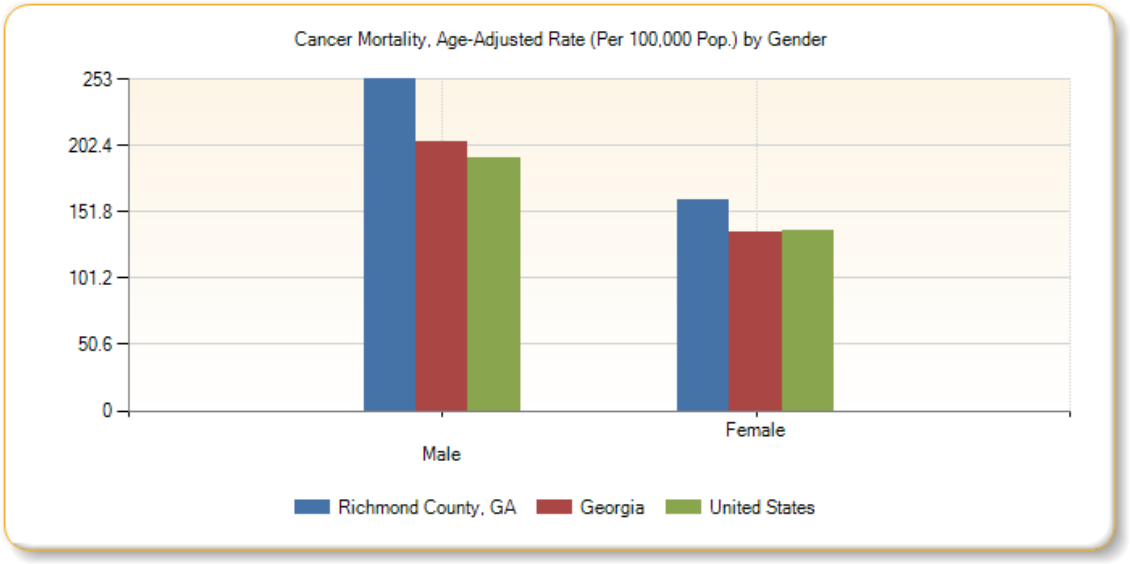
Report Area	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Georgia	196.3	195.5	189.9	184	185.5	175.1	175.6	174.8	170.3	169	167.6	165.5
United States	190.9	186.8	185.1	181.8	179.3	176.4	173.5	172.8	169	166.5	163.2	161.2

Data Source: Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2012-16.

Table 7.43 shows a higher cancer mortality rate for male in Richmond County than State and National Rate. Table 7.44 shows that overall black residence mortality rates were more significant at the county level.

Table 7.43 Cancer Mortality, Age-Adjusted Rate (Per 100,000 Pop.) by Gender

Report Area	Male	Female
Richmond County, GA	**252.81**	160.94
Georgia	205.28	136.76
United States	192.58	137.85



Data Source: Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2012-16.

Table 7.44 Cancer Mortality, Age-Adjusted Rate (Per 100,000 Pop.) by Race / Ethnicity

Report Area	Non-Hispanic White	Non-Hispanic Black
Richmond County, GA	210.13	**196.51**
Georgia	166.75	181.62
United States	165.71	190.01

Data Source: Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2012-16. Source geography: County

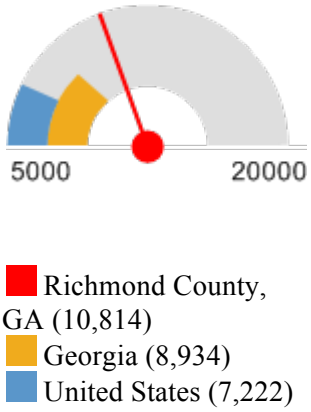
Premature Death

Table 7.45 reports Years of Potential Life Lost (YPLL) before age 75 per 100,000 population for all causes of death, age-adjusted to the 2000 standard. YPLL measures premature death and is calculated by subtracting the age of death from the 75-year benchmark. This indicator is relevant because a measure of premature death can provide a unique and comprehensive look at overall health status (Community Commons, 2016).

Table 7.45 Years of Potential Life Lost, Rate Per 100,000 Population

Report Area	Total Population	Total Premature Death, 2014-2016	Total Years of Potential Life Lost, 2014-2016 Average	Years of Potential Life Lost, Rate per 100,000 Population
Richmond County, GA	43,923	3,405	4,750	10,814
Georgia	29,011,107	125,636	2,591,995	8,934
United States	896,379,917	3,642,755	64,739,406	7,222

Data Source: University of Wisconsin Population Health Institute, County Health Rankings. 2014-16.



Public Health Implications

The annual medical costs associated with obesity have been estimated for 21 percent of all medical spending (FRAC, 2018). High rates of chronic illnesses, which in many cases are preventable, are among the biggest drivers of healthcare costs and reduce worker productivity. A study by the Urban Institute found set for preventable diseases (diabetes, heart disease, high blood pressure, stroke – many of which are often related to obesity) cost the healthcare system $23.9 billion annually. Based on current trends, by 2050, this is expected to double to $50 billion a year (Waidmann, 2018).

One observation that can be made from the data is that heart disease, diabetes and cancer combined together account for a significant amount of deaths among African Americans in Richmond County. This is most concerning when compared to state and national rates. Given that obesity and physical inactivity rates are high and access to exercise facilities is limited, has resulted in many chronic diseases. Further emphasis is worth mentioning regarding the prevalence of diabetes, high blood pressure, and high cholesterol in Richmond county. The most concerning data is the percentage of adult obesity in Richmond County for African Americans when compared to state and national rates. Overall the county ranks poor in many indicators when compared to state (Table 7.46).

Table 7.46 Comparison of Health Outcomes for Georgia State and Richmond County

Health Outcomes	Georgia	Richmond County, GA
Premature Death	7,500	10,800
Poor or fair health	19%	22%
Poor physical health days	3.8	4.4
Poor mental health days	3.8	4.0
Low birthweight	10%	11%
Adult Smoking	18%	21%
Adult Obesity	30%	34%
Food environment index	5.8	4.9
Physical inactivity	24%	27%
Access to exercise opportunities	77%	71%
Excessive drinking	15%	15%
Sexually transmitted disease	570.8	820.9
Uninsured	16%	14%
Primary Care Physicians	1520:1	1060:1
Preventable hospital stays	50	43
Diabetes Monitoring	85%	77%
Mammography Screening	62%	53%

Data Source: http://www.countyhealthrankings.org/app/georgia/2018/compare/snapshot?counties=13_245

The data presented in this section suggest that there may disparities in overall health for African Americans due to lack of preventive health services, access to healthy food, follow-up care and health education and information.

Chapter 8: Health Care System

Findings

Healthcare Facilities & Providers

Richmond County supports a rich diversity of choices for Health Care. There are several major-medical facilities in Augusta and surrounding areas (Augusta, 2018).

- Dwight David Eisenhower Army Medical Center
- Augusta University Medical Center
- Doctors Hospital
- University Hospital
- University Hospital Summerville
- Charlie Norwood VA Medical Center
- Walton Rehabilitation Hospital

Dwight David Eisenhower Army Medical Center

Figure 8.1

Data Source: http://eisenhower.amedd.army.mil/SitePages/Home.aspx

Dwight David Eisenhower Army Medical Center (EAMC) traces its roots to World War II when it was the Camp Gordon Station Hospital built in 1941. It is a 300-bed medical treatment facility located in Fort Gordon, GA located near Augusta, GA. Primarily used for active-duty personnel

and beneficiaries for health care (EAMC, 2018). It is also a training hospital for military doctors, and partners with the Medical College of Georgia and Augusta Veterans Affairs Medical Center in training programs and patient care. EAMC's Cardiothoracic Surgery Clinic does more heart surgeries than any medical facility in the Department of Defense. A wide range of cardiac, thoracic, vascular services, and minimally invasive techniques are used to address cardiothoracic issues (EAMC, 2018).

United Health Care System

University Health Care System has grown into one of the largest, most comprehensive healthcare providers in Georgia. The not-for-profit University provides skilled care through inpatient care at two hospitals, three extended care nursing facilities, home health and prompt care facilities, rehabilitative care programs and more (Universityhealth, 2018).

Augusta University Hospital

The university hospital is a 612-bed hospital which offers specialty centers, including Breast Health Center, Georgia Heart Institute, Women's Center and Cancer Center. More than 21,000 patients are admitted to each year, and 10,000 are observed on a 23-hour outpatient basis (Remax, 2018).

University Hospital Summerville

University Hospital Summerville is a tertiary care facility located in Augusta, GA. As part of the University Health Care System, the hospital has approximately 370 employees and is known for its comprehensive diagnostic services, including cardia catheterization, magnetic resonance imaging, and osteoporosis treatment (Wrdw, 2017).

Doctors Hospital

Figure 8.2

Data Source: https://www.premierparking.com/why-premier/doctorshospital/

Doctors Hospital is a 350-bed full-service tertiary care center located in Augusta, GA. Joseph M. Still Burn Center is the largest medical burn facility in the U.S. and is part of the Doctors Hospital campus which serves as the primary burn care center for Southeastern United States (Doctors Hospital, 2018). The 70-bed units sees admission of more than 3,000 inpatient admissions annually (Wikipedia, 2018).

Charlie Norwood VA Medical Center

Figure 8.3

Data Source: https://www.augusta.edu/research/explore/human-research-program/irboffice/va/index.php

Charlie Norwood VA Medical Center offers a variety of health services to meet the needs of nation's Veterans (Augusta VA, 2018). The Medical Center is a 470-bed tertiary care teaching hospital serving more than 45,524 veterans with a workforce of 2,446 employees (Wrdw, 2015).

HealthSouth Walton Rehabilitation Hospital

Figure 8.4

Data Source: http://www.healthsouthwalton.com/

The hospital is a 60-bed inpatient rehabilitation hospital that offers services to enhance the quality of life for people with physical disabilities (HealthSouth, 2018). In addition to caring for

general rehabilitation diagnoses such as amputations, arthritis, orthopedics, HealthSouth Walton Rehabilitation Hospital has specialized inpatient programs for stroke, brain injury, oncology, cardiac and joint replacement (Health South, 2018).

In 2017, the Department of Family Medicine at Augusta University prepared a community resource guide (https://www.augustahealth.org/media/file/ResourceGuide.pdf) for Richmond County and citizens of neighboring counties. Included are available services, urgent care centers, family planning and pregnancy, medical supplies, educational websites and additional community resources.

Clinical Care

A lack of access to care presents barriers to good health. The supply and accessibility of facilities, primary care and physicians, the rate of uninsurance, financial hardship, transportation barriers, cultural competency, and coverage limitations affects access and health status issues (Community Commons, 2016).

Health Care Professional Shortage

Georgia has one of the worst nursing shortages in the country and Augusta has the second biggest shortage in the state behind Atlanta (Wrdw, 2017). According to Health Resources and Services administration, there is a shortage of mental health, dental health and primary care providers in Richmond County, GA. The Health Professional Shortage Area Score (HPSC) developed by the National Health Services Council (NHSC) for health care providers was 17 for Richmond County. The score range from 1 to 26 where the higher score, the greater the priority (HRSA, 2018).

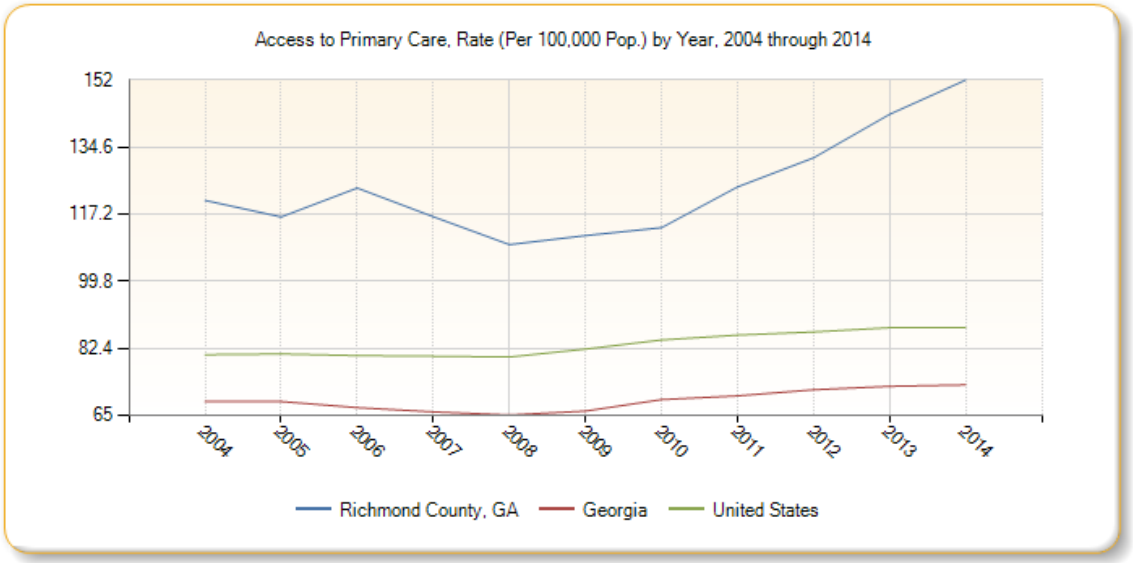
Access to Primary Care

Table 8.5 shows the number of primary care physicians per 100,000 population. Doctors classified as "primary care physicians" by the AMA include: General Family Medicine MDs and DOs, General Practice MDs and DOs, General Internal Medicine MDs and General Pediatrics MDs.

The trend has been a steady increase in the rate from 2004-2014 for Richmond County. However, the county rates are significantly higher when compared to state and national rates.

Table 8.5 Access to Primary Care, Rate (Per 100,000 Pop.) by Year, 2004 through 2014

Report Area	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Richmond County, GA	120.76	116.46	123.97	116.53	109.28	111.63	113.69	124.24	131.8	143.07	151.96
Georgia	68.63	68.61	67.04	65.93	65.13	66.15	69.12	70.1	71.66	72.55	72.93
United States	80.76	80.94	80.54	80.38	80.16	82.22	84.57	85.83	86.66	87.76	87.77



Data Source: US Department of Health Human Services, Health Resources and Services Administration, Area Health Resource File. 2014. Source geography: County

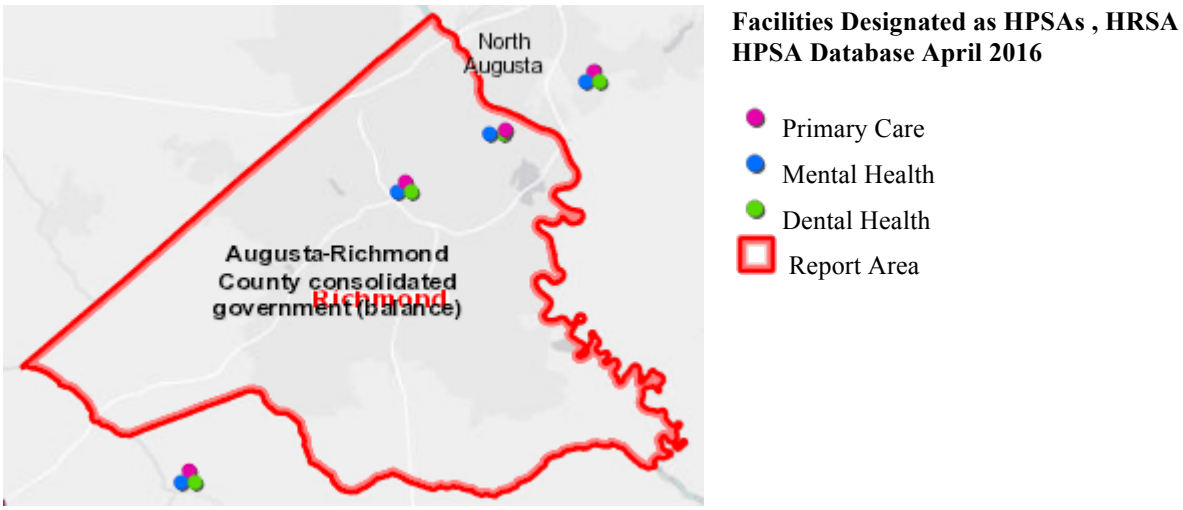
Facilities Designated as Health Professional Shortage Areas

According to US Department of Heath Human Services, Richmond County has a total of 6 "Health Professional Shortage Areas" (HPSAs) facility designations. Table 8.6 shows the number and location of health care facilities designated as HPSAs, defined as having shortages of primary medical care, dental or mental health providers (Community Commons, 2016).

Table 8.6 Number of Location of Health Care Facilities as HPSAs

Report Area	Primary Care Facilities	Mental Health Care Facilities	Dental Health Care Facilities	Total HPSA Facility Designations
Richmond County, GA	2	2	2	6
Georgia	79	72	64	215
United States	3,599	3,171	3,071	9,836

Data Source: US Department of Health Human Services, Health Resources and Services Administration, Health Resources and Services Administration. April 2016. Source geography: Address



Data Source: US Department of Health Human Services, Health Resources and Services Administration, Health Resources and Services Administration. April 2016. Source geography: Address

Federally Qualified Health Centers

Table 8.7 shows Richmond County falls below the national and states rates for the number of Federally Qualified Health Centers (FQHCs) in the community. This indicator is relevant because FQHCs are community assets that provide health care to vulnerable populations (Community Commons, 2016).

Table 8.7 Rate of Federally Qualified Health Centers

Report Area	Total Population	Number of Federally Qualified Health Centers	Rate of Federally Qualified Health Centers per 100,000 Population
Richmond County, GA	200,549	4	**1.99**
Georgia	9,687,653	203	2.1
United States	312,471,327	7,646	2.45

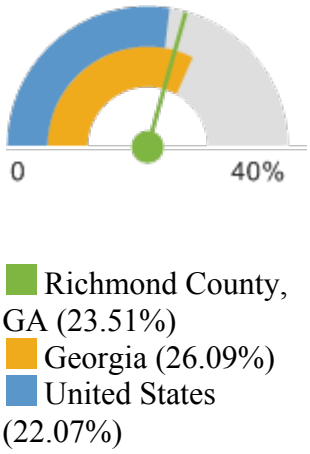
Note: This indicator is compared with the state average.
Data Source: US Department of Health Human Services, Center for Medicare Medicaid Services, Provider of Services File. Dec. 2016.

Lack of a Consistent Source of Primary Care

Table 8.7 shows the percentage of adults aged 18 and older who self-report that they do not have at least one person who they think of as their personal doctor or health care provider. According to Behavioral Risk Factor Surveillance System, Richmond County's percent for adults without any regular doctor was 23.51% less than the state rate of 26.09%. While we do not have the county percent by race, Table 8.8 shows African Americans in Georgia had the 2nd highest percent of adults without a consistent source of primary care (Community Commons, 2016).

Table 8.7 Percent Adults Without Any Regular Doctor

Report Area	Survey Population (Adults Age 18)	Total Adults Without Any Regular Doctor	Percent Adults Without Any Regular Doctor
Richmond County, GA	155,142	36,473	23.51%
Georgia	7,219,015	1,883,447	26.09%
United States	236,884,668	52,290,932	22.07%



Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES. 2011-12. Source geography: County

Table 8.8 Adults Without a Consistent Source of Primary Care, Percent by Race / Ethnicity

Report Area	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic Other Race	Hispanic or Latino
Georgia	20.33%	29.32%	28.69%	54.11%
United States	17.15%	25.28%	25.47%	38.58%

ER Visits by Residence

According to Georgia Department of Health, African Americans had the most ER visits in Richmond County. Table 8.9 shows ER visits for 2010-2016 by race.

Table 8.9 ER Visits by Residence in Richmond County

	2010	2011	2012	2013	2014	2015	2016
White	29,943	29,449	30,214	28,758	28,067	28,691	28,542
Black	71,863	69,256	73,251	73,938	75,901	78,845	81,740
Asian	353	361	396	251	326	344	403
American Indian	36	31	34	53	33	48	51
Native Hawaiian	0	0	0	0	35	37	50
Multiracial	2658	2589	2899	2851	2693	2868	3028

Date Source: Georgia Department of Health. Online Analytical Statistical Information System (OASIS)

Chapter 9: Community Resources

Introduction

This chapter will provide an overview of community resources available to the residents in Richmond County, GA. Community resources are assets that help meet certain needs for those around them. Assets can be people, places and community services which are essential in helping residents diversify their range of outlets of support for healthy eating and active living (Nowak, 2018). This chapter will briefly discuss resources for education and training, health and wellness, cultural, public services, environmental, civic organizations, gathering places such as community centers and churches for those with faith-based needs. Many resources are based in Augusta, GA and serve the county from a centralized structure.

Sources of Information and Methods

Sources of information for this chapter were obtained from Georgia Department of Public Health, Richmond County School System, Augusta Government, and Visit Augusta websites. A full list of resources is provided at the end of this chapter.

Findings

Public Schools

The Richmond County School System (RCSS) main office, located in historic Augusta, Georgia, is home to eight school districts with 56 public schools serving over 32,000, making it the 10th largest school district in Georgia (RCBOE, 2018). In addition, there are three alternative schools which serve students through a non-traditional virtual school. Table 9.1 summarizes schools by district. With over 4,000 employees, RCSS is the third largest employer

in Augusta-Richmond County. RCSS boasts having the oldest public school in the south and 5th oldest public high school in America. Several RCSS schools are on the National Register of Historic places.

According to SchoolDigger.com, a useful school search and comparison site which contains detailed profile for over 136,000 schools in every state in the US, Richmond County public schools have performed very poorly over the years and were ranked 162nd of 179 Georgia districts in 2017. Richmond County School District's performance was worse than 96 percent of the state's other school districts in 2016, according to the Governor's Office of Student Achievement. According to the governor's office of student achievement, Richmond County public school's consist of majority black students (Figure 9.2) and graduation rate is 78.5% and only 47.4% of graduates are college ready (Figure 9.3). Over the past 15 years, the perception of Richmond County has a poor school system and suffers from high crime has also negatively affected its population (Eidson, 2017).

Table 9.1 Richmond County Schools by District

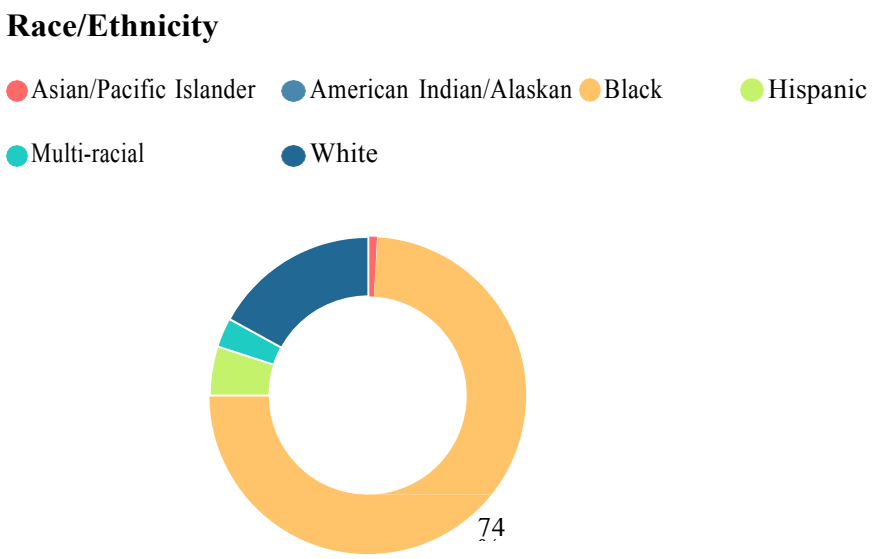
District 1	District 2	District 3
Academy of Richmond County High Craig-Houghton Elementary John S. Davidson Fine Arts Magnet W. S. Hornsby Elementary W. S. Hornsby Middle A. R. Johnson Hlth. Prof., Sci. & Eng. Magnet Lamar-Milledge Elementary Lucy C. Laney High Monte Sano Elementary	George P. Butler High Jenkins/White Elementary Murphey Middle T. W. Josey High C. T. Walker Traditional Magnet Wilkinson Gardens Elementary	S. D. Copeland Elementary Lake Forest Hills Elementary Rupert Langford Middle Sue Reynolds Elementary
District 4	**District 5**	**District 6**

Barton Chapel Elementary Deer Chase Elementary Diamond Lakes Elementary Freedom Park K-8 Jamestown Elementary Morgan Road Middle Tobacco Road Elementary Windsor Spring Elementary	Bayvale Elementary Glenn Hills Elementary Glenn Hills Middle Glenn Hills High Meadowbrook Elementary Terrace Manor Elementary	Cross Creek High Gracewood Elementary A. Dorothy Hains Elementary Pine Hill Middle Richmond County Technical Career Magnet Roy E. Rollins Elementary Southside Elementary
District 7	**District 8**	**Special Schools**
T. Harry Garrett Elementary A. Brian Merry Elementary John M. Tutt Middle Warren Road Elementary Westside High	Blythe Elementary Goshen Elementary Hephzibah Elementary Hephzibah High Hephzibah Middle McBean Elementary Spirit Creek Middle Willis Foreman Elementary	Alternative Education Center Performance Learning Center Sand Hills Center

Data Source: Richmond County School System. Retrieved from https://www.rcboe.org/domain/4592

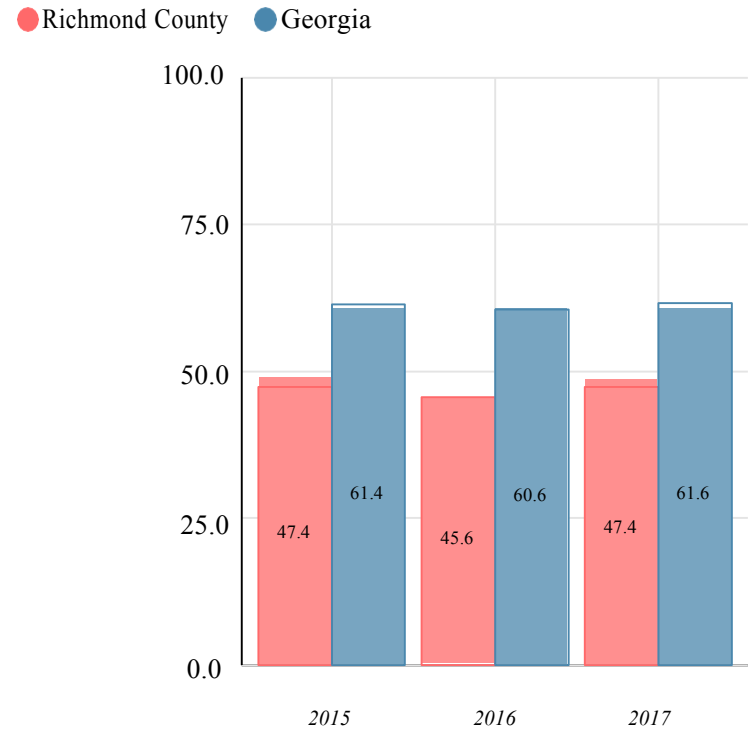
Although steeped in history, Richmond County strives to move education forward and to provide students with opportunities to succeed (RCBOE, 2018). One of the programs that has already enjoyed an extremely successful first full year is the RPM (Reaching Potential Through Manufacturing) program. It is a partnership between the Richmond County School System and Textron Specialized Vehicles (E-Z-GO) that is designed to provide students with classroom instruction, on-the-job training, life skills, mentoring and employment opportunities. The RPM program helps students stay in school, graduate and go on to become successful, productive members of the workforce (Eidson, 2017).

Figure 9.2 Richmond County School System by Race/Ethnicity



Data Source: https://schoolgrades.georgia.gov/richmond-county

Figure 9.3 Percent of high school graduates who are college ready



Data Source: https://schoolgrades.georgia.gov/richmond-county

Private Schools

According to Private School Review, there are 15 private schools in Richmond County, GA, serving 3,038 students. There is a total of 5 private high schools, 14 elementary schools, and 6 private preschools. Minority enrollment is 24% of the student body, and the student: teacher ratio is 9:1. 93% of schools are religiously affiliated (Private School Review, 2018).

Colleges and Universities

There are 6 colleges within Richmond County (College Simply, 2018). They are as follows.

(1.) Augusta Technical College

(2.) Virginia College Augusta

(3.) Augusta State University

(4.) Miller Motte Technical College

(5.) Paine College

(6.) University of Phoenix

Public Health Resources

The Georgia Department of Public Health (DPH) is the lead agency in preventing disease, injury and disability; promoting health and well-being; and preparing for and responding to disasters from a health perspective (GDPH, 2018). At the state level, DPH functions through numerous divisions, sections, programs and offices. Locally, DPH funds and collaborates with Georgia's 159 county health departments and 18 public health districts. DPH's main functions include: Health Promotion and Disease Prevention, Maternal and Child Health, Infectious Disease and Immunization, Environmental Health, Epidemiology, Emergency Preparedness and Response, Emergency Medical Services, Pharmacy, Nursing, Volunteer Health Care, the Office of Health Equity, Vital Records, and the State Public Health Laboratory.

The Georgia Department of Public Health serves groups of counties that form public health districts. Richmond County falls into the East Central Health District (Figure 9.4), which also includes Central Savannah River Area (CSRA) and surrounding 12 counties. Richmond County Health department offers a wide range of health care services (such as family planning, cancer screening, immunizations, dental care, child health, and hypertension management) to those with and without health insurance. They also provide many non-clinical services like birth and death certificates, inspection of restaurants and ServSafe food service training (ECHD, 2018).

Figure 9.4 Map of the Public Health District

Data Source: *https://georgiainfo.galileo.usg.edu/topics/maps/article/political/physical-health-districts-map*

Social Welfare and Advocacy Resources

There are 12 free and income based clinics, public health department clinics, and community health centers in or around Augusta, Georgia. They provide a wide array of services ranging from free to sliding scale services (FreeClinics, 2018). Additionally, there are 24 community clinics that provide basic healthcare including nutrition assistance, diagnosis, physical examinations and treatment of common ailments for low income people, people who are uninsured and population that are economically challenged. Services are generally provided on an ability-to-pay basis.

The Obesity Action Coalition (OAC) is a more than 58,000 member-strong 501(c)(3) National non-profit organization dedicated to giving a voice to the individual affected by the disease of obesity and helping individuals along their journey toward better health through education, advocacy and support. They focus to raise awareness and improve access to the prevention and treatment of obesity, provide evidence-based education on obesity and its treatments, fight to eliminate weight bias and discrimination, elevate the conversation of weight and its impact on health and offer a community of support for the individual affected (Obesity Action, 2018).

Resources specifically aimed toward obesity

Most young children spend time in schools, making the Early Care and Education (ECE) setting one of the best to reach young children for with obesity prevention efforts (CDC, 2018). The Physical Activity and Nutrition Toolkit for Georgia K-12 Public Schools and School Districts was created by the Georgia Department of Public Health and with support from Centers for Disease Control and Prevention (CDC). Under the leadership of Governor Nathan Deal,

Georgia SHAPE is a network of partners and agencies committed to improving the health of state's young people by offering assistance and opportunity to achieve a greater level of overall fitness (GDPH, 2018).

Cultural Resources

Augusta-Richmond County is home to a wide range of cultural resources. Historic buildings, sites and districts represent many aspects of Augusta's history and include the central business district, industrial facilities, urban neighborhoods, African-American resources, institutional buildings, and rural resources. They reflect the significant contributions made by statesmen, businessmen, religious leaders, ethnic groups, racial minorities, and ordinary citizens to the history and development of the community.

Figure 9.4 Augusta Common

Source: http://www.augustaga.gov/1482/Augusta-Common

There are currently eight (8) National Register Historic Districts in Augusta, encompassing approximately 6,200 properties. Thirty-four (34) properties are listed individually on the National Register. These districts and properties represent many aspects of Augusta's history and include the central business district, industrial facilities, urban neighborhoods, institutional buildings, and rural resources (VisitAugusta, 2018).

There are several museums in Augusta as it's the second oldest city in Georgia.

- Augusta Museum of History: Featured are a number of permanent exhibitions, including the award-winning Augusta's Story - a 12,000-year journey through local history
- Augusta Canal Discovery Center: Developed by the Augusta Canal Authority, the Discovery Center uses film, models and interactive exhibits to illustrate the rich history of Augusta waterways.
- Morris Museum of Art, which features nearly 5,000 pieces of art by Southern artists.
- Gertrude Herbert Institute of Art: contemporary gallery and visual arts school (VisitAugusta, 2018).

Major attractions include: Augusta Riverwalk, Historic Trolley Tour of Augusta, Augusta Canal and Imperial Theatre. Richmond County consist of 6 libraries which serve over half a million items. All of the libraries are equipped with computer access.

Recreational Resources

Augusta's public outdoor spaces and buildings are under the purview of the Augusta-Richmond County Recreation, Parks and Facilities Division. The division maintains more than 70 regional, neighborhood and pocket parks, as well as the grounds at recreation centers within Augusta. Facilities available include athletic fields, basketball, volleyball and tennis courts, playgrounds, exercise/walking trails, boating and fishing areas, picnic shelters, disc golf courses, greenspaces and a dog park. Additionally, the Division maintains the Riverwalk and Augusta Commons areas, and provides support for the many special events held annually at these and other park and plaza locations (Augusta, 2018). The Division also maintains three cemeteries (Magnolia, Cedar Grove and Westview) as well as landscaped medians in a variety of locations (Augusta, 2018).

Service and Religious Organizations

Richmond County citizens have made religious worship a high priority. The rich religious history of architecture of historic buildings illustrate the importance of religion in the community. The religious profile in Richmond County has a wide spectrum with Southern Baptist making up the majority followed by Catholics, Methodists, and Non-denominational (City-Data, 2018).

Richmond County has over 200 places of worship, ministries and faith-based help organizations that provide residents with material, counseling, assistance and training. Majority of the population affiliate with Christianity while there is a very small population affiliated with Eastern religion (Remax, 2018).

Local Foundations, Grantors, & Philanthropy

The Community Foundation for the Central Savannah River Area is Richmond County's largest community foundation with a total giving of $5.88 million and total assets of $68.26 million. The foundation encourages and promotes philanthropy through education, responsible management of charitable contributions and the distribution of these funds, and to provide the conduit for this to be accomplished by individuals, companies, private foundations and organizations (Community Foundation, 2018).

Augusta University collaborates with three partner foundations to receive and manage donations to the university and health system: the Augusta University Foundation, Georgia Health Sciences Foundation, and the Medical College of Georgia Foundation (Augusta University, 2018).

Civic Organizations

Richmond County has many local service clubs and non-profit organizations that operate and support educational, charitable purposes including promotion of community welfare and are devoted to social welfare purpose. Some notable organizations are American Red Cross, YMCA, American Legion, Ronald McDonald House of Augusta, Salvation Army and Habitat for Humanity.

Environmental Resources

There are a multitude of organizations and agencies bringing together their local and regional business communities to support sustainability. At the National level are noteworthy organizations such as The Green Chamber of Commerce and US Green Chamber of Commerce. The goal is to facilitate and support sustainable business which spurs innovation, job creation energy efficiency and an overall brighter economic future (US Green Chamber of Commerce, 2018). The Green Chamber of the South looks to bridge rural and urban interests, encourage entrepreneurship, and build trust in sustainable natural resource management and utilization in the Southeast (Green Chamber, 2018).

In Richmond County, there are several organizations and agencies whose focus is to serve and connect the people in the areas of clean air, green building, energy conversation, and sustainably-grown local food (Augusta, 2018). The Natural Resources Conservation Service (NRCS) in Richmond County provides products and services that enable people to be good stewards of the Nation's soil, water, and related natural resources on non-Federal lands. With their help, people are better able to conserve, maintain, or improve their natural resources (Augusta, 2018).

Notably, Richmond County Environmental Health Department provides primary prevention through a combination of surveillance, education, enforcement, and assessment programs designed to identify, prevent and abate the environmental conditions that adversely impact human health (ESHD, 2018).

Commerce/Business Organization

The Augusta Economic Development Authority of Richmond County (DARC) is the single point of contact for economic development projects in Augusta-Richmond County. DARC is responsible for the recruitment of new businesses in the areas of industrial, manufacturing, distribution, corporate, and regional headquarters, customer service centers, and assistance with other major economic development projects in the county (Augusta, 2018).

The Augusta Metro Chamber of Commerce is the largest business membership organization and serves as the central hub is what's happening in Richmond County (AugustaMetroChamber, 2018). The largest employers in terms of employment are in the Augusta area are displayed in the table below. U.S. Army Cyber Center of Excellence & For Gordon is the largest local employer, offering approximately 25,264 jobs to the local workforce. The education and healthcare sectors also employ a great number of workers (Augusta Economic Development, 2017).

Table 9.5: Major Employers in Richmond County

MAJOR EMPLOYERS	PRODUCT/SERVICE	EMPLOYEES
U.S. Army Cyber Center of Excellence & Fort Gordon	Military	25,264*
Augusta University	Education	4,656
Richmond County School System	Education	4,418
NSA Augusta	Government	4,000
University Hospital	Health Care	3,200
Augusta University Hospitals	Health Care	3,054
Augusta-Richmond County	Municipal Services	2,612
VA Medical Centers	Health Care	2,082
East Central Regional Hospital	Health Care	1,488
Doctors Hospital	Health Care	1,210

Data Source: Augusta Economic Development Authority http://augustaeda.org/business-industry-largest-employer;
**Military and Civlian*

There are many organizations in Richmond County working to provide increased access to health-promoting public services for residents. Assistance come in many forms, ranging from transportation agencies to health care providers (Community Action Plan, 2015). Community resources are critical for residents to have sufficient healthcare access, education, and employment. A community's success depends on affordable cost of living, sound primary and secondary education, safe and secure living environment with parks and amenities, healthcare resources, faith based organizations and charitable organization. In Richmond County, there are many health services that work closely with the residents to provide material, counseling, assistance and training. This is very important as they're an integral part of the community.

The richness of the region's resources is apparent from the number of cultural resources, recreation resources, service and religious organizations. Utilizing and maximizing these

resources will help Richmond County's resident to develop healthy behaviors, promote healthy families, seek support, improve literacy, promote health education, and improve behavior and social skills.

Part 3: Multi-Level Intervention

Chapter 10: Intervention

Introduction

The proposed multi-level intervention incorporates several theories of health behavior to reduce obesity in the African American community in Richmond County and address the Healthy People 2020 objective "Nutrition, Physical Activity, and Obesity" (Healthy People 2020, 2016). Overweight youth are at risk of being obese during adulthood and are likely to experience obesity-related chronic illness. The increase in obesity in Richmond County is caused by many factors, including increased access to foods that are high in fats, sugar and calories; growth in the prevalence of sedentary lifestyle, and increased eating outside the home. According to William Dietz, MD, PHD, Chair of the Sumner M. Redstone Global Center for Prevention and Wellness at the Milken Institute School of Public Health at the George Washington University, the prevalence of obesity roughly doubles between preadolescence and young adults. Because excessive weight gain, defined as approximately 45 pounds or more, occurs more frequently during young adulthood, prevention of obesity in this age group is critical in reversing the obesity epidemic in Richmond County. No other age period is associated with as many life transitions that influence the development of obesity and excessive weight gain as in young adulthood (GW, 2017).

For the purpose of this intervention, the strategies suggested are for African American teenagers of all genders aged between 13 to 19. I propose a two-fold approach that simultaneously integrates individual-level and structural obesity prevention initiatives. The

Health Belief Model (HBM) and Social Ecological Model were used to understand attitudes and beliefs that predict preventive health behavior. HBM focuses on the individual's motivation to undertake a health behavior and how to alter or shift those attitudes and beliefs to influence positive behavior change (Romano & Scott, 2014). The Social Ecological Model recognizes that individual-level behavior is influenced by social, environmental, and personal attributes. The model shows how various factors such as social and cultural norms influence food and beverage intake, physical activity patterns, and ultimately health outcomes (Dietary Guidelines for Americans, 2015-2020).

Healthy People 2020 establishes several targets to improve nutrition, increase physical activity and reduce obesity in adults by 2020. In 2005–2008, 0.76 cup equivalents of total vegetables per 1,000 calories was the mean daily intake of persons aged 2 years and over (age adjusted). In 2008, 18.2% of persons aged 18 years and over met the current federal physical activity guidelines (age adjusted). HP2020 target is 20.1%, a 10% improvement over the baseline. In 2005-2008, the rate of obesity was 33.9% among adults aged 20 years and over and the rate of obesity was 16.1% among children and adolescents aged 2–19 years. The HP2020 target is 30.5% for adults and 14.5% for children and adolescents, a 10% improvement over the baseline for age sets (Healthy People 2020, 2016).

This intervention is also aligned with the statewide, governor-supported Georgia Student Health and Physical Education (SHAPE) initiative for obesity prevention from birth through eighteen. The intervention involves coordinated partnership efforts with government agencies, private foundations, healthcare providers, professional athletic teams, and private companies (Astho, 2012). The multi-level interventions are discussed through the lens of the five levels of

influence within the socio-ecological model: individual, interpersonal, community, organization and policy.

Primary Behaviors and Determinants

The interventions proposed are intended to encourage the following primary behavior changes among the targeted population:

- Reduce consumption of sugar-sweetened beverages (e.g. sodas, alcohol)
- Reduce poor eating habits – including diets with a high-energy density (e.g. fries, processed meats, sweets, desserts)
- Increase physical activity and reduce high levels of sedentary behavior (e.g. television watching, playing video games, sitting for extended amount of time)
- Increase involvement in community-based recreational activities
- Improve the quality of physical environment (e.g. safety) and increase access (e.g. access to parks, sidewalks, and healthy foods)
- Increase health education and promotion programs that increase awareness of proper nutrition (e.g. dietary knowledge), healthy lifestyle (e.g. physical activity knowledge, attitudes, and beliefs) and obesity risks (Rennie et al., 2005)

See Table 10.1 for the key determinants that influence the risk and protective factors that affect the behavior changes.

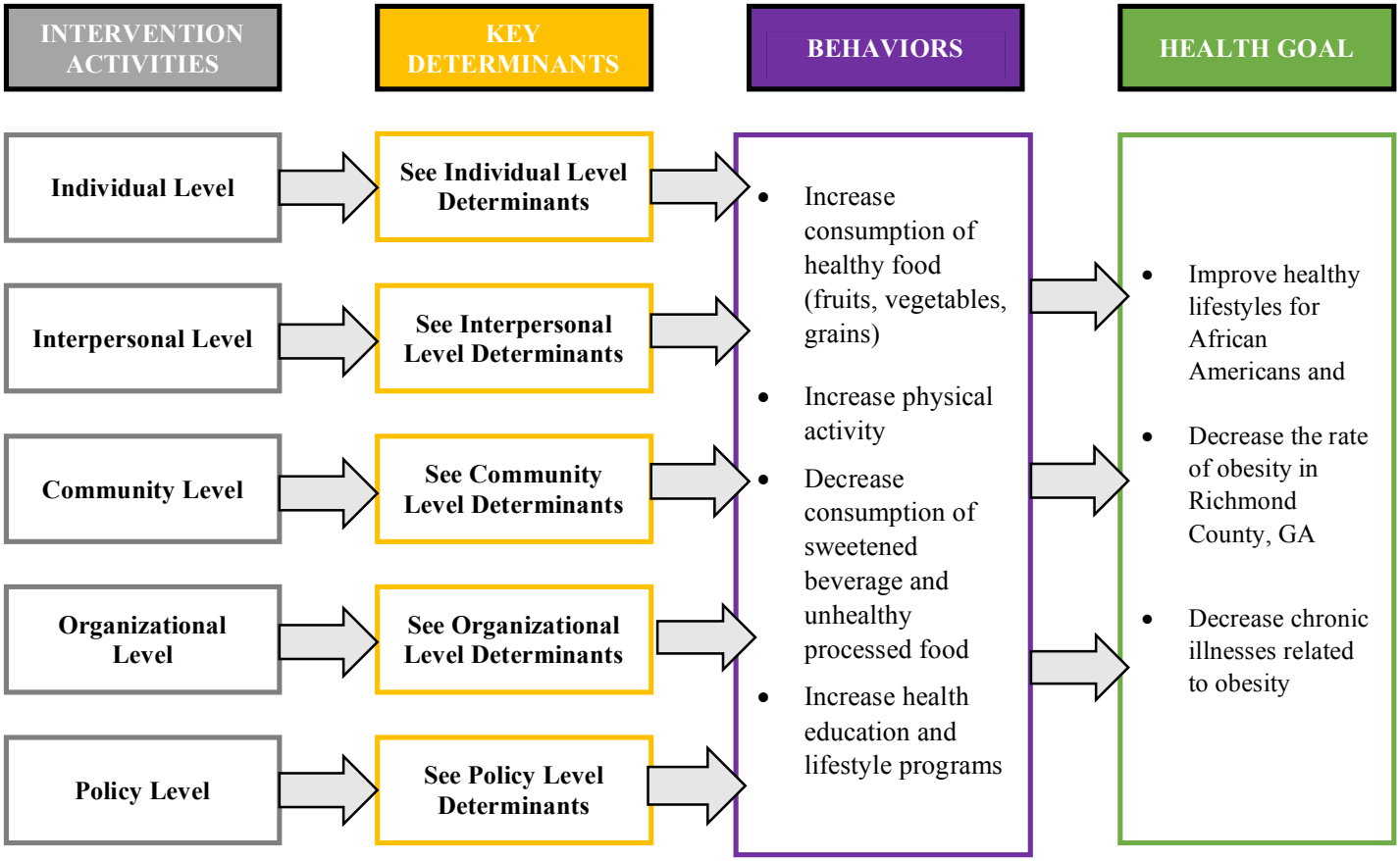
Table 10.1 Key Goals/Processes to Reduce Obesity

INTERVENTION LEVEL	KEY DETERIMINANTS
INDIVIDUAL AND INTERPERSONAL	• Improve attitudes about obesity • Improve access to healthy food • Reduce consumption of sugary beverages • Increase social support • Reinforce knowledge about consequences of being obese
COMMUNITY	• Improve access to parks, sidewalks, gyms • Provide city-owned land and support for community gardens • Cultivate school based health programs • Increase involvement in extra-curricular activities • Help with behavior and lifestyle choices • Improve access to health services that encourage nutrition • Promote awareness of obesity health related illnesses • Access to qualified health care professionals
ORGANIZATIONAL	• Improve collaboration with local community organizations (e.g. the Boys and Girls Club of Augusta, YMCA, Eastview Community Center, Jamestown Community Center, Sand Hills Community Center) • Increase involvement in physical activities within the county • Improve awareness programs about obesity with campaign • Build-up training for healthcare staff and advocates • Build on existing school based interventions (e.g. classroom lessons of correct nutrition and importance of increasing physical activity, reducing carbonated drink consumption, and increasing knowledge of obesity related diseases) • Increase after school programs (e.g. dance, educational games) • Improve access to individual counseling in school (e.g. nutritionist)

POLICY	• Provide funding for obesity intervention programs • Improve access to physical activity and nutrition education • Improve understanding of health disparities and other contributing factors that influence obesity • Develop targeted interventions • Enhanced understanding of strategies that have resulted in reduced obesity rates in similar communities

Data Source: Sartorius, 2015. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4463861/

Figure 10.1 Multi-Level Intervention to Address Obesity among African-Americans aged 13-19 years in Richmond County, GA



Social-Ecological Model (SEM)

The root cause of obesity among African Americans reach far beyond issues of access to health care services and health care inequities (Robinson, 2008). Social-cultural beliefs and norms play a key role in preventive health behaviors, health outcomes, health care utilization, perceptions of health and behavioral responses to obesity (Russell & Jewell, 1992). How do we design intervention programs that adequately reach and effectively impact African American teenagers in Richmond County?

The Social-Ecological Model (SEM) is an approach that offers a more comprehensive approach that integrates multiple levels of influence to impact health behavior and health outcomes (Robinson, 2008). The SEM provides a useful framework for achieving a better understanding of the multiple factors and barriers that impact dietary behaviors and therefore can provide guidance for developing culturally appropriate and intervention strategies for African Americans in Richmond County (Robinson, 2008). The most effective approach leading to healthy behaviors is integrating efforts at all levels—individual (taste preferences, habits, and nutritional knowledge and skills), interpersonal (processes whereby culture, social traditions, and role expectations impact eating practices), organizational, community, and policy (environmental factors that affect food access and availability) (Robinson, 2008).

Health Belief Model (HBM)

The Health Belief Model (HBM) model focuses on individual perceptions of the threat posed by a health problem (obesity), the benefits of avoiding the threat, and factors influencing the decision to act. HBM suggests that changes in health behaviors are predicted by perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy. Perceived susceptibility is a belief about the likelihood of getting a disease or condition.

Perceived severity is a belief about the seriousness of the condition. Perceived threat is a sum of severity and susceptibility. Perceived benefit is a belief that a certain action will reduce risk of impact and perceived barriers is a belief about costs of the action. Cue to action is a motive to readiness and self-efficacy is one's confidence in the ability to successfully perform an action (Park, 2011). Applied in a systematic way, the full set of model components has the potential to provide a comprehensive understanding of the influence of social, economic, and environmental factors on health behaviors.

Individual / Interpersonal Level Intervention

One of the overarching goals of Healthy People 2020 is to reduce health disparities, decrease chronic disease risk, and increase rates the prevalence of healthy body weights. Individual behavior change and biology have traditionally been the focus of interventions to address obesity. However, social, economic, and physical factors in the environment can both support and discourage physical activity and healthy eating (Maley, 2012). Health behavior theories suggests that behavioral intentions are shaped by a combination of (1) personal attitudes, (2) perceived social pressures and norms, and (3) the amount of perceived control an individual thinks they have over the desired behavior (Black & Macinko, 2008). In the setting of reducing obesity among teenagers, the health belief model focuses on the following:

- Focusing on individual behavior change
- Reaching people who are interested in changing
- Using an educational approach (Maley, 2012)

It is essential to address cultural factors that mediate health related behaviors. Integrating the Health Belief Model (HBM), the interventions proposed here will focus on individual behavioral change through education, training, and services.

The primary focus of the individual level intervention will be altering teenage attitudes about obesity and increasing access to nutrition and physical activity. Educating and empowering families about practicing healthy eating through skill building in parenting, meal planning and behavioral management is essential. The most imperative setting that influences obesity is the home environment, which represents the first and primary socialization point for healthy eating and adequate physical activity. Most habits are developed at a young age and children are more likely to eat a food when an adult role model eats that food or one similar.

Because of the importance of household level habits, family-based programs should be promoted (McGowan, 2016). One example that has a family focus is the "Parents as Teachers Program," a national parent education program that uses in-home visitation to help families develop the skills needed to promote health and developmental readiness (Foltz, et al., 2012). The Augusta Partnership for Children, Inc. is a tribal organization of "Parents as Teachers Program" in Richmond County, which focuses on raising awareness of obesity. Another example is the "High 5 for Kids Program," which is an obesity intervention program designed for adolescents and has proven to be effective for home based intervention where it teaches families how to ensure a fruit-vegetable environment (Haire-Joshu et al., 2008). Expanding on such family environment interventions is important in Richmond County.

The primary resource within the Health Belief Model is self-efficacy for bringing change. Two approaches to increase behavioral capabilities of adolescents and their parents is through skill-building activities related to nutrition and physical activity behaviors and to improve social support by creating a supportive environment to foster behavior change. Building an internet component into an individual intervention program would likely increase adolescent participation and has shown to be effective at increasing self-efficacy of healthy behaviors. An

internet obesity prevention program for adolescents (Whittmore, et al., 2013) in school could examine health behaviors, BMI, and self-efficacy. The program would be based on Social Learning Theory (Whittmore, et al., 2013) with components of interactive education, and behavior support on healthy eating and activity. Because of the age of participants, it is important to use technology based intervention methods that support self-monitoring among participants undertaking behavior change programs for physical activity and fruit and vegetable consumption.

It is important to introduce nutrition counseling, physical activity and education through health services to teens in schools. Health education can inspire behavior change if the education incorporates the HBM and is tailored to develop and present health information effectively. Individuals will be empowered and more inclined to make healthier decisions, which could extend their lifespan and improve their quality of life (Moore, 2015).

Obesity prevention strategies at the intrapersonal level include:

- Increasing teenager and parent awareness of ways to make healthful foods more available
- Increasing awareness of consequences of unhealthy foods
- Providing education and skill building to improve self-efficacy and behavior change
- Educating mothers on how to increase fruit and vegetable intake for themselves and their children
- Encouraging child feeding strategies that increase fruit and vegetable intake
- Providing education programs on avoiding fast-food restaurants
- Increasing knowledge and attitudes about benefits of fruit and vegetable consumption
- Increasing awareness/knowledge of benefits of physical activity (Banjoff, 2016).

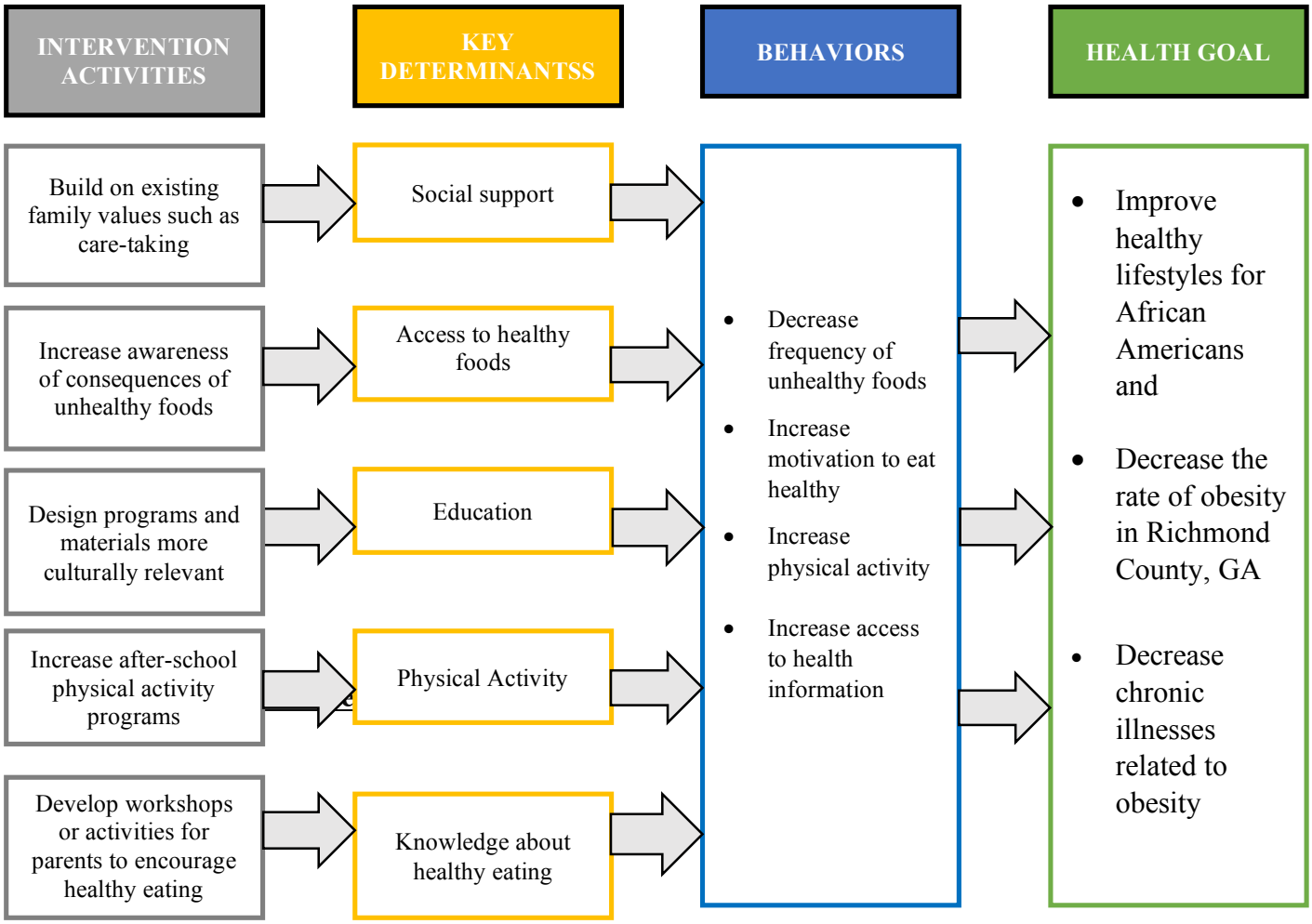
An example of an interpersonal intervention is to develop parent and teenage obesity programs in partnership with Richmond County Health Department. This would be modeled after a similar existing "Chicago Parent Program" (O'Brien et al., 2013) with the goal of helping families shape their eating and activity behaviors. Eating a family meal together has the potential to create a positive model for good nutritional choices. Family food choices that include small changes such as simple food substitutions, more fruits and vegetables and reducing portion size can play an important role in developing healthy habits (Victoria Health Foundation, 2015). Parental and peer-to-peer education programs would be combined with after school activity programs that provide structured time for homework, building social skills, and recreational activity.

The increased risk of obesity and related conditions among African American women or men may be related to long standing cultural perceptions regarding weight in the community. It is likely that these perceptions about ideal body size have had some impact on the prevalence of obesity among young African Americans (Padgett, 2003). A home-based, personalized intervention sponsored by the Richmond County Health department would be effective in promoting weight loss and increasing physical activity for young black women or men. *(Eaton CB et al., 2016).* The home-based program includes telephone counseling, individually tailored print materials, and DVDs in addition to face-to-face meetings with health counselors.

To improve physical activity, support systems such as walking groups, buddy systems, and exercise groups can be beneficial for individuals who are physically inactive or not self-motivated. Such programs sustain social networks and encourage individuals to be physical active. One approach to encourage activity is informational approaches, which focus on motivating and enabling young people to change behavior and to maintain change over time. For

example, inexpensive prompts such as small signs near stairways and escalators are effective in increasing the use of stairs. This intervention would be appropriate in places like malls or shopping centers. Initiatives that integrate strategies to influence individual knowledge, attitudes and behaviors can be effective if they are part of a broader strategy (Victoria Health Foundation, 2015).

Figure 10.2: Individual/Interpersonal Level BDI – Obesity Prevention Among African Americans aged 13-19 years in Richmond County, GA



Community Level Intervention

The socio-ecological model recognizes the interwoven relationship that exists between individuals and their environment. While individuals are responsible for instituting and maintaining the lifestyle changes necessary to reduce risk and improve health, individual behavior is determined to a large extent by social environment (e.g., community norms and values, regulations, and policies) (Naacho, 2018). Factors such as poverty, inadequate housing, low educational attainment, disability status, and lack of access to quality healthcare can influence access to healthy food and safe physical activity opportunities within communities (Naccho, 2018). As these barriers are lowered or removed, behavior change becomes achievable and sustainable within the community.

Using the socio-ecological model as a framework, a comprehensive prevention-oriented approach is required to address obesity among African American teenagers in Richmond County at the community level. A successful strategy would need to include broad-based community partnerships, high-level leadership, and outcome driven interventions that address social determinants of health. (Naccho, 2018).

Obesity prevention strategies at the community level include:

1. Creating a community plan that increases the awareness of obesity within Richmond County
    a. The plan would utilize an ecological framework to define specific action steps for local government; health care systems and providers; schools; educators; community, faith, and youth organizations; the media and marketing sector; and employers (Maley, 2012)

2. Increasing parent's participation in the healthcare of their adolescents and enhancing appropriate monitoring and supervision of adolescents (Banjoff, 2016)
3. Promoting walking and biking (e.g. safe routes to school that encourage walking to school)
4. Providing city-owned land and support for community gardens and activities (Naacho, 2018)
5. Forming partnerships with local restaurants to develop and promote healthy menu items
6. Improving access to athletic fields for community use after school (National League of Cities, 2010)
7. Increasing affordable exercise and physical activity programs (Naacho, 2018)

Community level interventions focus on large population segments within the community and are important for creating an enabling environment for behavior change. Community-wide interventions, which focus on cultivating a physical and social environment that is conducive to the acquisition and maintenance of healthful lifestyle practices, are needed to increase opportunities for learning and practicing healthful habits.

Examples of socio-environmental changes are improving access to outdoor recreation facilities, enhancing infrastructure for bicycling and walking, locating schools within easy walking distance, improving public transportation, and zoning for mix land use (Foltz et al., 2012). The community's built environment can influence residents' access to healthy affordable foods and beverages, which can be increased through supportive changes in food retail venues such as farmers' markets, community gardens, and convenience and grocery stores (Foltz et al, 2012). The Institute of Medicine reports broad recommendations for communities and their partners, including public health agencies, schools, and community organizations to encourage

healthy eating and physical activity. Integrating these strategies into a comprehensive strategy will be key to change.

Faith Based Organization

From a socioecological perspective, churches and other religious organizations can influence members' behaviors at multiple levels of change. According to Gallop press release in 2014, more 39 percent residents in Georgia attended church on Sundays. Black attendance at religious services was 47% and eleven of the top 12 states for attendance at a religious service were in the South (Carlson, 2015). For young people, the weekly attendance at religious services was 28% according to Pew Research Center. Evidence indicates that for African Americans, health interventions that incorporate spiritual and cultural contextualization have been effective. Church-based health promotion interventions can reach broad populations and have great potential for reducing health disparities (Campbell et al., 2007).

Obesity Prevention Strategies at Faith based centers that can be effective:

1. Healthy cooking and exercising: This program would offer classes that teach healthy cooking and exercise skills. Participants learn how eating a healthy diet and exercising will benefit them. Health advisors would set incremental goals (self-efficacy). Respected congregation members would serve as role models. Participants would receive T-shirts, recipe books, other incentives, and are taught to reward themselves by making time to relax. As church members learn about healthy lifestyles, they bring healthier foods to church, reinforcing their healthy habits.

2. Nutrition education: Young people can be empowered to adopt positive lifestyle habits through nutrition education. Topics such as serving sizes, reading labels, eating healthy on a low

budget, healthy eating when dining out, and food safety can be incorporated into the weekly education curriculum.

3. Culturally appropriate programs: Hands on educational and cultural activities at the centers can serve to help incorporate fruits and vegetables into meals and snacks. Additionally, social activities like hip hop dance, musical plays, and singing can provide an avenue for youth to be active (Wilson, 2009).

4. Color code utensils: Church can color code serving utensils in the cafeteria salad bar to help diners make healthier food choices (The community guide, 2012). A green label indicates a food is a highly nutritious "go," a yellow label cautions moderation, and a red label warns diners to "stop" before eating too much of a high-fat food. As one component in a comprehensive health strategy, interventions like this will help community save millions in healthcare costs.

5. Sunday Morning Walks: This program would be designed with two purposes. One is to help clean-up and remove any thrash on the streets and neighborhoods. Secondly, is to keep young African American men and women physically active by walking the streets. The program would be a great benefit to cities in Richmond County. The work would be rewarded by incentives such as class credits, amusement park and entertainment tickets and college scholarships. For this strategy to be successful, community leaders will need to take a committed role. (The community guide, 2012).

Faith based organizations have a good understanding of the local context, deliver high quality services, mobilize energy and resources, contribute to consensus-building and connect local communities with higher authorities. Their close links to communities and influence over

them provide them with an ideal opportunity to promote nutrition and physical activity and address other cultural factors contributing to health issues (HCCC, 2018).

Physical Environment

Safety is a major environmental influence on moderating physical activity for teens. Factors such as traffic, sidewalks, recreational facilities, parks, and businesses can influence physical activity levels in teens. Transportation is often a problem in poor communities for young people, presenting obstacles to accessing health care services, especially preventive care. Adequate city planning in Richmond County is needed to improve neighborhoods that are accessible and safe for teens. Mixed use development and design have proven to be beneficial in fighting obesity through incentivizing behavior (Chen, 2016). This design creates a network of streets, roads, and buildings which are interconnected, pedestrian accessible, and provide services or functions people would normally travel for. If choices can be shaped by the environment in which they are made, then teens can be encouraged to walk or bike and become more active travelers. The mission is to provide *opportunities* for active transport, such that teens are enticed to walk, bike or take public transportation (Chen, 2016). The creation and sustainability of health places are critical in obesity prevention in Richmond County. In order to ensure the health and well-being of the population, Richmond County needs to continuously create and improve physical and social environments and expanding those community resources that enable people to support each other in performing all functions of life (WHO, 2018).

Access to healthy foods is a critical issue, especially in black neighborhoods in Richmond County, which have significantly fewer supermarkets than other neighborhoods. The food that is available is less fresh and lower quality (Noonan, 2016). Strategies should be developed to improve access to healthy food such as advocating for more supermarkets and farmers' markets

and promoting inner city community gardens. This should be targeted at disadvantaged areas so that individuals have equal access to supermarkets and high quality foods and decreasing reliance on the convenience stores as a regular source of food (Keene, 2011). One strategy is to develop fresh food financing initiatives, which focuses on providing access to healthy foods by giving grocery stores and supermarkets financial incentives in the form of grants and loans to operate stores in underserved communities. Another example, is to promote nutrition by providing coupons that are redeemable at local farmers' markets to purchase fruits and vegetables (Foltz et al, 2012).

Health and wellness are influenced by the places in which people live, learn, work, and play. It is important to create a physical environment that create opportunities for physical activity for young people and equalize access to healthy food sources.

Health Care Services

An educated and informed black population will use health care services more effectively. Health literacy is necessary to make appropriate health decisions. Good health literacy requires the reading, analysis, and decision-making skills to make appropriate health decisions. Many of the young people living in Richmond County have poor health literacy and have problems communicating with their health providers, reading instructions on medicines, and completing medical and insurance forms. There needs to be a significant expansion of health training programs across the county to address this inequality (Noonan, 2016).

The Richmond County Health Department (RCHD) serves as a connecting force in the community and is able to reach out to everyone. RCHD has the opportunity to reduce the health and economic burden of obesity. RCHD needs to provide structure and guidance for formulating a comprehensive obesity prevention plan. They have access to local data, and are aware of the

ongoing problems and the dynamics to changing problems. Richmond County health officials are able to share resources and information and should recommend evidence-based strategies aimed at obesity prevention (Naacho, 2018).

The use of lay health advisors (LHAs) and educational outreach activities by the LHAs has shown to be an effective strategy. LHAs can be successfully trained to deliver an educational program design to reduce obesity and cardiovascular disease risk through promotion of healthy nutrition, physical activity, and decreased exposure to alcohol and tobacco (Kim et al., 2004). The LHAs would recruit members of their community through the use of their social networks, conduct health-promotion program, and collect data to evaluate the effects of their outreach intervention. The use of LHAs is financially and logistically feasible and can be an effective and sustainable healthcare delivery strategy for community health promotion at a grassroots level (e.g., health centers, community centers, churches (Kim et al., 2004).

The general practice of medicine, however, is still focused on sick care rather than health care. Traditionally, doctors are trained and incentivized to treat disease once it manifests itself instead of focusing on the promotion of wellness. Good diet and nutrition can create a path to health and wellness, but it's unusual to find doctors who are trained well enough and can spend the time required to have this conversation with patients. Training and educating doctors on lifestyle medicine is an important step in healthcare settings (Sadick, 2016). Lifestyle medicine is the evidence-based practice of helping individuals and families adopt behavior that improves health and quality of life. It focuses on diet and nutrition, exercise, stress management and the elimination of tobacco and excessive alcohol use (Nadolsky, 2017).

There is evidence that some healthcare professionals (HCPs) do not view obesity as a disease and, therefore, do not consider it to be the responsibility of primary care (McGowan,

2016). Primary care professionals have an important role and responsibility to help patients by starting the obesity dialogue and recommending patients to the most appropriate services. There is clearly an opportunity to improve a patient-centered approach within general practices that empowers patients to take responsibility for their own health with support from their physicians. Patients will benefit from their doctors actively monitoring changes in their weight and health.

A multidisciplinary approach to the care of patients is necessary across all levels of care with physicians being at the center of the intervention. The first barrier is the perception among African American patients that overweight and obesity is ‘normal' (Johnson, 2008), which may result in them not seeking medical support and physicians not actively addressing the issue.

All health providers should be required to obtain regular training and refreshing in the provision of equitable care. More full-fledged doctors should be recruited who actually specialize in obesity treatment. Training of young people of color in the health professions should be viewed as an urgent national objective requiring the rebuilding of many of social development and community health programs. Outreach to young people of color and encouraging them to pursue health careers should be given a much higher priority (Noonan, 2016). Minorities are more likely to seek care from healthcare professionals of their own ethnicity. In order to assure care of the highest quality, proactive efforts must be taken throughout health systems to eliminate the conscious and unconscious differences in quality of care provided.

An effective intervention is utilizing community health workers (CHWs) to provide home-based counseling and education on obesity risk factors and to link families to resources in multiple settings. CHWs, also known as community health advisors or outreach workers, typically share similar ethnic, socioeconomic, and geographic characteristics of the families they

serve (Foltz et al., 2012). CHWs have effectively worked within communities to reduce health disparities and improve health outcomes associated with chronic diseases such as diabetes and cardiovascular disease. CHWs can serve as the bridge between families and the health care system, and engage different sectors of the community (e.g., in faith-based centers). CHW interventions have the potential to reduce health care costs, promoting healthy behaviors, and helping patients manage chronic diseases (Foltz et al., 2012).

Workforce education and training for health care services and agencies have proven to be a very effective intervention. Richmond County care professionals must be competent and knowledgeable about the resources and services necessary to help support young African Americans. Effective training, education, and increased access to qualified health care professionals has the potential to enable families to more easily discuss health issues .

Marketing & Communication

Communications are considered more effective if they are personally relevant, tailored to the audience's needs and interests, and understandable. Innovative communication strategies are critical for facilitating awareness and prevention in Richmond County. Media and social media resources such as newspaper, TV, flyers, billboard signs, internet, school campaigns and church brochures would facilitate awareness. Stories about obesity and consequences would be shared at local faith based organizations. For healthy eating, the marketing of unhealthy foods must be reduced and replaced with messages that promote daily physical activity. One example of multiethnic media intervention is the VERB campaign, which was developed by CDC to increase and maintain physical activity among young people (Wong, 2004). Radio ads and posters displayed in schools and in doctor's offices reinforce the healthy message. Crucially, schools, recreation centers and after-school programs should pledge not to use unhealthy food (e.g. pizza,

cupcakes, candy, chips) as rewards for good performance at birthday parties, social gatherings, and sporting events.

Addressing the problems of nutrition and food desserts should be high priorities. Given the link between sugar-sweetened beverage consumption and increase in obesity, a needs assessments approach would determine the areas in Richmond County with the most prominent display and saturation of sugar-sweetened beverage marketing and promotion. Warning messages about the dangers of sugar-sweetened beverage (SSB) consumption can be carefully tailored for low-income, marginalized, and medically underserved populations. In addition, teen after school support program or focus groups should be designed to assess baseline knowledge of SSB. Further research should be conducted to understand the barriers to changing behavior in decreasing SSB consumption. These strategies should empower community members to understand the dangers of chronic sugar-sweetened beverage consumption and engage in efforts to decrease obesity.

Meal interventions and fruit and snack interventions aimed to provide healthier foods and beverages that are appealing to students while limiting access to less healthy options should be implemented. These interventions include school meal policies that ensure school breakfasts or lunches meet nutrition requirements and programs that provide fresh fruit and vegetables to students during lunch or snack. Healthy food and beverage marketing strategies for these interventions may include placing healthier foods and beverages where they are easy to select, offering taste tests, and pricing healthier foods and beverages at a lower cost (The Community Guide, 2017).

Health Information Technology

Effective use of Health Information Technology can be a resourceful tool and can have a positive impact on health, health care and health equity. This includes delivering accurate and actionable health information, supporting shared decision-making between adolescents and providers, increasing health literacy skills, providing new opportunities to connect with culturally diverse and hard-to-reach populations, increasing internet and mobile access, providing sound principles in the design of programs that result in health behaviors, and providing self-management tools and resources (HealthPeople, 2018). Such interventions improve the public health information infrastructure, support care in the community, and build health skills and knowledge.

Communication with healthcare providers/educators is an important aspect for prevention. Using technology in coaching or counseling interventions can help teenagers to eat less, lose weight, and maintain the weight loss for 12 to 18 months. Technology-supported components include computer-based interfaces (such as computer kiosks, software programs, email, or the internet), video conferencing, personal digital assistants, pagers, pedometers that "sync" with computers, and computerized telephone system interventions. For example, a highly sophisticated patient portal should be developed that is easily available on a website and app form. The goals of the patient portal are to provide open and ongoing communication with educators and mentors, send reminders for educational workshops, social events and positive messages they can share on social media or with their friends. Having increased interaction with healthcare organizations will allow African Americans a safe and comfortable way for getting the help they need.

Community Garden and Centers

Another approach that can contribute to developing healthy lifestyles is for young people to grow fresh, healthy food close to home. Community gardens provide the opportunity to grow, eat, share, and learn. Local churches, schools and community centers can partner with the local government and the University of Georgia Extension Office in Augusta for making gardening space available and provide teens the resources (e.g. on-site training, education, supplies, incentives) to participate. This project would bring various groups together (e.g. families, seniors, teachers) and ensure that young people are involved in bettering themselves and the community.

One strategy is to develop more programming at community centers and recreation facilities which allows youth to engage in indoor sports (e.g. basketball, volleyball, soccer), parents and seniors to join aerobics and yoga classes, infants and toddlers to be cared for onsite, and families to socialize on a regular basis during family oriented events. Civic leaders and charitable organizations can work together to raise funds to create a Teen Health Empowerment Organization with the aim of educating and supporting young African Americans within the county. The organization would have Community Ambassadors who would raise awareness about the health struggles with obesity and help young people in improving their quality of life. Funds would be primarily raised through 5K and 10K races, 1K fun walk, youth basketball tournaments, and hip hop musical competitions.

Collaboration not only reduces cost with organizations but allows community organizations to make a greater impact in the community. Programs for obesity prevention that have been deemed to be successful include:

- Service learning programs with a focus of encouraging the youth to become actively involved in the community
- Electronic or mobile technology to support coaching or counseling for weight loss or maintenance
- Worksite programs for weight loss
- Youth development programs with a combination of health care, education, involvement in sports, and employment assistance
- Parent programs that involve the adolescent and the parents held within a community or organizational setting
- Community wide programs that involve the entire community and not just parents and youth (National Campaign to Prevent Teen and Unwanted Pregnancy, 2012)

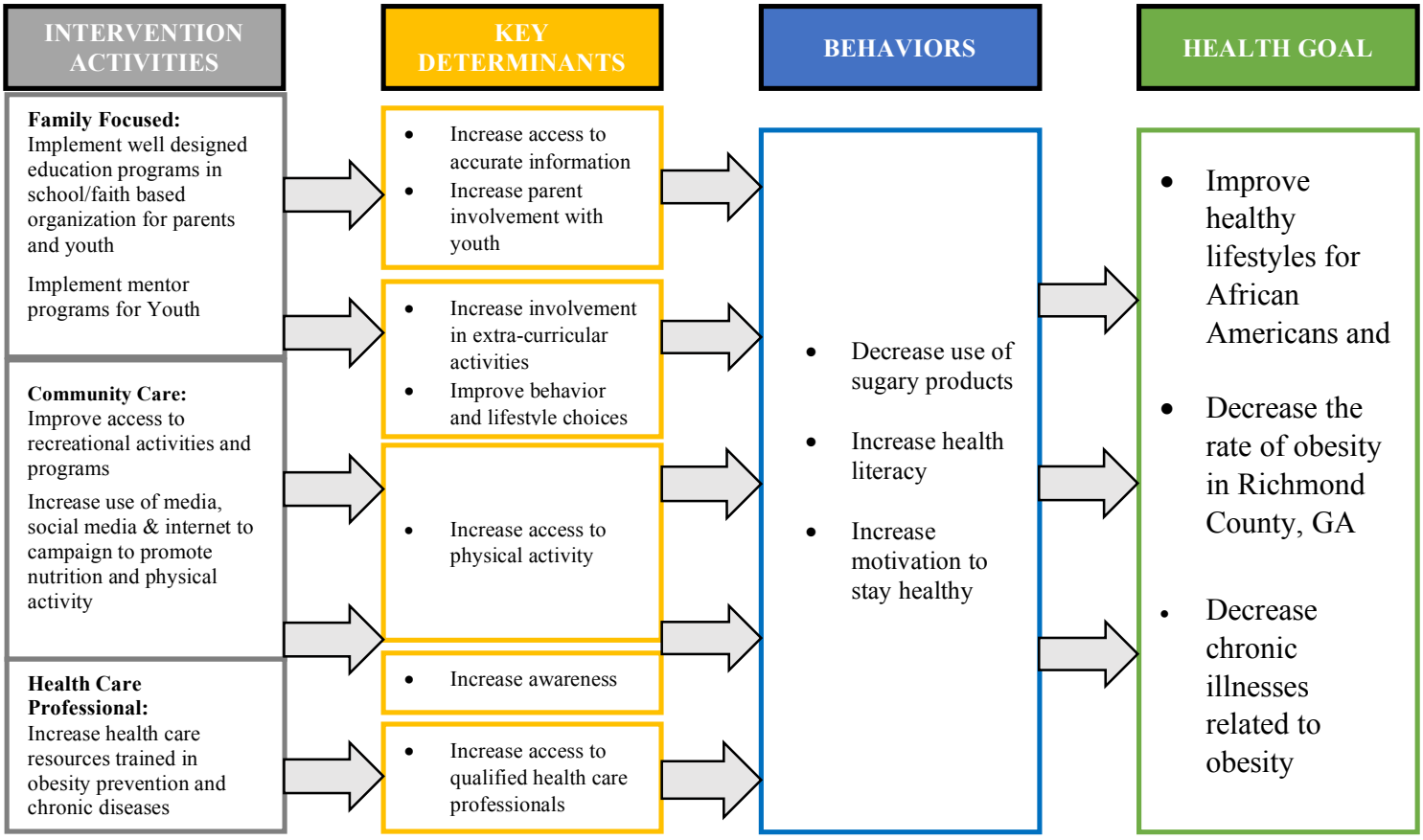
Interventions that focus on reducing screen time, spending less time watching TV, video, or DVDs, playing video or computer games, and surfing the internet can help teens lose weight. Behavioral interventions and classes aimed at improving knowledge, attitudes, or skills should be developed at local community centers. Data shows that previous interventions such as these have reduced screen time by more than 36 minutes a day and resulted in modest weight loss among adolescents. These classes may include skills building, goal setting, reinforcement techniques, and family support encouragement (The Community Guide, 2017).

To accomplish an effective Obesity Prevention Program, monthly meetings at the County Health Department should be conducted. These will consist of trainings for community members, educators and healthcare providers on a curriculum, how to engage with youth to provide a comfortable and confidential setting, updates, and share success stories. Meetings are

important to keep the community informed of program changes and also to integrate more partnerships in Richmond County. Mentoring program will also be incorporated to have role models come alongside adolescents to help empower them to make positive choices. Because people desire to be part of a social network, it is important to increase the social network within the community and build stronger relationships between adolescents and parents. Many teens have said that their parents have never spoken to them about obesity or nutrition, making them unaware of the consequences. Additional strategies that can be implemented as part of a communitywide intervention include community-wide educational campaigns, individual education, screening, counseling, community events, and low-cost lifestyle modifications (Foltz et al., 2012).

It is important to understand the structures and norms that support obesity issues in the community. Since communities exist in a social ecological system, changing community-level behaviors and creating new social norms requires creating and enabling environment, that is, facilitating change and removing bottlenecks that inhibit change at the community level (Homer & Simpson, 2007).

Figure 10.3: Community Level BDI – Obesity Prevention Among African Americans aged 13-19 years in Richmond County, GA



Organizational Level Intervention

For the organizational level, it is critical to involve all stakeholders in the community, with a focus on partnering with large organizations, for example the County Health Department, community programs (WIC, Head Start) and even the school districts. Not only is it important to have partnerships between these, but it is also essential to reach smaller organizations within the community level, for example places of worship. Including organizational level interventions is essential to a successful comprehensive approach to promote obesity prevention.

School Systems

School or education systems provide an opportunity for children and adolescents to shape healthy behaviors through large amount of activities and role modeling. Most educational settings such as childcare, preschool, school, and university provide a universal way to address the broader determinants of health and equity. Within school settings in particular, there has been a dominant focus on physical activity, healthy eating, and obesity prevention. The main goals of the Health and Physical Education Department of Richmond County School system are to:

1. Educate the mind

2. Promote social, physical and mental wellness of the student

3. Encourage positive attitudes towards a lifetime of physical fitness and sport skills (Rcboe, 2018).

The intervention would build upon the goals of Richmond County School system and would work with local school districts to review, modify, and strengthen wellness policies to improve physical education curriculum, nutrition quality, and nutrition education (Astho, 2012). Strategies include working with schools to craft effective programs and adjust the message to fit

within the values of Richmond County. For example, one strategy could be to review school's physical education syllabus and assess areas for improvement.

A Sample School Physical Education Syllabus

1. Provide a developmentally appropriate and comprehensive experience through exposure to a wide variety of activities and quality instruction at all levels
2. Recognize that participation in health and physical education can lead to an understanding and appreciation of diversity
3. Provide for the development of effective and efficient fundamental motor skills
4. Promote the acquisition of skills and beliefs needed to pursue a lifetime of involvement in physical activity and healthful decision-making
5. Promote an understanding of the relationship between physical activity and life-long health, and assume responsibility for personal health
6. Provide an environment which is safe and conducive to self-expression, enjoyment, and creativity
7. Promote the relationship between health and physical education, school, community and life through an interdisciplinary approach to instruction where appropriate (Autrey Mill Middle School, 2018)

Another strategy that has shown some success in addressing health inequities in school settings is the promotion of economic and physical access to healthy foods. Delivery channels include school breakfast and lunch programs, menu modification, and provision of free or subsidized fruits and vegetables. School meal programs have shown positive impacts on African American children from low socioeconomic backgrounds. For healthy eating strategies, school

initiatives should offer foods and beverages that comply with and promote the Dietary Guidelines for Americans to address the nutrition quality of the school food supply.

Promoting a culture of wellness and prevention encourages young people to assume responsibility for their own quality of life, motivating them to practice healthy lifestyles, and receive the education and resources to achieve health and wellness goals. Successful whole-of-school approaches can also include providing classroom-based nutrition education, exercise training, integrating additional opportunities for physical activity into classroom curriculum, and engaging parents through educational newsletters or activities. The program would offer interactive health activities, wellness notebook, fact sheets, guidelines, quizzes, and tool kits (e.g. wallet reminders - quick reminders of health eating and exercise habits). Furthermore, programs should be designed which include home activities focused on reducing TV and computer viewing. Each school in Richmond County must have programs designed to better engage students and improve health disparities.

Comprehensive nutrition curriculum and mentoring programs should begin in ***middle school***. The information shared may include role-plays and other activities to teach adolescents skills for responsible decision-making. This program can include older teens teaching younger teens or peers (Brooks & David, 1999). Mentoring programs, which involve teaching life skills and coaching are programs designed to support and develop healthy relationships between mentors and mentees. Benefits of such programs increase high school graduation rates, healthier relationships and lifestyle choices, enhanced self-esteem and self-confidence, improved behavior, improved interpersonal skills, better attitude about healthy diet (Youth.gov, 2016).

Instituting **school-based body mass index** (BMI) (i.e., taking students' heights and weights) programs and reporting the results to parents annually is one way of preventing obesity and helping families in Richmond County. BMI screening programs, similar to other health screenings (e.g., hearing, vision), identify those students most at risk and give parents confidential information about their child's weight status. BMI screening and reporting programs can help increase public and professional understanding of children's weight issues and can be a useful vehicle for engaging with children and families about healthy lifestyles and weight problems (Nihiser et al. 2007). Focus groups should be conducted with parents to find out their opinions about BMI screening programs and message content. The HBM can be useful for developing strategies to deal with treatment regimen. Printed nutritional materials and reminder letters will encourage people to consistently follow healthcare recommendations.

Most frequently, health programs like CATCH (The Child and Adolescent Trial for Cardiovascular Health program) have been extensively implemented in schools in CA, LA, MN, and TX (Child Trends, 2018). CATCH schools have received food service modifications and food service personnel training to improve the nutrition of school meals, PE interventions and teacher training to increase the amount of fun activities (Luepker et al., 1996). School-based programs such as CATCH which combines health education with behavioral components would improve physical activity and nutrition-related behavior in Richmond County school system (Luepker et al., 1996).

The focus should be more on awareness and prevention of obesity in schools and getting students the help they need. Some programs that schools should include would be research-based programs and support programs. For example: (1) program that incorporates mindfulness and yoga (2) self-awareness program that teaches what is going on with your body, your mind,

and your emotions and (3) programs that focus on stress reduction, problem solving and building self-confidence. Richmond County School should seek new ways to address the issue of obesity and prevention. One way is to create a "Text for Help" program which gives students quick access to a nutritionist or health specialist to discuss diet, disease prevention and strategies to reduce weight (Waylock, 2018).

Many food options in schools and workplace environments are often not conducive to healthy choices. There is a significant reduction in the amount of physical education in schools and a lack of opportunities to participate in physical activity. Community-wide engagement which increases participation of students in extracurricular activities is essential. This includes parents, schools, faith based organizations, health care providers, and civic organizations in developing youth assets and opportunities in careers, further education, and service to the community (Brooks & David, 1999). Schools should encourage students to participate in recreational activities, hobbies, Boy Scouts & Girl Scouts, STEM activities, faith-based activities, and other community activities by providing small gifts (i.e., free healthy lunch, movie tickets). This will improve their lifestyles and enhance their interest in activities that are positive and will prevent them from engaging in misconduct or interest in drinking or drug use.

Hospitals

"Just sitting in a room and telling people to lose weight doesn't work," says Dr. Madhu Mathur, a pediatrician and obesity medicine physician in Stamford, Connecticut, who developed and formerly directed the Kids' Fitness and Nutrition Services clinic at Stamford Hospital (Howard, 2016). Richmond County hospitals should offer guidance and resources to the community at large. Interventions should be developed with a focus on minority and cultural aspects. Here are some examples of what other hospitals have done for obesity prevention.

(a.) Boston Children's has created a 10-week "OWL on the Road" curriculum, guided by a dietitian and a psychologist, that it provides free at several inner-city community health centers (Howard, 2016).

(b.) Children's Hospitals and Clinics of Minnesota, partnering with other community organizations, offers its city's Latino residents the Vida Sana program, featuring instruction on healthy living (and dance classes). Some institutions are broadcasting their message statewide.

(c.) The Barbara Bush Children's Hospital of Maine Medical Center in Portland has launched a Let's Go! campaign that forges connections with schools, child care sites, after-school programs, and doctor's offices to teach healthy living habits to hundreds of thousands of children (Howard, 2016).

(d.) Georgia's statewide Strong4Life initiative, which was launched by Children's Healthcare of Atlanta in 2010 uses multiple channels – pediatric practices, schools and community partnerships – to spark change in families whose children are overweight. Instead of overwhelming them with onerous food and exercise rules, the Strong4Life idea is to make one small change at a time. So far, the program has trained 3,000 health care providers and 1,200 school nutrition staff across the state and racked up 2 million visits to its website, Strong4Life.com (Howard, 2016).

Work Study Programs

Richmond Department of Health should identify obesity as a priority area and launch an initiative to address this condition by promoting the importance of nutrition and physical activity to young people. By partnering with Richmond County Chamber of Commerce, Richmond County School District and state leaders, RCHD would encourage high school students to gain

real life experience in a worksite environment. The work study program would offer host of incentives and cost-savings incentives to both companies and teenagers.

Worksite nutrition and physical activity programs would allow teenagers to work with nutritionist, nurses and wellness coordinators. Teens would gain valuable real-life experience and work with onsite healthy lifestyle initiatives such as:

- Assessment of health risks with feedback (AHRF) plus health education with or without other interventions
- Chronic disease management programs
- Point-of-decision prompts to encourage use of stairs
- Worksite programs to control overweight and obesity
- Smoke-free policies to reduce tobacco use among workers
- Creation of or enhanced access to places for physical activity combined with informational outreach activities (Thorndike, 2011).

These interventions would encourage physical activity as they promote cohesiveness. These programs geared at improving dietary and physical activity habits would include one or more approaches to support behavior changes, ranging from informational and educational to behavioral and social, as well as to policy and environmental strategies (improving access to healthy foods on-site and offering more opportunities for physical activity) (Thorndike, 2011).

Companion animals like dogs and cats help people of all ages learn about empathy, sharing, and unconditional love -- qualities particularly essential to a child's healthy development. Through helping to care for a pet, young people also learn to care for their themselves and fellow human beings. The intervention would focus on developing an innovative program where schools would partner with CSRA Humane Society which is Augusta's No-Kill

Animal shelter. The society is run by hands-on volunteers. Teens would work with vets and experienced dog handlers to learn about care of animals. Responsibilities would include walking the dogs, keeping them physically active by playing games, and feeding them. This program would be designed to help teens gain responsibility, confidence and lastly keeping them physically active.

Grocery Stores and Supermarkets

The role of the grocery store in health promotion seems to be growing. Many larger grocery stores are also blending in more health-related services such as pharmacies, medical clinics, immunizations and fitness classes. With food being so central to health, grocery stores have an opportunity to shape your health for the better or for the worse.

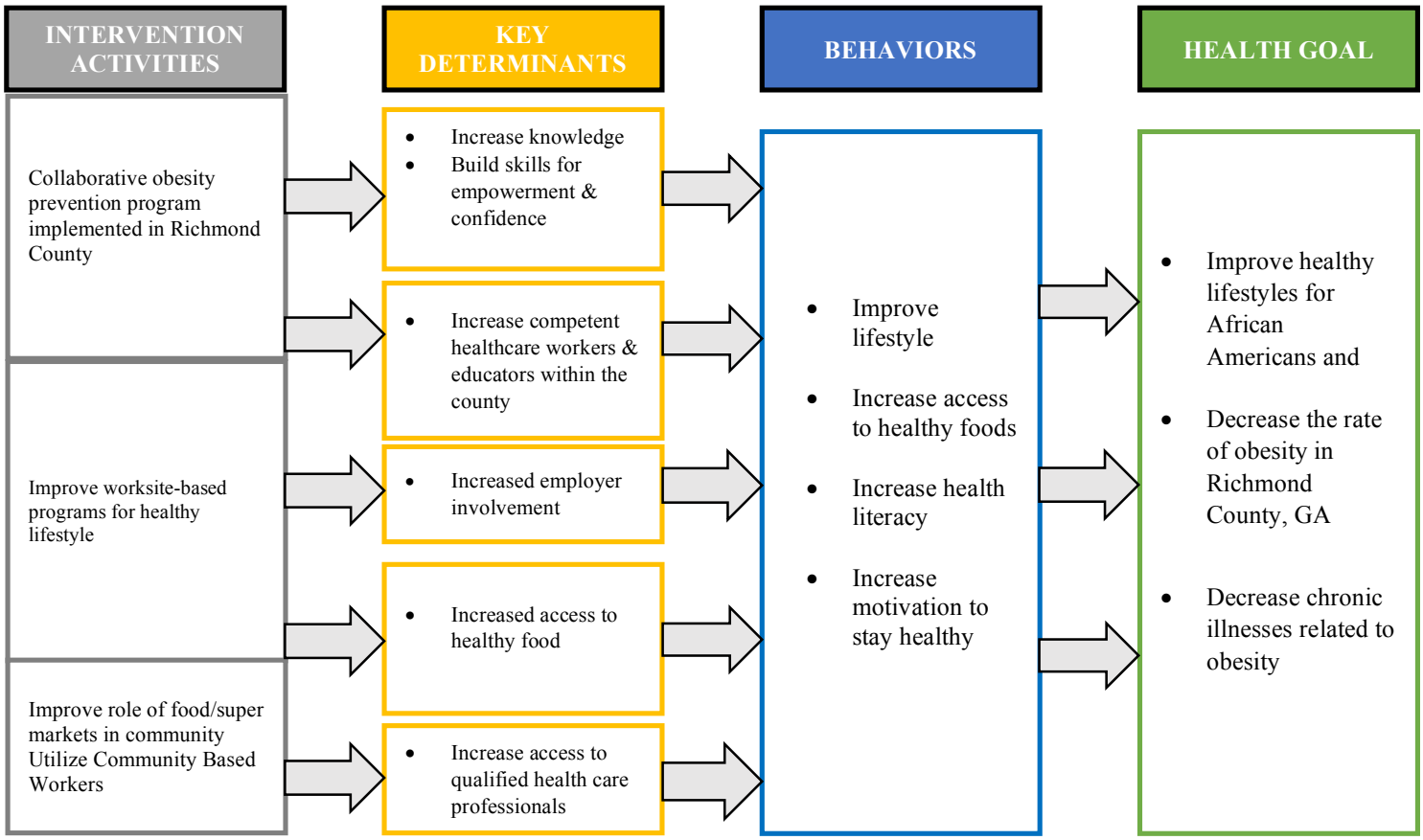
Richmond County grocery stores, supermarkets and other large food retailers do not simply "store" food. They, in fact, can play major roles in what you choose to eat and drink. While this may not be new news to food marketers, health advocates have been increasingly recognizing this role and developing policies and interventions that target food retailers. With the obesity epidemic and other diet-related health problems bringing more attention to what you eat and drink, more and more grocery stores in Richmond County should proactively establish practices and programs that promote health may be good business (Lee, 2016). Such initiatives include:

- **Increasing stocking of healthy food**
- **Changing the placement of healthy foods in the store**
- **Improving the ambiance around healthy food**
- **Offering healthier food samples**

- **Posting health and nutrition information**
- **On-site personnel to provide suggestions and advice**
- **Special deals for healthy foods**
- **Educational materials and programs (Lee, 2016).**

The organizational level is just one puzzle piece for addressing the large problem of obesity in Richmond County, GA. It provides the partnerships and collaboration of organizations that can impact the community on a larger scale.

Figure 10.4: Organizational Level Intervention – Obesity Prevention Among African Americans aged 13-19 years in Richmond County, GA



Policy Level Intervention

Successful strategies are also driven by policy and legislation. Examples of policy level interventions include insurance incentives for company wellness policies; joint-use agreements between schools and community organizations; school legislation mandating healthier menus and physical education; comprehensive wellness policies in school districts, government facilities, and hospitals; trans-fats bans; and menu labeling requirements (Naacho, 2018).

There is limited health care policy response to obesity prevention because there is a lack of irrefutable and coherent evidence about what actions are most effective for system level intervention (Homer & Simpson, 2007). A second obstacle in mobilizing a health care response to obesity prevention is concern about the efficacy of personal health–based approaches compared with broad community efforts. The most salient answer is the financing of obesity-related services and initiatives. The State of Georgia provides limited information about obesity prevention and treatment, few practices are able to secure reimbursement for obesity-related services, and children enrolled in Medicaid are not receiving needed obesity prevention and treatment services (Homer & Simpson, 2007).

Reimbursement policies by individual health plans do appear to influence practice and, potentially, outcomes. Systematic mechanisms are needed to identify the most effective reimbursement strategies and to share these practices widely across private and especially public payers. Obesity is a condition with a profoundly disparate impact, affecting poor and minority youth with two to three times the magnitude as it does more-affluent white children. Although a few states have introduced or passed legislation to provide reimbursement, Georgia needs to

prioritize the financing of health care responses to obesity in order to address the growing health disparities in the state (Homer & Simpson, 2007).

Much can be done to reverse the obesity epidemic, yet important opportunities to tackle obesity at the national policy level – including changes that enable more Americans to eat healthy and be active, as well as those that provide appropriate medical treatment for patients have gone largely unmet. The National Campaign "End Obesity" works to fill this gap. By bringing together leaders from across industry, academia and public health with policymakers and their advisors, the Campaign provides the information and guidance that decision-makers need to make policy changes that will reverse one of the nation's costliest and most prevalent diseases (Campaign to End Obesity, 2018).

The "Treat and Reduce Obesity Act of 2017," is a critical step for improving health outcomes, as well as managing out-of-control health care spending. The Act would give **only seniors** with obesity access to needed, effective and safe therapeutic tools to help them lose and manage their weight, including counseling from trained health care professionals and FDA-approved pharmaceutical therapies. As economic evidence increasingly shows that effective interventions for patients with obesity regardless of age and those at risk for obesity can generate long-term health and economic returns, there is growing interest in ensuring that patients have the resources they need to achieve and sustain a healthy weight. Such tools should be made available for young people. Along with diet, exercise, and, in certain circumstances, surgery, can help to form a comprehensive obesity treatment approach. (Campaign to End Obesity, 2018).

Interventions at the policy level can either support or hinder interventions attempted and implemented at the other four levels. In proposing a multi-level intervention to address obesity in Richmond County, GA it is important to understand the current political climate and policies

around obesity. Taking into account the overarching framework of this multi-level intervention, the Health Belief Model, we must also consider the elements of the Multiple Streams Framework: the problem stream (obesity rates), the policy stream (current environment, nutritional education in schools), and the politics stream (current support for socially economically challenged population) (Walhart, 2013). The biggest challenge faced in meeting the goal of this multi-level intervention is identifying a policy window that would allow for support of the interventions.

A great deal of activity is going on at several levels of the system but these efforts are not coordinated, nor is there sufficient learning and sharing across efforts to maximize these programs' impact on outcomes. Standard definitions of *impact* must be established; mechanisms for comparing results and sharing approaches must be implemented; and incentives, training, tools, and support—both within the health care system narrowly defined and spanning the boundaries between health care and community—must be devised. For these activities to occur, policy changes are needed at the federal and state levels (Homer & Simpson, 2007).

Needed policy changes are not limited to reimbursement policies. Many other aspects should be addressed, including (1) research and demonstration funding and priorities needed to identify effective prevention and treatment approaches; (2) training and for health care professionals in preventing, identifying, and treating affected children and families; (3) inclusion of a broad range of community-based obesity-related services in benefit coverage; (4) incentives for providers and health plans to address the issue; (5) support of innovations, including quality improvement in clinical settings, to accelerate the most effective and efficient strategies to deliver obesity-related services; and (6) promotion of the use of health information technology

(including electronic medical records with decision-support systems and obesity registries) (Homer & Simpson, 2007).

One strategy is to establish a complementary goal that all entities involved can support—increasing education of proper nutrition and physical activity. Another approach for improving the nutritional environment of communities and preventing obesity is to create task forces specific to food systems, such as food policy councils or advisory coalitions. State government can improve access to healthy foods by incentivizing and subsidizing high quality foods, making such foods more widely available and requiring the purchase of nutritious foods in government assistance programs (Obesity Action, 2018). State and local governments can take an active role in promoting healthy nutrition through policy and environmental strategies. Such strategies can be included in organizations within the community such as faith-based groups, public service venues including government facilities (e.g., libraries, government workplaces) and park and recreation facilities (Foltz et al., 2012).

The Patient Protection and Affordable Care Act (ACA) is changing the funding of hospitals from a system based on quantity of patients to one focused on quality of care. Many of the responsibilities are now incorporated into the "Community Health Plan" of the hospital and expansion of Medicaid. This change offers a significant opportunity for African Americans in Richmond County to insert themselves into the health care infrastructure (Han et al., 2015).

Obesity prevention programs must be fully integrated and supported by local state, health departments, voluntary or private organizations. This ensures adequate funding, durability, effectiveness, and inclusiveness of obesity prevention initiatives within all of Richmond County.

Local health officials, community stake holders, advocates and voluntary representatives should stand together and support policies that address obesity prevention issues.

Obesity prevention strategies at the policy level include:

1. The Food and Drug Administration (FDA) should commence regulatory action to sharply lower the added-sugar content in soft drinks and similar beverages.
2. The Federal government should develop a high-profile education campaign to encourage consumers to choose lower-sugar or unsweetened foods and beverages.
3. Congress and/or local governments should require comprehensive menu labeling at the point of decision-making in chain restaurants.
4. Comprehensive menu labeling should be displayed clearly and in plain language across restaurants in Richmond County. The menu includes nutrition information, such as calories, fats (including trans fats), carbohydrates, and sodium, which is the information most critical to people with chronic diseases.
5. Local governments should increase the number of potable water outlets in workplaces, schools, public spaces, and vending areas.
6. Local governments should address the marketing and placement of sugar-sweetened beverages in supermarkets to reduce consumption of sugar-sweetened beverages.
7. Local governments should address the reduction of consumption of sugar-sweetened beverages through portion control recommendations, retail marketing and placement, and availability of sugar-sweetened beverages.
8. State government should mandate and implement strong nutrition standards limiting access to calorie-dense, nutrient-poor foods and beverages available in government-run or -regulated after-school programs, recreation centers, parks, and child care facilities.

9. Local governments and planning agencies should integrate local public health considerations into community design processes, including community planning, regulations, and design of new development and redevelopment, to promote and protect the health of communities.
10. Municipal planning should encourage bicycling and walking for transportation and recreation through improvements in the built environment and make transportation accessible to all ages and abilities.
11. Local, state, and federal governments should dedicate resources to improve the capacity of local health departments to participate effectively in the community design process through training, development of tools, technical assistance, and other support (Naacho, 2018).
12. Local health departments should conduct needs assessments and use County Health Rankings or other accurate data sources to reflect on areas of high obesity rates to help them develop plans to address obesity.
13. Local health departments should advance local government policies to use healthy food vending standards in local government facilities, and schools to reduce access to sugar-sweetened beverages and increase the availability of healthier beverage options (Naacho, 2018).
14. Local health departments should work with business partners to ensure that warning messages about the dangers of sugar-sweetened beverage consumption are distributed to the community with carefully tailored messages for low-income, marginalized, and medically underserved populations.

15. The Food and Drug Administration (FDA) should expeditiously implement Section 4205 of the Affordable Care Act, which requires restaurants with 20 or more locations to post calorie content information for standard menu items directly on the menu and menu boards (Naacho, 2018).
16. Incentive programs should be created to increase community access to healthy foods through current food retailers and to attract new retailers to underserved areas (Banjoff, 2016).

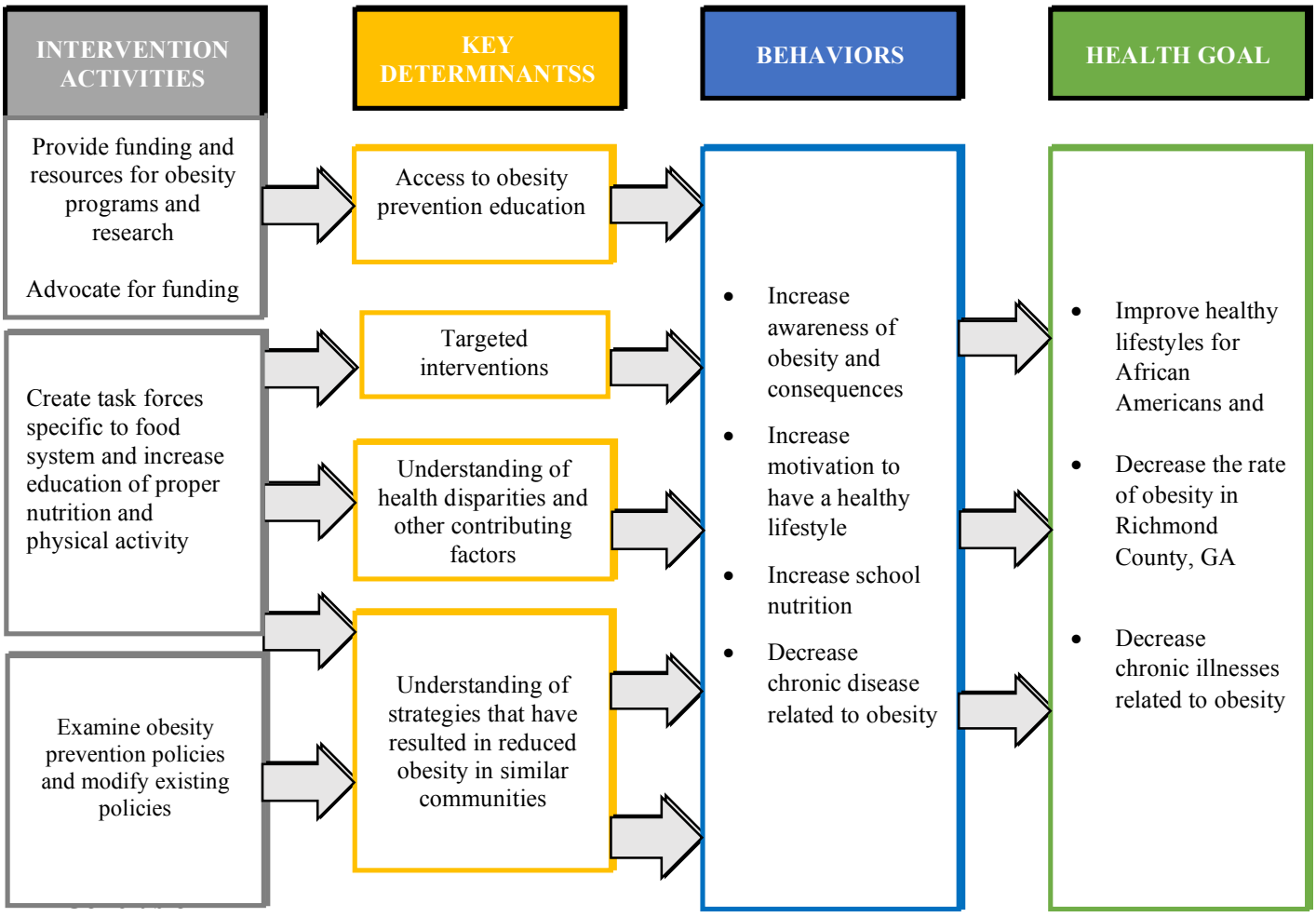
The office of Disease Prevention and Health Promotion and Healthy People 2020 recommend increasing access to both routine medical care and medical insurance, which are vital steps in improving the health of all Americans. Public health should take the lead in advocating for and providing the expertise to assure that inadequacies in physical and social environments do not harm African American populations (Noonan, 2016). The Richmond County Health Department should develop programs which provide low-income population reliable access to health services which can prevent disease, detect and treat illnesses, and increase life expectancy. Primary care providers (PCP) can develop meaningful and sustained relationships with patients and provide integrated services (HealthyPeople, 2018).

Health insurance should provide care for obesity as a standard benefit. Recognizing obesity as a chronic condition, insurance should also cover necessary long-term follow-up care for obesity treatment. Patients must have access to this comprehensive treatment approach through reasonable means and this access to care should not be hindered by undue tests or prerequisites on the part of the patient (Obesity Action, 2018).

It is the responsibility of trained health professionals to provide the information needed to make appropriate health policy decisions and to evaluate their implementation. The policies of health practice and health institutions that serve African Americans are most often determined by public and private sector leaders who have no health training (Sartorius et al., 2015). In addition to these factors, communities, providers, and individuals must all understand that politics is a key factor in the ongoing battle to eliminate the disparities in health outcomes in the USA that are based on racial differences.

Policymakers should develop dynamic new collaborations and collective actions across federal and state agencies, between private and public entities and industries, individuals and communities. Richmond County must improve funding for research on obesity as well as the outcomes of any prevention and/or treatment programs attempted.

Figure 10.5: Policy Level BDI – Obesity Prevention Among African Americans aged 13-19 years in Richmond County, GA



Conclusion

Obesity is a serious medical condition, which is associated with a wide range of debilitating, chronic and life-threatening conditions. It imposes huge financial burdens on health care systems and the community at large. Prevention at an early age is crucial and important strategies for preventing obesity are healthy eating behaviors and regular physical activity. Knowledge is an absolute prerequisite for lifestyle and behavior modifications. Implementing school and community based educational programs is one of the key strategy for advancing knowledge, modifying attitudes and behaviors, and empowering individuals for lifestyle modification. The effectiveness of health-related interventions and programs will depend on combining framework of HBM and SCM models in areas of health and education. Focusing on positive behavioral change at the individual level can assist in individual's motivation to undertake a health behavior that reduces unhealthy eating and improves physical activity. According to the Social Ecological Model, there are many levels to make a prevention program sustainable and successful. The overall success of intervention programs that have been detailed can assure good health to African Americans population in Richmond County. Although there has been significant progress in assuring healthcare for the poor with the ACA and other programs, health institutions must understand that adequate healthcare is available for everyone and must be of the highest quality. Proactive efforts must be taken by local government, community leaders and public health professionals to have impactful interventions. Through policy changes and support mechanisms, meaningful and sustained progress in reversing this epidemic can be made.

Chapter 11: Recommendations

Recommendations

It is clear that actions to prevent teenage obesity for African Americans in Richmond County need to target multiple activity settings and at all levels. There is also a need to incorporate a variety of approaches and involve a wide range of stakeholders who will ultimately influence the sustainability of any initiative. The available evidence indicates that the school is the institutional setting in which teenagers spend the majority of their time, and an institution in which policies to curb obesity are directly within the public domain. The Institute of Medicine recommends that schools be a focal point for obesity prevention (Institute of Medicine, 2012) and successful obesity prevention during adolescence can be achieved through local `settings-based` approach (WHO, 2010). Schools are ideal setting for interventions (Kropski, 2008; Brown and Summerbell, 2008; CDC, 2011) and support healthy behaviors as the majority of children are schooled outside the home. Schools provide an established infrastructure, a safe and supportive physical environment, policies, curriculum and staff that can offer continuous, intensive contact with young people (Kropski, 2008; Brown and Summerbell, 2008; CDC, 2011).

Schools can positively affect health by educating students, promote health outside of the classroom, and serve as an important data source on student health. The main purpose of education in schools is to prepare young minds to learn, grow and deal with challenges. Improving and building on the existing educational programs that Richmond County School system offers; schools would be a center point for obesity prevention by requiring quality physical education and opportunities for physical activity in schools; ensuring strong nutritional

standards for all foods and beverages sold or provided through schools; and ensuring food literacy, including skill development, in schools (Institute of Medicine, 2012).

Background

Richmond County in Georgia has one of the lowest annual County Health Rankings. The rankings measure vital health factors including obesity and access to healthy foods and income. The disparity in obesity is related to social (e.g., family, school, community, workplace, social norms, mass media, food marketing, nutrition education, etc.), economic (e.g., tax, direct pricing, serving size, nutrition labeling, etc.), and environmental factors (sidewalk, parks, foods outlets, exercise facilities, transportation, etc.) (Sturm, 2014). At the county level, 33.9% of adults in Richmond County are obese (BMI>30). African Americans nationally experience the highest rates of obesity, and it is widely believed that attaining health equity requires focus on facility obesity prevention in high risk groups such as African Americans. African American communities' make-up 56% of the population in Richmond County (U.S. Census 2017; Trust for America's Health, 2014).

According to CDC National Center of Health Statistics, the prevalence of obesity for black adults in U.S. for 2015-2016 was 46.8% while the prevalence of obesity among black adolescents (12-19 years) was 22%. Obesity prevalence increased in both adults and youth during the 18 years between 1999-2000 and 2015-2016. The prevalence of obesity in the United States remains higher than the Healthy People 2020 goals of 14.5% among youth and 30.5% among adults. According to Behavioral Risk Factor Surveillance System (BRFF) data, prevalence of obesity among adults for East Central Health District (Augusta) in 2014 was 32.3% and black non-hispanics (37.6%) were significantly more likely to be obese when compared to white non-Hispanics (33.3%). Obesity rates for age 10-17 for 2016-2017 in Georgia was 18.4%. According

to the Georgia Department of Public Health, the number one leading cause for death in Black or African American communities in Richmond County, Georgia between 2012-2016 was coronary heart disease. This is significant as ***obesity***, ***poor diet***, and ***lack of exercise*** are some of the risk factors that increase the potential to develop this disease.

Obesity is a serious problem in African Americans and the high burden of obesity in Richmond County is multifactorial in cause, including increased access to foods, high in fats, added sugar and calories, sedentary lifestyle, and increase eating outside the home. The high prevalence has serious health consequences and a major risk factors for diseases such as cardiovascular disease, type 2 diabetes and many cancers.

Why is it important to target teen (13 to 19 years) obesity?

There are many reasons to care for teen obesity.

- Early prevention is important which may have impressive effects on teen's behavior (Ryan, 2017).
- Adolescence is the period of crucial growth. During this phase, physical changes including growth, the onset of menarche for the girls, and increase in fat and muscle mass for the boys takes place. This contributes to obesity (Ryan, 2017).
- Obese teens are much more likely to become obese as adults and it is more challenging for these adults to lose the excess weight once they become obese (CDC, 2018).
- Obese teens today are developing health problems that once afflicted only adults (CDC, 2018).

Richmond County Schools

The Richmond County School System (RCSS) is home to eight school districts with 56 public schools serving over 32,000, making it the 10th largest school district in Georgia (RCBOE, 2018). In addition, there are three alternative schools which serve students through a non-traditional virtual school. RCSS boasts having the oldest public school in the south and 5th oldest public high school in America. Several RCSS schools are on the National Register of Historic places. According to the governor's office of student achievement, Richmond County Public Schools consist of majority black students (74%).

There are 15 private schools in Richmond County, GA, serving 3,038 students. Minority enrollment is 24% of the student body, and the student: teacher ratio is 9:1. 93% of schools are religiously affiliated (Private School Review, 2018).

Objectives and Aims

There is an urgent need to focus on obesity in Richmond county, through renewed commitment to nutrition education in middle school and high school, enforcement of legislation and commitments to remove barriers for unhealthy options. Also, cultural and social norms of obesity need be tackled by challenging the tradition of being big is normal. Effective health and social intervention programs need to be implemented which works with young people, to educate them about healthy behaviors and chronic diseases. Policy and programmatic actions must be based on a deep understanding of the real issues in community where obesity is increasing.

Knowledge is an absolute prerequisite for lifestyle and behavior modifications. Implementing school and community based educational programs is one of the key strategy for advancing knowledge, modifying attitudes and behaviors, and empowering individuals for lifestyle modification.

The five recommendations below aim to indicate which prevention measures that can be undertaken at local level (Richmond County School System) and are likely to be the most effective.

Strategies to address the obesity issue in Richmond County:

1. **Create a school campaign called "Got Water?"** similar to a campaign that started 25 years ago for "Got Milk?". The goal is to increase consumption of water (relative to sugary beverages) in schools. The campaign would be funded by Richmond County Public School system. It will include installing more water filling stations and water fountains. Most of the marketing will take place through bill board signs, banners, social media and school websites. The campaign would be simple, direct and include messages from local students and athletes.

   Impact of "Got Water" campaign

   A positive campaign such as this would increase awareness of drinking more water and inform young people to replace soda in their diets with water. The pro water campaign is a simple, actionable information to make healthy choices. This effort will remind people that more water helps them have more energy and stamina to do more, longer and a better focus. Water is the most accessible healthy choice people can make (Hamblin, 2013).
2. **Remove sugary sodas from vending machines and vending machines** to be available only to students after the school day has ended. The goal is to decrease consumption of sugar sweetend beverages among teenagers by creating an environment that supports healthier choices.

Impact of Removing Sugary Sodas

The goal is to create an environment which works for students and gives them less access to unhealthy options. The program will remove high-calorie sodas from vending machines in Richmond County School system. Instead of grabbing a Sprite, Coke or Mountain Dew, students will be able to quench their thirst with diet soda, V8 products, flavored water and low-calorie Gatorade. This will expand the school system's efforts to curb sugar intake among teenagers (Shapiro, 2013).

Furthermore, all vending machines will be **ONLY** available after the school day has ended.

3. **Promote 10-minute physical activity breaks** into the daily school routine. The goal is to promote physical activity (making exercsise fun) and students to benefit from mid-day activity breaks and experience reduced stress and anxiety and an increase in overall energy and alertness.

Impact of 10-minute physical activity

Instant Recess® is an evidence-based model designed to improve health & productivity by incorporating 10-minute physical activity breaks into the routine daily "conduct of business" — fighting the inactivity epidemic 10 minutes at a time. Instant Recess® can be done at work, at school, at church, in the library, at sporting or cultural events – anywhere people gather. The movements are simple enough for anyone to participate, and can be adapted to suit any culture or physical environment. By introducing brief activity breaks in the middle of the day, the program can make activity the norm (InstantRecess, 2018).

Results are increase in self-esteem, energy levels, alertness and water consumption. Additionally, it has shown to decrease stress, anxiety and fatigue. The movements are simple enough for anyone to participate, and can be adapted to suite any culture or physical environment. It's a good use of time because it gets kids excited and helps them work as a team (InstantRecess, 2018).

4. **Promote a pledge campaign for students: "Together We Can Do Better"**. The goal is to make simple health improvements in one's daily routine and sticking to them. The result is that eating habits get better. (Stouder, 2016).

   Impact of pledge campaign for students: "Together We Can Do Better"

   This pledge provides suggestions for small changes students can make in their daily life to make a big difference. It's voluntary. It would orient young people towards taking responsibility and consider broader implications of their actions.

   - For example:
     - spend less time on electronics (TV, computers and phones)
     - spend atleast 3-4 hours doing physical activity (yard work, walking, jogging, playing a sport) during the week
     - drink less sugary drinks

   The campaign is designed to help students take responsibility and promise themselves to make the right decisions. The notion of a pledge shows to keep a commitment and resist temptations.

5. **Design and implement 30-minute Online Parent Toolkit Presentations**. The goal is to educate parents; provide an opportunity for them to learn about nutrition, and encourage parents to support their kids to use this information to make informed decisions about food. Parents are key role models and advisors in helping their kids get their food facts. They are

the most important influence in their chidlren's lives that includes food and physical activity choices.

Impact of Parent Toolkit Presentations

The presentations will feature four 30-minute online presentation which include nutrition plan, education booklets, online learning games for students; tip sheets for adults and adolescents; the latest nutrition information and trends, as well as newsletters (CSBHA, 2018).

The presentation will be designed in partnership with Richmond County School System. Each student and parent will have access to the presentation. The presentation will allow students and parents to assess their nutrition know-how and will provide easy ways to improve their diet, manage weight and prevent disease. The presentation will serve as a tool for educating students and families (CSBHA, 2018).

Action Plan

In order to enhance the educational benefits to students, the implementation will be most effective by working collaboratively with the county health department, superintendent, school committee, administrators, the teachers' union, parents, students, particular groups affected by the change, interested community members and local colleges (especially schools of public health). By placing together, a strong and diverse community group of supporters of change and by using the leverage the group commands – research into best practices, media communication and community sentiment – the change can be achievable (Community Tool Box, 2018).

The message will be clear and consistent and most importantly, it will emphasize how this will benefit students, education, and/or the community. Current policies will be reviewed and the proposed changes will be further research to fully understand how it relates to the

school system. It is important to fully understand the support we will receive. This collaborative planning approach would make the process less resistant and improve the chances for change effort (Community Tool Box, 2018).

The proposed recommendations will be presented to the policy committee.

General Process for Policies at Richmond County School Systems are highlighted below.

Each year after the legislative session, policies are reviewed based on the changes in laws and State rules. A policy committee reviews, makes changes, and presents them to the Superintendent. The Superintendent places them on the Board agenda to sit for 30 days for stakeholder input and then to vote on the changes after the input is reviewed (RCSS, 2018).

Assess

- Determine policies that need to be updated based on waivers or stakeholder input.
- Meet with attorney to determine which policies/procedures need to be updated based on legislative changes.
- Review pertinent data that may assist in decision making - this data may be stakeholder input, student performance data, or updates in the laws (RCSS, 2018).

Plan

- The policy committee makes changes to policies based on data and pertinent information and submits the changes to the Superintendent for review.
- Copies of the policies are sent to the Board Members and Attorney for review before the Board meetings (RCSS, 2018).

Implement

- The Superintendent places updated, new, or policies that need to be removed on the Board agenda for a 30-day feedback period.
- The Board of Education reviews any stakeholder feedback and votes on the policies (RCSS, 2018).

Readiness of Local Community

In order for the suggested interventions to be successful it is important getting community buy-in. This will take time, energy, and dedication to garner community involvement. Conducting outreach and education for families through participation at relevant school events (e.g. parent-teacher conferenence, school activities) and through school newsletters or social media will ensure an awareness, understanding of the inverventions and help spread the word. It is crucial for the ones in the community to see that important steps are being taken towards improving the life of young people and community. Implementing the 5 key interventions is one way of improving the long-term health outcomes of young African Americans in Richmond County.

Interventions # 4 and #5 are designed with an internet base component. In Georgia, 100% of Georgians have access to mobile broadband service. In Richmond County, 95% have access to 25 mbps average speed (Broadbandnow, 2018). For patrons who do not have internet, the Augusta-Richmond County Library provides access to a broad range of information resources, including those through the internet.

Additionally, the internet will be available to all students and staff for instructional and administrative purposes in Richmond County School Systems. The Bring Your Own

Technology (BYOT) program is designed so that a device will provided for students who do not have devices. In schools, student will be able to participate and use the internet using RCSS wireless network which is free (RCSS, 2018).

Readiness of Individual

HBM suggests that changes in health behaviors are predicted by perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy. Raising awareness, and increasing the perceived threat of obesity or related consequences such as diabetes or high blood pressure, combined with improving knowledge, reducing barriers, and therefore improving outcome expectations, are expected to increase the adoption of healthy lifestyles. Cues to action such as parent toolkit, provides parents with strategies to improve their children's health behaviors and remind them of plans for behavior changes. The water campaign and soda removal strategy are designed to identify perceived barriers that may prevent people from taking positive action to changing health behaviors. The 10-minute break are designed for helping young people be more physically active, and cues to action. Together, these components increase the likelihood of preventive actions being taken, especially when self-efficacy for such behaviors is high (Hendriks et al., 2012).

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