Brookwood Baptist Health

Princeton Baptist Medical Center Community Health Needs Assessment

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Princeton Baptist Medical Center at a Glance

In 2015, Baptist Health System and Brookwood Medical Center came together to form a new community of care: Brookwood Baptist Health. United in service and devotion to the people of central Alabama, Brookwood Baptist Health was founded on our mutual dedication to high-quality, compassionate care for the communities we have served since 1922.

With five hospitals, dozens of specialty centers, and the largest primary care network in the state, Brookwood Baptist Health has convenient locations all across Central Alabama, including Princeton Baptist Medical Center and Brookwood Baptist Medical Center in Birmingham, Shelby Baptist Medical Center in Alabaster, Walker Baptist Medical Center in Jasper, and Citizens Baptist Medical Center in Jefferson.

Across the entire statewide system, Brookwood Baptist Health has more than 1,700 patient beds, includes more than 70 primary and specialty care clinics, approximately 1,500 affiliated physicians, and more than 8,500 employees overall, with convenient locations across central Alabama.

Princeton Baptist Medical Center, located at 701 Princeton Avenue SW, Birmingham, AL 35211, is a 505-bed facility that serves approximately 53,000 patients annually through primary and emergency care. Princeton is accredited by the American College of Surgeons Commission on Cancer and is committed to contributing to the future of health care through its clinical research and medical residency program.

PBMC offers a full range of services to meet the diverse needs of our patients including fast, life-saving response times for patients with chest pain or stroke symptoms; cardiology, including structural heart and valve care; orthopedics, including rehabilitation; psychiatric care; a comprehensive sleep center; and a Comprehensive Bariatrics Center, providing surgical and non-surgical weight-loss procedures.

Methodology

Community Health Needs Assessment Background

On June 6, 2019, Brookwood Baptist Health contracted with Carnahan Group to conduct a Community Health Needs Assessment (CHNA) for Princeton Baptist Medical Center (PBMC) as required by the Patient Protection and Affordable Care Act (PPACA). Please refer to Appendix A: Carnahan Group Qualifications for more information about Carnahan Group.

The PPACA, enacted on March 23, 2010, requires not-for-profit hospital organizations to conduct a CHNA once every three taxable years that meets the requirements the Internal Revenue Code 501(r) set forth by the PPACA. The PPACA defines a hospital organization as an organization that operates a facility required by a state to be licensed, registered, or similarly recognized as a hospital; or, a hospital organization is any other organization that the Treasury's Office of the Assistant Secretary ("Secretary") determines has the provision of hospital care as its principal function or purpose constituting the basis for its exemption under section 501(c)(3).

A CHNA is a report based on epidemiological, qualitative, and comparative methods that assess the health issues in a hospital organization's community and that community's access to services related to those issues. Based on the findings of the CHNA, an implementation strategy for PBMC that addresses the community health needs will be developed and adopted no later than five and a half months following the end of Fiscal Year 2019.

Secondary Data Collection and Analysis Methodology

A variety of data sources were utilized to gather demographic and health indicators for the community served by PBMC. Commonly used data sources include Esri, the U.S. Census Bureau, and the Centers for Disease Control and Prevention (CDC). Jefferson County defines the community served by PBMC. Demographic and health indicators are presented for the county.

For select indicators, county level data are compared to state and national benchmarks. Additionally, Healthy People 2020 (HP 2020) Goals are presented where applicable. The HP 2020 Goals, launched in December 2010, are science-based, ten-year national objectives for improving the health of all Americans.

Requirements

As required by the Treasury Department ("Treasury") and the Internal Revenue Service (IRS), this CHNA includes the following:

- A description of the community served;
- A description of the process and methods used to conduct the CHNA, including:
    - A description of the sources and dates of the data and the other information used in the assessment; and,
    - The analytical methods applied to identify community health needs.
- The identification of all organizations with which PBMC collaborated, if applicable, including their qualifications;
- A description of how PBMC took into account input from persons who represented the broad interests of the community served by PBMC, including those with special knowledge of or expertise in public health, written comments regarding the hospital's previous CHNA, and any individual providing input who was a leader or representative of the community served by PBMC; and,
- A prioritized description of all of the community health needs identified through the CHNA and a description of the process and criteria used in prioritizing those needs.

CHNA Strategy

This CHNA was conducted following the requirements outlined by the Treasury and the IRS, which included obtaining necessary information from the following sources:

- Input from persons who represented the broad interests of the community served by PBMC, which included those with special knowledge of or expertise in public health;
- Identifying federal, regional, state, or local health or other departments or agencies, with current data or other information relevant to the health needs of the community served by PBMC, leaders, representatives, or members of medically underserved, low-income, and minority populations with chronic disease needs in the community served by PBMC; and,
- Consultation or input from other persons located in and/or serving PBMC's community, such as:
    - Healthcare community advocates;
    - Nonprofit organizations;
    - Local government officials;
    - Community-based organizations, including organizations focused on one or more health issues;
    - Healthcare providers, including community health centers and other providers focusing on medically underserved populations, low-income persons, minority groups, or those with chronic disease needs.
- The sources used for PBMC's CHNA are provided in the References and Appendix B: Community Leader Interviewees. Information was gathered by conducting interviews with individuals representing community health and public service organizations, public health agencies, medical professionals, hospital administration and other hospital staff members.

Actions Taken Since 2016 CHNA

PBMC's previous Implementation Strategy outlined a plan for addressing the following priorities identified in the 2016 CHNA: cardiovascular disease, diabetes, obesity and nutrition, and sexually transmitted infections. The list below describes the strategies completed by PBMC.

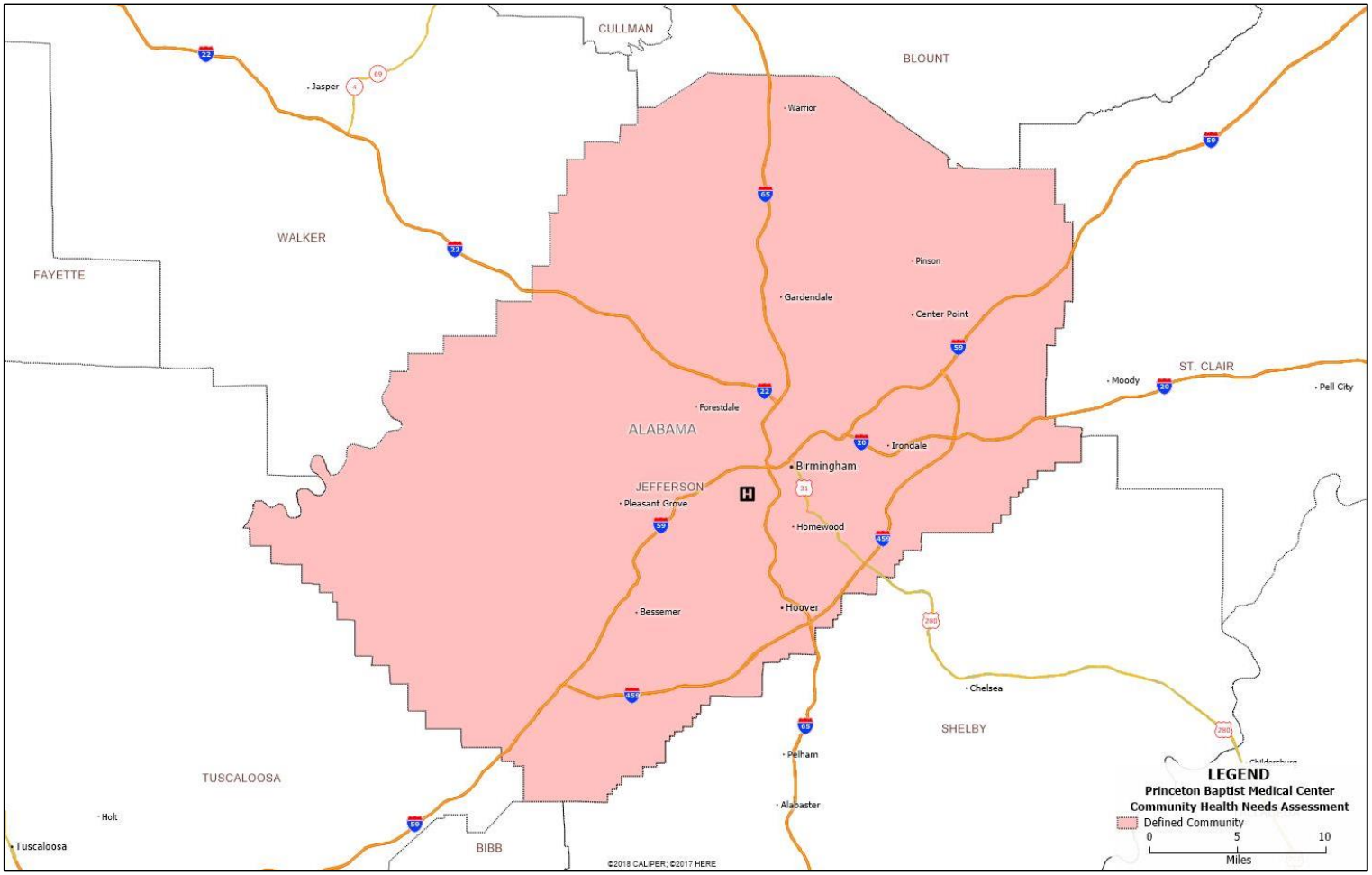
Actions Completed by CBMC 2017-2019

2016 CHNA Health Priorities	2016 Implementation Strategies	Actions Completed
Cardiovascular Disease	Improve cardiovascular health in order to prevent cardiovascular disease	The community relations team hosts regular health education and screening events including "Stroke Prevention and Awareness" sessions For the 2017 Birmingham Heart Walk PBMC raised $12,159 and BBH totaled $42,724
	Promote healthy living initiatives to increase engagement (for community members and employees)	Ongoing health coaching services Employee Wellness Programs are provided as a Tenet corporate benefit
Diabetes	Diabetes prevention programming (including physical activity programs)	YMCA partnership has led to a regular exercise and walking program at Princeton Towers Employee Wellness Programs are provided as a Tenet corporate benefit Youth physical activity programs are provided by Sports Medicine physicians Ongoing health coaching services
	Education	Continued community outreach events and health fairs
Obesity & Nutrition	Healthy living programs	Employees have access to tobacco cessation programs and online "Healthy Living" portal
	Education	Health screenings are offered at community-based events The community relations team arranges for speakers to provide education on a variety of topics Comprehensive Bariatric Center continues to offer bi-monthly weight loss seminars, bi-monthly support groups, and the Retrace Program for the bariatric population. The center also houses a gym available to employees and patients at no charge. Continued community outreach events and health fair attendance PBMC offers a Nutrition and Exercise Class weekly for patients
Sexually Transmitted Infections	Education Treatment resources	Continued community outreach events and health fair attendance Partnership with Jefferson County Health Department to offer Sex Education in senior living facilities

PBMC received no written feedback on the 2016 CHNA and Implementation Strategy.

Community Overview

For the purposes of the CHNA report, PBMC chose Jefferson County as the defined community. Because this community was chosen purely based on geography, it includes medically underserved, low income, and minority populations.



Source: Maptitude 2018

Community Overview (continued)

Health Professional Shortage Areas

Health Professional Shortage Areas (HPSAs) are designations that indicate health care provider shortages in primary care, dental health, or mental health.

Shortages may be geographic-, population-, or facility-based:

- **Geographic Area** - A shortage of providers for the entire population within a defined geographic area.
- **Population Groups** - A shortage of providers for a specific population group(s) within a defined geographic area (e.g., low income, migrant farmworkers, and other groups)

The following geographical areas are characterized as Health Professional Shortage Areas (HPSA) within the community:

County	Primary Care Designation	Dental Health Designation	Mental Health Designation	Rural Status
Jefferson	Low Income Population HPSA (Central Jefferson County Census Tracts)	Low Income Population HPSA	Low Income Population HPSA (Catchment Area M-5)	Non-Rural

Source: HRSA

Community Overview (continued)

Medically Underserved Areas

Medically Underserved Areas (MUAs) and Medically Underserved Populations (MUPs) identify geographic areas and populations with a lack of access to primary care services. MUAs have a shortage of primary care health services for residents within a geographic area while MUPs are specific sub-groups of people living in a defined geographic area with a shortage of primary care health services.

Designations are based on the Index of Medical Underservice (IMU). The IMU is calculated based on four criteria:

- the population to provider ratio;
- the percent of the population below the federal poverty level;
- the percent of the population over age 65; and
- the infant mortality rate.

IMU can range from 0 to 100, where zero represents the completely underserved. Areas or populations with IMUs of 62.0 or less qualify for designation as an MUA/P.

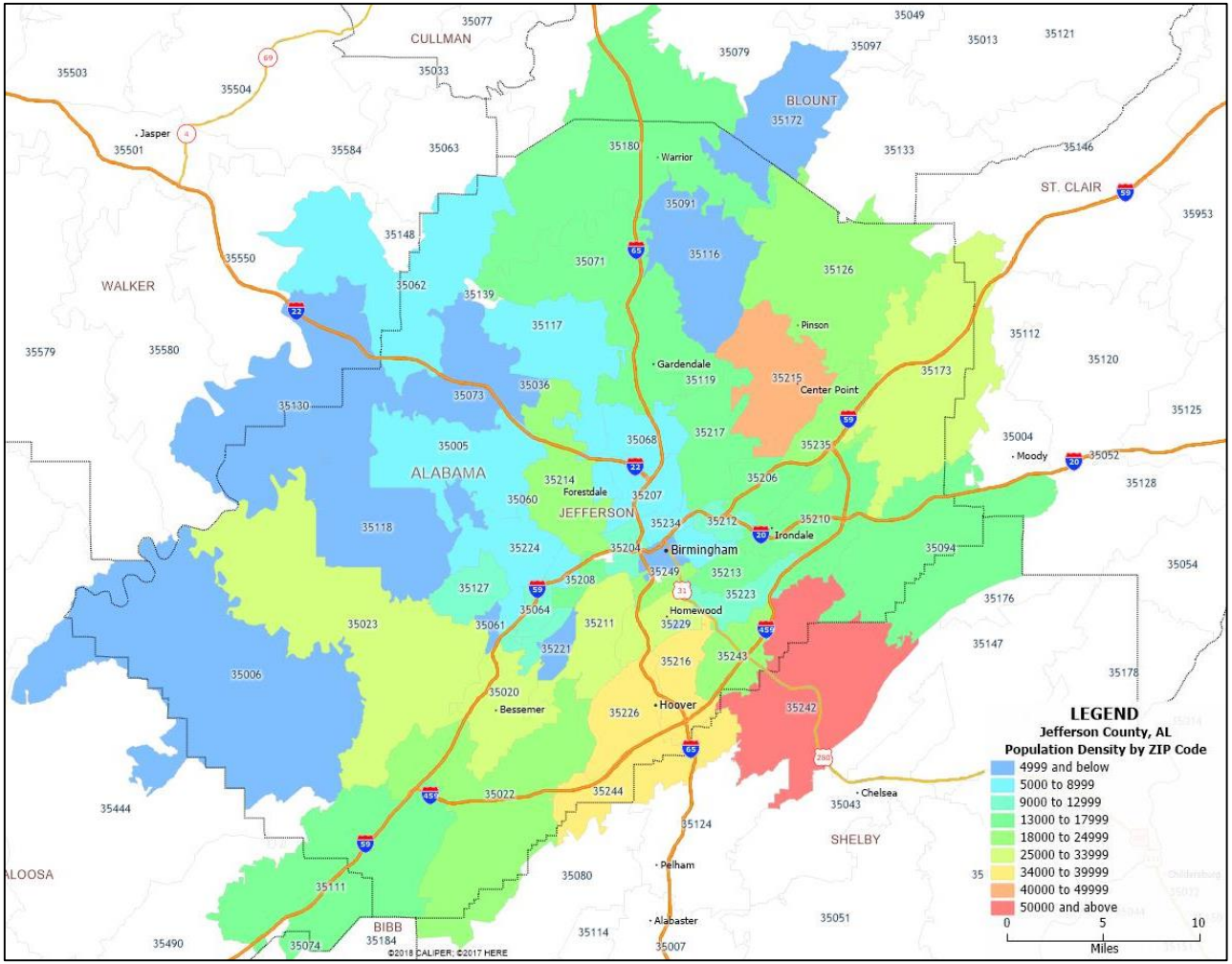
The following table describes the MUA within the community:

County	IMU Score	Medically Underserved Area Designation
Jefferson	Scored by Census Tract	Partial MUA, Partial MUP Low Income

Source: HRSA, Maptitude 2018

Health Profile

Demographics - Population Density by ZIP Code in PBMC's Community, 2019



Source: Esri 2018; Maptitude 2018

Population Change by ZIP Code

The overall projected population growth for the community is 1.9% over the next five years. Slight upward or downward changes are expected for most ZIP Codes. Substantial growth of 4.0% or greater is expected for ZIP Codes 35068 (Fultondale), 35091 (Kimberly), 35111 (Mc Calla), and for the following Birmingham ZIP Codes: 35203, 35213, 35222, 35233, 35242, and 35243. Population decline of 1.0% or greater is expected for 35005 (Adamsville), 35062 (Dora), 35073 (Graysville), 35127 (Pleasant Grove), and 35221 (Birmingham).

Total Community Population Change by ZIP Code, 2019-2024

ZIP Code	Community	Current Population	Projected 5-year Population	Percent Change
35005	Adamsville	7,404	7,317	-1.2%
35006	Adger	3,200	3,230	0.9%
35020	Bessemer	25,597	25,492	-0.4%
35022	Bessemer	21,931	22,735	3.7%
35023	Bessemer	25,256	25,275	0.1%
35060	Docena	403	403	0.0%
35061	Dolomite	1,555	1,548	-0.5%
35062	Dora	7,829	7,732	-1.2%
35064	Fairfield	10,878	10,808	-0.6%
35068	Fultondale	8,047	8,379	4.1%
35071	Gardendale	16,502	16,627	0.8%
35073	Graysville	2,552	2,525	-1.1%
35091	Kimberly	3,047	3,183	4.5%
35094	Leeds	16,029	16,461	2.7%
35111	Mc Calla	16,294	16,983	4.2%
35116	Morris	4,499	4,664	3.7%
35117	Mount Olive	5,508	5,545	0.7%
35118	Mulga	3,185	3,172	-0.4%
35126	Pinson	21,414	21,547	0.6%
35127	Pleasant Grove	9,494	9,347	-1.5%
35130	Quinton	3,350	3,360	0.3%
35172	Trafford	2,762	2,776	0.5%
35173	Trussville	26,860	27,522	2.5%
35180	Warrior	13,899	14,061	1.2%
35203	Birmingham	4,164	4,416	6.1%
35204	Birmingham	11,707	11,736	0.2%
35205	Birmingham	19,153	19,667	2.7%
35206	Birmingham	17,403	17,470	0.4%
35207	Birmingham	8,845	8,830	-0.2%
35208	Birmingham	15,122	15,052	-0.5%
35209	Birmingham	30,048	30,749	2.3%
35210	Birmingham	14,810	15,053	1.6%
35211	Birmingham	25,517	25,684	0.7%
35212	Birmingham	11,761	11,892	1.1%
35213	Birmingham	15,059	15,813	5.0%
35214	Birmingham	18,988	18,844	-0.8%
35215	Birmingham	46,324	46,321	0.0%
35216	Birmingham	36,936	37,413	1.3%
35217	Birmingham	13,897	13,969	0.5%
35218	Birmingham	7,163	7,243	1.1%
35221	Birmingham	4,487	4,372	-2.6%
35222	Birmingham	8,429	8,852	5.0%
35223	Birmingham	11,488	11,740	2.2%
35224	Birmingham	6,078	6,041	-0.6%
35226	Birmingham	34,437	35,385	2.8%
35228	Birmingham	10,579	10,641	0.6%
35229	Birmingham	1,006	1,003	-0.3%
35233	Birmingham	3,476	3,682	5.9%
35234	Birmingham	6,163	6,142	-0.3%
35235	Birmingham	19,416	19,472	0.3%
35242	Birmingham	56,029	59,962	7.0%
35243	Birmingham	19,580	20,403	4.2%
35244	Birmingham	36,274	37,619	3.7%
Total		**771,834**	**786,158**	**1.9%**

Source: Esri 2019

Population Change by Age and Gender

The population of children aged 5–14, adults aged 20–29, adults aged 35-39, and adults aged 55–64 are expected to decrease over the next five years. Slight population growth of 1.0% - 4.0% is expected for children aged 15–19, adults aged 30-34, adults aged 50–54, and adults aged 85 and older. Substantial population growth over greater than 8.0% is expected among residents aged 65-84 and adults aged 40–44.

Total Service Area Population Change by Age and Gender, 2019-2024

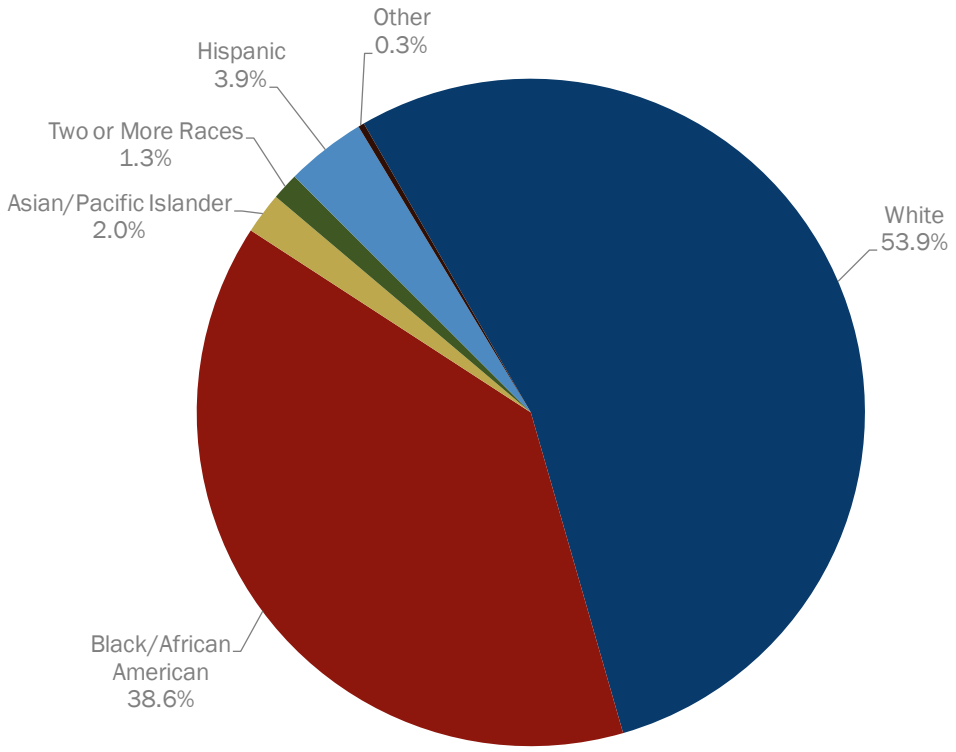
	2019			2024			Percent Change		
Age Group	Male	Female	Total	Male	Female	Total	Male	Female	Total
Age 00 through 04	22,999	22,349	45,348	23,121	22,330	45,451	0.5%	-0.1%	0.2%
Age 05 through 09	23,980	23,024	47,004	23,485	22,616	46,101	-2.1%	-1.8%	-1.9%
Age 10 through 14	24,957	23,797	48,754	24,922	23,721	48,643	-0.1%	-0.3%	-0.2%
Age 15 through 19	23,490	23,514	47,004	24,597	24,155	48,752	4.7%	2.7%	3.7%
Age 20 through 24	23,901	24,742	48,643	22,637	23,991	46,628	-5.3%	-3.0%	-4.1%
Age 25 through 29	27,513	27,797	55,310	25,000	25,210	50,210	-9.1%	-9.3%	-9.2%
Age 30 through 34	25,845	26,821	52,666	27,219	27,146	54,365	5.3%	1.2%	3.2%
Age 35 through 39	25,059	26,921	51,980	25,599	26,312	51,911	2.2%	-2.3%	-0.1%
Age 40 through 44	22,802	24,550	47,352	24,964	27,006	51,970	9.5%	10.0%	9.8%
Age 45 through 49	23,143	24,825	47,968	23,101	24,868	47,969	-0.2%	0.2%	0.0%
Age 50 through 54	22,820	24,949	47,769	23,454	25,047	48,501	2.8%	0.4%	1.5%
Age 55 through 59	24,869	28,072	52,941	22,481	24,754	47,235	-9.6%	-11.8%	-10.8%
Age 60 through 64	23,299	27,212	50,511	23,368	26,662	50,030	0.3%	-2.0%	-1.0%
Age 65 through 69	19,600	23,502	43,102	21,260	25,482	46,742	8.5%	8.4%	8.4%
Age 70 through 74	14,569	18,147	32,716	17,053	21,554	38,607	17.0%	18.8%	18.0%
Age 75 through 79	9,208	12,591	21,799	12,256	16,281	28,537	33.1%	29.3%	30.9%
Age 80 through 84	5,730	8,968	14,698	7,084	10,515	17,599	23.6%	17.3%	19.7%
Age 85 and over	5,281	10,988	16,269	5,613	11,294	16,907	6.3%	2.8%	3.9%
Total	**369,065**	**402,769**	**771,834**	**377,214**	**408,944**	**786,158**	**2.2%**	**1.5%**	**1.9%**

Source: Esri 2019

Current Population by Race/Ethnicity

The most common race/ethnicity in PBMC's community is white (53.9%) followed by Black/African American (38.6%), Hispanic (3.9%), Asian/Pacific Islander (2.0%), individuals of two races (1.3%) and individuals of other races (0.3%).

Total Service Area Population by Race/Ethnicity, 2019



Source: Esri 2019

Population Change by Race/Ethnicity

Substantial population growth is expected for Asian/Pacific Islanders (19.0%), individuals of two or more races (21.2%), and Hispanics (5.9%) over the next five years. Moderate growth is expected for the Black/African American population (3.5%), and other races (2.0%). The white population is expected to decrease slightly (-0.7%).

Total Service Area Population Change by Race/Ethnicity, 2019-2024

Race/Ethnicity	2019	2024	Percent Change
White	415,836	412,927	-0.7%
Black/African American	298,231	308,569	3.5%
Asian/Pacific Islander	15,441	18,373	19.0%
Two or More Races	10,134	12,280	21.2%
Hispanic	29,923	31,695	5.9%
Other	2,269	2,314	2.0%

Source: Esri 2019

Socioeconomic Characteristics

According to HP2020, socioeconomic status (SES) is most often based on a person's income, education level, occupation, social status in the community, and geographic location. Studies have found that SES, more than race or ethnicity, predicts the likelihood of an individual's or group's access to education, health insurance, health care services, and safe and healthy living or working conditions.

According to the U.S. Bureau of Labor Statistics, the 2019 annual unemployment average for Jefferson County (3.7%) was lower than the Alabama and United States averages (both 3.9%). The U.S. Census American Community Survey (ACS) publishes median household income and poverty estimates. According to 2013–2017 estimates, the median household income in Jefferson County ($49,321) was higher than Alabama's ($46,472) but lower than the United States ($57,652).

Poverty thresholds are determined by family size, number of children, and age of the head of the household. A family's income before taxes is compared to the annual poverty thresholds. If the income is below the threshold, the family and each individual in it are considered to be in poverty. As of January 11, 2019, the 2019 federal poverty threshold for a family of four was $25,750. The ACS estimates indicate that the percentage of individuals below the poverty level in Jefferson County (17.6%) was higher than in Alabama (16.9%) and in the United States (12.3%). Children in Jefferson County were less likely to be living below the poverty level (25.6%) compared to all children in Alabama (26.0%). However, the child poverty rate in Jefferson County exceeded the United States rate (20.3%).

Socioeconomic Characteristics

	Jefferson	Alabama	United States
Unemployment Rate[1]	3.7%	**3.9%**	**3.9%**
Median Household Income[2]	$ 49,321	**$ 46,472**	**$ 57,652**
Individuals Below Poverty Level[2]	17.6%	**16.9%**	**12.3%**
Children Below Poverty Level[2]	25.6%	**26.0%**	**20.3%**

[1] Source: Bureau of Labor Statistics, 2018 Annual Average

[2] Source: U.S. Census - ACS, 2013-2017 estimates

Educational Attainment

The U.S. Census ACS publishes estimates of the highest level of education completed for residents aged 25 years and older. The ACS 2013--2017 estimates indicate that Jefferson County had fewer individuals who had not earned a high school diploma than Alabama and the nation as a whole. During the same time frame, the percentage of the population who had earned a Bachelor's, graduate, or professional degree was higher in Jefferson County than in the state or the nation.

Highest Level of Education Completed by Persons 25 Years and Older, 2013-2017

	Jefferson	Alabama	United States
Less than 9th grade	3.0%	**4.7%**	**5.4%**
9th to 12th grade, no diploma	7.6%	**10.0%**	**7.2%**
High school degree or equivalent	26.8%	**30.9%**	**27.3%**
Some college, no degree	22.6%	**21.7%**	**20.8%**
Associate's degree	8.1%	**8.2%**	**8.3%**
Bachelor's degree	19.4%	**15.4%**	**19.1%**
Graduate or professional degree	12.5%	**9.1%**	**11.8%**

Source: U.S. Census, ACS 2013-2017 estimates

Crime Rates

According to the Alabama Law Enforcement Agency, in 2017 the homicide rate in Jefferson County (14.4 per 100,000 population) was significantly higher than the rate in Alabama (8.1) and the United States (5.4). The rate of rape in Jefferson County was lower than the state and national benchmarks during the same time period. Robbery (143.1 per 100,000) and assault (441.2) rates were higher in Jefferson County than in Alabama and the United States.

Violent Crime Rates, 2017

	Jefferson	Alabama	United States*
Homicide	14.4	**8.1**	**5.4**
Rape	29.6	**39.5**	**42.4**
Robbery	143.1	**79.8**	**101.2**
Assault	441.2	**364.3**	**252.4**

Source = Alabama Law Enforcement Agency, Crime in Alabama 2017

* Source = Federal Bureau of Investigation, Crime in the United States 2017

Rates are per 100,000 population

Housing

The U.S. Census Bureau ACS 2013-2017 estimates indicated that residents of Jefferson County had a lower rate of home ownership (62.8%) than the Alabama and U.S. averages (68.6% and 64.0%, respectively). County Health Rankings also publishes an estimate of the percent of residents faced with a severe housing cost burden by county. A greater number of individuals within Jefferson County faced a severe housing cost burden from 2013 to 2017 (15.6%) when compared to the state (12.9%) and the nation (15.0%).

From 2013-2017, the segregation indices for both Black/White (65.0) and non-White/White (61.0) populations were higher within Jefferson County than in Alabama and the United States.

Home Ownership and Residential Segregation, 2013-2017

	Jefferson	Alabama	United States
Homeownership	62.8%	**68.6%**	**64.0%**
Severe housing cost burden	15.6%	**12.9%**	**15.0%**
Residential segregation - Black/White	65.0	**57.0**	**62.0**
Residential segregation - non-White/White	61.0	**51.2**	**47.0**

Source: U.S. Census - ACS, 2013-2017 estimates, County Health Rankings

Residential segregation shown as a segregation index

Health Outcomes & Risk Factors

The Centers for Disease Control and Prevention (CDC) publish mortality and life expectancy data by county. From 2013-2017, the age-adjusted mortality rate from all causes in Jefferson County was higher than the mortality rate in Alabama during the same time frame (932.6 and 919.3 deaths per 100,000 population, respectively).

According to the CDC National Center for Health Statistics, from 2015-2017 the life expectancy in Jefferson County of 74.7 years was lower than the life expectancy within the state of Alabama (75.4 years). The life expectancy for black individuals (73.0 years) was lower than that of white individuals (75.8 years) within Jefferson County, which is similar to the trend observed at the national level. In the United States, the life expectancy at birth for the white population was 78.8 years in 2017 while the life expectancy for the black population was 75.3 years.

Mortality Indicators

	Jefferson	Alabama
Age-adjusted mortality from all causes[1]	932.6	**919.3**
Life expectancy[2]	74.7	**75.4**
White life expectancy[2]	75.8	*
Black life expectancy[2]	73.0	*
Hispanic life expectancy[2]	*	*

[1] Source: CDC Wonder, Multiple Cause of Death 2013-2017

[2] Source: National Center for Health Statistics Mortality File 2015-2017

Mortality rates are per 100,000 population and life expectancy is shown in years of age

* Insufficient data

Leading Causes of Death

According to the Centers for Disease Control and Prevention, heart disease and cancer are the first and second leading causes of death (COD), respectively, in Jefferson County, Alabama, and the nation. The death rates in Jefferson county exceeded both the state and national benchmarks for cancer, stroke, accident, diabetes, kidney disease, septicemia, and assault (homicide). Jefferson County's mortality rates for heart disease, Alzheimer's disease, influenza and pneumonia, hypertension, and Parkinson's disease exceeded national benchmarks but were lower than the state's mortality rates. Death rates for chronic lower respiratory disease, suicide, chronic liver disease and cirrhosis, pneumonitis, and other neoplasms were equal to or lower than state and national benchmarks.

Leading Causes of Death

	Jefferson	Alabama	United States
Heart disease	193.3	**225.5**	**167.1**
Cancer	178.8	**175.8**	**158.1**
Chronic lower respiratory disease	40.0	**55.8**	**41.1**
Stroke	58.4	**50.1**	**37.1**
(Unintentional injury) Accident	57.7	**51.3**	**44.0**
Alzheimer's disease	35.6	**39.0**	**28.0**
Diabetes	22.1	**21.7**	**21.2**
Influenza and pneumonia	18.9	**19.0**	**14.8**
Kidney disease	19.4	**17.9**	**13.2**
Septicemia	22.4	**17.8**	**10.7**
Suicide	13.2	**15.2**	**13.3**
Chronic liver disease and cirrhosis	10.6	**12.1**	**10.6**
Hypertension[1]	8.7	**9.7**	**8.6**
Assault (homicide)	19.2	**10.4**	**5.7**
Pneumonitis	4.9	**5.7**	**5.2**
Other Neoplasms (benign)	4.2	**4.2**	**4.3**
Parkinson's disease	8.5	**8.7**	**7.8**

Source: CDC Wonder, Multiple Cause of Death 2013-2017

Age-Adjusted Death Rates are per 100,000 population

[1] Hypertension includes essential primary hypertension and hypertensive renal disease with renal failure

Heart Disease Mortality

According to the Centers for Disease Control and Prevention, Jefferson County's age-adjusted mortality rate for all heart disease per 100,000 adults aged 45 to 64 was lower than the state rates but exceeded the national rates from 2014 to 2016.

Within the state of Alabama and the United States, heart disease mortality in adults aged 45 to 64 and older was higher for males than for females. Both the male and female heart disease death rates in Jefferson County were higher than the national rates but lower than the Alabama rates.

Adults aged 45 to 64 with Black (Non-Hispanic) race/ethnicity were more likely than those with White (Non-Hispanic) race/ethnicity to die of heart disease. The mortality rate for White (Non-Hispanic) adults age 45 to 64 in Jefferson County was 138.9, while the mortality rate for Black (Non-Hispanic) adults aged 45 to 64 was 212.5 per 100,000. The heart disease death rate for Black (non-Hispanic) individuals in Jefferson County was lower than the state and national death rates for Black (non-Hispanic) individuals.

Age-Adjusted All Heart Disease Death Rates per 100,000 Adults Age 45 to 64 by Race and Gender, 2014-2016

	Jefferson	Alabama	United States
All Heart Disease, All Races/Ethnicities	168.1	198.6	**122.6**
All Heart Disease, Black (Non-Hispanic)	212.5	246.5	**213.2**
All Heart Disease, White (Non-Hispanic)	138.9	190.1	**121.4**
All Heart Disease, Hispanic	143.2	77.8	**73.5**
All Heart Disease, Male	230.7	268.2	**175.1**
All Heart Disease, Female	113.6	134.3	**72.8**

Source: Centers for Disease Control and Prevention

Heart Attack Mortality

According to the Centers for Disease Control and Prevention, Jefferson County's age-adjusted mortality rate for heart attacks per 100,000 adults aged 45 to 64 (28.5) was lower than the Alabama death rate (44.3) but higher than the U.S. rate (27.9) from 2014-2016.

Within Jefferson County, Black (Non-Hispanic) adults aged 45 to 64 were more likely to die of a heart attack (32.4 deaths per 100,000) than White (Non-Hispanic) adults aged 45 to 64 (26.6). This trend was not observed at the state level but was present at the national level. The heart attack death rate for Black (Non-Hispanic) individuals in Jefferson County was lower than the death rates for Black (Non-Hispanic) individuals in Alabama and the United States.

The heart attack mortality rates for males and females aged 45 to 64 in Jefferson County were lower than the state rates, but greater than the national rates from 2014-2016. Across the county, state, and national levels, the heart attack death rates for females were significantly lower than the death rates for males.

Age-Adjusted Heart Attack Mortality Rates per 100,000 Adults Ages 45 to 64 by Race and Gender, 2014-2016

	Jefferson	Alabama	United States
Heart Attack, All Races/Ethnicities	28.5	44.3	**27.9**
Heart Attack, Black (Non-Hispanic)	32.4	41.6	**34.8**
Heart Attack, White (Non-Hispanic)	26.6	47.1	**30.0**
Heart Attack, Hispanic	9.6	*	**16.9**
Heart Attack, Male	42.6	63.3	**41.3**
Heart Attack, Female	15.9	26.8	**15.2**

Source: Centers for Disease Control and Prevention

* Insufficient Data

Hypertension Mortality

According to the Centers for Disease Control and Prevention, age-adjusted hypertension mortality rates per 100,000 adults aged 45 to 64 were lower in Jefferson County (89.1) than in Alabama and the United States (both 89.7).

Males aged 45 to 64 had a higher hypertension death rate than females within Jefferson County, Alabama, and the United States from 2014-2016. Across the county, state, and national levels, the hypertension death rates for females were lower than the corresponding death rates for males.

In Jefferson County, Black (Non-Hispanic) adults aged 45 to 64 were much more likely to die of hypertension than White (Non-Hispanic) adults aged 45 to 64. This trend persisted at the state and national levels. Black (Non-Hispanic) individuals in Jefferson County had a lower hypertension mortality rate (125.9 per 100,000) than Black (Non-Hispanic) individuals in Alabama (148.4) and the United States (189.1).

Age-Adjusted Hypertension Death Rates per 100,000 Adults Ages 45 to 64 by Race and Gender, 2014-2016

	Jefferson	Alabama	United States
Hypertension, All Races/Ethnicities	89.1	89.7	**89.7**
Hypertension, Black (Non-Hispanic)	125.9	148.4	**189.1**
Hypertension, White (Non-Hispanic)	60.9	72.7	**80.4**
Hypertension, Hispanic	33.3	30.1	**66.6**
Hypertension, Male	120.0	116.9	**121.8**
Hypertension, Female	60.3	64.6	**59.4**

Source: Centers for Disease Control and Prevention

Stroke Mortality

According to the Centers for Disease Control and Prevention, the age-adjusted stroke mortality rate per 100,000 adults aged 45 to 64 was higher in Jefferson County (39.0) than in Alabama (33.7) and the United States (19.1) from 2014-2016.

Within Jefferson County, adults aged 45 to 64 with Black (Non-Hispanic) race/ethnicity had a higher stroke mortality rate (54.8) than those with White (Non-Hispanic) race/ethnicity (28.1). The same trend was observed at the state and national levels.

Males aged 45 to 64 had higher stroke mortality rates than females aged 45 to 64 in Jefferson County, Alabama, and the United States from 2014-2016. In Jefferson County, the male and female death rates exceeded the corresponding state and national benchmarks during the same time frame.

Age-Adjusted Stroke Death Rates per 100,000 Adults Ages 45 to 64 by Race and Gender, 2014-2016

	Jefferson	Alabama	United States
All Stroke, All Races/Ethnicities	39.0	33.7	**19.1**
All Stroke, Black (Non-Hispanic)	54.8	54.9	**41.4**
All Stroke, White (Non-Hispanic)	28.1	27.4	**16.0**
All Stroke, Hispanic	15.1	*	**16.6**
All Stroke, Male	46.5	39.5	**22.4**
All Stroke, Female	30.1	28.4	**16.0**

Source: Centers for Disease Control and Prevention

* Insufficient Data

Cancer Screenings

The Centers for Medicare and Medicaid publish information on screenings completed by beneficiaries in the Mapping Medicare Disparities Tool. In 2017, the percentage of Jefferson County Medicare beneficiaries who received mammograms (33%) was higher than the statewide rate (31%). The number of beneficiaries who received prostate cancer screens (23%) was slightly lower than the corresponding statewide screening rate (24%). The rates of colorectal cancer screening and cervical cancer screening amongst Medicare beneficiaries in Jefferson County were the same as the state rates.

Percentage of Medicare Beneficiaries Receiving Select Cancer Screenings, 2017

	Jefferson	Alabama
Mammogram	33%	**31%**
Prostate Cancer Screening	23%	**24%**
Colorectal Cancer Screening	6%	**6%**
Cervical Cancer Screening (Pap Smear)	7%	**7%**

Source: Centers for Medicare and Medicaid, Mapping Medicare Disparities Tool, 2017

Cancer Incidence

The National Cancer Institute reports cancer incidence rates on a state and county level. Tables detailing select cancer incidence rates per 100,000 population from 2012-2016 can be found below.

- The combined incidence rate of all cancer sites in Jefferson County was higher than the state and national benchmarks.
- Jefferson's incidence rates for prostate, breast, pancreatic, brain, and stomach cancers were higher than the state and national benchmarks.
- The incidence rates for Jefferson County were equal to or lower than the state incidence rates, but higher than the national benchmark rates in the following: lung, colorectal, ovarian, and cervical cancers.

Select Cancer Incidence Rates, 2012 – 2016

	Jefferson	Alabama	United States
All Cancer Sites[1]	455.5	**451.9**	**448.0**
Lung and bronchus[1]	61.5	**66.4**	**59.2**
Prostate[2]	153.9	**119.5**	**104.1**
Breast[3]	132.7	**122.1**	**125.2**
Colon and rectum[1]	39.8	**44.0**	**38.7**
Pancreas[1]	13.2	**12.8**	**12.8**
Ovarian[3]	11.7	**11.7**	**11.1**
Brain[1]	7.3	**6.5**	**6.5**
Stomach[1]	8.4	**6.6**	**6.6**
Cervical[3]	8.8	**9.3**	**7.6**

Source: National Cancer Institute - State Cancer Profiles

[1]Rates are per 100,000 males

[2]Rates are per 100,000 females

[3]Rates are per 100,000 population

Cancer Mortality

The National Cancer Institute reports cancer mortality rates on a state and county level. Tables detailing select cancer mortality rates per 100,000 population from 2012-2016 can be found below.

- The combined mortality rate of all cancer sites in Jefferson County was higher than the state and national benchmarks.
- Mortality rates were higher in Jefferson County than the Alabama and United States rates for prostate, breast, colorectal, pancreatic, brain, stomach, and cervical cancers.
- The county's death rate for lung cancer (48.0) fell in between the national (41.9) and state (51.9) rates.
- The ovarian cancer death rate in Jefferson County (6.9 per 100,000 females) was lower than both the state and national benchmarks.

Select Cancer Mortality Rates, 2012 – 2016

	Jefferson	Alabama	United States
All Cancer Sites[1]	180.5	**179.0**	**161.0**
Lung and bronchus[1]	48.0	**51.9**	**41.9**
Prostate[2]	24.2	**21.7**	**19.2**
Breast[3]	26.0	**21.8**	**20.6**
Colon and rectum[1]	16.2	**16.1**	**14.2**
Pancreas[1]	12.4	**11.5**	**11.0**
Ovarian[3]	6.9	**7.4**	**7.0**
Brain[1]	5.5	**5.2**	**4.4**
Stomach[1]	3.7	**3.4**	**3.1**
Cervical[3]	3.8	**3.5**	**2.3**

Source: National Cancer Institute - State Cancer Profiles

[1]Rates are per 100,000 population

[2]Rates are per 100,000 males

[3]Rates are per 100,000 females

Diabetes Incidence

According to the CDC's Division of Diabetes Translation, in 2016 the percentage of adults aged 20 and older who had been diagnosed with diabetes was 11.7% in Jefferson County. The county's incidence rate was lower than the state rate (13.2%) but significantly higher than the national benchmark (8.5%).

Age-Adjusted Diabetes in Adults Ages 20 and Older, 2016

	Jefferson	Alabama*	United States
Adults with diagnosed diabetes	11.7%	**13.2%**	**8.5%**

Source: Centers for Disease Control and Prevention, Division of Diabetes Translation

*State and national data reflect adults aged 18+

Weight Status

The Behavioral Risk Factor Surveillance System (BRFSS) collects data and reports on health-related risk behaviors, chronic health conditions, and use of preventative services. In 2017, the adult obesity rate in Jefferson County was identical to the state rate (36.3%) and higher than the national rate (34.4%).

Adult Obesity Rate, 2017

	Jefferson	Alabama	United States
Adult obesity rate	36.3%	**36.3%**	**30.1%**

Source: Behavioral Risk Factor Surveillance System and Alabama Department of Public Health, 2017

Nutrition and Food Insecurity

The U.S. Department of Agriculture publishes the Food Environment Atlas which includes information on food insecurity, food deserts, and access to healthy foods. Jefferson County's food environment index rating of 6.2 was higher than the Alabama index (5.8) but lower than the United States rating (7.7) based on 2015-2016 data points. The percent of county residents experiencing limited access to healthy foods (12.3%) was significantly higher than both the state and national benchmarks. According to Map the Meal Gap, published by Feeding America in 2017, 17.8% of individuals in Jefferson county experienced food insecurity, which was higher than the state average (16.3%) and the U.S. average (12.5%).

Access to Healthy Foods, 2015-2017

	Jefferson	Alabama	United States
Food environment index [1]	6.2	**5.8**	**7.7**
Limited Access to Healthy Foods [1]	12.3%	**7.9%**	**6.0%**
Food insecurity [2]	17.8%	**16.3%**	**12.5%**
Average meal cost [2]	$ 3.11	**$ 2.98**	**$ 3.02**

[1] USDA Food Environment Atlas, 2015-2016

[2] Map the Meal Gap, 2017

Physical Activity

The Centers for Disease Control and Prevention and County Health Rankings collect data on physical inactivity and access to physical fitness venues.

In 2015, Jefferson County had a slightly lesser rate of physical inactivity (27.9%) than the state of Alabama (28.2%), but a much higher physical inactivity rate than the nation (22.0%). Jefferson County residents had greater access to recreation and fitness facilities when compared to the state of Alabama (61.6%), although the county's access rate was lower than the national benchmark (84.0%).

Physical Inactivity

	Jefferson	Alabama	United States
Physical inactivity [1]	27.9%	**28.2%**	**22.0%**
Access to exercise opportunities [2]	79.5%	**61.6%**	**84.0%**

[1] CDC Diabetes Interactive Atlas, 2015

[2] County Health Rankings 2019

Sexually Transmitted Infections

The Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention reports on rates of sexually transmitted infections (STIs) by county. Jefferson County had drastically higher rates of chlamydia, gonorrhea, and primary and secondary syphilis than the state and the nation.

In 2016, the prevalence of HIV in Jefferson County was approximately double that of the state rate and much higher than the national prevalence rates. The rate of newly diagnosed HIV cases within the county was also significantly higher than the Alabama and U.S. rates.

Rate of Reported Cases of Sexually Transmitted Infections, 2017

	Jefferson	Alabama	United States
Chlamydia	914.9	614.1	**524.6**
Gonorrhea	443.0	245.1	**170.6**
Primary and Secondary Syphilis	14.7	8.7	**9.4**

Source: Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, 2017

Rates are per 100,000 population

HIV Prevalence and Diagnosis Rate, 2016–2017

	Jefferson	Alabama	United States
HIV prevalence, 2016	621.1	309.9	**365.5**
Newly Diagnosed HIV Case Rate, 2017	25.7	15.9	**14.0**

Source: Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, 2017

Rates are per 100,000 population

Maternal and Child Health

The Alabama Department of Public Health and the National Center for Health Statistics publish data on maternal and child health indicators. The birth rate in Jefferson County (13.1 per 1,000 population) was higher than the state and national rates in 2016 (both 12.2). The 2015 teen birth rate, measured per 1,000 females aged 15-19, was lower in Jefferson County (27.9) than in Alabama (30.1), although both exceeded the national rate (22.3).

In 2017, the infant mortality rate per 1,000 live births was higher in Jefferson County (10.5) than in Alabama (7.4) and the United States (5.8). Jefferson County's rate of low-birthweight births in 2016 (11.7%) was higher than the state and national rates. The proportion of mothers with inadequate prenatal care in Jefferson County (19.7%) was higher than the Alabama benchmark (18.2%) during 2016.

Births and Infant Morbidity and Mortality, 2015–2017

	Jefferson	Alabama	United States
Birth rate (per 1,000 population), 2016[1]	13.1	**12.2**	**12.2**
Teen birth rate (per 1,000 women aged 15–19 years), 2015[2]	27.9	**30.1**	**22.3**
Infant mortality rate (per 1,000 live births), 2017[3]	10.5	**7.4**	**5.8**
Low birthweight, 2016[1]	11.7%	**10.3%**	**8.2%**
Inadequate prenatal care, 2016[1]	19.7%	**18.2%**	**N/A**

[1]Source: Alabama Department of Public Health, Alabama Vital Statistics 2016

[2]Source: National Center for Health Statistics

[3]Source: Alabama Department of Public Health, Center for Health Statistics

Inadequate prenatal care refers to the percentage of births for which the adequacy of prenatal care utilization index was known, comparable national data unavailable

Access to Care

According to the Census Bureau's ACS 2013–2017 estimates, 10.3% of Jefferson County residents had no health insurance coverage, compared to 10.7% of Alabama residents and 10.5% of Americans. The number of children without health insurance in Jefferson County (4.2%) during the same time period was higher than the state benchmark but lower than the amount of children in the U.S. without health insurance coverage (5.7%).

A lower proportion of individuals received public health insurance in Jefferson County (34.6%) than in Alabama (36.1%), although both rates exceeded the national rate of public insurance coverage (33.8%). A greater number of individuals had private health insurance coverage in Jefferson County (67.4%) when compared to the state of Alabama (66.9%) and the nation (67.2%).

Health Insurance Coverage, 2013-2017

	Jefferson	Alabama	United States
Private insurance coverage	67.4%	**66.9%**	**67.2%**
Public insurance coverage	34.6%	**36.1%**	**33.8%**
No health insurance coverage	10.3%	**10.7%**	**10.5%**
No health insurance coverage (children)	4.2%	**3.5%**	**5.7%**

Source: US Census, ACS 2013-2017

Substance Abuse

The CDC's National Center for Injury Prevention and Control provides estimates of the number of opioid prescriptions dispensed per person, per year. Within Jefferson County the prescribing rate (104.2) was nearly double the national rate of 58.7 in 2017.

Opioid Prescriptions Dispensed per 100 Persons per Year

	Jefferson	Alabama	United States
Opioid prescribing rate 2017	104.2	**107.2**	**58.7**

Source: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control

Mental Health

County Health Rankings provides an estimate of access to mental health providers in the form of a ratio of the county population to mental health providers. The ratio represents the number of individuals served by one mental health provider in a county, if the population were equally distributed across providers. The ratio for Jefferson County was 640:1 in 2018 which was better than the ratio for the state of Alabama but worse than the United States ratio.

Mental Health Provider Ratio, 2018

	Jefferson	Alabama	United States
Mental health provider ratio	640 :1	**1,100:1**	**440:1**

Source: County Health Rankings 2019, CMS, National Provider Identification 2018

Health Behaviors

The Behavioral Risk Factor Surveillance System collects data on adult smoking and alcohol consumption. In 2016, Jefferson County's adult smoking rate of 18.4% was lower than the Alabama rate (21.5%) but higher than the national benchmark (17.0%). Jefferson County had a higher proportion of adults reporting excessive drinking (16.1%) than Alabama (14.2%), although both rates were lower than the United States (18.0%).

Behavioral Risk Factors, 2016

	Jefferson	Alabama	United States
Adult smokers	18.4%	**21.5%**	**17.0%**
Excessive drinking	16.1%	**14.2%**	**18.0%**

Source: Behavioral Risk Factor Surveillance System, 2016

Health Outcomes

The National Center for Health Statistics provides estimates of premature death. Jefferson County's premature death indicator (10,995 years of potential life lost per 100,000 population) was higher than the indicators for Alabama (9,917 years) and the United States (6,900 years) from 2015 to 2017.

The Behavioral Risk Factor Surveillance System collects data on self-reported physical and mental health. In 2016, a lesser proportion of individuals in Jefferson County reported poor or fair health (19.8%) than in Alabama (21.4%). Both exceeded the national benchmark (16.0%).

Residents in Jefferson County reported a fewer number of poor physical health days than the state benchmark. Similarly, those in Jefferson County reported a fewer number of poor mental health days than the Alabama average. Jefferson County's averages for both physical and mental health days exceeded the national benchmarks.

Health Outcomes

	Jefferson	Alabama	United States
Premature death indicator [1]	10,995	**9,917**	**6,900**
Poor or fair health [2]	19.8%	**21.4%**	**16.0%**
Poor physical health days[2]	4.0	**4.4**	**3.7**
Poor mental health days [2]	4.3	**4.6**	**3.8**

Source: [1] National Center for Health Statistics, 2015-2017, shown in years of potential life lost before age 75 per 100,000 population

[2] Behavioral Risk Factor Surveillance System, 2016

Community Input

The interview and survey data is qualitative in nature and should be interpreted as reflecting the values and perceptions of those interviewed. This portion of the CHNA process is designed to gather input from persons who represent the broad interest of the community serviced by PBMC, as well as individuals providing input who have special knowledge or expertise in public health. It is intended to provide depth and richness to the quantitative data collected.

Community Leader Interviews

Interview Methodology

Seventeen interviews were conducted from September 9, through October 2, 2019. Interviews required approximately 30 minutes to complete. Interviewers followed the same process for each interview, which included documenting the interviewee's expertise and experience related to the community. Additionally, the following community-focused questions were used as the basis for discussion:

- Interviewee's name
- Interviewee's title
- Interviewee's organization
- Overview information about the interviewee's organization
- What are the top strengths of the community?
- What are the top health concerns of the community?
- What do you think is the single most important thing that could be done to improve the health in your community?
- What are the barriers to obtaining health services in your community?
- What health resources are available in your community?
- What health resources does your community currently need more of?
- What sub-populations are medically underserved in your community?
- Is there anything else we should know about your community that we have not already discussed?

Community Leader Interview Summary

There was a variety of topics discussed during community leader interviews. Common themes that emerged include collaboration amongst community-based organizations, mental health, chronic disease prevalence, and a lack of health equity.

Concerns

Mental health was the most frequently discussed concern amongst community leaders. Many interviewees mentioned mental health as either the single most important issue or as a significant community health problem. Most felt that mental health is a major issue because of the stigma surrounding mental illness, the availability of mental health services, the deficit of mental health providers, and the lack of treatment facilities. Mental health was also discussed in the context of comorbid substance abuse disorders.

The inability of individuals to navigate the healthcare system was a worry for some interviewees. Low levels of health literacy were thought to lead community members to have issues accessing the right type of healthcare at the right time. Health literacy was discussed within the context of low socioeconomic status, health insurance coverage, and the social determinants of health. As one interviewee noted, “The social determinants shape an individual’s potential to be healthy.”

Numerous community leaders reported chronic disease as their greatest health-related concern. One interviewee noted that cultural norms around types of cuisine have been detrimental to the overall health of Jefferson County citizens. Multiple community leaders requested more be done to improve access to healthy foods, like increasing healthy eating initiatives and having more resources to connect low-income people with healthier food choices. Leaders also discussed a lack of health equity in Jefferson County. Interviewees were concerned with how the geographical maldistribution of services in the area impacted health disparities.

Community Leader Interview Summary (continued)

Barriers

The high cost of care, and financial barriers faced by low-income individuals in the community were discussed at length by leaders. The uninsured and under-insured were thought to face the greatest resistance in seeking care, especially in light of the state deciding not to expand the Medicaid program. Other barriers mentioned included provider shortages, income inequality, low levels of health literacy, mental health issues, health policies at the state level, and systemic racism.

Strengths and Assets

When asked to discuss local assets, many leaders mentioned the variety of hospitals, specialty care providers, and other healthcare facilities available within Birmingham and the surrounding region. Community-based organizations cited as strengths included the Bold Goals Coalition, the United Way, Health Action Partnership, the Community Foundation of Greater Birmingham, Bimingham Cares, local foodbanks, and faith-based organizations.

Resources

Leaders were also asked to share resources that they felt were missing from the community. The most frequently indicated needs related to mental health services and the social determinants of health (SDOH). Interviewees would like to see additional mental health facilities, extenders trained in mental health, a local psychiatric crisis center, and the involvement of the faith-based community in tackling mental health concerns.
In order to tackle the SDOH, leaders noted the need for improved access to healthy foods, improved education opportunities, increased wages and employment, housing improvements, and a reduction in crime and violence in the area served by PBMC. Existing resources like the Community Food Bank of AL, Cahaba Medical Care, Christ Health Center, and Urban Ministries were mentioned by multiple leaders.

Another theme that emerged was the need for care coordination and patient navigation. The leaders suggested embedding additional healthcare providers like social workers and Community Health Workers (CHWs) in the community may help link patients to care.

Community Leader Interview Summary (continued)

Top Themes

Topic	Top Themes Discussed
Strengths & Assets	Variety of healthcare facilities available Community-based organizations Increase in physical activity and healthy lifestyles Local health departments
Concerns	Access to care Mental health Poverty Substance abuse Heart disease Food insecurity
Barriers	Low socioeconomic status and high cost of care Health insurance coverage including lack of Medicaid expansion Transportation
Medically Underserved Populations	Minority populations Geographical areas Low-income populations Individuals with mental illness

Online Health Survey

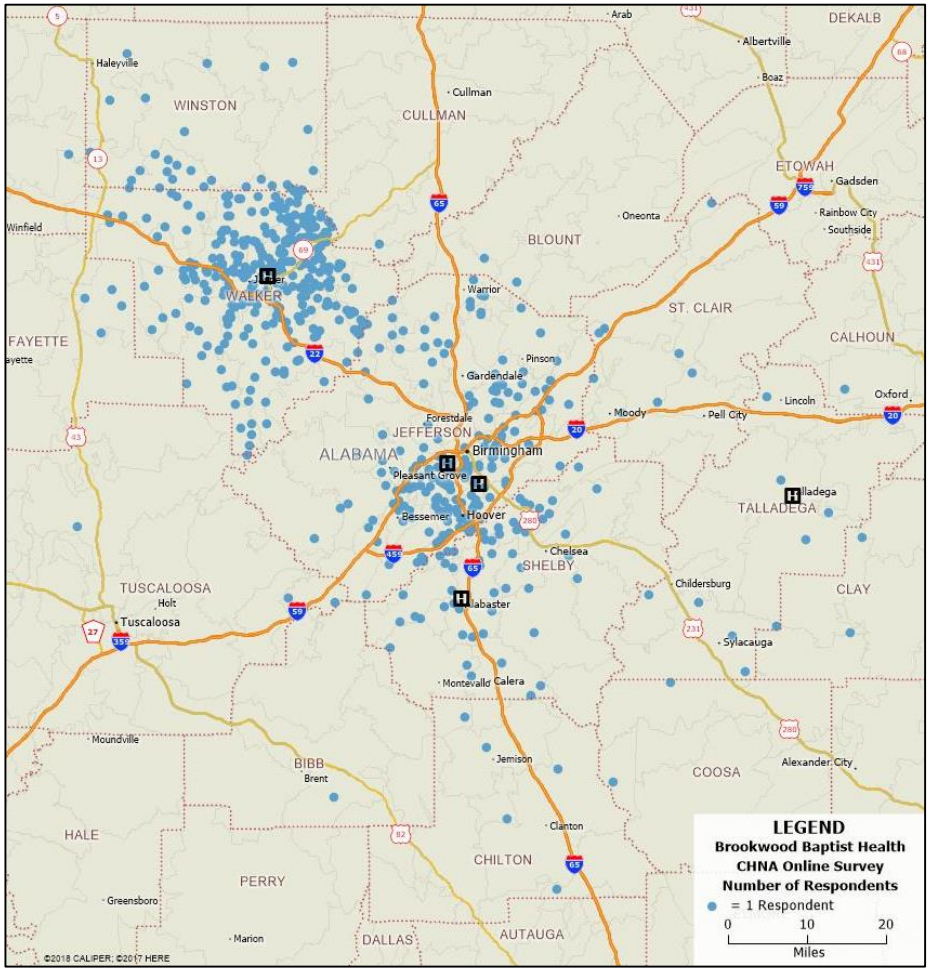
A total of 246 online health surveys were completed by community members within Jefferson County and those who did not provide a home ZIP Code. The full health survey questionnaire is available in Appendix C.

Online Community Health Survey Methodology

The link to the online survey was shared via multiple social media channels by Brookwood Baptist Health's Marketing Department. Email invitations to complete the survey or to share the survey via e-newsletters were sent to BBH's email subscriber list, community leaders, and health and public health stakeholders throughout the region. The survey instrument asked respondents to rate their own health and the overall health of community members, in addition to questions related to accessing preventative and sick care. Respondents were also asked to prioritize three health problems and three social problems in the community from lists of options. Lastly, optional demographic questions were also included at the end of the survey.

Online Health Survey Summary

Community Health Survey Distribution – All BBH Facility Respondents Mapped by ZIP Code



Source: Carnahan Group; Maptitude 2018

NOTE: n=30 respondents did not provide a ZIP Code and were also included within the analysis for each BBH facility.

Online Health Survey Summary (continued)

Community Health Survey Respondent Demographics

6.8% of n=265 survey respondents indicated that they did not own a smartphone. The majority of respondents indicated that they have private health insurance (95.9%), while 9.3% had Medicare coverage, and 0.8% had Medicaid coverage.

Age	Percentage of Respondents
18-44 years	33.5%
45-64 years	54.2%
65+ years	12.3%

n=227 respondents

Gender	Percentage of Respondents
Female	87.9%
Male	12.1%

n=224 respondents

Household Income	Percentage of Respondents
$200,000 and above	1.9%
$150,000 to $199,999	7.4%
$100,000 to $149,999	17.2%
$75,000 to $99,999	19.1%
$50,000 to $74,999	21.4%
$35,000 to $49,999	12.1%
$25,000 to $34,999	9.8%
$15,000 to $24,999	4.2%
Under $15,000	2.3%
I don't know	4.7%

n=215 respondents

Race/Ethnicity	Percentage of Respondents
White	65.5%
Black/African American	32.3%
Hispanic	0.4%
Asian/Pacific Islander	0.4%
American Indian & Alaska Native	0.9%
Other	2.2%

n=223 respondents

Online Health Survey Summary (continued)

Community Health Survey Results

When asked to select three serious health problems, n=246 respondents selected the following options*:

Rank	Serious Health Problem	Percentage of Respondents
1	Obesity	67.9%
2	Diabetes	58.9%
3	High blood pressure	54.1%
4	Heart disease and stroke	52.8%
5	Cancer	50.8%
6	Mental health issues (ex. depression)	37.4%
7	Substance abuse/addiction	33.3%
8	Breathing problems (ex. asthma, COPD)	19.9%
9	Violence	17.1%
10	Suicide	14.6%
11	Tooth problems (dental health)	13.8%
12	Child abuse or neglect	11.0%
13	Sexually transmitted diseases	11.0%
14	Infectious diseases	8.1%
15	Motor vehicle injuries	5.3%
16	Injuries	3.3%
17	Prenatal and infant health	2.0%

**Note that some respondents indicated fewer or greater than three selections.*

Online Health Survey Summary (continued)

Community Health Survey Results

When asked to select three serious social problems, n=246 respondents selected the following options*:

Rank	Serious Social Problems	Percentage of Respondents
1	Poverty (low income)	51.6%
2	No health insurance	38.2%
3	Crime	36.6%
4	Not enough free or affordable health screenings (	34.1%
5	Not enough healthy food	28.9%
6	Racism and discrimination	26.4%
7	Not enough interesting activities for youth	25.2%
8	Not enough education	24.8%
9	Public transportation	23.2%
10	Homelessness	22.8%
11	Not enough jobs in area	22.0%
12	Not enough childcare options	16.3%
13	Overcrowded housing	5.7%

**Note that some respondents indicated fewer or greater than three selections.*

Online Health Survey Summary (continued)

Community Health Survey Results

- When asked “Have you had any of the following health services in the past year?”, the majority of respondents (n=242) indicated that they had received blood work (80.6%), a blood pressure check (80.2%), dental care (69.0%), and a blood sugar check (50.0%).
- The majority of respondents indicated that they would rate their health as “good” in general (53.3%) while 34.6% rated their health as “very good.” However, 41.3% of respondents indicated that they would rate the overall health of community members as “good” in general and 45.7% would rate the overall health of community members as “fair” (n=246 and n=247, respectively).
- 32.8% of respondents have missed 1-5 days of work or other activities (ex. church, school) over the past 3 months because they were sick or not feeling well (n=247).
- 81.2% of respondents have had a physical exam (checkup, well visit) with a doctor in the past year (n=245).
- When asked “When you are sick or need health care, are you able to visit the doctor?”, the majority of respondents indicated that they were always able to visit the doctor (69.7%), while 26.6% indicated that they were sometimes able to visit the doctor (n=244).
- When asked “Is there anything that makes it hard for you to see a doctor when you are sick?”, n=186 respondents indicated the following barriers most frequently:
    - I don’t think I need to see a doctor (24.2%)
    - I cannot get time off work (23.1%)
    - It is too expensive (19.9%)

Community Health Priorities

The overarching goal in conducting this Community Health Needs Assessment is to identify significant health needs of the community, prioritize those health needs, and identify potential measures and resources available to address the health needs. For the purpose of identifying health needs for PBMC, a health priority is defined as a medical condition or factor that is central to the state of health of the residents in the community. An exhaustive list of health needs was compiled based on the health profile and interviews. A modified version of Fowler and Dannenberg's Revised Decision Matrix was developed to capture priorities from the primary and secondary data. This matrix tool is used in health program planning intervention strategies, and uses a ranking system of "high," "medium", and "low" to distinguish the strongest priorities.

As the CHNA is meant to identify the community's most significant health needs, only the health needs falling under the "high" and "medium" categories are highlighted. The six health priorities identified through this process are:

1. Access to Care
2. Social Determinants of Health
3. Diabetes
4. Heart Disease
5. Weight Status
6. Mental Health

Access to Care

Priority Definition

The Institute of Medicine previously defined access to care as “the timely use of personal health services to achieve the best health outcomes.”

Key topics within this priority include:

- Health insurance
- Access to primary care
- Medication costs
- Inpatient bed shortages
- Care continuum

Qualitative Findings

COMMUNITY LEADER CONCERNS:

- Need for additional trauma services in the area
- Long wait times to see a provider
- Geographical provider shortages
- Access to the right level of care at the right time to decrease inappropriate Emergency Department usage
- Lack of Medicaid expansion in Alabama
- Need for navigation programs to help individuals access services

Quantitative Findings

Of 246 respondents, 38.2% indicated that a lack of health insurance was a serious social problem facing the community

Health survey respondents mentioned that getting time off of work, difficulty getting in to see a physician, affordability (including copays), and scheduling challenges were all barriers to seeking sick care.

10.3% **of Jefferson County was uninsured from 2013-17**

In Jefferson County 4.2% of children had no health insurance coverage from 2013-2017, which was higher than the state benchmark during that time period.

34.6% **of Jefferson County received public insurance from 2013-17**

According to County Health Rankings, the physician-to-population ratio for primary care providers was lower (more providers per population) in Jefferson County than the Alabama average of one physician for every 1,529 residents.

Social Determinants of Health

Priority Definition

According to the CDC, the social determinants of health (SDOH) are defined as “conditions in the places where people live, learn, work, and play.” The World Health Organization expands upon that definition, stating that the SDOH are “shaped by the distribution of money, power, and resources.”

Key topics within this priority include:

- Crime / violence
- Poverty
- Housing
- Education
- Employment
- Health literacy

Qualitative Findings

COMMUNITY LEADER CONCERNS:

- Leaders expressed concern regarding poverty, housing, transportation, crime, and violence
- Food deserts and lack of access to healthy foods
- Health literacy
- Racial health disparities and systemic racism
- “Homicide and inter-generational cycles of violence need to be addressed in order to make communities and neighborhoods thrive“ – a community leader

Quantitative Findings

Health survey respondents indicated that poverty, crime, food insecurity, racism and discrimination, youth engagement, and education were top social concerns

51.6% Of health survey respondents (n=246) indicated that poverty was a serious concern

According to County Healthy Rankings, 15.6% of Jefferson County residents faced a severe housing cost burden from 2013-2017, which is higher than the state benchmark of 12.9%. During the same time frame, the income ratio between the 80th percentile and 20th percentile of household incomes in Jefferson County was 5.4, which is higher than the state average of 5.2.

The homicide rate within Jefferson County was 14.4 deaths per 100,000 population, which was higher than the state rate (8.1) in 2017.

Low health literacy is more prevalent amongst the following populations: older adults, minority populations, individuals with low socioeconomic status, and medically underserved people (HRSA).

17.6% Of individuals residing in Jefferson County were living below the federal poverty level from 2013-17 (25.6% of children)

Diabetes

Priority Definition

One of the HP2020 goals is to "reduce the disease burden of diabetes mellitus (DM) and improve the quality of life for all persons who have, or are at risk for, DM."

Key topics within this priority include:

- Prevention
- Modifiable risk factors
- Health education to improve self-management
- Quality clinical care including case management and care coordination
- Support services for individuals with DM

Qualitative Findings

COMMUNITY LEADER CONCERNS:

- High diabetes prevalence rates in the area
- Disparate proportion of African Americans with diabetes
- Need for health education
- High cost of medications
- Nutrition

Quantitative Findings

The diabetes death rate in Jefferson County was 22.1 deaths per 100,000 population from 2013-17

11.7% of Jefferson County residents had diabetes in 2016

HP2020 describes the four "transition points" in diabetes care and their accompanying opportunities for intervention:

1. Primary prevention: Movement from no diabetes to diabetes
2. Testing and early diagnosis: Movement from unrecognized to recognized diabetes
3. Access to care for people with diabetes: Movement to having timely access to appropriate care
4. Quality of care: Movement to adequate care

58.9% of health survey respondents (n=246) rated diabetes as a serious health problem

"African Americans, Hispanic/Latino Americans, American Indians, and some Asian Americans, Native Hawaiians, and other Pacific Islanders are at particularly high risk for the development of type 2 diabetes." (HP2020)

Of those surveyed (n=242) 50.0% indicated that they had received a blood sugar check in the past year.

Heart Disease

Priority Definition

One of the HP2020 goals is to “improve cardiovascular health and quality of life through prevention, detection, and treatment of risk factors for heart attack and stroke; early identification and treatment of heart attacks and strokes; prevention of repeat cardiovascular events; and reduction in deaths from cardiovascular disease.”

Key topics within this priority include:

- Modifiable risk factors
- Education
- Screening
- Early intervention
- Co-morbid conditions
- Access to quality clinical care

Qualitative Findings

COMMUNITY LEADER CONCERNS:

- Multiple community leaders identified heart disease as a top concern
- Need for more preventative medicine
- High blood pressure and related health disparities in the African American population

Quantitative Findings

Heart disease was the leading cause of death in Jefferson County from 2013 to 2017

52.8% of health survey respondents indicated that heart disease and stroke are serious health problems

Of n=242 survey respondents, 80.6% had blood work completed, 80.2% had a blood pressure check, and 23.1% had a heart screening in the past year.

According to the Centers for Disease Control and Prevention, the death rate for all heart disease in adults aged 45-64 was lower in Jefferson than in Alabama from 2014-2016. During the same time frame the population had a higher stroke death rate when compared to state and national benchmarks.

54.1% of health survey respondents indicated that hypertension is a serious health problem

The leading modifiable risk factors for heart disease and stroke are: high blood pressure, high cholesterol, cigarette smoking, diabetes, unhealthy diet and physical activity, and overweight/obese status (HP2020).

In 2016, the percentage of adults in Jefferson County who were current smokers was 18.4% (BRFSS).

Weight Status

Priority Definition

The HP2020 goals include to “promote health and reduce chronic disease risk through the consumption of healthful diets and achievement and maintenance of healthy body weights” and to “improve health, fitness, and quality of life through daily physical activity.”

Key topics within this priority include:

- Obesity
- Food insecurity and hunger
- Access to healthy food
- Access to physical activity opportunities
- Knowledge, understanding, and skills
- Environmental risk factors

Qualitative Findings

COMMUNITY LEADER CONCERNS:

- Food insecurity
- Lack of access to healthy foods
- Healthy eating habits
- Obesity prevalence
- Physical inactivity
- The built environment and its impact on physical activity levels
- Cultural norms related to food

Quantitative Findings

Of n=246 health survey respondents, 67.9% identified obesity as a serious health problem, making it the most frequently identified topic.

36.3% of individuals within the community were obese in 2016

The USDA’s Food Environment Index for Jefferson County was 6.2 in 2015-2016, which was better than the state benchmark, although 12.3% of individuals had limited access to healthy foods which exceeded the state average. Map the Meal Gap reported a food insecurity rate of 17.8% for Jefferson County in 2017.

According to the CDC, 27.9% of adults in Jefferson County reported no leisure time physical activity in 2015. Within the county, 79.5% of residents had access to exercise opportunities, which was higher than the state average.

“Among adults and older adults, physical activity can lower the risk of coronary heart disease, stroke, high blood pressure, type 2 diabetes, breast and colon cancer, falls, and depression. Among children and adolescents, physical activity can improve bone health, reduce symptoms of depression, improve cognitive skills, and improve the ability to concentrate and pay attention. For people who are inactive, even small increases in physical activity are associated with health benefits.” (HP2020)

Mental Health

Priority Definition

One of the HP2020 goals is to “improve mental health through prevention and by ensuring access to appropriate, quality mental health services.”

Key topics within this priority include:
- Provider shortages
- Funding for mental health services
- System of care
- Facility capacity
- Co-occurring substance abuse disorders

Qualitative Findings

COMMUNITY LEADER CONCERNS:

- Lack of outpatient and acute crisis-focused psychiatric services available
- Need for school-based counselors and nurses trained in psychiatric care
- Navigating the involuntary commitment process
- Lack of insurance coverage for mental health services
- Stigma
- Co-occurring substance abuse disorders
- Need for health education related to mental health
- Need for training for providers to handle crises

Quantitative Findings

From 2013-2017 the suicide death rate in Jefferson County was 13.2 deaths per 100,000 population

37.4% Of health survey respondents (n=246) indicated mental health is a serious health problem

Survey respondents also indicated that substance abuse (33.3%) and suicide (14.6%) were serious health problems.

Individuals in Jefferson County reported 4.3 poor mental health days in the previous 30 days while the national average was 3.8 days (BRFSS via County Health Rankings).

In any given year, an estimated 18.1% (43.6 million) of U.S. adults aged 18 years or older suffered from any mental illness and 4.2% (9.8 million) suffered from a seriously debilitating mental illness. Neuropsychiatric disorders are the leading cause of disability in the United States, accounting for 18.7% of all years of life lost to disability and premature mortality (HP2020).

640:1 and 1,100:1

ratio of population to mental health providers in Jefferson County and Alabama in 2018

Resources

Hospital-based, community-based, and government-sponsored resources related to each of the health priorities are featured throughout the following pages.

Resources – Access to Care

Project ACCESS provides specialty care by volunteer physicians for free or at significantly lower costs in order to serve the uninsured population in the area.

Alabama Regional Medical Services is a community health center that provides primary care, behavioral health, dental, pharmacy, and a specialized black lung clinic. Interpretation and translation services are available in addition to a sliding fee scale.

Cahaba Medical Care is a Federally Qualified Health Center and is accredited as a Patient Center Medical Home with ten sites in the area. Cahaba provides comprehensive healthcare services in Jefferson County including treatment and management of chronic and acute diseases; preventative care and cancer screenings; pediatric care; women's health services; prenatal care and obstetrics; dermatological services; geriatrics; sports medicine services; mental healthcare; and dental services. The center offers a discounted, sliding fee schedule based on income and family size.

Christ Health Center provides primary care, dental services, professional counseling, and medication therapy management. All forms of insurance are accepted, and a sliding fee scale is available.

Cooper-Green Mercy Health Services provides outpatient care and after-hours urgent care. Specialties include behavioral health, cardiology, chemotherapy, dermatology, endocrinology, gastroenterology, neurology, and pulmonary disease.

Jefferson County Health Department provides primary care services at the Central Health Center, Eastern Health Center, and Western Health Center. Other services include family planning, case management, SNAP, WIC, prenatal care, and the Nurse Family Partnership program.

Samford University's College of Health Sciences trains faith community nurses and runs the Congregational Health Ministries Program that partners with over 180 churches in the state.

Resources – Social Determinants of Health

Community Food Bank of Central Alabama provides millions of meals per year in 12 counties. The organization delivers groceries to seniors' doorsteps, provides meals to children at risk of hunger when schools close, and partners with physicians to serve patients in need through the Rx Health program.

La Casita informs and educates the local Hispanic Community on victim advocacy, law enforcement, public health, and safety information including assistance completing applications for health and social service programs.

The **Jefferson County Committee for Economic Opportunity** is a Community Action Agency that provides adult day healthcare, senior nutrition centers, energy assistance, emergency assistance, financial literacy training, and home weatherization.

Urban Ministry is a faith-based nonprofit focused on working with the residents of West End to build a thriving community. Programs include a community garden, an after-school program, food assistance, and crisis/emergency assistance.

The **Community Foundation of Greater Birmingham** has five priorities including nurturing thriving communities, driving regional cooperation, fostering equity and inclusion, creating economic opportunity for all, and overcoming persistent poverty.

Greater Birmingham Ministries provides financial help, food and clothing, and support for families and individuals in crisis. The organization also works alongside low-income neighborhoods and people as they organize to improve their lives and the community.

One Roof is the clearing house and center of coordination for the homeless Continuum of Care system of central Alabama. One Roof advocates for people experiencing homelessness by providing internal and external education and working on a national level to bring HUD supportive housing dollars to the region. A variety of residential shelters provide temporary solutions for individuals experiencing housing insecurity throughout the community. Examples include Hope House, Jessie's Place, and Firehouse Ministries.

Resources – Social Determinants (continued)

The Diocese of Birmingham Centers of Concern help individuals with food, housing services, utilities, prescriptions, clothing needs, and other basic needs.

M-POWER Ministries is a social services agency that provides education and health services designed to help people break the cycle of poverty. The M-POWER Education Center provides adult literacy tutoring, GED programs, and Career-Readiness programs. The M-POWER Health Center provides acute care walk-in clinics, primary care clinics, and sub-specialty clinics for patients without access to health care.

Positive Maturity hosts programs for seniors at activity centers, places volunteers in positions serving adults over the age of 55, and offers case management services.

The City of Birmingham's Office of Peace and Policy seeks to "promote and sustain improved public health for the residents of Birmingham by addressing risk and protective factors."

Jefferson County Health Action Partnership is a coalition of over 80 organizations that work together to make Jefferson County a healthier place to live, learn, work, and play in alignment with the Bold Goals Coalition of Central Alabama. The partnership published their latest "Community Health Equity Report" in 2018 to inform the public, decision makers, and funders of health disparities and needs.

Jefferson County Collaborative for Health Equity seeks to improve the health and quality of life of community residents by identifying and intervening on conditions in the natural, built, and social environments linked to increased risk for chronic diseases and conditions.

Resources – Diabetes

Princeton Baptist Medical Center hosts a Diabetes Self-Management Education Program to educate the public about diabetic management and care.

Brookwood Baptist Health partners with the local chapter of the **American Diabetes Association** and helps provide support for outreach events.

FMS Pharmacy in Birmingham provides a 'self-management' program for diabetics, helpful for people who are looking to become better educated on the disease and are seeking to manage their condition at home. The educators for this program, accredited by the American Association of Diabetes Educators, tailor an approach to managing diabetes on an individual basis with the help of the individual's physicians.

Both the **Ken Glover Drugstore** and **Sumiton Senior Center** provide Diabetes Education classes with local pharmacists and Hospice nurses for those seeking more information about treatment and maintenance.

The **Jefferson County Health Department** also provides an open clinic for diabetic patients in conjunction with the **Samford University School of Pharmacy**. This clinic provides both educational and coaching services under the guidance of licensed Pharmacists.

Resources – Heart Disease

Brookwood Baptist Health provides advanced resources for cardiovascular disease to the Jefferson County community through both Brookwood Baptist Medical Center and Princeton Baptist Medical Center. These services include cardiothoracic surgery, interventional cardiology, electrophysiology, structural heart conditions and valve disease, a cardiopulmonary program, endovascular and vascular surgery, cardiac rehabilitation, women's heart services and congestive heart failure care.

Princeton Baptist Medical Center has been recognized as a Primary Stroke Center by the Joint Commission in 2017, a High Performer in Heart Failure by the US News & World Report in 2019, and a Stroke Gold Plus and Stroke Honor Roll Elite facility by Get with the Guidelines in 2019.

The **American Heart Association** partners with BBH to promote cardiovascular disease awareness to residents of Jefferson County.

West End Community Garden partners with BBH in order to raise community awareness about the positive cardiovascular effects of exercise and healthy eating.

Brookwood Baptist Health partners with numerous local businesses in a Workforce Wellness Program, aimed at decreasing cardiovascular disease in each respective business's employees as well as hospital employees. These efforts include smoking cessation classes, discounted memberships to Weight Watchers, enhanced access to gym/physical fitness activities, and healthy eating/nutritional education.

Let's Get Down 35211 is a 12-week, community-based high blood pressure management program that provides eligible participants with peer support from trained health coaches, an electronic blood pressure monitor and a group class led by a healthcare provider on strategies for taking blood pressure medication as prescribed.

Resources – Weight Status

Princeton Baptist Medical Center was recognized as a MBSAQIP Accredited Bariatric Center in 2018 and a Blue Cross Blue Shield Distinction Center for Bariatric Surgery in 2017. Minimally invasive bariatric surgeries offered by Brookwood Baptist Health include gastric bypass, gastric sleeve, gastric band, and laparoscopic/robotic procedures. Brookwood Baptist Health offers weight loss classes, a Bariatric Surgery Navigator, and support group meetings.

YMCA of Greater Birmingham is dedicated to strengthening communities through youth development, healthy living, and social responsibility. Approximately 22% of member families receive financial assistance, with subsidies as high as 95%.

Children's of Alabama operates a Children's Center for Weight Management in Birmingham to help children with interdisciplinary care and lifestyle change.

Community Food Bank of Central Alabama provides millions of meals per year in 12 counties. The organization delivers groceries to seniors' doorsteps, provides meals to children at risk of hunger when schools close, and partners with physicians to serve patients in need through the Rx Health program.

The United Way's Safe Routes is a movement to create safe, convenient, and fun opportunities for students to walk, bike, and roll to school.

A.G. Gaston Boys & Girls Club's Smart Girls program guides young women age 8-17 towards healthy attitudes and lifestyles, positive self-esteem, good eating habits, and getting good health care. Triple Play is a program for ages 6-18 that seeks to increase daily physical activity, teach good nutrition, and help children develop healthy relationships while Jaguars Athletics hosts teams for football, cheerleading, boys' and girls' basketball, and baseball to keep kids active year-round

The **Lakeshore Foundation** enables people with physical disabilities and chronic health conditions to lead healthy, active, and independent lifestyles through physical activity, sport, recreation, advocacy, policy, and research.

Brookwood Baptist Health promotes physical activity through partnering with several organizations such as the Rumpshaker 5K, Susan B. Komen Race for the Cure, Mayhem on the Mountain, Laura Crandall Brown 5K, and Relay for Life.

Resources – Mental Health

JBS Mental Health Authority provides individualized mental health services to children, youth, and adults in a manner that encourages resilience and wellness. The organization has three centers and serves individuals in Jefferson, Blount, and St. Clair counties and provides outreach, case management, nursing services, supportive housing, peer support, and homeless programming. The **Urgent Care Clinic** provides rapid access to outpatient mental health care.

Eastside Mental Health Center provides accessible, cost effective services to persons with a serious mental illness living in Alabama's eastern Jefferson, Blount, and St. Clair counties.

OASIS Counseling for Women & Children provides mental health counselling and educational programs for Medicaid patients and offers a sliding fee scale.

The Crisis Center is a non-profit organization located in Birmingham with an additional location in Bessemer. The center provides crisis intervention and prevention, sexual assault services, and mental health services. At the Piper Place location, the center offers a rehabilitative day program. The organization also provides education, consultation, information and referral, and prevention services to the communities in Jefferson, Blount, St. Clair, Walker, and Shelby counties.

Wings Across Alabama has a peer support talk line for individuals experiencing mental health issues. The line is available from noon to midnight during weekdays at 1-800-639-3000.

The **UAB Center for Psychiatric Medicine** offers in-depth evaluation and treatment for a broad range of psychiatric disorders and specialized neuropsychiatry, psychiatry, psychotherapy, and addiction care.

NAMI Birmingham is dedicated to improving the lives of persons with mental illness through education, advocacy, research, and support. NAMI establishes local support groups, conducts provider education, supports evidence-based mental health programs and services, provides accurate information to the public to eliminate stigma, and advocates for improved services, treatment, and care for people with mental health issues.

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Appendix A

Carnahan Group Qualifications

Carnahan Group is an independent healthcare technology and consulting firm that focuses on providing innovative and cost-effective compliance solutions to healthcare systems and organizations throughout the nation. Since 2002, Carnahan Group has been trusted by healthcare organizations throughout the nation as an industry leader in providing Fair Market Valuations, Medical Staff Demand Analyses, Community Health Needs Assessments, and Strategic Planning. Our executive team has risen through the ranks of some of the world's largest healthcare systems and has firsthand knowledge of working within a hospital system undergoing federal scrutiny and under OIG Corporate Integrity Agreements. We have not spent our lives as consultants and are therefore acutely aware of the sensitivity surrounding the timeliness, the objectivity, and the correctness of strategic reports. Carnahan Group is dedicated to providing unsurpassed customer service and quality to our clients.

Appendix B

Community Leader Interview Organizations

Organization	Title	Organization Type or Population Represented
Regional Paramedical Services	South District Deputy Director of Operations	Clinical provider
JBS Mental Health Authority	Director	Clinical provider, and underserved, low-income, minority, and/or chronic disease populations
Community Food Bank of Alabama	Executive Director	Underserved, low-income, minority, and/or chronic disease populations
Birmingham Fire and Rescue Service		Emergency response
National Alliance on Mental Illness (NAMI) Birmingham	Vice-President, Advocacy	Non-profit
City of Birmingham, Division of Youth Services	Chief of Staff	Local government
Brookwood Baptist Health	Director of Marketing	Hospital administration
Brookwood Baptist Health	Events Manager	Hospital administration
The Exceptional Foundation	President & CEO	Non-profit
Jefferson County Health Department	Health Officer & CEO	Public health expert
University of Alabama at Birmingham	Dean, School of Public Health	Public health expert
Samford University	Vice Provost, College of Health Sciences, Dean, Ida Moffett School of Nursing	Academic institution, clinical provider
Birmingham Regional Emergency Medical Services System	Executive Director	Emergency response
Greater Shiloh Baptist Church	Pastor	Underserved, low-income, minority, and/or chronic disease populations
Jefferson County Commission	County Commissioner District 2	Local government
Community Foundation of Greater Birmingham	Vice President, Programs	Non-profit and underserved, low-income, minority, and/or chronic disease populations
Church Without Walls	Pastor	Non-profit

Appendix C

Community Health Survey

1. **Are you 18 years of age or older?** ☐ **Yes** ☐ **No**
2. **Which type of health insurance do you have?**
   - ☐ Medicare
   - ☐ Medicaid
   - ☐ Private insurance (ex. through your job)
   - ☐ I do not have health insurance
   - ☐ I don't know
3. **Do you have a smart phone?**
   - ☐ Yes ☐ No
4. **How would you rate your health in general (most days)?**
   - ☐ Very good ☐ Good ☐ Fair ☐ Poor ☐ I don't know
5. **Thinking about your community, how would you rate the overall health of community members?**
   - ☐ Very good ☐ Good ☐ Fair ☐ Poor ☐ I don't know
6. **Over the last 3 months (90 days), how many days have you missed work or other activities (ex. church, school) because you were sick or not feeling well?**
   - ☐ None
   - ☐ 1-5 days
   - ☐ 6-10 days
   - ☐ 11-15 days
   - ☐ 16-20 days
   - ☐ More than 30 days
7. **When you are sick or need health care, are you able to visit the doctor?**
   - ☐ Always ☐ Sometimes ☐ Rarely ☐ Never
8. **Is there anything that makes it hard for you to see a doctor when you are sick?** ***(Choose all that apply)***
   - ☐ It is too expensive
   - ☐ I don't think I need to see a doctor
   - ☐ I don't have health insurance
   - ☐ I am not ready to talk about my health problem(s)
   - ☐ I do not have transportation
   - ☐ The doctor is too far away
   - ☐ My culture or religious beliefs
   - ☐ I can't find a doctor who accepts my insurance
   - ☐ I can't get time off from work
   - ☐ Other _____
9. **When was your last physical exam (checkup, well visit) with a doctor?**
   - ☐ In the past year
   - ☐ Less than 2 years ago
   - ☐ Between 2-5 years ago
   - ☐ More than 5 years ago
   - ☐ I have never had a checkup or physical exam visit with my doctor

Community Health Survey (continued)

10. Have you had any of the following health services in the past year?
(Choose all that apply)

- ☐ Heart screening
- ☐ Dental appointment
- ☐ Blood work
- ☐ Skin cancer screening
- ☐ Blood sugar check
- ☐ Blood pressure check
- ☐ Mammogram (breast cancer screening – for females)
- ☐ Pap smear (cervical cancer screening – for females)
- ☐ Colon/rectal exam
- ☐ Prostate exam (for males)

11. Which of the following do you consider serious health problems in your community?
(Choose three)

- ☐ Alzheimer's Disease
- ☐ Cancer
- ☐ Tooth problems (dental health)
- ☐ Obesity
- ☐ Heart disease and stroke
- ☐ Suicide
- ☐ Diabetes
- ☐ Injuries
- ☐ Infectious diseases (ex. flu virus, hepatitis, tuberculosis)
- ☐ Mental health issues (ex. depression)
- ☐ Motor vehicle injuries
- ☐ High blood pressure
- ☐ Prenatal and infant health (ex. babies born underweight)
- ☐ Breathing problems (ex. asthma, COPD)
- ☐ Sexually transmitted diseases
- ☐ Violence
- ☐ Child abuse or neglect
- ☐ Substance abuse/addiction
- ☐ Other _____

12. Which of the following do you consider serious social problems in your community?
(Choose three)

- ☐ Poverty (low income)
- ☐ Not enough jobs in the area
- ☐ Overcrowded housing
- ☐ Homelessness
- ☐ Not enough education (ex. high school dropouts)
- ☐ Racism and discrimination
- ☐ No health insurance
- ☐ Not enough interesting activities for youth
- ☐ Crime
- ☐ Not enough healthy food
- ☐ Not enough childcare options
- ☐ Public transportation
- ☐ Not enough free or affordable health screenings (ex. tests for cancer or infectious diseases)
- ☐ Other _____

13. Which of the following do you consider important parts of healthy, thriving community?
(Choose all that apply)

- ☐ Safe worksites
- ☐ Affordable housing
- ☐ Good schools
- ☐ Access to healthy foods
- ☐ Diversity
- ☐ Parks and recreation
- ☐ Sanitation and public works
- ☐ Good jobs
- ☐ Low crime and violence
- ☐ Good healthcare
- ☐ Childcare
- ☐ Faith-based organizations (ex. churches)
- ☐ Services for the elderly
- ☐ Support organizations (ex. nonprofits)
- ☐ Other _____

Community Health Survey (continued)

1. **Your Home ZIP Code** _____
2. **Age:**
   - ☐ Under 18 ☐ 18-44 ☐ 45-64 ☐ 65+
3. **Gender:**
   - ☐ Male ☐ Female
4. **Race/Ethnicity (*Choose all that apply*)**
   - ☐ White
   - ☐ Black/African American
   - ☐ Hispanic
   - ☐ Asian/Pacific Islander
   - ☐ American Indian & Alaska Native
   - ☐ Other
5. **Household income last year:**
   - ☐ Under $15,000
   - ☐ $15,000 to $24,999
   - ☐ $25,000 to $34,999
   - ☐ $35,000 to $49,999
   - ☐ $50,000 to $74,999
   - ☐ $75,000 to $99,999
   - ☐ $100,000 to $149,999
   - ☐ $150,000 to $199,999
   - ☐ $200,000 and above
   - ☐ I don't know
6. **Which of the following best describes your employment status?**
   - ☐ Employed full-time
   - ☐ Employed part-time
   - ☐ Full-time student
   - ☐ Retired
   - ☐ Unemployed
   - ☐ Homemaker
   - ☐ Other _____
7. **Where do you go for information about health and wellness? *Check all that apply***
   - ☐ Doctors, nurses, and pharmacists in my community
   - ☐ Family and friends
   - ☐ Newspapers or magazines
   - ☐ Television or radio
   - ☐ Books
   - ☐ Social media (Facebook, Twitter, Instagram)
   - ☐ Internet (websites)
   - ☐ Hospital
   - ☐ Church
   - ☐ School or college
   - ☐ Health fairs
   - ☐ The health department
   - ☐ Your place of work
   - ☐ Other _____

Company Overview

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Thank you for the opportunity to serve Brookwood Baptist Health and Princeton Baptist Medical Center.
We are committed to being your innovative strategic partner.


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Strategic Healthcare Advisors