

# Community Health Needs Assessment

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## **Shelby Baptist Medical Center**



#### **Shelby Baptist Medical Center at a Glance**

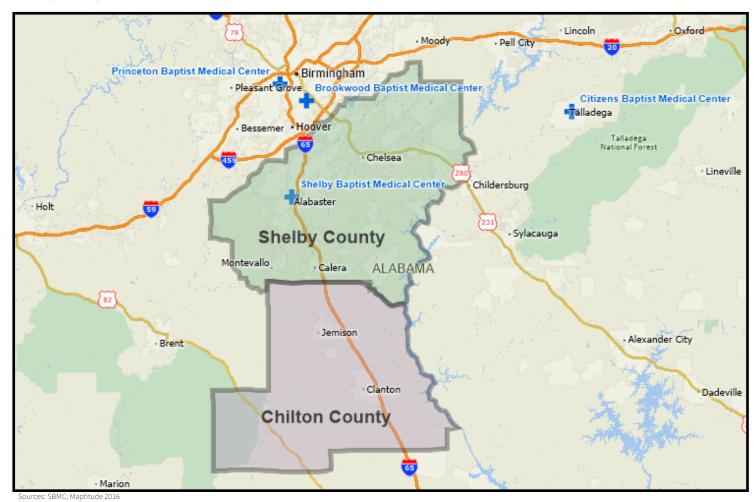
Shelby Baptist Medical Center (Shelby) is passionate about caring for the people of Shelby and Chilton County. Located in Alabaster, AL, Shelby is proud to serve the community as the sole hospital located in the county. The acute care facility is equipped with 252 beds and 300 physicians on staff. The emergency department is one of the most utilized in the state, with over 44,000 visits each year.

Shelby offers a patient-centered approach to care, providing not only immediate care to those who need it, but also preventative care, education and numerous support groups such as N.A.M.I. mental health groups. Shelby offers advanced technology to the surrounding community, including a 3 Tesla MRI, a comprehensive robotic surgery program, and a state-of-the-art cardiology suite, along with a full range of specialty services, including a 20-bed adult psychiatric unit, urogynecology services, orthopedic surgery, and acute inpatient hospice care.

## **Community Overview**

For the purposes of the CHNA report, SBMC chose Shelby and Chilton counties as its service area. Because this community was chosen purely by geography, it includes medically underserved, low income, and minority populations.

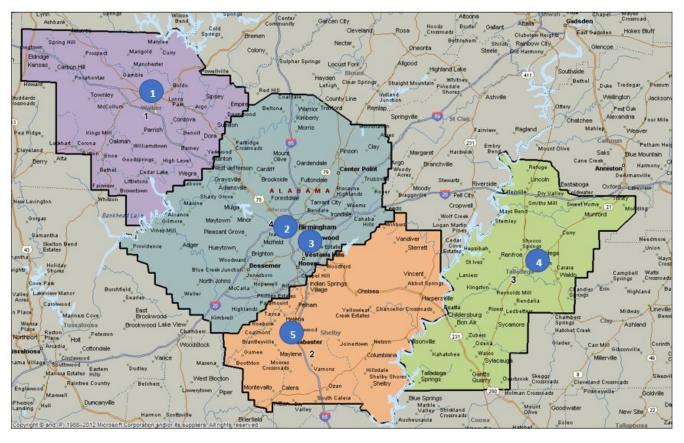
The map below represents the SBMC service area.



#### **Brookwood Baptist Health**

In 2015, Brookwood Medical Center and Baptist Health System merged, creating the new five-hospital network: Brookwood Baptist Health. The five hospitals, shown in the map below, along with Brookwood Baptist Health's additional convenient primary care and specialty centers throughout the state, now represent the largest primary care network in Alabama.

The map below represents the Brookwood Baptist Health Hospital Network





#### Key:

- 1 Walker Baptist Medical Center
- 2 Princeton Baptist Medical Center
- **3 Brookwood Baptist Medical Center**
- **4 Citizens Baptist Medical Center**
- 5 Shelby Baptist Medical Center

#### **Purpose**

## **Community Health Needs Assessment Background**

On February 15, 2016, SBMC contracted with Carnahan Group to conduct a Community Health Needs Assessment (CHNA) as required by the Patient Protection and Affordable Care Act (PPACA).

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 SBMC that addresses the community health needs will be developed and adopted by early 2017.

#### 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 SBMC collaborated, if applicable, including their qualifications;
- A description of how SBMC took into account input from persons who represented the broad interests of the community served by SBMC, 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 SBMC; 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 SBMC, 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 SBMC, leaders, representatives, or members of medically underserved, low-income, and minority populations with chronic disease needs in the community served by SBMC; and,
- Consultation or input from other persons located in and/or serving SBMC'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 SBMC's CHNA are provided in the References and Appendix A: Community Leader Interview Organizations. Information was gathered by conducting interviews with individuals representing community health and public service organizations, medical professionals, hospital administration and other hospital staff members.

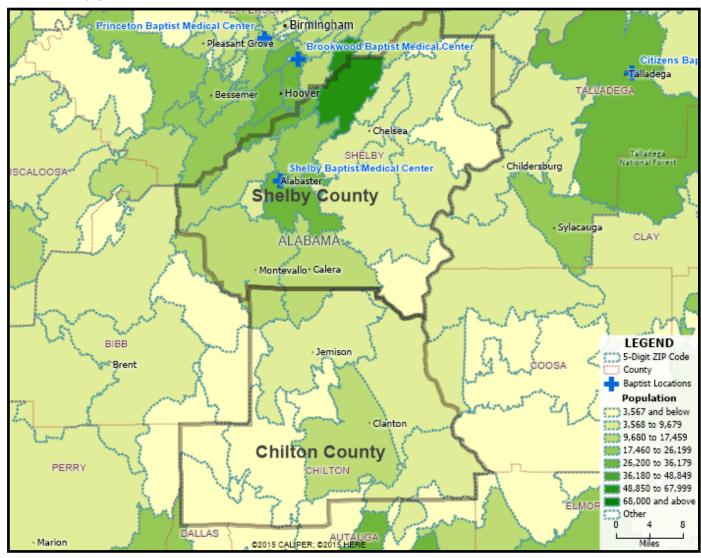
## **Health Profile**

## **Secondary Data Collection and Analysis Methodology**

A variety of data sources were utilized to gather demographic and health indicators for the community served by SBMC. Commonly used data sources include Esri, the U.S. Census Bureau, the Alabama Department of Public Health (ADPH), and the Centers for Disease Control and Prevention (CDC). As previously mentioned, Shelby and Chilton counties define the community for SBMC. Demographic and health indicators are presented at the county level and compared to state benchmarks.

## **Demographics**

Population Density by ZIP Code, 2015



Sources: Esri 2015; Maptitude 2016

## **Population Change by ZIP Code**

The estimated 2015 population in SBMC's community is 243,035 and is expected to grow by 6.1% over the next five years.

Total Service Area Population Change by ZIP Code, 2015–2020

			Current	Projected 5-year	Percent
ZIP Code	Community	County	Population	Population	Change
35242	Birmingham	Shelby	53,181	57,159	7.5%
35007	Alabaster	Shelby	27,059	28,528	5.4%
35124	Pelham	Shelby	25,751	27,105	5.3%
35080	Helena	Shelby	18,547	20,026	8.0%
35040	Calera	Shelby	16,399	17,849	8.8%
35045	Clanton	Chilton	15,140	15,457	2.1%
35115	Montevallo	Shelby	15,053	15,754	4.7%
35043	Chelsea	Shelby	11,626	12,680	9.1%
35051	Columbiana	Shelby	10,073	10,712	6.3%
35085	Jemison	Chilton	9,411	9,610	2.1%
35114	Maylene	Shelby	6,987	7,632	9.2%
35186	Wilsonville	Shelby	5,347	5,809	8.6%
35046	Clanton	Chilton	5,069	5,271	4.0%
36091	Verbena	Chilton	3,959	4,139	4.5%
35178	Vincent	Shelby	3,693	3,916	6.0%
35171	Thorsby	Chilton	3,385	3,454	2.0%
35143	Shelby	Shelby	3,376	3,526	4.4%
35147	Sterrett	Shelby	3,108	3,337	7.4%
36750	Maplesville	Chilton	2,846	2,846	0.0%
35078	Harpersville	Shelby	2,267	2,376	4.8%
35176	Vandiver	Shelby	451	467	3.5%
36790	Stanton	Chilton	307	307	0.0%
Total			243,035	257,960	6.1%

## **Population Change by Age and Gender**

Substantial population growth is expected among residents aged 65 and older (22.7%). Moderate growth is expected for children and young adults aged 0 through 19 (4.9%) and adults aged 45 through 64 (5.3%). The population of adults aged 20 through 44 is expected to grow slightly (1.6%).

Total Service Area Population Change by Age and Gender, 2015–2020

2015		2020			Percent Change				
Age Group	Male	Female	Total	Male	Female	Total	Male	Female	Total
Age 0 through 19	33,764	32,282	66,046	35,393	33,872	69,265	4.8%	4.9%	4.9%
Age 20 through 44	40,749	41,201	81,950	41,443	41,850	83,293	1.7%	1.6%	1.6%
Age 45 through 64	31,350	33,125	64,475	33,314	34,600	67,914	6.3%	4.5%	5.3%
Age 65 and older	13,778	16,786	30,564	16,943	20,545	37,488	23.0%	22.4%	22.7%
Total	119,641	123,394	243,035	127,093	130,867	257,960	6.2%	6.1%	6.1%

## **Population by Race and Ethnicity**

The populations of individuals of two races, Asian/Pacific Islanders, black/African Americans, and other races are expected to grow substantially by 2020 (see table). The Hispanic population is expected to grow moderately (6.5%), while the white population is expected to grow slightly (3.0%).

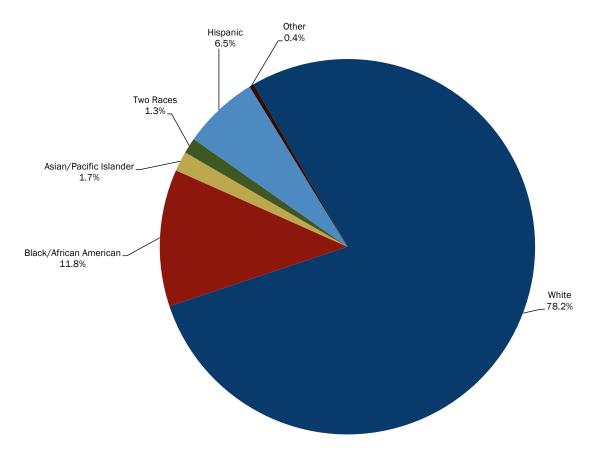
Total Service Area Population Change by Race and Ethnicity, 2015–2020

			Percent
Race/Ethnicity	2015	2020	Change
White	190,038	195,808	3.0%
Black/African American	28,699	34,493	20.2%
Asian/Pacific Islander	4,167	5,207	25.0%
Two Races	3,255	4,427	36.0%
Hispanic	15,912	16,951	6.5%
Other	964	1,074	11.4%

## **Race/Ethnic Composition**

The most common race/ethnicity in SBMC's community is white (78.2%) followed by black/African American (11.8%), Hispanic (6.5%), Asian/Pacific Islander (1.7%), individuals of two or more races (1.3%), and other races (0.4%).

#### Race/Ethnic Composition 2015



#### **Socioeconomic Characteristics**

According to the U.S. Bureau of Labor Statistics, the 2014 annual unemployment rates for Shelby County (4.3%) and Chilton County (5.4%) were lower than Alabama's (6.8%).

The U.S. Census American Community Survey (ACS) publishes median household income and poverty estimates. According to 2010–2014 estimates, the median household income in Shelby County (\$69,723) is significantly higher than Alabama's (\$43,511), while Chilton County's is slightly lower (\$41,785).

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. In 2014, the poverty threshold for a family of four was \$24,008. The ACS estimates indicate that Shelby County residents are less likely to live in poverty (8.6%) compared to all Alabama residents (18.9%), while Chilton County residents are as likely to live in poverty (18.8%). Children in Shelby County are less likely to be living below the poverty level (11.7%) compared to all children in Alabama (27.5%). Children in Chilton County are more likely to live in poverty (31.2%) compared to all children in Alabama.

Socioeconomic Characteristics, 2010-2014

	Shelby County	Chilton County	Alabama
Unemployment Rate, 2014 annual average <sup>1</sup>	4.3%	5.4%	6.8%
Median Household Income <sup>2</sup>	\$69,723	\$41,785	\$43,511
Individuals Below Poverty Level <sup>2</sup>	8.6%	18.8%	18.9%
Children Below Poverty Level <sup>2</sup>	11.7%	31.2%	27.5%

<sup>&</sup>lt;sup>1</sup>Source: Bureau of Labor Statistics

<sup>&</sup>lt;sup>2</sup> Source: U.S. Census - American Community Survey, 2010–2014

#### **Education**

The U.S. Census ACS publishes estimates of the highest level of education completed for residents 25 years and older. Shelby County residents aged 25 and older are more likely to be college educated compared to all Alabama residents, while residents of Chilton County are less likely.

The Alabama State Department of Education reported data from the 2014–2015 school year indicating that Shelby County students were substantially less likely to be approved for free or reduced lunch (30.5%) compared to students in Alabama (52.5%), while students from Chilton County were more likely to be approved for free or reduced lunch (57.7%). The projected four-year dropout rate for Shelby County (2.6%) is below Alabama's rate (4.8%), while Chilton County's rate is higher (6.4%). Students in Shelby County are more likely to graduate (91.0%) than all Alabama students (89.0%). Students in Chilton County are less likely to graduate from high school (74.0%) in comparison to all Alabama students.

Highest Level of Education Completed Persons 25 Years and Older, 2010--2014

	Shelby	Chilton	
	County	County	Alabama
Less than a high school degree	8.7%	22.5%	16.3%
High school degree or equivalent	21.4%	40.0%	31.1%
Some college	22.4%	17.0%	22.0%
Bachelor's degree	26.5%	8.8%	14.5%
Graduate or professional degree	13.7%	4.8%	8.6%

Source: U.S. Census - American Community Survey, 2010-2014

Select Education Indicators

	Shelby County	Chilton County	Alabama
Students approved for free or reduced lunch <sup>1</sup>	30.5%	57.7%	52.5%
Four-year dropout rate <sup>1</sup>	2.6%	6.4%	4.8%
High school graduation rate <sup>2</sup>	91.0%	74.0%	89.0%

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Source: Alabama State Department of Education, 2014–2015

<sup>2</sup>Source: Kids Count Data Center, 2013

#### **Crime Rates**

According to the Alabama Criminal Justice Information System, in 2014 Shelby County had lower rates of homicide, rape, assault, and robbery compared to the state of Alabama. In 2014 Chilton County had higher rate of rape compared to the state, while the rates of homicide, assault, and robbery were lower in comparison to Alabama.

Violent Crime Rates, 2014

	Shelby County	Chilton County	Alabama
Homicide	2.5	2.3	5.6
Rape	24.9	56.9	39.0
Assault	98.3	236.7	267.8
Robbery	32.3	18.2	92.4

Source: Alabama Criminal Justice Information System, 2014

## **Mortality Indicators**

According to the ADPH 2013 County Health Profile for Shelby County, residents in Shelby have a higher life expectancy at birth (80.2 years) compared to Alabama (75.6 years), while Chilton County residents' life expectancy at birth is lower (74.0 years). The death rate in Shelby County (6.4 per 1,000) is well below Alabama's (10.4 per 1,000), while the death rate in Chilton County is slightly above the state rate (11.7 per 1,000).

Mortality Indicators, 2013

	Shelby County	Chilton County	Alabama
Life expectancy at birth in years	80.2	74.0	75.6
Death rate (per 1,000 population)	6.4	11.7	10.4

Source: Alabama Department of Public Health, 2013 County Health Profiles

Among individuals from birth to 14 years old, mortality rates in Shelby County (0.6 per 1,000) and Alabama (0.8 per 1,000) are similar. Shelby County has lower mortality rates for individuals in all the other age groups. The mortality rate for age group 0–14 was lower in Chilton County in comparison to Alabama's, but the rates for all other age groups were slightly higher.

Age-Specific Mortality Rates per 100,000 Population, 2013

	Shelby County	Chilton County	Alabama
0 - 14 years old	0.6	0.3	0.8
15 - 44 years old	1.2	2.2	1.7
45 - 64 years old	4.9	9.8	8.9
65 - 84 years old	25.3	43.5	34.7
85 years and older	128.9	155.6	153.4

Source: Alabama Department of Public Health, 2013 County Health Profiles

## **Leading Causes of Death**

Heart disease and cancer are the two leading causes of death in Shelby County, Chilton County, and Alabama. Heart disease and cancer mortality rates are lower in Shelby County (142.0 per 100,000 and 152.8 per 100,000, respectively) than in Alabama (257.6 per 100,000 and 213.7 per 100,000, respectively). Chilton County's mortality rates for heart disease (343.6 per 100,000) and cancer (232.1 per 100,000) are higher than the statewide rates. Chronic lower respiratory disease (CLRD), accidents, and stroke are among the top five leading causes of death in Shelby County, Chilton County, and Alabama. The CLRD mortality rate is substantially lower in Shelby County (37.2 per 100,000) than in Alabama (62.9 per 100,000), while Chilton County's rate (113.8 per 100,000) is almost double the state rate. Accident mortality is lower in Shelby County (37.0 per 100,000) than in Alabama (47.6 per 100,000), while Chilton County's rate is higher (61.4 per 100,000). Stroke mortality is substantially lower in Shelby County (27.4 per 100,000) than in Alabama (53.6 per 100,000), while stroke mortality in Chilton County (61.4) is higher than in Alabama.

Leading Causes of Death, 2013

	Shelby	Chilton	
	County	County	Alabama
Heart disease	142.0	343.6	257.6
Cancer	152.8	232.1	213.7
Chronic lower respiratory disease	37.2	113.8	62.9
Accidents	37.0	61.4	47.6
Stroke	27.4	61.4	53.6
Alzheimer's disease	16.2	25.0	28.9
Diabetes	9.3	11.4	27.8
Influenza and pneumonia	10.3	18.2	21.4
Suicide	13.7	15.9	14.9
Homicide	1.0	11.4	8.7
HIV	1.5	0.0	2.5

Source: Alabama Department of Public Health, 2013 County Health Profiles

Rates are per 100,000 population

#### Cardiovascular Outcomes

Residents aged 65 and older in Shelby County are less likely to die from heart disease (1,105.3 per 100,000) compared to Alabama (1,357.6 per 100,000), while Chilton County residents aged 65 and older are more likely to die from heart disease (1,733.4 per 100,000). Blacks in Shelby County and Chilton County are more likely to die from heart disease (1,297.3 per 100,000 and 1,859.9 per 100,000, respectively) compared to whites (1,105.7 per 100,000 and 1,720.2 per 100,000, respectively). Males in Shelby County, Chilton County, and Alabama have a higher likelihood of dying from heart disease compared to females.

Age-Adjusted Heart Disease Mortality Rates per 100,000 Adults Ages 65 and Older by Race and Gender, 2011-2013

	Shelby County	Chilton County	Alabama
Heart Disease, All	1,105.3	1,733.4	1,357.6
Heart Disease, White (Non-Hispanic)	1,105.7	1,720.2	1,359.9
Heart Disease, Black (Non-Hispanic)	1,297.3	1,859.9	1,430.0
Heart Disease, Male	1,357.4	1,883.3	1,631.1
Heart Disease, Female	926.4	1,562.4	1,162.9

Source: Centers for Disease Control and Prevention

Deaths from acute myocardial infarctions, commonly known as heart attacks, are less common in Shelby County than in Alabama, but more common in Chilton County. The overall heart attack mortality rate for residents 65 and older in Shelby County (132.6 per 100,000) is lower than in Alabama (213.6 per 100,000), while heart attack mortality in Chilton County (346.2 per 100,000) is substantially higher than in Alabama. In Shelby County and Chilton County, whites are substantially less likely to die from heart attacks than blacks. Males in Shelby County, Chilton County, and Alabama are substantially more likely to die from a heart attack compared to females.

Age-Adjusted Heart Attack Mortality Rates per 100,000 Adults Ages 65 and Older by Race and Gender, 2011-2013

	Shelby	Chilton	
	County	County	Alabama
Heart Attack, All	132.6	346.2	213.6
Heart Attack, White (Non-Hispanic)	133.0	321.3	212.0
Heart Attack, Black (Non-Hispanic)	193.8	514.0	233.5
Heart Attack, Male	197.3	461.7	268.4
Heart Attack, Female	96.9	253.8	173.1

Source: Centers for Disease Control and Prevention

#### Cardiovascular Outcomes (continued)

Shelby County residents ages 65 and older are less likely to die from a stroke (271.5 per 100,000) than residents in Alabama (317.7 per 100,000), while Chilton County residents are more likely to die from a stroke (333.8 per 100,000). Blacks in Shelby County, Chilton County, and Alabama are substantially more likely to die from a stroke compared to white residents. There is a higher stroke mortality rate among women in Shelby County (307.7 per 100,000) compared to men (263.7 per 100,000). In Chilton County and Alabama, men are slightly more likely to die from a stroke in comparison to women.

Age-Adjusted Hypertension Mortality Rates per 100,000 Adults Ages 65 and Older by Race and Gender, 2011-2013

	Shelby County	Chilton County	Alabama
Hypertension, All	399.7	494.1	614.2
Hypertension, White (Non-Hispanic)	397.2	505.3	559.3
Hypertension, Black (Non-Hispanic)	652.6	674.7	899.3
Hypertension, Male	425.5	426.7	648.6
Hypertension, Female	381.9	525.8	581.1

Source: Centers for Disease Control and Prevention

Hypertension mortality rates among persons ages 65 and older in Shelby County (399.7 per 100,000) and Chilton County (494.1 per 100,000) are below the state rate (614.2 per 100,000). Blacks in Shelby County, Chilton County, and Alabama are substantially more likely to die from hypertension compared to whites (see table). In Shelby County, hypertension mortality is higher in males (425.5 per 100,000) than females (381.9 per 100,000). In Chilton County, women (525.8 per 100,000) are more likely to die from hypertension than men (426.7 per 100,000).

Age-Adjusted Stroke Mortality Rates per 100,000 Adults Ages 65 and Older by Race and Gender, 2011-2013

	Shelby	Chilton	
	County	County	Alabama
Stroke, All	271.5	333.8	317.7
Stroke, White (Non-Hispanic)	256.8	321.5	311.1
Stroke, Black (Non-Hispanic)	419.2	389.7	364.4
Stroke, Male	263.7	317.4	318.3
Stroke, Female	307.7	295.7	312.9

Source: Centers for Disease Control and Prevention

#### **Cancer Incidence**

Total cancer incidence is lower in Shelby County (452.9 per 100,000) and Chilton County (445.2 per 100,000) than in Alabama (461.1 per 100,000) and the United States (453.8 per 100,000).

Lung and bronchus cancer incidence in Shelby County (62.4 per 100,000 population) is lower than in Alabama (73.4 per 100,000 population) and the United States (63.7 per 100,000 population), while Chilton County's rate is higher (81.9 per 100,000).

Breast and prostate cancer are more common in Shelby County compared to Alabama and the United States (see table). Conversely, breast and prostate cancer incidence rates in Chilton County are lower than in Alabama and the United States (see table).

The cervical cancer incidence rate in Shelby County (5.4 per 100,000 females) is lower than Alabama (8.5 per 100,000 females) and the United States (7.7 per 100,000 females). Cervical cancer incidence data for Chilton County was unavailable.

Select Cancer Incidence Rates, 2008-2012

	Shelby	Chilton		United
	County	County	Alabama	States
Total cancer <sup>1</sup>	452.9	445.2	461.1	453.8
Lung and bronchus <sup>1</sup>	62.4	81.9	73.4	63.7
Breast <sup>2</sup>	131.3	117.4	119.5	123.0
Prostate <sup>3</sup>	150.3	110.8	146.1	131.7
Cervical <sup>2</sup>	5.4	*	8.5	7.7

Source: National Cancer Institute, State Cancer Profiles

<sup>&</sup>lt;sup>1</sup>Rates are per 100,000 population

<sup>&</sup>lt;sup>2</sup>Rates are per 100,000 females

<sup>&</sup>lt;sup>3</sup>Rates are per 100,000 males

<sup>\*</sup> Data has been suppressed to ensure confidentiality and stability of rate estimates

## **Cancer Mortality**

Total cancer mortality in Shelby County (157.4 per 100,000) is lower than in Alabama (191.2 per 100,000) and the United States (171.2 per 100,000), while Chilton County has a higher total cancer mortality rate (204.4 per 100,000).

Lung and bronchus cancer mortality in Shelby County (48.7 per 100,000) is lower than in Alabama (58.1 per 100,000) but higher than the United States (47.2 per 100,000). Chilton County's rate is higher (67.5 per 100,000) than Alabama and the United States.

Breast cancer mortality is less common in both Shelby County and Chilton County compared to Alabama and the United States.

Shelby County males are less likely to die from prostate cancer (17.7 per 100,000 males) compared to all males in Alabama (26.4 per 100,000 males) and the United States (21.4 per 100,000 males). Male residents of Chilton County are less likely to die from prostate cancer (22.3 per 100,000) in comparison to all Alabama males, but more likely compared to all males in the United States.

Cervical cancer mortality is higher in Shelby County (5.7 per 100,000 females) compared to Alabama (4.5 per 100,000 females). The cervical cancer mortality rate in Chilton County (2.3 per 100,000) is lower than the state rate.

Select Cancer Mortality Rates, 2008-2012

	Shelby County	Chilton County	Alabama	United States
Total cancer <sup>1</sup>	157.4	204.4	191.2	171.2
Lung and bronchus <sup>1</sup>	48.7	67.5	58.1	47.2
Breast <sup>2</sup>	20.1	13.2	22.6	21.9
Prostate <sup>3</sup>	17.7	22.3	26.4	21.4
Cervical <sup>2</sup>	*	*	3.0	2.3

Source: National Cancer Institute, State Cancer Profiles

<sup>&</sup>lt;sup>1</sup>Rates are per 100,000 population

<sup>&</sup>lt;sup>2</sup>Rates are per 100,000 females

<sup>&</sup>lt;sup>3</sup>Rates are per 100,000 males

<sup>\*</sup> Data has been suppressed to ensure confidentiality and stability of rate estimates

#### Reported Health Status, Risk Factors, and Behaviors

Adult obesity is slightly lower in Shelby County (31.0%) than in Alabama (33.1%). Chilton County residents are more likely to report being obese (37.3%).

Adults in Shelby County are less likely to report being diagnosed with diabetes (8.2%) compared to all Alabama adults (11.1%), while Chilton County adults are more likely to report being diagnosed with diabetes (12.0%).

Physical inactivity in this report is defined as "not participating in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise" in the past month. Adults in Shelby County are less likely to be physically inactive (23.2%) compared to all Alabama adults (27.1%), while Chilton County residents are more likely to report physical inactivity (31.2%).

Reported Health Status, Risk Factors, and Behaviors, 2012

	Shelby County	Chilton County	Alabama
Adult obesity	31.0%	37.3%	33.1%
Diagnosed diabetes	8.2%	12.0%	11.1%
Physical inactivity	23.2%	31.2%	27.1%

Source: Centers for Disease Control and Prevention

#### **Diabetes**

According to the State of Obesity, diabetes rates have doubled in the past 20 years and Alabama has the third highest rates of diabetes. Adults in Chilton County are less likely to be diagnosed with Diabetes when compared to adults in Alabama, however when compared to adults in the United States they are more likely to be diagnosed. Adults in Shelby County are less likely to be diagnosed with diabetes when compared to adults in Alabama and the United States.

Males in Chilton County are more likely to be diagnosed with diabetes when compared to males in the United States, however males in Shelby County are less likely to be diagnosed. Females in Chilton County are more likely to be diagnosed with diabetes when compared to females in the United States, however females in Shelby County are less likely to be diagnosed with diabetes.

Diagnosed Diabetes, 2013

	Chilton County	Shelby County	Alabama	United States
Population with Diagnosed Diabetes*	12.0%	8.1%	12.5%	9.2%
Percent Males with Diabetes*	12.8%	9.1%	13.1%	9.8%
Percent Females with Diabetes*	11.4%	7.3%	12.0%	8.6%

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

\*Adults aged 20 who have been diagnosed with diabetes

The Dartmouth Atlas of Health Care reports on the percentage of diabetes Medicare patients who in the last year have had a hemoglobin A1c (hA1c) test, which is a blood test that measures blood sugar levels. This test is instrumental in early detection as well as treatment of subsequent health problems. Medicare enrollees who have been diagnosed with diabetes in Chilton and Shelby Counties are more likely to have received an annual hemoglobin A1c (hA1c) test when compared to Medicare enrollees diagnosed with diabetes in Alabama and the United States.

Diabetes Annual Exam, 2012

	Chilton	Shelby		United
	County	County	Alabama	States
Percentage with Diabetes who have had an Annual Exam*	88.8%	85.7%	84.2%	84.6%

Source: Dart mouth At las of Health Care, 2012

<sup>\*</sup>Medicare Enrollees diagnosed with Diabetes

#### **Communicable Diseases**

Data on reported communicable diseases are available through the ADPH. Reported HIV incidence rates in Shelby County (6.4 per 100,000) and Chilton County (11.4 per 100,000) are lower than the Alabama rate (13.5 per 100,000). Similarly, both counties have lower chlamydia incidence rates (198.4 per 100,000 in Shelby County and 343.6 per 100,000 in Chilton County) compared to Alabama (613.3 per 100,000). The gonorrhea and syphilis incidence rates in Shelby County and Chilton County are substantially lower than Alabama's (see table). The tuberculosis incidence rate in Shelby County (0.5 per 100,000) is lower than the state rate (2.2 per 100,000), while no cases were reported in Chilton County.

Communicable Disease Incidence Rates, 2013

	Shelby	Chilton	
	County	County	Alabama
HIV	6.4	11.4	13.5
Chlamydia	198.4	343.6	613.3
Gonorrhea	41.1	61.4	173.2
Syphillis	0.5	6.8	13.8
Tuberculosis	0.5	0.0	2.2

Source: Alabama Department of Public Health, 2013 County Health Profiles

Rates are per 100,000 population

#### Mental Health

This data represents the percentage of the Medicare fee-for-service population with diagnosed depression. According to the Centers for Medicare and Medicaid Services, adults with Medicare in Chilton County are more likely to be diagnosed with depression (17.3%) when compared to adults with Medicare in Alabama (14.8%) and in the United States (16.2%). Adults with Medicare in Shelby County (15.4%) are more likely to be diagnosed with depression when compared to adults in Alabama (14.8%).

Diagnosed Diabetes, 2013

	Chilton	Shelby		United
	County	County	Alabama	States
Percent of Medicare Population with Depression	17.3%	15.4%	14.8%	16.2%

Source: Centers for Medicare and Medicaid Services, 2014

This data represents the rate of the county population to the number of mental health providers in the county. This includes psychiatrists, psychologists, clinical social workers, and counselors who specialize in mental health care. According to the County Health Rankings, the rate of mental health care providers in Chilton County (45.5 per 100,000 population) and in Shelby County (61.4 per 100,000 population) are significantly lower than the rate in Alabama (84.7 per 100,000 population) and in the United States (202.8 per 100,000 population).

Mental Health Care Provider Rates, 2016

	Chilton	Shelby		United
	County	County	Alabama	States
Mental Health Care Provider Rate*	45.5	61.4	84.7	202.8

Source: County Health Rankings, 2016

<sup>\*</sup> Per 100.000 Population

#### Maternal and Child Health

A birth rate is defined as the number of live births per 1,000 persons in a given year. According to the ADPH 2013 County Health Profiles, the birth rates in Shelby County (11.4 per 1,000), Chilton County (12.9 per 1,000), and Alabama (12.0 per 1,000) are similar. The teen birth rate in Alabama is defined as the number of births per 1,000 persons aged 10-19. Teen births are substantially less common in Shelby County (8.4 per 1,000) than in Alabama (17.4 per 1,000), while teen births in Chilton County (26.3 per 1,000) are substantially more common.

Women in Shelby County and Chilton County are more likely to receive prenatal care in the first trimester (89.0% and 82.0%, respectively) than all women in Alabama (80.6%). Adequate prenatal care in this report is defined as receiving 80% or more of the expected prenatal visits based on the Kotelchuck Index; whereas, inadequate care in this report is defined as 79% or less of expected prenatal visits. Women in Shelby County are more likely to receive adequate prenatal care (80.6%) than all women in Alabama (76.2%), while women in Chilton County are less likely to receive adequate prenatal care (70.2%). Women in Shelby County are less likely to receive inadequate care (7.7%) compared to women in Alabama (12.8%), whereas Chilton County women are more likely to receive inadequate prenatal care (14.8%).

Low birthweight is defined as less than 2,500 grams (5 lbs 8oz). Low birthweight births are less common in Shelby County (6.6%) and in Chilton County (6.5%) as compared to Alabama (10.0%). Teen women in Shelby County and Chilton County were less likely to have low birthweight babies (7.6% and 4.1%, respectively) than teen women in Alabama (10.4%). The infant mortality rate in Shelby County (6.5 per 1,000) is lower than in Alabama (8.6 per 1,000). Chilton County's infant mortality rate (1.8%) is substantially lower than in Shelby County and Alabama

Maternal and Child Health Indicators, 2013

	Shelby County	Chilton County	Alabama
Birth rate (per 1,000 population)	11.4	12.9	12.0
Teen birth rate (per 1,000 population aged 10-19 years)	8.4	26.3	17.4
Women receiving prenatal care in first trimester	89.0%	82.0%	80.6%
Women receiving adequate prenatal care	80.6%	70.2%	76.2%
Women receiving inadequate care	7.7%	14.8%	12.8%
Low weight births*	6.6%	6.5%	10.0%
Low weight births to teen women (10-19 years old)	7.6%	4.1%	10.4%
Infant mortality rate (per 1,000 births)	6.5	1.8	8.6

Source: Alabama Department of Public Health, 2013 County Health Profiles

<sup>\*</sup> Percent of all births with known status

#### **Access to Care**

According to the ACS 2010–2014 estimates, Shelby County residents are more likely to have health insurance coverage (90.4%) compared to all Alabama residents (86.5%), while Chilton County residents are slightly less likely to be insured (84.3%).

Private insurance coverage is more common among Shelby County residents (80.0%) than among Alabama residents (65.4%). Chilton County residents (61.4%) are less likely to carry private insurance than Alabama residents.

Public insurance coverage is slightly more common among Chilton County residents (34.6%) compared to all Alabama residents (33.9%), but less common among residents of Shelby County (21.3%).

Residents in Shelby County are less likely to be uninsured (9.6%) compared to all Alabama residents (13.5%). Children in Shelby County are less likely to be uninsured (4.2%) compared to all children in Alabama (4.6%). Chilton County residents are more likely to be uninsured (15.7%) compared to all Alabama residents. Similarly, children in Chilton County are more likely to be uninsured (6.1%) compared to all children in Alabama.

Health Insurance Coverage, 2010-2014

	Shelby	Chilton	
	County	County	Alabama
Health insurance coverage	90.4%	84.3%	86.5%
Private insurance	80.0%	61.4%	65.4%
Public coverage	21.3%	34.6%	33.9%
No health insurance coverage	9.6%	15.7%	13.5%
No health insurance coverage (Children)	4.2%	6.1%	4.6%

Source: U.S. Census - American Community Survey, 2010-2014

Note: Individuals may be included in more than one group due to dual enrollement in Private and Public Insurance.

## **Phone Survey Critical Analysis**

Cancer and heart disease were top concerns in both Shelby and Chilton counties. There is a stark difference between the counties in their satisfaction with their local hospital's ability to care for their concerns. Among Chilton County respondents, 66.7% were unsatisfied with their hospital's heart care, and 58.3% were unsatisfied with their hospital's cancer care. In Shelby County, however, only 14.3% were unsatisfied with their hospital's heart care, and 26.3% were unsatisfied with their hospital's cancer care. Most respondents felt that their concerns were improving except for the concern for cancer in Shelby County. There it was an even 50/50 split.

In Chilton County, the lack of affordable care was a major concern. Respondents hoped for programs that could make care less expensive. In Shelby County substance abuse was a top concern. Respondents believed that more education, law enforcement, and rehab centers could help with the problem.

## **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 SBMC, 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, interviews, and focus group data. Concerns that did not fall within the definition of an identified health priority, such as social determinants of health, are discussed in conjunction with the health priorities where applicable. 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 options based on effectiveness, efficiency, and sustainability. 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.

Shelby Baptist Medical Center's leadership team reviewed the primary and secondary data compiled and ordered the priority health needs based on capacity to meet the needs identified. The five health priorities identified through the CHNA are: cardiovascular disease, cancer, diabetes, mental health, and healthcare access and affordability.

#### Cardiovascular Disease

- Heart disease is the leading cause of death in Shelby and Chilton counties.
- The heart disease mortality rate in Chilton County is substantially higher than the state rate.
- Stroke mortality is more common among Chilton County residents than all Alabama residents.
- Compared to all Alabama adults, Chilton County adults who
  participated in the BRFSS survey were more likely to report
  being obese, being diagnosed with diabetes, and being
  physically inactive.
- Heart disease was a commonly mentioned as a health concern by community leaders.
- Making preventative care a priority was a widely discussed topic among community leaders.
- Heart disease was the second most commonly mentioned health concern by Shelby County and Chilton County phone survey respondents.
- Two-thirds of Chilton County phone survey respondents are unsatisfied with their local hospital's ability to deal with heart disease.

#### Cancer

- Cancer is the second leading cause of death in Shelby County and Chilton County.
- The cancer mortality rate in Chilton County is higher than the statewide rate.
- Community leaders commonly mentioned Cancer as a health concern.
- Cancer was the third most commonly mentioned health concern by Shelby County phone survey respondents.
- Half of the Shelby County phone survey respondents feel that cancer has not improved over time.
- Cancer was the most commonly mentioned health concern by Chilton County residents.
- More than half of Chilton County phone survey respondents are unsatisfied with their local hospital's ability to deal with cancer.

#### **Diabetes**

- Adults in Chilton County are more likely to be diagnosed with diabetes when compared to adults in the United States.
- During Community Phone Surveys, diabetes was the fourth most commonly mentioned health concern by those surveyed.
- During Community Leader Interviews, those interviewed noted diabetes as one of their main health concerns.

#### Mental Health

- Medicare enrollees in Chilton County are more likely to be diagnosed with depression when compared to Medicare enrollees in Alabama and the United States.
- Medicare enrollees in Shelby County are more likely to be diagnosed with depression when compared to Medicare enrollees in Alabama.
- The rates of mental healthcare providers in Chilton and Shelby Counties are significantly lower than the rates in Alabama and the United States.

## **Healthcare Access and Availability**

- Chilton County residents are less likely to be insured compared to all Alabama residents.
- Approximately one in five Shelby County phone survey respondents mentioned either lack of affordable care or health insurance as a health concern in the community.
- Healthcare access and affordability concern were mentioned by 52% of Chilton County phone survey respondents.
- Health insurance was the third most commonly mentioned community concern among phone survey respondents.

#### Resources

#### Cardiovascular Disease

As part of its 2013 Implementation Strategy, SBMC created a plan for addressing cardiovascular disease. The goal was to provide community education on the early signs and symptoms of cardiac distress and the need to seek immediate medical attention. As part of this strategy, SBMC promoted the adoption and training of the Early Heart Attack Care (EHAC) program to hospital employees and promoted the benefits to area healthcare providers.

Other efforts in the cardiovascular disease initiative include offering an online assessment, "Heart Health Profiler," which is available on the Brookwood Baptist Health website, and conducting community educational sessions through the Rotary Club and Leadership of Shelby County program on the importance of cardiovascular health.

As part of the Be Well - Workforce Wellness (formerly Baptist Health System Workforce Wellness) program, SBMC provided support for programs aimed at decreasing cardiovascular disease. The 2013 Implementation Strategy also included initiatives for nutrition and obesity. SBMC continues to provide nutritional consults to hospital patients, provide educational classes on diabetes, and to partner with Middle Alabama Area Agency (M4A) to provide seniors with educational material on nutrition and healthy living.

#### Cancer

There are limited resources for cancer services in Shelby and Chilton counties. Alabama Oncology is the largest private, community-based cancer care service provider in Alabama. One of Alabama Oncology's nine clinics is located in Alabaster in the Shelby Cancer Care Center, which is two blocks north of SBMC.

Other resources located in nearby Birmingham include multiple Alabama Oncology clinics, the UAB Cancer Center, and the Bruno Cancer Center.

#### **Diabetes**

Shelby Baptist Medical Center provides diabetes education classes, in which a Certified Diabetes Educator teaches a program certified by the American Diabetes Association. Classes are free to the community. Shelby Baptist Medical Center also provides assistance through community support groups.

Shelby County supports the Community of Hope Health Clinic, providing basic medical care at no charge to those who qualify. The clinic operates out of the Shelby County Health Department and is run by volunteers. The clinic hosts diabetes education classes and teaches members of the community proper diabetic care.

In addition to these resources, Montgomery, Alabama houses a Center for Diabetes and Nutrition Education. At this location, those who have diabetes can seek education and support from the community. The Center for Diabetes provides patients with counseling from registered dietitians, as well as classes throughout the week which teach proper nutrition and eating habits. The American Diabetes Association is also sponsoring a "Diabetes Alert Day" in Birmingham where people in the community can take a free Diabetes Risk Test and participate in educational activities for the whole family.

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#### Mental Health

Shelby Baptist Hospital provides assessment and treatment plans for seniors aged 60 and older suffering from mental health issues. Patients and their family members participate in assessments to determine whether the patient would benefit from either inpatient or outpatient therapies. Some of the therapies provided include Individual Psychotherapy, Group Psychotherapy, and Art therapy. If inpatient treatment is provided, the hospital also works in conjunction with the patient's family to establish a plan of care after discharge.

Shelby County is home to The Mental Health Board of Chilton and Shelby Counties, Inc. This mental health center is a non-profit organization which provides services for those suffering from mental illness and substance abuse who wish to seek treatment.

Central Alabama has numerous counseling centers and hotlines for those suffering from suicidal tendencies and other mental disorders. The Family Counseling Center of Mobile is a great resource, providing screenings for depression and suicide, family counseling, credit counseling, and counseling sessions for rape victims and those suffering from Alzheimer's Disease.

# **Healthcare Access and Affordability**

Cahaba Valley Health Care (CVHC), located in Birmingham, is a non-profit health services organization serving Jefferson and Shelby County residents. CVHC primarily serves Hispanics, though they will accept any patient. CVHC makes access to health services easier for the Hispanic community by breaking down barriers typically encountered by this group. Another community-based provider of health services is the Community of Hope Health Clinic (CHHC). CHHC is a Volunteers in Medicine clinic that provides free, non-emergent medical care to uninsured, low income Shelby County adults aged 19-64. As part of its 2013 Implementation Strategy, SBMC partnered with CHHC to provide primary care to uninsured residents in the county by assisting with the recruitment of clinic volunteers and supporting clinical operations.

The Clanton Family Health Center, operated by Health Services, Inc., provides primary care services to medically underserved adult residents in Chilton County. In addition to providing medical care to the community, Clanton Family Health Center also offers occasional free health screening events.

ALL Kids is a statewide low-cost, comprehensive healthcare coverage program for children under age 19. Check-ups, immunizations, sick child visits, prescriptions, vision and dental care, hospitalization, and many more services are covered by the program.

#### References

INTELLIMED International. (2016). Esri 2016.

United States Census Bureau. (2016). Poverty thresholds by size of family and number of children. Retrieved from http://www.census.gov/hhes/www/poverty/data/threshld/

United States Department of Labor, Bureau of Labor Statistics. (2016). Labor force data by county, 2014 annual average. Retrieved from http://www.bls.gov/lau/laucntycur14.txt

United States Census Bureau, American Fact Finder. (n.d.). 2010–2014 American Community Survey 3-year estimates. Retrieved from http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml

Alabama State Department of Education. (2016). Free Lunch by System and School. Retrieved from http://www.alsde.edu/

Alabama State Department of Education. (2016). FERP Grad Rate Cohort 2015. Retrieved from http://www.alsde.edu/

Kids Count Data Center (2016). Graduation Rate. Retrieved from http://datacenter.kidscount.org/data/tables/4087-graduation-rate? loc=2#detailed/5/119-184,7613/false/36,868,867/any/8509,8510

Alabama Criminal Justice Information System. (2016). Crime in Alabama 2014. Retrieved from http://www.alea.gov/home/wfContent.aspx? PLH1=plhACJIC-CrimeInAlabama

Alabama Department of Public Health. (n.d.). County Health Profiles, 2013. Retrieved from http://www.adph.org/healthstats/assets/C2013.pdf

#### References (continued)

Centers for Disease Control and Prevention. (n.d.). Interactive Atlas of Heart Disease and Stroke. Retrieved from http://nccd.cdc.gov/DHDSPAtlas/Default.aspx?state=NJreports.aspx?geographyType=county&state=NJ#report

National Cancer Institute. (2016). State Cancer Profiles. Retrieved from http://statecancerprofiles.cancer.gov/

Centers for Disease Control and Prevention. (n.d.). BRFSS Prevalence & Trends Data. Retrieved from http://www.cdc.gov/brfss/brfssprevalence/

# **Appendix A: Community Leader Interview Organizations**

Organization	Area Represented
Brierfield Volunteer Fire Department	Public Service Organization
City of Alabaster	Public Service Organization
City of Pelham	Public Service Organization
Shelby County Alabama Cooperative Extension	Public Service Organization
Shelby Board of Education	Education

## **Appendix B: Additional Data**

- 1. Are you at least 18 years of age? [Yes or No]; If No, not eligible for survey
- 2. Are you a resident of [County of interest]? [Yes or No]; If No, not eligible for survey
- 3. When thinking about your community, what do you feel is the number one health concern facing your community today?

Record <PRIMARY> verbatim:

- 4. Are you satisfied with your local hospital's ability to deal with <PRIMARY>? [Yes or No]
- 5. Has there been improvement in <PRIMARY> in the community over time? [Yes or No]
- 6. What do you feel the community can do to address <PRIMARY>?
- 7. What do you feel is your second highest health concern in your community? Record <SECOND> verbatim:
- 8. Are you satisfied with your local hospital's ability to deal with <SECOND>? [Yes or No]
- 9. Has there been improvement in <SECOND> in the community over time? [Yes or No]
- 10. And finally, what do you feel is your third highest health concern in your community? Record <THIRD> verbatim.
- 11. Are you satisfied with your local hospital's ability to deal with <THIRD>? [Yes or No]
- 12. Has there been improvement in <THIRD> in the community over time? [Yes or No]

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#### **Community Leader Interviews**

#### Interview Methodology

Six phone interviews were conducted from May 12–27, 2016. Interviews required approximately 20 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 three strengths of the community?
- What are the top three health concerns of the community?
- What are the health assets and resources available in the community?
- What are the health assets or resources that the community lacks?
- What are the barriers to obtaining health services in the community?
- What is the single most important thing that could be done to improve the health in the community?
- That other information can be provided about the community that has not already been discussed?

# **Community Leader Interview Summary**

Topic	Discussion Points/Highlights
Topic	Discussion Folhes/Highlights
Health Strengths	<ul> <li>One interviewees noted that he is "impressed with the way the hospital handles and supports first responders". Several interviewees said that the hospital cares about the community and is a strength.</li> <li>One interviewee noted that the Medical Mile Initiative is a strength in the community.</li> </ul>
Health Concerns	Some of the commonly mentioned health concerns include diabetes, obesity, heart disease, and cancer.
	<ul> <li>Other interviewees mentioned the area not being friendly to biking or walking as their primary health concern. Because of this, activity levels are down and this greatly impacts health.</li> </ul>
Resources Available	Some health resources mentioned include an active senior center, eye exams in schools, clinics for the underinsured/uninsured, annual health fairs, and a strong faith based network.  Several interviews a reactioned CRMC as being a strongth in the content of the content o
	<ul> <li>Several interviewees mentioned SBMC as being a strength in the community.</li> </ul>
Resources Needed	<ul> <li>In regards to the elderly, one interviewee noted that long term care facility beds are a community need.</li> </ul>
	<ul> <li>One interviewee noted that there are few nutritional resources in the community. An increase in these would benefit the community.</li> </ul>
Ways to improve the	One interviewee discussed the need for greater  advantagement for absolute at a policy level.
overall health in the community	acknowledgement for obesity at a policy level.
Community	<ul> <li>One widely discussed topic was the need to make preventative care a priority. One interviewee noted that community members need more information and education on preventative care.</li> </ul>

#### Community Health Phone Survey

Phone surveys were conducted between March 2, 2016 and March 17, 2016. There were 101 respondents to the survey from Shelby County and 50 from Chilton County. Respondents were asked about their top concerns for the health of the community, their satisfaction with their local hospital's ability to deal with their concerns, and whether their concerns were improving over time.

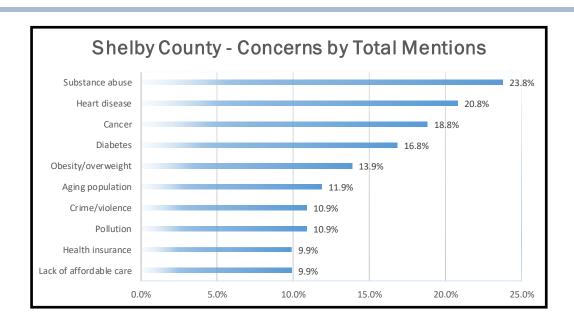
#### **Shelby County Phone Survey Responses**

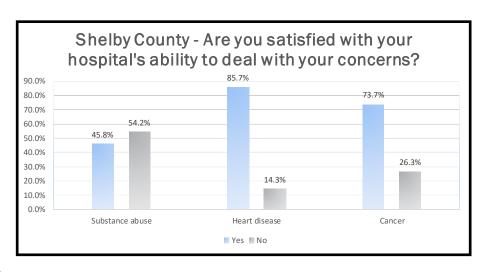
Shelby County's top three concerns by total mentions are substance abuse (23.8%), heart disease (20.8%), and cancer (18.8%). Most respondents are satisfied with their hospital's ability to deal with , but are unsatisfied with their hospital's ability to deal with substance abuse. Most respondents feel that substance abuse and heart disease were improving over time, but respondents were split as to cancer.

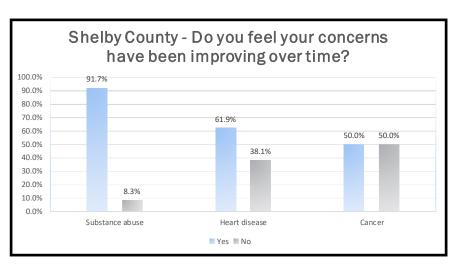
Shelby County Top Health Concerns by Total Mentions

Community Concerns	Primary Concern	Secondary Concern	Tertiary Concern	Total Mentions
Substance abuse	15.8%	4.0%	4.0%	23.8%
Heart disease	7.9%	7.9%	5.0%	20.8%
Cancer	7.9%	9.9%	1.0%	18.8%
Diabetes	4.0%	5.9%	6.9%	16.8%
Obesity/overweight	5.0%	6.9%	2.0%	13.9%
Aging population	9.9%	1.0%	1.0%	11.9%
Pollution	5.9%	3.0%	2.0%	10.9%
Crime/violence	5.0%	5.0%	1.0%	10.9%
Lack of affordable care	9.9%	0.0%	0.0%	9.9%
Health insurance	6.9%	1.0%	2.0%	9.9%

# **Shelby County Phone Survey Responses**







# **Chilton County Phone Survey Responses**

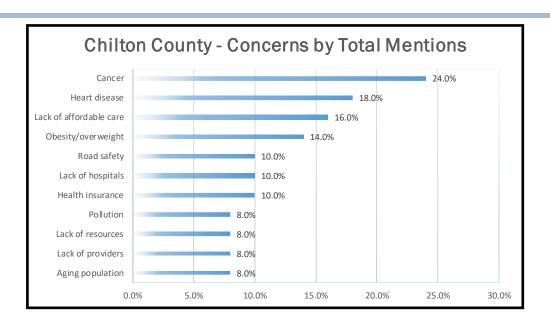
#### **Chilton County Phone Survey Responses**

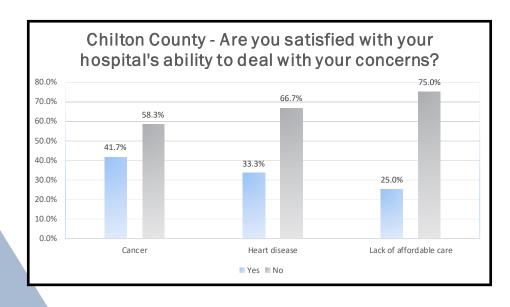
Chilton County's top three concerns by total mentions are cancer (24.0%), heart disease (18.0%), and lack of affordable care (16.0%). Most respondents are unsatisfied with their hospital's ability to deal with their top concerns. Most respondents feel that their top concerns were improving over time.

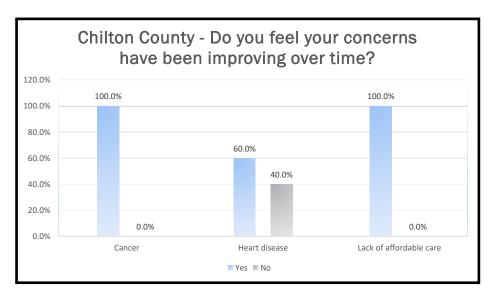
Chilton County Top Health Concerns by Total Mentions

Community Concerns	Primary Concern	Secondary Concern	Tertiary Concern	Total Mentions
Cancer	12.0%	8.0%	4.0%	24.0%
Heart disease	10.0%	2.0%	6.0%	18.0%
Lack of affordable care	14.0%	0.0%	2.0%	16.0%
Obesity/overweight	2.0%	6.0%	6.0%	14.0%
Health insurance	8.0%	2.0%	0.0%	10.0%
Lack of hospitals	10.0%	0.0%	0.0%	10.0%
Road safety	10.0%	0.0%	0.0%	10.0%
Aging population	2.0%	6.0%	0.0%	8.0%
Lack of providers	4.0%	0.0%	4.0%	8.0%
Lack of resources	4.0%	4.0%	0.0%	8.0%
Pollution	8.0%	0.0%	0.0%	8.0%

## **Chilton County Phone Survey Responses (continued)**



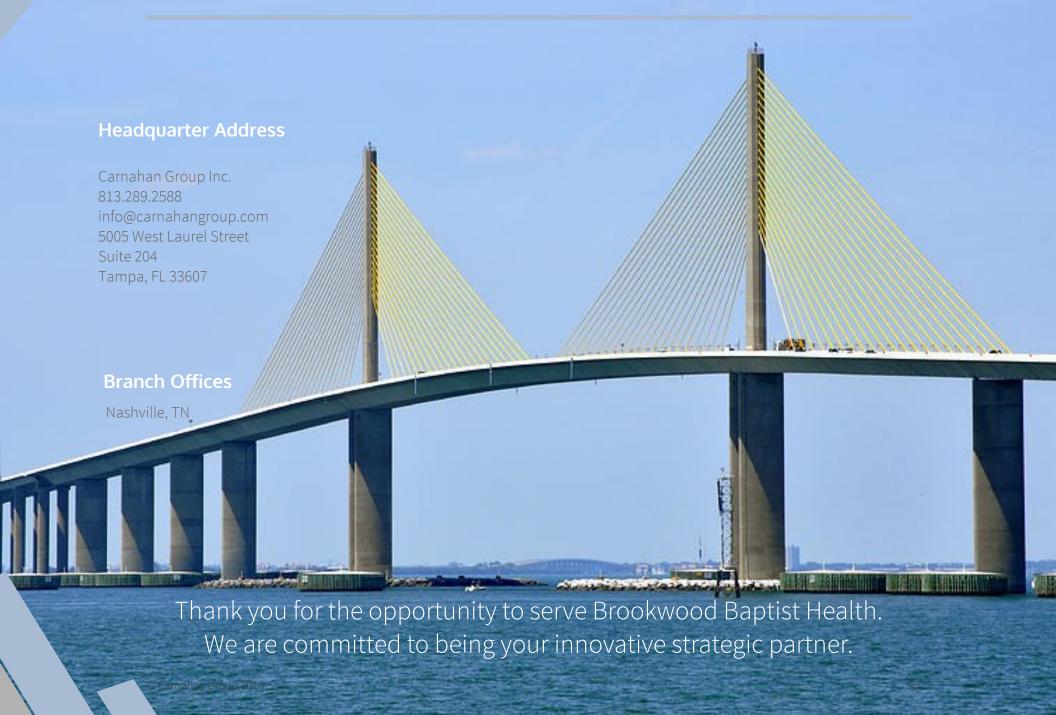




## Appendix C: Carnahan Group Qualifications

Carnahan Group is an independent and objective healthcare consulting firm that focuses on the convergence of regulations and planning. For over 10 years, 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. Carnahan Group serves a variety of healthcare organizations, such as, but not limited to, hospitals and health systems, large and small medical practices, imaging centers, and ambulatory surgery centers. Carnahan Group offers services through highly-trained and experienced employees, and Carnahan Group's dedication to healthcare organizations ensures relevant and specific insight into the needs of our clients.

# **Company Overview**





Strategic Healthcare Advisors