

*Christian Hospital
2016 Community Health Needs
and Implementation Plan*



Our Mission: To help people enjoy life by improving their health

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I. Executive Summary

Christian Hospital is a 220-bed, acute-care medical center located in north St. Louis County. Northwest Healthcare is located six miles west of the main hospital campus and offers the community 24-hour emergency care and a variety of outpatient services in a convenient setting to complement the hospital services. Christian Hospital is a leader among hospitals in the St. Louis region and has experienced tremendous growth in the last few years. Since 1903 when Christian Hospital took its first step toward a remarkable history with the opening of a modest home for use as a hospital, Christian Hospital has continued its commitment to provide needed health care to the community. Christian Hospital has also established effective partnerships towards the goal of improving the health of the community.

Like all nonprofit hospitals, Christian Hospital is required by the Patient Protection and Affordable Care Act (PPACA) to conduct a community health needs assessment (CHNA) and create an implementation plan every three years. Christian Hospital completed its first CHNA and implementation plan on Dec. 31, 2013. The report was posted to the hospital's website to ensure easy access to the public.

Each hospital is required to define its community. Christian Hospital defined its community as St. Louis County, with specific focus on north St. Louis County. Once the community is defined, input must be solicited from those who represent the broad interests of the community served by the hospital, as well as those who have special knowledge and expertise in the area of public health.

Christian Hospital conducted its 2016 assessment in two phases. The first phase consisted of a focus group discussion with key leaders and stakeholders representing the community. This group reviewed the primary data and community health need findings from 2013 and discussed changes that had occurred since 2013. Additionally, the focus group reviewed gaps in meeting needs, as well as identified potential community organizations for Christian Hospital to collaborate with in addressing needs.

During phase two, findings from the focus group meeting were reviewed and analyzed by a hospital internal work group of clinical and non-clinical staff. Using multiple sources, including Healthy Communities Institute and Truven Health Analytics, a secondary data analysis was conducted to further assess the identified needs. This data analysis identified some unique health disparities and trends evident in St. Louis County when compared against data for the state and country.

At the conclusion of the comprehensive assessment process, Christian Hospital identified three health needs where focus is most needed to improve the future health of the community it serves: Access to Care/Care Coordination; Heart Disease; and Cardiovascular Health with a focus on Stroke Prevention; and Diabetes.

The analysis and conclusions were presented, reviewed and approved by the Christian Hospital board of directors.

II. Community Description

A. Geography

Christian Hospital is a member of BJC HealthCare, one of the largest, nonprofit health care organizations in the country. BJC HealthCare hospitals serve urban, suburban and rural communities through 15 hospitals and multiple community health locations primarily in the greater St. Louis, southern Illinois and mid-Missouri regions. Christian Hospital, Missouri Baptist Medical Center and Barnes-Jewish West County Hospital are the three BJC HealthCare hospitals located in St. Louis County.

Christian Hospital defines its community as St. Louis County.

St. Louis County is geographically divided into North County, West County and South County. Christian Hospital is located in north St. Louis County.

North Region of St. Louis County

For the purpose of this report, Christian Hospital's focus area is North County. The majority of the available data to complete the CHNA compared St. Louis County, Missouri and the U.S. Whenever possible, data analysis was included on the sub-counties of St. Louis County: North County, West County and South County.

Below, the North county population is compared to the population of St. Louis County.

North County 2015 Population

277,003

54 percent Female (149,844)

46 percent Male (127,159)

64 percent African American (176,314)

31 percent White (85,005)

2.0 percent Hispanic or Latino (5,469)

2.0 percent Two or More Races (5,940)

1.0 percent Asian/Pacific Islander (2,495)

St. Louis County 2015 Total Population

1,003,362

52.6 percent Female (527,768)

47.4 percent Male (475,594)

24.1 percent African American (241,810)

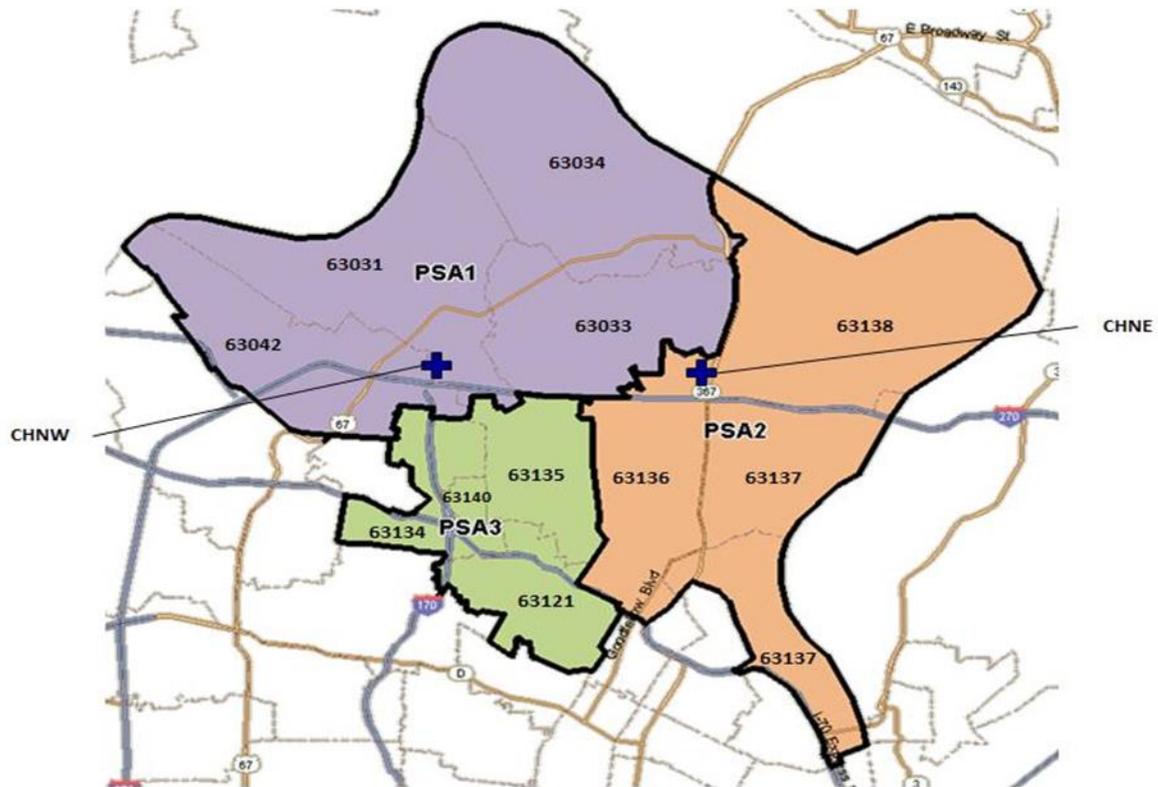
69.5 percent White (697,337)

2.8 percent Hispanic or Latino (28,094)

2.0 percent Two or More Races (20,067)

4.2 percent Asian (42,141)

Christian Hospital PSA 1-3 Map



Christian Hospital’s community is defined by its Primary Service Area (PSA) in north St. Louis County with emphasis in the following zip codes: 63031, 63034, 63033, 63042, 63136, 63137, 63138, 63121, 63134, 63135 and 63140.

B. Population

Population and demographic data is necessary to understand the health of the community and plan for future needs. In 2015, St. Louis County reported a total population estimate of 1,003,362 compared to the state population of 6,083,672. St. Louis County comprises 16 percent of the state of Missouri’s total population. It is the most populous county in Missouri.

The population of the county and the state has grown since the 2010 census. From 2010-2015, the county population grew 0.4 percent and the state experienced a 1.6 percent increase in its population.

Table 1 further defines the county's population as compared to the state.

Table 1: Demographic of St. Louis County vs. Missouri State		
	St. Louis County	Missouri
GEOGRAPHY		
Land area in square miles, 2010	507.80	68,741.52
Persons per square mile, 2010	1,967.20	87.1
POPULATION		
Population, July 1, 2015 estimate	1,003,362	6,083,672
Population, 2010 (April 1) estimates base	998,883	5,988,923
Population, percent change - April 1, 2010 to July 1, 2015	0.4%	1.6%
Population, 2010	998,954	5,988,927
RACE / ETHNICITY / Language Spoken		
White alone, percent, 2015	69.5%	83.5%
White alone, not Hispanic or Latino, percent, 2015	67.1%	67.6%
African American alone, percent, 2015	24.1%	11.8%
Asian alone, percent, 2015	4.2%	1.9%
Hispanic or Latino, percent, 2015	2.8%	4.0%
Two or More Races, percent, 2015	2.0%	2.0%
American Indian and Alaska Native alone, percent, 2015	0.2%	0.5%
Native Hawaiian and Other Pacific Islander alone, percent, 2015	0.0%	0.1%
LANGUAGE		
Foreign born persons, percent, 2010-2014	6.7%	3.9%
Language other than English spoken at home, percent 5+, 2010-2014	8.7%	6.1%
AGE		
Persons under 5 years, percent, 2015	5.8%	6.2%
Persons under 18 years, percent, 2015	22.2%	23.0%
Persons 65 years and over, percent, 2015	16.8%	15.4%
GENDER		
Female persons, percent, 2015	52.6%	50.9%
Male Persons, percent, 2015	47.4%	49.1%

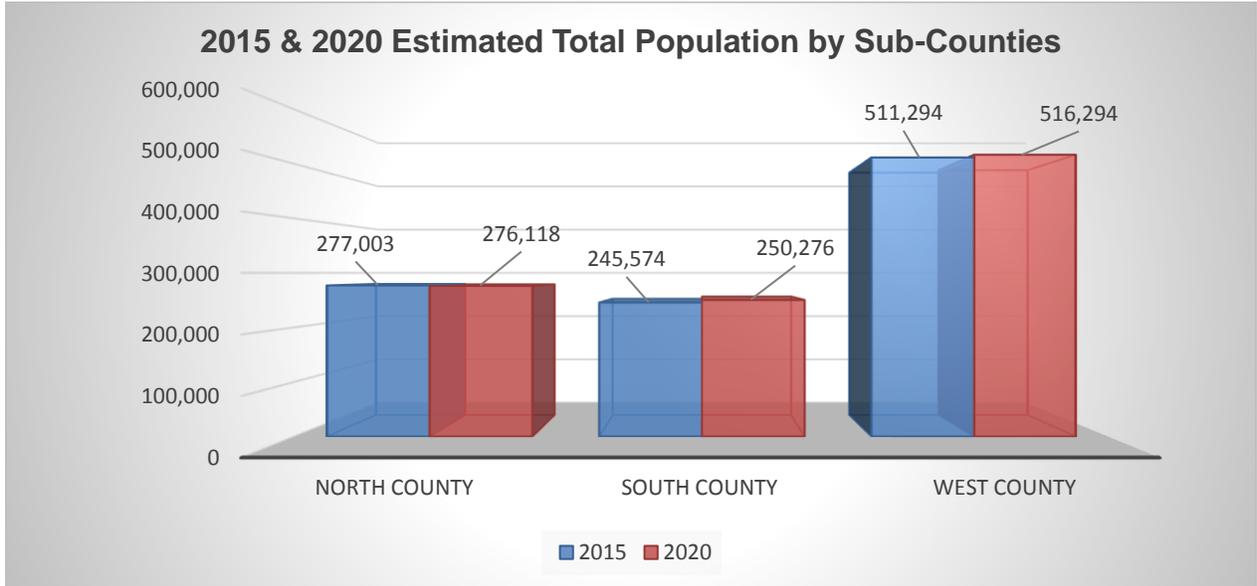
Source: U.S. Census Bureau

Table 2: St. Louis County Demographic Including Education, Income, Housing vs. Missouri		
	St. Louis County	Missouri
EDUCATION		
High school graduate or higher, percent of persons age 25+, 2010-2014	92.6%	88.0%
Bachelor's Degree or higher, percent of persons age 25+, 2010-2014	41.4%	26.7%
INCOME		
Per capita money income in the past 12 months (2011 dollars), 2010-2014	\$35,388	\$26,006
Median household income (in 2014 dollars), 2010-2014	\$59,520	\$47,764
Persons below poverty level, percent, 2010-2014	9.6%	15.5%
HOUSING		
Housing units, 2014	438,081	2,735,742
Homeownership rate, 2010-2014	70.8%	67.9%
Housing units in multi-unit structures, percent, 2010-2014	22.7%	19.70%
Median value of owner-occupied housing units, 2010-2014	173,000	136,700
Households, 2010-2014	402,629	2,361,232
Persons per household, 2010-2014	2.44	2.48

Source: U.S. Census Bureau

St. Louis County's median household income for the five-year period ending 2014 was 25 percent higher than the state overall. Persons living below the poverty level in St. Louis County totaled 9.6 percent compared to 15.5 percent in the state. Home ownership was higher in St. Louis County (70.8 percent) than Missouri (67.9 percent).

Demographic of St. Louis County Sub-Counties

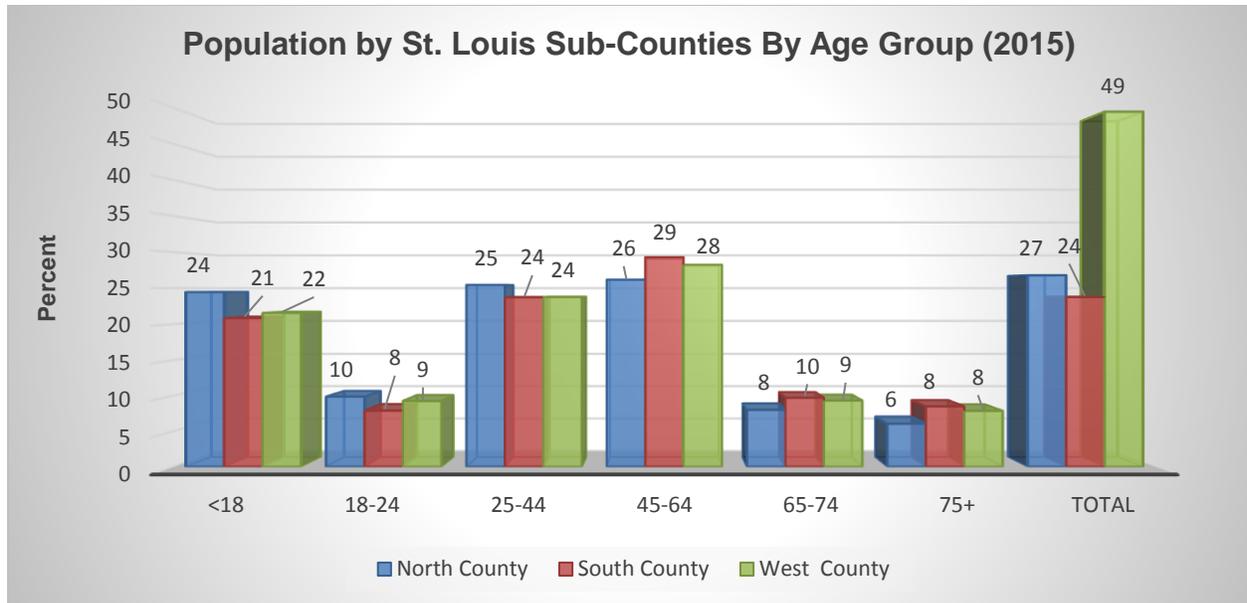


Source: Truven Health Analytics

North County, home of Christian Hospital, is estimated to have a slight decline of -0.3 percent in its population from 2015 to 2020. A slight population increase is expected by 2020 in both West County (1 percent) and South County (nearly 2 percent).

C. Age

The age structure of a community is an important determinant of its health and health services it will need.



Source: Truven Health Analytics

In St. Louis County, 27 percent of the population resided in North County in 2015, 24 percent in South County and 49 percent in West County. Within each sub-county, the distribution of the population across age groups was similar.

Table 3: Demographic of Sub-Counties of St. Louis County							
		North County		South County		West County	
		2015	2020	2015	2020	2015	2020
Population by Race	White	85,805	77,088	225,666	227,627	389,012	385,645
	African American	176,314	181,769	4,039	4,404	59,542	58,965
	Asian & Pacific Islander	2,495	2,914	6,162	7,171	31,858	36,265
	2+ Races	5,940	6,935	3,459	3,950	10,404	11,923
	Hispanic	5,469	6,360	5,712	6,571	18,945	21,868
	American Indian	603	668	382	401	855	903
	Other	377	384	154	152	678	681
	Total Population	277,003	276,118	245,574	250,276	511,294	516,250
Male Population	<18	34,244	32,722	26,296	25,885	56,123	54,239
	18-24	13,618	13,359	10,009	10,701	24,042	25,709
	25-44	31,609	33,018	28,741	29,237	59,289	59,588
	45-64	31,971	30,187	34,794	33,129	68,276	64,652
	65-74	9,432	11,305	10,686	13,215	21,604	26,421
	75+	6,285	6,772	8,052	8,780	15,073	16,414
	Male Total	127,159	127,363	118,578	120,947	244,407	247,023
	Female Population	<18	33,478	31,893	24,877	24,594	54,129
18-24		13,694	12,967	9,573	10,014	23,259	24,607
25-44		38,919	38,330	29,515	29,825	62,206	61,106
45-64		40,571	39,232	37,126	35,593	76,123	73,222
65-74		12,718	15,540	13,114	15,979	25,979	31,649
75+		10,464	10,793	12,791	13,324	25,191	26,319
Female Total		149,844	148,755	126,996	129,329	266,887	269,227

Source: Truven Health Analytics

This table shows a 21.2 percent growth projected in the 65-74 age group (male and female) in North County from 2015-2020; a 22 percent increase in West County; and a 23 percent growth in South County. The 18-24 age group is expected to decrease by 3.6 percent in North County and increase by 6 percent in both West County and South County.

D. Race and Ethnicity

The regions that comprise St. Louis County vary in their racial and ethnic composition. In 2015 for example, South County had a much higher percentage of people who identified as White (92 percent) compared to West County (76 percent) and North County at (31 percent). Conversely, 64 percent of North County's residents identified as African American compared to less than two percent of residents in South County and 12 percent in West County.

For the Hispanic population, North County and South County reported two percent of the population who identified as Hispanic when compared to West County (4 percent). North County reported the lowest percent of residents who identified as Asian (1 percent), when compared to South County (3 percent) and West County (6 percent).

E. Income

In North County, the median household income in 2015 was \$43,008 and estimated at \$44,430 in 2020. In West County, the median household income in 2015 was \$71,803 and projected at \$73,746 in 2020. For South County, the median household income in 2015 was \$61,584 and projected at \$63,852 in 2020.

Table 4: Total Households & Family Structure of St. Louis County Sub-Counties				
2015		North County	South County	West County
Total Households		109,513	101,357	211,386
Median Household Income		\$43,008	\$61,584	\$71,803
Family Structure	Families	72,412	67,437	134,314
	Married Couple w / Children	16,206	21,856	45,551
	Married Couple no Children	22,454	31,546	59,425
	Male Head w / Children	3,404	2,243	3,869
	Male Head, no Children	2,644	1,787	3,353
	Female Head w / Children	18,797	5,633	13,488
	Female Head, no Children	8,901	4,361	8,624

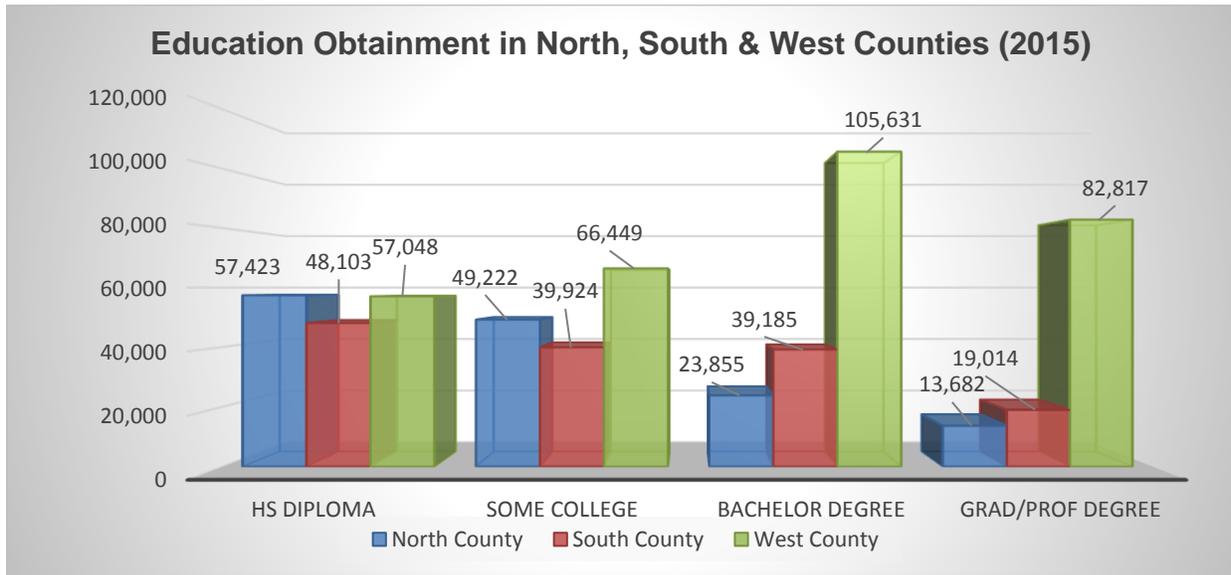
Source: Truven Health Analytics

Table 4 shows that in North County, 58 percent of families with children are from single-parent households when compared to West County with 28 percent and 26 percent in South County.

Adults and children in single-parent households are at a higher risk for adverse health effects, such as emotional and behavioral problems, compared to their peers. Children

in such households are more likely to develop depression, smoke, and abuse alcohol and other substances. Consequently, these children experience increased risk of morbidity and mortality of all causes. Similarly, single parents suffer from lower perceived health and higher risk of mortality. (Healthy Communities Institute).

F. Education



Source: Truven Health Analytics

In North County, 13 percent of the population 25 and older has a bachelor's degree when compared to 30 percent in West County and 22 percent in South County.

For many, having a bachelor's degree is the key to a better life. The college experience develops cognitive skills, and allows learning about a wide range of subjects, people, cultures, and communities. Having a degree also opens up career opportunities in a variety of fields, and is often the prerequisite to a higher-paying job. It is estimated that college graduates earn about \$1 million more per lifetime than their non-graduate peers. (Healthy Communities Institute).

In North County, 12 percent of the population 25 and older did not have a high school diploma compared to South County at 8 percent and West County at 6 percent.

Individuals who do not finish high school are more likely than people who finish high school to lack the basic skills required to function in an increasingly complicated job market and society. Adults with limited education levels are more likely to be unemployed, on government assistance, or involved in crime.

The Healthy People 2020 national health target is to increase the proportion of students who graduate high school within four years of their first enrollment in 9th grade to 82.4 percent.

III. Previous CHNA Measurement and Outcomes Results

At the completion of the 2013 CHNA, Christian Hospital identified Diabetes, Obesity and Access to Affordable Health Care where focus was most needed to improve the health of the community served by the hospital. The following table details results, goals and current status of these community health needs. (See Full Report in Appendix C).

Table 5: Christian Hospital's 2013 CHNA Outcomes		
Cardiovascular Disease / Diabetes	Obesity	Access to Affordable Healthcare
Goals	Goals	Goals
Increase the number of pre-diabetes and diabetes screenings in the community and encourage follow-up for abnormal results.	Reduce the incidence of overweight and obese individuals in North County.	Offer Medicaid and financial assistance enrollment to 100% of eligible patients who present for medical care.
Increase the number of adolescents and adults with pre-diabetes / diabetes who receive formal education in the community.	Educate individuals on what their body needs to be healthy.	
Current Status:	Current Status:	Current Status:
Community members are screened at free events at Christian Hospital throughout the calendar year.	Just Lose It continues to be offered to community members, free of charge. Nearly 1,000 neighbors sign up each year to exercise, learn cooking and weight loss tips and share their personal stories.	The number of individuals who receive assistance for insurance eligibility and the number who are enrolled in programs are being tracked. .
Follow-up is done by registered nurses who provide education and access to resources.	Just Lose It is offered twice a year, once in January and once in August. Each group of participants has lost up to, and over 2,000 lbs. of weight each session.	In 2014 and 2015, respectively 10,068 and 6,653 were enrolled in the program.
The number of individuals who are being screened has decreased due to realignment in the diabetes service of the hospital.		
The hospital is working to ensure that community members receive access to free screenings as often as possible.		

V. Conducting the 2016 CHNA

A. Primary Data Collection

Christian Hospital and SSM DePaul Health Center collaborated in conducting a joint focus group to solicit feedback from community stakeholders, public health experts and those with a special interest in the health needs of north St. Louis County residents. These hospitals first partnered in a combined focus group as part of the 2013 CHNA.

Seventeen of 25 invited participants representing various St. Louis County organizations participated in the focus group. (See Appendix B). The focus group was held June 15, 2015 at Northwest HealthCare with the following objectives identified:

- 1) Determine whether the needs identified in the 2013 CHNA remain the correct focus areas
- 2) Explore whether any previous needs are no longer a priority
- 3) Determine where gaps exist in the plan to address the prioritized needs
- 4) Identify potential organizations for collaboration
- 5) Discuss how the world has changed since 2013 when Christian Hospital and SSM DePaul Health Center first identified these needs and whether there are new issues to consider
- 6) Evaluate what issues the participants anticipate becoming a greater concern in the future

2016 CHNA Focus Group Summary

A general consensus was reached that needs identified in the previous assessment should remain as focus areas for Christian Hospital. Nothing was identified to remove from the list of prioritized needs. Further, the leadership teams of the hospitals agreed the priorities are interrelated and suggest a holistic approach to caring for patients in north St. Louis County.

Diabetes – Currently, educational and prevention programs are in place. It is believed treatment and outcomes can be controlled by doctors.

Obesity – Obesity is perceived as a principle concern because physicians have less control over compliance with weight management and eating habits, which often leads to diabetes and heart disease.

Access to affordable health care – Focus group participants believe the Affordable Care Act is addressing this priority; however, many residents are still unaware of how to access the program.

Heart and vascular care – In general, there are increased efforts to educate consumers about the signs and symptoms of a stroke or heart attack. However,

prevention, education, and seeking timely treatment remain challenges in north St. Louis County.

Considerations for Adding to List of Priorities

Focus group participants reflected on challenges the community experienced in north St. Louis County in 2014 and 2015. This led some to reconsider how key contributing factors, such as mental health, substance abuse and socio-economic factors are prioritized in the “other needs” category. These “other needs” are believed to result in the following:

- Violence and trauma
- Nutritional deficiencies
- Decreased or no physical activity
- Lack of continuity in access to care and medication

Gaps in Implementation Strategies

Gaps were identified in the ways needs are being addressed, including:

- Access: Transportation
- Communication and Awareness
- Training and Education: Health Literacy
- Social Determinants of Health
- Seniors and children were identified as special populations with specific needs, with pediatric asthma noted as an important issue.
- Behavioral/Mental Health Issues

Potential Partner Organizations

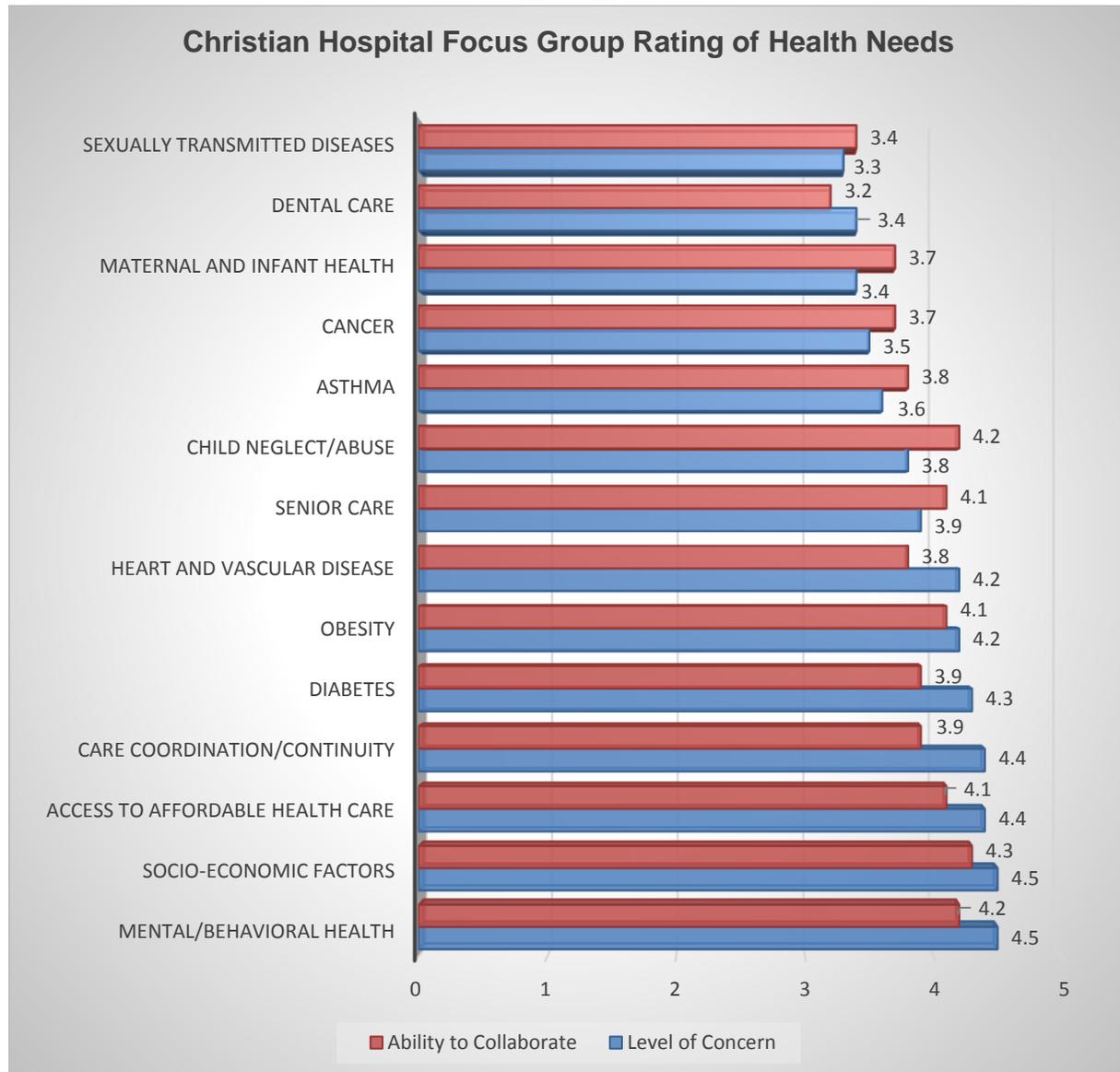
Most participants agreed the issues related to north St. Louis County are as complex as are finding solutions. Understanding that hospitals alone cannot address these issues, several organizations were identified for collaboration, including local parks and recreation departments, grocery stores and career centers as well as other organizations, including the St. Louis Regional Health Commission, Brown School of Social Work at Washington University, Community Action Agency of St. Louis County, Operating Seeds of Hope Farm, Urban League of Metropolitan St. Louis and the Better Family Life.

New Issues of Concern since 2013

- Financial literacy
- Employment

Rating of Needs

Participants were given the list of the needs identified in the 2013 assessment and directed to re-rank them on a scale of 1 (low) to 5 (high), based on their perceived level of community concern and the ability of community organizations to collaborate in addressing:



Mental/Behavioral Health, Socio-Economic Factors, Access to Affordable Health Care and Care Coordination/Continuity all ranked high in terms of concern. Socio-Economic Factors ranked highest in terms of ability to collaborate, while Mental/Behavioral Health, and Child Neglect and Abuse ranked a close second. (See Appendix D for Complete Focus Group Report).

B. Secondary Data Analyses

Based on the primary data reviewed by focus group members, key areas were identified for a secondary data analysis. (See graph on previous page). These needs represent the most prevailing issues identified by the focus group.

Data sources used for the secondary data analysis included the following described below:

Healthy Communities Institute (HCI), an online community dashboard of health indicators for St. Louis County as well as the ability to evaluate and track the information against state and national data and Healthy People 2020 goals. This online dashboard of health indicators for St. Louis County evaluates and tracks information against state and national data and Healthy People 2020 goals. Sources of data include the National Cancer Institute, Environmental Protection Agency, US Census Bureau, US Department of Education, and other national, state, and regional sources.

Hospital Industries Data Institute (HIDI, 2014) is a data source provides insight into the patterns and frequency of health care utilization in the hospital.

Missouri Information for Community Assessment (MICA) is an online system that helps to prioritize diseases using publicly available data. The system also provides for the subjective input of experts to rank their perceived seriousness of each issue.

Centers for Disease Control and Prevention (CDC)/State Cancer Profiles is a web site that provide data, maps, and graphs to help guide and prioritize cancer control activities at the state and local levels. It is a collaboration of the National Cancer Institute and the Centers for Disease Control and Prevention.

<https://statecancerprofiles.cancer.gov>

Missouri Department of Mental Health provides numerous comprehensive reports and statistics on mental health diseases, alcohol and drug abuse.

http://dmh.mo.gov/ada/countylinks/saint_louis_county_link.html

Truven Health Analytics offers health care data management, analytics and services and consulting to customers across the health care industry including hospitals and health systems, employers, health plans, life sciences companies, and state and federal government agencies. <http://truvenhealth.com/>

The majority of the analysis was completed comparing St. Louis County, Missouri and the U.S. Health needs data was not available on the sub-counties of St. Louis with the exception of prevalence rates for emergency room visits, asthma, cancer, diabetes, cardiovascular health, obese/morbid propensity and mental health. In order to provide a comprehensive analysis of disparity and to identify trends, the most up-to-date secondary data was included on the following needs:

- Access to Affordable Health Care/Care Coordination
- Access to Transportation
- Asthma
- Cancer
- Diabetes
- Heart Health & Stroke
- Obesity
- Maternal and Infant Health
- Mental Health
- Substance Use and Abuse

Sexually Transmitted Disease was not included because of outdated data.

Child Neglect/Abuse and Socio-Economic Factors were not included due to a lack of data availability.

Following the secondary data analysis, a summary is provided that outlines observations noted in the disparities and trends for each of the above needs. (See Page 58). While Christian Hospital has identified three needs as its primary focus, the following needs will continue to be appropriately addressed by the hospital and other organizations in north St. Louis County.

Access to Affordable Health Care/Care Coordination

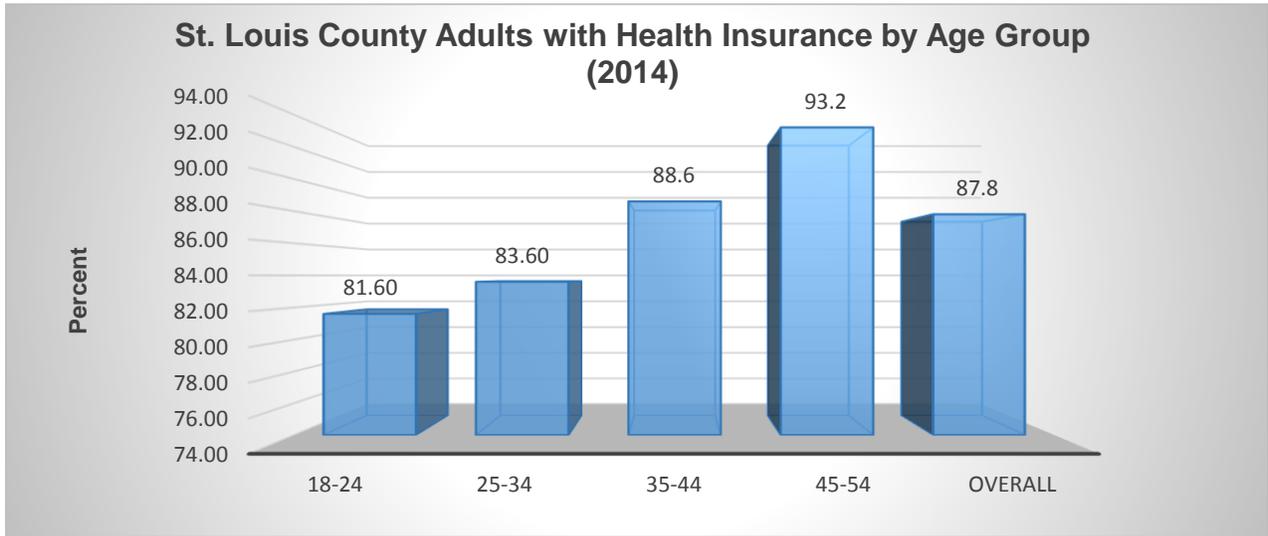
The ability to access health services has a profound and direct effect on every aspect of a person’s well-being. Beginning in 2010, nearly 1 in 4 Americans lacked a primary care provider (PCP) or health center to receive ongoing medical services. Approximately 1 in 5 Americans today, children and adults under age 65, do not possess medical insurance.

Individuals without medical insurance are more likely to lack a traditional source of medical care, such as a PCP, and are more likely to skip routine medical care due to costs, therefore, increasing the risk for serious and debilitating health conditions. Those who access health services are often burdened with large medical bills and out-of-pocket expenses. Increasing access to both routine medical care and medical insurance are vital steps in improving the health of the community. (Healthy Communities Institute).

Table 6: Access to Health Care		
Health Indicators	St. Louis County	Missouri
Adults with Health Insurance in Percent: Age 18-64 (2014)	87.8	83.9
Children With Health Insurance in Percent (2014)	95.4	92.8
Primary Care Providers Rate / 100,000 (2012)	120	71
Dentist Rate/100,000 (2013)	83	54
Mental Health Providers Rate/100,000 (2014)	249	167
Non-Physicians Primary Care Providers Rate / 100,000 (2014)	58	66
Preventable Hospital Stays. Discharges / 1000 Enrollees (2013)	48	59

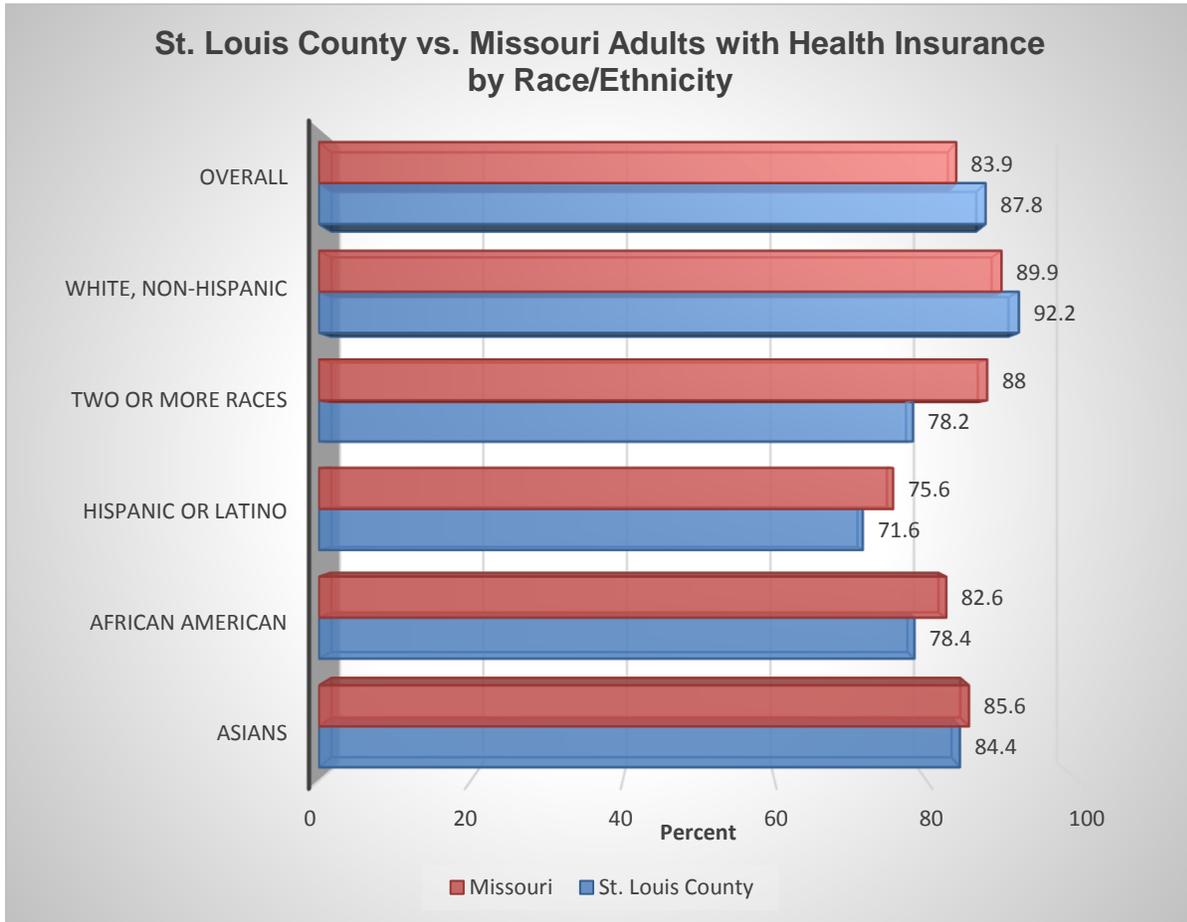
Source: HCI / Mo Department of Health & Senior Services / Healthy People 2020

The rate of adults and children with health insurance in St. Louis County in 2014 was higher than the rate of the same age group in Missouri. The rate of primary care providers and dentists was higher in the county than in the state. Conversely, the rate for non-physician primary care providers was lower in the county than in the state. The rate of preventable hospital stays was lower in the county when compared to the state.



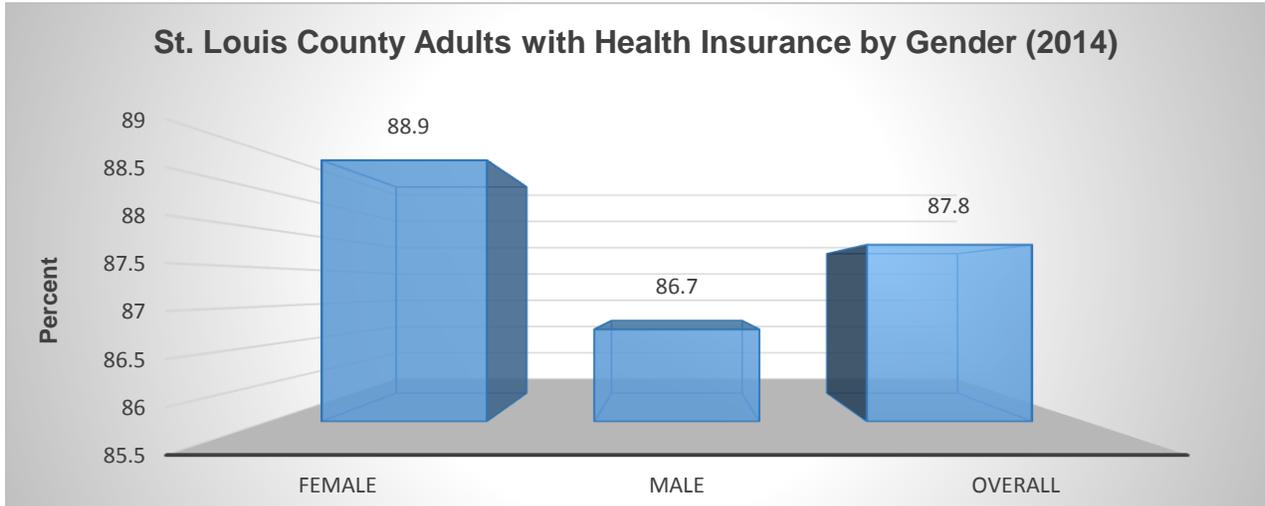
Source: Healthy Communities Institute

The Healthy People 2020 national health target is to increase the proportion of people with health insurance to 100 percent. The overall percentage of adults with health insurance in St. Louis County was 87.8 percent in 2014. Of the total number of insured adults, the 45 to 54 age group had the most adults with insurance; the 35 to 44 age group had the second highest percentage of insured adults. The 18 to 24 age group had the lowest number of insured adults.



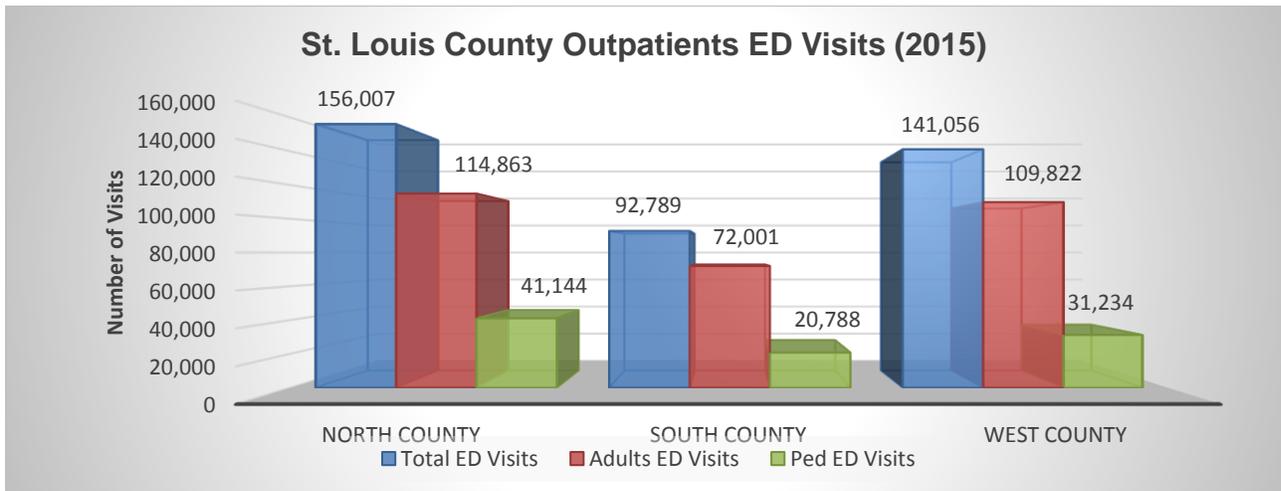
Source: Healthy Communities Institute

When comparing the rate of adults with health insurance by race/ethnic groups, the overall rate in the state was lower than the overall rate in the county. The state scored higher than the county in every group except among White, Non-Hispanic.



Source: Healthy Communities Institute

Females had a higher percentage of health insurance than men in St. Louis County.



Source: Truven Health Analytics

These visits represent all volume to emergency departments in St. Louis County regardless of medical need or services utilized. North County accounts for the majority of ED visits across the county; however, it does not have the highest population.

Access: Transportation

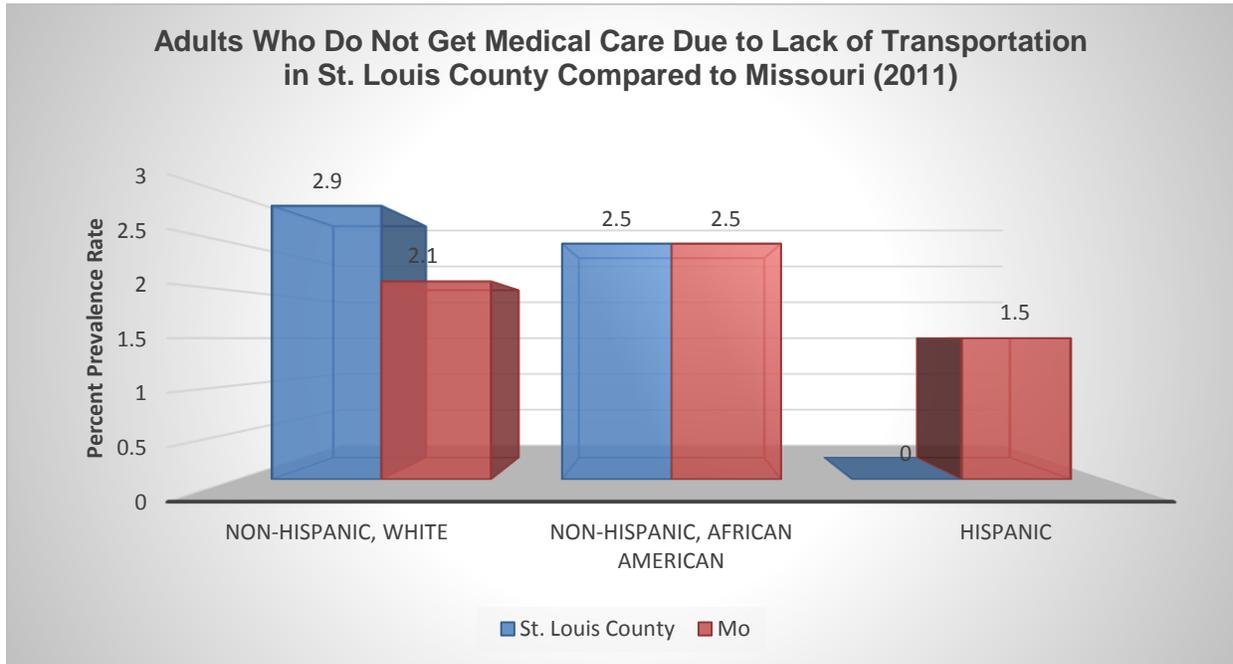
Owning a car has a direct correlation with the ability to access health care. Individuals with no car in the household make fewer than half the number of trips compared to those with a car and have limited access to essential local services such as, supermarkets, post offices, doctors' offices and hospitals.

Public transportation offers mobility to U.S. residents, particularly people without cars. Transit can help bridge the spatial divide between people and jobs, services and training opportunities. Public transportation is also beneficial because it reduces fuel consumption, minimizes air pollution and relieves traffic congestion.

Table7: Access: Transportation		
Health Indicators	St. Louis County	Missouri
Households Without a Vehicle in Percent (2010-2014)	7.30	7.4
Workers Commuting by Public Transportation in Percent (2010-2014)	2.5	1.5
Mean Travel Time to Work; Age 16+ (2010-2014)	23.5 minutes	23.1

Source: Healthy Communities Institute

The Healthy People 2020 national health target is to increase the proportion of workers who take public transportation to work to 5.5 percent. The St. Louis County rate was three points below the target rate. Lengthy commutes cut into a workers' free time and can contribute to health problems such as headaches, anxiety and increased blood pressure. Longer commutes require workers to consume more fuel, which is both expensive for workers and damaging to the environment. (Healthy Communities Institute).



Source: Mo Department of Health & Senior Services

Among those who do not get medical care due to lack of transportation, Non-Hispanic, Whites in St. Louis County had a higher rate when compared to Non-Hispanic, African Americans. While the rate is higher among Non-Hispanic, White in St. Louis County, a lower rate was noted among the same group in Missouri. The Non-Hispanic, African American rate was the same rate in St. Louis County and Missouri. The rate of Hispanic was not calculated due to lack of responses from the group.

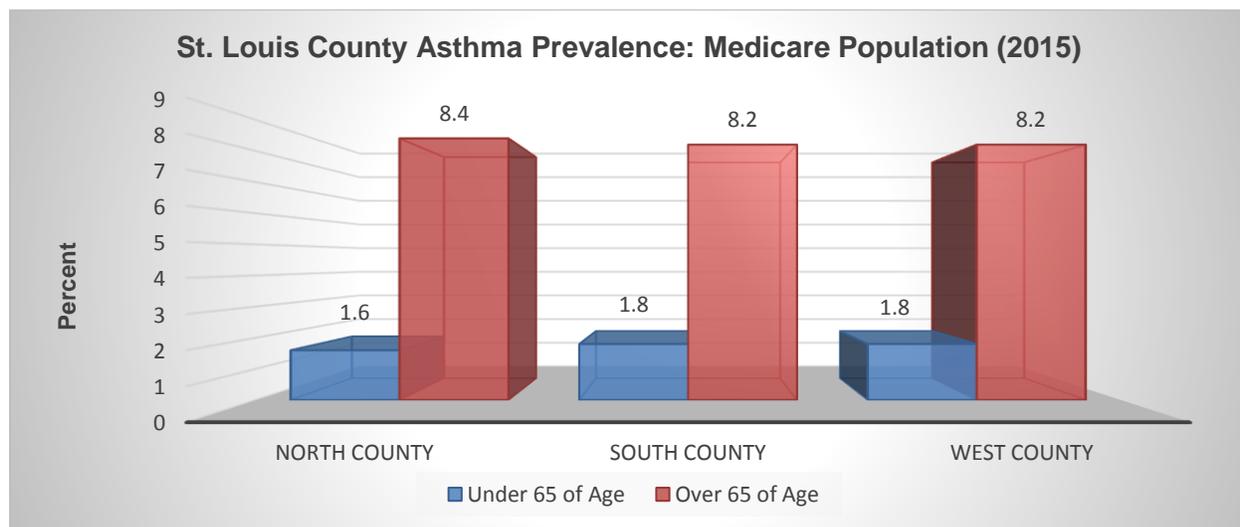
Asthma

Asthma is a chronic lung disease characterized by periods of wheezing, chest tightness, shortness of breath and coughing. Symptoms often occur or worsen at night or in the early morning. These occurrences, often referred to as “asthma attacks,” are the result of inflammation and narrowing of the airways due to a variety of factors or “triggers.”

Table 8: St. Louis County Three-Year Moving Asthma Average Rates Compared to Missouri						
Health Indicators	2009-2011		2010-2012		2011-2013	
	St. Louis County	Missouri	St. Louis County	Missouri	St. Louis County	Missouri
Asthma Death / 100,000 population	1.06	1.08	0.96	1.03	1.00	0.90
Asthma Hospitalizations /10, 000 population	15.68	13.38	16.27	13.5	17.17	13.64
Asthma ER Visits/ 1000 population	6.38	5.15	6.60	5.2	6.70	5.22

Source: Missouri Health Department & Senior Services

Based on the table above, the asthma death and hospitalization rate in St. Louis County and Missouri decreased while the rate of asthma ER visits continued to increase.



Source: Truven Health Analytics

North County had a slightly lower asthma prevalence percent for adults under 65. Conversely, North County had a slightly higher asthma prevalence percent for adults over 65 years of age.

Table 9: St. Louis County Asthma Cases in Numbers & Rate Compared to Missouri				
Health Indicators	St. Louis County		Missouri	
	Cases in Number	Rate in Percent	Cases in Number	Rate in Percent
Asthma Death: 2003-2013	123	1.0	763	1.1
Asthma Hospitalizations: 2009-2013	7828	16.0	37,375	12.5
Asthma ER Visits: 2009-2013	33,255	7.4	151,044	5.3

Source: Missouri Department of Health & Senior Services

The rate of asthma hospitalizations and ER visits in St. Louis County was higher than the rate in the state while the death rate was statistically equal in the county and the state.

Table 10: Asthma Rate in St. Louis County & Missouri State by Ethnicity / Race				
Health Indicators	St. Louis County		Missouri	
	White	African American	White	African American
Death / 100,000 (2003-2013)	0.6	2.3	0.9	3.0
Hospitalizations / 10,000 (2009-2013)	7.7	38.6	8.2	39.2
ER Visits / 1,000 (2009-2013)	2.6	18.9	3.1	17.4

Source: Missouri Department of Health & Senior Services

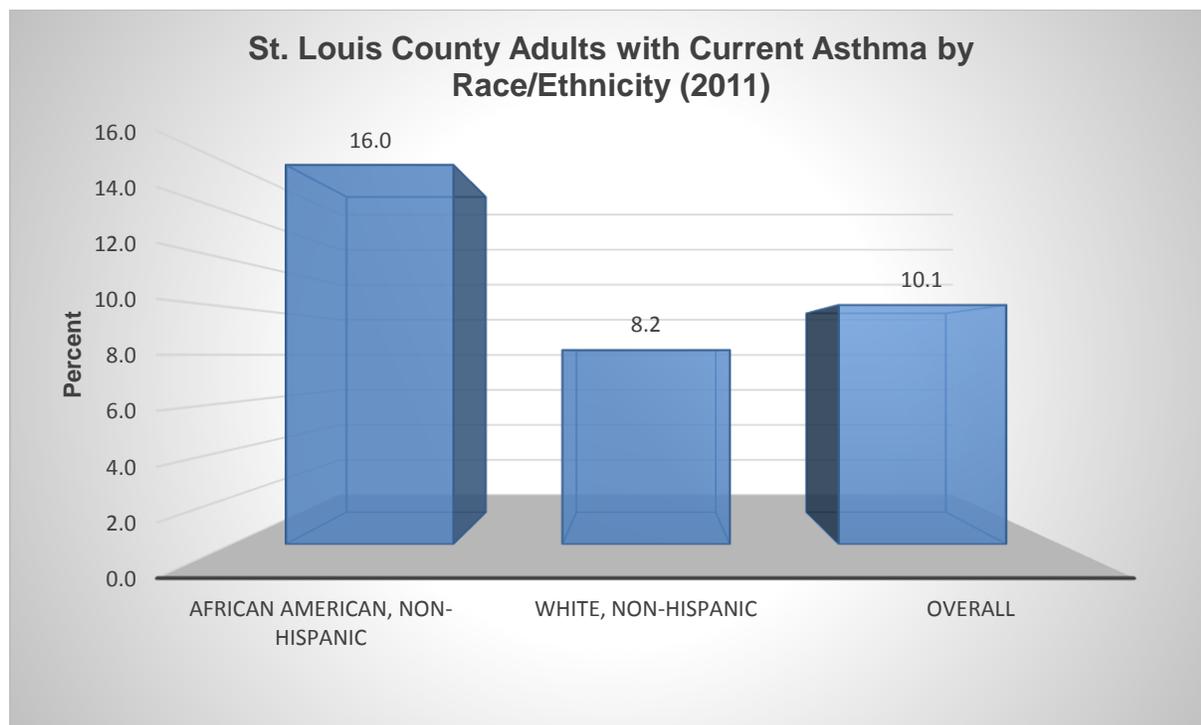
The death, hospitalization and ER visit rates due to asthma among African Americans were markedly higher than rates among Whites in both the state and the county.

Chronic Lower Respiratory Disease (CLRD) refers to a diverse group of disorders characterized by airway obstruction, causing shortness of breath and impaired lung function, and includes asthma, emphysema, bronchitis and chronic obstructive pulmonary disease. CLRD is a leading cause of death and generally occurs among older adults. While mortality rates of other leading causes of death have decreased, deaths due to CLRD continue to rise. Smoking cigarettes as well as exposure to secondhand smoke and chemical irritants are important risk factors. (Healthy Community Institute).

Table 11: St. Louis Respiratory Diseases Rates Compared to Missouri		
Health Indicators	St. Louis County	Missouri
Adults with Current Asthma in Percent (2011)	10.1	10.1
Age-Adjusted Death Rate due to Chronic Lower Respiratory Disease /100,000 Population (2010-2014)	33	51.7
Asthma: Medicare Population in Percent (2014)	5.6	4.8
COPD: Medicare Population in Percent (2014)	9.8	13.2

Source: Healthy Communities Institute

The rate of asthma among the Medicare population was higher in the county when compared to the state.

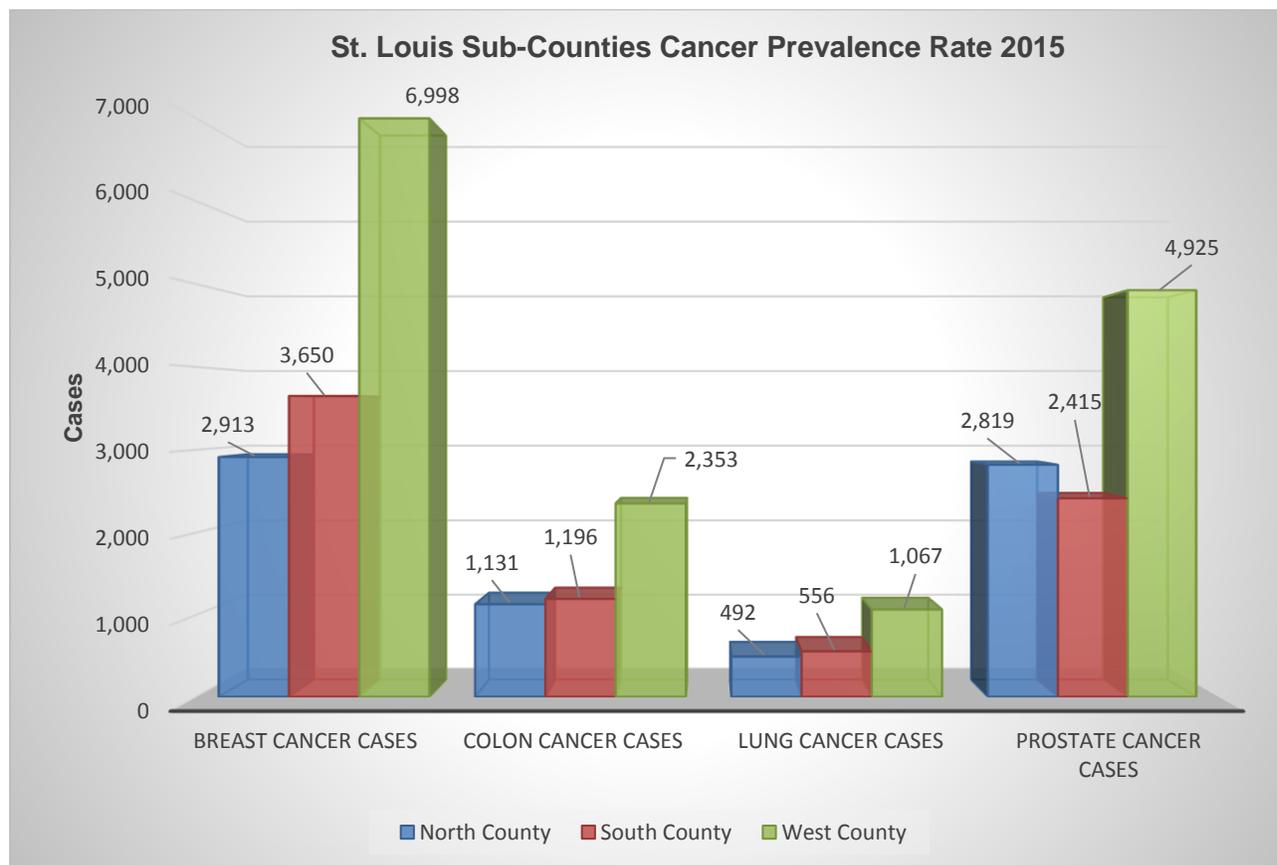


Source: Healthy Communities Institute

The rate of asthma among African American, Non-Hispanic adults in St. Louis County was nearly twice the rate of White, Non-Hispanic adults.

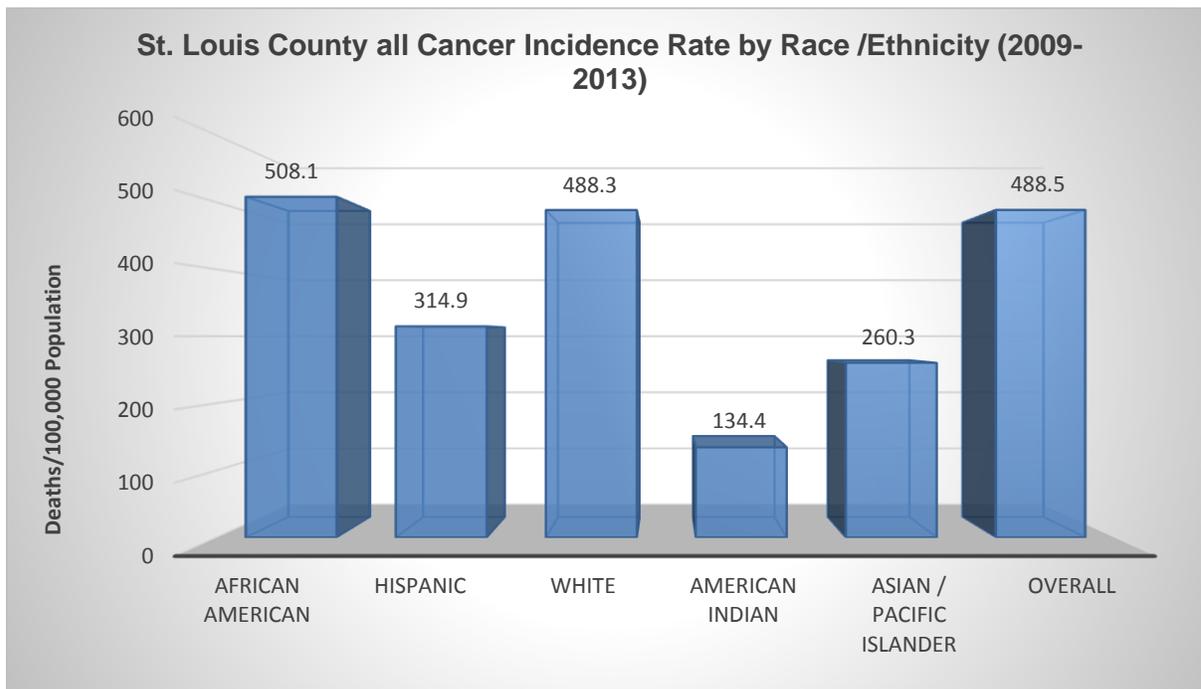
Cancer

Cancer is a leading cause of death in the United States, with more than 100 different types of the disease. According to the National Cancer Institute, lung, colon and rectal, breast, pancreatic and prostate cancer lead in the greatest number of annual deaths.



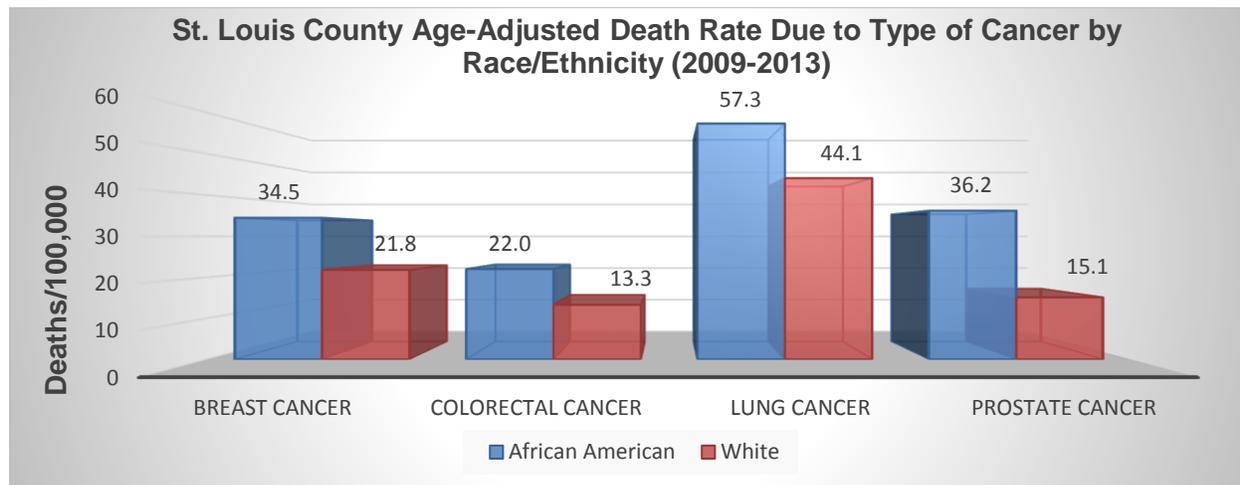
Source: Truven Health Analytics

While the estimated number of cancer cases was the largest in West County, the proportion of cases to a population was almost identical across all areas of St. Louis County.



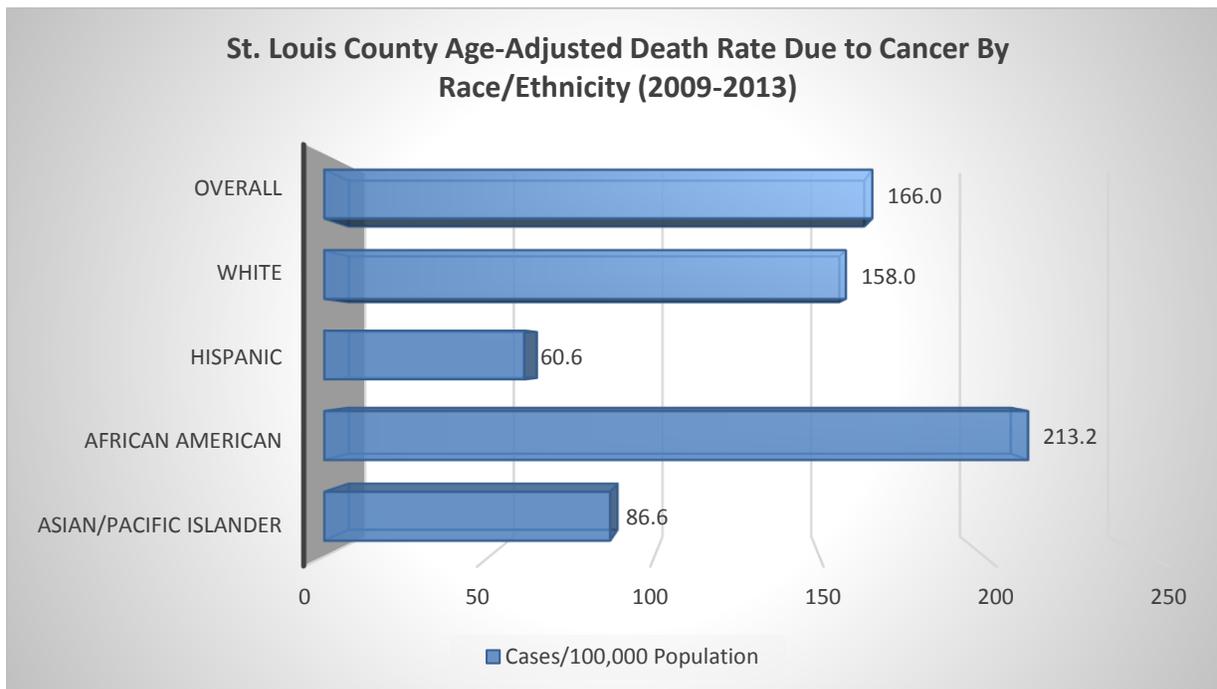
Source: Healthy Communities Institute

Based on 2009-2013 data, African Americans had a higher rate of cancer when compared to Whites, American Indian, Asian/Pacific Islanders and Hispanics.



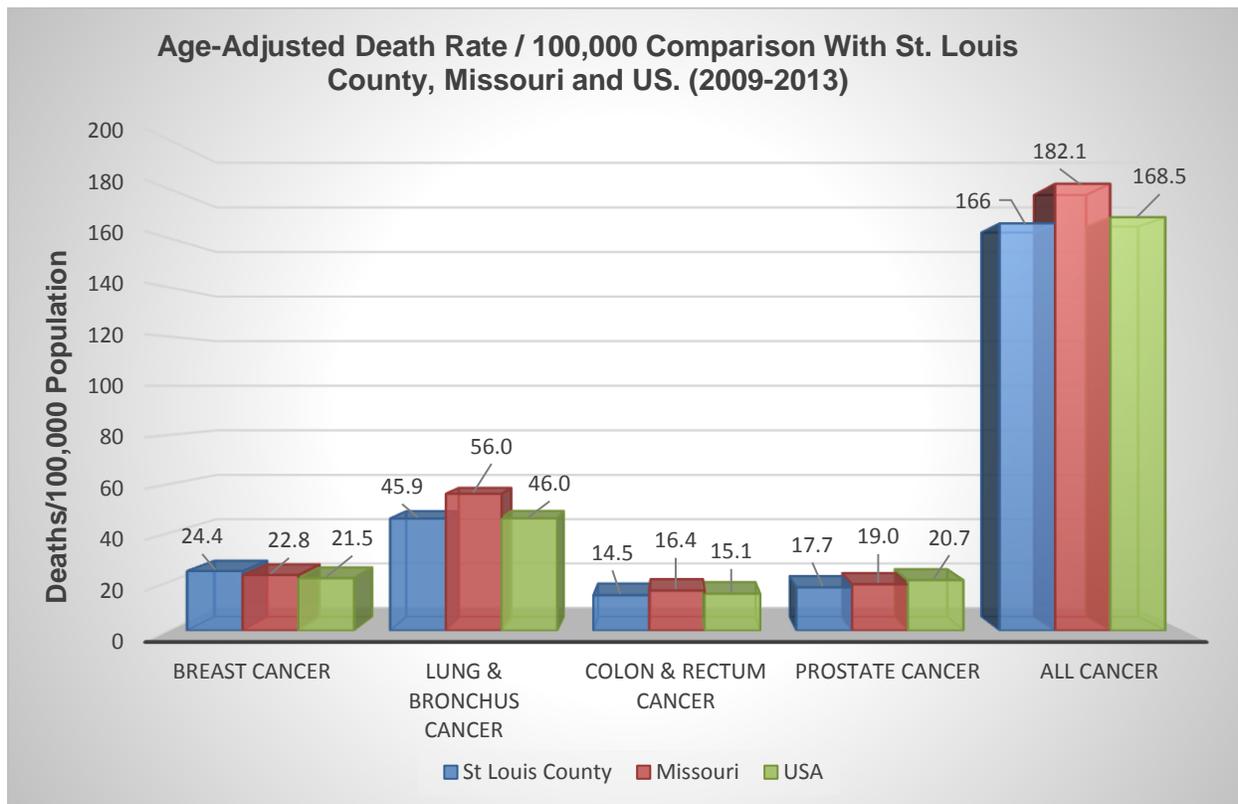
Source: Healthy Communities Institute

African Americans had a higher death rate of breast, colorectal, lung and prostate cancer than Whites in St. Louis County.



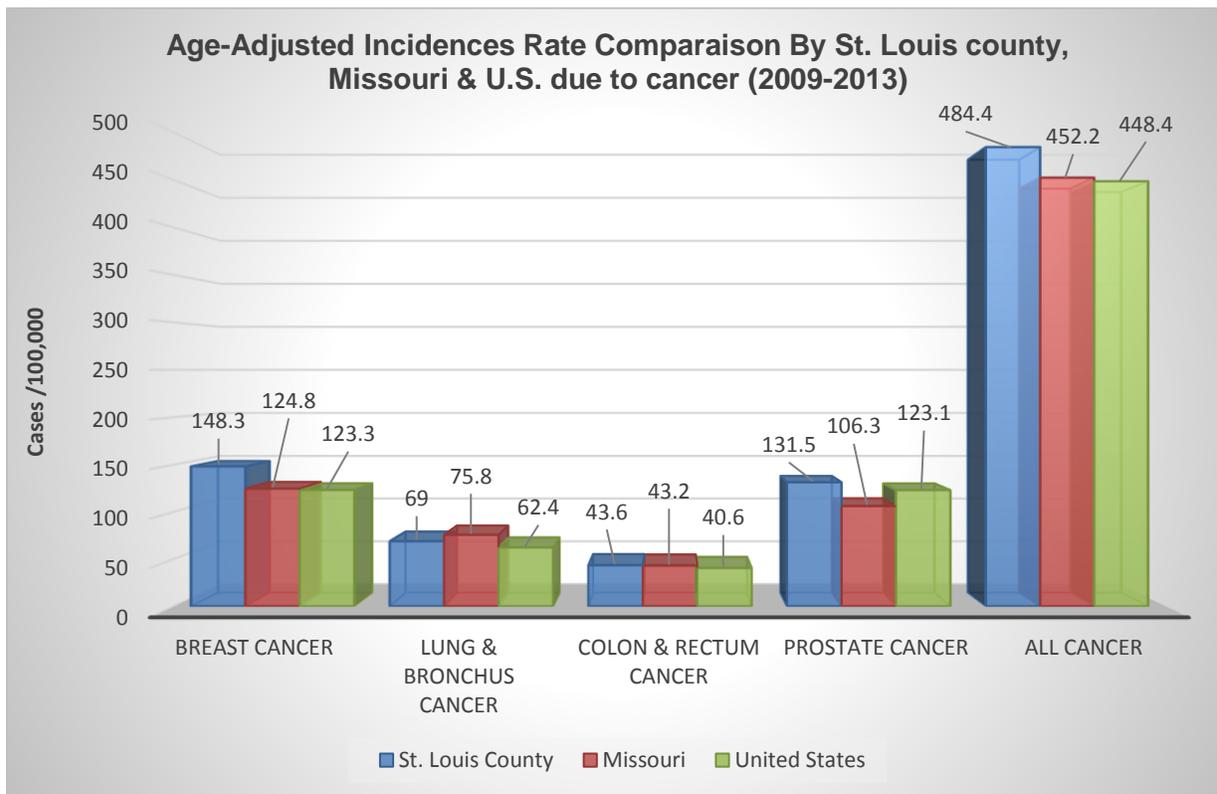
Source: *Healthy Communities Institute*

Death rates due to cancer in St. Louis County were higher among African Americans compared to Whites, Asian/Pacific Islanders and Hispanics. The death rate of African Americans was more than three times the rate of Hispanics and more than two and one-half times the rate of Asian/Pacific Islanders.



Source: CDC State Cancer Profile

The overall age-adjusted death rate due to cancer in St. Louis County was lower when compared to Missouri and U.S. The breast cancer death rate in the county was higher than the state and the country. The rate of lung cancer in the county was statistically equal to the U.S. rate and lower than the state rate. The rate of colon and rectum cancer and prostate cancer was lower in the county than the state and country.

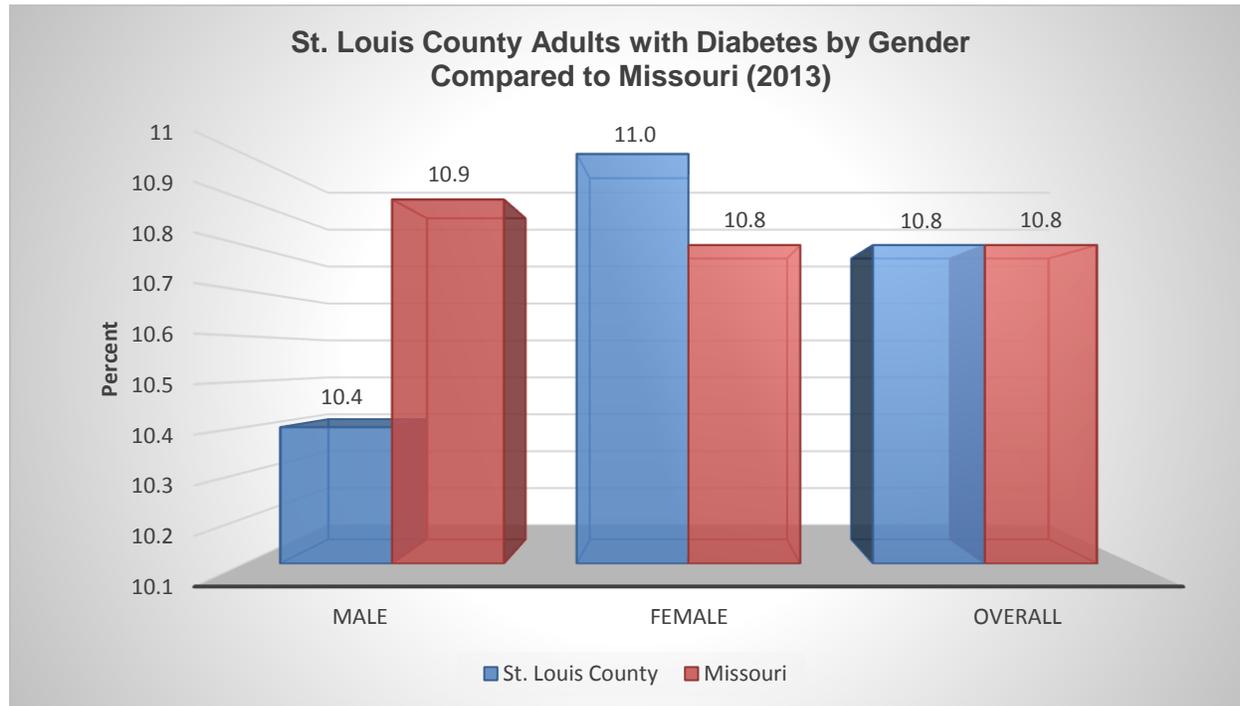


Source: CDC State Cancer Profile

The age-adjusted incidence rate among all cancer in St. Louis County was higher than the rate in Missouri and in the U.S. Even though the incidence rate was higher in St. Louis County, the death rate was lower than the rate in Missouri or U.S. as noted in the previous graph.

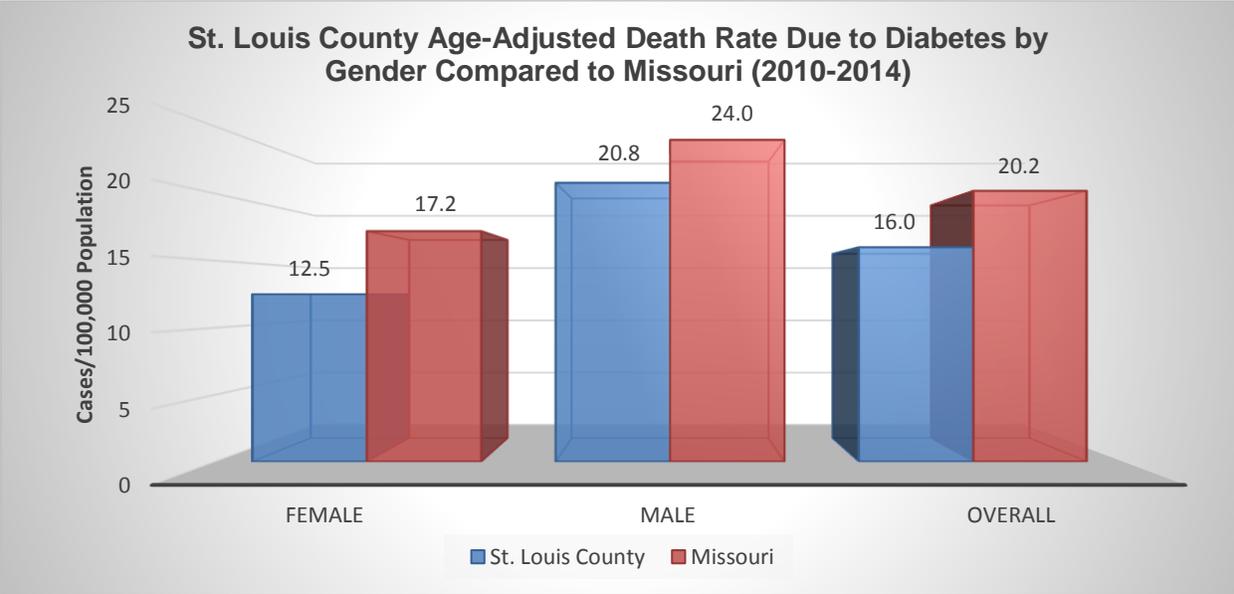
Diabetes

Diabetes is a leading cause of death in the United States. According to the Centers for Disease Prevention and Control (CDC), more than 25 million people have diabetes, including both diagnosed and undiagnosed cases. This disease can have a harmful effect on most of the organ systems in the human body; it is a frequent cause of end-stage renal disease, non-traumatic lower-extremity amputation, and a leading cause of blindness among working-age adults. Persons with diabetes are also at increased risk for ischemic heart disease, neuropathy and stroke. Diabetes disproportionately affects minority populations and the elderly, and its incidence is likely to increase as minority populations grow and the U.S. population becomes older. (Healthy Communities Institute).



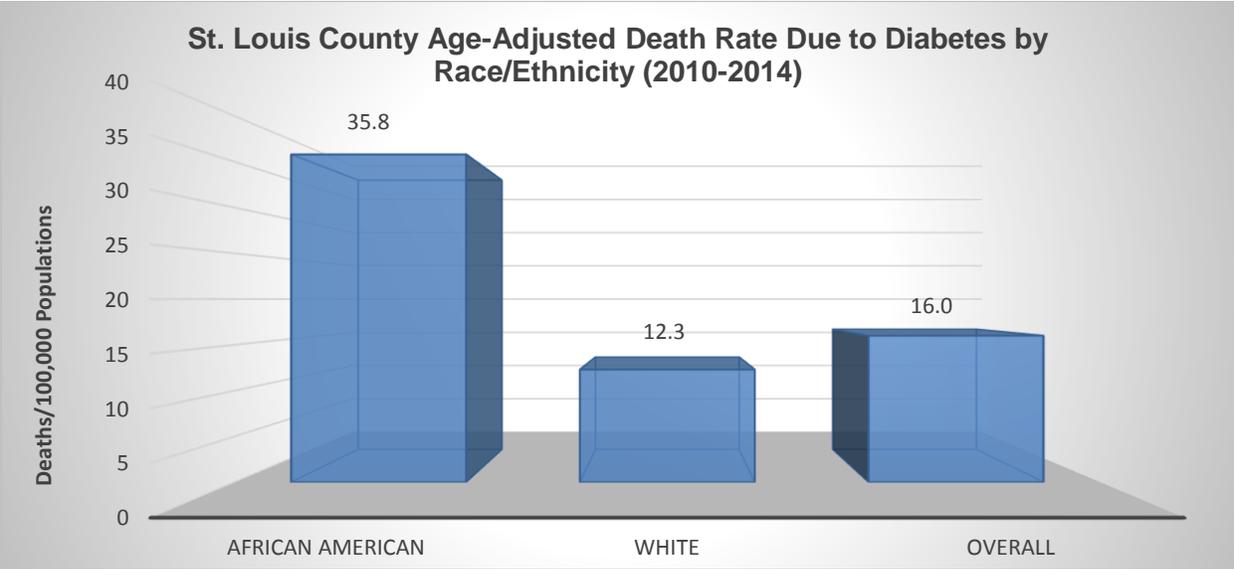
Source: Healthy Communities Institute

The rate of females in the county with diabetes was higher than the rate of males. Conversely, the rate of males in the state was higher than the rate of females with diabetes.



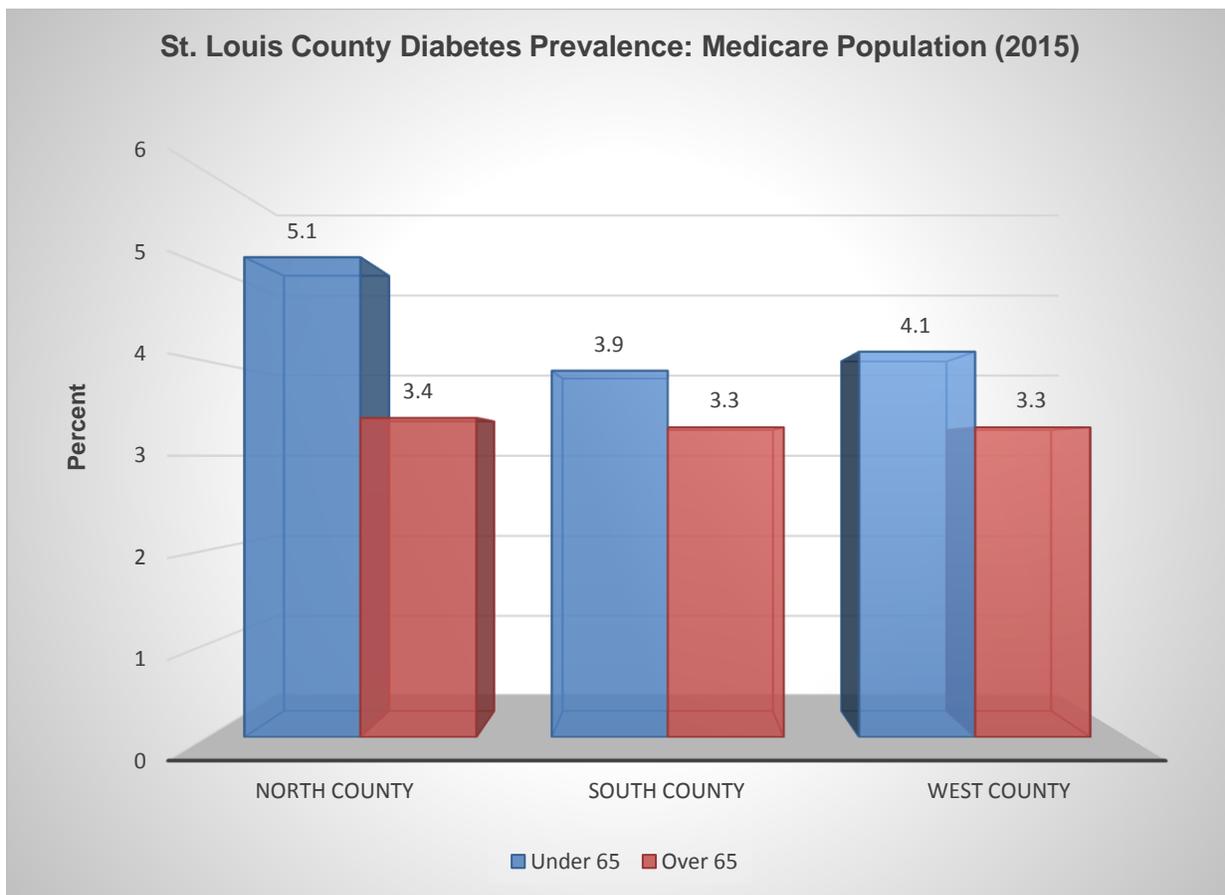
Source: Healthy Communities Institute

Age-adjusted death rate for females and males was lower in the county when compared to the state.



Source: Healthy Communities Institute

African Americans in St. Louis County had nearly three times higher the rate of death due to diabetes compared to the White population.

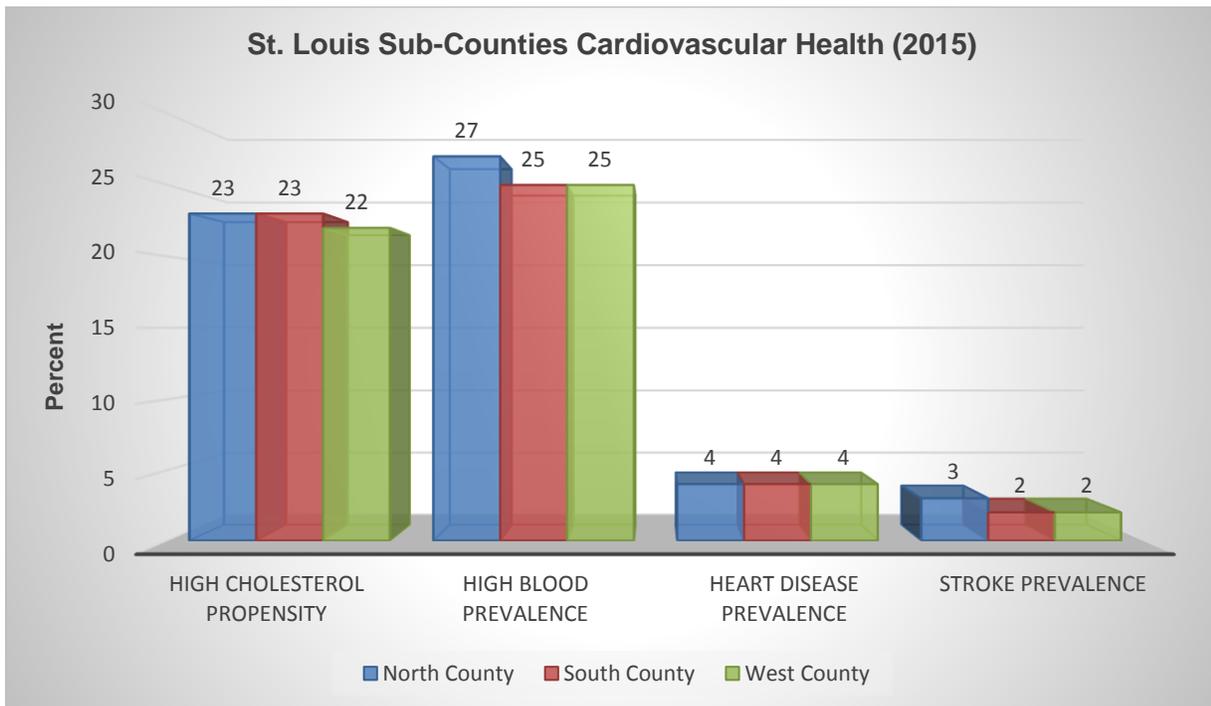


Source: Truven Health Analytics

The diabetes prevalence rate for persons under 65 was higher in North County when compared to South County and West County. For persons over 65, the prevalence rate was the same in South and West County and statistically the same in North County.

Heart Health & Stroke

Heart disease and stroke are among the most preventable disease in the U.S., yet are the most widespread and costly health conditions facing the nation today. Heart disease and stroke are the first and third leading causes of death for both women and men. These diseases are also major causes of illness and disability and are estimated to cost the U.S. hundreds of billions of dollars annually in health care expenditures and loss of productivity. (CDC Division for Heart Division and Stroke Prevention).



Source: Truven Health Analytics

The rate of high blood pressure was slightly higher in North County. Proportionally, the propensity for high cholesterol and the prevalence rates for high blood pressure, heart disease and stroke were virtually identical across all regions in St. Louis County.

Table 12: Heart Disease & Stroke: St. Louis County vs. Missouri Age-Adjusted Rate Comparison		
Health Topics	St. Louis County	Missouri
Heart Disease		
Deaths / 100,000 (2003-2013)	205.1	216.75
Hospitalizations / 10,000 (2009-2013)	120.4	123.11
ER Visits / 1,000 (2009-2013)	12.4	14.65
Ischemic Heart Disease		
Deaths / 100,000 (2003-2013)	152.5	144.7
Hospitalizations / 10,000 (2009-2013)	31.60	38.34
ER Visits / 1,000 (2009-2013)	0.10	0.62
Stroke / Other Cerebrovascular Disease		
Deaths / 100,000 (2003-2013)	43.80	47.75
Hospitalizations / 10,000 (2009-2013)	30.60	28.79
ER Visits / 1,000 (2009-2013)	0.40	0.77

Source: Missouri Department of Health & Senior Services

Based on Table 12, death, hospitalizations and ER visit rates due to heart disease in St. Louis County was lower compared to the rates in Missouri. However, the death rate from ischemic heart disease, also known as the coronary artery disease, was higher in the county than the state. Ischemic heart disease is the most common form of heart disease and the leading cause of heart attack and angina. Overall, the rates in St. Louis County were better than the rates in Missouri.

Table 13: Heart Disease & Stroke by Ethnicity / Race				
	St. Louis County		Missouri	
Health Topic	White	African American	White	African American
Heart Disease				
Deaths / 100,000 (2003-2013)	192.9	275.6	212.7	264.6
Hospitalizations / 10,000 (2009-2013)	102.3	193.1	115.4	180.8
ER Visits / 1,000 (2009-2013)	8.5	24.5	13.1	24.7
Ischemic Heart Disease				
Deaths / 100,000 (2003-2013)	145.7	197.8	143.1	168.6
Hospitalizations / 10,000 (2009-2013)	29.4	39.6	37.9	36.9
ER Visits / 1,000 (2009-2013)	0.1	0.3	0.6	0.4
Stroke / Other Cerebrovascular Disease				
Deaths / 100,000 (2003-2013)	40.4	62.4	46.4	60.9
Hospitalizations / 10,000 (2009-2013)	25.6	51.4	26.7	44.7
ER Visits / 1,000 (2009-2013)	0.3	0.7	0.8	0.7

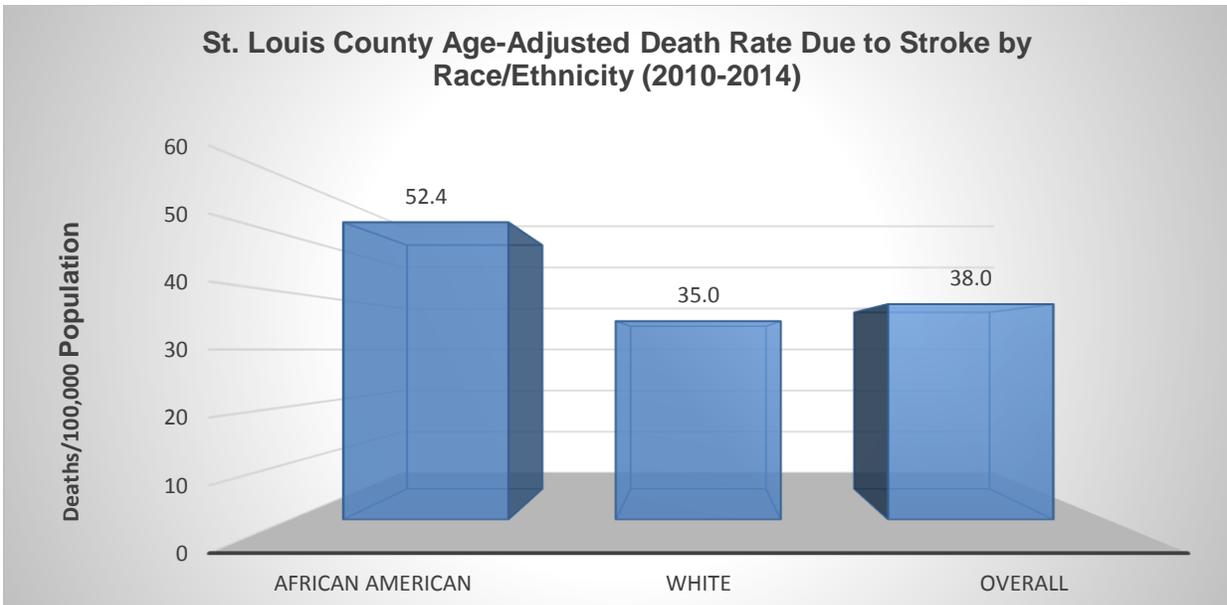
Source: Mo Department of Health & Senior Services

The rate of heart disease and stroke among African Americans in Missouri and St. Louis County has remained high over the past decade. The rate of ischemic heart disease deaths and hospitalizations as well as stroke deaths and hospitalizations among African Americans was higher in the county than the state.

Table 14: St. Louis County Three-Year Moving Heart Disease Average Rates Compared to Missouri						
Health Topic	2009-2011		2010-2012		2011-2013	
	St. Louis County	Missouri	St. Louis County	Missouri	St. Louis County	Missouri
Heart Disease						
Deaths / 100,000 (2003-2013)	189.37	200.75	184.36	196.22	178.89	194.11
Hospitalizations / 10,000 (2009-2013)	143.11	151.84	136.33	142.91	132.36	136.57
ER Visits / 1,000 (2009-2013)	10.35	13.06	10.54	13.07	11.34	13.63
Ischemic Heart Disease						
Deaths / 100,000 (2003-2013)	139.31	132.55	134.30	128.05	125.73	122.38
Hospitalizations / 10,000 (2009-2013)	45.51	55.14	40.73	49.38	37.78	45.21
ER Visits / 1,000 (2009-2013)	0.22	0.84	0.20	0.73	0.18	0.67
Stroke / Other Cerebrovascular Disease						
Deaths / 100,000 (2003-2013)	41.53	43.90	40.03	42.83	38.06	41.73
Hospitalizations / 10,000 (2009-2013)	30.84	30.42	30.40	29.55	30.51	29.51
ER Visits / 1,000 (2009-2013)	0.46	0.81	0.45	0.79	0.42	0.77

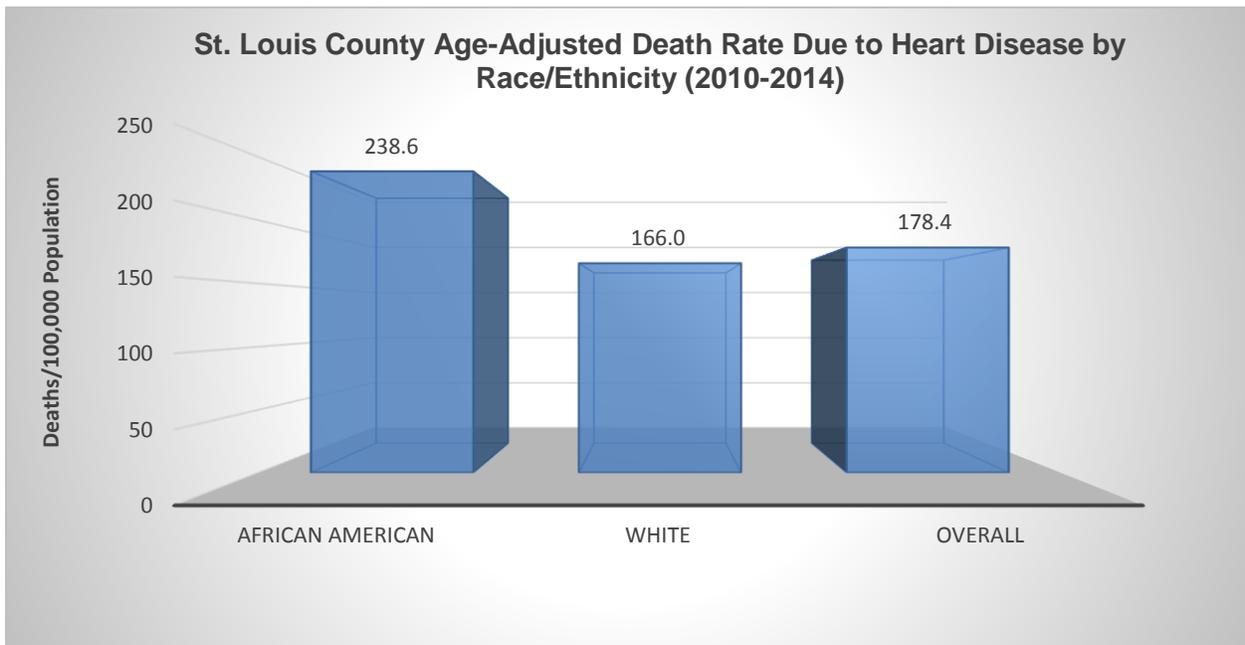
Source: Missouri Department of Health & Senior Services 2011

From 2009-2013, a decrease was noted in the rate of heart disease, ischemic heart disease and stroke in St. Louis County and in Missouri. A slight increase occurred in ER visits related to heart disease in the county and in the state.



Source: Healthy Communities Institute

The stroke death rate among African Americans was 1.5 times higher than the rate of Whites from 2010-2014.

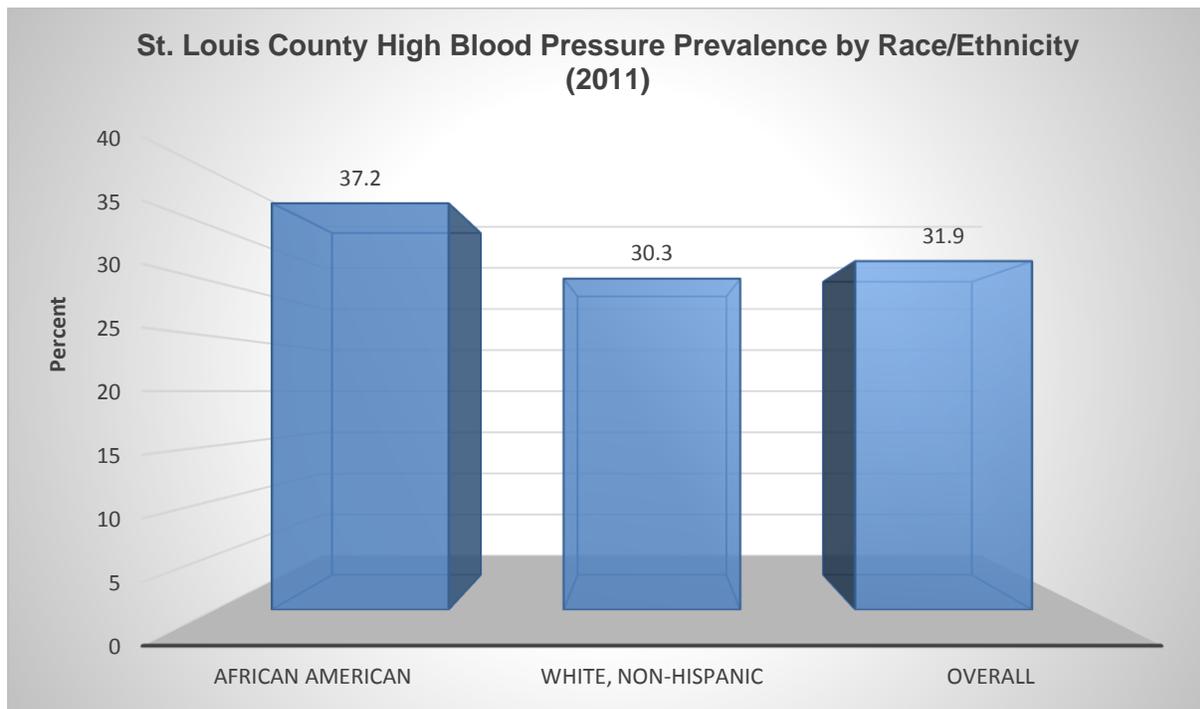


Source: Healthy Communities Institute

The death rate from heart disease was higher among African Americans than Whites.

High Blood Pressure

High blood pressure indicates a significant increase in blood pressure in the arteries. Some symptoms include severe headaches, dizziness and irregular heartbeat. Many people with high blood pressure may not experience symptoms, even if blood pressure is dangerously high. High blood pressure is the leading cause of stroke and a major cause of heart attack, heart failure and kidney failure. In 2010, approximately 58 million adults in the U.S. were treated for high blood pressure; one in three adults has high blood pressure, and nearly one-third of these people are not aware they have it. High blood pressure can occur in people of any age or sex; however, it is more common among those over age 35. It is particularly prevalent in African Americans, older adults, obese people, heavy drinkers and women taking birth control pills. Blood pressure can be controlled through lifestyle changes including eating a heart-healthy diet, limiting alcohol, avoiding tobacco, controlling weight, and staying physically active. The Healthy People 2020 national health target is to reduce the proportion of adults age 18 years and older with high blood pressure to 26.9 percent. The St. Louis County high blood pressure prevalence rate is 31.9 percent, which is higher than the Healthy People 2020 target rate. (Healthy Communities Institute).

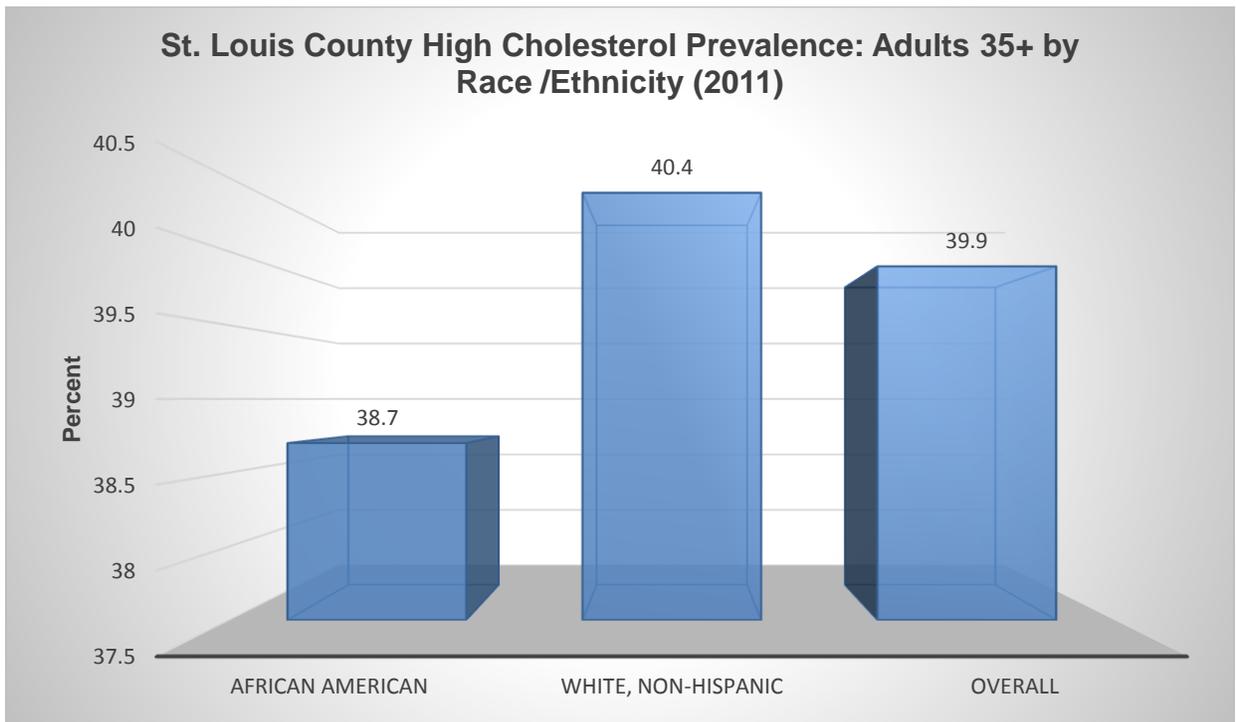


Source: Healthy Communities Institute

African Americans had a higher prevalence of high blood pressure than Whites.

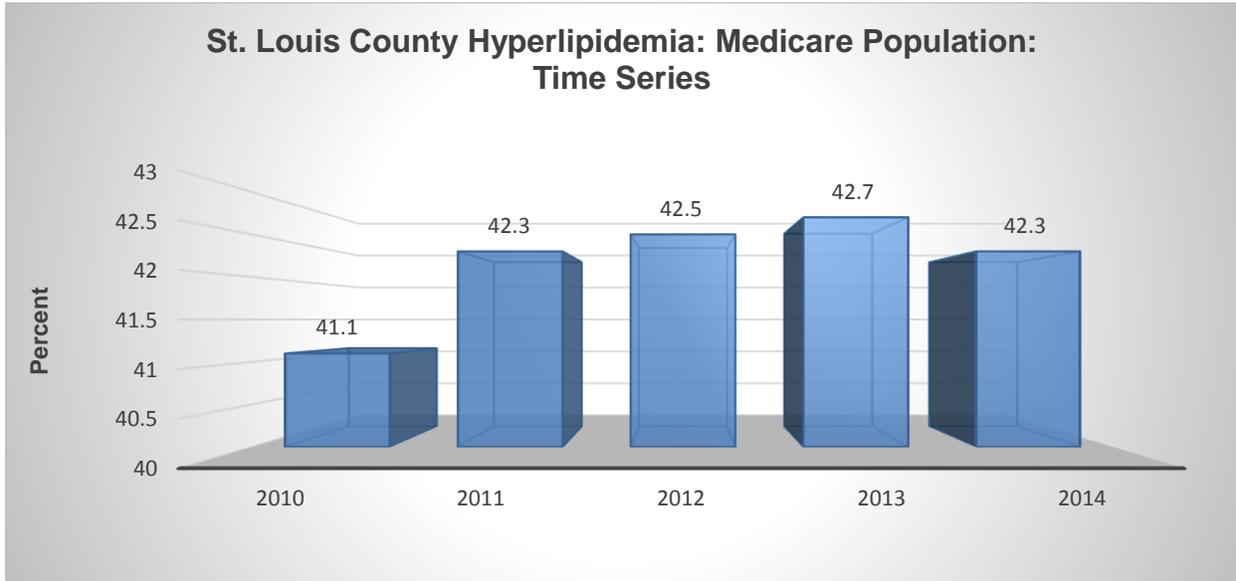
Cholesterol

High blood cholesterol is one of the major risk factors for heart disease. Studies show that the higher the blood cholesterol level, the greater the risk for developing heart disease or having a heart attack. High blood cholesterol does not cause symptoms, so it is important to understand cholesterol numbers. Lowering cholesterol levels lessens the risk for developing heart disease and reduces the chance of having a heart attack. Lowering high cholesterol levels is important for people of all ages, both men and women.



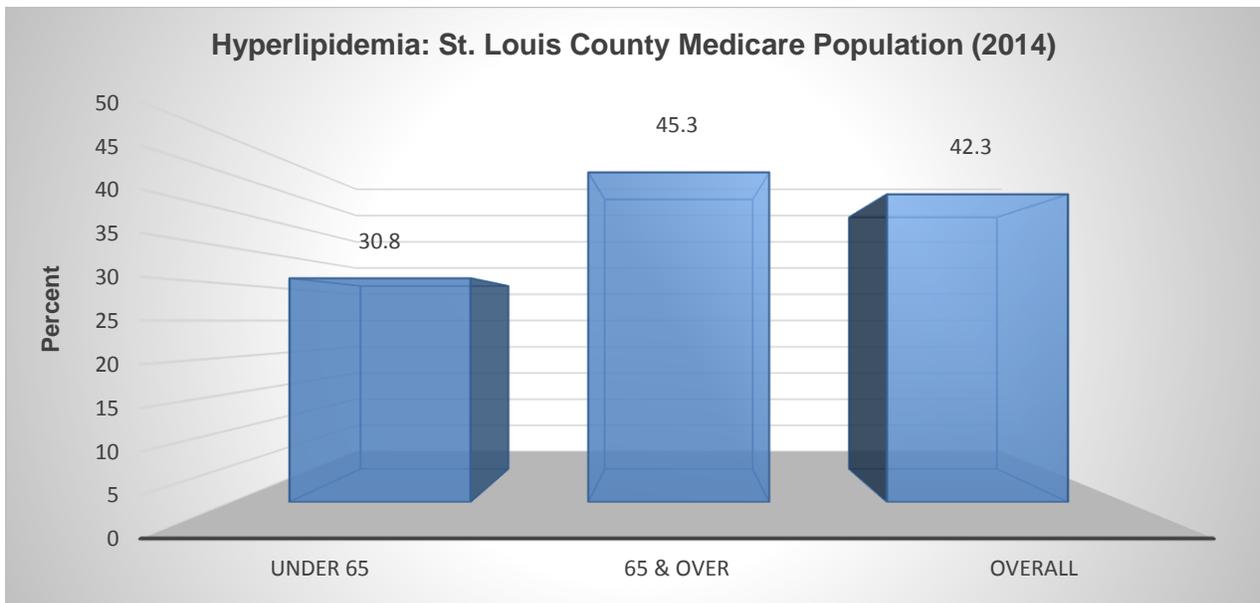
Source: *Healthy Communities Institute*

The high cholesterol prevalence rate of adults 35+ in the county showed White/ Non-Hispanics had a higher rate than African Americans.



Source: Healthy Communities Institute

Hyperlipidemia is an increase in the amount of fat (cholesterol and triglycerides) in the blood. The graph above shows a slight increase from 2010-2014 in the percent of hyperlipidemia among the Medicare population in St. Louis County.

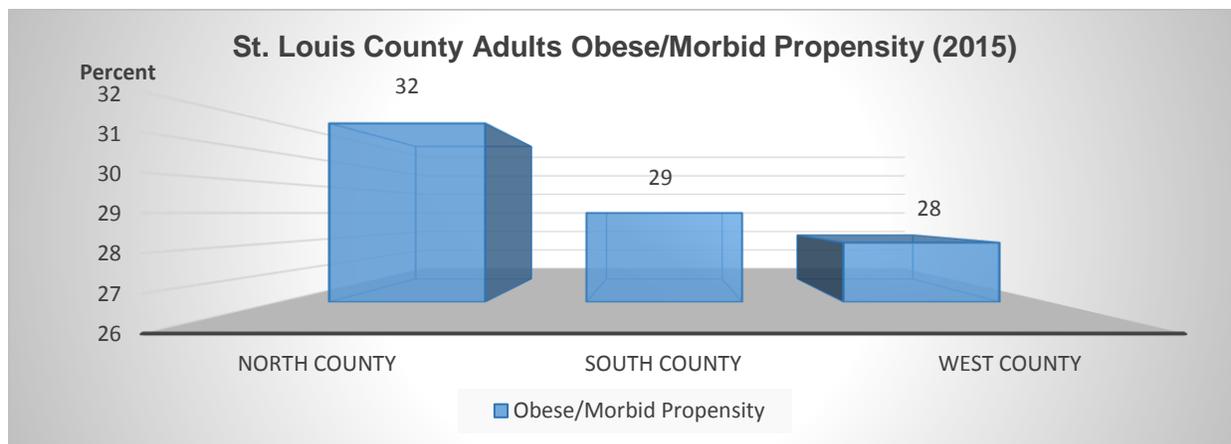


Source: Healthy Communities Institute

The rate of hyperlipidemia among the Medicare population was higher among the 65 and over population.

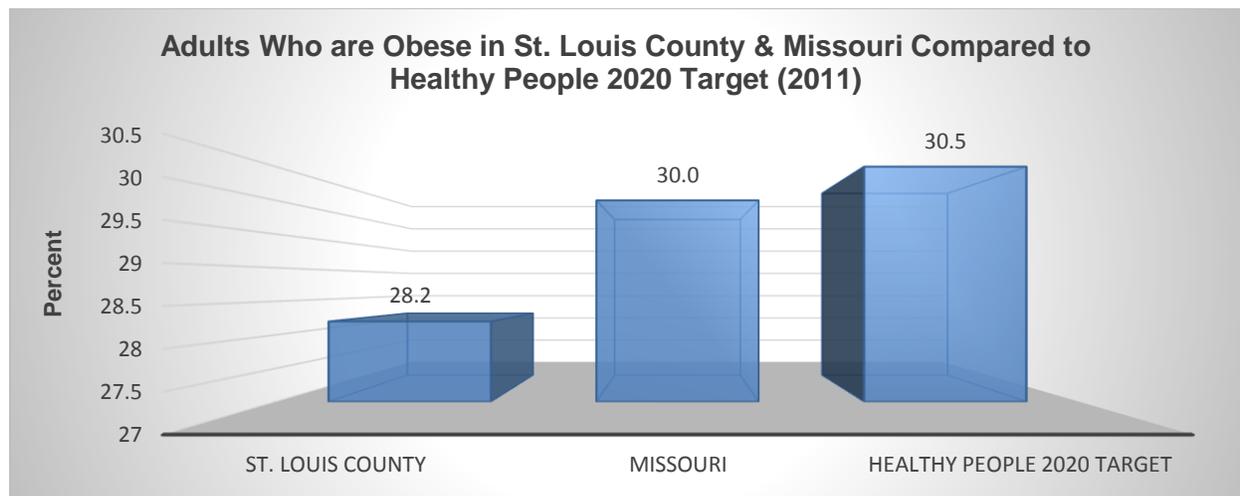
Obesity

Obesity increases the risk of many diseases and health conditions including heart disease, type 2 diabetes, cancer, hypertension, stroke, liver and gallbladder disease, respiratory problems and osteoarthritis. Losing weight and maintaining a healthy weight help to prevent and control these diseases. Being obese also carries significant economic costs due to increased health care spending and lost earnings. (Healthy Communities Institute).



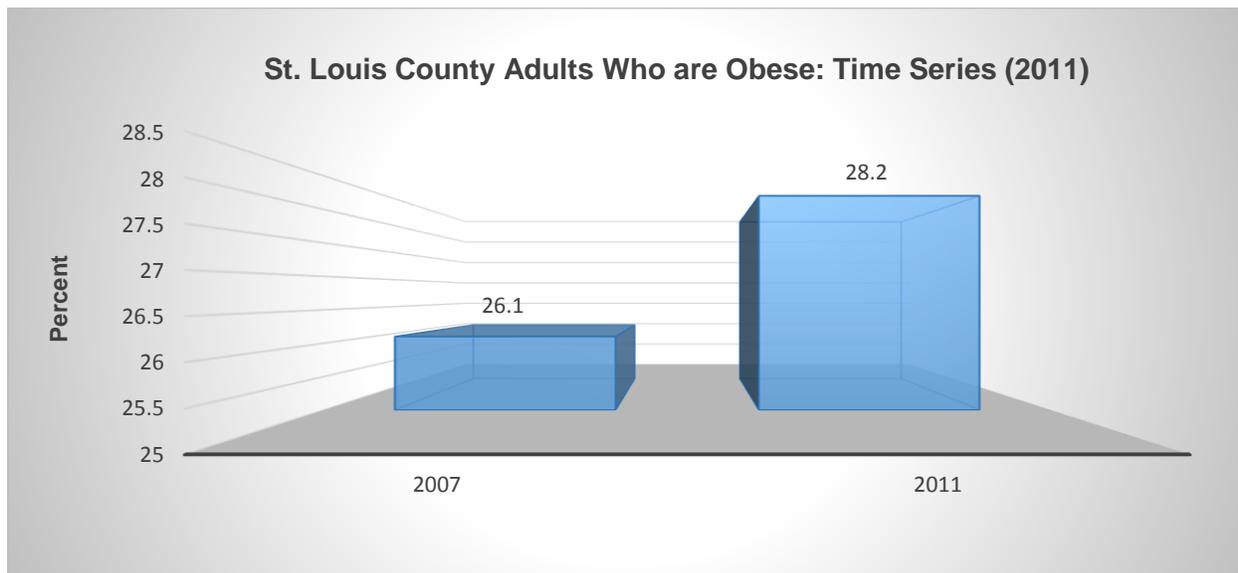
Source: Truven Health Analytics

Among the three segments of St. Louis County, North County had the highest propensity for obesity in 2015 among adults 18 years old and older.



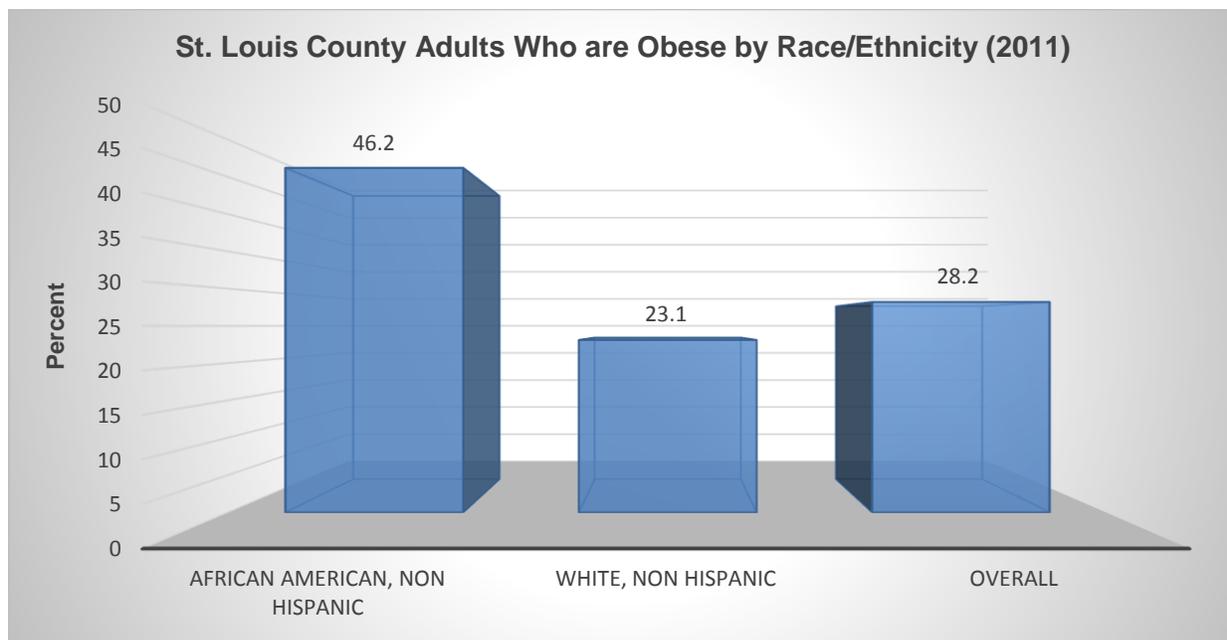
Source: Healthy Communities Institute

The Healthy People 2020 national health target is to reduce the proportion of adults age 20 and older who are obese to 30.5 percent. In the graph above, the rate in St. Louis County and in the state was lower than the target.



Source: Healthy Communities Institute

Even though St. Louis County had a lower rate than the state and the nation, an increase in the obesity rate was evident from the year 2007 (26.1 percent) to 2011 (28.2 percent).

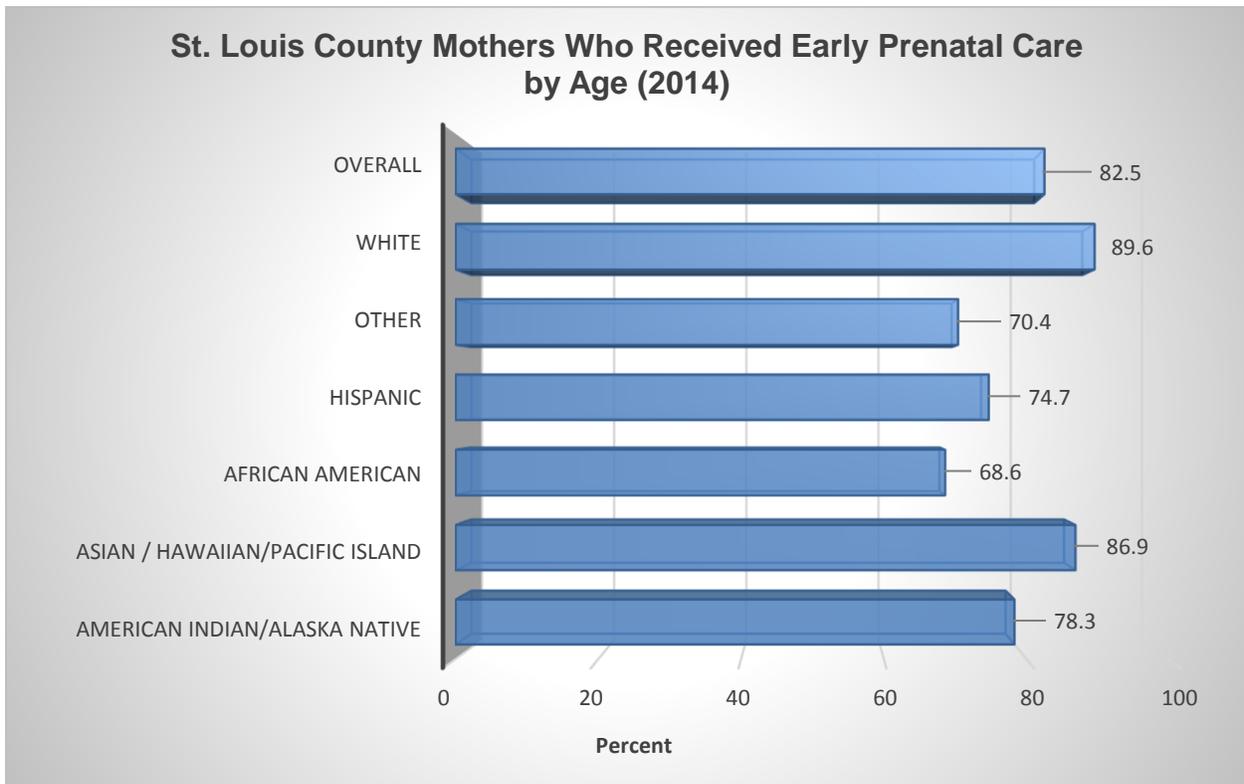


Source: Healthy Communities Institute

The rate of African American, Non-Hispanic adults who are obese were twice the rate when compared to White, Non-Hispanic adults.

Maternal and Infant Health

The risk of maternal and infant mortality and pregnancy-related complications can be reduced by increasing access to quality preconception (before pregnancy) and inter-conception (between pregnancies) care. Moreover, healthy birth outcomes and early identification and treatment of health conditions among infants can prevent death or disability and enable children to reach their full potential. (Healthy People 2020).

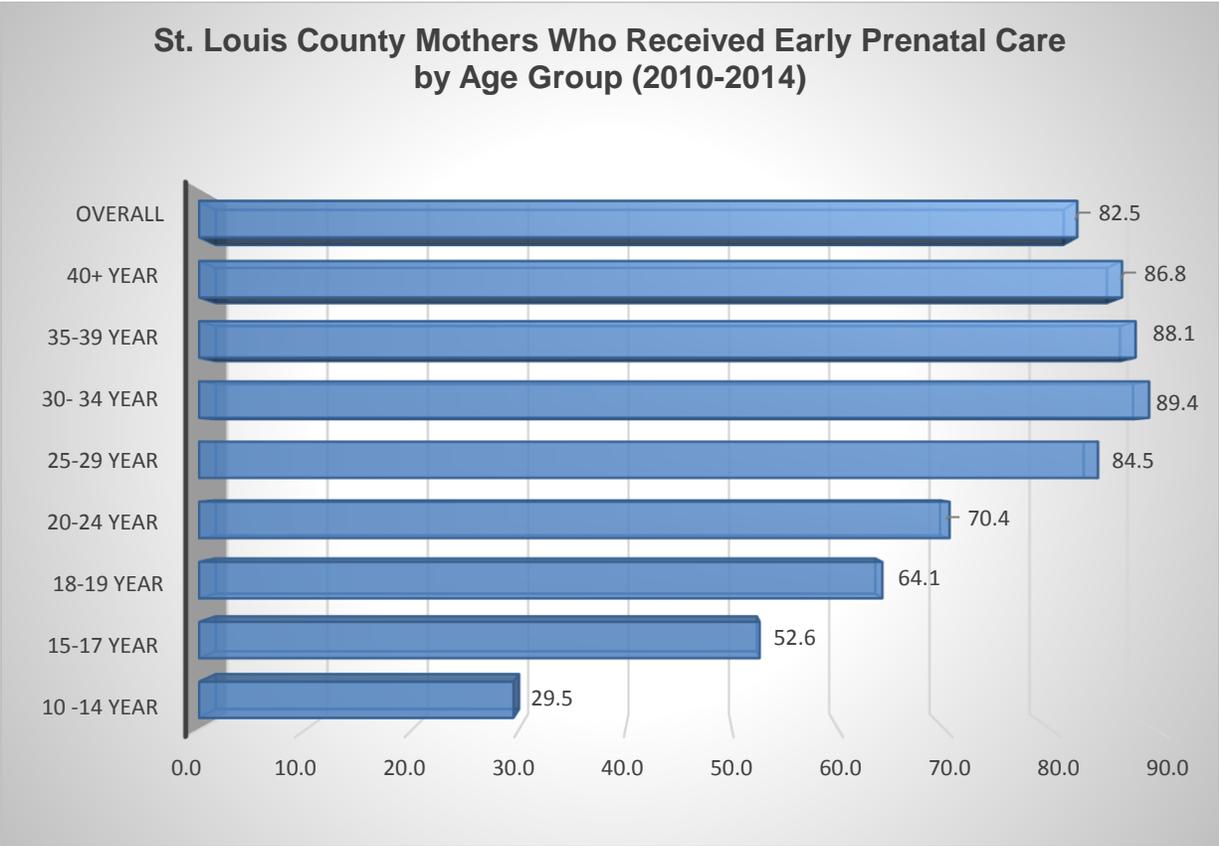


Source: Healthy Communities Institute

According to information from the Healthy Communities Institute, babies born to mothers who do not receive prenatal care are three times more likely to have a low birth weight and five times more likely to die than those born to mothers who do receive care.

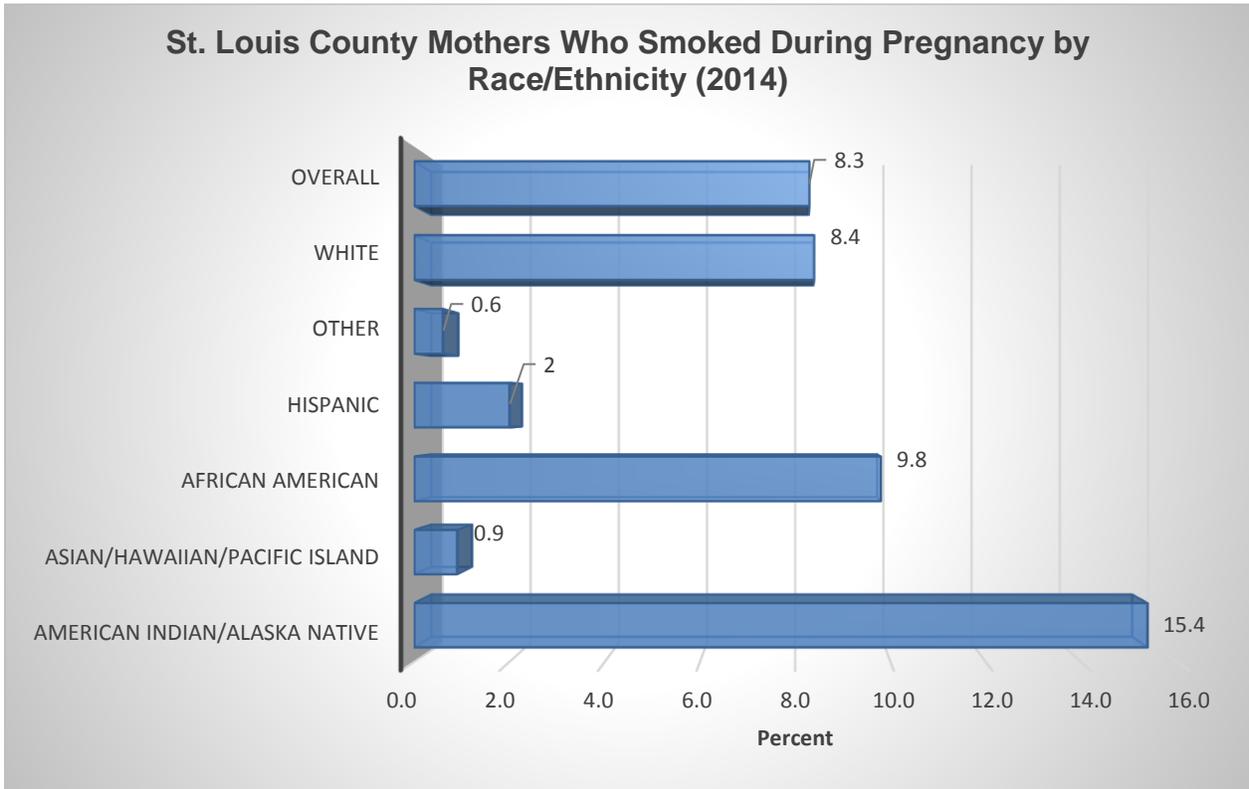
The graph above shows racial disparity among St. Louis County mothers who received prenatal care in the first trimester in 2014. African Americans were less likely to receive prenatal care in the first trimester followed by other races and Hispanics.

The Healthy People 2020 national health target is to increase the proportion of pregnant women who receive prenatal care in the first trimester to 77.9 percent. With an overall rate of 82.5 percent, St. Louis County exceeded the national target while the state was just below the target at 75.1 percent.



Source: Healthy Communities Institute

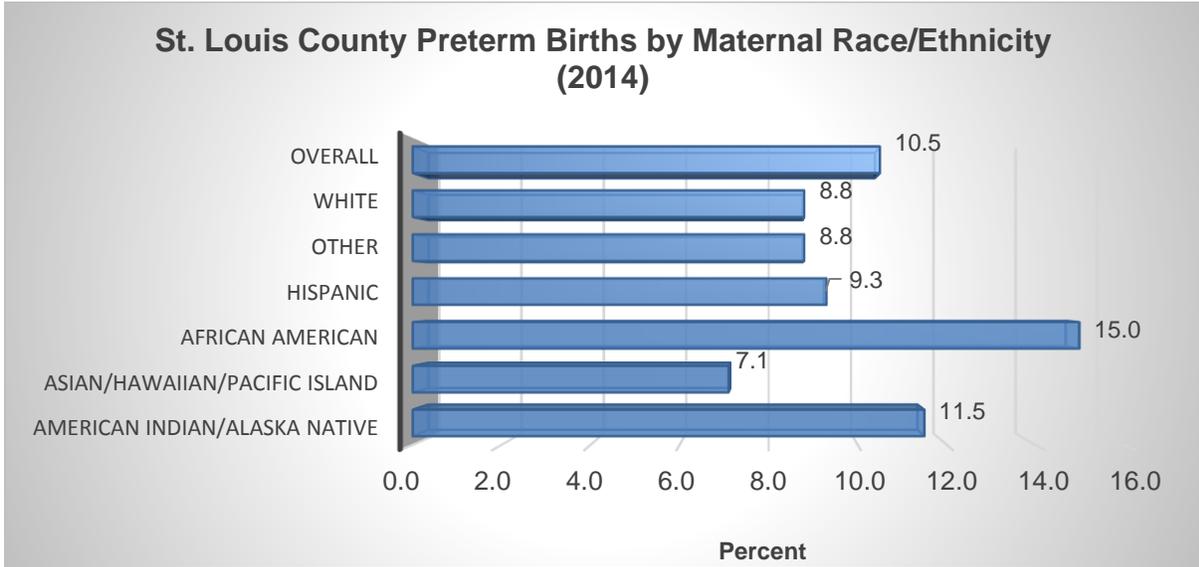
This graph demonstrates the rate of mothers who received prenatal care during the first trimester by age group. As the groups grew older, the rate of early prenatal care also increased through the 30-34 age group, at which point a decline was noted.



Source: Healthy Communities Institute

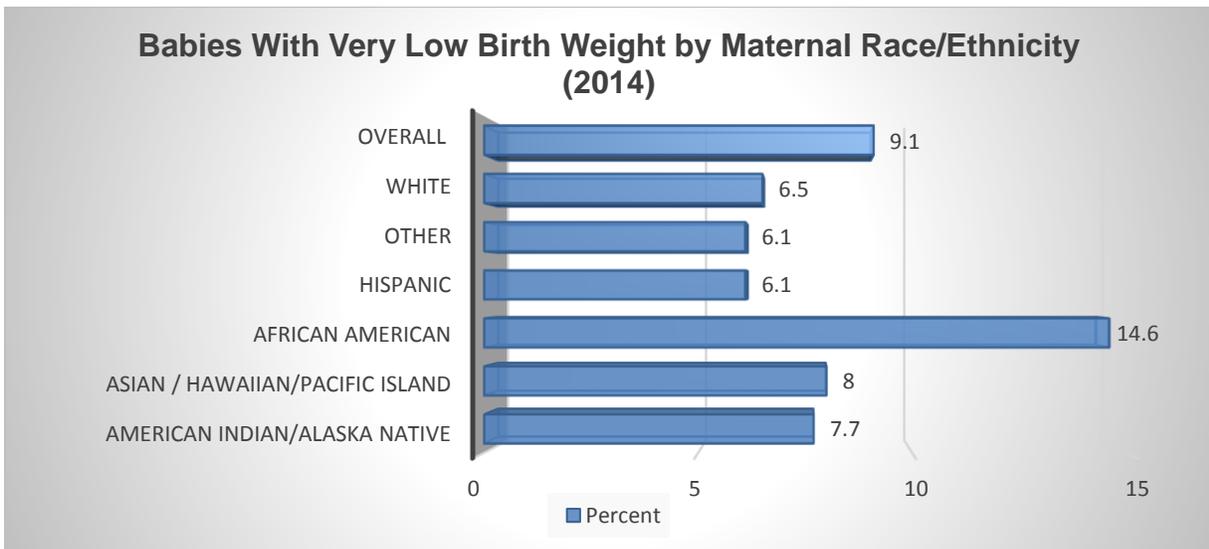
Smoking during pregnancy poses risks for both mother and fetus and is estimated to cause up to 10 percent of all infant deaths. (Healthy Communities Institute).

The overall rate of women who smoke during pregnancy in the county was 8.3 percent, six times the national rate of 1.4 percent set by Healthy People 2020 and half the rate of the state. American Indian/Alaska Natives had the highest rate of smoking during pregnancy followed by African Americans and Whites.



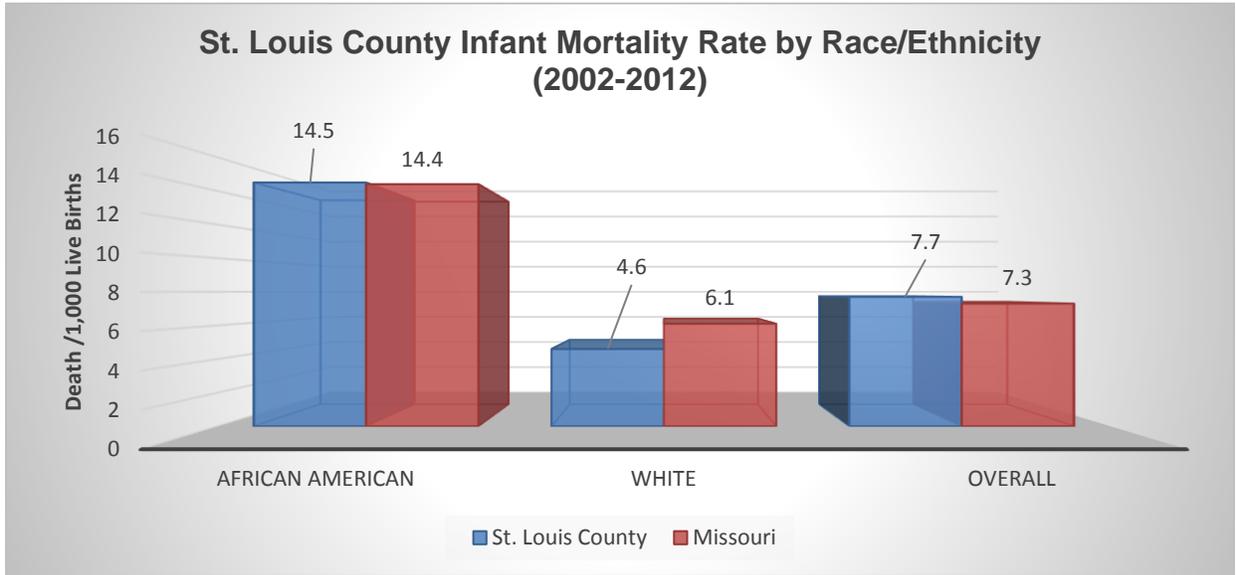
Source: Healthy Communities Institute

The Healthy People 2020 national health target is to reduce the proportion of infants who are born preterm to 11.4 percent. The St. Louis County overall rate at 10.5 percent was lower than the target rate and higher than the state rate of 9.7 percent. The rate of preterm birth was higher among African Americans than any other race followed by American Indians and Hispanics.



Source: Healthy Communities Institute

The Healthy People 2020 national health target is to reduce the proportion of infants born with very low birth weight (5 pounds, 8 ounces) to 7.8 percent. The rate of African Americans was almost twice the national and higher than any other race.

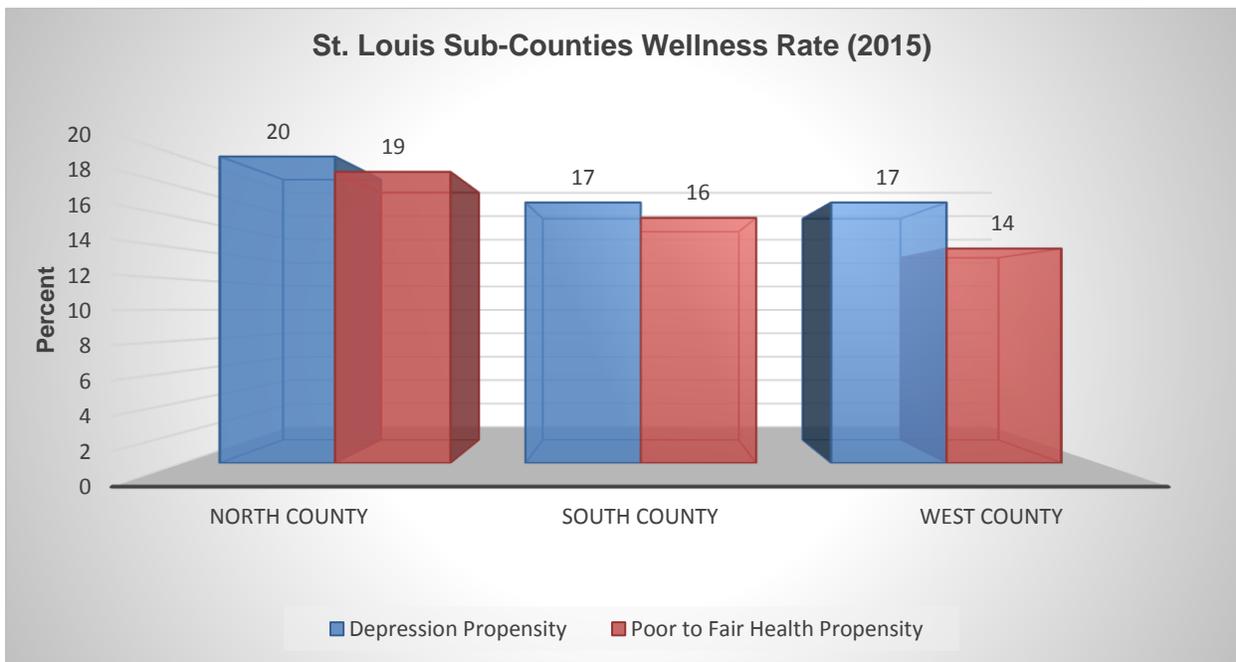


Source: Healthy Communities Institute

The Healthy People 2020 national health target is to reduce the infant mortality rate to six deaths per 1,000 live births. The rate of infant mortality in the county and state was statistically equal, but higher than the national health target. The rate among African Americans in the county was the same as the rate in the state.

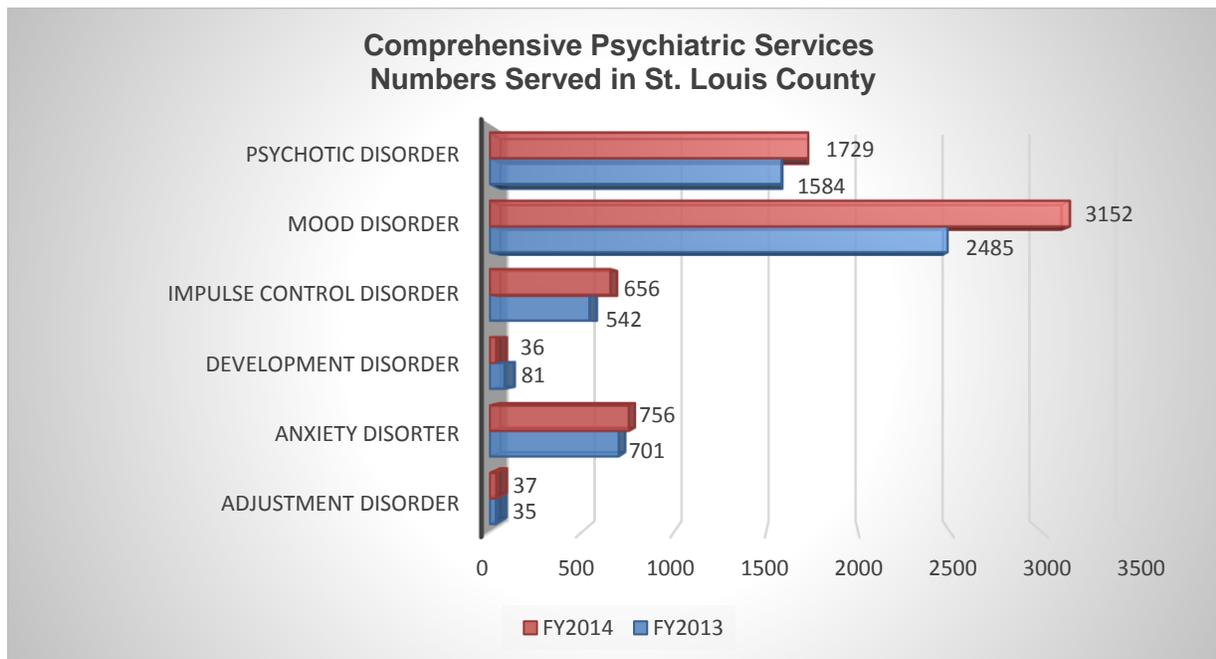
Mental Health

In 2014, there were an estimated 9.8 million adults age 18 or older in the U.S. with serious mental illness. This number represented 4.2 percent of all U.S. adults. (National Institute of Mental Health). From 2012 to 2013, the total cases of individuals in St. Louis County Emergency Rooms with a mental disorder principal diagnosis has decreased from 7,070 to 5,774. However, there was an increase from 2011 (6,114) to 2012 (7,070). (Missouri Department of Mental Health).



Source: Truven Health Analytics

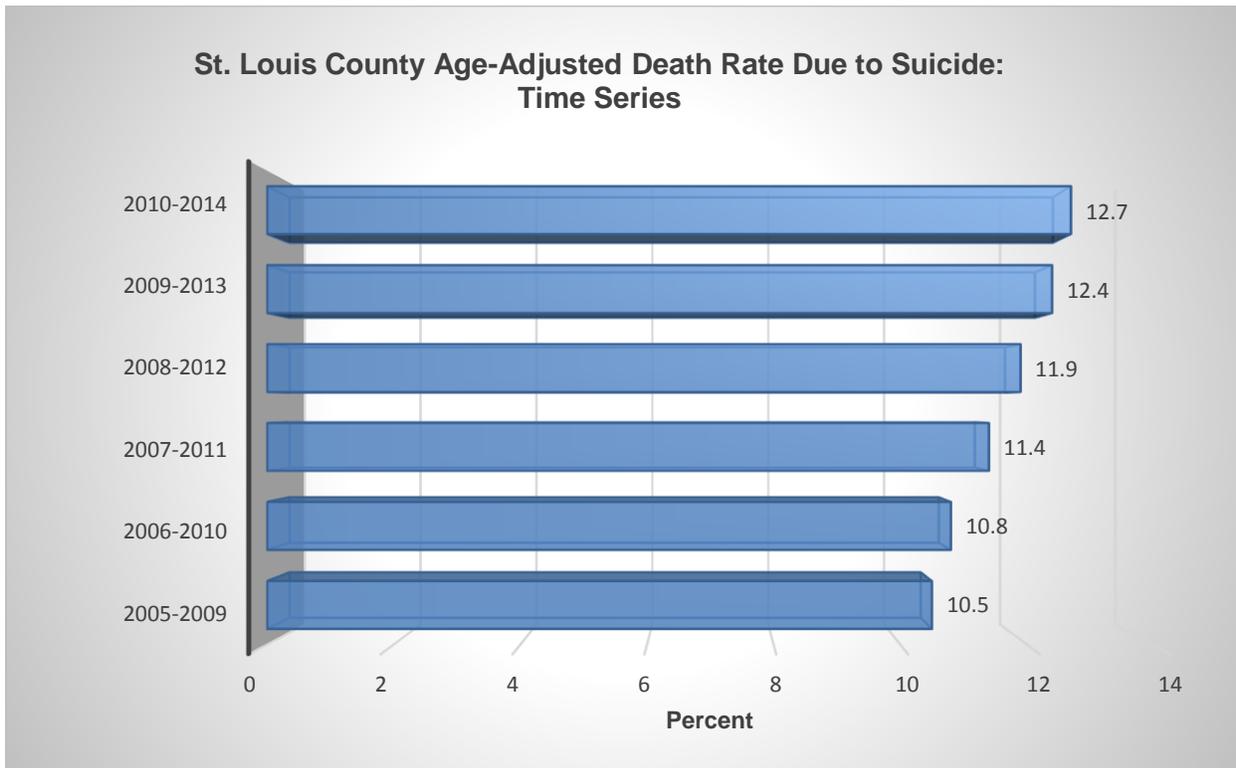
The propensity to suffer from symptoms of depression was the highest in North County in 2015. North County also had the highest propensity for poor to fair health.



Source: Missouri Department of Mental Health

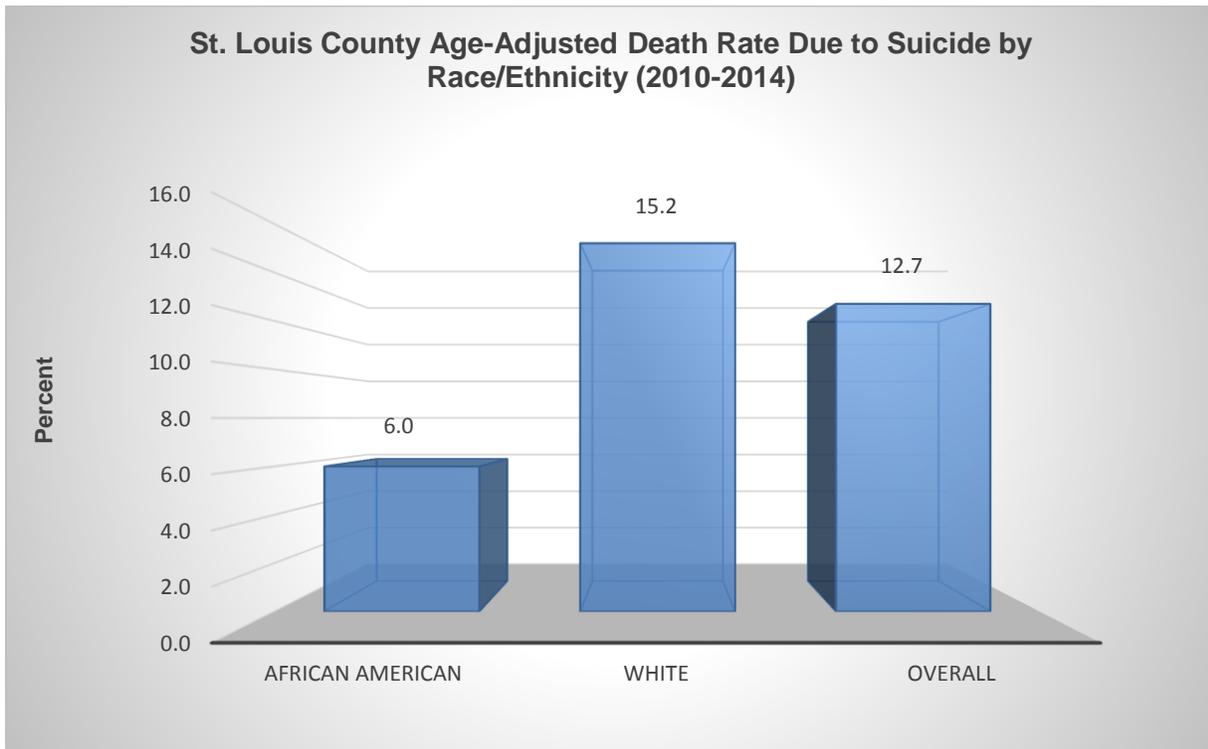
The graph above indicates the number of clients seen with each diagnosis per year. An individual client may have more than one admission within a year. Mood and psychotic disorders led among all conditions in 2014 and 2015. A total of 5,675 St. Louis County residents received treatment for serious mental health conditions at publicly-funded facilities. (Missouri Department of Mental Health, 2014).

Suicide is a leading cause of death in the United States, presenting a major, preventable public health problem. More than 33,000 people kill themselves each year according to the Centers for Disease Control and Prevention, but suicide deaths only account for part of the problem. An estimated 25 attempted suicides occur per every suicide death, and those who survive suicide may have serious injuries, in addition to having depression and other mental problems. Men are about four times more likely than women to die from suicide, but three times more women than men report attempting suicide. Suicide occurs at a disproportionately higher rate among adults 75 years and older.



Source: Healthy Community Institute

In the last decade, a noted increase occurred in the suicide rate in the county, a major public health concern.

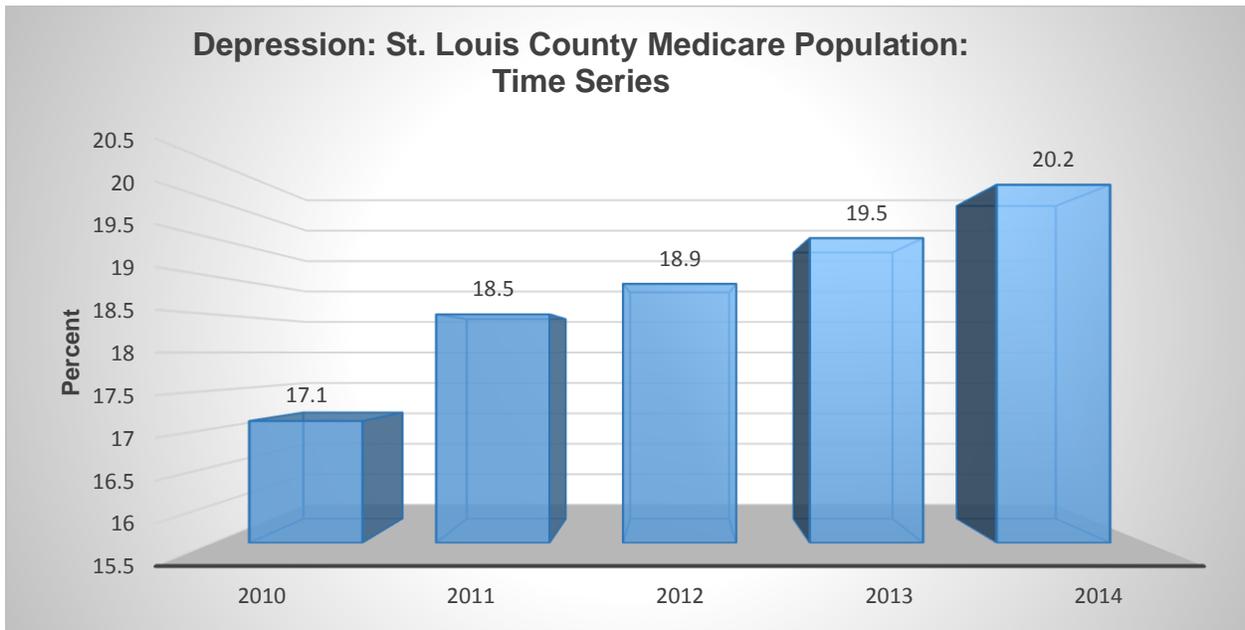


Source: Healthy Communities Institute

The death rate due to suicide among Whites was twice the rate of African Americans in St. Louis County.

Depression is a chronic disease that negatively affects a person's feelings, behaviors and thought processes. Depression has a variety of symptoms, the most common being a feeling of sadness, fatigue and a marked loss of interest in activities that used to be pleasurable. Many people with depression never seek treatment; however, even those with the most severe depression can improve with treatments including medications, psychotherapies and other methods.

According to the National Comorbidity Survey of mental health disorders, people over the age of 60 have lower rates of depression than the general population — 10.7 percent in people over the age of 60 compared to 16.9 percent overall. The rate of depression in the county among adults less than 65 was 34 percent and 17.6 percent among 65+.

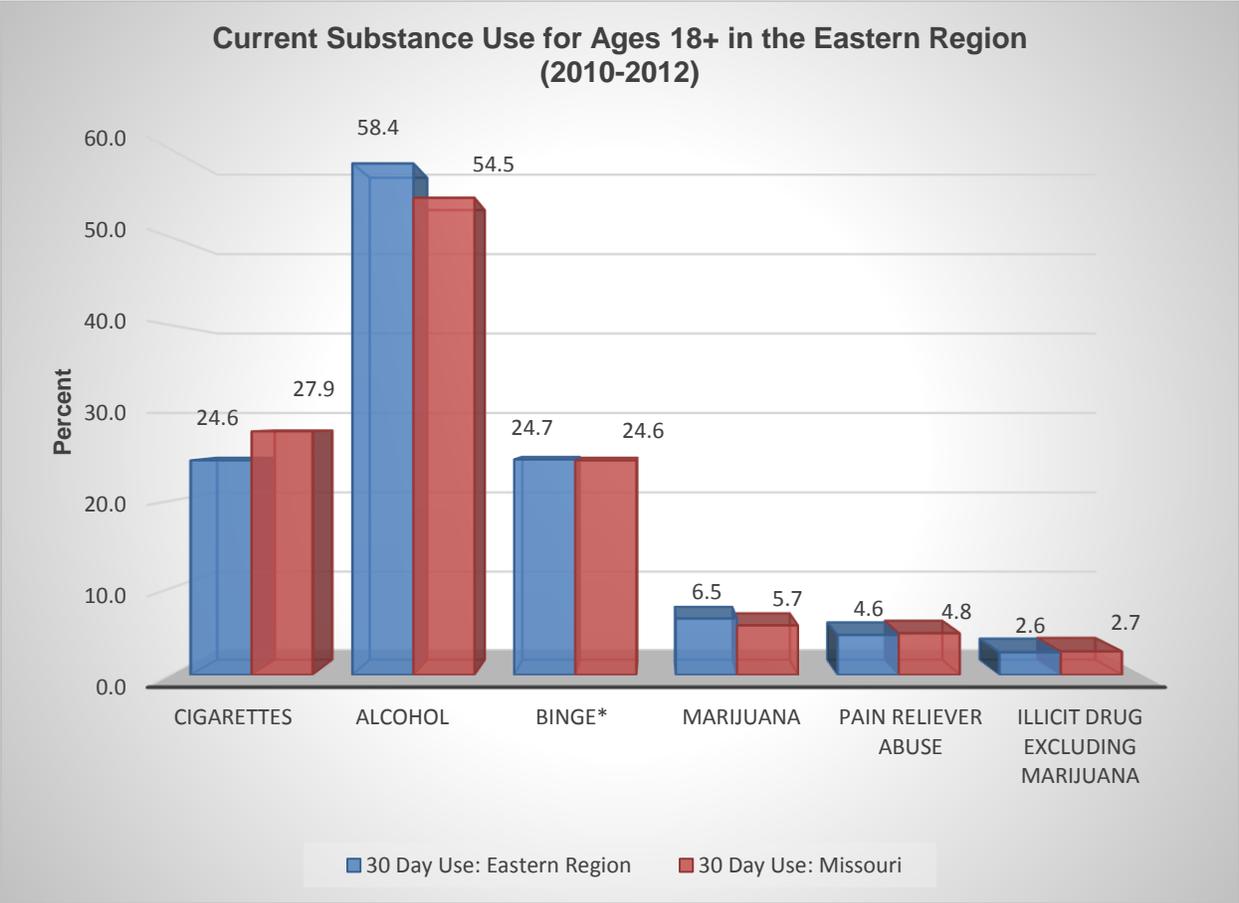


Source: Healthy Community Institute

This graph shows an increase in the rate of depression among the Medicare population from 17.1 in 2010 to 20.2 in 2014. The Center for Medicare Services estimates depression in older adults occurs in 25 percent of those with other illnesses, including: arthritis, cancer, cardiovascular disease, chronic lung disease and stroke.

Substance Use and Abuse

The availability of county-level data on substance use and abuse is limited. In 2012, St. Louis County residents had a total of 323 alcohol-related and 437 drug-related hospitalizations. In addition, there were 1,767 alcohol-related and 1,294 drug-related ER visits that did not include a hospital stay. In 2014, 2,896 individuals in St. Louis County were admitted into substance abuse treatment programs. A total of 1,273 were primarily due to alcohol while 476 were primarily due to marijuana. (Missouri Department of Mental Health).



Source: Missouri Department of Mental Health

Cigarettes, Alcohol and Binge drinking (*5+ drinks on a single occasion in last 30 days) led in substance use for the eastern region and the state. Marijuana, pain reliever abuse and illicit drug use rates were statistically the same for the region and state.

Secondary Data Summary

The collection of secondary data available regarding North County and presented on the preceding pages revealed a number of findings:

- Among the three segments of St. Louis County, North County had the highest propensity for obesity in 2015 among adults 18 years old and older.
- The diabetes prevalence rate for persons under 65 was higher in North County when compared to South County and West County. For persons over 65, the prevalence rate was the same in South and West County and statistically the same in North County.
- The rate of high blood pressure was slightly higher in North County. Proportionally, the propensity for high cholesterol and the prevalence rates for high blood pressure, heart disease and stroke were virtually identical across all regions in St. Louis County
- While the age-adjusted incidence rate among all cancer in St. Louis County was higher than the rate in Missouri and in the U.S., the all cancer age-adjusted death rate in St. Louis County was lower when compared to Missouri and the U.S.
- The propensity to suffer from symptoms of depression was the highest in North County in 2015. North County also had the highest propensity for poor to fair health.

C. Internal Work Group Prioritization Meetings

Christian Hospital chose 13 employees to participate on an internal CHNA work group from various hospital departments representing Emergency Medical Services; Community Benefit; Case Management; Behavioral Health/Pain Management; Nursing; Quality; Nursing; Patient Access and Registration; Surgical Services & Cardiology; Mental Health; Community Health Access Program (CHAP); Marketing, Communications & Community Outreach; and BJC Community Benefit. (See Appendix B).

The work group met over six months to analyze the primary and secondary data and to complete the priority ranking for the hospital's 2016 CHNA.

Meeting 1

The work group met on Sept. 11, 2015 to review the purpose for the CHNA, role of the work group and goals for the project. The team reviewed the key findings from the 2013 report and the current findings from the 2015 focus group. The 2015 focus group perceptions were then reviewed and discussed.

Through discussion and consensus, the team narrowed the list of the health needs from the focus group from 16 to 11 health needs. (See Table 15 on next page). The team made its decision by reviewing resources available including staffing, program availability and hospital service lines.

Table 15: Christian Hospital's List of Primary Data	
Stakeholders Focus Group: List of Community Health Needs	Christian Hospital CHNA Work Group: Top 11 Community Health Needs
Asthma	Asthma
Cancer	Infectious Disease (Pneumonia & Influenza)
Diabetes	Cancer
Access to Affordable Health Care	Diabetes
Heart Disease	Obesity
Child Welfare (Neglect & Abuse)	Access to Affordable Health Care
Dental Care	Care Coordination & Continuity
Sexual Transmitted Disease (HIV/AIDS)	Heart Disease & Stroke
Infectious Diseases (Pneumonia & Influenza)	Behavioral Health / Substance Abuse
Mental Health (Violence & Trauma)	Mental Health (Violence & Trauma)
Behavioral Health / Substance Abuse	Senior Health Care
Maternal & Infant Health (Reproductive Health)	
Senior Health Care	
Socio-Economic Factors (Nutritional Deficiencies or no Physical Activities)	
Care Coordination & Continuity	
Obesity	

Child Welfare (Neglect & Abuse), Dental Care, Maternal & Infant Health (Reproductive Health), Socio-Economic Factors (Nutritional Deficiencies or no Physical Activities) and Sexual Transmitted Diseases (HIV / AIDS) are the five needs highlighted in red the hospital CHNA work group decided not to include in its top list. The right column lists the top 11 community health needs the work group selected.

Meeting 2

The work group met again Oct. 2, 2015 for the purpose of reviewing the secondary data and discussing and prioritizing the top 11 community health needs. The team reviewed all the available community health needs data and held a discussion about the importance of each need and its effect on the community.

During the second meeting, the work group also reviewed the criteria to rank the top 11 health needs. The criteria (below) for prioritizing the needs identified by the focus group were agreed upon by the work group.

Table 16: Criteria For Priority Setting			
	Rating	Weight	Score
How many people are affected by the problem?			
What are the consequences of not addressing this problem?			
Are existing programs addressing this issue?			
How important is this problem to community members?			
How does this problem affect vulnerable populations?			
The total score			

Source: Catholic Health Association

The work group used a ranking process to assign weight to criteria by using the established criteria for priority setting above. Criteria of overriding importance were weighted as “3,” important criteria were weighted as “2,” and criteria worthy of consideration, but not a major factor, were weighted as “1.” Health needs were then assigned a rating ranging from one (low need) to five (high need) for each criteria. The total score for each need was calculated by multiplying weights by rating. .” This process was done individually.

Meeting 3

The work group met again Dec. 1, 2015 to discuss the results of its ranking. (See Table 17 below). Participants were encouraged to discuss how and why each arrived at the ranking. Asthma ranked as the highest community health need followed by Infectious Diseases (including Pneumonia and Influenza) and Diabetes. Senior Health Care scored the lowest of all the needs. Because the focus group discussed Senior Care as a special population, this group will be included when addressing needs. The group also compared its results to the external focus group ranking. (See Page 17).

Table 17 Christian Hospital's Internal Work Group Rating of Top 11 Community Health Needs	
Highest to the Lowest Health Needs	Total Scores
Asthma	379
Infectious Diseases	357
Diabetes	354
Access to Affordable Healthcare	350
Mental Health/Substance Abuse	341
Obesity	330
Care Coordination	318
Cardiovascular	298
Cancer	282
Senior Health Care	227

The work group also considered the Hospital Industries Data Institute (HIDI 2014) on Christian Hospital health condition volumes (discharges and outpatient volumes) to compare to the primary and secondary data. Based on the hospital data, the primary service area with zip codes 63031, 63033, 63034 and 63042 had higher numbers of cases of cardiovascular disease followed by mental health, cancer and asthma visits and discharges. Overall, Christian Hospital primary service areas had a higher number of visits for mental health conditions and cardiovascular discharges in 2014.

The table below shows:

- primary data from the focus group ranking
- needs identified by the internal work group ranking
- results of the secondary data using Healthy Communities Institute scoring tools that compared data from similar communities in the nation
- Priority MICA, an online survey used to prioritize diseases using publicly available Missouri data

The internal work group conducted this ranking as a group with individual input on the severity of each need.

Table 18: Christian Hospital Community Health Needs Assessment Primary & Secondary Data Rating Summary				
Rank	Focus Group Ranking	Hospital Internal Team Ranking	Healthy Community Institutes	MICA
1	Mental/Behavioral Health	Asthma	Asthma (Medicare Population)	Diabetes
2	Socio-Economic Factors	Infectious Diseases	Chronic Kidney Disease (Medicare Population)	Pulmonary Disease (COPD)
3	Access to Affordable Health Care	Diabetes	Depression (Medicare Population)	Heart Disease
4	Care Coordination	Access to Affordable Health Care	Atrial Fibrillation (Medicare Population)	Asthma
5	Diabetes	Mental / Behavioral Health	Breast Cancer Incidence Rate	Cerebrovascular Diseases
6	Obesity	Substance Abuse	Cancer (Medicare Population)	Colorectal Cancer
7	Heart and Vascular Disease	Obesity	Osteoporosis (Medicare Population)	HIV / AIDS
8	Senior Care	Care Coordination	Rheumatoid Arthritis (Medicare Population)	Schizophrenia and Psychosis
9	Child Neglect/Abuse	Heart and Vascular	Stroke (Medicare Population)	Suicide and Self-Inflicted Injury
10	Asthma	Cancer	Adults Who Drink Excessively	Breast Cancer
11	Cancer	Senior Health Care	Babies with Low Birth Weight	Lung Cancer
12	Maternal and Infant Health		Hyperlipedemia: Medicare Population	Prostate Cancer
13	Dental Care		Farmers Market Density	Abuse and Neglect
14	Sexual Transmitted Diseases		Social Association	Cervical Cancer

- Asthma was ranked by all four groups; the internal team and HCI listed Asthma as the top need. The focus group ranked this need 10th and Priority MICA ranked Asthma 4th.
- Heart Disease and Mental/Behavioral Health, and underlying causes, were listed by all groups as was Cancer.
- Diabetes was listed by the focus group, internal team and Priority MICA.
- Obesity, Care Coordination, Access to Affordable Health and Senior Care were only ranked by the focus group and the internal team.

After reviewing the secondary data, the team discussed the health disparity among the senior, African American and Hispanic populations in St. Louis County as well as North County compared to West and South County. Participants reviewed and discussed the differences among all rankings and were provided the opportunity to change their rankings. Individual rankings were totaled to yield a composite ranking.

After thorough discussion, the group concluded that Christian Hospital will continue to address Diabetes with modification to the 2013 implementation plan. For the 2016 plan, the hospital will also focus on Access to Care/Care Coordination as well as Heart Disease and Cardiovascular Health by focusing on Stroke prevention.

V. Appendices

Appendix A

Christian Hospital

Christian Hospital is licensed as a 220-bed; acute-care medical center located on 28 acres in unincorporated north St. Louis County. Located six miles west of Christian Hospital's main campus is an extension, Northwest Healthcare, which offers the community 24-hour emergency care and a variety of outpatient services in a convenient setting to complement the hospital services. Christian Hospital is a leader among hospitals in the St. Louis region and has experienced tremendous growth in the last few years.

Specifically, Christian Hospital is highly regarded for its excellence in heart services and lifesaving cardiothoracic surgery, emergency medicine, neurosurgery, spine surgery, cancer treatment, radiation oncology, substance abuse programs, radiology, urology and pulmonary care.

Christian Hospital, a non-profit organization and founding member of BJC HealthCare, has nearly 500 physicians on staff and a diverse workforce of more than 2,200 healthcare professionals who are dedicated to providing the highest quality care with the latest technology and medical advances.

Our community counts on Christian Hospital as one of the largest employers and as a pillar in the community. Due to the complex nature of the health needs in our community, we provide lectures, screenings, education and wellness programs to nearly 10,000 community residents and provide thousands of meals to the North County Meals on Wheels program.

Appendix B**Christian Hospital Internal Team Work Group**

Name	Title	Department
Angie Liley	Case Manager	Case Management
Annette McCauley	Manager	Nursing Quality
Dana Edwards	Director	Case Management
Gregg Liedtke	Director	Nursing Administration
Heather Bowker	Manager	Patient Access
Kamille Pope	Development Coordinator	Foundation
Karley M.King	Community Benefit Manager	Corporate Communication & Marketing
Lori McLennan	Finance Manager	Finance
Michele Hoeft	Director	Marketing & Communication & Foundation
Rebecca Poindexter	Manager	Mental Health
Shannon Watson	Community Health Supervisor	Emergency Medical Services
Susan Burch	Director	Nursing Administration
Tom Saggio	Director	Nursing Administration

Appendix C

PERCEPTIONS OF THE HEALTHCARE NEEDS OF NORTH ST. LOUIS COUNTY RESIDENTS FROM THE VIEWPOINT OF COMMUNITY LEADERS

Prepared by:

Angie Wade
Manager, Market Research
BJC HealthCare

Prepared for:

Michele Hoeft
Executive Director
Christian Hospital

Dr. Rajiv Patel
Vice President of Medical Affairs
SSM DePaul Health Center

July 29, 2015

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BACKGROUND

The Patient Protection and Affordable Care Act (PPACA, March 2010) requires that non-profit hospitals conduct a community health needs assessment (CHNA) every three years. As part of that process, each hospital is required to solicit input from those who represent the broad interests of the community served by the hospital as well as those who have special knowledge and expertise in the area of public health.

Christian Hospital (CH) and SSM DePaul Health Center (DPHC) collaborated on their first needs assessment in 2012, although each was on a different timetable. DePaul began their assessment in 2012, which was implemented 2013 through 2015. So their first plan is actually coming to an end this year. Christian completed its needs assessment at the end of 2013, and is now in the middle of implementation, which runs through the end of 2016.

Both hospitals are in the process of preparing their next CHNA, and agreed to continue their collaboration to assess feedback of those community stakeholders who have an interest in the health of consumers located in North St. Louis County.

RESEARCH OBJECTIVES

The main objective for this research is to solicit input from healthcare experts and those who have a special interest in the healthcare needs of North St. Louis County residents, served by both Christian Hospital and SSM DePaul Health Center. Specifically, the discussion focused around the following objectives:

- 1) Determine whether the needs identified in the 2012/2013 CHNAs are still the right areas on which to focus
- 2) Explore whether there are there any needs on the list that should no longer be a priority
- 3) Determine where there are the gaps in the plan to address the prioritized needs
- 4) Identify other organizations with whom we should consider collaborating
- 5) Discuss how the world has changed since 2012/2013 when CH and DPHC first identified these needs and whether there are there new issues they should consider
- 6) Evaluate what issues the stakeholders anticipate becoming a greater concern in the future that we need to consider now

METHODOLOGY

To fulfill the PPACA requirements, CH and DPHC conducted a single focus group with public health experts and those with a special interest in the health needs of residents located in North St. Louis County. It was held on June 15, 2015 at the Northwest HealthCare - Community Room. The group was facilitated by Angela Ferris Chambers, Manager of Market Research & CRM for BJC HealthCare. The discussion lasted ninety minutes.

17 individuals representing various St. Louis city organizations participated in the discussion. Eight others were invited, but were unable to attend (Appendix A).

Sean Hogan, President, SSM DePaul Health Center and Ron McMullin, President, Christian Hospital, welcomed participants at the beginning of the meeting. Those who were observing on behalf of CH and DPHC were also introduced to the group (Appendix A).

During the group, the moderator reminded the community leaders why they were invited - that their input is needed to help each hospital move forward in this next phase of the needs assessment process. The hospitals view this iteration of its CHNA as more of a “tweak” than a total revision of the first assessment; insufficient time has passed for them to have a substantive impact on the needs that were prioritized.

The moderator shared the needs prioritized by each hospital in the first assessment and discussed where each hospital is in its implementation plan. She also mentioned that each system is working to standardize the language for identifying prioritized needs across all of its hospitals so that impact can be measured consistently. This will allow the sharing of best practices among all system facilities.

Christian Hospital and DePaul Health Center identified three of the same priorities in their 2012/2013 CHNAs:

- Diabetes
- Obesity
- Access to affordable health care

In addition to the three priorities Christian Hospital and DePaul Health Center share, DePaul identified an additional priority on which to focus:

- Heart and vascular care

Furthermore, each hospital identified the following goals to accomplish when measuring the success of each priority:

Christian Hospital’s Measures of Success by Priority

Cardiovascular Disease / Diabetes	Obesity	Access to Affordable Healthcare
<p>Success Measures:</p> <ul style="list-style-type: none"> • Increase the number of pre-diabetes and diabetes screenings in the community and encourage follow-up for abnormal results • Increase the number of adolescents and adults with pre-diabetes/diabetes who receive formal education in the community. 	<p>Success Measures:</p> <ul style="list-style-type: none"> • Reduce the incidence of overweight and obese individuals in North County. • Educate individuals on what their body needs to be healthy. 	<p>Success Measures:</p> <ul style="list-style-type: none"> • Offer Medicaid and financial assistance enrollment to 100% of eligible patients who present for medical care.
<p>Current Status:</p> <ul style="list-style-type: none"> • Community members are screened at free events at Christian Hospital throughout the calendar year. • Follow-up is done by registered nurses who provide education and access to resources. • The number of individuals who are being screened has decreased due to realignment in the diabetes service of the hospital. • The hospital is working to ensure that community members receive access to free screenings as often as possible. 	<p>Current Status:</p> <ul style="list-style-type: none"> • Just Lose It continues to be offered to community members, free of charge. Nearly 1,000 neighbors sign up each year to exercise, learn cooking tips, educate them on weight loss and share their personal stories. • Just Lose It is offered twice a year, once in January and once in August. Each group of participants has lost up to, and over 2,000 lbs. of weight each session 	<p>Current Status:</p> <ul style="list-style-type: none"> • The number of individuals who receive assistance for insurance eligibility and the number who are enrolled in programs are being tracked.

DePaul Health Center's Measures of Success by Priority

Cardiovascular Disease / Diabetes	Obesity	Access to Affordable Healthcare
<p>Success Measures:</p> <ul style="list-style-type: none"> • Decrease percentage of all-cause/all-location CHF 30-day readmissions to <15.5% in 2015 • Increase percentage of patients seen by primary care or cardiology within 5 business days after discharge to 100% in 2015 • Increase percentage of North County patients referred to endocrinology within 14 days of discharge to 75% in 2015 	<p>Success Measures:</p> <ul style="list-style-type: none"> • Decrease the percentage of North St. Louis County patients with self-reported obesity (BMI > 30) to 25.5% • Increase percentage of 6th grade students in CatholicFit program who self-report family discussions about fitness from 83% to 90% • Increase number of North St. Louis County residents treated by SSM Weight Loss Clinic from 277 in 2014 to 500 in 2015 	<p>Success Measures:</p> <ul style="list-style-type: none"> • Increase percentage of CRC encounters leading to a scheduled appointment to 50% and a show percentage of 40% in 2015 Current Status: Continued collaboration with the IHN (Integrated Health Network). In 2014, 78% of encounters resulted in appointments, 29% appointment show rate • Increase percentage of Urgent Care referrals of patients without a PCP to primary care to 100% in 2015 • Recruit 3 additional physicians and nurse practitioners to North County in 2015 Current Status: 2 new PCPs will begin practice by Sept. 2015
<p>Current Status:</p> <ul style="list-style-type: none"> • CHF 30-day readmissions currently at 21.3% • In Process - Medical Group and Cardiology have collaborated on process and protocols; initiative now underway • Comprehensive Endocrinology Clinic started in April 2015 	<p>Current Status:</p> <ul style="list-style-type: none"> • 440 children participated in the Catholic Fit program during the 2014-15 school year. Program ended in April, results / data pending 	<p>Current Status:</p> <ul style="list-style-type: none"> • Continued collaboration with the IHN (Integrated Health Network). In 2014, 78% of encounters resulted in appointments, 29% appointment show rate • 2 new PCPs will begin practice by Sept. 2015

Both CH and DPHC agreed that the following needs are important, but chose not to prioritize and address them at this time:

- Asthma
- Cancer
- Care coordination and continuity
- Child welfare, including neglect and abuse
- Dental care
- Sexually transmitted diseases, as well as other infectious diseases (influenza, pneumonia, HIV/AIDs)
- Mental health/substance abuse
- Maternal and infant health, including reproductive health
- Senior care
- Socio-economic factors

After the discussion, the participants were asked to rank these identified needs based on their level of concern and ability to address them via community collaboration.

KEY FINDINGS

PERCEPTION OF 2012/2013 PRIORITIES:

There was general consensus that the needs identified in the previous assessment are still those on which the two hospitals should focus. Furthermore, Christian Hospital and DePaul Health Center agree that the priorities are, in fact, interrelated and suggest a holistic approach to caring for patients in North St. Louis County.

- **Diabetes** - Currently, there are educational and preventative programs in place. It is believed that treatment and outcomes can be controlled by doctors.
- **Obesity** is thought to be a principle concern because physicians have less control over compliance with weight management and eating habits, which often lead to diabetes and heart disease.
- **Access to affordable health care** – It is believed that the Affordable Care Act is addressing this priority; however, many are still unaware of how to access the program.
- **Heart and vascular care** - There are increased efforts to educate consumers, in general, about the signs and symptoms of a stroke or heart attack. However, prevention, education, and seeking timely treatment remain challenges, overall, in North St. Louis County.

CONSIDERATIONS FOR ADDING TO THE LIST OF PRIORITIES:

Many reflected on challenges the community experienced in North St. Louis County over the past year. This led some to reconsider how key contributing factors, such as **mental health, substance abuse, and socio-economic factors** are prioritized in the “other needs” category. These “other needs” are believed to result in the following:

- Violence and trauma
- Nutritional deficiencies
- Decrease or no physical activity
- Lack of continuity in access to care and medication

When considering the list of needs identified in the previous assessment, there is agreement that because of the interrelationships and key contributing factors, the definition of “need” must be refined. The question remains, is the need the medical condition or is the need the predisposing factor that leads to the medical condition?

GAPS IN IMPLEMENTATION STRATEGIES:

Although nothing was identified that should come off the list of prioritized needs, there were gaps identified in the ways in which they are being addressed.

ACCESS: TRANSPORTATION

- Some mention the hospitals’ ability to coordinate/offer transportation resources as an important factor to accessing care. The lack of transportation for many in North St. Louis County is a primary deterrent in residents’ ability to select more nutritious food options at select grocery stores, obtain medications from local pharmacies, as well as seek or continue medical care.

COMMUNICATION AND AWARENESS

- Create more formal ways to communicate regarding services that are needed, as well as coordinate services that are already available. Communications should include services that support the continuity of care such as calls to remind patients to take medications, help with completing insurance application process, as well as “well-being” home visits. Healthcare providers request better information regarding the physical, dental, and mental health programs that are available and whom to call when a particular need arises.
- Work must continue to erase the “stigma” associated with North St. Louis County, which impacts residents’ willingness to seek care locally. Current service offerings, preventive programs, education and outreach, as well as the expertise and experience of medical staff located in North County, Christian Hospital, and DePaul should continue to be communicated and reinforced, even beyond the boundaries of North St. Louis County.
- Engage and partner with the local school district to create proactive programming that will foster awareness and prevention within the student population. Develop nutrition classes for different grade levels that last 11 to 12 weeks, and partnering with social workers in each school are examples. Further, school nurses and counselors can play a role in connecting primary care physicians with students, as well as aid in educating parents on access to additional services, care, and coverage. Currently, the Catholic Fit program has successfully implemented this type of service.

- Develop language and performance measures that help ensure hospitals in North St. Louis County are appropriately targeting messages that are “culturally competent for audiences.”

TRAINING AND EDUCATION: HEALTH LITERACY

- Parents need help understanding how to navigate the health system, as well as the tools to learn how to access services so that they become more self-reliant.
- Multiple examples were given of patients who are non-compliant because they do not fully understand their doctor’s orders, recommendation, dosage, etc.

SOCIAL DETERMINANTS OF HEALTH

- North St. Louis County is greatly affected by the lack of “meaningful jobs and sustaining jobs” which result in residents becoming less self-sufficient. Although it is still unclear how the medical profession can address this issue, most agree that attracting businesses that provide health insurance increases the likelihood of disease prevention, management, and compliance.
- Issues of poverty and homelessness contribute to a lack of health.
- North St. Louis County was identified by the CDC as a high-intensity drug trafficking area for both prescription drugs and heroin. The high use of intravenous drug users results in an increased outbreak of STDs and Hepatitis C. While some are currently monitoring these statistics, there is still a need to continue to collect more precise data to accurately identify the impact of the crisis.

BEHAVIORAL/MENTAL HEALTH ISSUES

- There is a need for better integration of behavioral health and physical health services into primary care.
- There is a shortage of mental health service providers.

SPECIAL POPULATIONS:

SENIOR CARE

- As baby-boomers age, they are becoming more conscious of health and prevention, and are exploring a more holistic approach to wellness. This population seeks programs that target their issues and concerns.
- Elder abuse is on the rise. It manifests not only in the form of neglect or physical abuse, but financial abuse, as well. Awareness should be raised of this growing problem.

CHILDREN/YOUTH

- There are many students in the community who suffer from chronic diseases. However, continuity of care is diminished as a result of socio-economics issues. The absence, limitations, and awareness of training and support programs related to self-care are also factors.

- In order to foster a better informed support system, there are opportunities for medical providers to expand partnerships within the North St. Louis County school district by using students as access points to further educate and involve parents.
- Substance abuse, mental health disorders and the relationship to violence must be elevated as an issue. It is described as being a “social determinants of health” particularly for children in North County who don’t have the “average childhood experience.”

TRANSIENT FAMILIES

- Transient families are a special concern. Home ownership is rapidly being replaced by rental housing in North County and residents are more mobile. Consequently, it is more challenging to track and communicate with families enrolled in programs, as well as measure the impact of the programs.

OTHER ORGANIZATIONS WITH WHOM TO CONSIDER PARTNERING:

Most agree that the issues related to North St. Louis County are complex and there is no simple solution. Understanding that hospitals alone cannot address these issues, several organizations were identified as good partners for collaboration:

- The local **Parks and Recreation Departments** are needed to help manage community outreach through fitness programs, health programs, etc.
- Working with the **local grocery store chains**, such as Shop ‘N Save to offer and promote healthier food options.
- Improving health literacy at hospitals and doctors’ offices by partnering with **St. Louis Community Health Commission/Health Literacy Commission**
- **Regional Health Commission’s** charge is to improve access to healthcare as well as outcomes
- Dr. Jason Purnell and **Brown School at Washington University** continues to provide research and information related to health behaviors and socio-economics.
- Promote growth in community gardens through programs similar to the ones offered via the **Community Action Agency of St. Louis County** and **Operating Seeds of Hope Farm**.
- **The Urban League** is a resource for job creation and local **Career Centers** work with the schools and to offer employment for summer youth.

- North County was designated as a **Promise Zone**. According to WhiteHouse.gov, local community leaders and business located in designated Promise Zones “will partner with the federal government to create jobs, increase economic security, expand educational opportunities, increase access to quality, affordable housing and improve public safety.”
- Recently, St. Louis County completed the **Livable Community Survey** which contains information regarding resources available to older adults, and is based on the needs identified in the survey results (**AARP.org**).
- **Better Family Life** is a community-based organization that receives federal funds for the development of family and youth programming.

NEW ISSUES OF CONCERN:

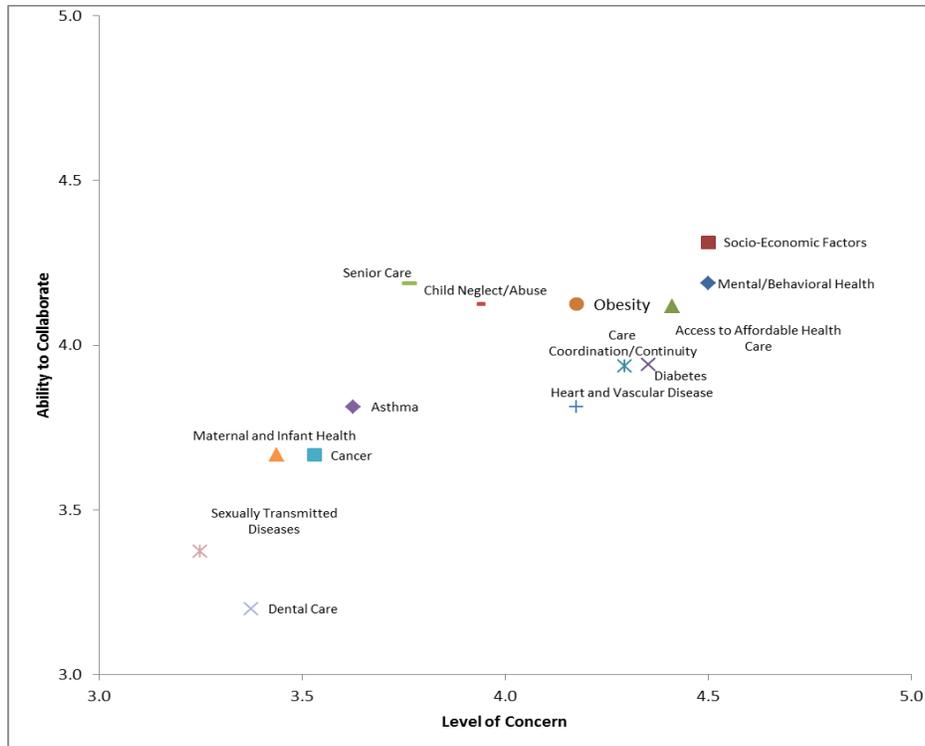
FINANCIAL LITERACY: Find ways to help mentor residents on how to become more financially literate.

EMPLOYMENT: Educate unemployed residents on how to gain and maintain employment. Also collaborate with local business to find solutions to issues that impede employment efforts, such as transportation and child care.

RATING OF NEEDS

Participants were given the list of the needs identified in the 2012/2013 assessment and asked to re-rank them on a scale of 1 (low) to 5 (high), based on their perceived level of community concern and the ability of community organizations to collaborate around them.

Mental/behavioral health, socio-economic factors, access to affordable health care, and care coordination/continuity all ranked high in terms of concern. Socio-economic factors ranked highest in terms of ability to collaborate, while mental/behavioral health, and child neglect and abuse ranked a close second.



Health Need	Level of Concern	Ability to Collaborate
Mental/Behavioral Health	4.5	4.2
Socio-Economic Factors	4.5	4.3
Access to Affordable Health Care	4.4	4.1
Coordination/Continuity	4.4	3.9
Diabetes	4.3	3.9
Obesity	4.2	4.1
Heart and Vascular Disease	4.2	3.8
Senior Care	3.9	4.1
Child Neglect/Abuse	3.8	4.2
Asthma	3.6	3.8
Cancer	3.5	3.7
Maternal and Infant Health	3.4	3.7
Dental Care	3.4	3.2
Sexually Transmitted Diseases	3.3	3.4

NEXT STEPS

Based on the input the hospitals received from community stakeholders, Christian Hospital and SSM DePaul Health Center will examine secondary data for St. Louis County to explore the size of the needs that have been identified.

Each hospital has established an internal stakeholder workgroup to assess this information and evaluate whether the priorities should change.

The needs assessment and associated implementation plan must be revised and updated for release by December 13, 2015 for SSM DePaul Health Center, and December 31, 2016 for Christian Hospital.

The community stakeholder group will continue to be updated about the progress of the internal work groups as they work to meet these deadlines.

Appendix D		
Focus Group Participants and Hospital Observers		
Focus Group Participants		
NAME	ORGANIZATION	ATTEND
Valerie Adkins	Family Resource Center	X
Brenda Bobo-Fisher	SLU Education and Public Services	X
Troy Doyle	St. Louis County PD	X
Laurie Dusenberg	Holy Spirit Catholic church	
Greg Echele	Family Resource Center	
Doug Eller	Community Action Agency of STL	
Mike Fulton	Pattonville School District	
Dr. Jade James	St. Louis County DOH	
Courtney Jones	Pleasant Grove Church	
Tim Lee	Ward 1 - Florissant	X
Terry Loehrer	Pattonville Fire Department	
Carolyn Marty	Greater N County Chamber of Commerce	X
Sr. Rose Mercurio	Holy Name of Jesus Catholic Church	X
Jeanette Mix	Edward Jones YMCA	X
Crystal Nelson	Hazelwood School District	X
Dave Reddy	Reddy Health and Performance	X
Nate Ruback	Grace Lutheran Chapel & School	
Mary Schaefer	Mid-East Area on Aging	X
Spring Schmidt	St. Louis County DOH	X
Rance Thomas	NCCU	X
Mark Tranel	UMSL	X
Lottie Wade	United Way	X
Vickie Wade	People's Health Centers	X
Denise Wiehardt	Crisis Nursery	X
Don Zykan	Community Representative	X

Hospital Observers		
Kim Bakker	SSM Health	X
Madeline Gemoules	Mercy	X
Michele Hoeft	Christian Hospital	X
Sean Hogan	DePaul Health Center	X
Karley King	BJC HealthCare	X
Ron McMullen	Christian Hospital	X
Dr. Elna Nagasko	BJC HealthCare	X
Dr. Rajiv Patel	DePaul Health Center	X
Rebecca Poindexter	Christian Hospital	X
Kamille Pope	Christian Hospital	X

Implementation Plan

A. Community Health Needs To Address

a) Heart & Vascular disease: Heart Health and Stroke Prevention

Rationale

Heart disease is the leading cause of death in the United States. Stroke is the fifth leading cause of death in the United States. Together, heart disease and stroke, along with other cardiovascular disease, are among the most widespread and costly health problems facing the Nation today, accounting approximately \$320 billion in health care expenditures and related expenses annually. Fortunately, they are also among the most preventable.

The leading controllable risk factors for heart disease and stroke are:

- High blood pressure
- High cholesterol
- Cigarette smoking
- Diabetes
- Unhealthy diet and physical inactivity
- Overweight and obesity

It is critical to address risk factors early in life to prevent these devastating events and other potential complications of chronic cardiovascular disease. Therefore Christian Hospital will use the “Just Lose it” program to enroll participants in the heart health program.

Program Goal

Improve cardiovascular health and quality of life through prevention, detection, and treatment of risk factors for heart attack and stroke.

Program Objective

Total blood pressure and cholesterol level of 25 residents of North County enrolled in the program will decrease by five percent from the pre-post screening at the end of 12 months participation in the program.

Program Action Plan

- Enroll participants through the “Just Lose it Program” by August 20, 2016.
- Limit enrollment to participants for blood pressure and cholesterol counseling with the following American Heart Association Guidelines:
 - a) Blood pressure: Prehypertension 120-139/80-89
 - b) High Cholesterol: Borderline High: 200-239
- Educate individual on how to prevent heart disease and stroke
- Address healthy eating, physical activity, weight management, high cholesterol,

- stress management, blood pressure and smoking cessation.
- Provide education through CH STEMI/Stroke Program to develop an individualized plan to reduce cardiovascular risk factors.
 - a) “Understanding TIAs (Transient Ischemic Attacks) and Stroke” Booklet
 - b) “Understanding Myocardial Infarction (MI) (Also known as Heart Attack)” Booklet
 - c) Customized education provided through Micromedex
 - Meet with individuals within 30 days of enrollment and quarterly thereafter.
 - Post enrollment “touch base” phone calls every 30 days while in the program.
 - Utilize American Heart Association on-line tools to address cardiovascular risk factors.

Expected Outcomes

- A reduction of total cholesterol of all participants combined who complete the program.
- An improvement of blood pressure measurement of all participants combined who complete the program.

Outcomes Measurement

- Participants will have cholesterol and blood pressure measurements evaluated at the end of 12 months.
- Laboratory measurement of Blood Cholesterol levels
- Post-program blood pressure screening
- Using an excel sheet, the post and pre result will be evaluated to see if any progress was made by each participant.

b) Access to Care and Care Coordination

Rationale

Access to comprehensive, quality health care services is important for the achievement of health equity and for increasing the quality of a healthy life for everyone. Access to health services means the timely use of personal health services to achieve the best health outcomes.

Disparities in access to health services affect individuals and society. Limited access to health care impacts people's ability to reach their full potential, negatively affecting their quality of life. Barriers to services include lack of availability, high cost and lack of insurance coverage. These barriers to accessing health services lead to:

- a. Unmet health needs
- b. Delays in receiving appropriate care
- c. Inability to get preventive services

Hospitalizations that could have been prevented Some residents in North County do not have access to a medical home and do not know how to navigate the healthcare system or even community resources. Residents that do not have access to a medical home or care coordination with healthcare and community resources are at risk for health problems such as heart disease, CHF, Pneumonia, COPD, diabetes, shorter lifespan, chronic unhealthy decisions, and increase in hospital admissions and visits.

These factors can cause our community to become unhealthy. The community health access program (CHAP) from Christian hospital is working to provide a holistic approach to the well-being and health in our community by going into the client's homes, helping provide access to care and bridging the services within our community

Program Goal

Increase access to care and provide care coordination for the community in North County

Program Objective

At the end of the 12 weeks session, Christian hospital patients from North County who enrolled in the CHAP program will have a:

- a. 60% decrease in their EMS/ED usage during enrollment
- b. 40% decrease in admissions during enrollment
- c. 100% of uninsured patients will receive insurance and/or financial assistance counseling.

- d. 100% of patients with no medical home or primary care physician (PCP) prior to enrollment will be connected to a medical home or assigned a PCP
- a. At the end of the 12 weeks session, patients' blood glucose will decrease by 10%

Action Plan

The community health access program (CHAP) will enroll clients into their program for 8-12 weeks and provide hands on care to each client's and develop a treatment plan at the time of enrollment. An APP (Advance Practice Paramedic), Resource Coordinator, and Medical Director will work together with the client on this treatment plan for 8-12 weeks. CHAP will educate the client on how to access these services for the future. During the enrollment period CHAP provide a bridge to the proper community service(s) that will help the client gain access to insurance if needed at the time of enrollment.

Participants will be identified through the *Just Lose It* program that is held at Christian Hospital the program has community members enroll in 8 weeks of training and education on how to lose inches and pounds. The program will provide education on nutrition, wellness physical and mental, workout classes, weigh-ins, and overall health.

- a. January 2016 enrollment (or)
- b. August 2016 enrollment

Advanced Practice Paramedics will screen the enrolled participants at the start of *Just Lose It* to obtain a baseline measurement.

Participant whose test results that are abnormal with glucose, cholesterol and blood pressure will be referred to the appropriate resource for education, resources, and access to care/care coordination.

Abnormal total cholesterol above 200 or blood pressure anything above 120/80, findings will be referred to the cardiac team.

Abnormal glucose with fasting anything over 99 and without fasting is under 199, findings will be referred to the Advanced Practice Paramedics.

Both referral teams will work with the participant over the course of their *Just Lose It* program to ensure the participant has no additional needs.

Advanced Practice Paramedics will screen the enrolled participants a second time at the end of the *Just Lose It* program, which will measure the participants' success throughout *Just Lose It*.

Expected Outcome

Decrease in ER visit, rate of admission, increase the number of patients with medical home and decrease in blood glucose level by 10 % of pre-enrollment.

Outcome Measurement

We are using our electronic medical record and spreadsheets to measure pre and post enrollment data and self-report from each client.

We will also use a spread sheet to record the pre-post blood glucose level to compare the differences between the two tests.

c) Diabetes

Rationale

Diabetes is a leading cause of death in the United States. According to the Centers for Disease Control and Prevention (CDC), more than 25 million people have diabetes, including both diagnosed and undiagnosed cases. This disease can have a harmful effect on most of the organ systems in the human body; it is a frequent cause of end-stage renal disease, non-traumatic lower-extremity amputation, and a leading cause of blindness among working age adults. Persons with diabetes are also at increased risk for ischemic heart disease, neuropathy, and stroke. According to the CDC, the direct medical expenditures attributable to diabetes are over \$116 billion. Diabetes disproportionately affects minority populations and the elderly, and its incidence is likely to increase as minority populations grow and the U.S. population ages.

Christian Hospital has identified diabetes education as a community need, based on statistical analysis and community needs assessments. To address this need, Christian Hospital would like to offer Medical Nutrition Therapy (MNT) and diabetes education as a community benefit for patients in our service area.

Program Goal

Reduce disease and economic burden of diabetes mellitus (DM) and improve the quality of life for all persons who have or are at risk to have diabetes.

Program Objective 1

Increase adherence in at least 1 out of 5 individualized nutritional recommendations of participants within 2 months, and increase adherence in at least 3 out of 5 individualized nutritional recommendations of participants within 6 months.

Program Objective 2

Increase knowledge level of North County residents who participate in educational course and nutritional counseling by 15%, from the pre- post-test at the end of the session.

Action Plan: Objective 1

Will increase participation in educational courses, and provide one on one nutritional counseling. Christian hospital has contracted with Morrison and OASIS to provided 1:1 nutritional counseling (MNT) and diabetes education as a community benefit.

Christian Hospital will provide physician ordered one hour 1:1 nutrition and educational resources. Education on how to refer patients for one 1:1 nutritional counseling (MNT) and diabetes education will be provided by a Registered Dietitian.

Program Outcomes

Increased adherence in eating habits and weight loss goals, and develop a personal self-management program and a better understanding of nutritional labels and impacts of calories and carbohydrates.

Outcomes Measurement

Patients will be given a self-assessment surveys at an initial visit, 2 month and 6 month follow-up visits. Assessments will include the following:

1. Which range best describes your blood glucose at home? 100-150 , 150-200, 200-250, >250
2. How many meals **per day** do you eat? 1, 2, 3, >3
3. How many grams of carbohydrates do you typically eat **per meal**? <45 grams, 45-60 grams, 60-75 grams, >75 grams
4. How many times **per week** do you drink sugar-sweetened beverages (soda, alcohol, etc)? none, 1-3, 3-5, >5
5. How many days **per week** do you exercise **at least 30 minutes per day**? 0, 1-3, 3-5, >5

Action Plan: Objective 2

The hospital will partner with Oasis in providing community based diabetes self-management classes to educate patients on lifestyle changes to prevent diabetes or improve their diabetes control. The program is taught by community partners with Oasis. Participants will attend an eight week self-management class, conducted by Oasis.

Expected Outcomes

Participants will learn better eating habits, start or maintain a regular exercise program, communicate better with family, friends and medical teams, and initiate a self-management program.

Outcome Measures

The education program will track the total number of participants that attend. All participants will receive a confidential pre and post patient evaluations of progress, measured by Oasis.

B. Community Health Needs Not To Address

Christian Hospital is positioned to actively impact the top two community health needs as identified through this study. The health needs below are not currently being addressed through this study; however Christian Hospital has programs in place that allow us to influence five of the top 10 community health needs.

Mental Health – The hospital does not currently have the financial ability to actively educate and screen the community. We offer support groups for substance abuse and other mental diagnosis through our outpatient mental health center.

Infectious Disease – The hospital does not currently have the financial ability to actively educate and screen the community for infectious disease. We do however, provide funds for free flu shots given in the community.

Reproductive Health – The hospital does not currently offer clinical support for obstetrics, thus a focus on reproductive health is minimal.

Cancer – Community benefit programs are currently funded that allow us to address cancer education and prevention such as the Men’s Healthy Happy Hour where we conduct PSA screenings and the Mammo-thon, providing mammograms for underinsured women in the community. However, we do not actively coordinate a program outside of our Komen grant. The greater community is actively involved with events through the American Cancer Society.

Child Welfare – The hospital does not currently have a pediatric unit and outside of seeing children in the ED, they are transferred to a facility that can accommodate them. Our hospital and EMS trucks are considered a “safe place” and we partner with Youth In Need to ensure our youth have access to basic needs outside of medical treatment.

Socio-Economic Factors – The hospital partners with organizations within the community to positively impact the growth of this area. We are a leading employer in the county and partner with various Community Development Corporations and community development organizations in an effort to improve the neighboring communities.

Senior Health Care – The hospital does not currently offer senior care outside of the management of Village North Retirement Home.

Dental Health – The hospital does not currently have the clinical opportunities to provide dental care to our community members.

Asthma – The hospital currently runs two large emergency departments in North County. Through those emergency department visits, we treat and educate hundreds of children and adults on the care of asthma. Christian Hospital is also partnering with the University of Missouri St. Louis, local schools and asthma organizations to ensure that school age children receive the care and education needed.