2016 COMMUNITY HEALTH NEEDS ASSESSMENT (CHNA) AND IMPLEMENTATION PLAN

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I. Executive Summary

Barnes-Jewish West County Hospital is a 77-bed hospital located in Creve Coeur, a western suburb of St. Louis County, Missouri. Barnes-Jewish West County Hospital provides short-stay, general medical and outpatient surgical services, emergency services and an on-site outpatient location of the Siteman Cancer Center. The hospital's small-size and convenient access means patients receive exceptional personalized care along with advanced specialty and acute care services.

Barnes-Jewish West County Hospital, like all nonprofit hospitals, 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. Barnes-Jewish West County 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.

As part of the CHNA process, Barnes-Jewish West County Hospital is required to define its community. 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.

Barnes-Jewish West County 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 Barnes-Jewish West County 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, Barnes-Jewish West County Hospital identified two health needs where focus is most needed to improve the future health of the community it serves: Cancer: Head & Neck and Alcohol/Substance Abuse.

The analysis and conclusions were presented, reviewed and approved by the Barnes-Jewish West County Hospital board of directors.

II. Community Description

A. Geography

Barnes-Jewish West County Hospital is a member of BJC HealthCare, one of the largest, non-profit 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. Barnes-Jewish West County Hospital, Missouri Baptist Medical Center and Christian Hospital are the three BJC HealthCare hospitals located in St. Louis County. Barnes-Jewish West County Hospital and Missouri Baptist Medical Center are located less than four miles from each other. The service areas of hospitals in the St. Louis metro area overlap each other.

Barnes-Jewish West County Hospital defines its community as St. Louis County. St. Louis County is geographically divided into North County, West County and South County. Barnes-Jewish West County Hospital is located in west St. Louis County.

B. Population Trend

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.

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. St. Louis County comprises 16 percent of the state of Missouri’s total population. It is the most populous county in Missouri.

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, 20154	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%

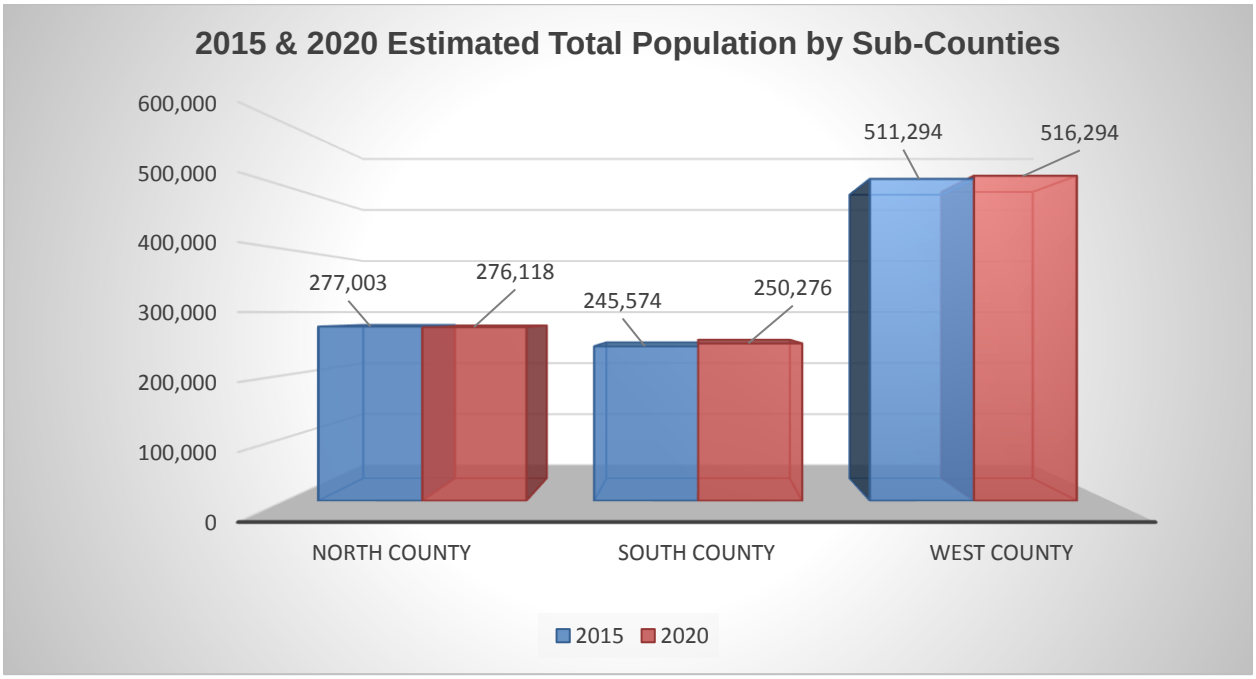
Source: United States Census Bureau

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: United States 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

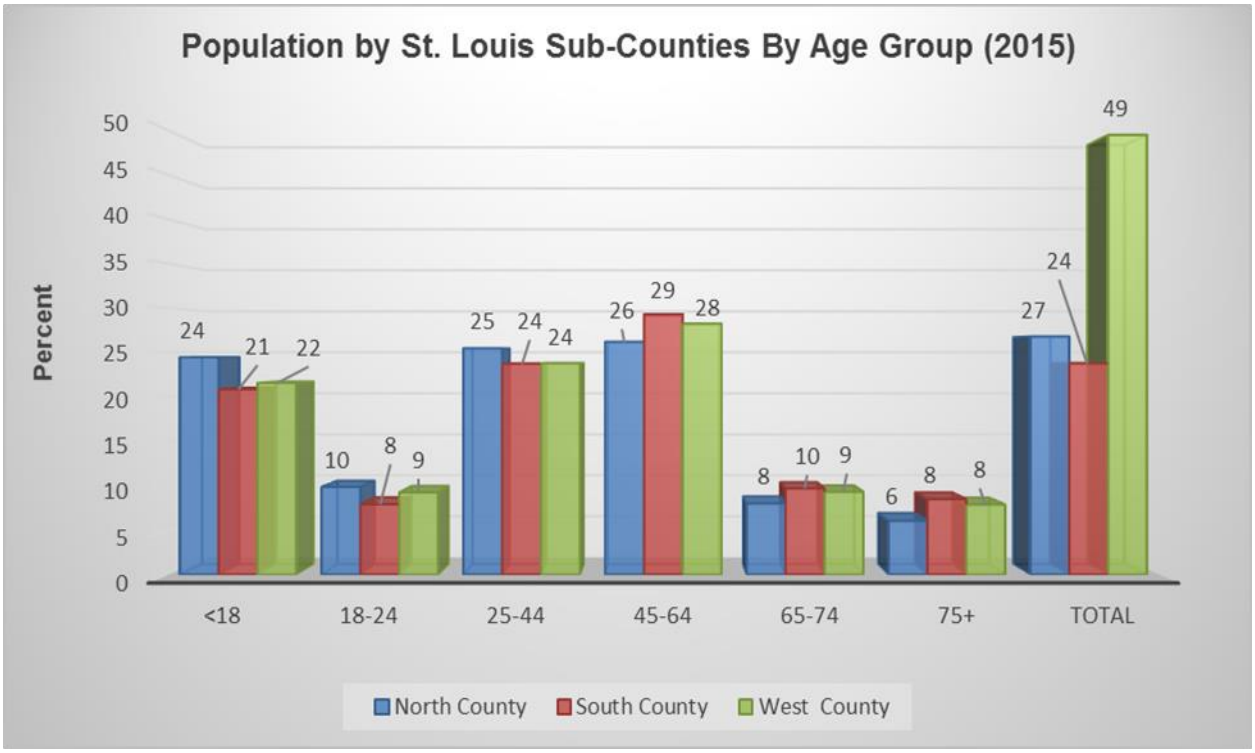


Truven Health Analytics

A community's population growth affects the need and demand for health services and its ability to meet that demand. A slight population increase is expected by 2020 in both West County (1 percent) and South County (nearly 2 percent) while a decline is projected in North County (-.3 percent).

C. Age

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



Truven Health Analytics

In St. Louis County, 24 percent of the population resided in South County, 49 percent in West County and 27 percent in North County in 2015. 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	13618	13359	10009	10701	24042	25709
	25-44	31,609	33,018	28,741	29,237	59,289	59,588
	45-64	31971	30187	34794	33129	68276	64652
	65-74	9,432	11,305	10,686	13,215	21,604	26,421
	75+	6285	6772	8052	8780	15073	16414
	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	52,324
	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 22 percent growth projected in the 65-74 age group (male and female) in West County; a 23 percent projected growth in the same group in South County; and a 21.2 percent increase in North County from 2015-2020. The 18-24 age group is expected to increase by 6 percent in both West County and South County and decrease by 3.6 percent in North 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).

Population projections for South County include: 16 percent Asian; 15 percent Hispanic; and 14 percent two or more races. In West County, expected growth includes: 13.8 percent Asian; 15.4 percent Hispanic and 14.6 percent two or more races.

E. Income

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

Table 4: Total Households & Family Structure of St. Louis County Sub-Counties

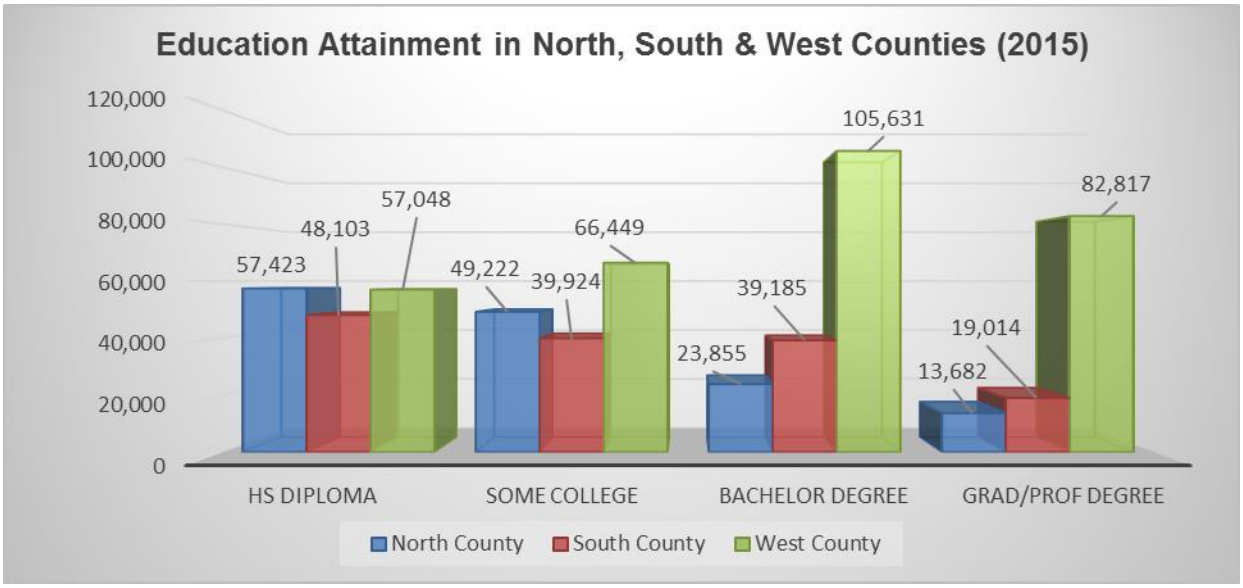
Year 2015		**North County**	**South County**	**West County**
Total Households		**109,513**	**101,357**	**211,386**
Median Household Income		**$43,008**	**$61,584**	**$71,803**
Family Structure	Families	72,412	67,437	134,314
	Married Couple w / Children	16,206	21,856	45,551
	Married Couple no Children	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

Truven Health Analytics

Table 4 shows that in West County, 28 percent of families with children are from single-parent households when compared to Southy County with 26 percent and 58 percent in North 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 West County, 30 percent of the population 25 and older had a bachelor's degree when compared to South County with 22 percent and 13 percent in North 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 South County, 8 percent of the population 25 and older did not have a high school diploma compared to West County at 6 percent and North County at 12 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.

West and South Region of St. Louis County

For the purpose of this report, Barnes-Jewish West County Hospital's focus areas are West and South Counties. 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: West County, South County and North County.

Specific zip codes as defined by BJC Strategic Planning for the west and south St. Louis Counties are as follows:

- West St. Louis County: 63025, 63005, 63011, 63017, 63021, 63038, 63040, 63043, 63044, 63074, 63088, 63105, 63114, 63117, 63119, 63122, 63124, 63130, 63131, 63132, 63133, 63141, 63143, 63144, 63146

- South St. Louis County: 63026, 63123, 63125, 63126, 63127, 63128, 63129

Below is a comparison of the population by gender and race in South County, West County and St. Louis County.

Table 5: Demographic of South and West Counties Compared to St. Louis County (2015)			
	South County	**West County**	**St. Louis County**
Population By Gender			
Male	52% (118,575)	52% (244,407)	47.4% (131,299)
Female	48% (126,996)	48% (266,887)	52.6% (145,704)
Total Population	245,574	511,294	1,003,362
Population By Race / Ethnicity			
African American	2% (4,039)	12% (59,542)	24.1% (66,758)
White	92% (225,666)	76% (389,012)	67.1% (185,869)
Hispanic or Latino	2% (5,712)	4% (18,945)	2.8% (7,756)
Asian & Pacific Islander	3% (7,171)	6% (31,858)	4.2% (11,634)
Two or more Races	1% (3,459)	2% (10,404)	2.0% (5,540)

Source: Truven Health Analytics

III. Previous (2013) CHNA Measurement and Outcomes Results

At the completion of the 2013 CHNA, Barnes-Jewish West County Hospital identified Access to Affordable Health Care; Cancer; Cardiovascular Conditions; Health Literacy, Advocacy and Cultural Competence; and Preventive Health Behaviors where focus was most needed to improve the health of the community served by the hospital. This section of the report details results, goals and current status of these community health needs.

Table 6: Barnes-Jewish West County Hospital's 2013 CHNA Outcomes

Access to Affordable Healthcare	Cancer	Cardiovascular Conditions	Health Literacy, Advocacy & Cultural	Preventative Health Behaviors
Goals	**Goals**	**Goals**	**Goals**	**Goals**
Increase enrollment into government health insurance and Barnes-Jewish West County Hospital financial assistance programs among underinsured and uninsured individuals.	Improve early detection of skin cancer and improve knowledge of skin cancer prevention among area residents.	Decrease incidence of heart disease and stroke among area residents.	Build a more knowledgeable, skilled health-care workforce.	Decrease incidence of influenza among area residents.
Provide financial counseling to underinsured and uninsured individuals who live in its service areas and qualified for Medicaid and other financial assistance.	Screen 5 percent more area residents for skin cancer at Barnes-Jewish West County Hospital in 2014 than in 2013 (an increase of 11 residents over 2013).	Screen 100 adults from South and West St. Louis County for cholesterol and high blood pressure in 2014.	Provide an educational environment for those interested in entering the medical field and those currently in the medical field. To introduce students to the variety of career choices and benefits of the industry.	Vaccinate approximately 3, 250 area residents in fall 2014 (or approximately 1 percent more residents than the previous year).
Current Status	**Current Status**	**Current Status**	**Current Status**	**Current Status**
2014: 834 individuals were enrolled in health insurance or financial assistance. **2015:** 779 patients were enrolled in health insurance plan or financial assistance programs.	**2014:** 254 people were screened. Of those, 15 basal cell carcinoma, 4 squamous cell carcinoma and 3 melanoma were diagnosed. **2015:** 366 people were screened: Of those, 17 basal cell carcinoma, 9 squamous cell carcinoma and one melanoma were detected.	Due to internal staffing shifts, this program did not have a dedicated resource to ensure success.	**2014:**15 students enrolled and completed the program. **2015:**16 students enrolled and completed the program.	**2014:** 3,701 community members were vaccinated. **2015**: 3,084 community members were vaccinated.

IV. Conducting the 2016 CHNA

A. Primary Data Collection

Barnes-Jewish West County Hospital collaborated with Missouri Baptist Medical Center, St. Anthony's Medical Center, St. Luke's Hospital and Mercy St. Louis 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 residents located in West County and South County. (See Appendix D for complete Focus Group Report). All hospitals, with the exception of Mercy St. Louis, partnered in a combined focus group to complete the 2013 CHNA.

Nineteen of 22 invited participants representing various St. Louis County organizations participated in the focus group. (See Appendix B). The focus group was held July 23, 2015, at the Frontenac Hilton Hotel in St. Louis, Missouri, 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 these hospitals 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 Focus Group Summary

A general consensus was reached that needs identified in the previous assessment should remain as focus areas for the hospital.

Considerations for Adding to List of Priorities

After reviewing the hospitals' key issues/priorities, nothing was identified to remove from the list. Many expressed the desire to reevaluate the priorities and integrate additional needs into the list of those being addressed, including:

Alcohol/Substance Abuse – Incidence rates have risen substantially over the years, especially for heroin and prescription drugs, and are considered a "major public health issue." At the same time, fewer treatment services are available, especially inpatient beds. Further, limitations on insurance plans and reimbursement contribute to the slow demise of medical-assisted treatments, detox programs and other services required to treat those who struggle with addiction.

Senior Services/Social Support – The senior population is increasing, particularly in South County. Seniors are large consumers of services, with unique needs currently not being addressed. Several members agreed that access to transportation is a major concern for seniors. Often, it is difficult for seniors to get to the hospital or to a primary care physician because they do not drive. As a result, “they end up calling the emergency room because they don’t have transportation.”

Maternal/Child Health – St. Louis County has a very high infant mortality rate and it is getting worse.

Consideration Should also be Given to Redefining the Following Category

Senior Services/Social Support – Social support should be separated from senior services as an area of need because social support is important not just for seniors, but also to women, children and families, and each may require a different approach.

Gaps in Implementation Strategies

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

- Alcohol/Substance Abuse
- Behavioral/Mental Health
- Chronic Conditions
- Colon Cancer
- Health Literacy

Changes since 2011/2013 and New Issues of Concern

- Access to Transportation
- Collaboration
- Maternal/Infant Health
- Health Disparities
- Cultural Literacy
- Social Determinants of Health
- Childhood Obesity

Other Areas of Concern

- Healthy Food Access
- Medicaid
- Elderly Abuse

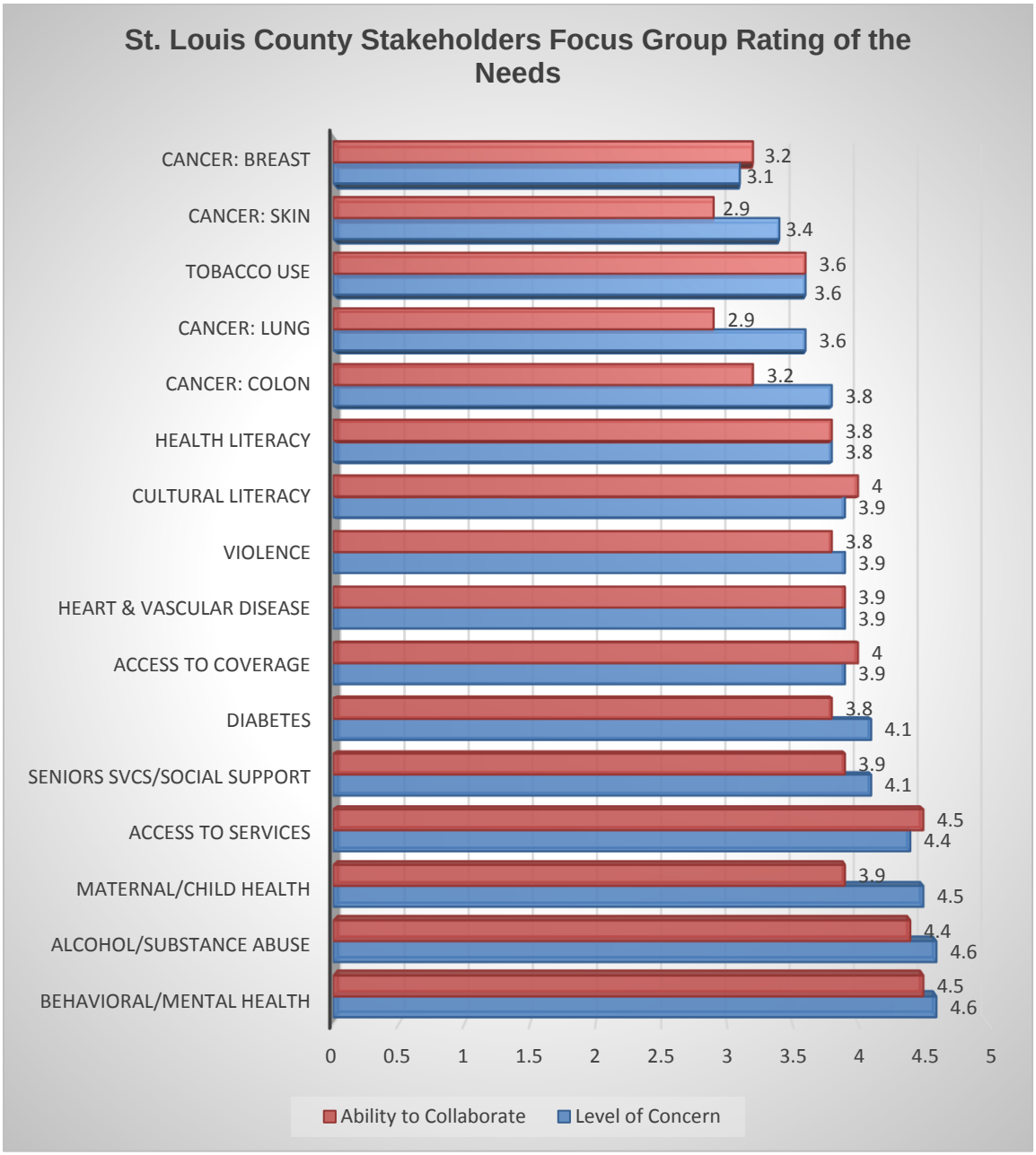
Seniors, children/youth and transient families were identified as special populations with specific needs.

Potential Partner Organizations

Understanding that hospitals alone cannot address these issues, several organizations were identified as potential partners for collaboration, including law enforcement and their crisis intervention teams; emergency medical services (EMS) used as a source of referral for community resources; Maternal Child and Family Health Coalition; Crisis Nursery; St. Louis County Clergy Coalition; Metropolitan Churches United; Epworth Children and Family Services; Foster and Adoptive Care Coalition and other advocacy groups; and Meals On Wheels.

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:



Behavioral/Mental Health and Alcohol/Substance Abuse rated highest in terms of level of concern and ability to collaborate. Breast Cancer rated lowest on level of concern. Skin Cancer and Lung Cancer tied for lowest on ability to collaborate.

B. Secondary Data Analyses

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

Data sources used for the secondary data analysis included:

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
- Mental Health
- Maternal and Infant Health
- Violence
- Substance Use and Abuse

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 Pages 75 and 76). While Barnes-Jewish West County Hospital has identified two needs as its primary focus, the following needs will continue to be appropriately addressed by the hospital and other organizations in St. Louis County.

Access to Affordable Health Care/Care Coordination

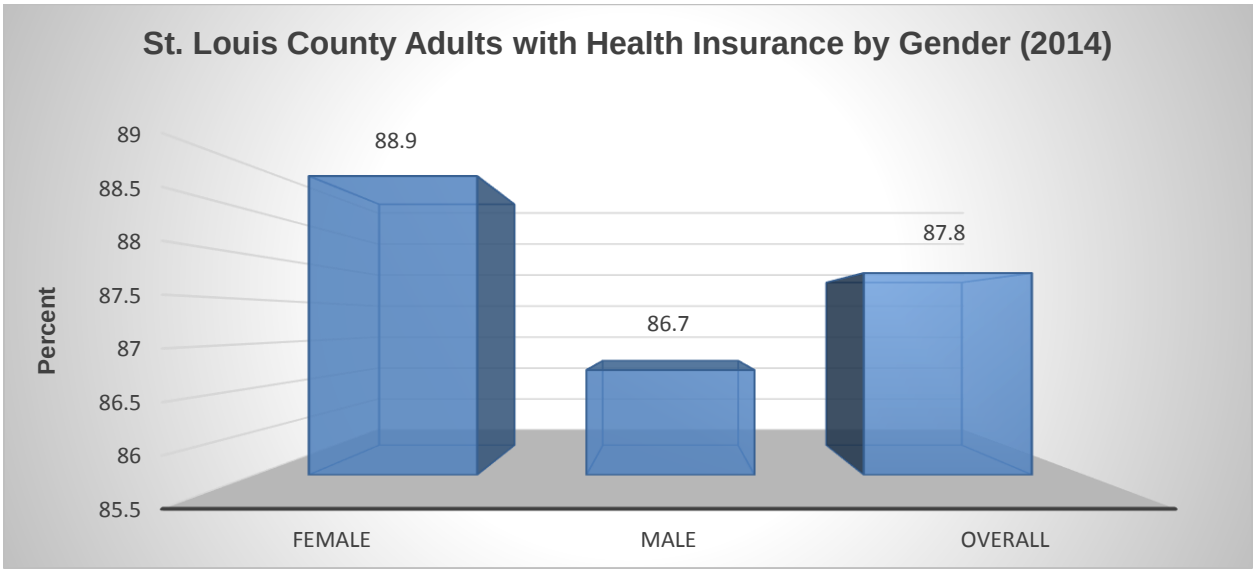
The ability to access health services has a profound and direct effect on every aspect of a person's well-being. Beginning in 2010, nearly 1 in 4 Americans lacked a primary care provider (PCP) or health center to receive ongoing medical services. Approximately 1 in 5 Americans today, children and adults 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 St. Louis County community. (Healthy Communities Institute).

Table 7: 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

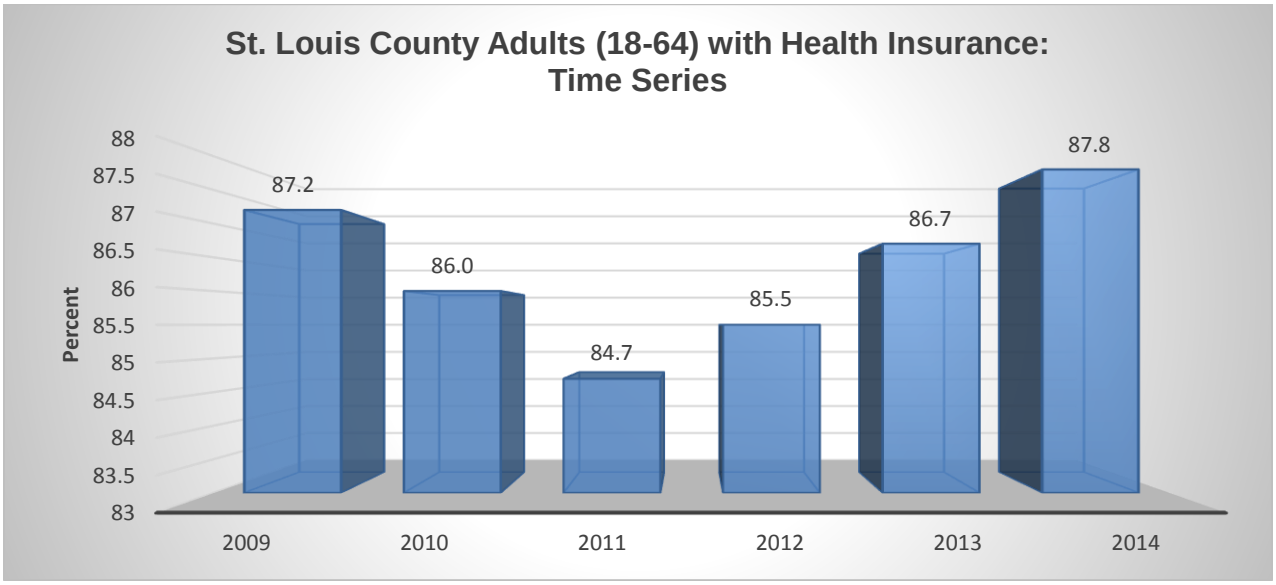
Source: Healthy Communities Institute

The rate of adults and children with health insurance in St. Louis County in 2014 was higher than the rate 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.



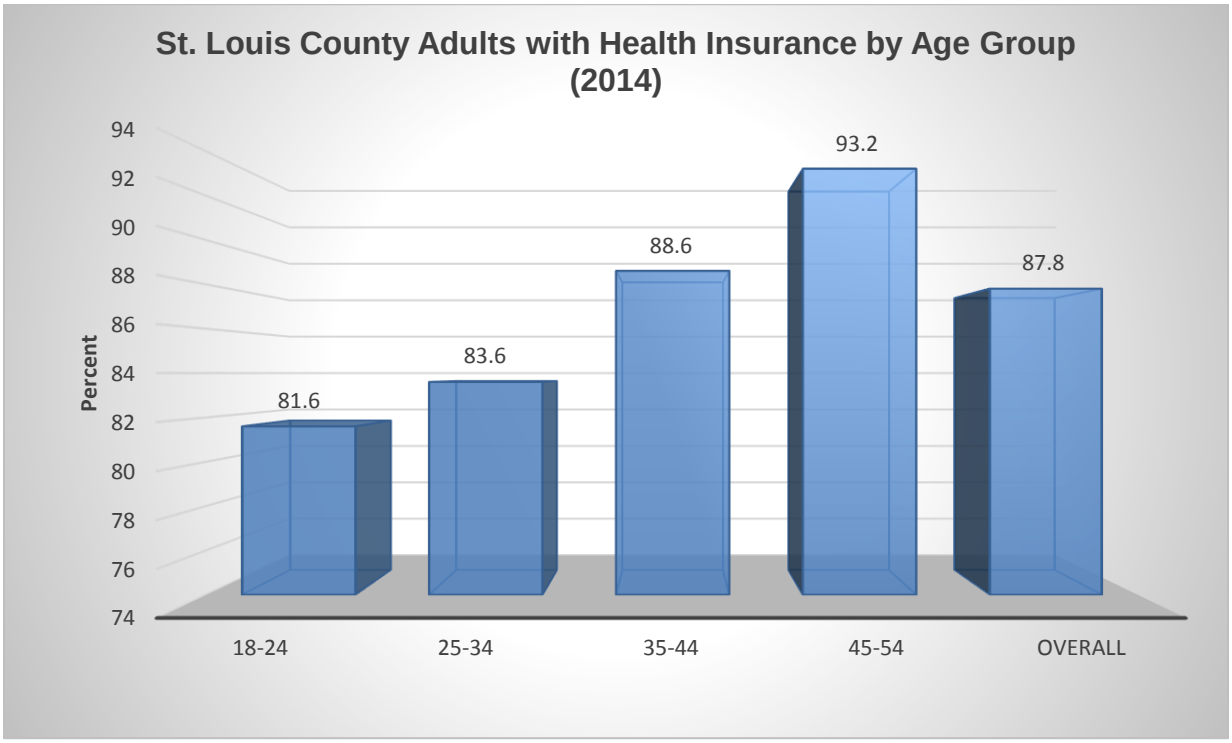
Source: Healthy Communities Institute

The overall rate of adults with health insurance in the county was 87.8 percent. Females had a higher percentage of health insurance than males in St. Louis County.



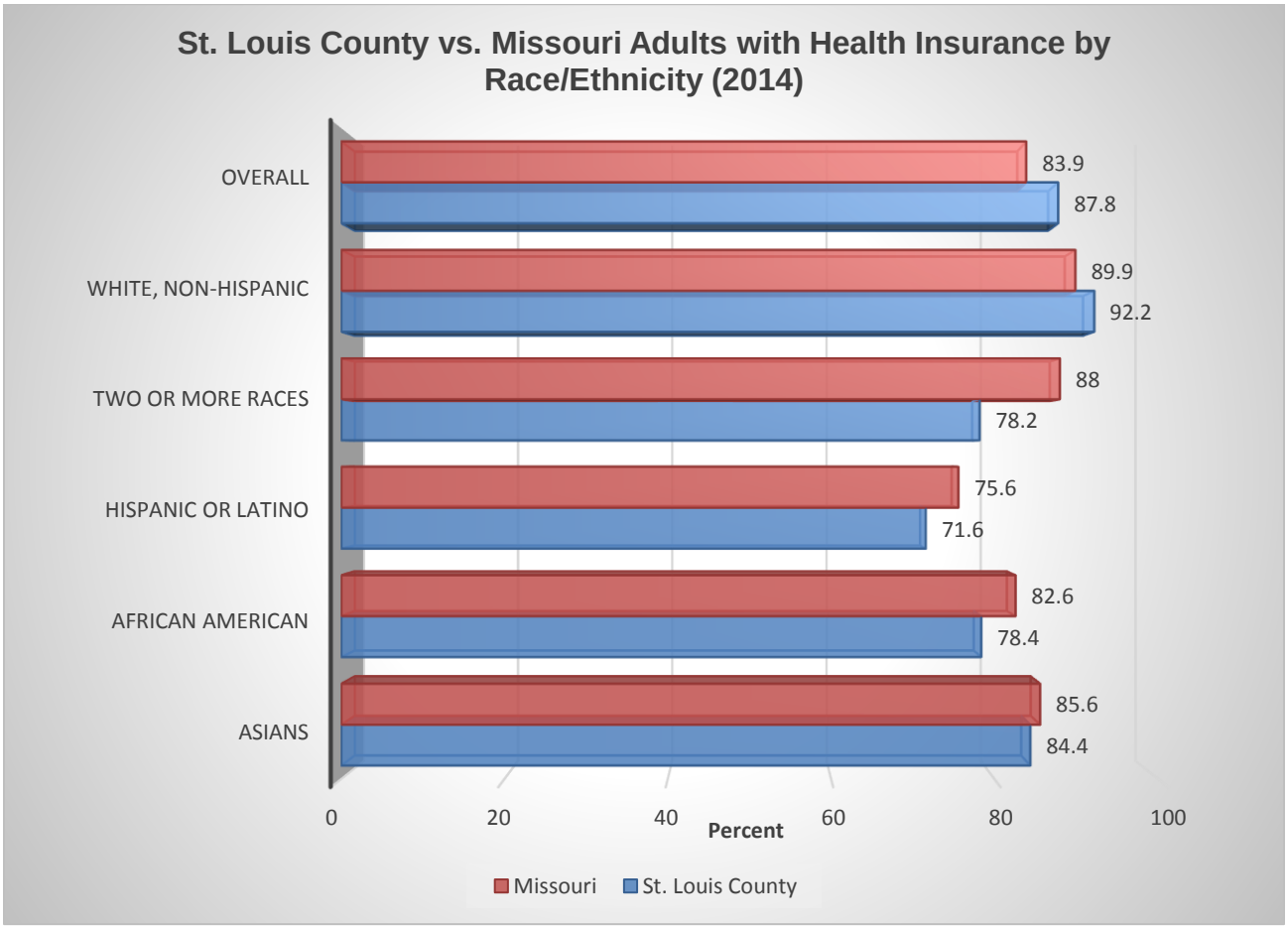
Source: Healthy Communities Institute

From the period 2009-2011, St. Louis County experienced a 2.9 percent (2.5 percentage points) decrease in the rate of adults with health insurance followed by an increase of 3.7 (3.1 percentage points) percent from the period ending 2011 to 2014.



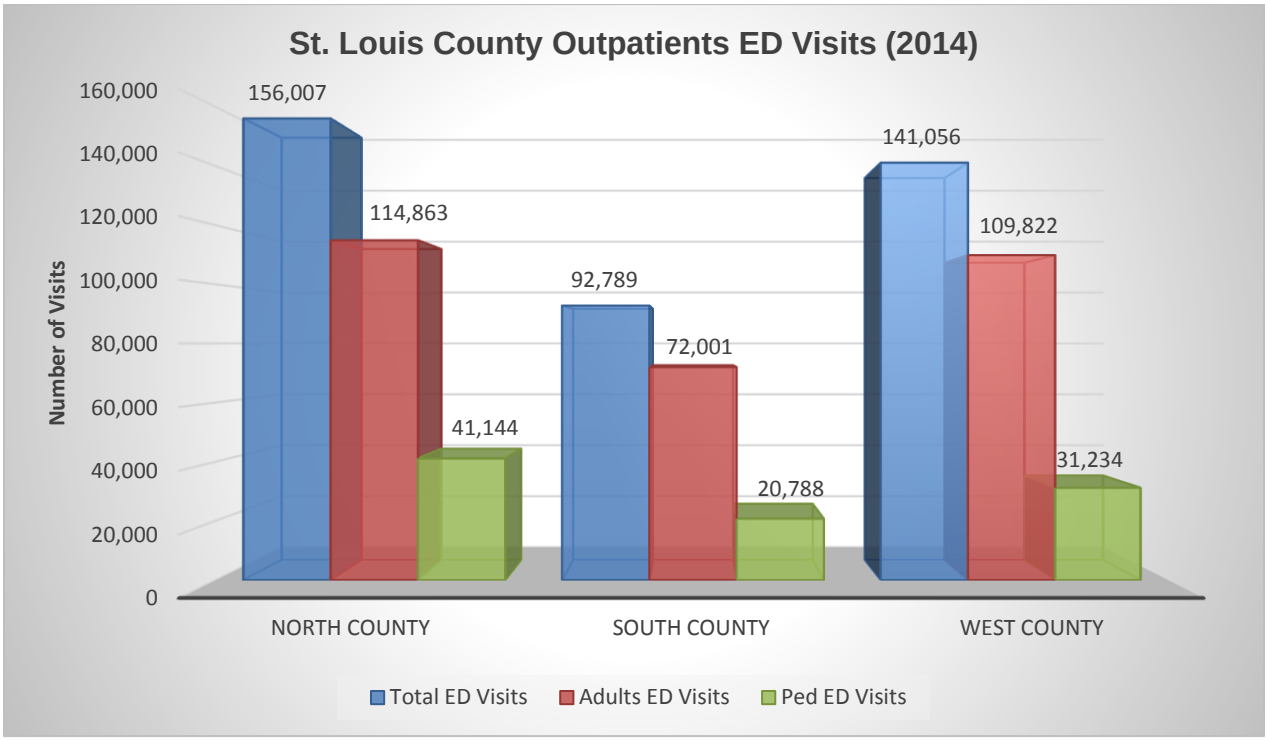
Source: Healthy Communities Institute

The overall rate of adults with health insurance living in St. Louis County was 87.8 percent, lower than the 100 percent national health target rate set by the Healthy People 2020. As noted in the graph above, the rate of health insurance was higher in the county as the population aged.



Source: Healthy Communities Institute

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



Source: Truven Health Analytics

These visits represent all volume to emergency departments in St. Louis County, regardless of medical need or services utilized. Of the three sub-counties of St. Louis County, West County had the lowest volume to the emergency department at .28 per capita. South County's rate was .38 per capita and North County was the highest at .56.

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.

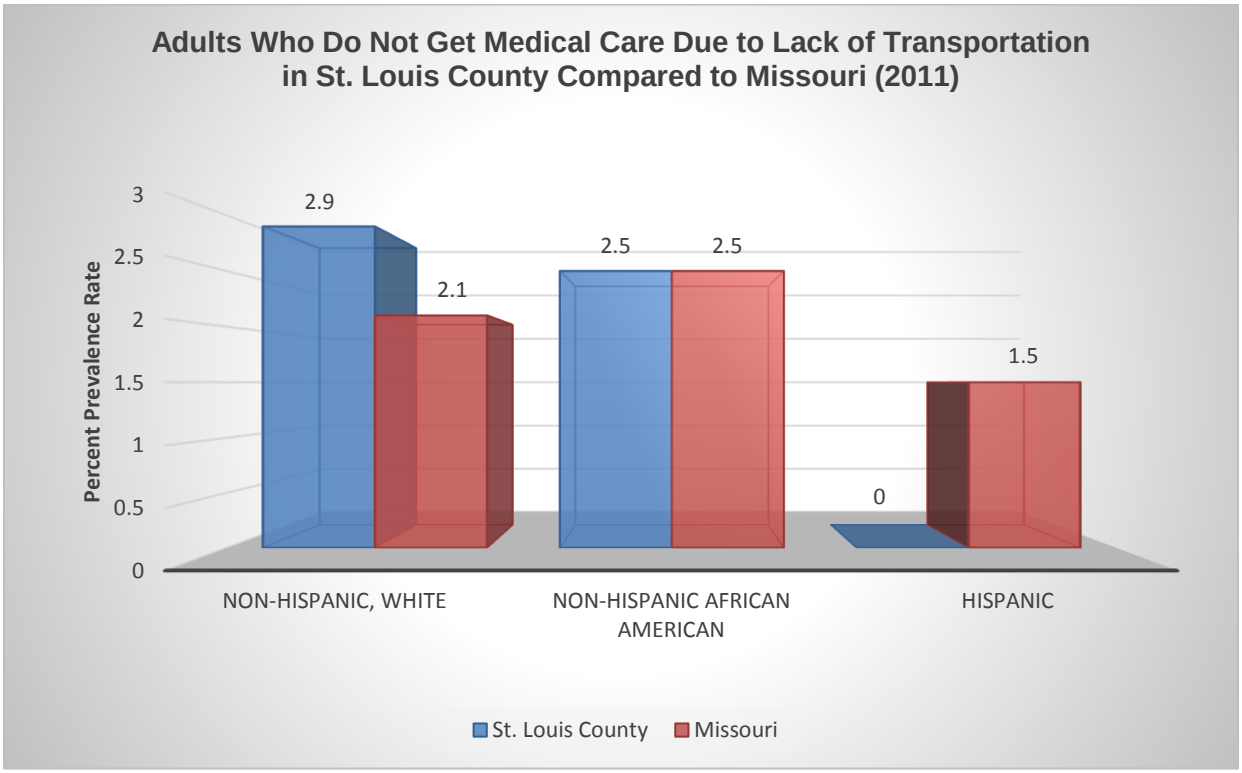
Public transportation offers mobility to U.S. residents, particularly people without cars. Transit can help bridge the spatial divide between people and jobs, services and training opportunities. Public transportation is also beneficial because it reduces fuel consumption, minimizes air pollution and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

Table 8: 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+ in Minutes (2010-2014)	23.5	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: Missouri Department of Health & Senior Services

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

Asthma

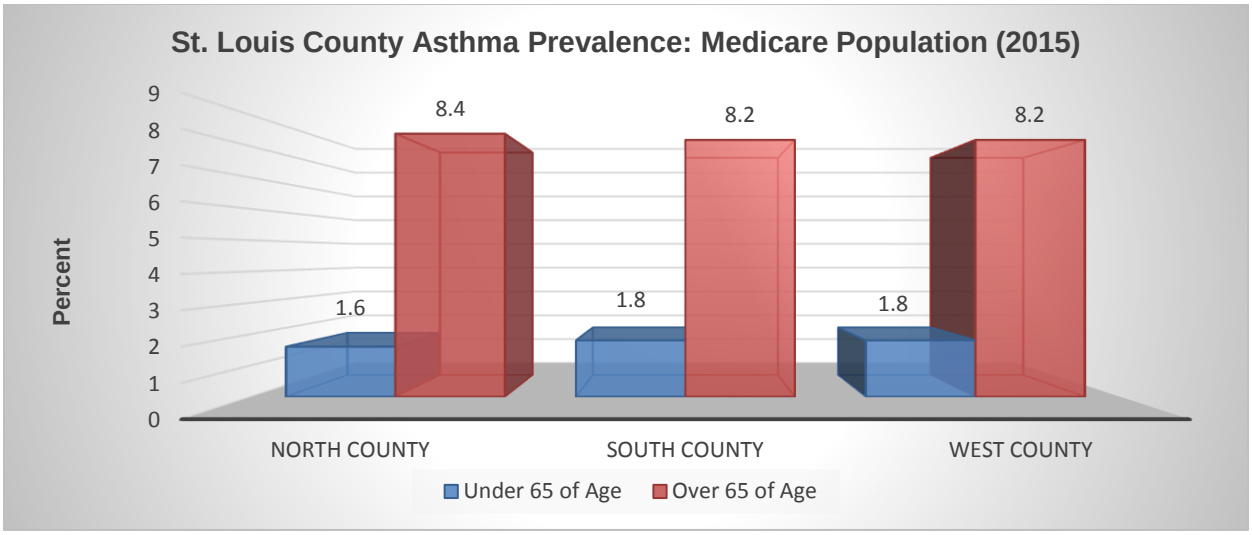
Asthma is a chronic lung disease characterized by periods of wheezing, chest tightness, shortness of breath and coughing. Symptoms often occur or worsen at night or in the early morning. These occurrences, often referred to as “asthma attacks,” are the result of inflammation and narrowing of the airways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

Table 9: 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

Table 8 represents the trend of asthma in the last four years by using a three-year moving average. This provides information about the direction of asthma. For St. Louis County, the table shows an increase in asthma hospitalizations and asthma ER visits from the period ending 2011 to the period ending 2013.



Source: Truven Health Analytics

The West County and South County Medicare population had a slightly higher asthma prevalence rate for adults under 65 years of age and a lower rate for adults over 65.

Table10: St. Louis County Asthma Cases in Numbers & Rate Compared to Missouri

Health Indicators	St. Louis County	Missouri
	Rate in Percent	Rate in Percent
Asthma Death: 2003-2013	1.0	1.1
Asthma Hospitalizations: 2009-2013	16.0	12.5
Asthma ER Visits: 2009-2013	7.4	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 11: 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.

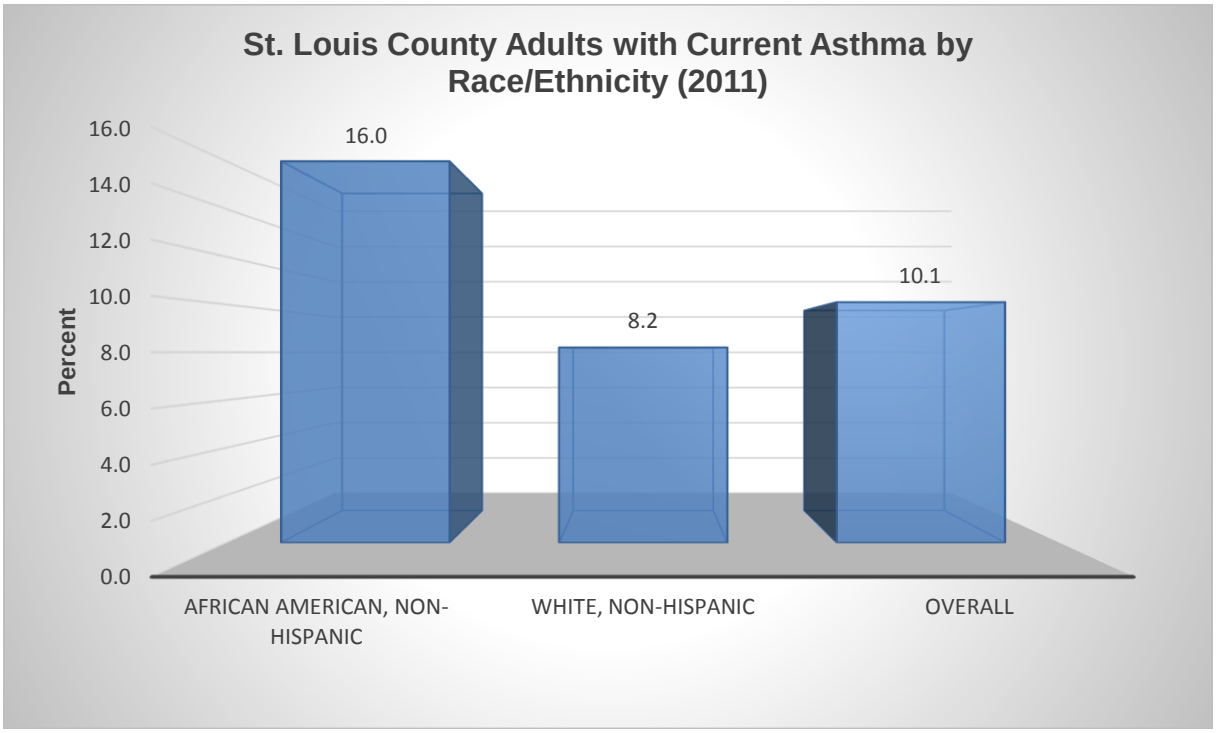
Chronic Lower Respiratory Disease (CLRD) refers to a diverse group of disorders characterized by airway obstruction, causing shortness of breath and impaired lung function, and includes asthma, emphysema, bronchitis and chronic obstructive pulmonary disease. CLRD is a leading cause of death and generally 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 12: 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

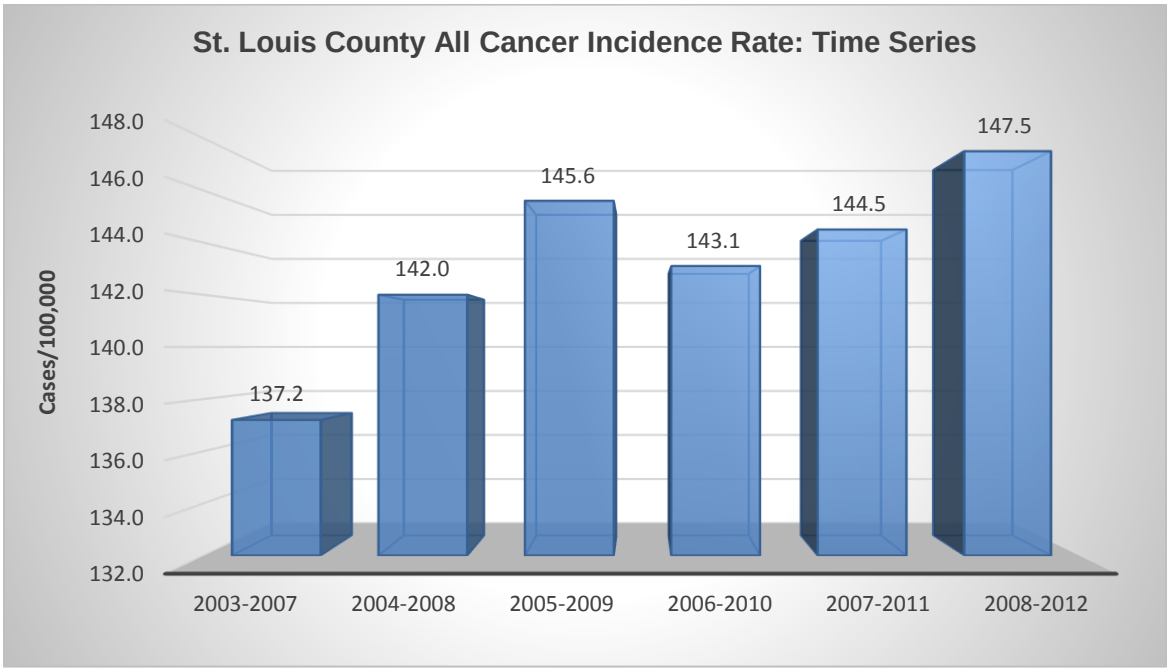
The CLRD rate in Missouri was one and one-half times higher than the rate in the county. The rate of asthma among the Medicare population was slightly higher in the county when compared to the state; however, the COPD rate in the county was lower than the state.



Source: Healthy Communities Institute

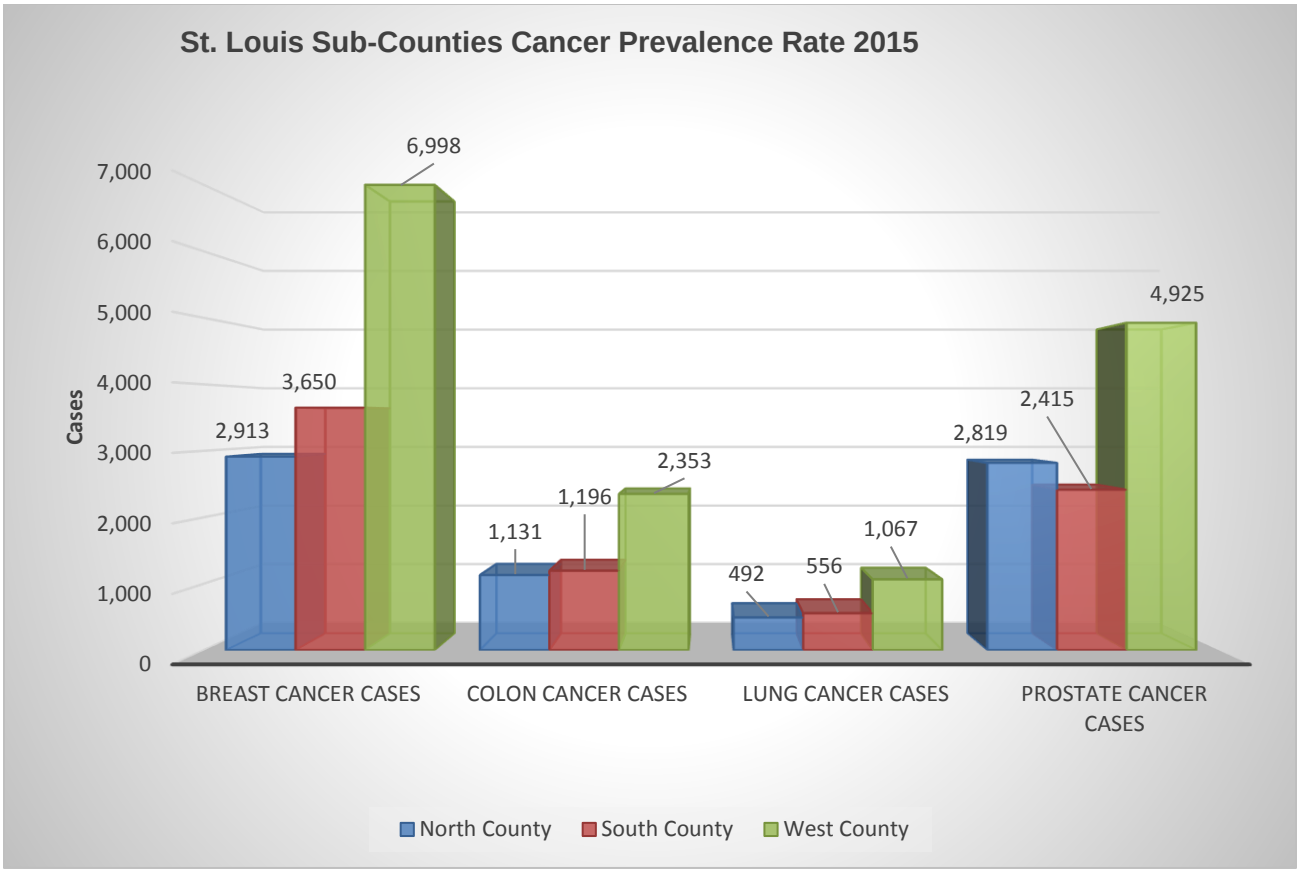
The rate of asthma among African American, Non-Hispanic adults in St. Louis County was nearly twice the rate of White, Non-Hispanic adults.

Cancer 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.



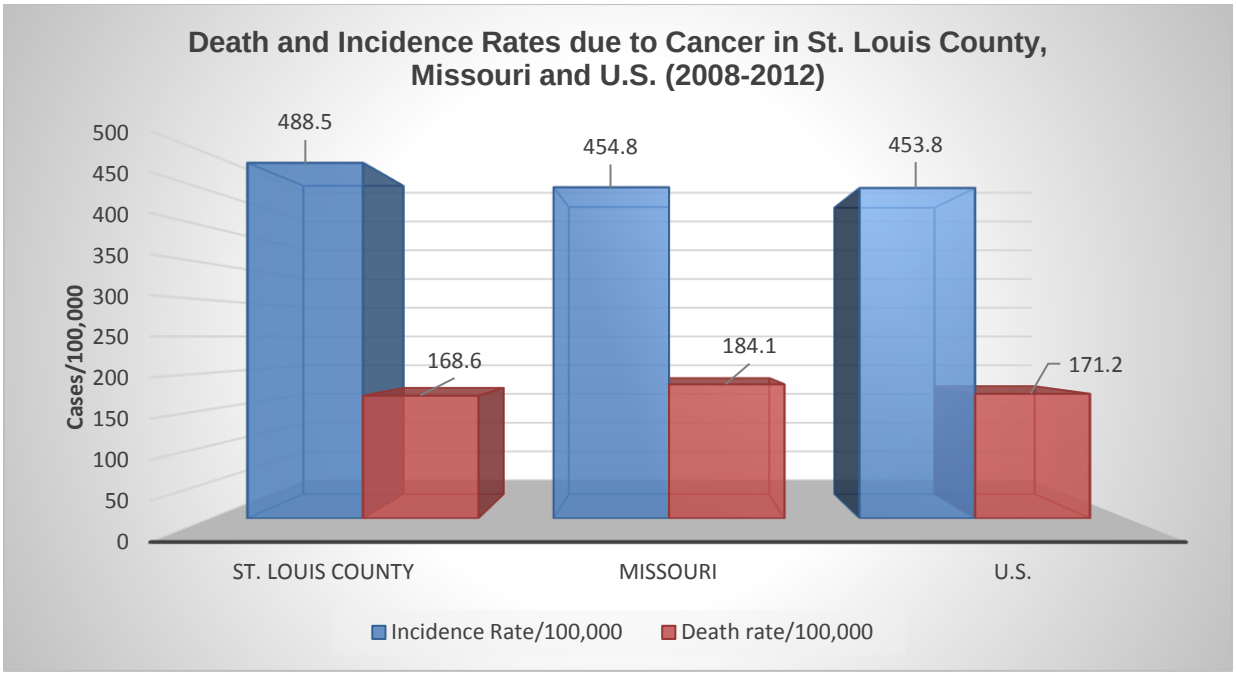
Source: Healthy Communities Institute

A steady increase occurred in the incidence rate of all cancers in St. Louis County from the period ending 2007 through the period ending 2009. A decrease followed in the period ending 2010, yet incidence rates increased again from the period ending 2011 to 2012.



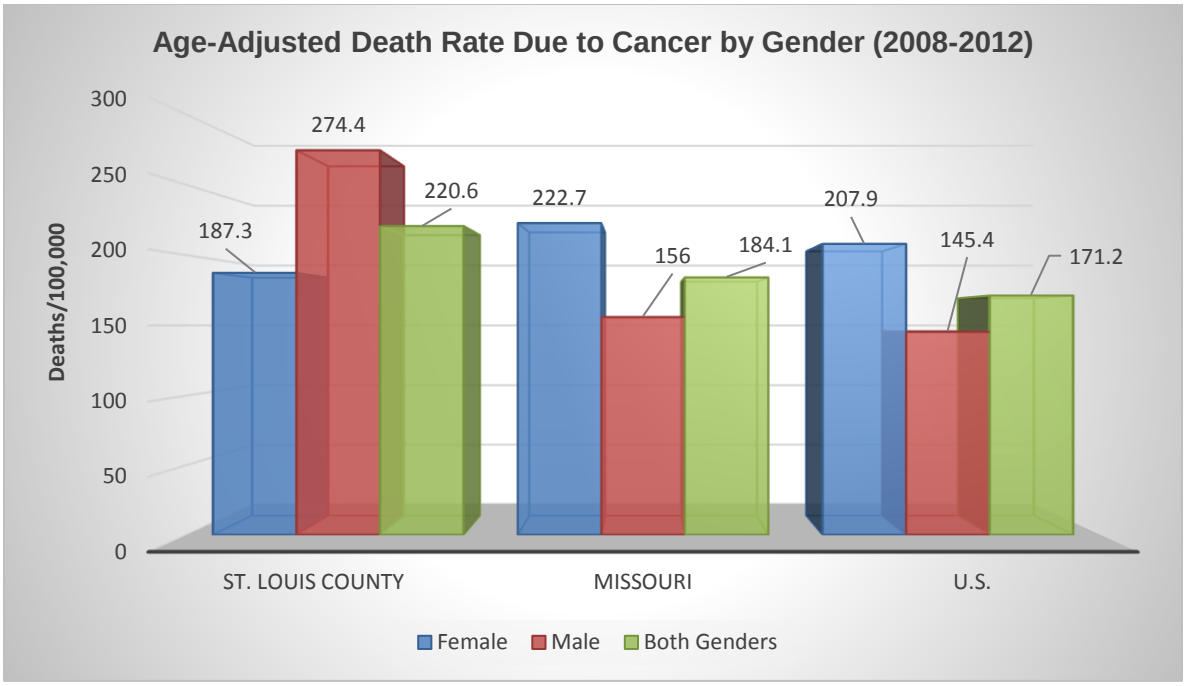
Source: Truven Health Analytics

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



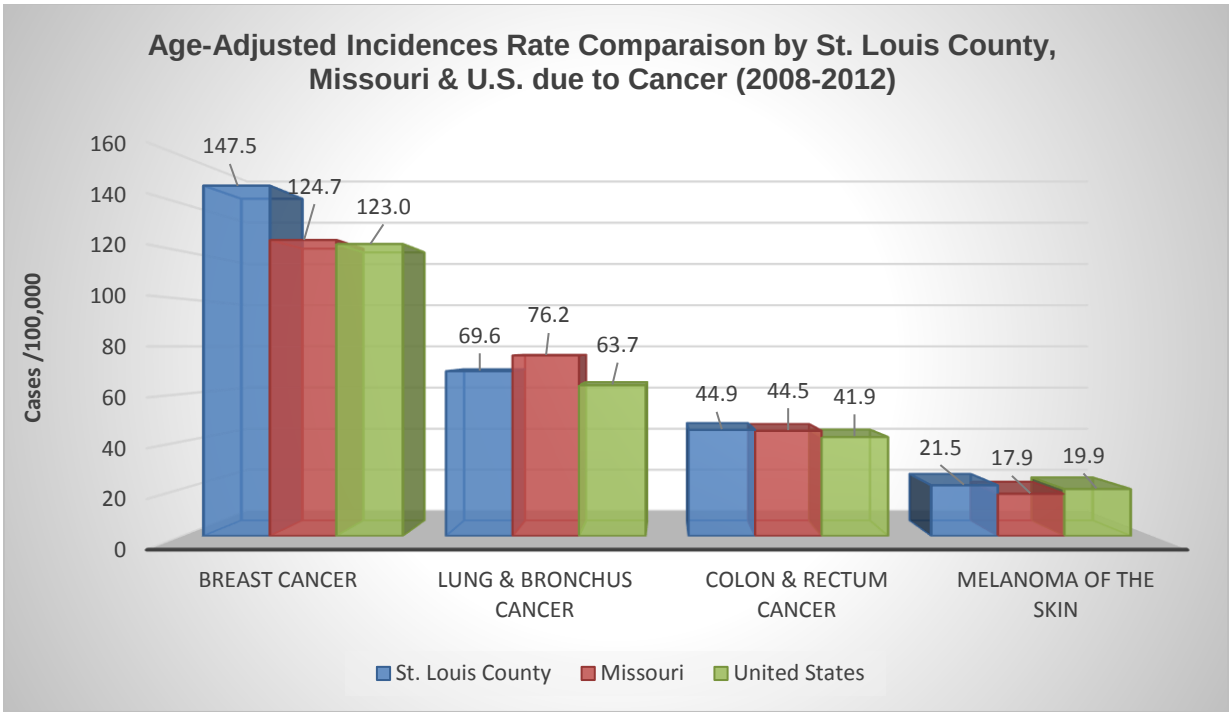
Source: CDC State Cancer Profile

More than one-third of individuals in St. Louis County diagnosed with cancer died of cancer. The incidence rate in the county was higher than the rate in the Missouri by 7.4 percent and the U.S. by 7.6 percent. The death rate in the county was lower when compared to Missouri and the U.S.



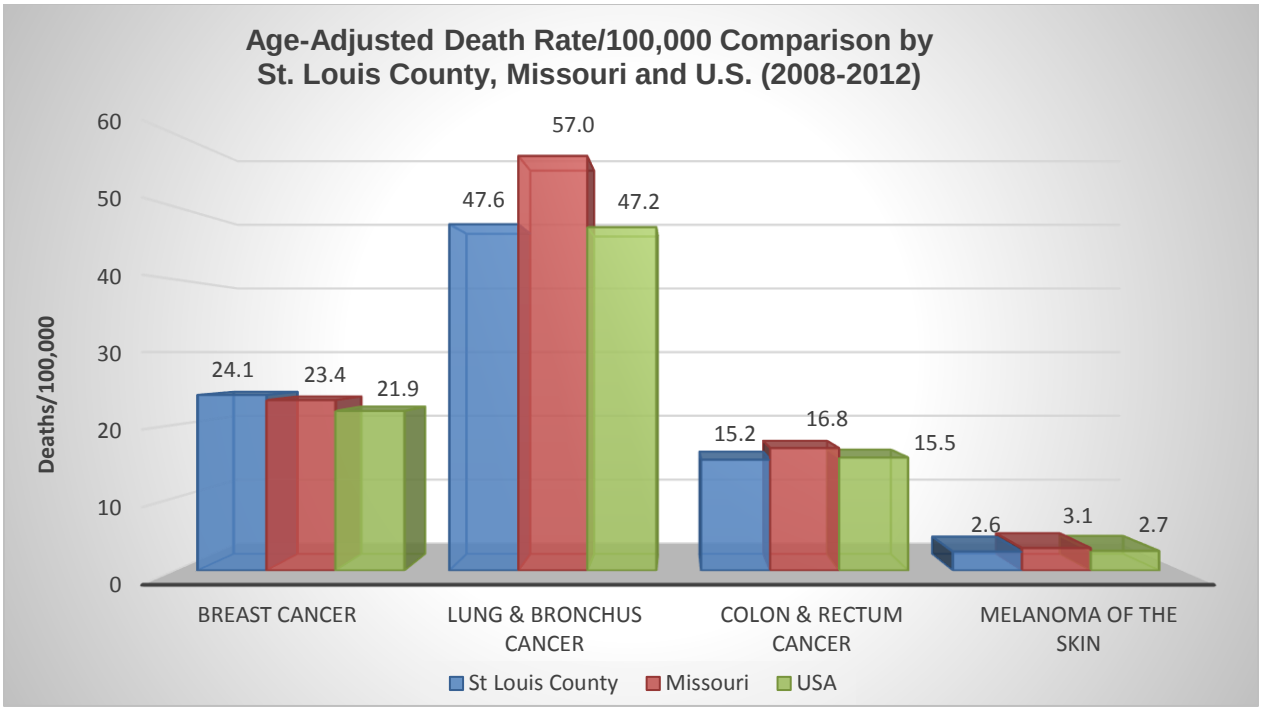
Source: CDC State Cancer Profile

The overall age-adjusted death rate by gender due to cancer was higher in St. Louis County when compared to Missouri and the U.S. The death rate among African Americans was higher when compared to the death rate of Whites by 8.1 percent in St. Louis County, 9.3 percent higher in Missouri and 2.6 percent higher in the U.S.



Source: CDC State Cancer Profile

St. Louis County reported a higher age-adjusted incidence rate due to breast cancer and melanoma of the skin compared to Missouri and the U.S. The colon & rectum cancer incidence rate was slightly higher in the county than the rate in the state and the country. (The difference in the incidence rate of the county, state and the country was statistically insignificant for colon & rectum cancer.) The rate of lung & bronchus cancer in the county was lower than the rate in the state, but higher than the country.

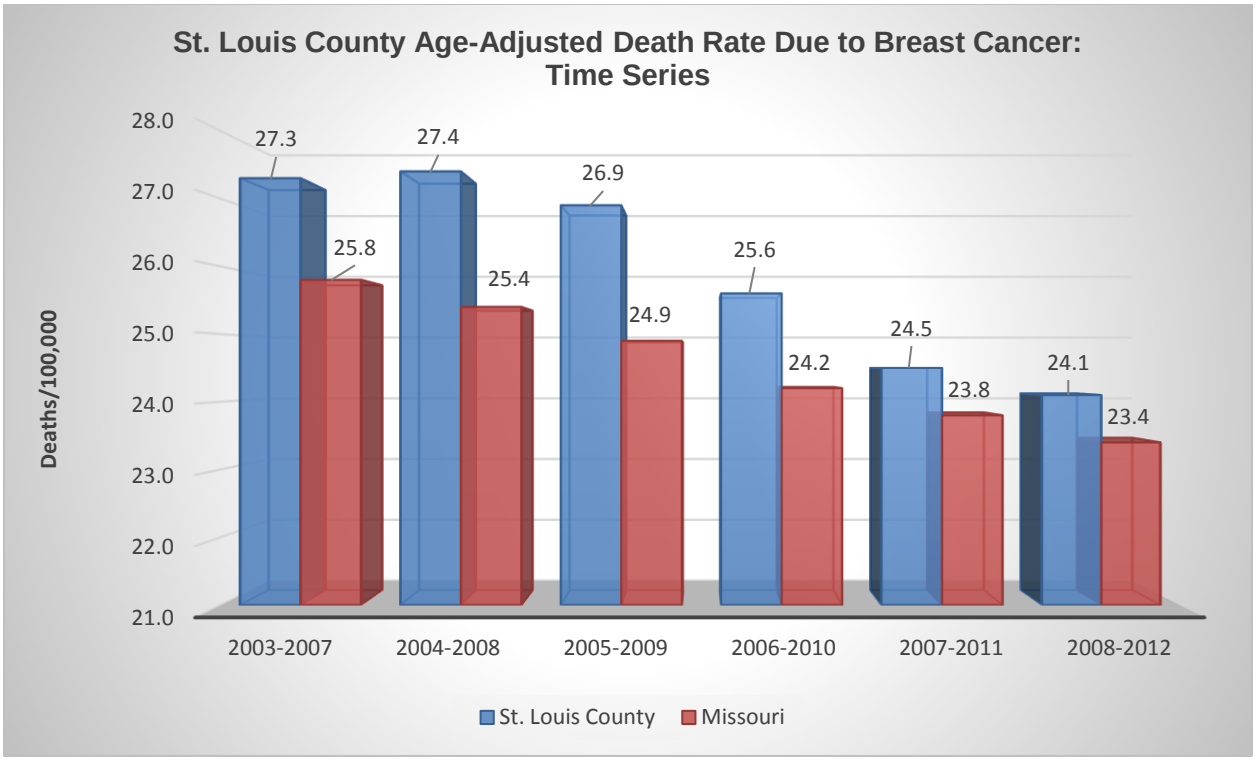


Source: CDC Cancer State Profile

With the exception of breast cancer, the death rate in St. Louis County was lower than the rate in Missouri and the U.S. for lung & bronchus, colon & rectum and melanoma of the skin. (The death rate of breast cancer was slightly higher in the county than the rate in the state, which was statistically insignificant.) The death rate of lung & bronchus, colon & rectum and melanoma of the skin was equal in the county and in the U.S.

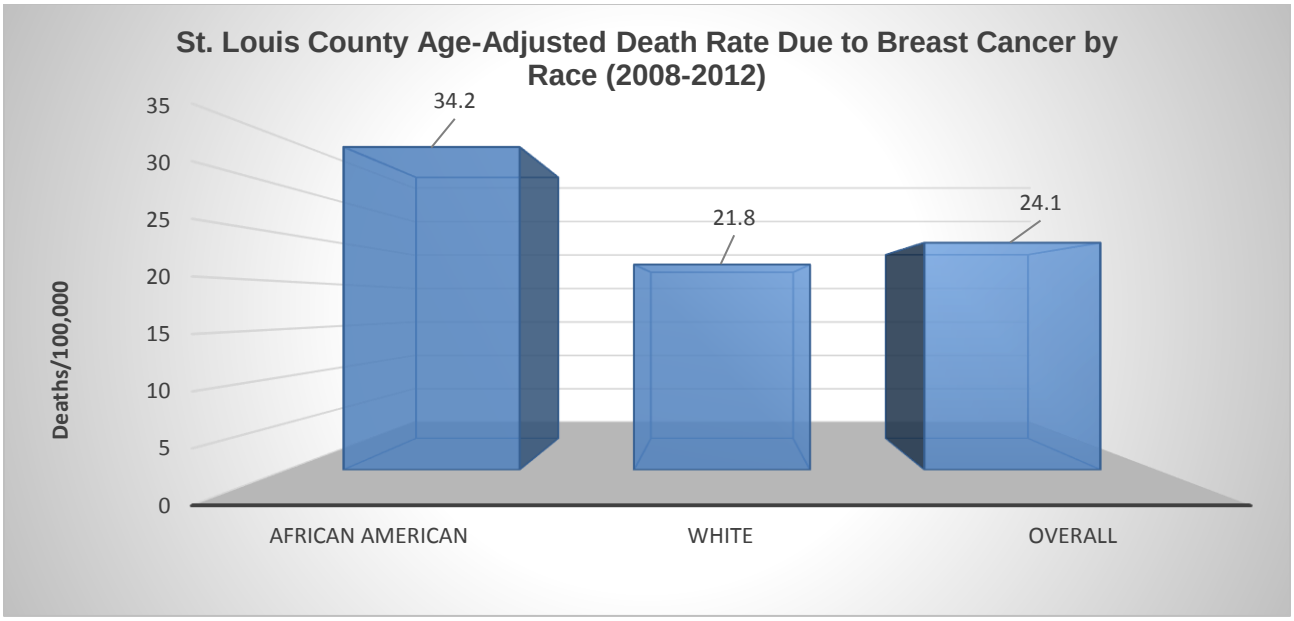
Breast Cancer

Breast cancer is a leading cause of cancer death among women in the United States. According to the American Cancer Society, approximately 1 in 8 women will develop breast cancer and about 1 in 36 women will die from breast cancer. Breast cancer is associated with increased age, hereditary factors, obesity and alcohol use. Since 1990, breast cancer death rates have declined progressively due to advancements in treatment and detection. (Healthy Communities Institute).



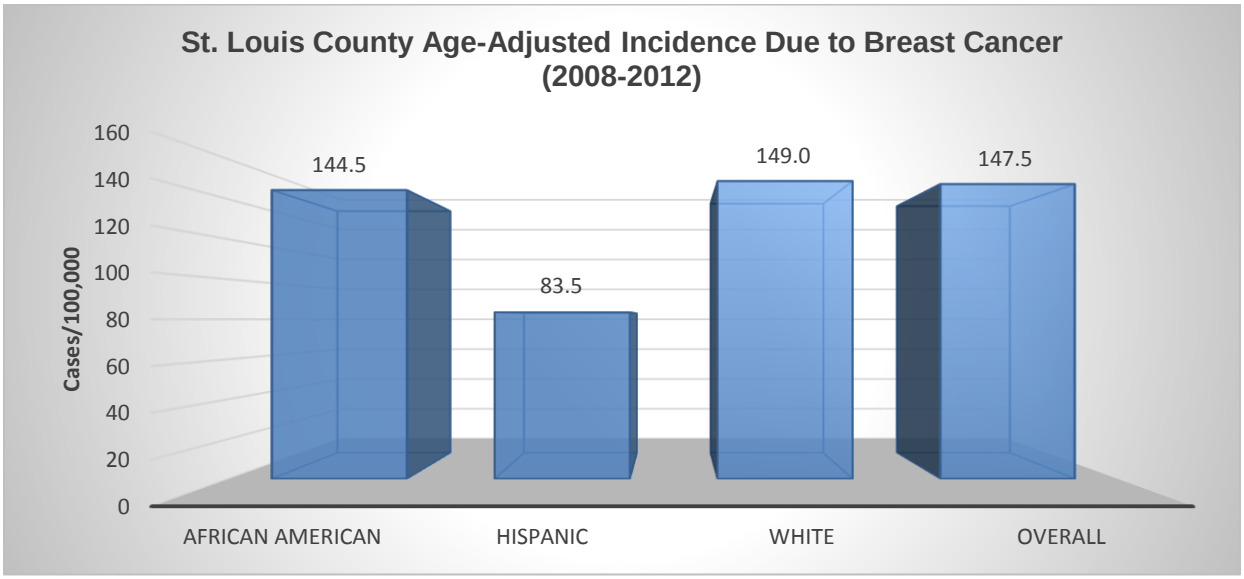
Source: Healthy Communities Institute

The death rate due to breast cancer experienced a steady decline in the last decade in St. Louis County (11.7 percent) and in Missouri (9.3 percent).



Source: Healthy Communities Institute

The death rate due to breast cancer among African Americans in St. Louis County was higher than the rate among Whites.

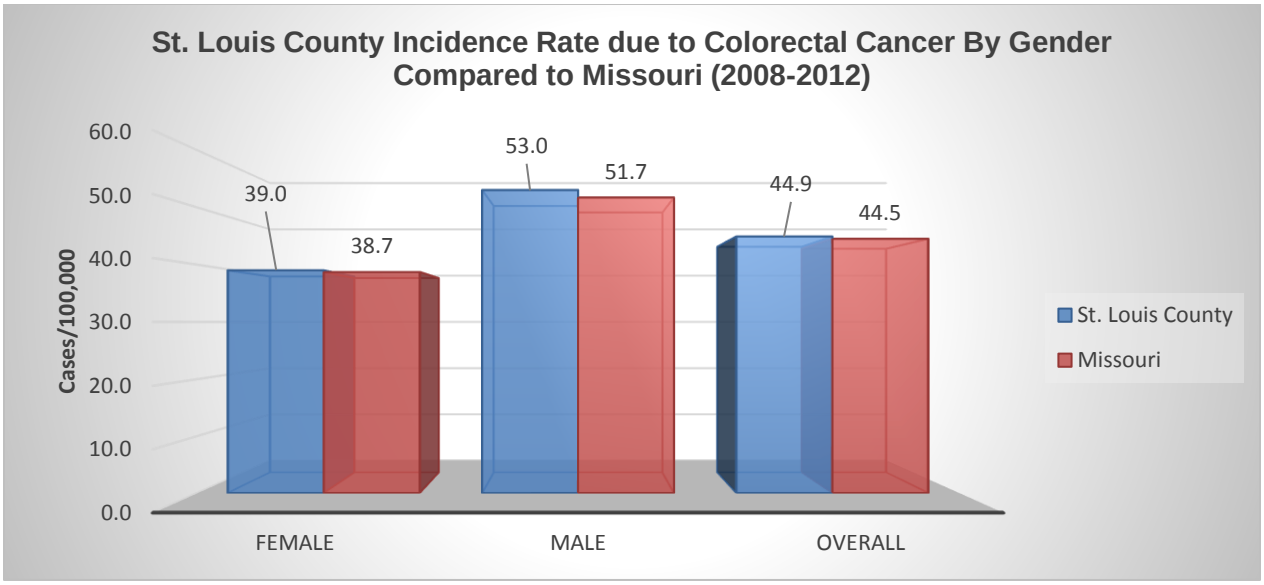


Source: Healthy Communities Institute

The breast cancer age-adjusted incidence rate in St. Louis County was highest among Whites. Hispanics had the lowest rate.

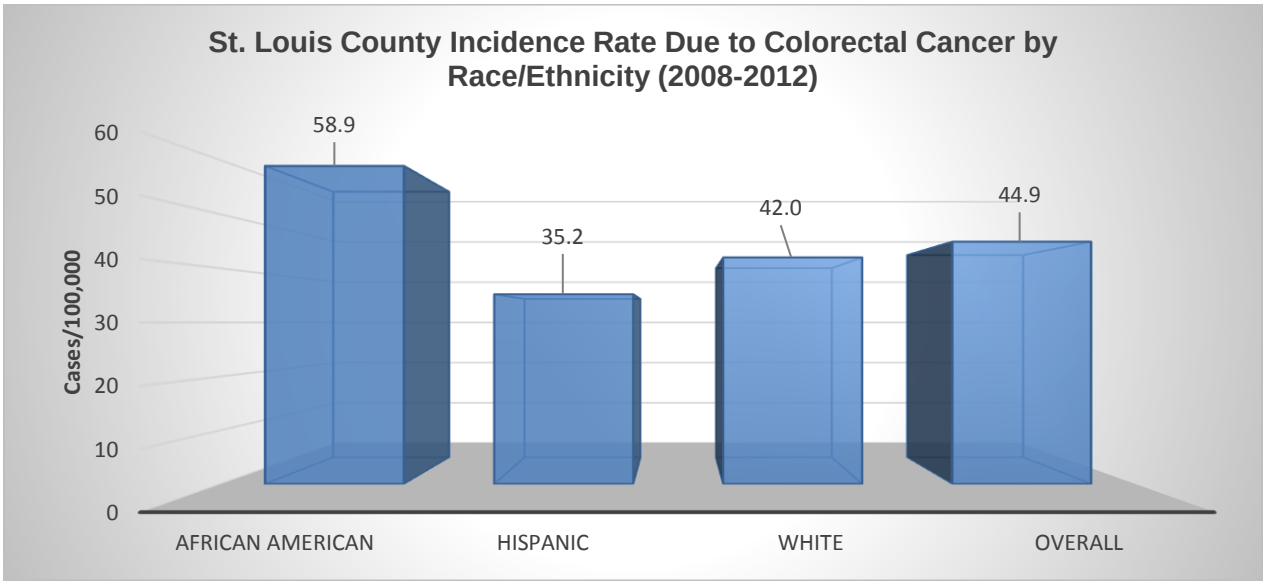
Colorectal Cancer

Colorectal cancer — cancer of the colon or rectum — is a leading cause of cancer-related deaths in the United States. The Centers for Disease Control and Prevention estimates that if all adults aged 50 or older had regular screening tests for colon cancer, as many as 60 percent of the deaths from colorectal cancer could be prevented. While 90 percent of colorectal cancer cases occur in adults aged 50 or older, it is essential for individuals with risk factors (those with a family history of colorectal cancer, inflammatory bowel disease, or heavy alcohol use) to seek regular screening earlier. (Healthy Communities Institute).



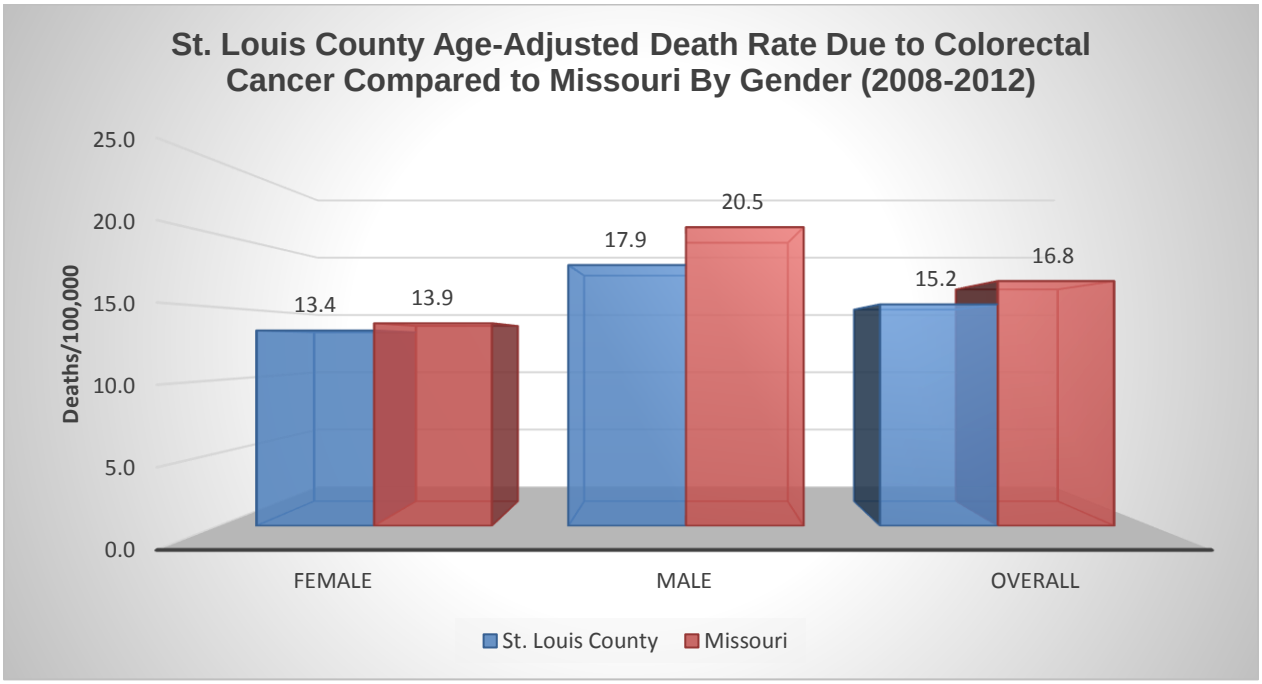
Source: Healthy Communities Institute

The overall incidence rate due to colorectal cancer was slightly higher in the county than the state. The rate of males in the county was 2.5 percent higher when compared to the state.



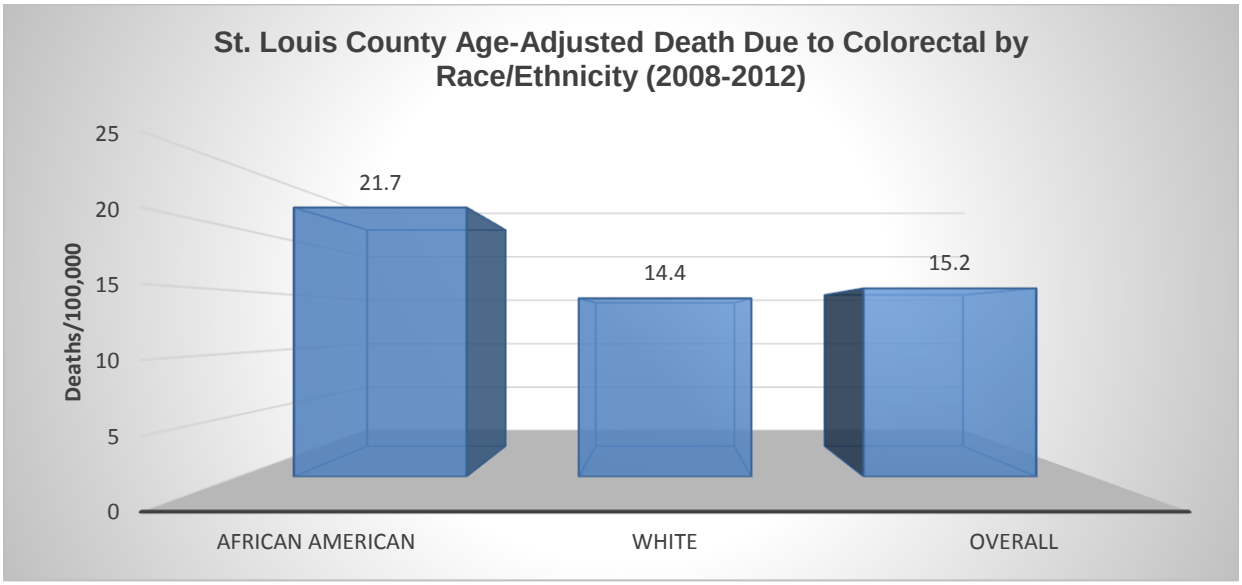
Source: Healthy Communities Institute

When comparing the incidence rate due to colorectal cancer in St. Louis County, African Americans had a 40 percent higher incident rate when compared to Whites and a 75 percent higher rate when compared to Hispanics.



Source: Healthy Communities Institute

The age-adjusted death rate due to colorectal cancer among males in St. Louis County was 12.7 lower than the rate of males in Missouri. The age-adjusted death rate due to colorectal cancer among females in St. Louis County was 3.6 percent lower than the rate of females in Missouri.

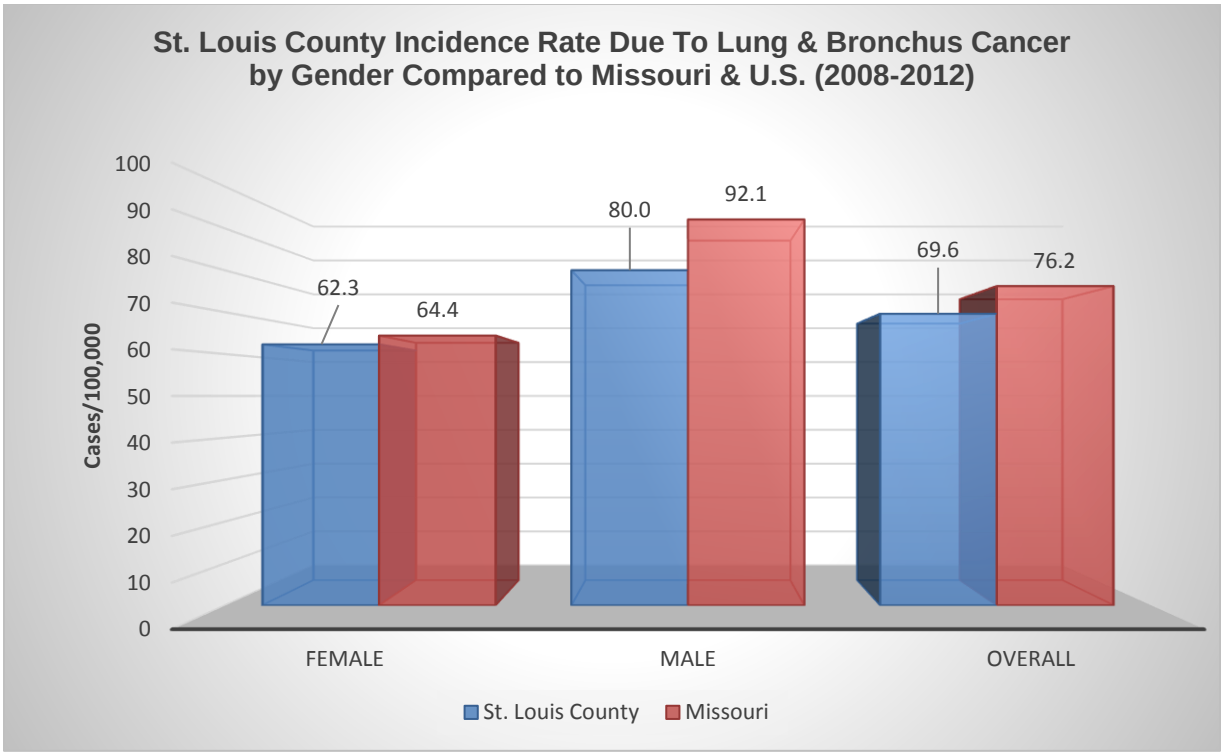


Source: Healthy Communities Institute

The age-adjusted death rate due to colorectal cancer in St. Louis County was higher among African Americans when compared to Whites.

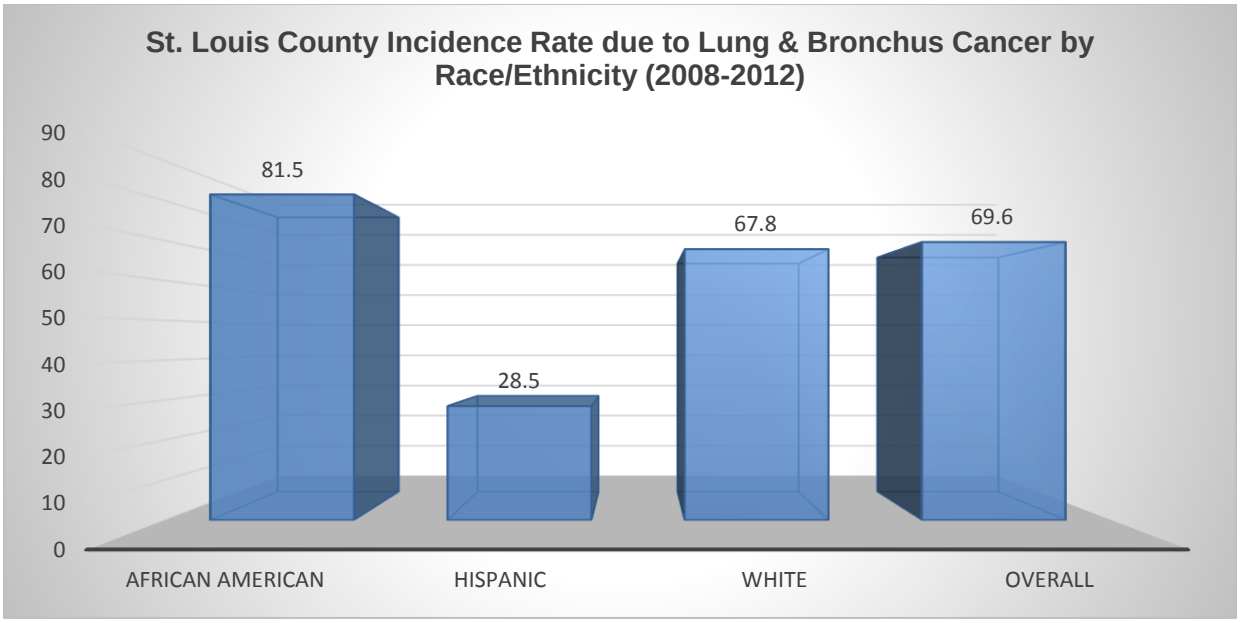
Lung Cancer

According to the American Lung Association, more people die from lung cancer annually than any other type of cancer, exceeding the total deaths caused by breast cancer, colorectal cancer and prostate cancer combined. The greatest risk factor for lung cancer is duration and quantity of smoking. While the mortality rate due to lung cancer among men has reached a plateau, the mortality rate due to lung cancer among women continues to increase. African-Americans have the highest risk of developing lung cancer. (Healthy Communities Institute).



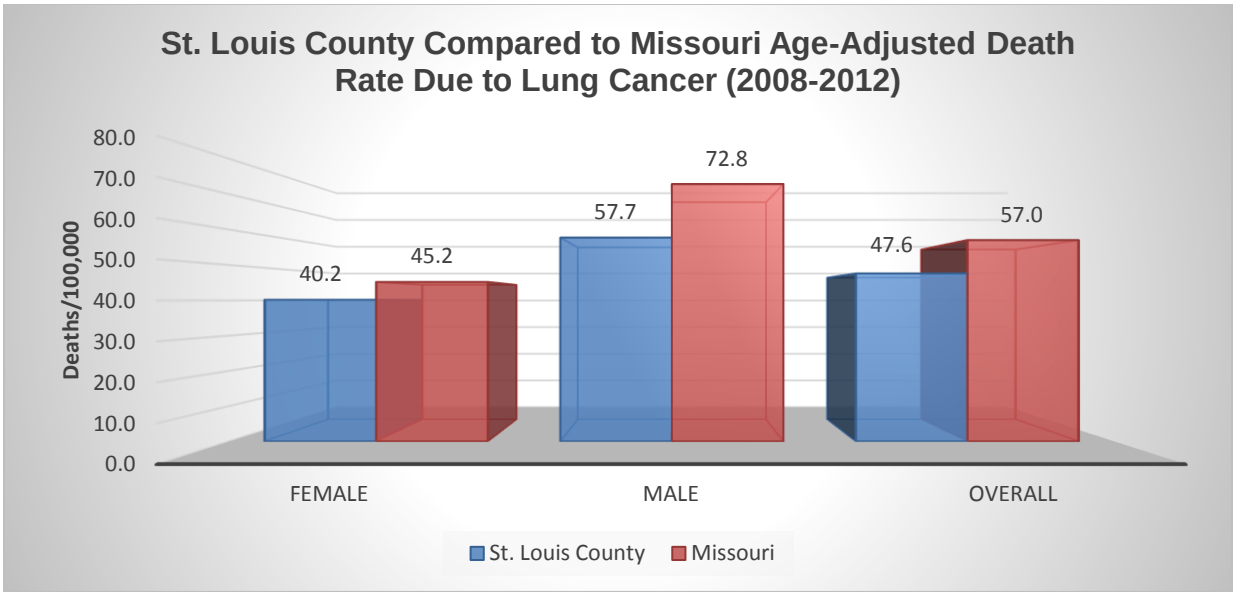
Source: Healthy Communities Institute

The incidence rate due to lung & bronchus cancer among males in St. Louis County was 13.1 percent lower than the rate of males in Missouri. The incidence rate due to lung & bronchus cancer among females in St. Louis County was 3.3 percent lower than the rate of females in Missouri.



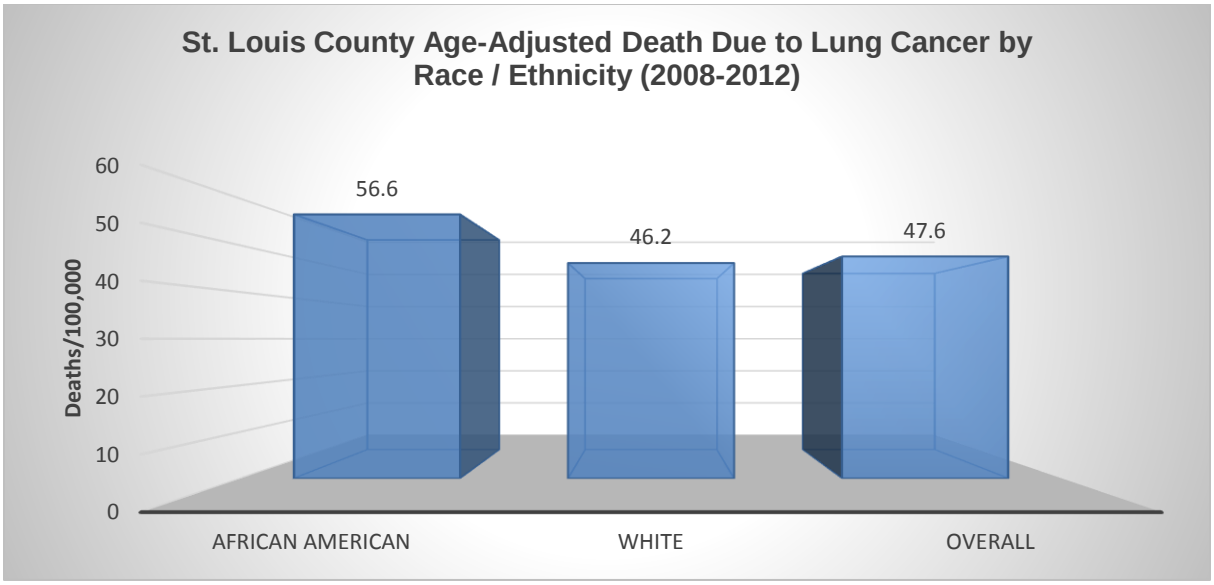
Source: Healthy Communities Institute

The overall incident rate due to lung & bronchus cancer by race in St. Louis County was 69.6 percent. African Americans had a 20 percent higher incident rate than Whites.



Source: Healthy Communities Institute

The overall age-adjusted death rate due to lung cancer was 16.5 percent lower in St. Louis County when compared to Missouri. While the death rate among males in the county was higher than females in the county, the death rate for males was 20.7 percent lower than the state. The death rate for females was 11.1 percent lower in St. Louis County than Missouri.



Source: Healthy Communities Institute

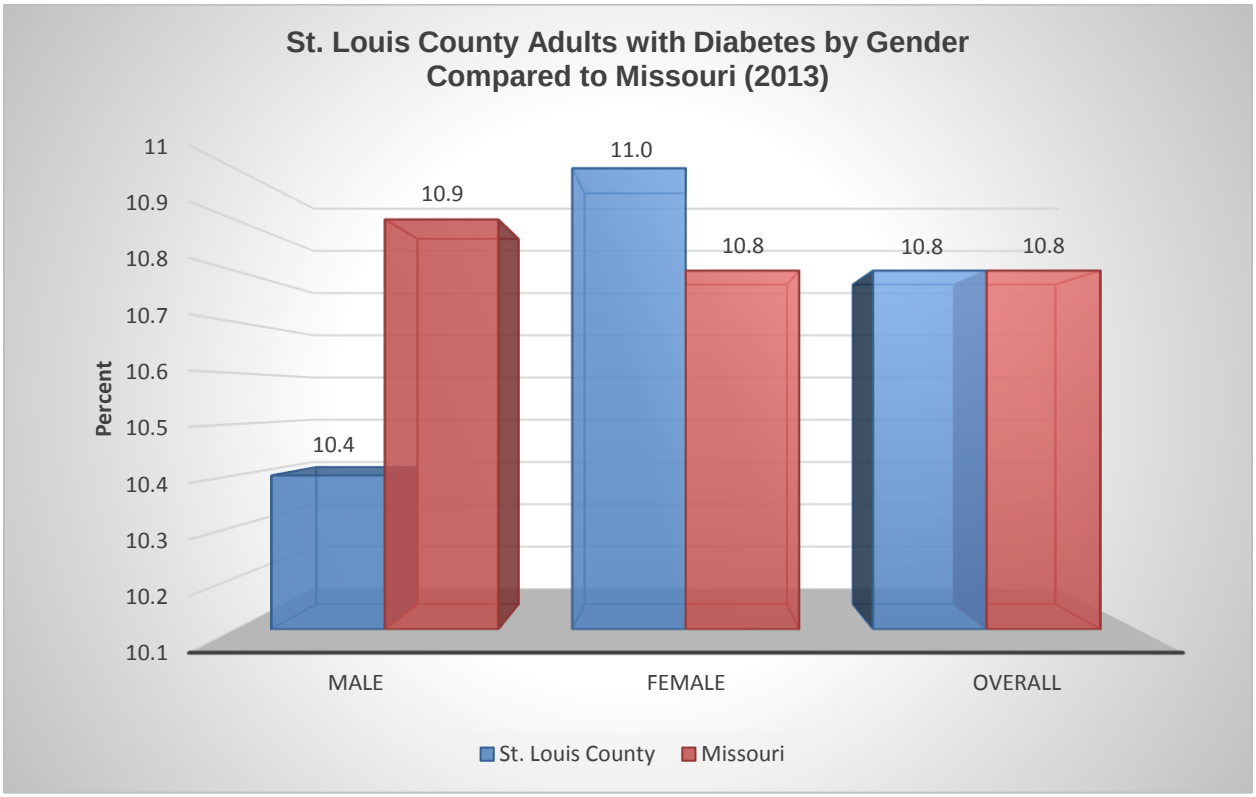
The age-adjusted death rate due to lung & bronchus cancer among African Americans in St. Louis County was 23 percent higher than the death rate among Whites.

Diabetes

Diabetes is a leading cause of death in the United States. According to the Centers for Disease Prevention and Control, more than 25 million people have diabetes, including both individuals already diagnosed and those who have gone undiagnosed.

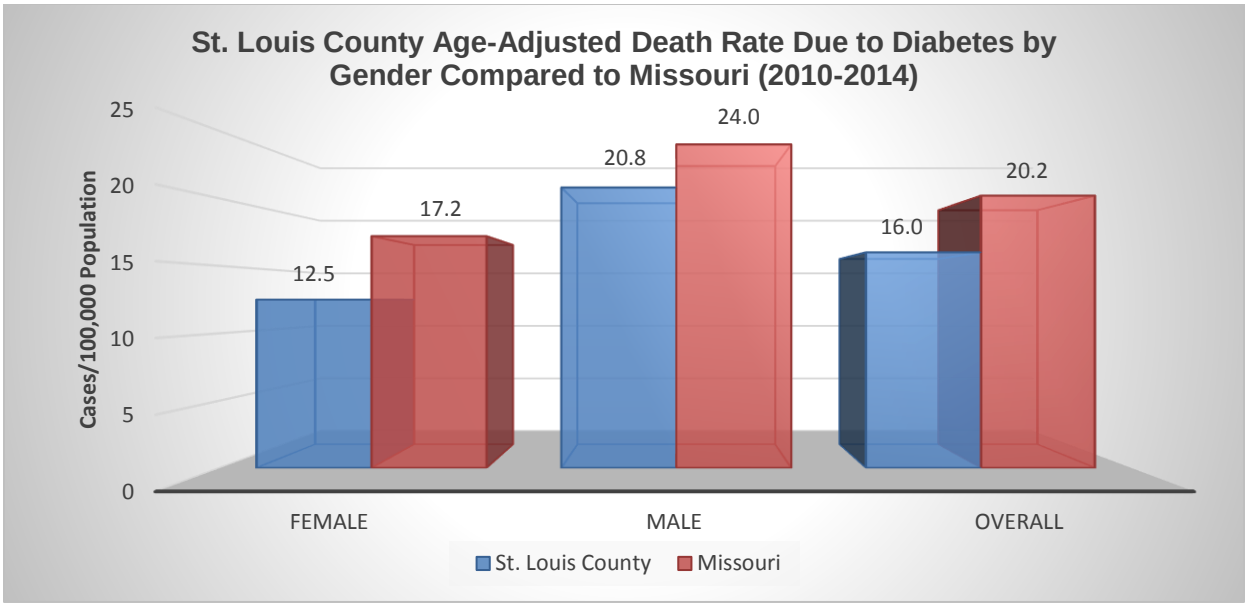
This disease can have harmful effects on most of the organ systems in the human body. It is a frequent cause of end-stage renal disease, non-traumatic lower-extremity amputation, and a leading cause of blindness among working-age adults. Persons with diabetes are also at increased risk for coronary heart 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).



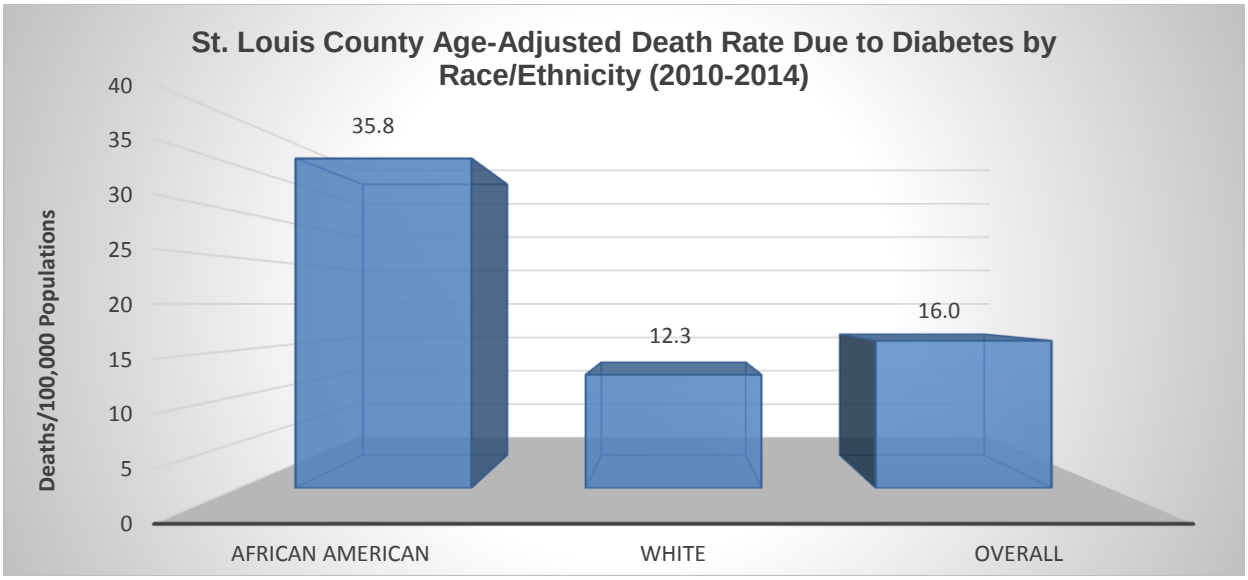
Source: Healthy Communities Institute

The overall rate of adults with diabetes in the county and the state was the same. The rate of females in the county was slightly higher than the rate of females in the state. The rate of males in the state was slightly higher than the rate of males in the county.



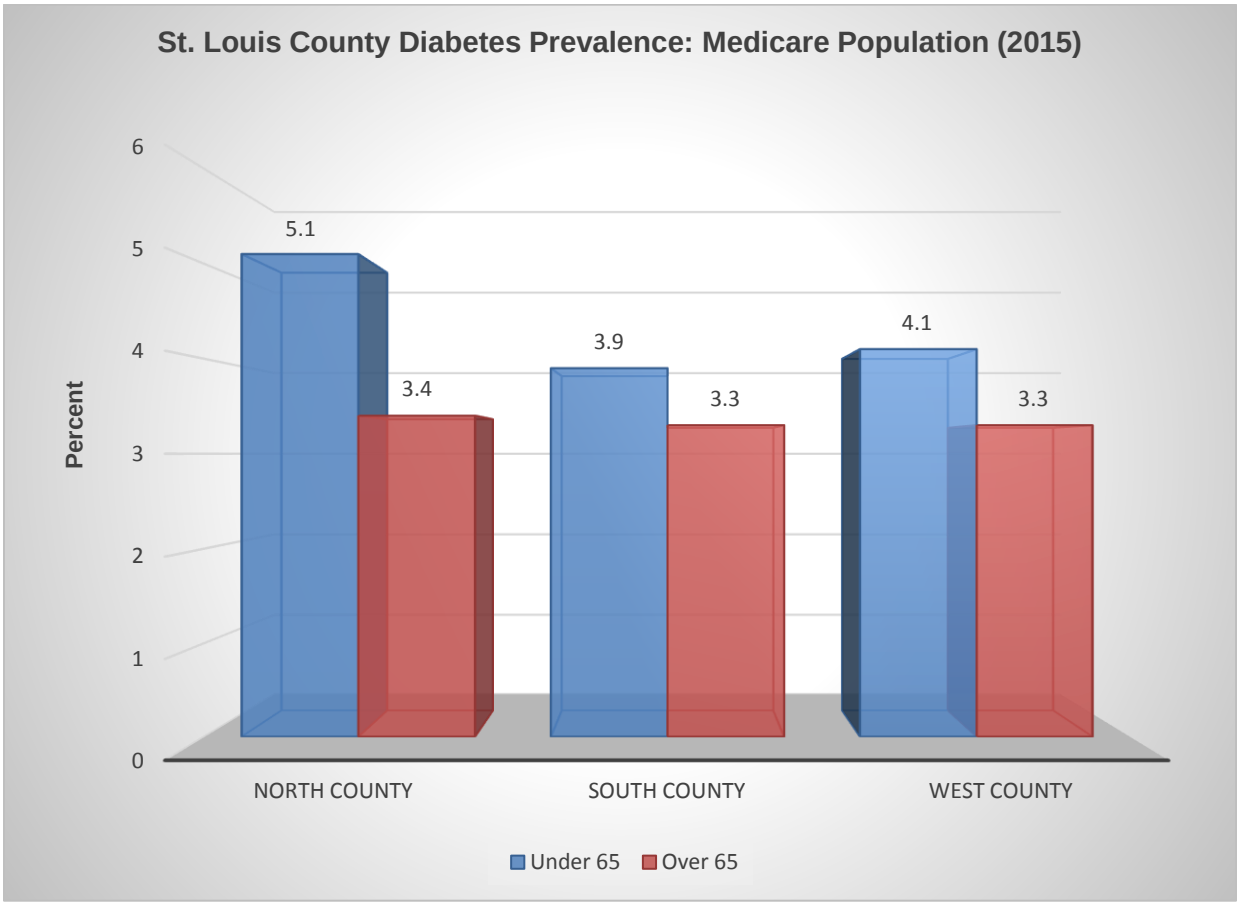
Source: Healthy Communities Institute

Age-adjusted death rate due to diabetes 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 when compared to the White population.

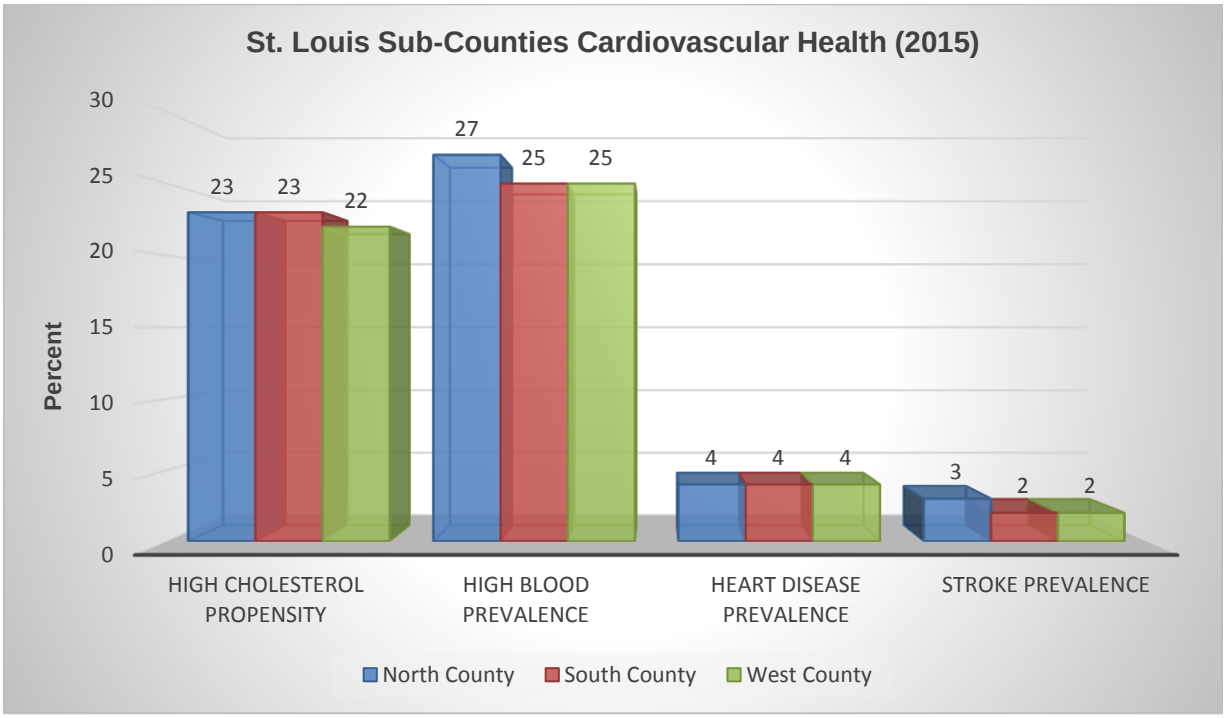


Source: Truven Health Analytics

West County diabetes prevalence rate for persons under 65 was slightly higher when compared to South County. Rates were the same for persons over 65.

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 propensity rate of high cholesterol, high blood pressure, heart disease and stroke were virtually identical in West County and South County.

Table 13: 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

Death, hospitalizations and ER visit rates due to heart disease in St. Louis County were 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 14: 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

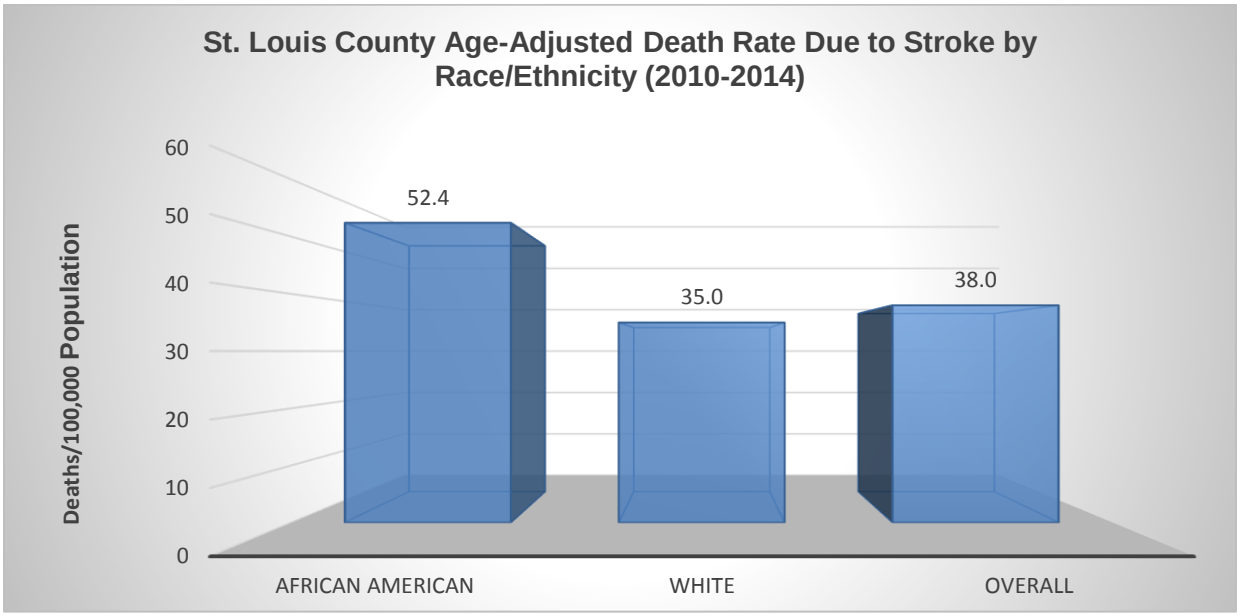
Source: Missouri Department of Health & Senior Services

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 15: 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

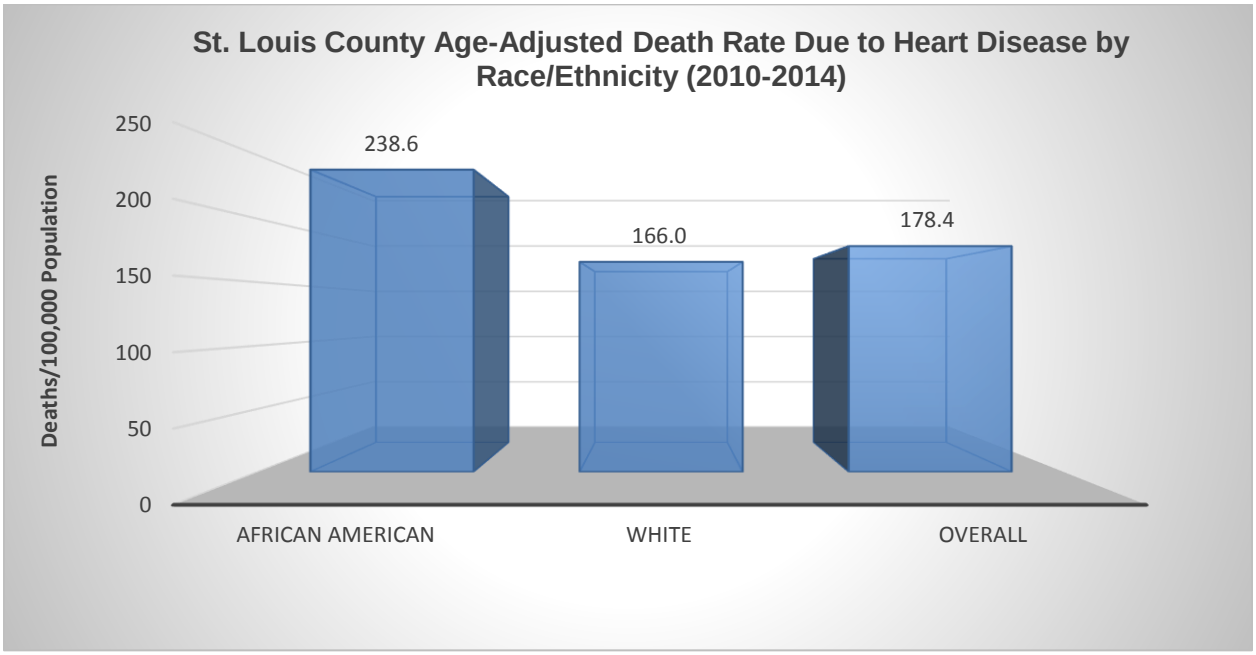
Source: Missouri Department of Health & Senior Services 2011

This table represents the trend of Heart Disease in the last four years by using a three-year moving average. This provides information about the direction of Heart Disease. 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 death rate from stroke among African Americans was 1.5 times higher than the rate of Whites from 2010-2014.

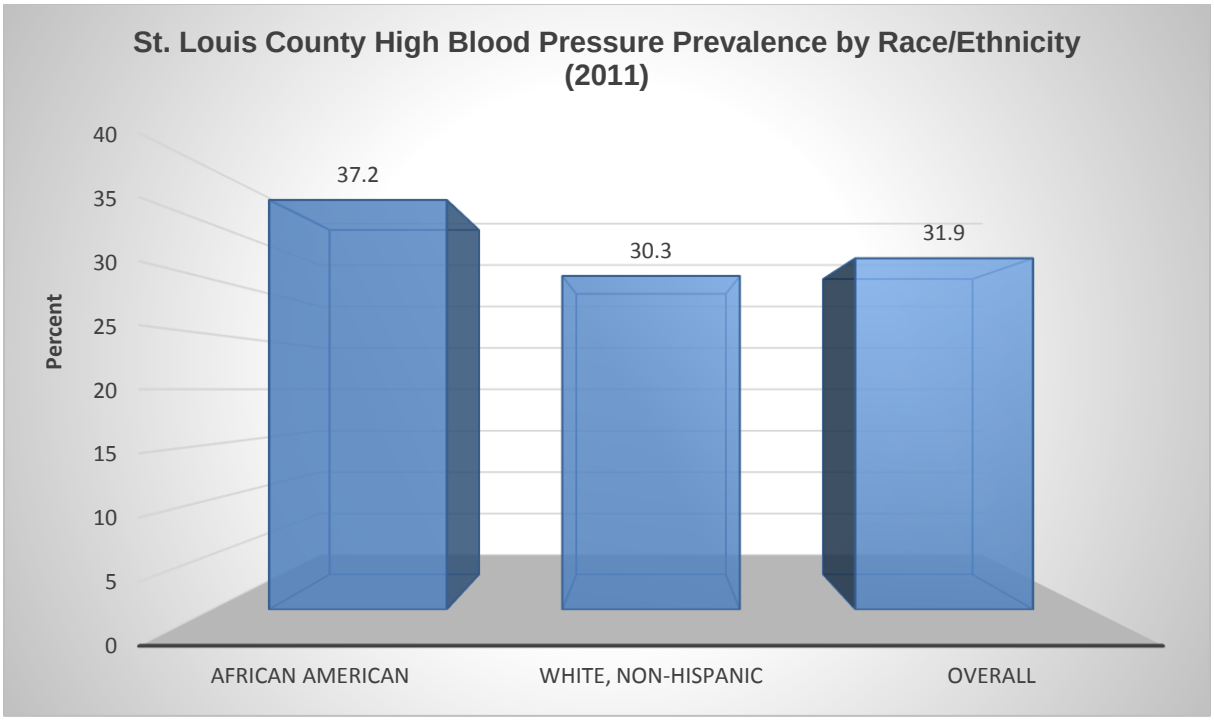


Source: Healthy Communities Institute

The death rate from heart disease was nearly one and one-half times higher among African Americans than Whites in the county.

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).

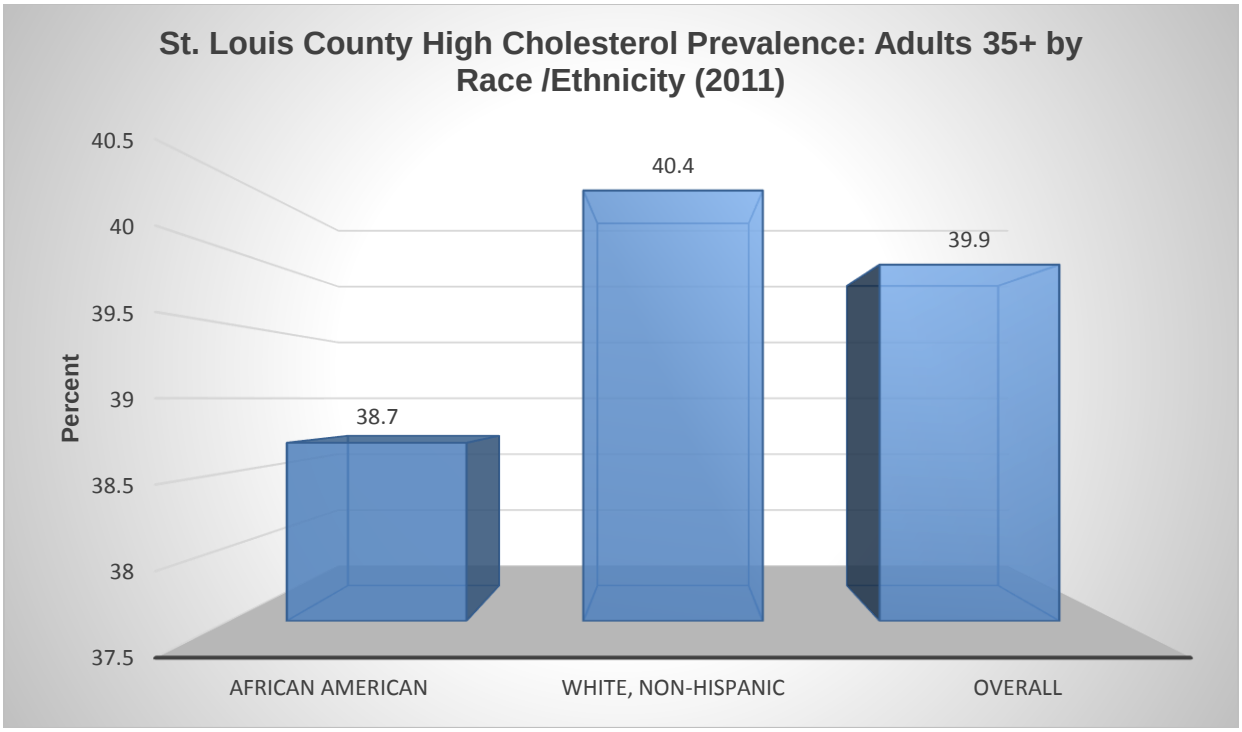


Source: Healthy Communities Institute

African Americans had a 23 percent higher prevalence of high blood pressure than Whites.

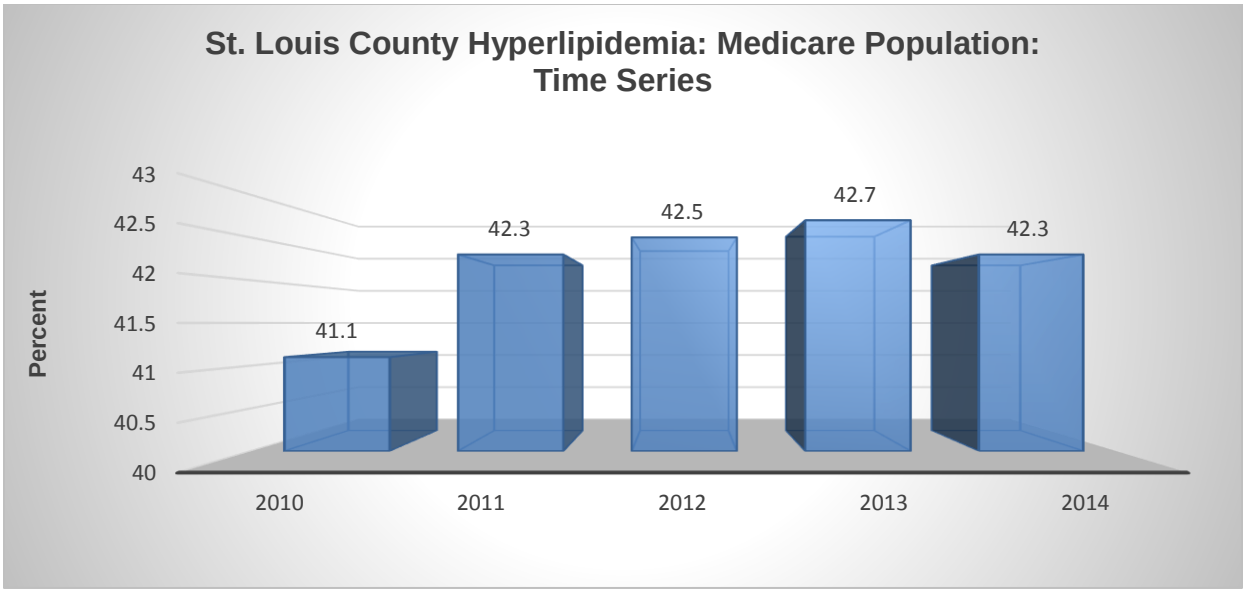
Cholesterol

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.



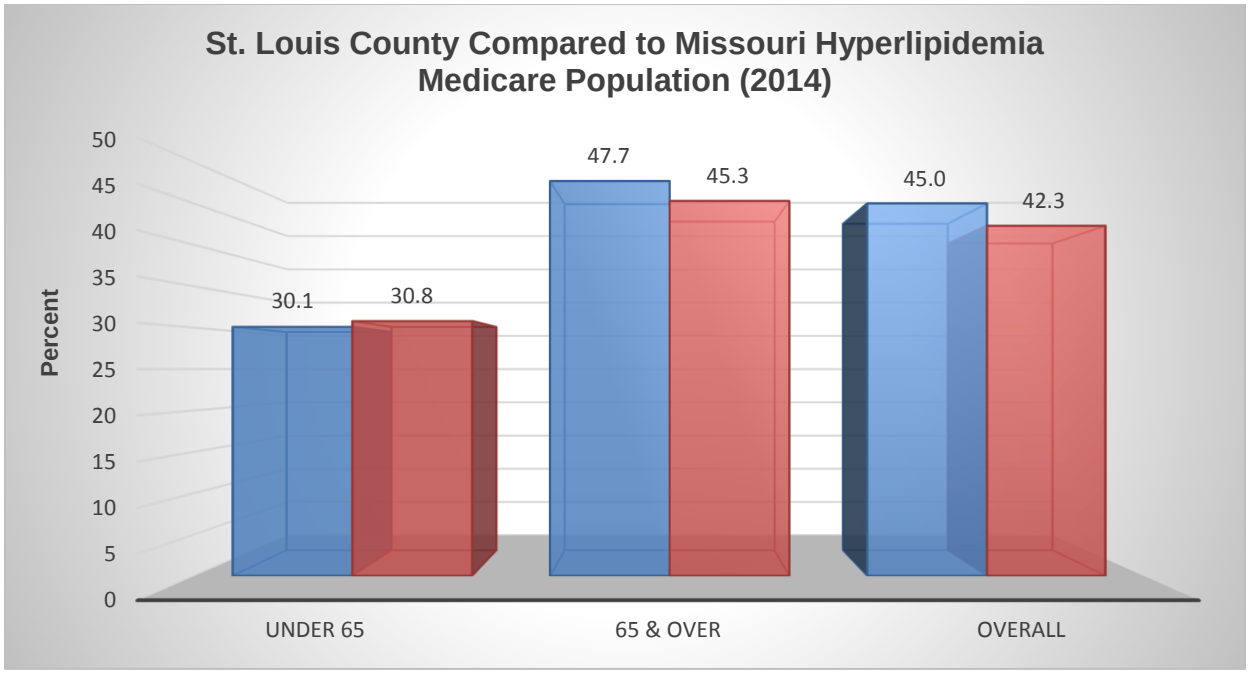
Source: Healthy Communities Institute

The high cholesterol prevalence rate of adults 35+ in the county showed White/ Non-Hispanics with a slightly 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 three percent increase from 2010-2014 in the percent of hyperlipidemia among the Medicare population in St. Louis County.

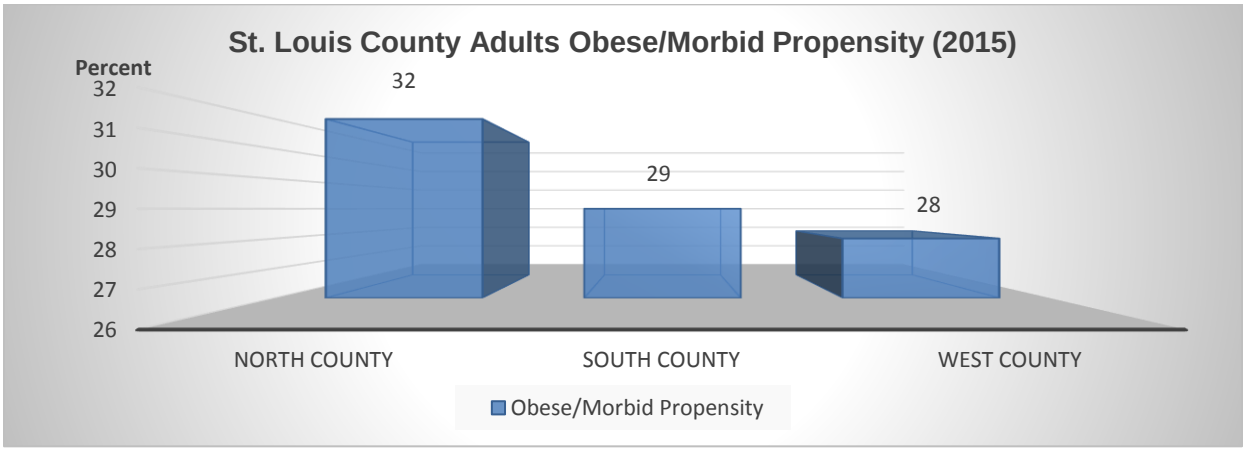


Source: Healthy Communities Institute

The overall rate of hyperlipidemia among the Medicare population was 6.4 percent higher in St. Louis County when compared to Missouri.

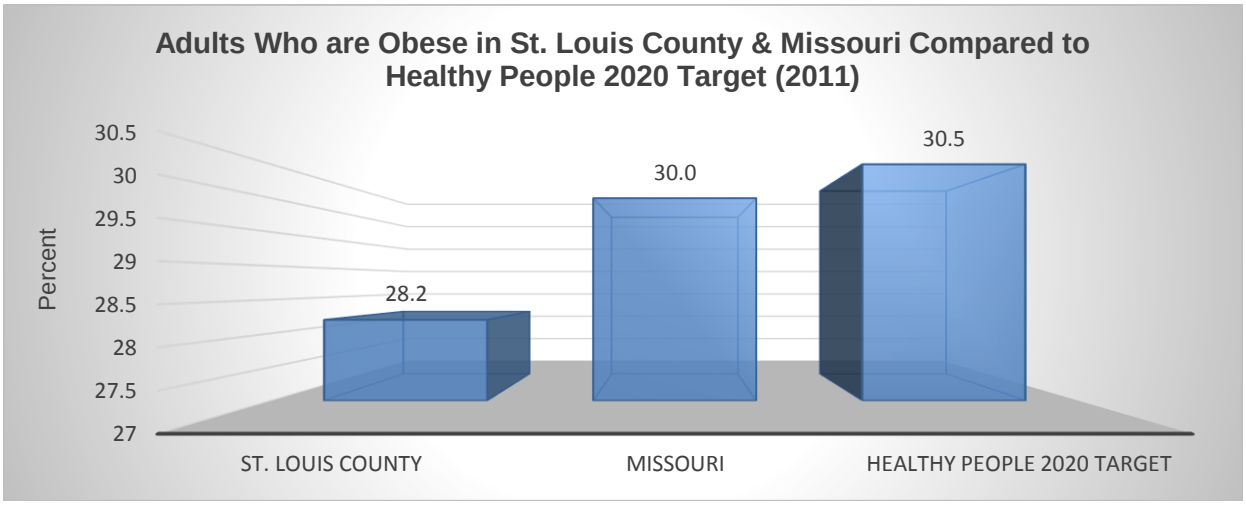
Obesity

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).



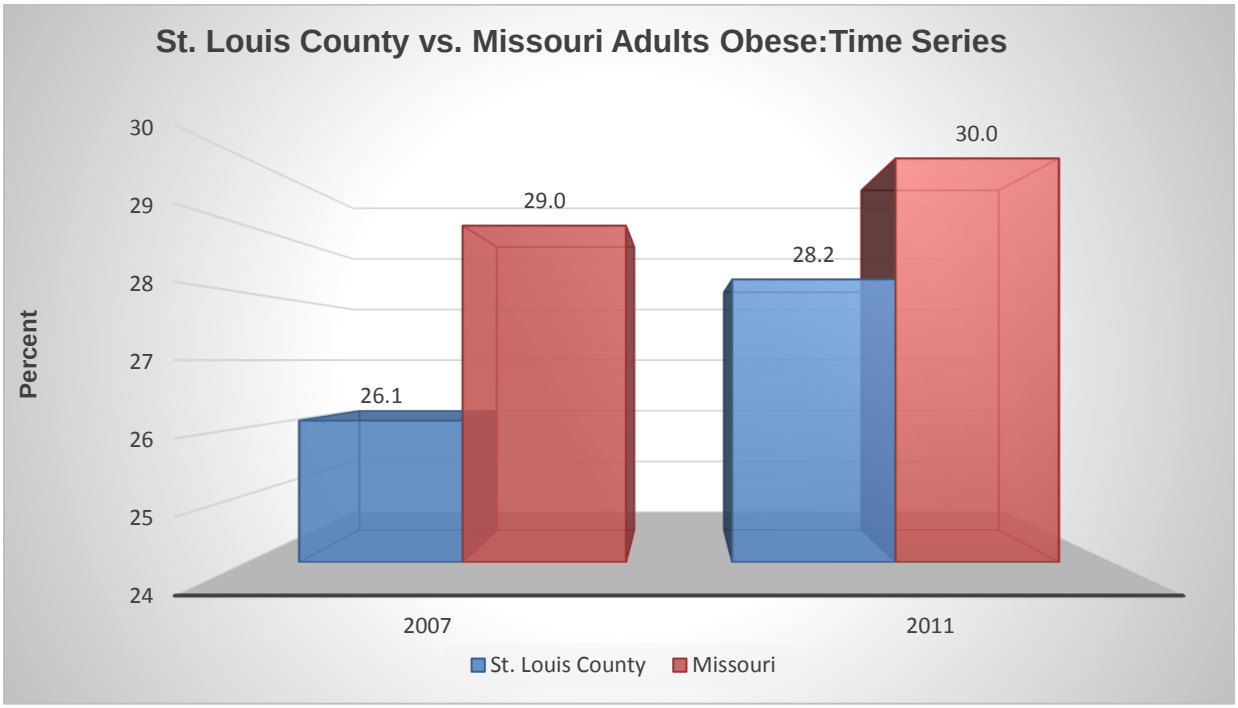
Source: Truven Health Analytics

Among the three segments of St. Louis County, West County had the lowest propensity for obesity in 2015 among adults 18 years old and older. South County was only one percentage point higher.



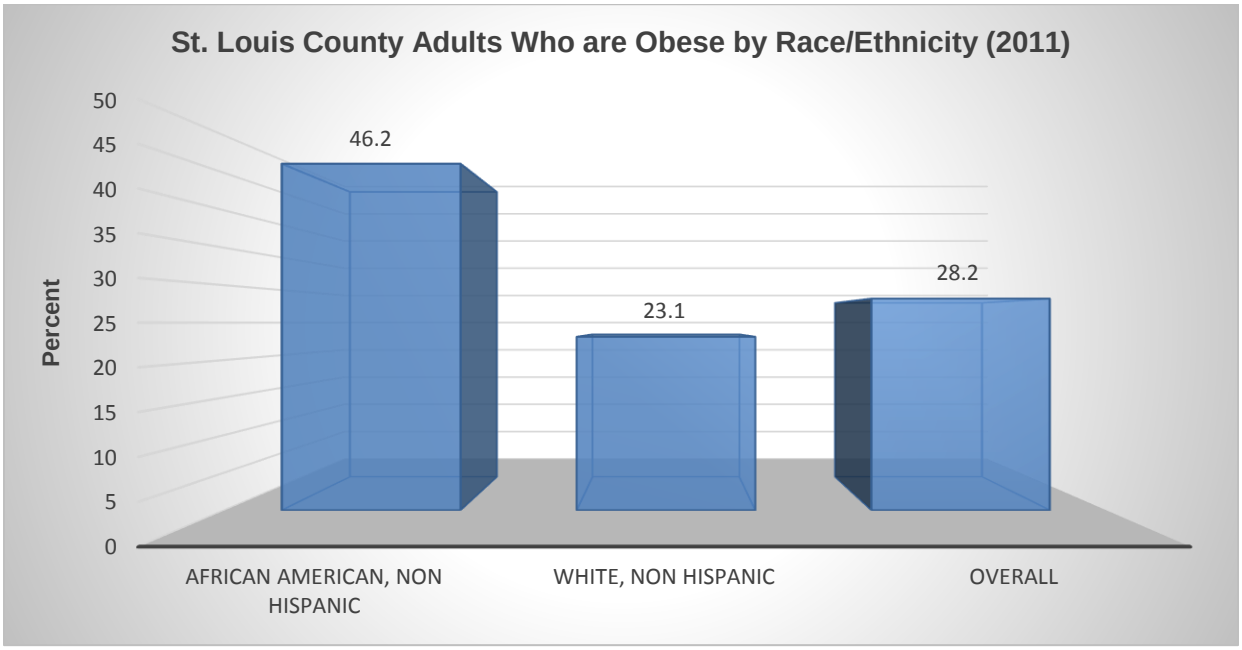
Source: Healthy Communities Institute

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

While the St. Louis County rate of obesity in 2011 was lower than the rate in Missouri, the county rate experienced an 8 percent increase since 2007 compared to a 3.4 percent increase in 2007 for the state.

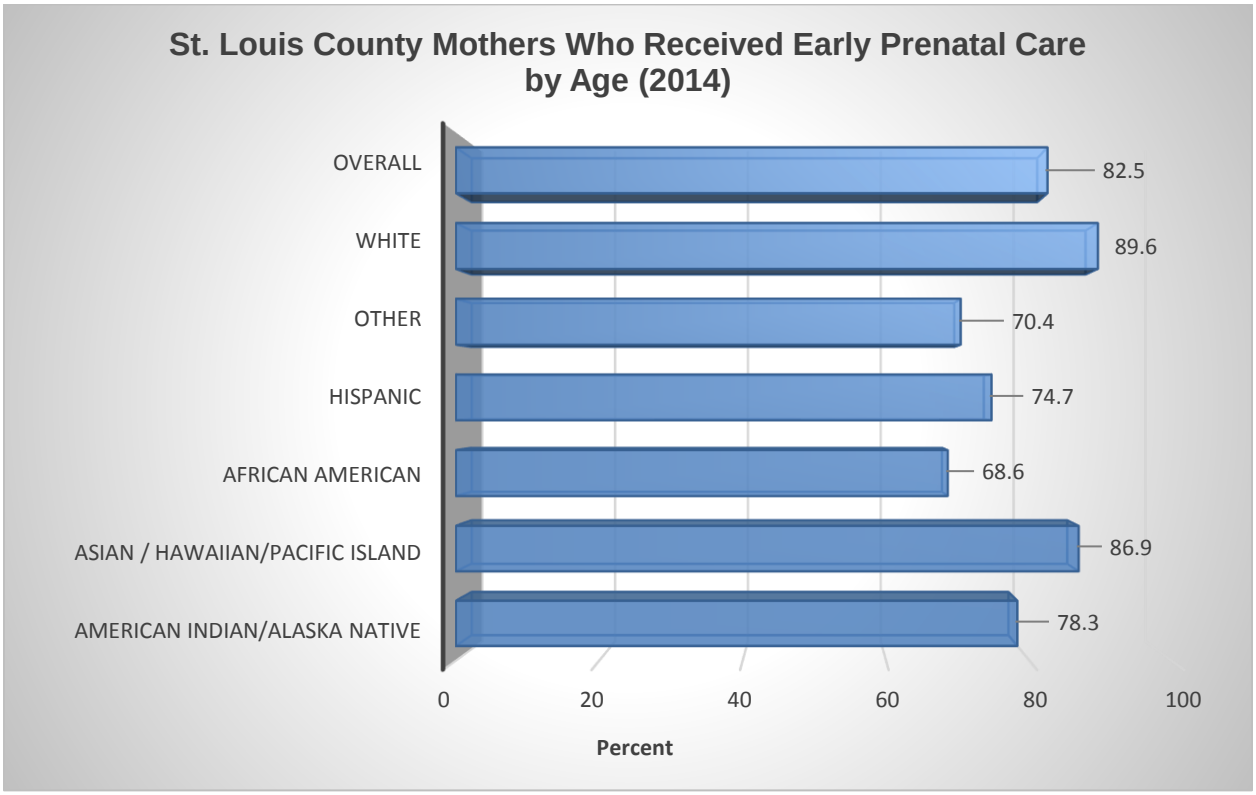


Source: Healthy Communities Institute

The rate of African American, Non-Hispanic adults who are obese was 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).

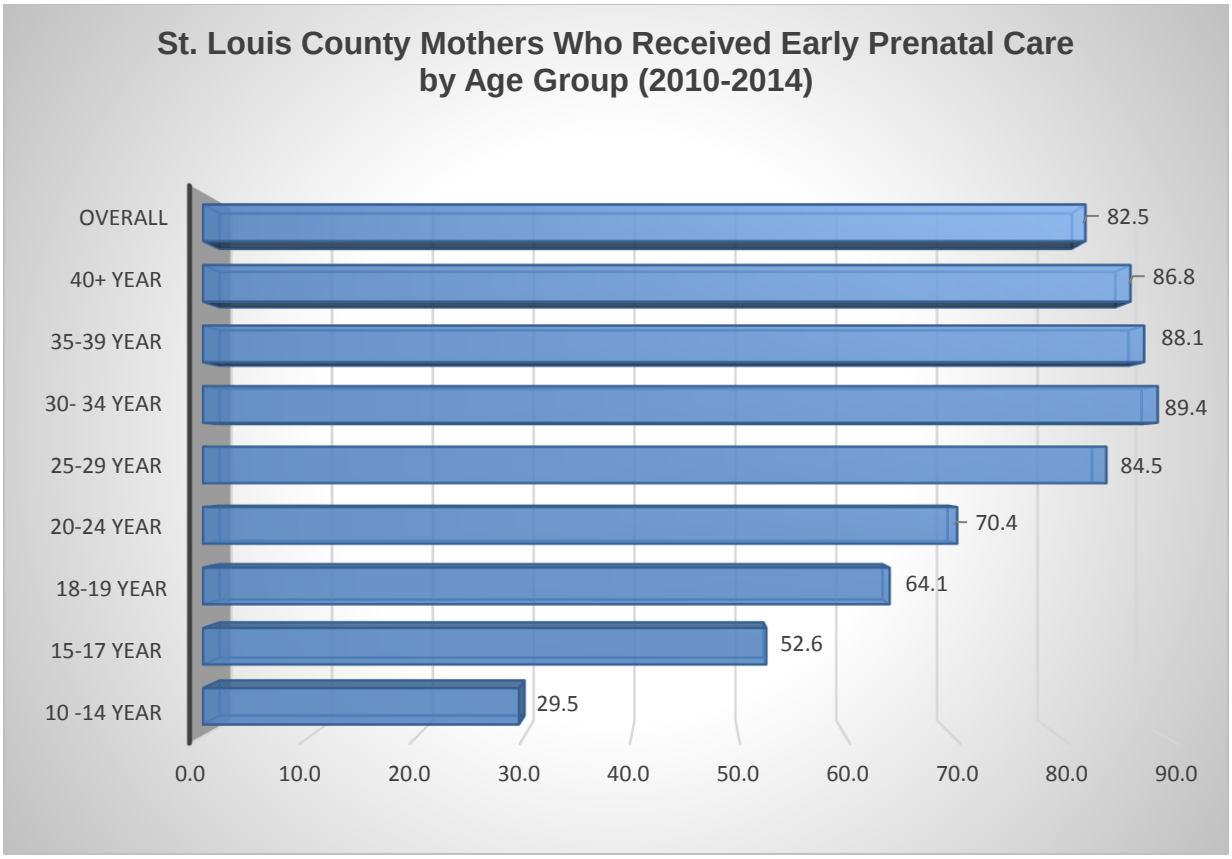


Source: Healthy Communities Institute

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.

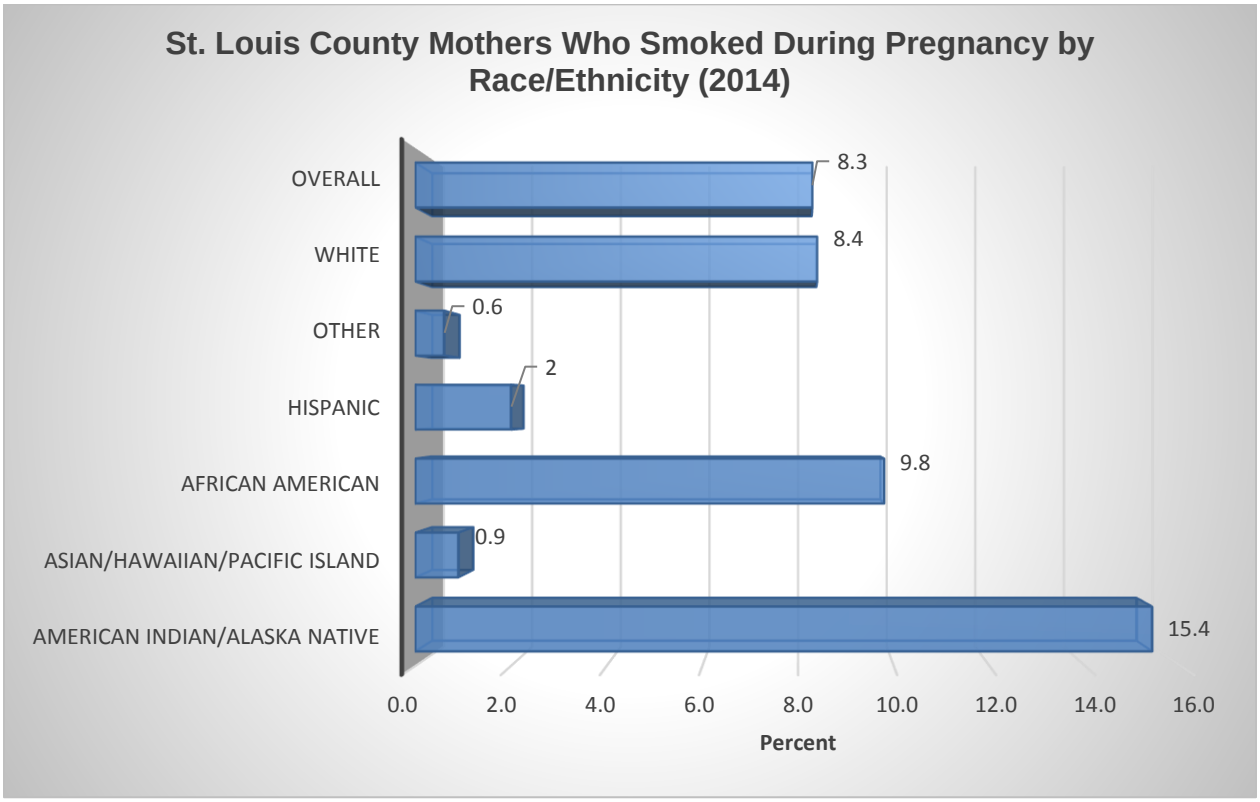
There is racial disparity among St. Louis County mothers who received prenatal care in the first trimester. The graph above shows that African Americans are less likely to receive prenatal care in the first trimester followed by other races and Hispanics.

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. (Healthy Communities Institute).



Source: Healthy Communities Institute

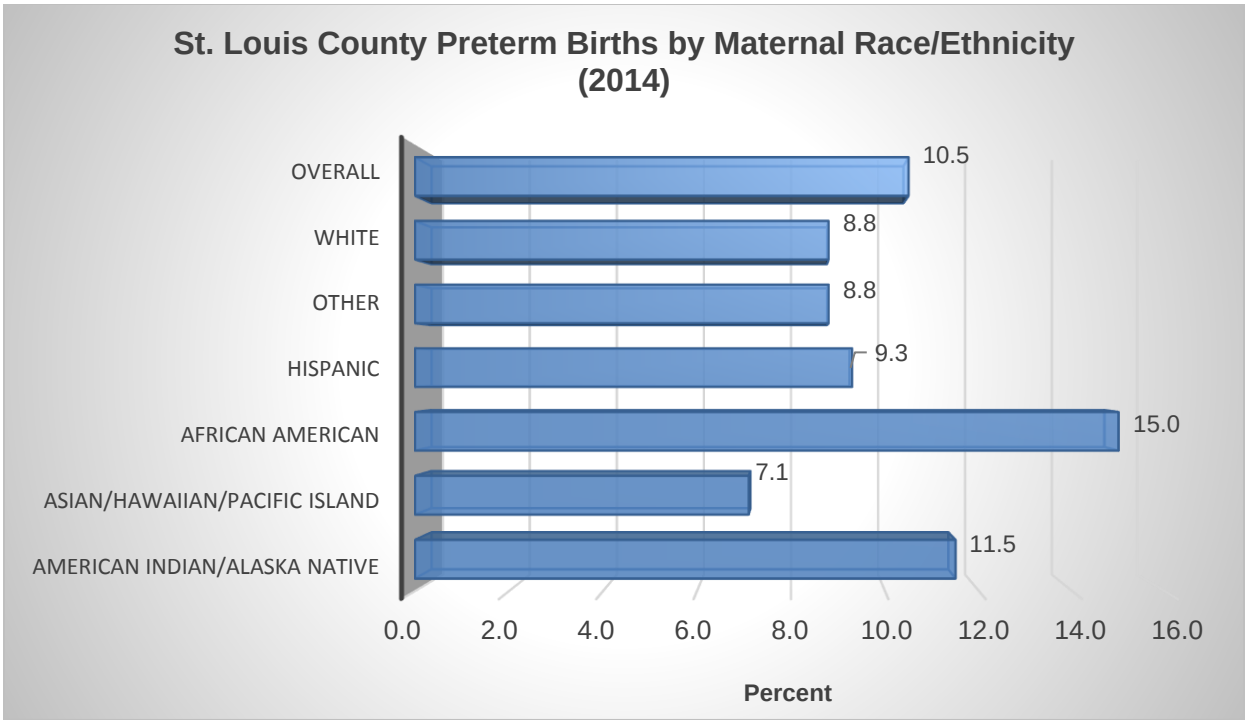
This graph reported the rate of mothers who received prenatal care during the first trimester by age group. As the groups aged, the rate of early prenatal care also increased through the 30-34 age group, at which point a slight decline was noted.



Source: Healthy Communities Institute

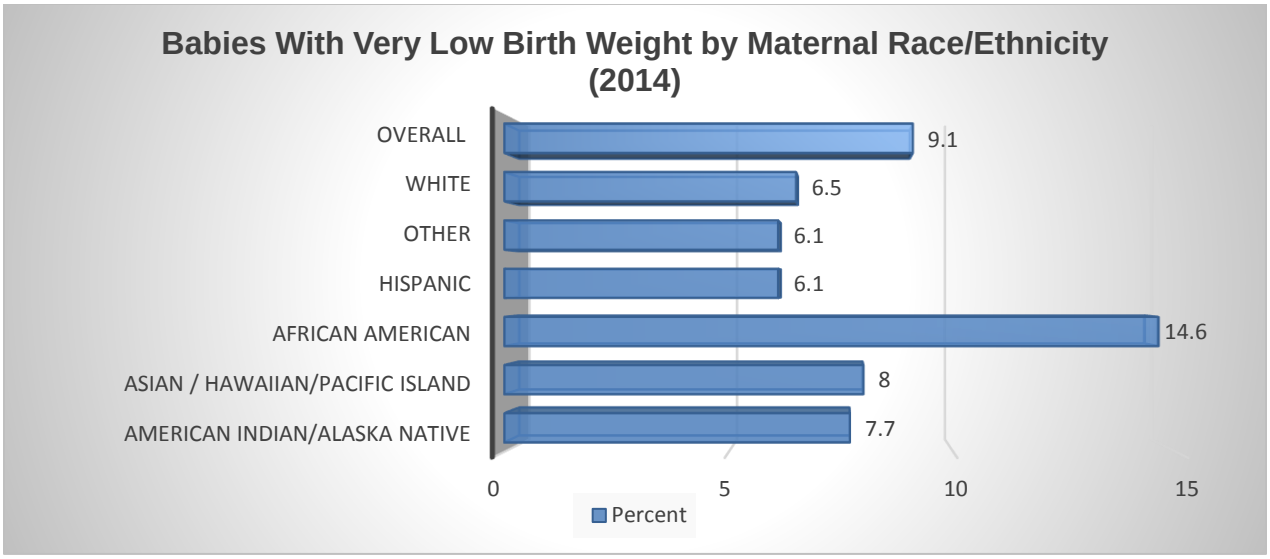
Smoking during pregnancy poses risks for both mother and fetus and is estimated to cause up to 10 percent of all infant deaths. (Healthy Communities Institute).

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



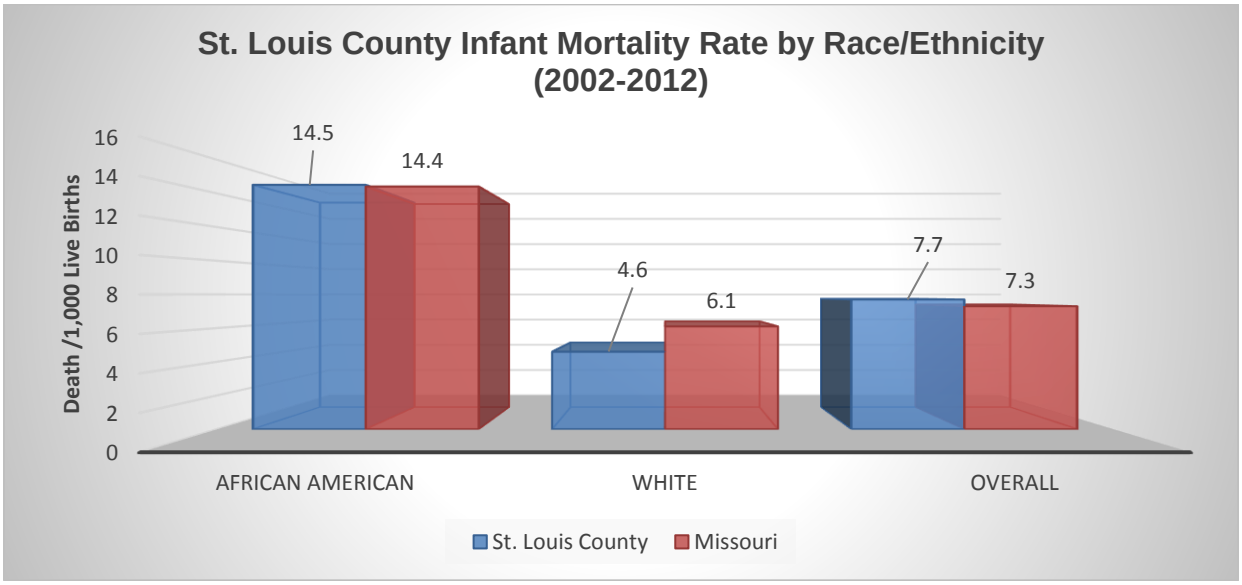
Source: Healthy Communities Institute

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. 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 target rate and higher than any other race.

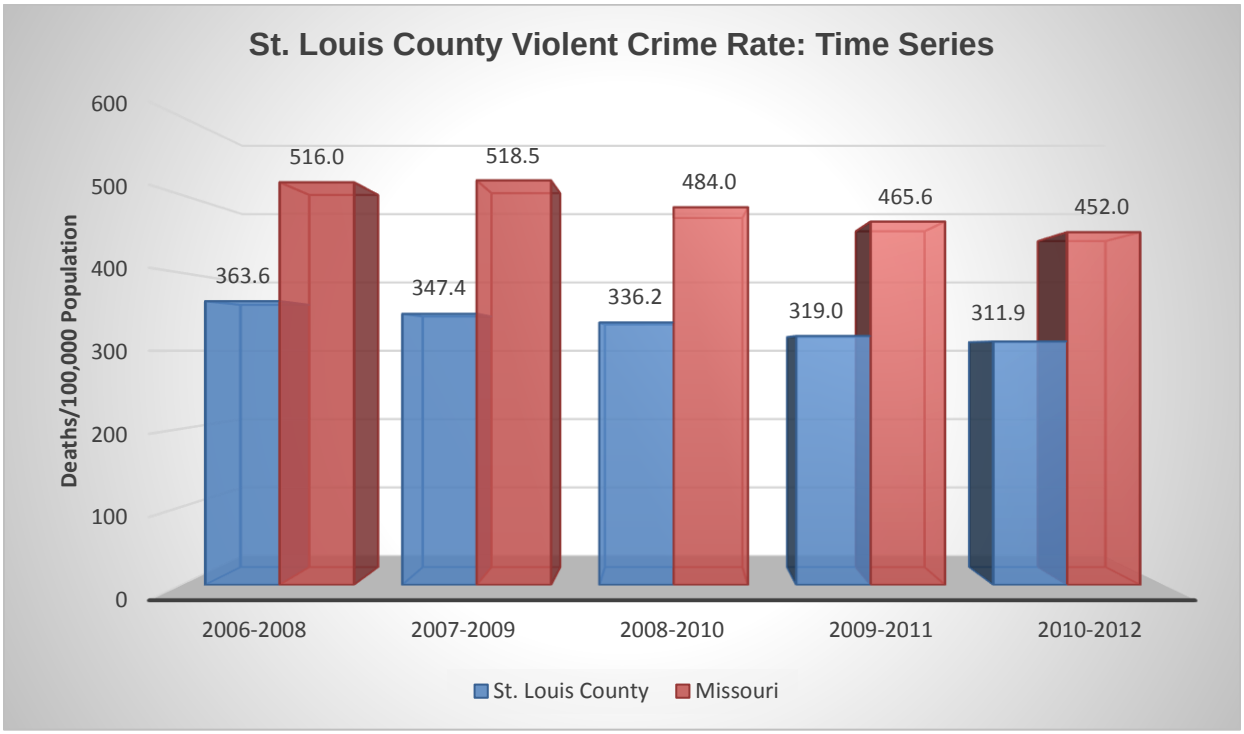


Source: Healthy Communities Institute

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

Violence

A violent crime is defined as a crime in which the offender uses or threatens to use violent force upon a victim. Violence negatively affects communities by reducing productivity, decreasing property values and disrupting social services. (Healthy Communities Institute).

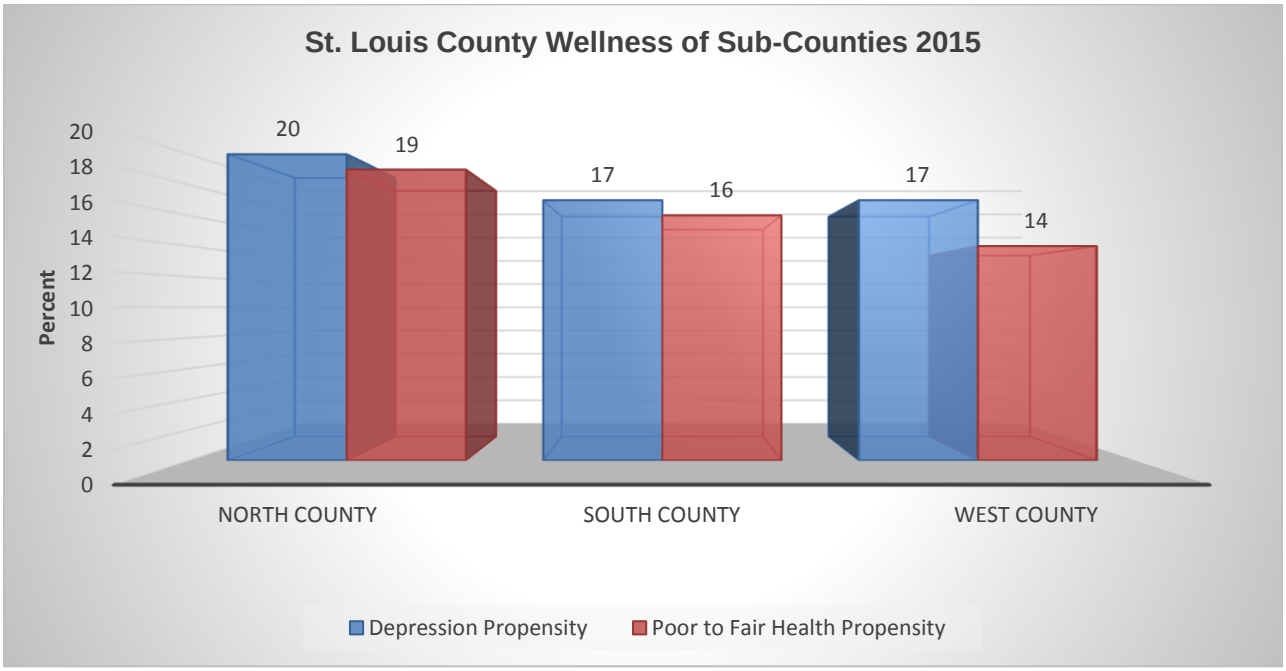


Source: Healthy Communities Institute

Violent crimes include homicide, forcible rape, robbery and aggravated assault. During the period 2006-2012, both St. Louis County and Missouri experienced a decline in the violent crime rate, 14.2 percent and 12.4 respectively.

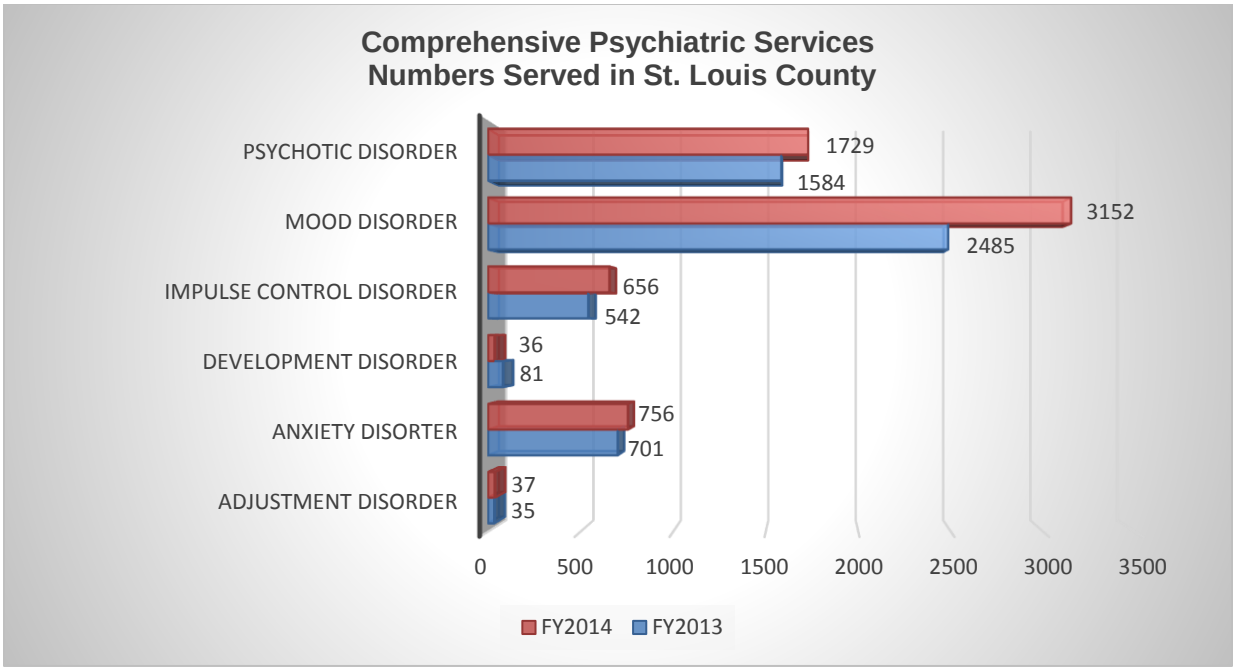
Mental Health

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

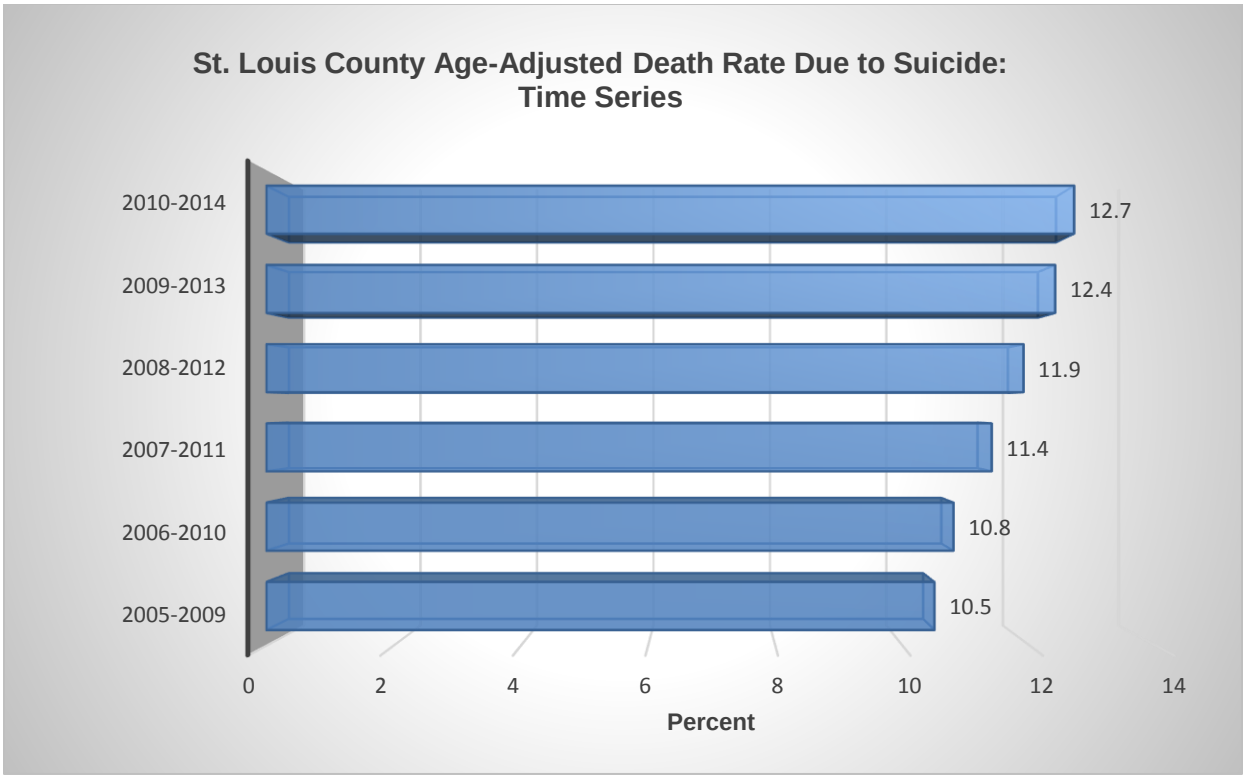
The propensity to suffer from symptoms of depression was 17 percent for both West County and South County residents. South County had a higher propensity to have residents with poor to fair health (16 percent) than West County (14 percent).



Source: Missouri Department of Mental Health

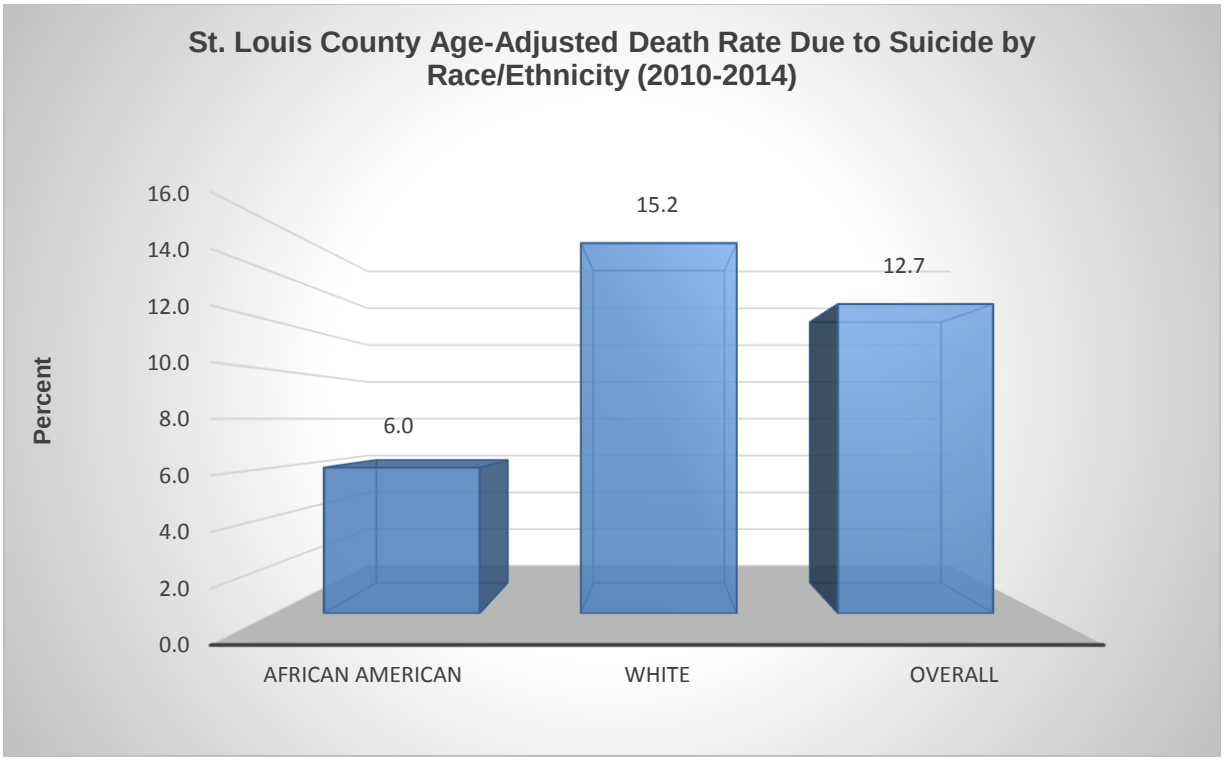
The graph above indicates the number of clients seen with each diagnosis per year. An individual client may have more than one admission within a year. Mood and psychotic disorders led among all conditions in 2014 and 2015. A total of 5,675 St. Louis County residents received treatment for serious mental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

For the period ending 2014, there was a 21 percent increase in the age-adjusted death rate due to suicide when compared to the period ending in 2009.

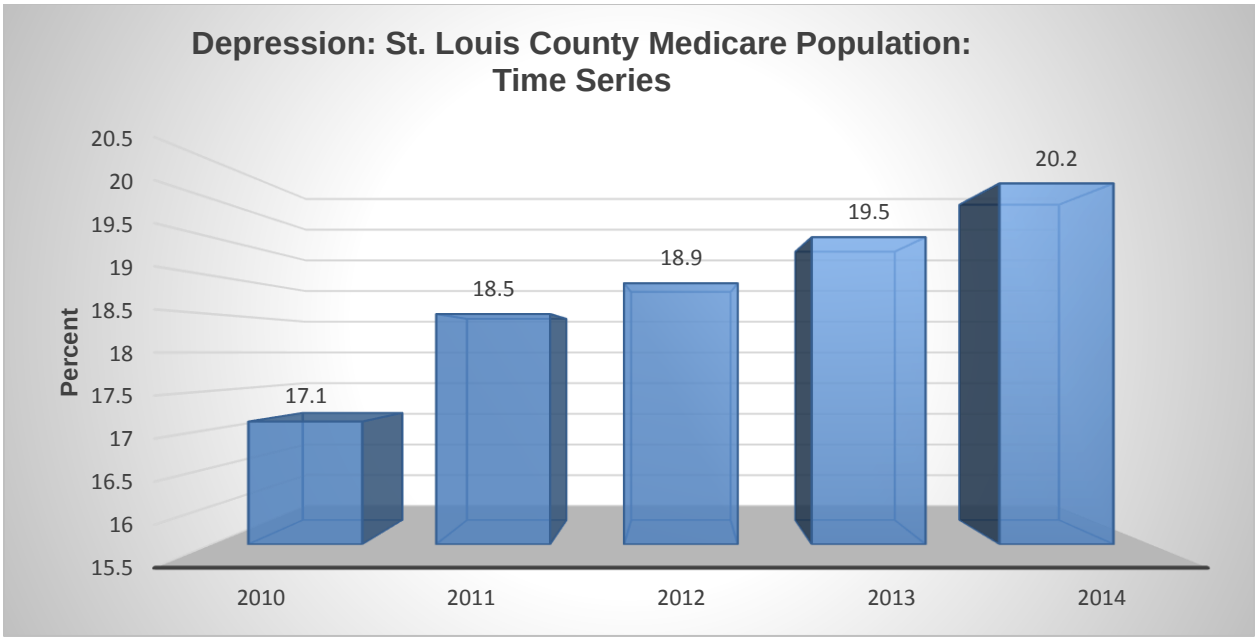


Source: Healthy Communities Institute

The death rate due to suicide among Whites was two and one-half times 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+.

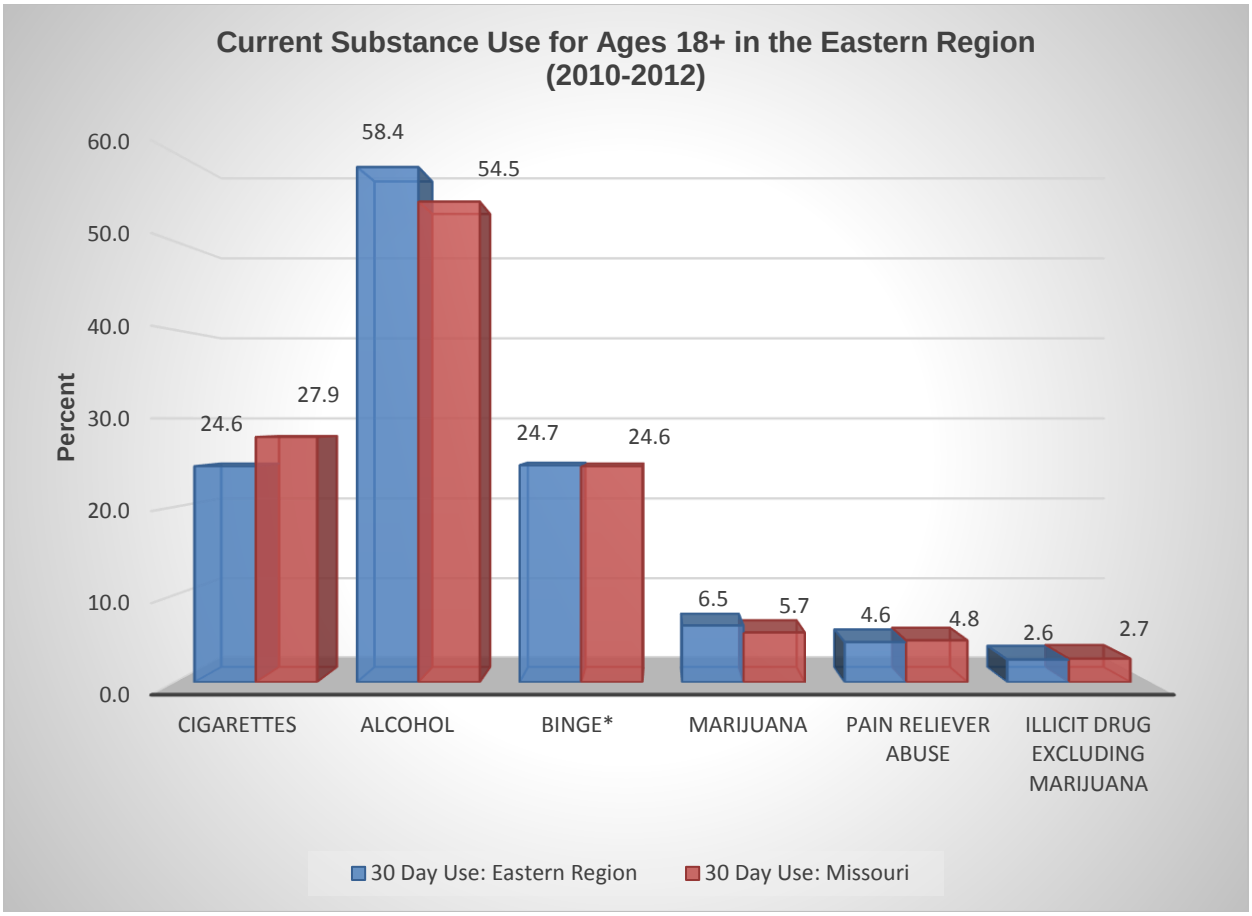


Source: Healthy Community Institute

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.

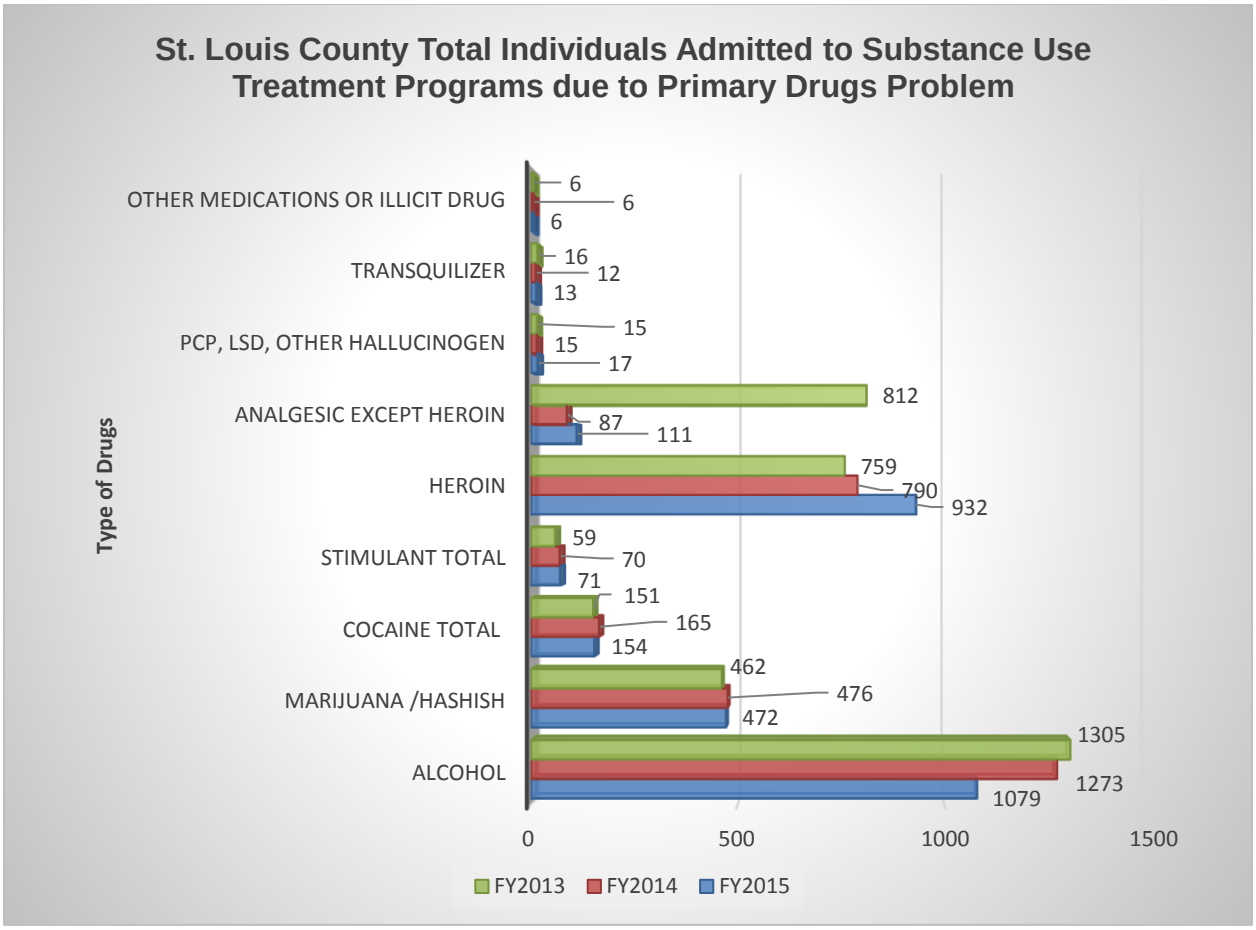
Substance Use and Abuse

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).



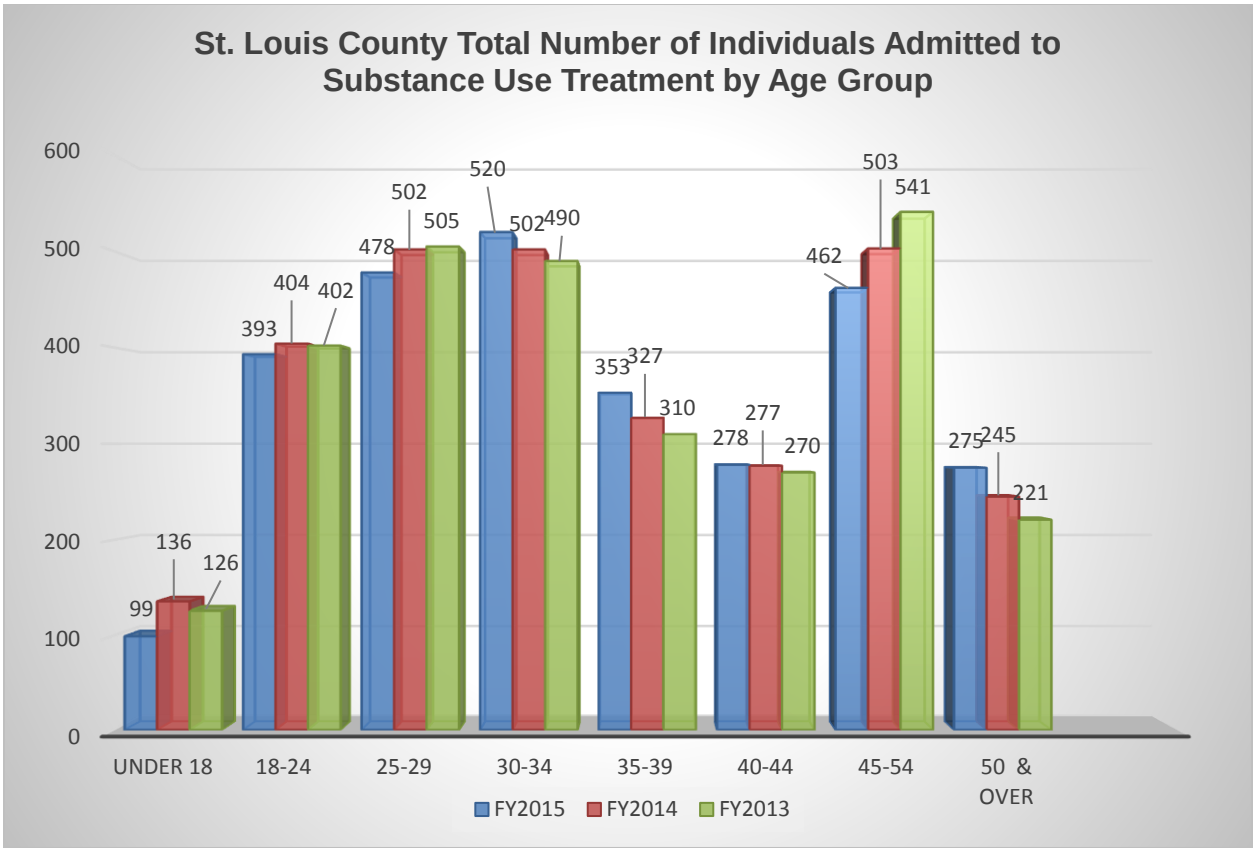
Source: Missouri Department of Mental Health

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 use was higher in the eastern region than the state. Pain reliever abuse and illicit drug use rates were statistically the same for the region and state.



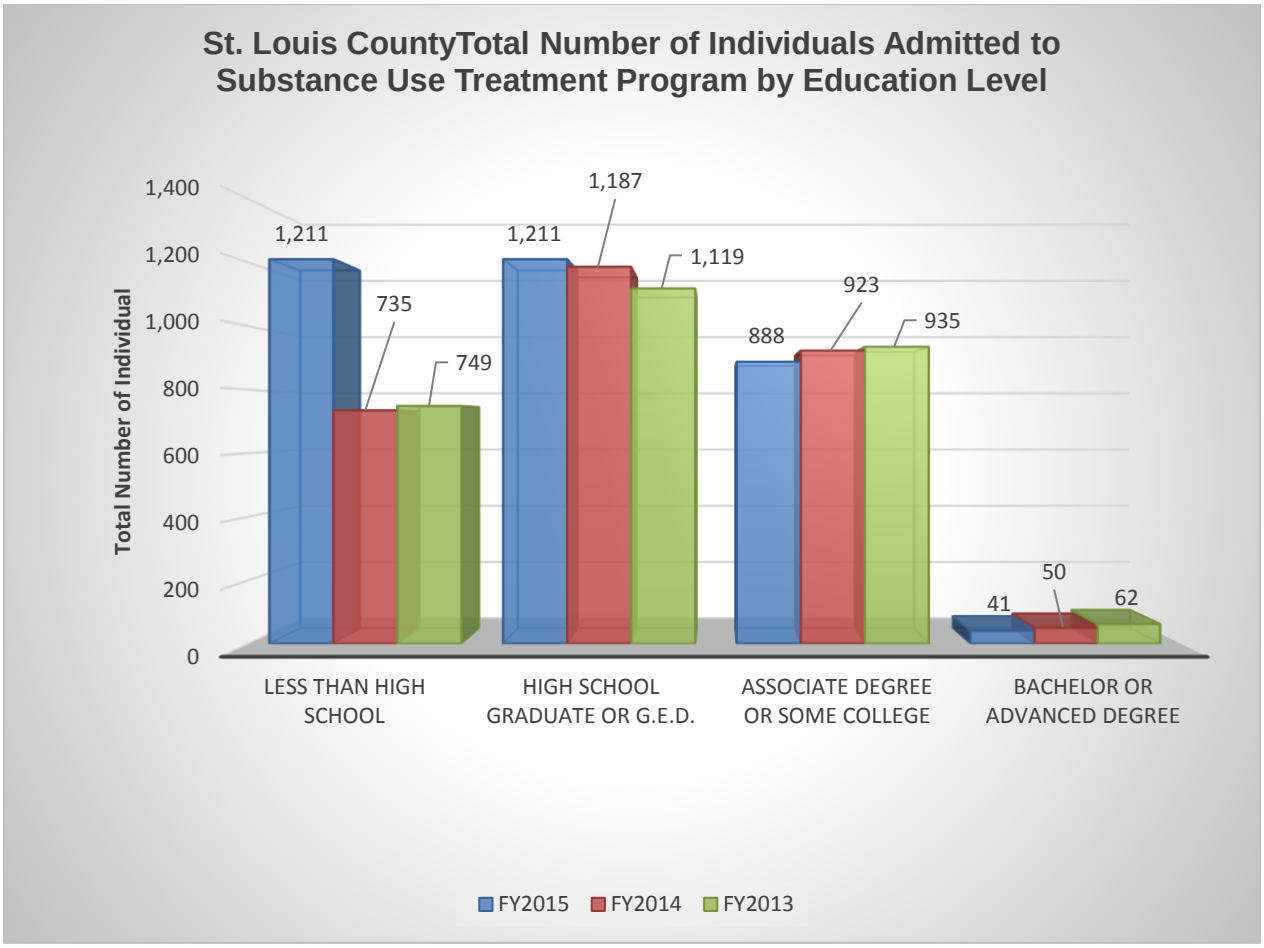
Source: Missouri Department of Mental Health

While the rate decreased from 2013-2015, alcohol use (3,657) remained the primary drug for admissions to substance use programs in St. Louis County compared to 2,481 admissions for heroin use. Heroin use rates increased from 2013-2015.



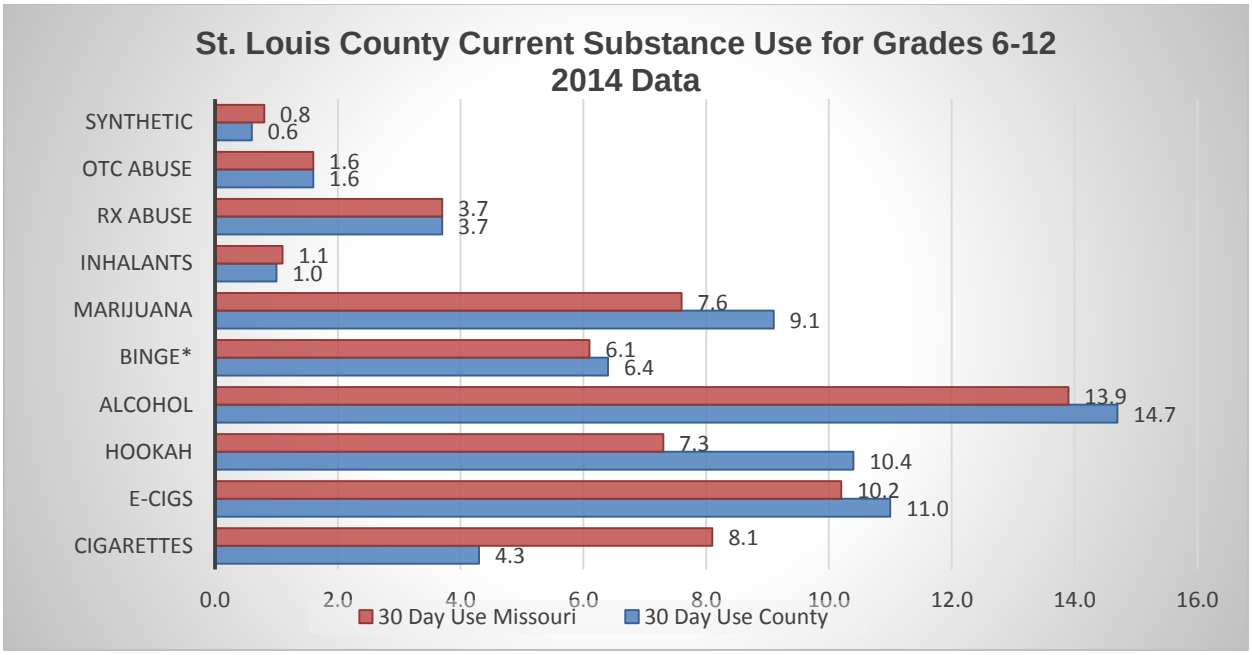
Source: Missouri Department of Mental Health

The 30-34 age group (1,512) reported the highest number of individuals admitted to substance use treatment programs in St. Louis County. This age group was followed closely by the 45-54 age group (1,506), and the 18-24 age group (1,485).



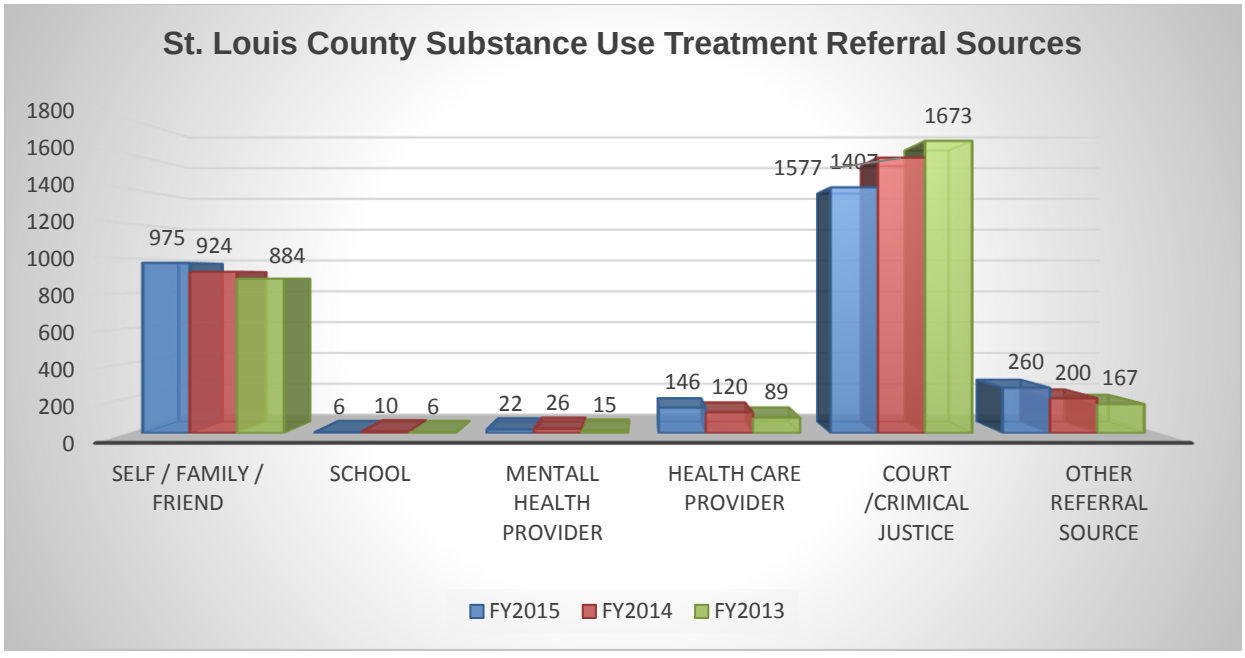
Source: Missouri Department of Mental Health

Individuals with a high school degree or G.E.D. (3,517) were the most likely to be admitted for substance use treatment, followed by individuals with an associate degree or some college (2,746) and those with less than high school (2,695) from 2013-2015 in St. Louis County.



Source: Missouri Department of Mental Health

Alcohol and E-cigarettes were the highest substances used among children in grades 6 -12 in St. Louis County and Missouri.



Source: Missouri Department of Mental Health

Most substance abuse treatment referrals in St. Louis County from 2013-2015 originated from the court or the criminal justice system followed by self/family/friend referral. In 2015, there were 168 referrals from mental health and health care providers.

Secondary Data Summary

The collection of secondary data presented on the preceding pages revealed a number of findings:

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

- More than one-third of individuals in St. Louis County diagnosed with cancer died of cancer. The incidence rate in the county was higher than the rate in the Missouri by 7.4 percent and the U.S. by 7.6 percent.

- The overall incident rate due to lung & bronchus cancer by race in St. Louis County was 69.6 percent. African Americans had a 20 percent higher incident rate than Whites.

- The death rate due to breast cancer experienced a steady decline in the last decade in St. Louis County (11.7 percent) and in Missouri (9.3 percent).

- The overall rate of hyperlipidemia among the Medicare population was 6.4 percent higher in St. Louis County when compared to Missouri.

- The death rate from heart disease was nearly one and one-half times higher among African Americans than Whites in the county.

- 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.

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

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

- 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.

- The death rate due to suicide among Whites was two and one-half times the rate of African Americans in St. Louis County. For the period ending 2014, there was a 21 percent increase in the age-adjusted death rate due to suicide when compared to the period ending in 2009.

- 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 (2014).

- The propensity to suffer from symptoms of depression was 17 percent for both West County and South County residents. South County had a higher propensity to have residents with poor to fair health (16 percent) than West County (14 percent).

- While the rate decreased from 2013-2015, alcohol use (3,657) remained the primary drug for admissions to substance use programs in St. Louis County compared to 2,481 admissions for heroin use. Heroin use rates increased from 2013-2015. Alcohol and E-cigarettes were the highest substances used among children in grades 6 -12 in St. Louis County and Missouri.

- 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.

C. Internal Work Group Prioritization Meetings

Barnes-Jewish West County Hospital chose 17 employees to participate on an internal CHNA work group representing various hospital departments including, Emergency Medicine; Care Coordination; Hospitalist; Radiation Oncology; Administration; Pharmacy; Community Outreach; and Communications and Marketing. (See Appendix C).

The work group held meetings to analyze the primary and secondary data and to complete the priority ranking for the hospital's 2016 CHNA.

Utilizing the information gathered in the community stakeholder focus group and from the secondary data collection, the team went through a number of exercises during meetings to establish criteria for priority setting which ultimately determined the two needs the hospital will address from 2017 to 2019.

Much discussion and debate occurred with each meeting and exercise. When assessing the data, internal workgroup members were to consider the following criteria:

- Incidence or importance of need
- The ability to collaborate with other community hospitals and/or organizations
- Barnes-Jewish West County Hospital priorities
- Budget allocation

Prior to Meeting 1: Workgroup Ranking Exercise

The team received the needs west and south St. Louis County residents determined by the 2015 focus group and were asked to rank needs from 1 (highest need) to 16 (lowest need) based on criteria listed above. Information was gathered from 10 internal team members.

Meeting 1

The work group met on Jan. 7, 2016 with the goal to analyze and prioritize data from the focus group to ensure alignment with community needs before allocation of resources.

- Review of 2015 Focus Group – new issues of concerns, perception of gaps, changes since 2013, how community leaders re-ranked the 2013 needs based on current level of concern and collaboration
- Workgroup Ranking Exercise – to narrow down the list of 16 needs to the top 10 needs

Table 16: List of Primary Data	
Stakeholders Focus Group: Top 16 Community Health Needs	**BJWCH CHNA Work Group: Top 10 Communities Health Needs**
Access: Health Insurance Coverage	Access: Health Insurance Coverage
Access: Services	Access: Services
Alcohol/Substance Abuse	Alcohol/Substance Abuse
Behavioral/Mental Health and Disorders	Behavioral/Mental Health and Disorders
Cancer: Breast	Cancer: Breast
Cancer: Colon and Rectal	Cancer: Colon and Rectal
Cancer: Lung	Cancer: Lung
Cancer: Skin	Diabetes
Cultural Literacy	Heart & Vascular Disease
Diabetes	Senior Services/Social Support
Health Literacy	
Heart & Vascular Disease	
Maternal/Child Health	
Senior Services/Social Support	
Smoking/Tobacco Use & Education	
Violence	

Highlighted above in red are the needs the hospital CHNA work group decided not to include in its top list: Cancer: Skin; Cultural Literacy; Health Literacy; Maternal/Child Health; Smoking/Tobacco Use & Education; and Violence. The right column lists the top 10 community health needs the work group selected.

Cancer: Skin - The incidence of melanoma of the skin is lower than the incidence of breast, lung and colorectal cancers. Barnes-Jewish West County Hospital has offered free skin cancer screenings in the past and will likely continue screenings in 2017, but will not incorporate screenings into the 2016 implementation plan. If the program continues, attendees who are found to be high risk or those diagnosed with melanoma will be connected to a physician for appropriate follow-up care.

Cultural Literacy - Cultural Literacy will be considered for west and south St. Louis County community residents when the hospital has identified its top health needs for implementation.

Health Literacy - Health Literacy will be considered for west and south St. Louis County community residents when the hospital has identified its top health needs for implementation.

Maternal/Child Health - Barnes-Jewish West County Hospital does not offer services to patients less than 18 years of age; therefore, the hospital does not possess the resources to address this need.

Smoking/Tobacco Use & Education - Clinical staff at Barnes-Jewish West County Hospital will use the current Patient Guide as an educational resource for patients. Information is provided to help a smoker connect with a local organization, which includes the American Lung Association, Siteman Cancer Center, National Cancer Institute and National Network of Tobacco Cessation Quitline. Each of these organizations provides a step-by-step program designed to help smokers quit and improve their health.

Violence - It was suggested that violence may be better addressed by Barnes-Jewish Hospital as this need is a greater concern/priority in the city versus the county.

Barnes-Jewish West County Hospital will not individually address nine of the 10 needs identified through the CHNA process. It was determined that a community hospital of its size cannot adequately address all of the needs identified.

Table 17: Barnes-Jewish Hospital West County Internal Work Group: Ranking of Top Community Health Needs		
Highest to the Lowest Needs	**Rank**	**Total Scores**
Access: Services (PCPs, preventable hospitals stays etc.)	1	58
Access: Health Insurance Coverage	2	62
Cancer: Breast	3	67
Cancer: Colon and Rectal	4	77
Cancer: Lung	5	89
Diabetes	6	90
Heart & Vascular Disease	7	92
Behavioral / Mental Health and Disorders	8	96
Senior Services/Social Support	9	99
Alcohol / Substance Abuse	10	104

Each of the 10 needs was ranked from 1 to 10, with 1 as the highest and 10 as lowest. The rankings were added together to determine the final ranking; the need with the lowest total score was ranked the highest.

After this exercise, the group discussed the results. Participants were then encouraged to discuss how and why each arrived at the ranking. Access: Services ranked as the highest community health need followed by Access: Health Insurance Coverage.

Meeting 2

The work group gathered again Jan. 27, 2016 with the goal to review data from primary and secondary sources in order to determine one to three health care needs Barnes-Jewish West County Hospital could address and provide resources toward. At this meeting, the work group reviewed/completed:

- 2015 focus group review
- Internal workgroup exercises
- St. Louis County data from Healthy Communities Institute (HCI)
- HIDI data from BJC Strategic Planning

Prior to the meeting, the team received instructions on the process to narrow the top 10 health needs to one to three health needs. Using the method below, higher values indicated a more pressing need.

Rating: Assign a rating from 1 to 5 for each criteria, with:

1= Low Priority	3=Neutral/Average	5=High Priority

Weight: Assign a weight from 1 to 3 for each criteria, with:

3. Criteria of overriding importance
2. Important criteria
1. Criteria worthy of consideration, but not a major factor

Score: Multiply rating and weight for final score

- Multiply rating and weight for score of each criteria
- Total score is sum of scores

During this meeting, 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.

The tables below exemplify the ranking of Access to Services and Alcohol/Substance Abuse using the advanced ranking method. Comparing these two needs, Alcohol/Substance abuse was a higher priority than Access to Services.

Table 18: Criteria For Priority Setting

Access: Services (PCPs, preventable hospital stays etc.)	Rating	Weight	Score
How many people are affected by the problem?	5	3	15
What are the consequences of not addressing this problem?	5	3	15
Are existing programs addressing this issue?	4	2	8
How important is this problem to community members?	4	2	8
How does this problem affect vulnerable populations?	5	3	15
The total score			**61**

Source: Catholic Health Association

Table 19: Criteria For Priority Setting			
Alcohol/Substance Abuse (prescription drugs, heroin, meth)	**Rating**	**Weight**	**Score**
How many people are affected by the problem?	4	2	8
What are the consequences of not addressing this problem?	5	3	15
Are existing programs addressing this issue?	4	2	8
How important is this problem to community members?	3	2	6
How does this problem affect vulnerable populations?	3	2	6
The total score			**43**

Source: Catholic Health Association

The work group also reviewed data from the Hospital Industries Data Institute. (HIDI 2014). The HIDI data provided Barnes-Jewish West County Hospital health condition volumes (discharges and outpatient volumes) to compare to the primary and secondary data.

Next, the work group reviewed results of the secondary data using the Healthy Communities Institute (HCI) Data Scoring Tool, which compares data from similar communities in the nation. The tool provides a systematic ranking of indicators for St. Louis County and helps prioritize the needs. The scoring is based on how a county compares to other similar counties within the state and U.S., the average state value, the average U.S. value, historical indicator values, Healthy People 2020 targets, and locally set targets, depending on data availability. The team reviewed the scores by indicators.

Primary and Secondary Rating Summary

The table below shows:

- Primary data from the focus group ranking
- Needs identified by the internal work group ranking
- Results of Healthy Communities Institute (HCI) scoring tools

Table 20: Community Health Needs Assessment Primary & Secondary Data Rating Summary			
Rank	**Focus Group Ranking**	**Internal Work Group Ranking**	**Healthy Communities Institute**
1	Behavioral/Mental Health	Access: Services	Asthma (Medicare Population)
2	Alcohol/Substance Abuse	Access: Health Insurance Coverage	Chronic Kidney Disease (Medicare Population)
3	Maternal/Child Health	Cancer: Breast	Depression (Medicare Population)
4	Access to Services	Cancer: Colon and Rectal	Atrial Fibrillation (Medicare Population)
5	Seniors Svices/Social Support	Cancer: Lung	Breast Cancer Incidence Rate
6	Diabetes	Diabetes	Cancer (Medicare Population)
7	Access to Coverage	Heart & Vascular Disease	Osteoporosis (Medicare Population)
8	Heart & Vascular Disease	Behavioral/Mental Health and Disorders	Rheumatoid Arthritis (Medicare Population)
9	Violence	Senior Services/ Social Support	Stroke (Medicare Population)
10	Cultural Literacy	Alcohol/Substance Abuse	Adults Who Drink Excessively
11	Health Literacy		Alzheimer's Disease or Dementia: Medicare Population
12	Cancer: Colon		Babies with Low Birth Weight
13	Cancer: Lung		Hyperlipidemia: Medicare Population
14	Tobacco Use		Hypertension: Medicare Population
15	Cancer: Skin		Prostate Cancer Incidence Rate
16	Cancer: Breast		Adults with Current Asthma

- Behavioral/Mental Health, Substance Abuse, Cancer and Heart and Vascular Disease (and associated categories) were listed by all groupings.

- Access to Coverage; Access to Services; Senior Services; and Diabetes; were listed by the focus group and the internal work group.

- Maternal and Infant Health was listed by the focus group and Healthy Communities Institute.

After reviewing the secondary data, the team discussed the health disparity among the populations in St. Louis County. Additionally, members considered needs based on impact on the community and if other organizations were already addressing a particular need. The work group also reviewed hospital resources available, including staffing, program availability and hospital service lines to meet the need.

Participants reviewed and discussed the differences among all rankings and were provided the opportunity to change their rankings. However, the team decided to keep the initial ranking. Individual rankings were totaled to yield a composite ranking. (See rationale section in the 2017 Implementation Plan on the next page for more details.).

At the conclusion of the comprehensive assessment process to determine the most critical needs in the West County and South County communities, the group concluded that Barnes-Jewish West County Hospital will continue to provide some of the community programs outlined in the 2013 plan. In addition for the 2016 plan, the hospital will also focus on: (1) Cancer: Head & Neck and (2) Alcohol/Substance Abuse.

V. Appendices

Appendix A

About Barnes-Jewish West County Hospital

Barnes-Jewish West County Hospital has been providing high-quality health care in a compassionate, healing environment since 1989 and is united with BJC HealthCare in the mission to improve the health of the people and communities we serve.

Barnes-Jewish West County Hospital patients have access to world-class physicians, including Washington University Physicians, BJC Medical Group and private practice physicians. Barnes-Jewish West County Hospital offers highly specialized care for a unique line of services. This includes the Siteman Cancer Center, emergency care, heart and vascular, imaging, sleep disorders, and physical therapy and rehabilitation, as well as a full range of inpatient and outpatient surgical procedures including colorectal, urology, orthopedics, plastics, ENT, digestive diseases, bariatrics and ophthalmology.

Barnes-Jewish West County Hospital is connected to the region's national leader in medicine, Barnes-Jewish Hospital and is a part of BJC HealthCare, one of the largest nonprofit health care organizations in the United States.

Apppendix B		
Focus Group Participants and Hospitals' Observants		
Focus Group Participants		
Last Name	**First Name**	**Organization**
Bartnick	Rachelle	American Heart Association
Bielik	Mindy	St. Louis Suburban School Nurses
Broadus	Damon	American Heart Association
Brown	Gloria	Missouri House of Representatives
Duff	Thomas	Catholic Family Services
Duncan	Dan	National Council on Alcoholism & Drug Abuse
Elders	Beth	Manchester United Methodist Church
McKenna	Diane	South County Health Center
Menefee	Maggie	ALIVE
Moll	Dominic	Lemay Fire Protection District
Moore	Mattie	Office of the County Executive
Mueller	Dianne	St. Louis Crisis Nursery
Orson	Wendy	Behavioral Health Network
Schaefer	Mary	Mid-East Area on Aging
Schmidt	Spring	St. Louis County DOH
Shouse	Kelly	Hope Lodge
Takeyama	Rikki	Regional Health Commission
Vaisvil	Cathy	United Way 2-1-1
Wade	Lottie	United Way
Wade	Vickie	People's Health Centers
West	Ted	Feed My People
Wiehardt	Denise	Crisis Nursery
Wren	Katie	American Cancer Society
Zelinske	Anna	Jewish Community Center

Hospitals' Observants		
Last Name	**First Name**	**Hosptals**
Allen	Marci	MBMC
Arvin	Jennifer	BJWCH
Bub	Laura	SAMC
Candio	Christine	St. Luke's Hospital
Elkins	Joan	MBMC
Finetti	Yoany	BJWCH
Gemoules	Madeleine	Mercy St. Louis
Holter	Dennis	SAMC
Johnston	Jeff	Mercy St. Louis
Kalicak	Liz	BJWCH
King	Karley	BJC HealthCare
Neumeister	Sharon	Mercy St. Louis
LaChance	Jim	BJWCH
Osseck	Tara	St. Luke's Hospital
Stringer	Lisa	BJC HealthCare
Varner	Anna	Mercy St. Louis
Victor	Debra	MBMC
Wade	Angela	BJC HealthCare
Waite	Josh	Mercy St. Louis
Weinstein	Cindy	BJWCH
Wertenberger	Darla	St. Luke's Hospital

App**endix C**

PERCEPTIONS OF THE HEALTHCARE NEEDS OF WEST AND SOUTH ST. LOUIS COUNTY RESIDENTS FROM THE VIEWPOINT OF COMMUNITY LEADERS

Prepared by:

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Manager, Market Research & CRM

Angie Wade

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BJC HealthCare

September 3, 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.

In 2012, several hospitals collaborated on their first needs assessment, with a specific focus on west and south St. Louis County. They included Barnes-Jewish West County Hospital (BJWCH), Missouri Baptist Medical Center (MBMC), St. Anthony's Medical Center (SAMC) and St. Luke's Hospital (SLH). In 2015, they were joined by Mercy St. Louis in this collaboration.

Each of the hospitals is at a different phase in the assessment process and is on different implementation plan timetables. SAMC and Mercy made their plans public in June 2013, while the BJC hospitals and St. Luke's were made public in December 2013. The next iteration of CHNA plans will be due on the corresponding months in 2016.

All of the hospitals are in the process of preparing their next CHNA, and agreed to continue their collaboration to assess feedback from community stakeholders who have an interest in the health of consumers located in West and South 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 St. Louis County residents, especially those in the west and south, who are served by these five hospitals. Specifically, the discussion focused on 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) Assess where there are the gaps in the plans 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 the participating hospitals 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, BJWCH, MBMC, SAMC, SLH, and Mercy St. Louis hosted a single focus group with public health experts and those with a special interest in the health needs of residents located in west and south St. Louis County. It was held on July 23, 2015 at the Frontenac Hilton in St. Louis County. The group was facilitated by Angela Ferris Chambers, Manager of Market Research & CRM for BJC HealthCare. The discussion lasted ninety minutes.

19 individuals representing various St. Louis County organizations participated in the discussion. Two others were invited, but were unable to attend (Appendix A).

Christine Candio, President and CEO, St. Luke's Hospital, welcomed participants at the beginning of the evening. Those who were observing on behalf of Barnes-Jewish West County Hospital, Missouri Baptist Medical Center, St. Anthony's Medical Center, St. Luke's Hospital, and Mercy St. Louis introduced themselves 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 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 several hospitals are working to standardize the language for identifying prioritized needs so that impact can be measured consistently. This will allow the sharing of best practices among all facilities.

The five hospitals identified several priorities for the 2012/2013 CHNAs, ranging from access to health insurance coverage to violence. Although some needs varied, they also share overall priorities such as access to services, cancer, and to some degree, chronic diseases and behavioral/mental health:

BJWCH	MBMC	St. Anthony's	St. Luke's	Mercy St. Louis
• Access to coverage • Chronic Disease: Heart and vascular • Cancer: skin	• Access to services • Cancer: breast • Cancer: skin • Chronic Disease: Diabetes • Chronic Disease: Heart and vascular	• Access to services • Behavioral/ mental health • Health literacy	• Cancer: breast • Cancer: colon • Cancer: lung • Chronic Disease: Diabetes • Chronic Disease: Heart and vascular • Obesity	• Access to coverage • Access to services • Behavioral/ mental health • Tobacco use • Violence: domestic and family

Further, each hospital outlined the goals and tactics for implementation which will be used to measure the success of each priority. Details of each hospital's needs assessment plan can be found on each hospital's website.

BJWCH, MBMC, SAMC, SLH, and Mercy St. Louis agree that the following needs are important, but chose not to address them in 2013:

- Alcohol/Substance Abuse
- Cultural Literacy
- Maternal and Infant Health
- Senior Services/Social Support

After the discussion, participants were asked to rate each need on their level of concern, as well as the ability to address them via community collaboration.

KEY FINDINGS

PERCEPTION OF 2012/2013 PRIORITIES:

There was general consensus that the priorities identified in the previous assessment are still those on which the hospitals should focus. Further, goals and tactics discussed provided some insight into the detailed CHNA implementation plans that are located on BJWCH, MBMC, SAMC, SLH, and Mercy St. Louis websites.

CONSIDERATIONS FOR ADDING TO THE LIST OF PRIORITIES:

After reviewing the hospitals' key issues/priorities, nothing was identified that should come off the list. Many expressed the desire to reevaluate the priorities, however, and integrate additional needs into the list of those being addressed.

- **Alcohol/Substance Abuse:** Incidence rates have risen substantially over the years, especially for heroin and prescription drugs, and are considered a "major public health issue." At the same time, fewer treatment services are available, especially inpatient beds. Further, limitations on insurance plans and reimbursement contribute to the slow demise of medical-assisted treatments, detox programs, and other services required to treat those who struggle with addiction.

- **Senior Services/Social Support:** The senior population is increasing, particularly in South County. Seniors are large consumers of services, with unique needs currently not being addressed. Several agree that access to transportation is a major concern for them. Often, it is difficult for seniors to get to the hospital or to their primary care physician because they do not drive. As a result, "they end up calling the emergency group because they don't have transportation."

- **Maternal/Child Health:** St. Louis County has a very high infant mortality rate and it is getting worse.

Consideration should also be given to redefining the following category:

- **Senior Services/Social Support:** Social support should be separated from senior services as an area of need. Social support is important not just for seniors but to women, children and families, and each may require a different approach.

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 needs are being addressed.

ALCOHOL/SUBSTANCE ABUSE:

- Other states have adopted prescriber guidelines and tool kits that have resulted in demonstrable decreases in opioid abuse and heroin deaths.
- Providers who are treating patients with chronic conditions have an opportunity to provide additional referrals to those who are also dealing with substance abuse and/or mental health issues. Addressing the latter would increase the likelihood of the patient being more compliant in dealing with his/her chronic condition.
- There is a need to address the stigma associated with both substance abuse and behavioral health issues by examining the language used to talk about them and the processes put into place for users to access services. If barriers to access

could be lowered as well as the stigma that these systems create, more people might take advantage of the services that do exist.

BEHAVIORAL/MENTAL HEALTH:

- There is increasing awareness that trauma affects an individual's mental health. The impact that Ferguson has had on our community as well as environmental trauma, in general, needs to be acknowledged.
- Physicians need a greater awareness of how to identify mental health issues, and when to refer individuals for counseling and mental health services. People will follow the recommendations of those whom they trust, including their physicians.
- There is an insufficient number of child psychiatrists in the area compared to the size of the need. Medicaid reimbursement is inadequate to encourage psychiatrists in the area to participate in the program.
- One resource this region doesn't have is access to Crisis Respite for individuals undergoing a mental health crisis. This would be a place where an individual could get some additional support, get stabilized and then return to the regular routine of their life.
- Resources to support mental health are not sufficient. Mental health should be treated no differently than cancer.
- There's no good system within the region to share health information in an appropriate way. An individual who has been on a stable medication regimen but stops taking them needs to get back on their treatment plan. If s/he comes into the ED, there's no way to know that, however, and their medications are changed. They may never get back to that level of recovery.

CHRONIC CONDITIONS:

- When hospitals perform screenings, there needs to be a mechanism in place for those with positive results to receive follow-up care, especially if they don't have insurance. How do we address the needs of those who are diagnosed but are unable to access treatment?

COLON CANCER:

- 70% of those not being screened for colon cancer have health insurance. Primary care physicians need to encourage their patients to be screened, and address the fear and stigma that may be preventing them from following through.

HEALTH LITERACY:

- Health literacy and cultural literacy should be considered a component of every program, and not as “stand-alone” needs. For every need that is defined, the approach should be evaluated with an eye to both health literacy and cultural literacy.

CHANGES SINCE 2012/2103 and NEW ISSUES OF CONCERN:

ACCESS TO TRANSPORTATION:

- Having transportation available to access medical services is a major concern. Without it, individuals end up using emergency medical transportation inappropriately, making it unavailable for someone who truly may need it and increasing health care costs unnecessarily.
- Thinking creatively in our approach, there are opportunities to bring services into the community where they are needed, rather than forcing the population to go to the services. Consider expanding the concept of a mammography van to a vision van, a heart & vascular van, or a van that visits schools to provide pediatric care.
- Some communities have also created programs that use paramedics to make “house calls” to individuals who might not otherwise have access, eliminating their use of emergency services unnecessarily.
- The state Medicaid transportation program is both inefficient and ineffective

COLLABORATION:

- Many expressed a desire to explore opportunities to collaborate on these issues more than every three years. Those sitting at the table would like to be included in the process, and seek opportunities to work with these hospital partners to expand everyone’s reach. In addition, there is an opportunity to engage many of the faith communities that are easily accessible to each of the participating hospitals and invite them to be involved in the process. Other partners might include urban housing groups, the County Health Department and the City Health Department.
- There are other non-traditional health partners to consider as well as community organizations like Oasis through which collaboration would encourage the breaking down of silos and promote a more community-based approach.

MATERNAL/INFANT HEALTH:

- Recent statistics indicate that health outcomes for infants are worse in St. Louis than in some third world countries. Children are more likely now than ever to be killed at the hands of a caregiver.

HEALTH DISPARITIES:

- Individuals will experience vastly different health outcomes based on characteristics such as race, age, gender or where they live in St. Louis. Health disparities should be considered within every need that is identified and addressed in the hospitals' plans.
- The report *For Sake of All* by Dr. Jason Purnell of the Brown School of Social Work at Washington University should be referenced to better understand the role of health disparities in St. Louis.

CULTURAL LITERACY:

- Cultural literacy directly impacts quality of care, continuity of care, and health outcomes. Further, it is believed that achieving implementation goals outlined in the hospitals' CHNAs hinge upon the partners' ability to increase cultural competencies and lower barriers. If barriers are lowered by increasing cultural literacy, more people may take advantage of new or existing services.

SOCIAL DETERMINANTS OF HEALTH:

- The escalation of violence in the last three years has affected every community, not just north St. Louis. It impacts mental health and feeds into substance abuse.
- Access to health insurance through Missouri Health Net used to be a two-month process. Due to the Affordable Care Act, it now takes six to nine months.
- Individuals of every age have a need for social support. Caregivers of those with health issues struggle to provide care to their loved one and serve as the link between them and the agencies from which they obtain services. There is a need for services that educate and support the caregivers, so they can maintain their loved one at home.

CHILDHOOD OBESITY:

- This issue is a growing concern, and will impact the incidence of chronic conditions as these children grow into adulthood.

Other areas of concern that were briefly mentioned included healthy food access, Medicaid and elderly abuse.

SPECIAL POPULATIONS:

SENIOR CARE:

- The growth in the size of the elderly population will impact the need for caregivers, not only in the hospital but in the community.

CHILDREN/YOUTH:

- There is a need for more child psychiatrists in general as well as those who will take Medicaid.

OTHER ORGANIZATIONS WITH WHOM TO CONSIDER PARTNERING:

- Consider including **law enforcement**. Some police departments have Crisis Intervention Teams who work with individuals with mental health disorders. The goal is divert them from jail and get them to treatment. Oftentimes, however, that means going to the emergency department, although that may not be the best placement for an individual experiencing a psychiatric crisis.

- Because of the extent to which **EMS** come into contact with community members, they can be used as a source of referral for community resources. If they were provided with a list of resources, they could hand them out to those in need with whom they come in contact.

- For maternal and child health issues, we should partner with the **Maternal Child and Family Health Coalition** and the **Crisis Nursery**.

- Engaging the **St. Louis County Clergy Coalition** would be a positive step as well as the **Metropolitan Churches United**, although the latter is a fee-based organization.

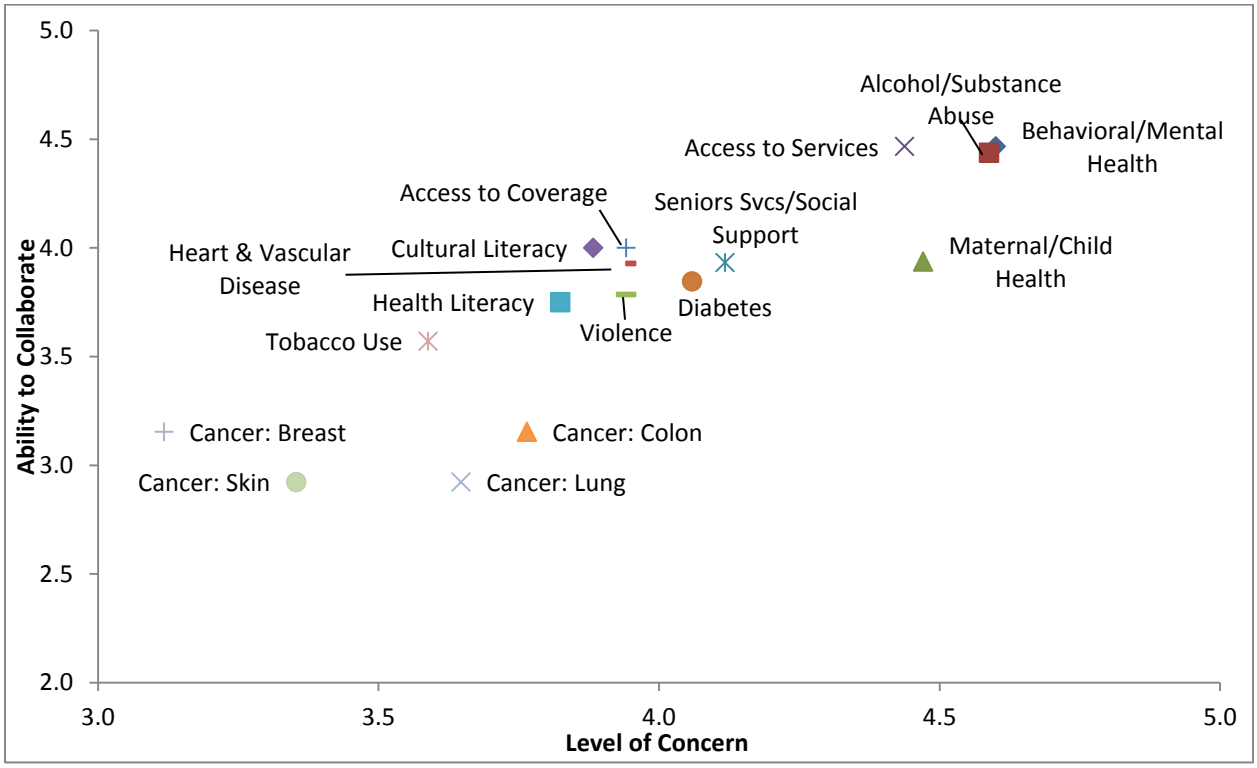
- The **Epworth Children and Family Services** is in Webster Groves, and throughout West County, the **Foster and Adoptive Care Coalition** is a great partner, as well as some of our other children and family ministries and advocacy groups.

- **Meals On Wheels** is a community resource, although they touch a limited number of people.

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.

Behavioral/mental health and alcohol/substance abuse rated highest in terms of level of concern and ability to collaborate. Interestingly, breast cancer rated lowest on level of concern. Skin cancer and lung cancer tied for lowest on ability to collaborate. The actual ratings are shown on the chart on the next page.



AVERAGE RATINGS

	Level of Concern	Ability to Collaborate
Behavioral/Mental Health	4.6	4.5
Alcohol/Substance Abuse	4.6	4.4
Maternal/Child Health	4.5	3.9
Access to Services	4.4	4.5
Seniors Svcs/Social Support	4.1	3.9
Diabetes	4.1	3.8
Access to Coverage	3.9	4.0
Heart & Vascular Disease	3.9	3.9
Violence	3.9	3.8

Cultural Literacy	3.9	4.0
Health Literacy	3.8	3.8
Cancer: Colon	3.8	3.2
Cancer: Lung	3.6	2.9
Tobacco Use	3.6	3.6
Cancer: Skin	3.4	2.9
Cancer: Breast	3.1	3.2

NEXT STEPS

Based on the input the hospitals received from community stakeholders, each hospital will examine secondary data for St. Louis County to explore the size of the needs that have been identified.

In addition, 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 June 30, 2016 for St. Anthony's Medical Center and Mercy St Louis, and December 31, 2016 for Barnes-Jewish West County Hospital, Missouri Baptist Medical Center and St. Luke's 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.

Implementation Plan

As recommended by federal guidelines, Barnes-Jewish West County Hospital identified two priority areas that align with the strategic priorities of the hospital from the 10 health needs identified in its CHNA. The implementation plan includes the rationale of the selection of the focus areas, as well as an explanation of how Barnes-Jewish West County Hospital will meet its goals.

A. Identified Community Health Needs Barnes-Jewish West County Hospital will address

- Cancer: Head & Neck
- Behavioral/Mental Health: Alcohol/Substance Abuse

1. Cancer: Head & Neck

Rationale

- People are not aware of the symptoms of a head and neck tumor, nor are they aware that many forms of head and neck cancers are preventable.
- Over the past decade, an increasing number of cases of head and neck cancer have been attributed to the human papillomavirus, or HPV.

Program Goal

- Increase early detection of head and neck cancer.

Program Objectives

- Screen a minimum of 80 adults from south and west St. Louis County for head and neck cancer each year.
- In 2016, baseline percentage change from patient pre and post tests will be taken to show impact of education. In 2017 to 2019 increase the percentage by 5 percent as compared to the previous year.
- A minimum of 10 percent of those who require further treatment will be successfully connected to the appropriate care.

Action Plan

- Hold a free head & neck screening at the Siteman Cancer Center on the campus of Barnes-Jewish West County Hospital for those with increased risk factors. The screening will be conducted by Washington University physicians and otolaryngologists will visually and physically check the ear, nose, throat and neck area for any signs of cancer. No diagnostic tests (scopes, X-rays, etc.) will be performed at this screening.
- Provide a resource on the web and in print for head and neck cancer prevention. Raise awareness of resources through social media, Focus

magazine (mailed to 100,000 households) and flyer distribution on the campus of Barnes-Jewish West County Hospital who attend the free head and neck screening about the importance of children getting the HPV vaccine.

Expected Outcomes

By our intervention and education, the following are behaviors or results we are expecting to achieve:

- By increasing awareness of head and neck cancers, community members will be aware of the symptoms and seek treatment from a physician before the cancer progresses to an incurable stage.
- Increased engagement of our community in primary prevention methods for developing head and neck cancers; tobacco cessation and HPV vaccination.
- Improved coordination of care for those to be determined to have high risk factors and those who require follow-up treatment.

Outcomes Measurement

- Record total number of people who attend the event and are screened.
- Record the number of people who receive a positive diagnosis, or are considered high risk, that the doctor recommends for follow-up care.
- Conduct pre and post test to 100 percent of the attendees. Knowledge test scores will determine if they learned something new at the event and plan to change a habit.
- Three months post screening - 100 percent of the patients who received a positive diagnosis, or who were considered high risk, will be tracked to determine if they received follow-up care from the Siteman Cancer Center.

2. Behavioral/Mental Health: Alcohol/Substance Abuse

Rationale

- 2016 Focus Group raised prescription drug misuse as a new issue of concern. Since 2012/2013 it was indicated that there has been a rise of heroin use and prescription drug misuse, as well as inadequate treatment options.
- Medicines that languish in home cabinets are highly susceptible to diversion, misuse, and abuse. Responsible drug disposal options to the public are needed.
- The National Institute on Drug Abuse (NIDA) has shown that the total number of opioids being prescribed to relieve and reduce the intensity of pain has been on the rise from 1991 to 2010. As these numbers rise, this results in an increase of addiction, overdose and death.
- Opioid drugs are a gateway to heroin. Heroin is an illegal substance that is easier to get and less expensive than prescription opioids.
- If diagnosed in time, opiate overdoses can be reversed with the administration of naloxone by a healthcare professional. Assistance into a treatment program should be provided to patient.
- Based on the stated rationale, and for the safety of our patients and employees, BJWCH will focus on increasing awareness of prescription drug misuse by education, safe medication storage and disposal.

Program Goal

Increase awareness of prescription drug misuse.

Program Objectives

a) In 2017, baseline percentage change from colorectal patient pre and post tests will be taken to show impact of education.
b) By 2019, increase knowledge test scores of prescription drug misuse in 8 percent of the patients who participate as compared to 2017.

Action Plan

- Beginning in 2017, Barnes-Jewish West County Hospital will require online training to educate health care providers on standards of care when reviewing opioid prescriptions with colorectal patients.
- Before a colorectal surgery patient is discharged, the provider will review all instructions including but not limited to, dosage, home safety, risks of misuse and proper disposal.
- Provide web-based and print materials to health care providers so they can offer immediate assistance to a patient who presents with a chemical dependency disorder (drug or alcohol) or classified as high risk.
- Raise awareness of resources through social media, and internal communications to physicians and clinical staff on the campus of Barnes-Jewish West County Hospital and Barnes-Jewish Hospital.

Expected Outcomes:

- Preventing prescription drug misuse will improve quality of life, lower health care costs and promote a safer community.

Outcomes Measurement

- Record the total number of Barnes-Jewish West County Hospital health care providers who complete the online competency training in Saba.
- Conduct a pre-test to all of the colorectal surgery patients who are discharged with an opioid prescription.
- Conduct a post-test to all of the colorectal patients during their follow-up phone call.
- Measure pre- and post-test results to measure awareness and confidence in addressing prescription drug misuse and illicit drug use.

B. Health Needs Barnes-Jewish West County Hospital will not Address

Barnes-Jewish West County Hospital will not individually address 15 needs identified through the CHNA process. It was determined that a community hospital of its size cannot adequately address all of the needs identified.

1. **Access: Health Insurance Coverage**
   All patients who have an interaction with BJC HealthCare are offered financial counseling and assistance in applying for state Medicaid, Medicare or any insurance the person qualified for, including our own financial assistance programs.

2. **Access: Services (PCPs, preventable hospital stays etc.)**
   Barnes-Jewish West County Hospital's primary care physicians on campus are accepting new patients; however, this is not a need that will be individually addressed, measured or tracked.

3. **Behavioral/Mental Health and Disorders**
   Barnes-Jewish West County Hospital does not offer these services; therefore it does not have the resources to address the need. BJC Behavioral Health is a provider of various mental health services for community members living in St. Louis County and beyond.

4. **Cancer: Breast**
   Barnes-Jewish West County Hospital provides all-digital breast imaging services on campus and is accepting new patients; however, this is not a need that will be individually addressed, measured or tracked. Radiologists from the Siteman Cancer Center review all breast images.

5. **Cancer: Colon and Rectal**
   Barnes-Jewish West County Hospital provides colonoscopy services on campus and is accepting new patients; however, this is not a need that will be individually addressed, measured or tracked.

6. **Cancer: Lung**
   The Siteman Cancer Center provides lung cancer screenings to eligible patients.

7. **Cancer: Skin**
   The incidence of melanoma of the skin is lower than the incidence of breast, lung and colorectal cancers. Barnes-Jewish West County Hospital has offered free skin cancer screenings in the past and will likely continue screenings in 2017, but will not incorporate screenings into the 2016 implementation plan. If the program continues, attendees who are found to be high risk or those diagnosed with melanoma will be connected to a physician for appropriate follow-up care.

8. **Cultural Literacy (competence)**
   For the two needs at Barnes-Jewish West County Hospital will address, cultural literacy will be taken into consideration.

9. **Diabetes**
   Missouri Baptist Medical Center, a member of BJC HealthCare, is addressing this health care need in its 2016 implementation plan. In addition, diabetes management is offered by BJC Home Care Services and St. Louis OASIS Institute.

10. **Health Literacy (special populations)**
    For the two needs Barnes-Jewish West County Hospital will address, health literacy will be taken into consideration.

11. **Heart and Vascular Disease**
    Missouri Baptist Medical Center, a member of BJC HealthCare, is addressing this health care need in its 2016 implementation plan.

12. **Maternal/Child Health**
    Barnes-Jewish West County Hospital does not offer services to patients less than 18 years of age; therefore, the hospital does not possess the resources to address this need.

13. **Senior Services/Social Support**
    BJC HealthCare is a partner with St. Louis OASIS Institute, which offers a wide range of health programs for adults age 50 and over. This organization supports healthy aging to residents in the west and south St. Louis counties through lifelong learning, healthy living and community service.

14. **Smoking/Tobacco Use & Education**
    The Barnes-Jewish West County Hospital Patient Guide provides resources to help a smoker connect with a local organization, which includes the American Lung Association, Siteman Cancer Center, National Cancer Institute and National Network of Tobacco Cessation Quitline. Each of these organizations provides a step-by-step program designed to help smokers quit and improve their health.

15. **Obesity: Childhood**
    Barnes-Jewish West County Hospital does not offer services to patients less than 18 years of age; therefore, the hospital does not possess the resources to address the need. Making healthy food choices to reduce childhood obesity is a focus for St. Louis Children's Hospital, a member of BJC HealthCare.

16. **Violence**
    It was suggested that violence may be better addressed by Barnes-Jewish Hospital as this need is a greater concern/priority in the city versus the county.

Appendix D: Banes-Jewish West County Hospital Internal Work Group Members			
Name	**Title**	**Department**	**Role**
Yoany Finetti, RN, BSN, MSN	Chief Nursing Officer	Administration, BJWCH	Hospital Champion
Jennifer Arvin	Director	Communications and Marketing, BJH	Core Workgroup
Liz Kalicak	Supervisor	Community Outreach, BJH	Core Workgroup
Libby Martin	Manager	Communications and Marketing, BJWCH	Core Workgroup
Cindy Weinstein	Coordinator	Communications and Marketing, BJWCH	Core Workgroup
Jason Barczewski, Pharm.D.	Manager	Pharmacy, BJWCH	Internal Workgroup
Diane Glen	Finance and Support Services	Administration, BJWCH	Internal Workgroup
Mary Jording	Manager	Radiation Oncology, BJWC	Internal Workgroup
Adam Meyer, MD	Washington University Physician	Hospitalist, BJWCH	Internal Workgroup
Val Siemer, RN, MSN	Specialist	Care Coordination, BJWCH	Internal Workgroup
Rick Tao, MD	Washington University Physician	Emergency Medicine, BJWCH	Internal Workgroup
Marianne Esser	Health Educator	School Outreach and Youth Development, BJC	Program Coordinator
Kathleen Stice, MBA	Insurance Counseling Coordinator	OASIS, Christian Hospital	Outcomes Data, Access to Affordable Health Care
Brian Nussenbaum, MD	Washington University Physician	Head & Neck, Siteman Cancer Center	Key Stakeholder
Angie Phillion	Coordinator	Community Outreach, Siteman Cancer Center	Program Coordinator
Anthony Guarino, MD	Washington University Physician	Pain Management, BJWCH	Key Stakeholder
Norma Armstrong	Pharmacist	Pharmacy, BJWCH	Program Coordinator
Alyssa Thompson, Pharm.D.	Pharmacist	Pharmacy, BJWCH	Program Coordinator
Susan Ross		Social Worker, BJWCH	Program Coordinator