2019
Community Health Needs Assessment and Implementation Strategy

Christian Hospital
Northwest HealthCare

BJC HealthCare

MISSION: TO IMPROVE THE HEALTH OF THE PEOPLE AND COMMUNITIES WE SERVE.

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EXECUTIVE SUMMARY

Christian Hospital is licensed as a 220-bed; acute-care medical center located on 28 acres in north St. Louis County. Located 6 miles west of Christian Hospital's main campus is an extension, Northwest Healthcare, which offers the community 24-hour emergency care and a variety of outpatient services in a convenient setting to complement the hospital services. Both facilities have established effective partnerships toward the goal of improving the health of the community. (See Appendix A for additional information).

Like all nonprofit hospitals, Christian Hospital is required by the Patient Protection and Affordable Care Act (PPACA) to conduct a community health needs assessment (CHNA) and create an implementation plan every three years. As part of the CHNA process, each hospital is required to define its community. Christian Hospital defined its community as St. Louis County and identified North County as its specific focus area. Once the community is defined, input must be solicited from those who represent the broad interests of the community served by the hospital, as well as those who have special knowledge and expertise in the area of public health.

Christian Hospital and SSM Health DePaul Hospital conducted their first stakeholder assessment together in 2012 and 2016, and agreed to work together to complete the 2019 assessment. First, a focus group discussion was held with key leaders and stakeholders representing the community. The group reviewed the primary data and community health need findings from 2016 and discussed changes that had occurred since 2016. Additionally, the focus group reviewed gaps in meeting needs, as well as identified potential community organizations for the hospitals to collaborate with in addressing needs.

Christian Hospital then assembled an internal work group of clinical and nonclinical staff. This group reviewed focus group results as well as findings from a secondary data analysis to further assess identified needs. This analysis used data from multiple sources, including Conduent Healthy Communities Institute and Centers for Disease Control and Prevention (CDC)/State Cancer Profiles. The analysis identified unique health disparities and trends evident in St. Louis County when compared against state and U.S. data.

At the conclusion of the comprehensive assessment process, Christian Hospital identified three health needs where focus is most needed to improve the future health of the community it serves: Diabetes; Access to Care/Care Coordination; and Substance Abuse, with a focus on the Appropriate Opioid Usage (AOU) program.

The analysis and conclusions were presented, reviewed and approved by the Christian Hospital Board of Directors.

COMMUNITY DESCRIPTION

GEOGRAPHY

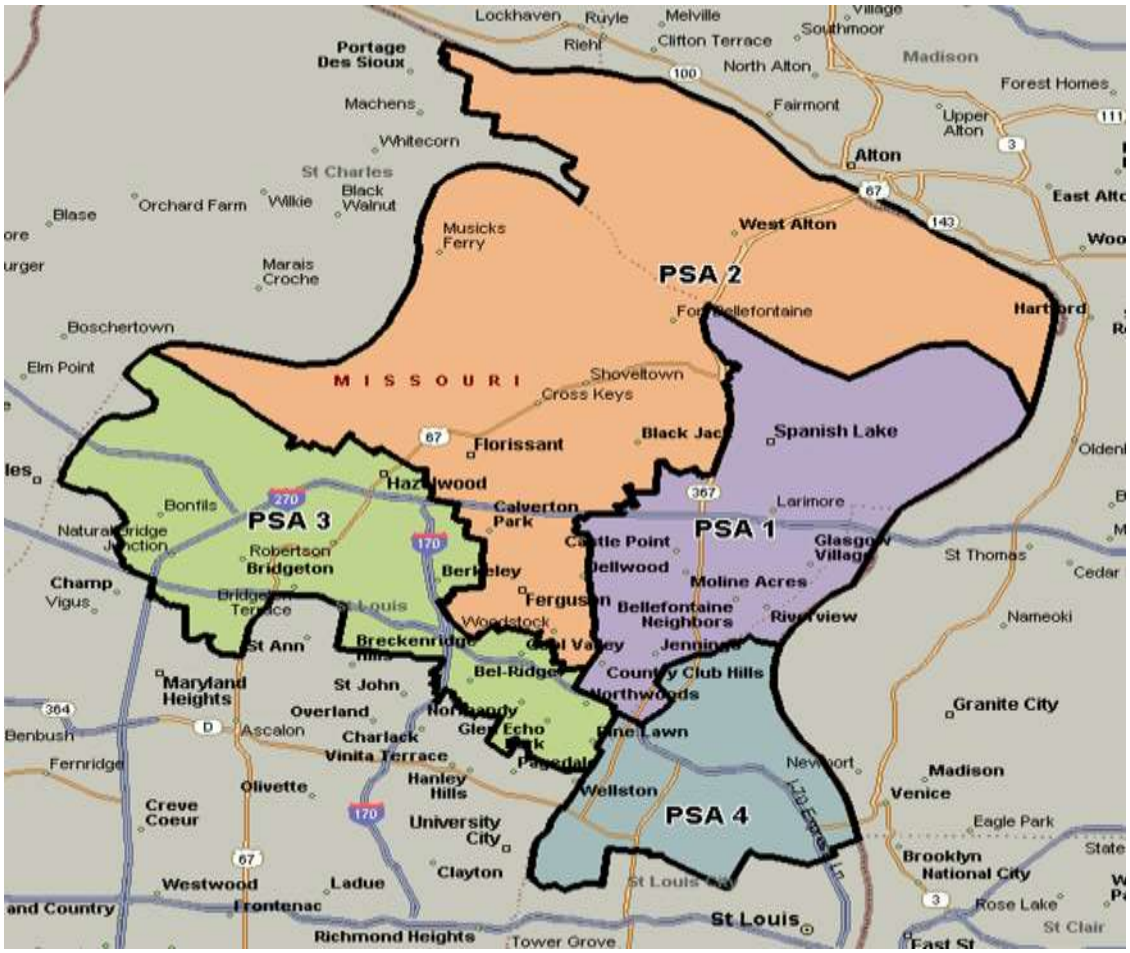
Christian Hospital (CH) is a member of BJC HealthCare, one of the largest, nonprofit health care organizations in the country. BJC HealthCare hospitals serve urban, suburban and rural communities through 15 hospitals and multiple community health locations primarily in the greater St. Louis, southern Illinois and mid-Missouri regions.

CH is one of three BJC HealthCare hospitals located in St. Louis County, along with Missouri Baptist Medical Center and Barnes-Jewish West County Hospital.

ST. LOUIS COUNTY SUB-COUNTY: NORTH COUNTY

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

CH's community is defined by its Primary Service Area (PSA) in north St. Louis County in the map below.



POPULATION

Population data are necessary to understand the health of the community and plan for future needs. In 2017, St. Louis County reported a total population estimate of 996,726 compared to the state population of 6,113,532. St. Louis County comprises 16.3 percent of the state of Missouri's total population. It is the most populous county in Missouri. Since the 2010 census, the county population declined 0.22 percent and the state experienced a 2.08 percent increase in population.

In 2017 in St. Louis County, 27 percent of the population resided in North County; 24 percent in South County; and 49 percent in West County.

North County is estimated to have a slight increase of 0.18 percent in its population from 2017 to 2022. A slight population increase is expected by 2020 in both West County (1 percent) and South County (nearly 2 percent).

INCOME

St. Louis County's median household income for the five-year period ending in 2017 was 22 percent higher than the state overall. Persons living below the poverty level in St. Louis County

totaled 9.8 percent compared to 14.6 percent in the state. Home ownership was higher in St. Louis County (63.7 percent) than Missouri (57.8 percent).

In North County, the median household income in 2017 was $46,569 and estimated to decrease to $44,430 in 2020. In South County, the median household income in 2017 was $66,084 and projected to decrease to $63,852 in 2020. In West County, the median household income in 2017 was $80,771 and projected to decrease to $73,746 in 2020.
In North County, 31 percent of families with children were from single-parent households compared to 12 percent in South County and 13 percent in West 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.

AGE

The age structure of a community is an important determinant of its health and the health services it will need. The distribution of the population across age groups was similar in North County, South County and West County.

The 65-74 age group (male and female) was projected to increase by 21.2 percent in West County; 22.9 percent in South County; and 21.1 percent in North County.

The 18-24 age group was expected to increase by 3.2 percent in West County and 2.7 percent in South County and decrease by 2.7 percent in North County.

RACE AND ETHNICITY

The regions that comprise St. Louis County vary in their racial and ethnic composition. In 2017, West County had a much higher percentage of people who identified as White (92 percent) compared to South County (76 percent) and North County 31 percent).

In North County, 64 percent identified as African American compared to less than 2 percent of residents in South County and 12 percent in West County.

North County and South County reported 2 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).

EDUCATION

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 ninth grade to 82.4 percent.

In North County, 11 percent of the population age 25 and older did not have a high school diploma compared to 8 percent in South County and 5 percent West County.

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

In North County, 24 percent of the population age 25 and older had a bachelor’s degree when compared to 22 percent in South County and 36 percent in West County.

2016 CHNA MEASUREMENT AND OUTCOMES RESULTS

At the completion of the 2016 CHNA, CH identified Diabetes, Heart and Vascular and Access to Affordable Health Care where focus was most needed to improve the health of the community served by the hospital. The following table details results, goals and current status of these community health needs.

TABLE 1: CHRISTIAN HOSPITAL'S 2016 CHNA OUTCOMES		
DIABETES	HEART & VASCULAR: HEART HEALTH & STROKE	ACCESS TO AFFORDABLE HEALTHCARE
GOAL	GOAL	GOAL
Reduce disease and economic burden of diabetes mellitus and improve the quality of life for all persons who have or are at risk to have diabetes.	Improve cardiovascular health and quality of life through prevention, detection and treatment of risk factors for heart attack and stroke.	Increase access to care and provide care coordination for the community in North County
OBJECTIVES	OBJECTIVE	OBJECTIVES
a. Increase adherence in at least 1 out of 5 individualized nutritional recommendations of participants within 2 months, and increase adherence in at least 3 out of 5 individualized nutritional recommendations of participants within 6 months. b. Increase knowledge level of North County residents who participate in educational course and nutritional counseling by 15 percent, from the pre- and post-test at the end of the session.	Total blood pressure and cholesterol level of 25 residents of North County enrolled in the program will decrease by five percent from the pre/post screening at the end of 12 months participation in the program.	At the end of the 12 weeks session, Christian Hospital patients from North County who enrolled in the CHAP program will have: a. 60 percent decrease in their EMS/ED usage during enrollment b. 40 percent decrease in admissions during enrollment c. 100 percent of uninsured patients will receive insurance and/or financial assistance counseling d. 100 percent of patients with no medical home or primary care physician (PCP) prior to enrollment will be connected to a medical home or assigned a PCP e. At the end of the 12 weeks session, patients' blood glucose will decrease by 10 percent
CURRENT STATUS	CURRENT STATUS	CURRENT STATUS
The number of participating community residents increased from 166 (2016) to 239 (2017), a 44 percent increase. In 2018, the number of participating community residents increased from 239 (2017) to 348 (2018), a 46 percent increase. In 2017, 6 diabetes workshops were offered through Oasis throughout North County with a total of 46 participants. In 2018, 10 diabetes self-management classes were held with 100 particpants with a 55 percent improvment in knowledge (total number of pre- and post- matching surveys = 17). There have been 3 classes in 2019 with 26 participants.	Between January 2016 – December 2017, 537 pre- and post-screenings were performed with a 37 percent decrease in total cholesterol. In 2018, 250 pre- and post-screenings were perfomed with a decrease in total cholesterol. There have been 219 pre- and post-screenings performed in 2019.	2017: CHAP enrolled 201 patients; 66 percent decrease in ED usage; 75 percent decrease in hospital admissions 2018: Reduction in ED usage by over 30 percent and over 30 percent reduction in variable cost YTD 2019: YTD referrals to CHAP have increased by 13.5 percent; goal will be to increase referrals with reduction in ED usage and variable cost

CONDUCTING THE 2019 CHNA

Primary Data Collection: Focus Group

CH and SSM DePaul Health Center collaborated in conducting a joint focus group to solicit feedback from community stakeholders, public health experts and those with a special interest in the health needs of north St. Louis County residents. These hospitals partnered in a combined focus group as part of the 2013 CHNA and 2016 CHNA. (See Appendix D for Focus Group Report)

Sixteen of 18 invited participants representing various St. Louis County organizations participated in the focus group (See Appendix E). The focus group was held June 20, 2018, at Northwest HealthCare with the following objectives identified:

1) Determine whether needs identified in the 2016 CHNA remain the correct focus areas
2) Discuss if needs on the list are no longer a priority
3) Determine where gaps exist in the plan to address the prioritized needs
4) Identify other organizations for collaboration
5) Discuss what has changed since 2016 when these needs were prioritized and whether there are new issues to consider
6) Understand what other organizations are doing to impact the health of the community and how those activities might complement the hospitals' initiatives
7) Evaluate what issues the stakeholders anticipate becoming a greater concern in the future

2019 CHNA FOCUS GROUP SUMMARY

A general consensus was reached that needs identified in the previous assessment should remain as focus areas for CH. Nothing was identified to remove from the list of prioritized needs.

CONSIDERATIONS FOR ADDING TO LIST OF PRIORITIES

- Diabetes, along with Obesity
- Mental Health, and the larger categories of Behavioral Health and Substance Abuse

SPECIAL POPULATIONS FOR CONSIDERATION

- A community of immigrants from at least 18 African countries
- Seniors
- Younger people, especially during transition from pediatric care to primary care
- Homeless and transient individuals

GAPS IN IMPLEMENTATION STRATEGIES

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

- Available data to accurately describe the health of north St. Louis County
- A large population of immigrants in north St. Louis County has resulted in many children who are not receiving age-appropriate immunizations
- More Mental Health centers in the community

- Consideration of socioeconomic factors, trauma and cultural-competence in addressing needs

CHANGES SINCE THE 2016 CHNA

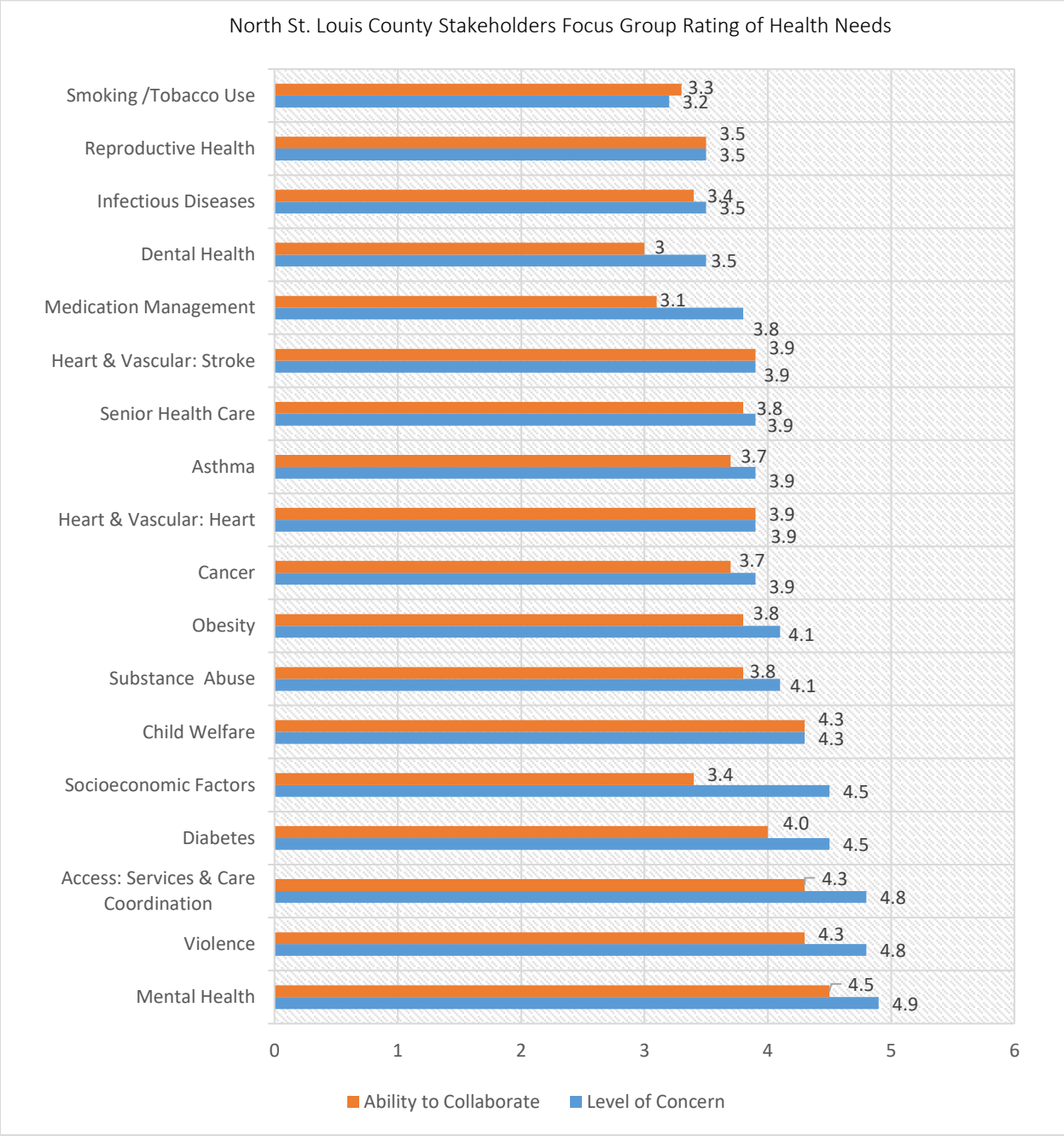
- Health care is more available than ever in north St. Louis County for those with health insurance; others must pay for those services out-of-pocket
- High level of depression
- Increased collaboration among community organizations, including area hospitals
- Ways people consume information continue to change
- Recognition that providers need to bring health care to people where they are
- Improvement in communication and community engagement between the police department and area residents
- Resurgence in use of community health workers
- Recognition that change takes time

FUTURE HEALTH CONCERNS

- Coldwater Creek and the West Lake landfills
- The degree trauma will impact the health of our community
- Need to see health needs of the community through a lens of racial equity
- Natural disaster preparedness

RATING OF NEEDS

Participants were given the list of the needs identified in the 2019 assessment and directed to re-rank them on a scale of 1 (low) to 5 (high), based on their perceived level of community concern and the ability of community organizations to collaborate in addressing:



Mental Health was rated the highest in terms of level of concern and ability to collaborate followed by Violence and Access to Services.

Secondary Data Summary

Based on the primary data reviewed by focus group members (See graph on previous page), the most prevailing health issues were identified by the focus group for a secondary data analysis. (See list below) In order to provide a comprehensive analysis of disparities and trends in St. Louis County, the most up-to-date secondary data was collected (See Appendix G for complete secondary data). A summary of observations noted for each health need follows.

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

While CH identified four 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

Over the first half of this decade, as a result of the Patient Protection and Affordable Care Act of 2010, 20 million adults have gained health insurance coverage. Yet even as the number of uninsured has been significantly reduced, millions of Americans still lack coverage. In addition, data from the Healthy People Midcourse Review demonstrate there are significant disparities in access to care by sex, age, race, ethnicity, education and family income. These disparities exist with all levels of access to care, including health and dental insurance, having an ongoing source of care and access to primary care. Disparities also exist by geography, as millions of Americans living in rural areas lack access to primary care services due to workforce shortages. (Healthy People 2020)

The overall percentage of adults with health insurance in St. Louis County was 90.6 percent in 2017. When comparing the rate of adults with health insurance by race/ethnic groups, Hispanic or Latino had the lowest rate of adults with insurance (71.7) followed by African Americans (84.6).

North County had 1 ½ times the rate of Emergency Department (ED) visits per capita when compared to South County and nearly 2 times the rate of ED visits per capita when compared to West County.

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.”

The rate of asthma among African American, Non-Hispanic adults in St. Louis County was nearly twice the rate of White, Non-Hispanic adults. The death, hospitalization and ED visit rates due to asthma among African Americans were markedly higher than rates among Whites in both the state and the county.

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

CANCER

Cancer is a leading cause of death in the United States, with more than 100 different types of the disease.

Based on 2011-2015 data, the African American population had a higher rate of cancer when compared to White, American Indian, Asian/Pacific Islander and Hispanic in the county and the state.

While St. Louis County's incident rate of cancer was 4 percent higher than the cancer rate in the state, the county's death rate was 9 percent lower than the state.

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.

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).

African Americans in St. Louis County had a two and one-half times higher rate of death due to diabetes when compared to the White population. However, in St. Louis County, the death rate of African Americans was 3.1 points lower when compared to the state.

HEART HEALTH & STROKE

Heart disease and stroke are among the most preventable 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).

While Whites in St. Louis County had a 10 percent lower incident rate of death due to cerebrovascular disease (stroke) compared to those in Missouri, the African American rate in the county was similar to the rate in the state.

In 2017, the propensity rate of high cholesterol, high blood pressure, heart disease and stroke were virtually identical in West County, South County and North County.

In St. Louis County, the death rate from stroke among African Americans was 1.6 times higher than the death rate among Whites. The death rate from heart disease and ischemic heart disease among African Americans was 1.4 times higher when compared to Whites.

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.

Among the three segments of St. Louis County, West County had the lowest propensity for obesity in 2017 among adults 18 years old and older. South County was only 1 percentage point higher. The North County rate was 19 percent higher than the West County rate.

The rate of African American, Non-Hispanic adults who are obese was 82 percent higher 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)

Among St. Louis County mothers who received prenatal care in the first trimester by race in 2016, American Indian/Alaska Native had the lowest rate. In 2016, the rate of preterm birth was higher among African Americans than any other race followed by American Indians and Hispanics.

The Healthy People 2020 national health target is to reduce the proportion of infants born with very low birth weight (5 pounds, 8 ounces) to 7.8 percent. The rate of African Americans was almost twice the national target and higher than any other race in St. Louis County in 2016.

MENTAL/BEHAVIORAL HEALTH: MENTAL HEALTH

Mental illnesses are common in the U.S. Nearly one in five U.S. adults live with a mental illness (46.6 million in 2017). Mental illnesses include many different conditions that vary in degree of severity, ranging from mild to moderate to severe. Individuals struggling with serious mental illness are at higher risk for homicide, suicide, and accidents, as well as chronic conditions including cardiovascular disease, respiratory disease and substance use disorders.

The rate of Prevalence of Any Mental Illness (AMI) was higher among women (22.3 percent) than men (15.1 percent).

Young adults aged 18-25 years had the highest prevalence of AMI (25.8 percent) compared to adults aged 26-49 years (22.2 percent) and aged 50 and older (13.8 percent).

The rate of AMI was highest among the adults reporting two or more races (28.6 percent), followed by White adults (20.4 percent). The prevalence of AMI was lowest among Asian adults (14.5 percent).

In state fiscal year 2017, 5,352 St. Louis County residents received treatment for serious mental illness at publicly-funded facilities. While data exists on those who receive treatment, data on mental health in the general population is very limited. This is especially true at the local level.

Suicide is the 2nd leading cause of death for ages 10-34 in Missouri. In 2016, 128 Saint Louis County residents died by suicide. Typically, white males are most at risk of suicide. Approximately 13.8 percent of youth had considered suicide in the last year, 8.9 percent made a plan, and 1.2 percent actually attempted suicide, resulting in an injury.

The rate of adults 18+ with mental health propensity remained the same in 2015 and 2017 in North County, but the rate in North County was higher than the rate in South County and West County. The propensity rate of adults 18+ who had poor to fair health was the highest in North County in 2015 and remained highest in 2017 with a slight decrease from 2015.

From 2013-2017, the death rate due to suicide among Whites was two times the rate of African Americans in St. Louis County, or 104 percent higher.

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 among the Medicare population from 2012 to 2017 has steadily grown in both St. Louis County (14.8 percent) and Missouri (12.3 percent).

MENTAL / BEHAVIORAL HEALTH: SUBSTANCE USE

The availability of county-level data on substance use and abuse is limited. In 2015, St. Louis County residents had a total of 600 alcohol-related and 672 drug-related hospitalizations. In addition there were 1,997 alcohol-related and 1,675 drug-related ER visits. In 2017, 2,713 individuals were admitted into Substance Abuse Treatment Programs. A total of 886 were primarily due to alcohol, 414 were primarily due to marijuana, and 57 were primarily due to prescription drugs. In 2017, St. Louis County had 2,531 DWI arrests, 438 liquor law violations and 7,123 drug-related arrests. There were 6 methamphetamine laboratory seizures in St. Louis County in 2017. Alcohol-related traffic crashes increased in the last year (from 657 in 2015 to 703 in 2016). Alcohol-related crashes are more likely to produce fatalities and injuries compared to non-alcohol-related crashes.

While the rate decreased from 2015-2017, heroin use (992) was the primary drug for admissions to substance use programs in St. Louis County compared to 886 admissions for alcohol use. Alcohol use rates increased from 2015-2017.

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)

Violent crimes include homicide, forcible rape, robbery and aggravated assault. During the three-year-period ending in 2016 compared to the three-year-period ending in 2010, St. Louis County saw a 2.5 percent increase while Missouri had a 0.6 percent decrease in violent crimes.

Internal Work Group Prioritization Meetings

CH selected 18 employees to participate on an internal CHNA work group from various hospital departments representing Emergency Medical Services; Case Management; Patient Care; Patient Access; Nursing Administration; Nursing Quality; Mental Health; Foundation; Finance; Service Excellence/Diversity; Learn/Development- BILD Team; Community Health Access Program (CHAP); and Marketing & Communications. (See Appendix F)

The work group met twice to analyze the primary and secondary data and to complete the priority ranking for the hospital's CHNA. Members reviewed data provided by the external focus group as well as information collected through secondary data analyses.

MEETING 1

The work group met Sept. 6, 2018, to review the purpose for the CHNA, role of the work group and goals for the project. The team reviewed the key findings from the 2016 CHNA report. The 2018 focus group perceptions were then reviewed and discussed. (See list of needs on Table 2)

TABLE 2: LIST OF NORTH ST. LOUIS COUNTY PRIMARY DATA BY COMMUNITY STAKEHOLDERS

Reproductive Health	Smoking / Tobacco Use	Senior Health Care
Asthma	Heart & Vascular Disease: Heart Health	Obesity
Infectious Diseases	Medication Management	Violent Crime
Social Economic Factors	Mental/Behavioral Health: Mental Health	Cancer
Child Welfare	Dental Health	Mental/Behavioral Health: Substance Abuse
Access to Care / Care Coordination	Diabetes	Heart & Vascular Disease: Stroke

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

TABLE 3: CRITERIA FOR PRIORITY SETTING			
	RATING	WEIGHT	SCORE
How many people are affected by the problem?			
What are the consequences of not addressing this problem?			
Are existing programs addressing this issue?			
How important is this problem to community members?			
How does this problem affect vulnerable populations?			
TOTAL SCORE			

Source: Catholic Health Association

Group discussion included seeking a possible partnership with the American Heart Association and aligning with St. Louis County hospitals on a unified diabetes initiative. The group concluded that cancer is being addressed with the Siteman Cancer Center coming to the campus.

MEETING 2

The work group met again Sept. 17, 2018. During this meeting, the group compared and discussed the major differences between the 2016 work group ranking and the 2019 work group ranking (Table 4) as well as the top two needs ranked by the focus group (Mental Health and Violence and the work group (Access to Care/Care Coordination and Diabetes) (Table 5).

TABLE 4: CHRISTIAN HOSPITAL INTERNAL WORK GROUP COMMUNITY HEALTH NEEDS RANKING		
RANK	HIGHEST-LOWEST	TOTAL SCORE
1	Access to Care / Care Coordination	572
2	Diabetes	551
3	Heart & Vascular Disease: Stroke	523
4	Mental/Behavioral Health: Mental Health	519
5	Social Economic Factors	514
6	Mental/Behavioral Health: Substance Abuse	509
7	Heart & Vascular Disease: Heart Health	463
8	Violent Crime	449
9	Medication Management	417
10	Senior Health Care	412
11	Cancer	411
12	Obesity	398
13	Asthma	395
14	Infectious Diseases	389
15	Child Welfare	362
16	Dental Health	254
17	Smoking / Tobacco Use	238
18	Reproductive Health	236

TABLE 5: CHRISTIAN HOSPITAL'S INTERNAL WORK GROUP 2016 VS 2019 COMMUNITY HEALTH RANKING		
RANK	2016 COMMUNITY HEALTH NEEDS RANKING	2019 COMMUNITY HEALTH NEEDS RANKING
1	Asthma	Access to Care / Care Coordination
2	Infectious Diseases	Diabetes
3	Diabetes	Heart & Vascular Disease: Stroke
4	Access to Affordable Healthcare	Mental/Behavioral Health: Mental Health
5	Mental Health/Substance Abuse	Social Economic Factors
6	Obesity	Substance Abuse
7	Care Coordination	Heart & Vascular Disease: Heart Health
8	Cardiovascular	Violent Crime
9	Cancer	Medication Management
10	Senior Health Care	Senior Health Care

Questions were raised on how CH could address violent crimes. A program in Chicago was mentioned and research will be done on what Washington University has in place.

Discussion took place to add Alzheimer's to the list, with emphasis on education of available resources. Members felt if Alzheimer's is a true need, this need should be taken to leadership for a plan to promote education. It was suggested that Alzheimer's be tabled until 2022.

The question of adding Substance Abuse was discussed, and suggestions were made include specific measurements and include programs currently in place. The group discussed adding Substance Abuse to the list with a focus on the Appropriate Opioid Usage (AOU) program with suggested metrics to include: the number of ED visits, the number of prescriptions provided, readmission rates and the EPIC intervention program. The group talked about the importance of Mental Health and the hospital's lack of resources to meet this critical need.

Heart Health and Stroke were suggested to be removed from the list since a new initiative will create a lack of resources. A system-wide program addressing stroke is now offered by BJC.

Table 6 provides:

- primary data from the focus group ranking
- needs identified by the internal work group ranking
- results of the secondary data using Healthy Communities Institute scoring tools that compared data from similar communities in the nation

TABLE 6: CHRISTIAN HOSPITAL NORTH ST. LOUIS COUNTY PRIMARY VS. SECONDARY DATA RANKINGS COMPARISON			
RANK	COMMUNITY STAKEHOLDERS RANKING	CHRISTIAN HOSPITAL INTERNAL WORK GROUP RANKING	HEALTHY COMMUNITIES INSTITUTE
1	Mental Health	Access to Care / Care Coordination	Chronic Kidney Disease: Medicare Population
2	Violence	Diabetes	Depression: Medicare Population
3	Access: Services & Care Coordination	Heart & Vascular Disease: Stroke	Rheumatoid Arthritis or Osteoarthritis: Medicare Population
4	Diabetes	Mental/Behavioral Health: Mental Health	Alzheimer's Disease or Dementia: Medicare Population
5	Socioeconomic Factors	Social Economic Factors	Atrial Fibrillation: Medicare Population
6	Child Welfare	Mental/Behavioral Health: Substance Abuse	Breast Cancer Incidence Rate
7	Substance Abuse	Heart & Vascular Disease: Heart Health	Stroke: Medicare Population
8	Obesity	Violent Crime	Cancer: Medicare Population
9	Cancer	Medication Management	Osteoporosis: Medicare Population
10	Heart & Vascular: Heart Health	Senior Health Care	Babies with Low Birth Weight
11	Asthma	Cancer	Death Rate due to Drug Poisoning
12	Senior Health Care	Obesity	Prostate Cancer Incidence Rate
13	Heart & Vascular: Stroke	Asthma	Hyperlipidemia: Medicare Population
14	Medication Management	Infectious Diseases	Heart Failure: Medicare Population
15	Dental Health	Child Welfare	Diabetic Monitoring: Medicare Population
16	Infectious Diseases	Dental Health	Chlamydia Incidence Rate: Females 15-19
17	Reproductive Health	Smoking / Tobacco Use	Preterm Births
18	Smoking/Tobacco Use	Reproductive Health	Age-Adjusted Death Rate due to Breast Cancer

- Diabetes; Mental Health; Heart and Vascular: Stroke; Cancer; and Heart Health were ranked by all three groups.
- Access to Affordable Health; Social Economic Factors; Obesity; Senior Care; Asthma; Medication Management; Dental; Child Welfare; Substance Abuse; Violence; Infectious Disease; Reproductive Health; and Smoking/Tobacco Use were ranked by the focus group and the internal team.

CONCLUSION

After a comprehensive discussion, the group concluded that CH will continue to address Diabetes, Access to Care/Care Coordination and Substance Abuse, with a focus on the Appropriate Opioid Usage (AOU) program.

APPENDICES

Appendix A: About Christian Hospital

Christian Hospital is licensed as a 220-bed; acute-care medical center located on 28 acres in unincorporated north St. Louis County. Located 6 miles west of Christian Hospital's main campus is an extension, Northwest Healthcare, which offers the community 24-hour emergency care and a variety of outpatient services in a convenient setting to complement the hospital services. Christian Hospital is a leader among hospitals in the St. Louis region and has experienced tremendous growth in the last few years.

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

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

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

In 2018, Christian Hospital provided $47,981,321 in community benefits and serving 267,977 persons. This total includes:

- $20,687,120 in financial assistance and means-tested programs serving 43,118 individuals
- 50015 individuals on Medicaid at a total net benefit of $22,155,174

Christian Hospital also provided a total of $5,139,027 to 170,844 persons in other community benefits including, community health improvement services, subsidized health services and in-kind donations. (See Appendix B for Community Benefit Expenses) All this included in the total of 55M above.

Appendix B: 2018 Community Benefit Expenses

CHRISTIAN HOSPITAL: 2018 TOTAL NET COMMUNITY BENEFIT EXPENSES		
CATEGORY	PERSONS SERVED	TOTAL NET BENEFIT
FINANCIAL ASSISTANCE AND MEANS-TESTED PROGRAMS		
Financial Assistance at Cost	43,118	$20,687,120.00
Medicaid	50,015	$22,155,174.00
TOTAL FINANCIAL ASSISTANCE AND MEANS-TESTED PROGRAMS	93,133	$42,842,294.00
OTHER COMMUNITY BENEFITS		
Community Health Improvement Services	61,566	$519,105.00
Health Professional	16	$160,837.00
Subsidized Health Services	109,262	$4,044,495.00
In-Kind Donation		$414,590.00
TOTAL OTHER COMMUNITY BENEFITS	170,844	$5,139,027.00
GRAND TOTAL	263,977	$47,981,321.00

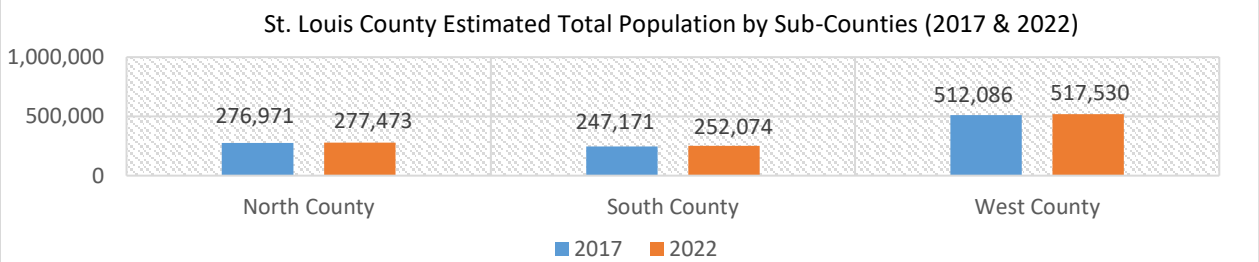
Appendix C: St. Louis County Demographic

DEMOGRAPHIC OF ST. LOUIS COUNTY VS. MISSOURI		
	ST. LOUIS COUNTY	MISSOURI
GEOGRAPHY		
Land area in square miles, 2010	507. 80	6,874,1.52
Persons per square mile, 2010	1967.2	87.1
POPULATION		
Population, 2017	996,726	6,113,532
Population, 2010	998,883	5,988,923
Population, Percent Change - 2010 -2017	-0.2	2.1
AGE		
Persons Under 5 Years, Percent, 2017	5.8	6.1
Persons Under 18 Years, Percent, 2017	22.0	22.6
Persons 65 Years and over, Percent, 2017	17.7	16.5
GENDER		
Female Person, Person, 2017	52.5	50.9
Male Persons, Percent, 2017	47.5	49.1
RACE / ETHNICITY		
White, Percent, 2017	68.6	83.1
White Alone, not Hispanic or Latino, Percent, 2017	66.1	79.5
African American Alone, Percent, 2017	24.7	11.8
Asian Alone, Percent, 2017	4.4	2.1
Hispanic or Latino, Percent, 2017	2.9	4.2
Two or More Races, Percent, 2017	2.1	2.3
American Indian and Alaska Native alone, Percent, 2017	0.2	0.6
Native Hawaiian and Other Pacific Islander Alone, Percent, 2017	0.0	0.1
LANGUAGE		
Foreign Born Persons, Percent, 2013-2017	6.9	4.0

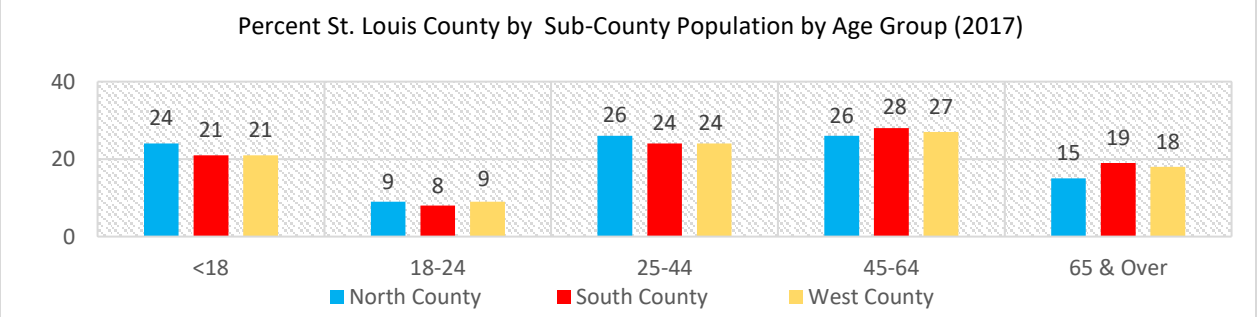
Source: Conduent Healthy Communities Institute

ST. LOUIS COUNTY DEMOGRAPHIC INCLUDING EDUCATION / INCOME / HOUSING VS. MISSOURI		
	ST. LOUIS COUNTY	MISSOURI
HOUSING		
Housing Units, 2017	441,236	2,792,506
Homeownership, 2013-2017	63.7	57.8
Median Housing Units Value, 2013-2017	181,100	145,400
FAMILY & LIVING ARRANGEMENTS		
Households, 2013-2017	402,307	2,386,203
Average Household Size (2013-2017)	2.4	2.5
Population Age 5+ with Language other than English Spoken at Home, Percent, 2013-2017	8.7	6.0
EDUCATION		
High School Graduate or Higher, Percent of Persons Age 25+, 2013-2017	93.2	88.8
Bachelor's Degree or Higher, Percent of Persons Age 25+, 2013-2017	42.8	27.6
INCOME & POVERTY		
Median Household Income, 2013-2017	$62,931.00	$51,542.00
Per Capita Income, 2013-2017	$38,081.00	$28,282.00
People Living Below Poverty Level, Percent, 2013-2017	9.8	14.6

Source: Conduent Healthy Communities Institute



Source: Truven Health Analytics



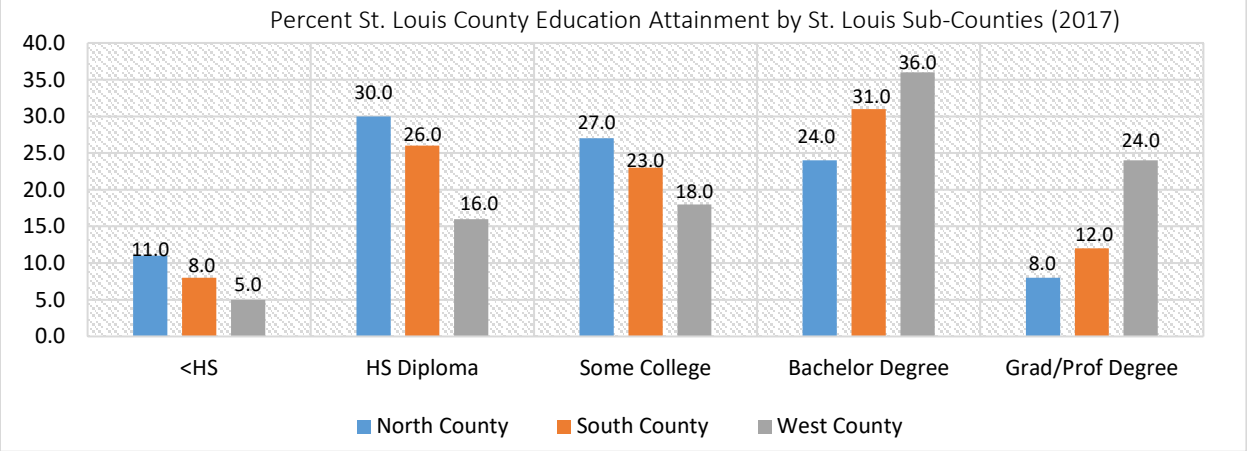
Source: Truven Health Analytics

DEMOGRAPHIC OF SUB-COUNTIES OF ST. LOUIS COUNTY							
		NORTH COUNTY		SOUTH COUNTY		WEST COUNTY	
		2017	2022	2017	2022	2017	2022
POPULATION BY RACE /ETNICITY	White	83,297	74,948	225,764	227,727	385,069	381,329
	African American	177,995	184,336	4,420	4,886	60,826	61,000
	Asian & Pacific Islander	620	681	402	421	872	938
	Two or More Races	2,689	3,189	6,686	7,756	33,778	38,431
	Hispanic	364	379	152	154	698	695
	American Indian	6,405	7,554	3,788	4,372	11,341	13,107
	Other	5,601	6,386	5,959	6,758	19,502	22,030
	TOTAL POPULATION	276,971	277,473	247,171	252,074	512,086	517,530
MALE POPULATION	<18	33,894	32,916	26,129	25,951	55,420	54,146
	18-24	13,071	12,884	9,990	10,493	24,149	25,119
	25-44	32,495	33,761	29,149	29,653	59,572	60,312
	45-64	31,211	29,227	34,084	32,163	66,578	62,462
	65-74	10,102	12,293	11,562	14,447	23,224	28,428
	75+	6,534	7,007	8,422	9,069	15,752	16,990
	MALE TOTAL	127,307	128,088	119,336	121,776	244,695	247,457
FEMALE POPULATION	<18	33,091	31,984	24,756	24,722	53,411	52,147
	18-24	13,139	12,611	9,551	9,779	23,469	24,057
	25-44	39,300	38,560	30,096	30,410	62,545	62,180
	45-64	39,724	38,499	36,278	34,699	74,167	71,060
	65-74	13,825	16,682	14,124	17,112	28,062	33,725
	75+	10,585	11,049	13,030	13,576	25,737	26,904
	FEMALE TOTAL	149,664	149,385	127,835	130,298	267,391	270,073

Source: Truven Health Analytics

TOTAL HOUSEHOLDS & FAMILY STRUCTURE OF SUB-COUNTIES OF ST. LOUIS COUNTY				
YEAR 2017		NORTH COUNTY	SOUTH COUNTY	WEST COUNTY
TOTAL HOUSEHOLDS		109,824	102,268	212,177
MEDIAN HOUSEHOLD INCOME		$46,569	$66,843	$80,771
FAMILY STRUCTURE	Families	72,594	68,055	134,785
	Married Couple w / Children	16,281	22,088	45,725
	Married Couple no Children	22,541	31,833	59,623
	Male Head w / Children	3,425	2,258	3,873
	Male Head, no Children	2,639	1,795	3,373
	Female Head w / Children	18,810	5,681	13,546
	Female Head, no Children	8,900	4,394	8,646

Source: Truven Health Analytics



Source: Truven Health Analytics

Appendix D: North St. Louis County Community Stakeholders Focus Group Report

FOCUS GROUP REPORT

PERCEPTIONS OF THE HEALTH NEEDS
OF NORTH ST. LOUIS COUNTY RESIDENTS
FROM THE PERSPECTIVES OF COMMUNITY LEADERS

PREPARED BY:

Angela Ferris Chambers
Director, Market Research & CRM
BJC HealthCare

JULY 31, 2018

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BACKGROUND

In the Patient Protection and Affordable Care Act (PPACA) passed in March 2010, non-profit hospitals were mandated to conduct a community-based health needs assessment (CHNA) every three years. As a 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 and underserved populations.

Even though the hospitals are on different times lines for completing their CHNAs, Christian Hospital and SSM Health DePaul Hospital conducted their first stakeholder assessment together in 2012, followed by a second in 2015.

Both hospitals continue to be on different timelines with this iteration. DePaul's next CHNA is due by the end of December 2018, while Christian's will be finalized by the end of December 2019. However, both hospitals continue to cooperate on soliciting community feedback to be incorporated into each individual assessment.

RESEARCH OBJECTIVES

The main objective of this research is to solicit feedback on the health needs of the community from experts and those with special interest in the health of the community served by the hospitals of North St. Louis County.

Specifically, the discussion focused around the following ideas:

1) Determine whether the needs identified in the 2015/2016 CHNAs are still the right areas on which to focus
2) Explore whether there are any needs on the list that should no longer be a priority
3) Determine where there are the gaps in the plans to address the prioritized needs
4) Identify other organizations with whom these hospitals should consider collaborating
5) Discuss what has changed since 2015/2016 when these needs were prioritized, and whether there are new issues to be considered
6) Understand what other organizations are doing to impact the health of the community and how those activities might complement the hospitals' initiatives
7) 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, Christian Hospital and SSM Health DePaul Hospital conducted a single focus group with public health experts and those with a special interest in the health needs of North St. Louis County residents. It was held on June 20, 2018, in the Community Room on the campus of Northwest HealthCare. The group was facilitated by Angela Ferris Chambers of BJC HealthCare. The discussion lasted about ninety minutes.

There were 16 individuals representing various St. Louis County organizations who participated in the discussion. Two others were invited, but were unable to attend. (See Appendix)

Rick Stevens, President, Christian Hospital, welcomed participants at the beginning of the meeting. Those who were observing on behalf of the sponsoring hospitals were also introduced.

At the conclusion of the meeting, Kim Bakker, Director – Civic Affairs, SSM Health, thanked everyone for sharing their perspectives.

During the group, the moderator reminded the community leaders why they were invited - that their input on the health priorities of the community is needed to help the hospitals move forward in this next phase of the needs assessment process.

The moderator shared the demographic and socioeconomic profile of St. Louis County. This included specific breakouts on the north, south and west-central sectors when data was available; the needs prioritized by the hospitals in their most recent assessments; and the highlights of each hospital's implementation plan.

Because Christian Hospital and DePaul referred to the same needs differently, some changes were made in the nomenclature to ensure that the same health need was being referenced. This was based on work that BJC HealthCare conducted in 2015 and 2016 to develop a common nomenclature to use among all of its hospitals.

The following health needs (based on the revised nomenclature) were identified in the 2015/2016 hospital CHNAs and implementation plans.

Needs Being Addressed	CH	DePaul
Access to care	X*	X
Diabetes	X	X
Heart and vascular disease	X	X

*Includes care coordination

Other health needs were identified in the 2015/2016 plans, but not addressed, due to factors such as lack of expertise and limitations in resources. These included:

Needs Not Being Addressed	CH	DePaul
Asthma	X	
Cancer	X	
Cerebrovascular disease (stroke)		X
Child welfare	X	
Dental health	X	
Infectious diseases	X	
Medication management		X
Mental health	X	X
Obesity		X
Reproductive health	X	
Senior health care	X	
Smoking/tobacco use		X
Socioeconomic factors	X	X
Substance abuse		X
Violence		X

The moderator also shared several pieces of information to help further identify the health needs of St. Louis County. These were based on comparisons between publically available St. Louis County health data and state/national measures. They included the following:

- the best performing health indicators
- the best performing social determinants of health
- the worst performing health indicators
- the worst performing social determinants of health

Other health indicators were shared describing access to health insurance, access to healthcare providers, infectious disease rates (including STDs), public safety and drug poisoning.
At the end of the presentation, the community stakeholders were asked to rate the identified needs based on their perceived level of concern in the community, and the ability of the community to collaborate around them.

KEY FINDINGS

FEEDBACK ON THE NEEDS BEING ADDRESSED:

The health issues that the hospitals have chosen to address are similar to those that the County Department of Public Health has selected in their most recent planning process. These include physical ailments like heart disease and diabetes; access to care, which includes appointment timeliness, provider availability and transportation; and behavioral health, including mental health and substance abuse. Violence is also a priority for the Health Department, as are social determinants of health. They are working in collaboration with other health providers, including the hospitals in North County, to try and move the needle on many of these issues.

The health issues the hospitals identified are also the same ones that local pastors are seeing among their congregants. However, pastors also observe an unwillingness among their followers to participate in screening programs. They frequently offer screening programs at their churches staffed by nurse volunteers, but find that there is minimal participation among church members. They are frustrated by their inability to convince church members that these screenings are valuable for identifying diseases that can easily be prevented and treated.

- Local pastors suspect that many of their church members are reluctant to actually find out that they have a medical problem. They would rather deal with being sick than face the reality of knowing what is wrong with them. In general, congregants are not comfortable going to doctors, and will only go to the emergency room when faced with an acute situation.
- The pastors suggest that the true need is to figure out how to convince these individuals to take advantage of health services that could markedly improve the quality of their lives. Others commented that this issue is more common in men, who are often reluctant to seek medical advice. There is a need to provide education to the population about why seeking medical care early can benefit them.

Another stakeholder commented that in identifying the needs in North St. Louis County, it is important to analyze the data by geography, whenever it is available, due to large variations among the different parts of St. Louis County. Otherwise, the data can be very misleading when

observed for the county overall. In addition, the disparities that exist in North County must be clearly identified and taken into consideration.
The issue of access should be considered based on how the hospitals can bring services to the community, rather than always expecting people to come to the hospital.

NEEDS THAT SHOULD BE REMOVED FROM THE LIST:

Stakeholders agreed that the needs being addressed should remain, and nothing should be removed from the list.

OTHER NEEDS THAT SHOULD BE ADDRESSED:

Diabetes cannot be addressed without also tackling obesity. Obesity has an impact on diabetes, and there is an obesity problem in North County. Stakeholders felt that, by also addressing obesity, there will be a positive impact on diabetes.

Several mentioned that mental health, and the larger categories of behavioral health and substance abuse, should be addressed by the hospitals in their implementation plans. This need is relevant among school-aged populations as well as adults.

- The hospitals should examine their own data around drug overdoses and mental health issues. There is a belief among those at the table that there are higher utilization rates for these issues in North County overall, as well as among those who are using hospital services for these disorders.

SPECIAL POPULATIONS FOR CONSIDERATION:

A community of African immigrants who reside in North County are having trouble accessing healthcare services. Very few of them have health insurance. Residents of at least 18 African countries live in the area, and speak different languages. Due to the difficulty in finding translators who are fluent in all of these languages, there are often challenges communicating the correct information to health care providers. Language barriers may also limit their ability to understand and follow treatment recommendations.

Senior health care will become a bigger issue in the future as the population ages. Not every healthcare provider is prepared to address issues of aging.

The population demographic analysis demonstrated a large proportion of younger people in North County. Child health and welfare is a big concern, especially when considering access to pediatricians.

- As a child moves into adulthood, and is no longer able to see a pediatrician, it is important that the community address the education involved in helping them understand why they need to have a primary care provider, and how to find one. Otherwise, they will end up using the emergency department for basic health services.
- Gun violence has been identified by the Hazelwood School District as an area of concern. Their representative discussed how it impacts their entire community.

Homeless and transient individuals are a hard-to-reach group, even though they have the same health needs as others in the community. Those who travel back and forth between St. Louis City and St. Louis County make tracking and communication difficult.

GAPS BETWEEN DEFINED NEEDS AND OUR ABILITY TO ADDRESS THEM:

Some feel that there are gaps in the available data to accurately describe the health of North St. Louis County. They would like the hospitals to provide more detailed information about why area residents are using emergency department services and then focus on providing more services to address those areas of need.

- The hospitals must be willing take some risks in exploring and sharing their own hospital data in identifying who they serve and the kinds of services they are they using.
- In addition, the data must be disaggregated by race to further identify disparities. According to one stakeholder, "We need to learn to be comfortable with seeing those disparities."
- Infant mortality is an example, where analyzing the data by race shows that it is three times higher in the African-American population than in the Caucasian population.

The large population of immigrants in North St. Louis County has resulted in many children who are not receiving their age-appropriate immunizations. Of the 125 children who did not receive their immunizations in the past year, half were new to this country.

- Part of the challenge is related to cultural differences in how immunizations are viewed, as well as an unwillingness to sign documents that immigrants fear may put them and their families at risk.

With regard to mental health services, there is a need for more mental health centers in the community. Mental health should be addressed in the same way that other diseases, like diabetes, are addressed. It impacts not only the individual but the surrounding community as well.

- The use of trained community health workers can help close the gap in the need for mental health services.
- There is also a lack of pediatric mental health professionals.
- In the African-American community, there is a stigma associated with admitting that you or a family member suffer from a mental health disorder. The community needs to figure out how to address this issue so more individuals will feel comfortable coming forward to seek care.

Another stakeholder pointed out that whatever needs the hospitals choose to address, they must consider the issues of trauma and cultural-competence in how they provide services. If the hospitals are not getting the results that they anticipated in their implementation plans, is it because trauma and cultural competence were not considered in their tactics?
The impact of socioeconomic factors can also be the reason why an individual may not access health services. They may create barriers that prevent an individual from receiving care.

- Among the barriers to care, the current health system provides services Mondays – Fridays when people are usually at work. Healthcare providers need to consider

redesigning the system so that people can access care when and where it is most convenient for them, and doesn't put them at risk for losing their job and other negative consequences.

Several stakeholders suggested that hospital communications about their efforts need to be relevant to those they are trying to reach. Providing education to residents in their community, at churches and community centers, about why screenings are important, can help residents understand that they will reduce their need for emergency services if they can address health issues before they escalate.

- The messages also need to be written in a way that is culturally relevant.
- It is also important to recognize that many people are fearful to seek help. Therefore, healthcare providers must determine how to communicate important information in ways that makes residents more comfortable about seeking treatment from a healthcare provider or hospital. Also, helping them to understand that being labeled with a diagnosis is not a death sentence, should be a goal.
- One way to accomplish this is through the use of community health workers where the message can be made more personal. A trusting relationship can develop between the community health worker and the person who may be resistant to being screened or treated.

OTHER ORGANIZATIONS WITH WHOM TO COLLABORATE:

Community leaders would like to support the hospitals by sharing information with their constituents about what the hospitals are doing, when the opportunity presents itself. Hospital leaders can help by providing community organizations with talking points to better explain how they are supporting the community.

- Community organizations don't always know what to say about the different roles the hospitals are playing. They want help knowing what to say, and how to say it in a culturally sensitive manner.
- When they encounter people in their communities who need help, they'd like to be able to direct them toward the assistance they need.

CURRENT COLLABORATIONS THAT WERE HIGHLIGHTED:

The African Diaspora Council is sponsoring a Health Promotion Initiative in a facility on Pagedale Avenue in St. Louis. The Council is developing relationships with African doctors who can speak to their patients in the patient's native language. The Initiative would like to work with area hospitals and healthcare providers to offer greater access to health services at this facility, as well as to address cultural differences in in how health services and treatments are provided.

There is a collaboration between the Salvation Amy and the Urban League in the development of the new Ferguson Community Empowerment Center. Christian Hospital and the Salvation Army are also working together to focus on the health of their clients and patients to provide services in the community. This new initiative is called Pathway to Health. The Salvation Army is working to address social determinants of health, while Christian Hospital is training community health workers to connect with families to address their health needs. The concept is based on scheduling home visits and meeting people where they are.

Both the Ritenour and Hazelwood School Districts are exploring options to locate a health center within the boundaries of their school districts. Students with chronic conditions such as asthma and diabetes have a higher level of absenteeism, which negatively impacts their academic performance. Making health services available in the school setting may minimize these absences and improve their academic performance.

- The schools can also be a conduit for influencing the behavior of older generations. By educating children about prevention, they can teach them that there is a different way to approach their health. If the schools can involve grandparents who are often their caregivers, this may result in generational changes.
- One of the goals of the school-based center is to allow children, parents and grandparents to have a voice. Offering services at the center during the school hours will help parents avoid missing work to take their children to the doctor or dentist.

In late 2017, the Greater North County Chamber of Commerce partnered with the Missouri Chamber to offer small businesses with less than 50 employees access to a better health insurance plan. A lot of small companies had found that insurance through the ACA was too expensive. This partnership gave them access to a more affordable health plan for themselves and their employees.
The Behavioral Health Network is working with churches in North St. Louis City and County to train individuals in subjects such as trauma and mental health first aid, so that they can help address mental health issues once they are identified. So far, 52 churches have participated in the training. The agency also pays for up to five free sessions of counseling if an individual does not have health insurance. So far, they've found that among those they've treated, 39% had never previously sought out help for a mental illness.

CHANGES SINCE THE 2015/2016 CHNA:
Several people commented that healthcare is more available than ever in North St. Louis County, if you have health insurance. They cited that SSM is now offering services in area Walgreens, and other urgent care providers have located in North County that were not previously available. If you don't have health insurance, you must be able to pay for those services out-of-pocket.

One stakeholder observed that there is a high level of depression among the residents of our community. It is been fueled by past incidents of police brutality and unemployment. There is also a stigma associated with depression in the African-American community and a degree of shame associated with thinking there is something wrong with you, or a member of your family.

- There is a need to acknowledge that this stigma exists, and to encourage community members to ask questions and recognize that it is okay to ask for help.

There has been increased collaboration among community organizations, including the area hospitals, to work together to address the health of our community. Educating others in the community to act as community resource officers and provide information about where to go for services can supplement what the hospitals are doing on their own.
The way the people consume information continues to change. People have shorter attention spans and are looking for "quick fixes." Some people look to the Internet to diagnose and treat

their ailments. Hospitals need to recognize this and use social media sites and short, to-the-point messages to get their points across about when and where to seek care. This is how young people today consume information. Health care organizations need to adopt this practice if they want to get their messages to have an impact.

There continues to be more emphasis on prevention and screening for physical ailments, depression, other mental health issues and substance abuse. However, providers need to recognize that offering a health education seminar in a physical location may be adequate today for the older generation, but younger adults will not participate in this type of format.

There is finally a recognition that providers need to bring health care to people where they are, rather than always expecting them to come to the hospital. The number of mobile units that currently exist demonstrates this awareness. The vans that provide dental services and vision services make it easier for children and families to get the care they need without creating difficult choices for parents. For many, seeing a nurse practitioner in Walgreens is now a common practice when they are sick. They do not perceive the value in a relationship with a regular primary care provider, but want care where and when they need it.

Another stakeholder felt that communication and community engagement between the police department and area residents have improved over the last three years. Should another racially charged incident occur in the community, they felt that better communication with the police would improve how the situation would be handled in the future.

The use of community health workers is not a new idea, but its resurgence in North County is. There is a new momentum toward recognizing the community health worker as a profession. A partnership with the community college has created a certification program for people to be trained as community health workers. There is also movement toward creating a professional association for community health workers. This leads to new employment opportunities for area residents. There are also efforts to make it a reimbursable service by Medicaid and other payers. There is also recognition that it takes time to “move the needle” as hospitals seek to measure the impact of their actions, and move away from “outputs” to “outcomes.”

HEALTH CONCERNS FOR THE FUTURE:

Recognizing the impact of Coldwater Creek and the West Lake Landfill on the health of the community was mentioned briefly. Both of these environmental situations have the potential to become huge health issues due to the uncertainty surrounding their resolution. The community as a whole needs to play an active role in examining the data around the clusters of disease that have been observed. If the community does not do it, no one from outside will draw attention to it.

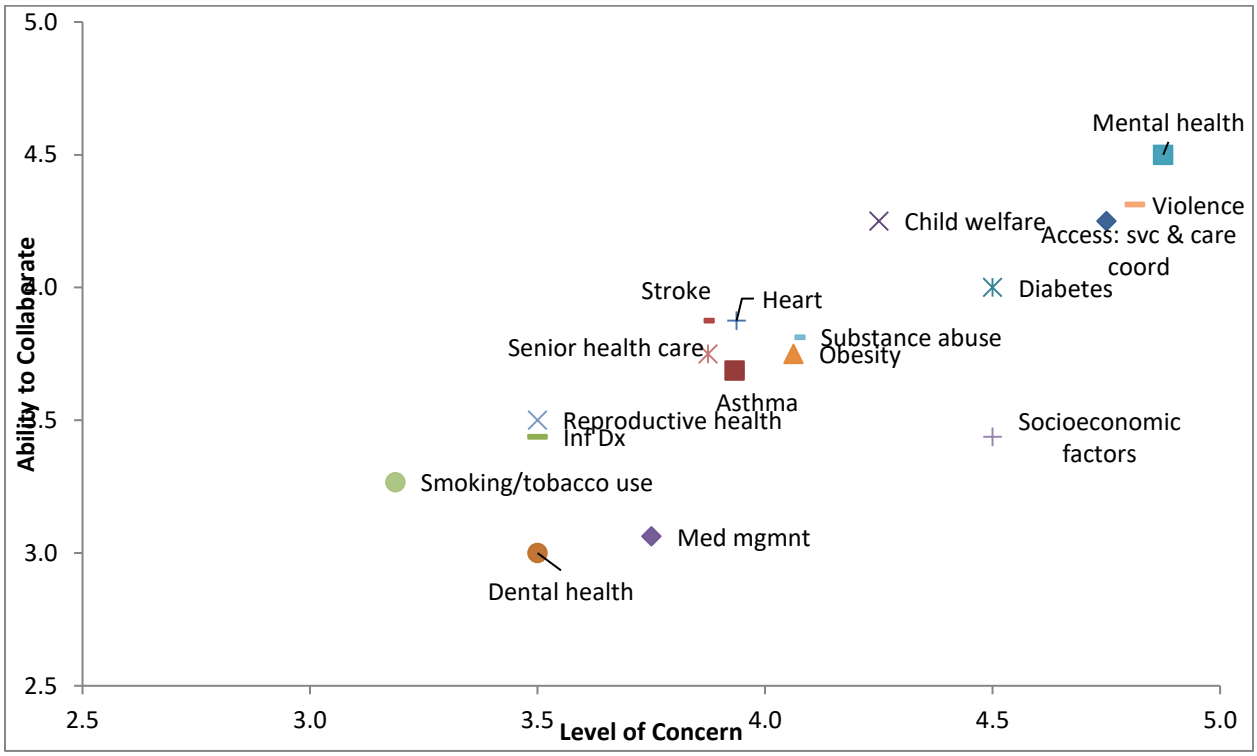
The degree to which trauma will impact the health of our community is expected to increase. As the population ages, young people will continue to see the health effects of trauma, and it will also impact the degree to which other health issues manifest themselves.

Being willing to look at the health needs of the community through a lens of racial equity is something that hospitals must not be afraid to do. If they aren't willing to do that, they will continue to see the same results they've seen before.

One stakeholder raised a concern about being better prepared in the future for natural disasters. Recovery from the 2015 flood has just been completed, and often, it takes three to five years to recover from these events. Families with water in their basements often did not have money to move, creating hazardous conditions related to the development of mold and exacerbating the environment for those with asthma.

RATING OF NEEDS

Participants rerated the needs identified in the 2015/2016 assessment 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.



The issue of mental health were rated the highest in terms of level of concern and ability to collaborate. Violence and access to services were not far behind.

The table on the next page shows the actual ratings for each need that was evaluated.

Average Scores

Health Need	Level of Concern	Ability to Collaborate
Mental health	4.9	4.5
Violence	4.8	4.3
Access: svc & care coord	4.8	4.3
Diabetes	4.5	4.0
Socioeconomic factors	4.5	3.4
Child welfare	4.3	4.3
Substance abuse	4.1	3.8
Obesity	4.1	3.8
Cancer	3.9	3.7
Heart & vascular: heart	3.9	3.9
Asthma	3.9	3.7
Senior health care	3.9	3.8
Heart & vascular: stroke	3.9	3.9
Medication management	3.8	3.1
Dental health	3.5	3.0
Infectious Diseases	3.5	3.4
Reproductive health	3.5	3.5
Smoking/tobacco use	3.2	3.3

NEXT STEPS

Using the input the hospitals received from community stakeholders, Christian Hospital and SSM Health DePaul Hospital will consult with their internal workgroups to evaluate this feedback. They will consider other secondary data they may review, and determine whether/how their priorities should change.

The needs assessments and associated implementation plans must be completed by December 31, 2018 for SSM Health DePaul Hospital and by December 31, 2019 for the Christian Hospital.

Appendix E: Focus Group Participants and Hospital Observers

NORTH ST. LOUIS COUNTY FOCUS GROUP PARTICIPANTS AND HOSPITAL OBSERVERS			
FOCUS GROUP PARTICIPANTS			
LAST NAME	FIRST NAME	ORGANIZATION	ATTEND
Anani	Michael Kodjo	African Diaspora Council	X
Armbruster	Jenny	NCADA	X
Bertel	Christian	Hazelwood School District	X
Bradshaw	Karen	Integrated Health Network	X
Donaldson	Kate	St. Louis County Dept. of Public Health	
Dotson	Dave	Pattonville Fire Protection District	X
Doyle, Lt. Col	Troy	St. Louis County Police Dept.	
Kilbride	Chris	Ritenour School District	X
Fields	LaKeysha	Salvation Army	X
Jackson-Beavers	Rose	Behavioral Health Network	X
JameS	Dwayne	Ferguson City Councilman (former)	X
Martz	Venus	Greater North County Chamber of Commerce	X
Means	Alison	Crisis Nursery	X
Robinson,	Lee	Third Presbyterian Church	X
Street	Keith	St. Louis County Department of Public Health	X
Thomas	Rance	NCCU	X
Tranel	Mark	UMSL Public Policy Research Center	X
Wade	Vicki	Peoples Health Center	
Zoll	Rebecca	North County Incorporated	X

HOSPITAL OBSERVERS			
LAST NAME	FIRST NAME	ORGANIZATION	ATTEND
Akinade	Omowunmi	BJC HealthCare	X
Bakkar	Kim	SSM Health	X
Ballard	Dana	Christian Hospital	X
Berigan	Brett	Christian Hospital	X
King	Karley	BJC HealthCare	X
Niebruegge	Becky	Christian Hospital	X
Paredes	Cesar	BJC HealthCare	X
Phelps	Amanda	Christian Hospital	X
Pratt	Ryan	SSM Health DePaul	X
Stevene	Rick	Christian Hospital	X
Villaflores, Dr.	Herbert	SSM Health DePaul	X
Simon	Juliet	Oasis	X
Weiss	Paul	Oasis	X

Appendix F: Christian Hospital Internal Work Group

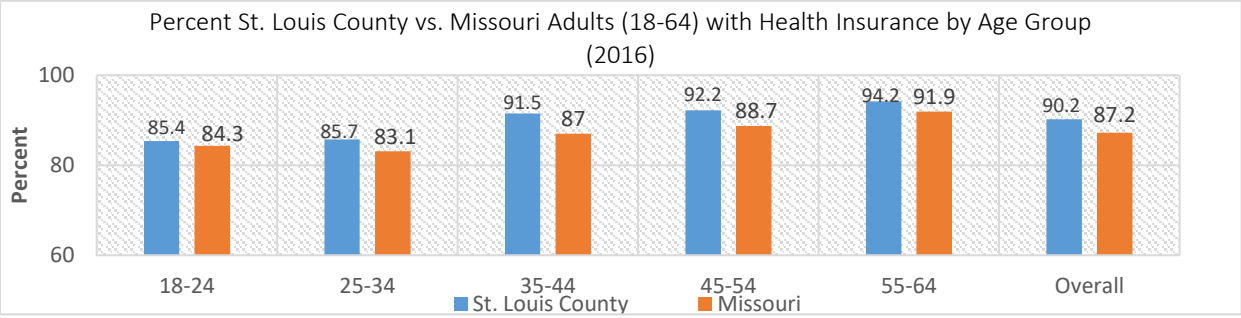
CHRISTIAN HOSPITAL INTERNAL WORK GROUP			
LAST NAME	FIRST NAME	TITLE	DEPARTMENT
Ballenger	Dana	Director	Case Management
Burch	Susan	Director	Nursing Administration
Cavitt	Nergis	Consultant	Learn / Development - BILD Team
Colleen	Wilkerson	Manager	Service Excellence/Diversity
Jameson	Kim	Manager	Nursing Quality
Liedtke	Gregg	Director	Nursing Administration
Liley	Angie	Case Manager	Case Management
King	Karley	Program Manager, Community Benefit	Corporate Communication and Marketing
Kroeschel	Sandra	Manager	Patient Care
McLennan	Lori	Finance Manager	Finance
Murphy	Jim	Director	Nursing Administration
Niebruegge	Becky	Senior Cordinator	Marketing & Communication & Foundation
Phelps	Amanda	Navigator	CHAP
Poindexter	Rebecca	Manager	Mental Health
Powell	Necole	Foundation Director	Foundation
Rieker	Jennifer	Supervisor	CHAP
Rhine	Tisha	Manager	Patient Access
Watson	Shannon	Community Health Supervisor	Emergency Medical Services

Appendix G: Secondary Data

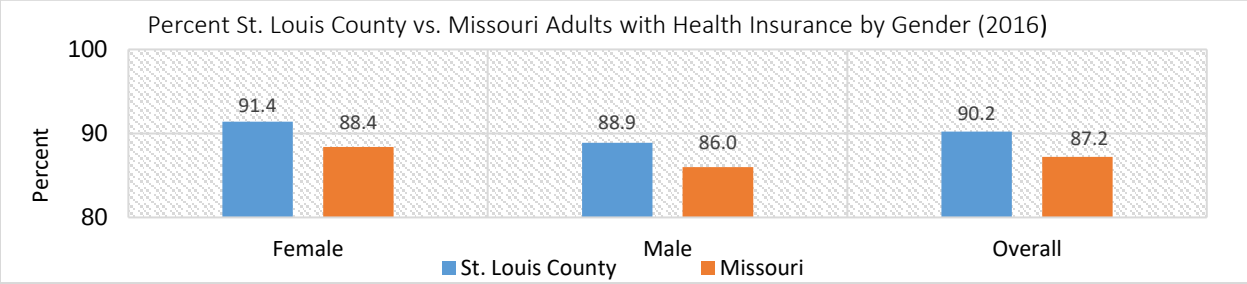
ACCESS TO HEALTH CARE

ST. LOUIS COUNTY ACCESS TO HEALTH CARE		
HEALTH INDICATORS	ST. LOUIS COUNTY	MISSOURI
Percent Adults with Health Insurance Age 18-64 (2017)	90.6	86.8
Percent Children with Health Insurance (2017)	96.9	94.9
Primary Care Providers Rate / 100,000 (2016)	123	71
Dentist Rate/100,000 (2017)	85	57
Mental Health Providers Rate/100,000 (2018)	258	170
Non-Physicians Primary Care Providers Rate / 100,000 (2017)	85	87
Preventable Hospital Stays.: Medicare Population / 1000 (2015)	47.7	56.6

Source: Conduent Healthy Communities Institute / County Rankings

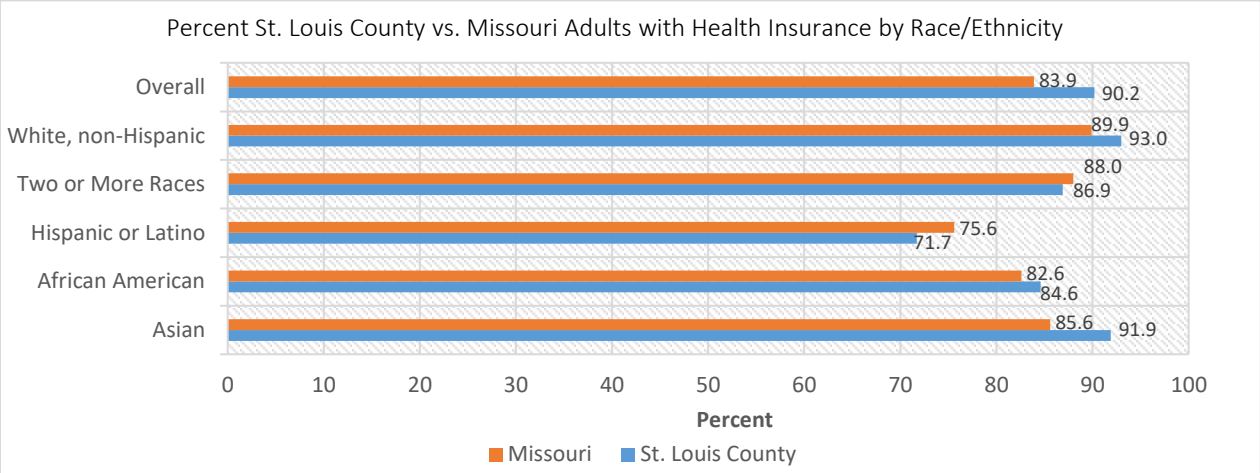


Source: Conduent Healthy Communities Institute

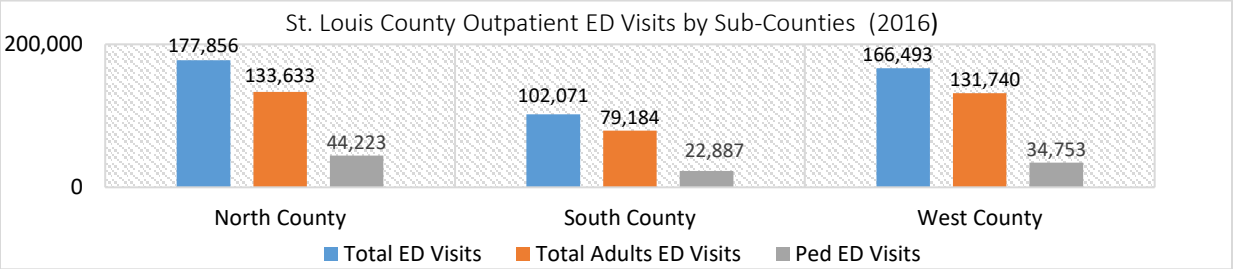


Source: Conduent Healthy Communities Institute

ACCESS TO HEALTH CARE



Source: Conduent Healthy Communities Institute



Source: Truven Health Analytics

ACCESS: TRANSPORTATION

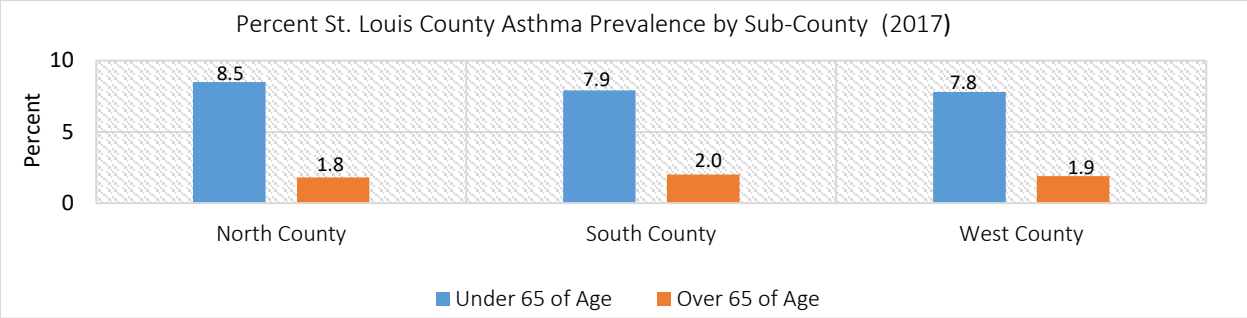
ACCESS: TRANSPORTATION		
HEALTH INDICATORS	ST. LOUIS COUNTY	MISSOURI
Percent Households without a Vehicle (2013-2017)	7.2	7
Percent Workers Commuting by Public Transportation (2013-2017)	2.7	1.5
Mean Travel Time to Work; Age 16+ (2013-2017)	24.2 Minutes	23.5 Minutes

Source: Conduent Healthy Communities Institute

ASTHMA

ST. LOUIS COUNTY VS. MISSOURI THREE-YEAR MOVING ASTHMA AVERAGE RATE						
HEALTH INDICATORS	2013-2015		2014-2016		2015-2017	
	St. Louis County	Missouri	St. Louis County	Missouri	St. Louis County	Missouri
Asthma Death / 100,000 Population	1.58	1.07	1.81	1.19	1.17	1.1
	2011-2013		2012-2014		2013-2015	
Asthma Hospitalizations /10,000 Population	15.51	11.74	15.06	11.44	14.08	10.65
Asthma EMERGENCY ROOM Visits/ 1000 Population	7.6	5.39	7.78	5.47	7.56	5.34

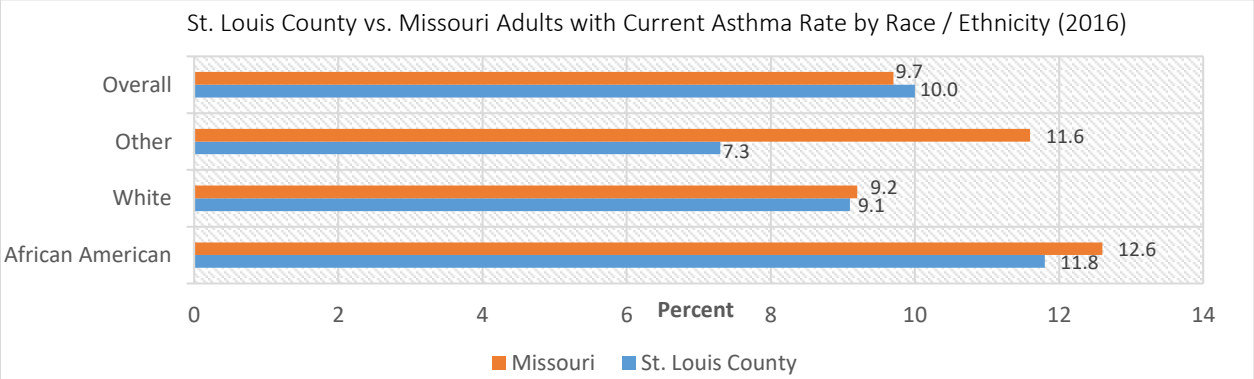
Source: Missouri Health Department & Senior Services



Source: Truven Health Analytics

ST. LOUIS COUNTY VS. MISSOURI Asthma RATE BY RACE / ETHNICITY				
HEALTH INDICATORS	WHITE		AFRICAN AMERICAN	
	ST. LOUIS COUNTY	MISSOURI	ST. LOUIS COUNTY	MISSOURI
Death / 100,000 Population (2007-2017)	0.67	0.83	2.78	3.08
Hospitalizations / 10,000 Population (2011-2015)	6.76	7.13	37.17	35.59
Emergency Room Visits / 1,000 Population (2011-2015)	2.4	3.02	20.06	18.16

Source: Missouri Department of Health & Senior Services

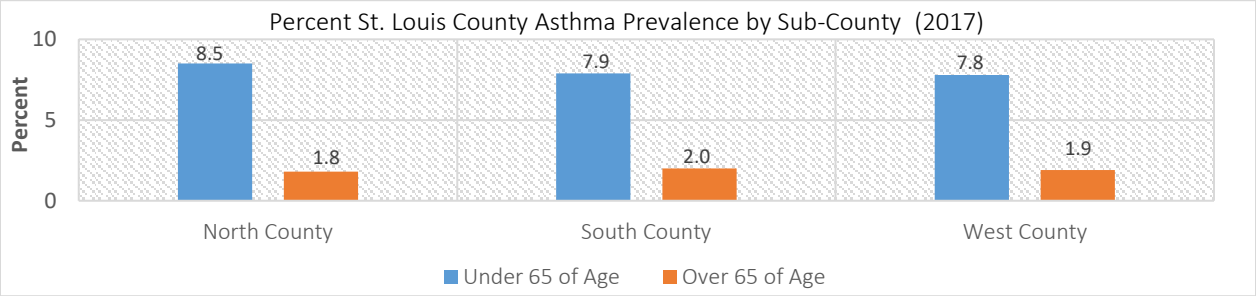


Source: Conduent Healthy Communities Institute

ASTHMA

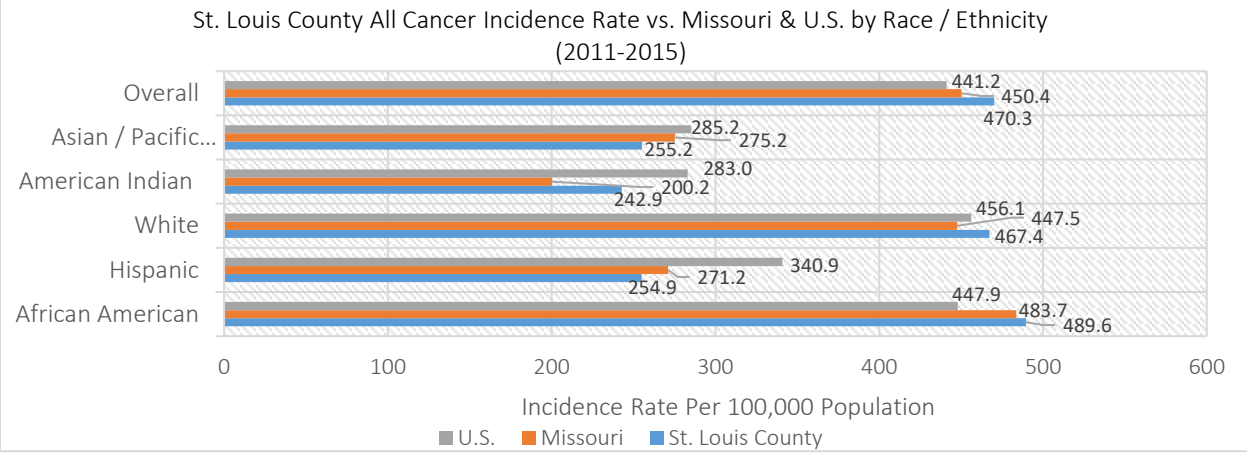
ST. LOUIS COUNTY VS. MISSOURI & U.S. RESPIRATORY DISEASES RATE			
HEALTH INDICATORS	ST. LOUIS COUNTY	MISSOURI	U.S.
Adults with Current Asthma in Percent (2016)	10	9.7	9.3
Age-Adjusted Death Rate due to Chronic Lower Respiratory Disease /100,000 Population (2013-2017)	31.6	51.9	41.1
Asthma: Medicare Population in Percent (2015)	5.8	4.7	5.1

Source: Conduent Healthy Communities Institute

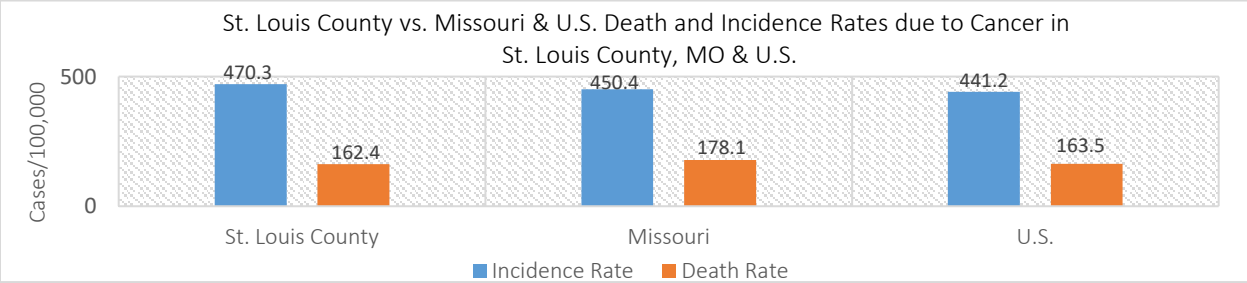


Source: Truven Health Analytics

CANCER

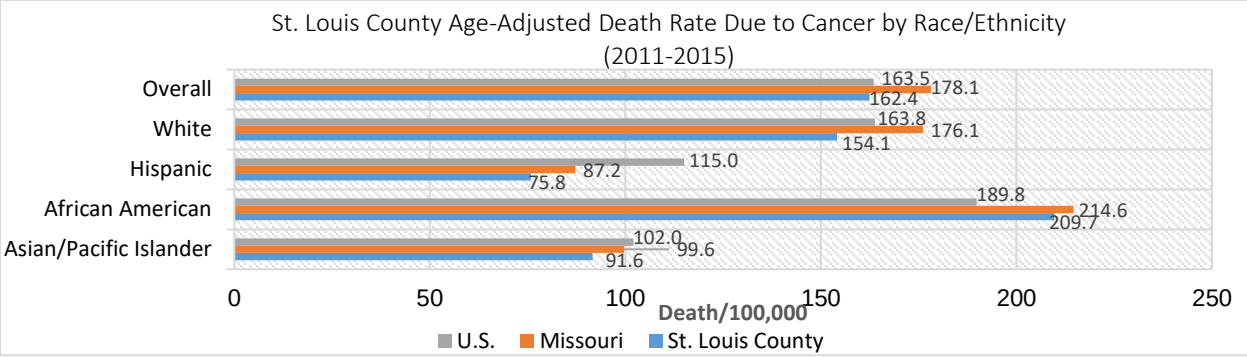


Source: Conduent Healthy Communities Institute



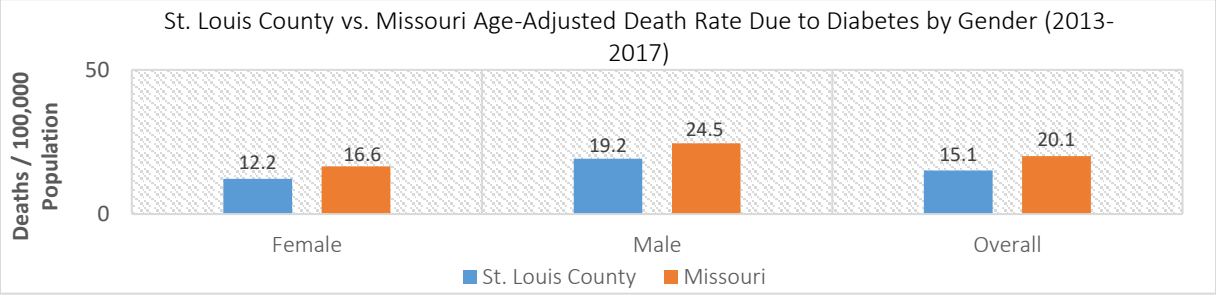
Source: Conduent Healthy Communities Institute

CANCER



Source: Conduent Healthy Communities Institute / CDC Cancer Profile

DIABETES



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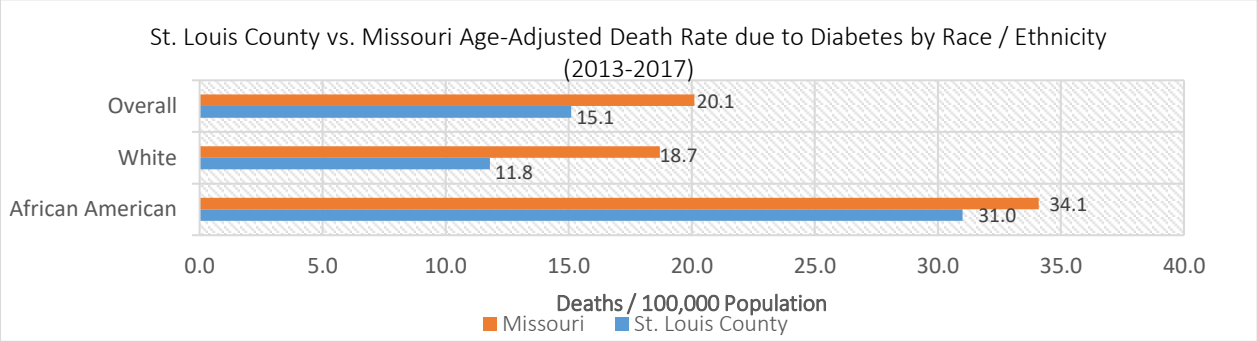

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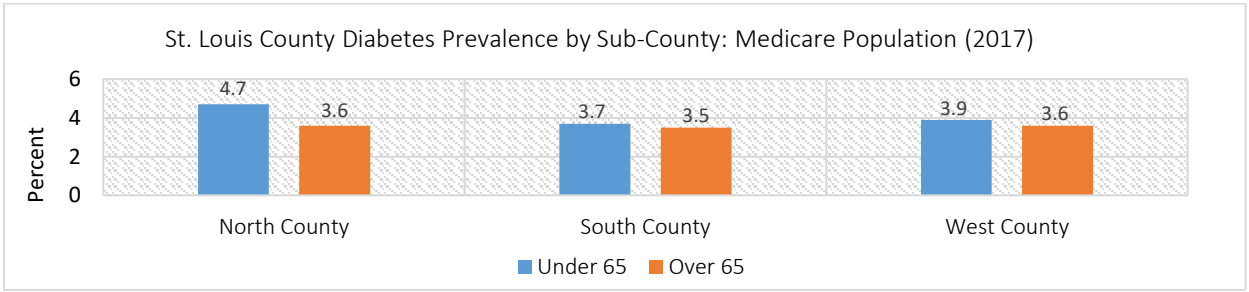
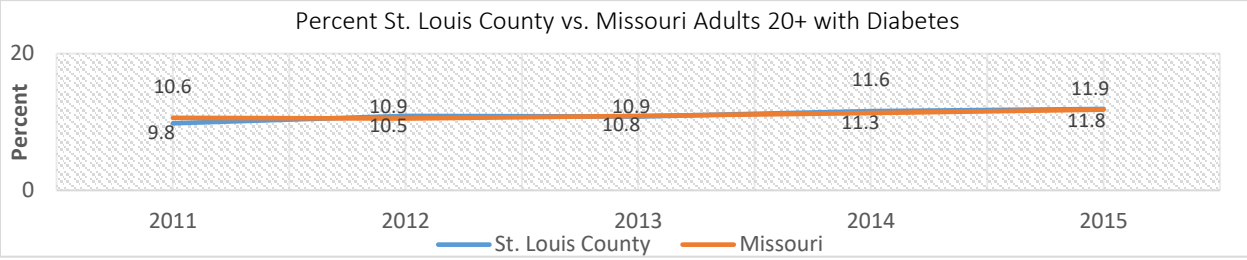


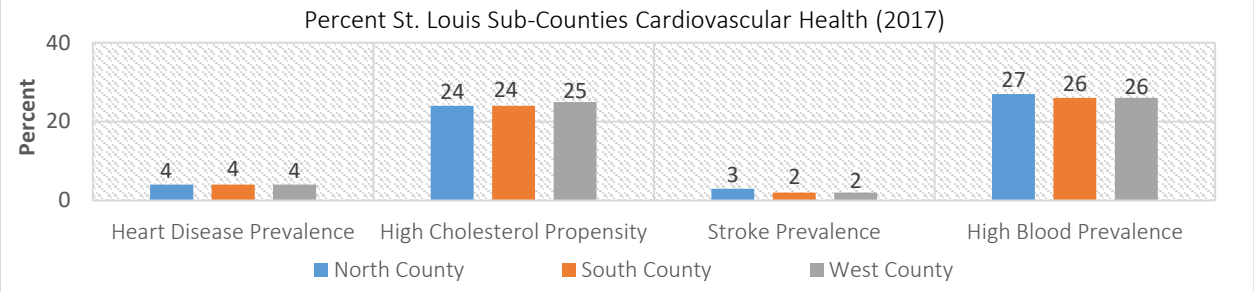
Source: Conduent Healthy Communities Institute

DIABETES



Source: Conduent Healthy Communities Institute

HEART HEALTH & STROKE

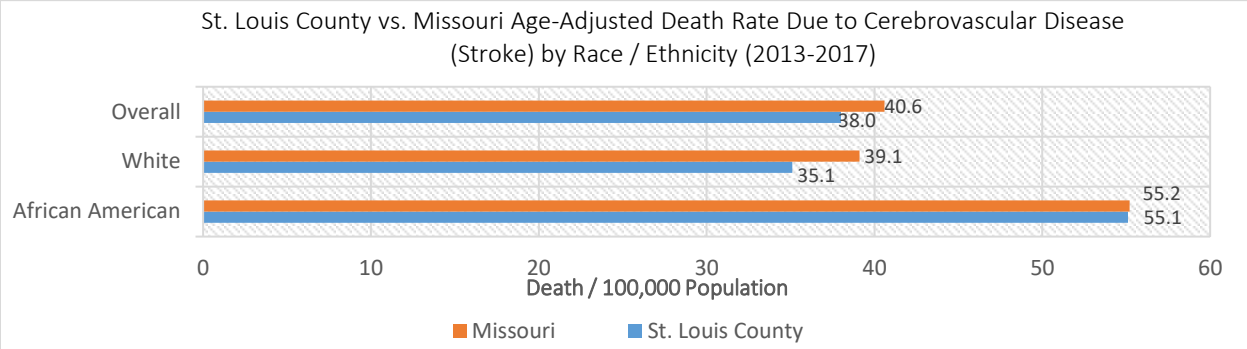


Source: Truven Health Analytics

ST. LOUIS COUNTY VS. MISSOURI HEART DISEASE & STROKE AGE-ADJUSTED RATE		
HEALTH TOPICS	ST. LOUIS COUNTY	MISSOURI
HEART DISEASE		
Deaths / 100,000 Population (2007-2017)	183.61	199.32
Hospitalizations / 10,000 Population (2011-2015)	106.11	109.46
Emergency Room Visits / 1,000 Population (2011-2015)	12.67	15.12
ISCHEMIC HEART DISEASE		
Deaths / 100,000 Population (2007-2017)	127.92	124.16
Hospitalizations / 10,000 Population (2011-2015)	26.54	32.53
Emergency Room Visits / 1,000 Population (2011-2015)	0.12	0.57
STROKE / OTHER CEREBROVASCULAR DISEASE		
Deaths / 100,000 Population (2007-2017)	40.59	43.02
Hospitalizations / 10,000 Population (2011-2015)	30.15	27.85
Emergency Room Visits / 1,000 Population (2011-2015)	0.33	0.77

Source: Missouri Department of Health & Senior Services

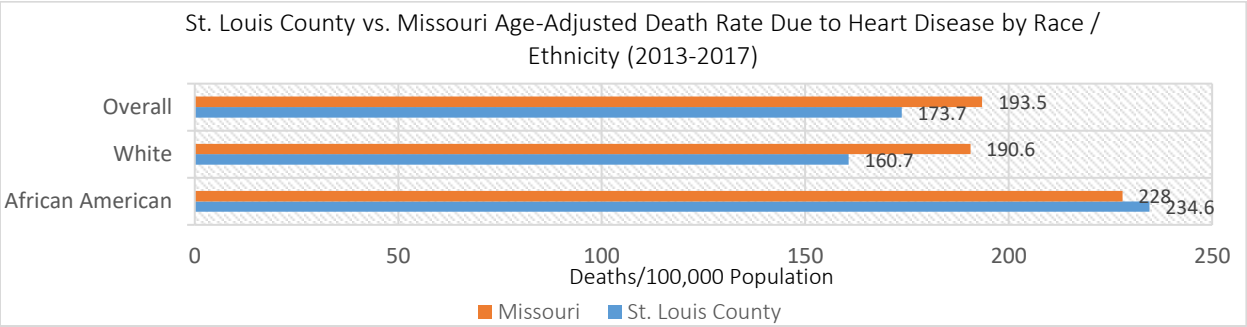
HEART HEALTH & STROKE



Source: Conduent Healthy Communities Institute

ST. LOUIS COUNTY VS. MISSOURI HEART DISEASE & STROKE AGE-ADJUSTED RATE BY RACE / ETHNICITY				
	WHITE		AFRICAN AMERICAN	
HEALTH INDICATORS	ST. LOUIS COUNTY	MISSOURI	ST. LOUIS COUNTY	MISSOURI
HEART DISEASE				
Deaths / 100,000 Population(2007-2017)	171.53	196.24	244.1	235.6
Hospitalizations / 10,000 Population (2011-2015)	88.71	102.13	173.23	164.99
Emergency Room Visits / 1,000 Population (2011-2015)	8.47	13.48	25.67	25.7
ISCHEMIC HEART DISEASE				
Deaths / 100,000 Population (2007-2017)	120.73	123.1	169.07	141.23
Hospitalizations / 10,000 Population (2011-2015)	24.19	32.06	35.42	33.04
Emergency Room Visits / 1,000 Population (2011-2015)	0.09	0.59	0.21	0.35
STROKE / OTHER CEREBROVASCULAR DISEASE				
Deaths / 100,000 Population (2007-2017)	36.8	41.62	58.29	56.71
Hospitalizations / 10,000 Population (2011-2015)	24.75	25.66	51.53	44.57
Emergency Room Visits / 1,000 Population (2011-2015)	0.24	0.77	0.65	0.69

Source: Missouri Department of Health & Senior Services

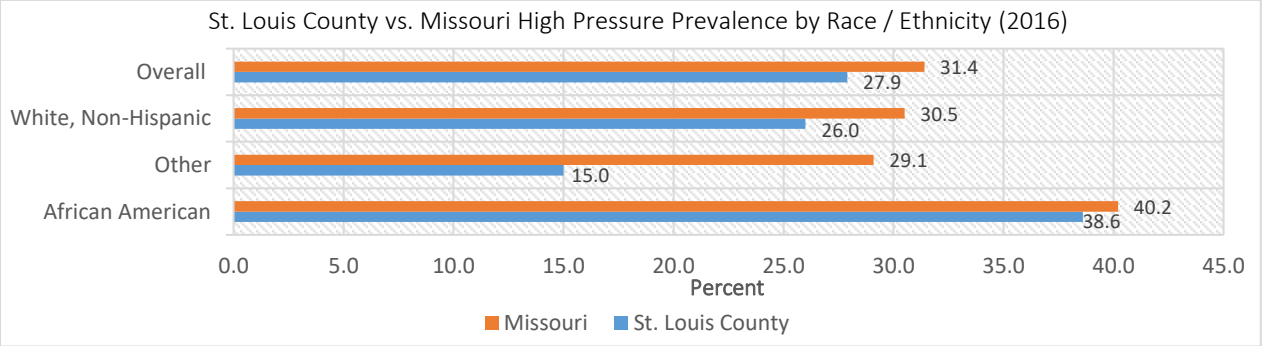


Source: Conduent Healthy Communities Institute

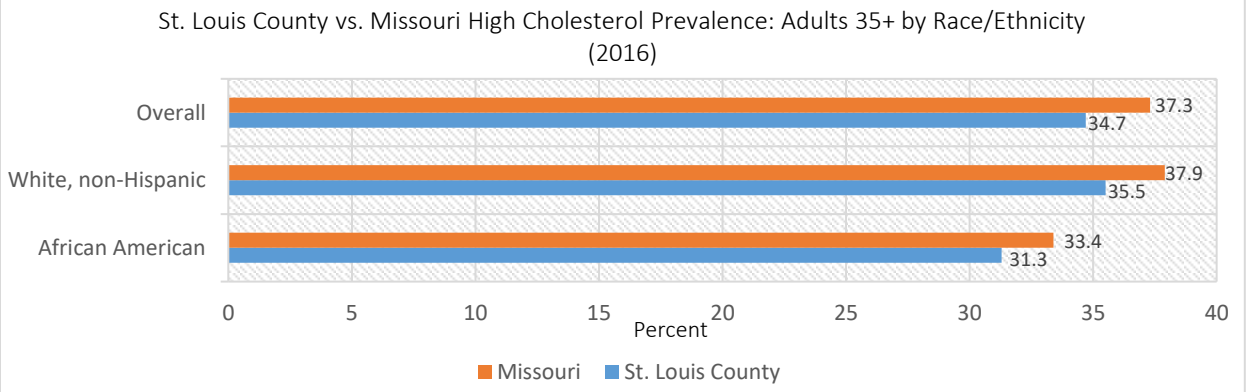
HEART HEALTH & STROKE

ST. LOUIS COUNTY VS. MISSOURI HEART DISEASE & STROKE THREE-YEAR MOVING AVERAGE RATES						
	ST. LOUIS COUNTY	MISSOURI	ST. LOUIS COUNTY	MISSOURI	ST. LOUIS COUNTY	MISSOURI
DEATHS / 100,000 POPULATION	2013-2015		2014-2016		2015-2017	
Heart Disease	172.55	194.78	172.64	194.15	176.26	193.5
Ischemic Heart Disease	113.02	114.21	111.22	111.17	111.46	108.36
Stroke / Other Cerebrovascular Disease	38.06	41.73	35.99	40.92	37.17	40.56
HOSPITALIZATIONS / 10,000 POPULATION	2011-2013		2012-2014		2013-2015	
Heart Disease	113.24	115.58	104.86	108.12	98.17	102.68
Ischemic Heart Disease	28.21	34.89	25.94	31.91	24.53	30.04
Stroke / Other Cerebrovascular Disease	30.84	28.44	29.9	27.47	29.36	27.16
EMERGENCY ROOM VISITS / 1,000 POPULATION	2011-2013		2012-2014		2013-2015	
Heart Disease	12.89	15.25	12.75	15.1	12.52	14.97
Ischemic Heart Disease	0.12	0.6	0.11	0.57	0.11	0.54
Stroke / Other Cerebrovascular Disease	0.33	0.78	0.33	0.76	0.32	0.75

Source: Missouri Department of Health & Senior Services 2011

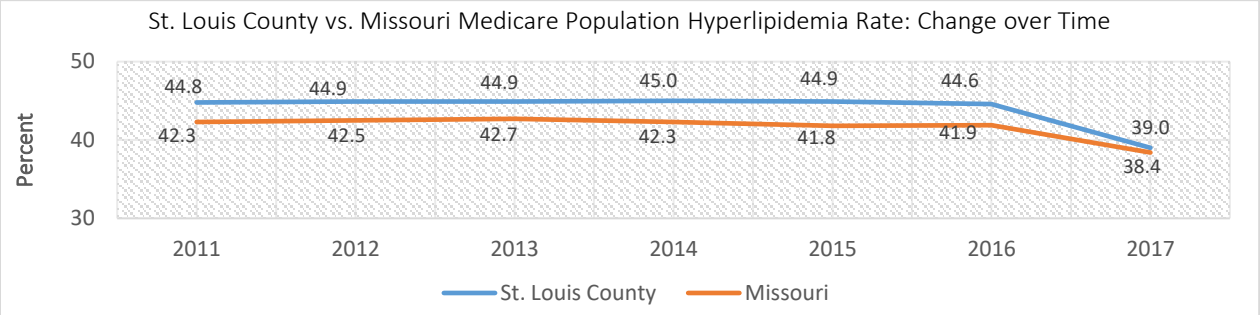


Source: Conduent Healthy Communities Institute



Source: Conduent Healthy Communities Institute

HEART HEALTH & STROKE



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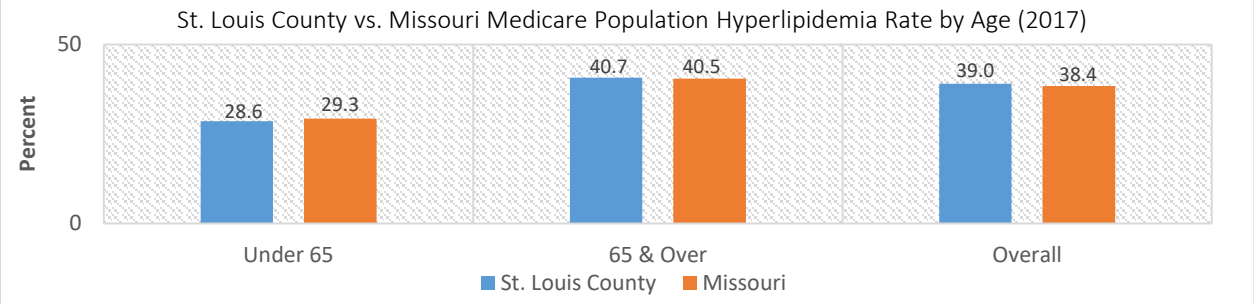
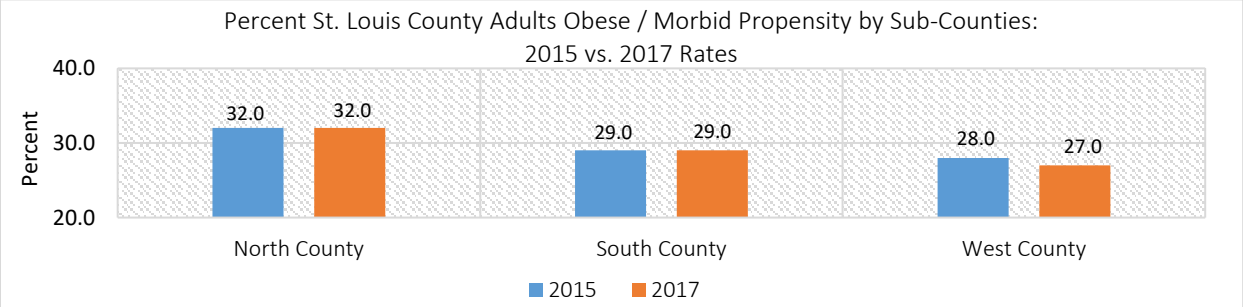
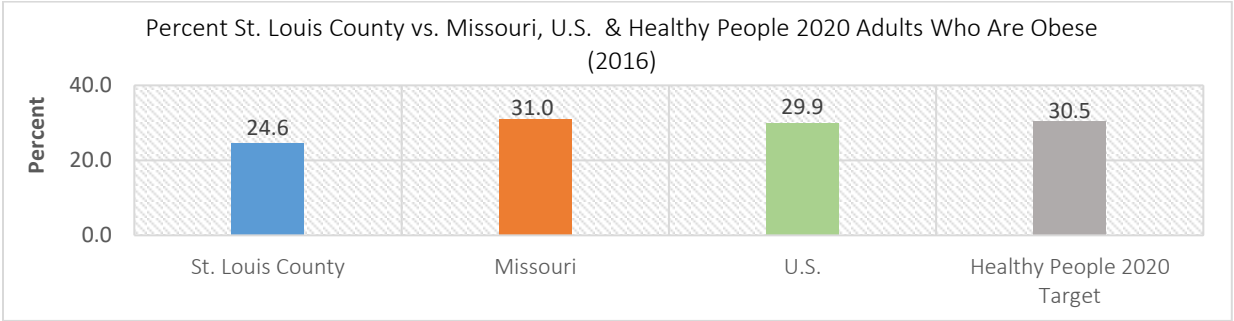


Source: Conduent Healthy Communities Institute

OBESITY



Source: Truven Health Analytics



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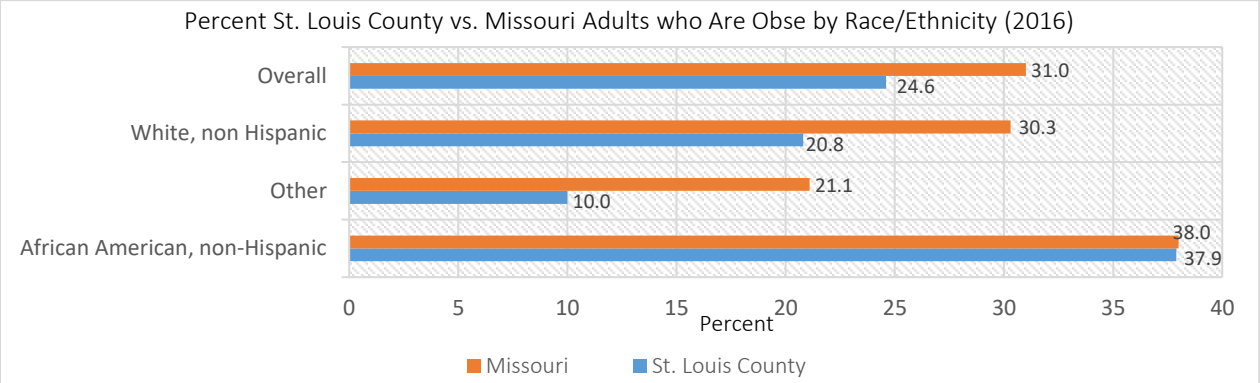
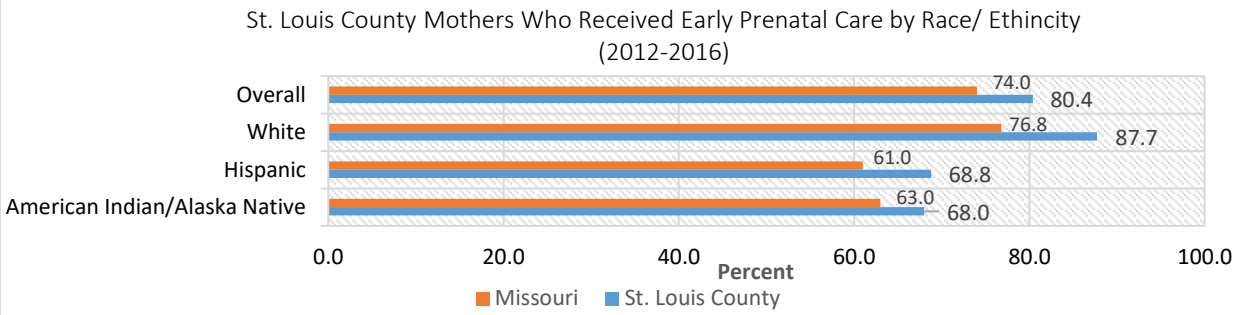
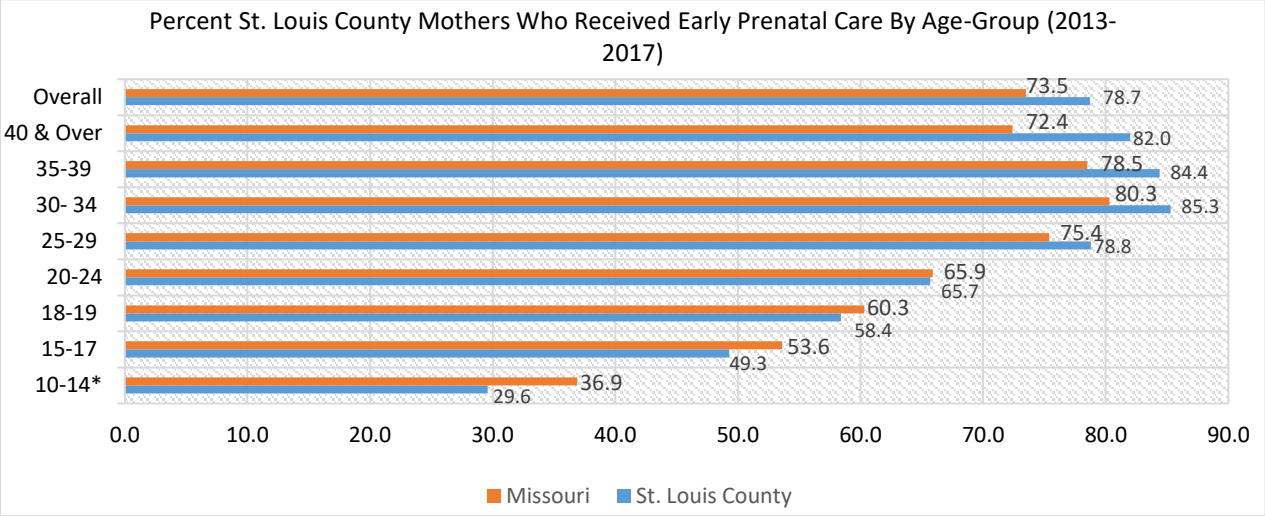


Source: Conduent Healthy Communities Institute

MATERNAL AND INFANT HEALTH



Source: Conduent Healthy Communities Institute



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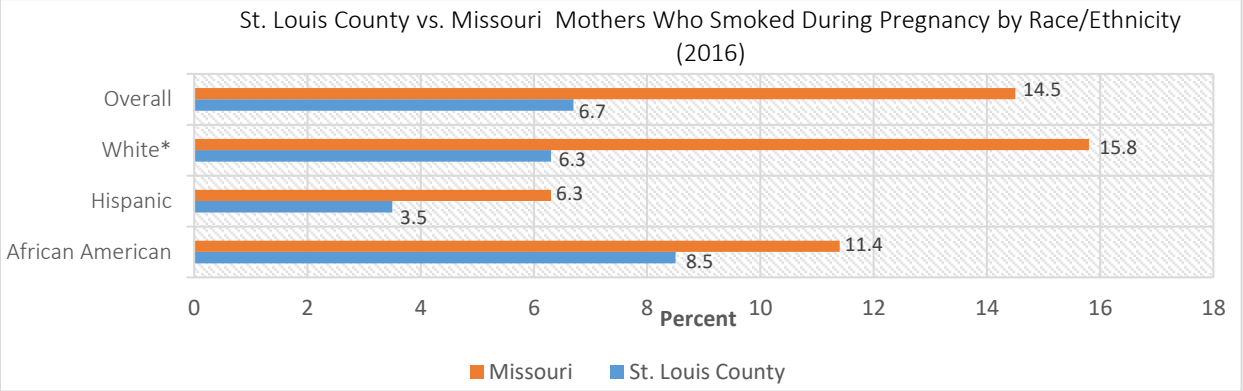

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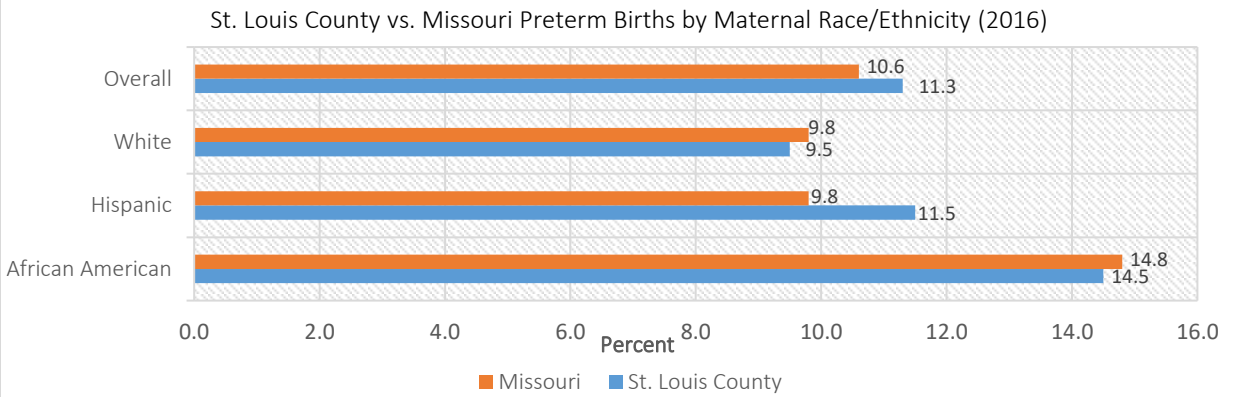
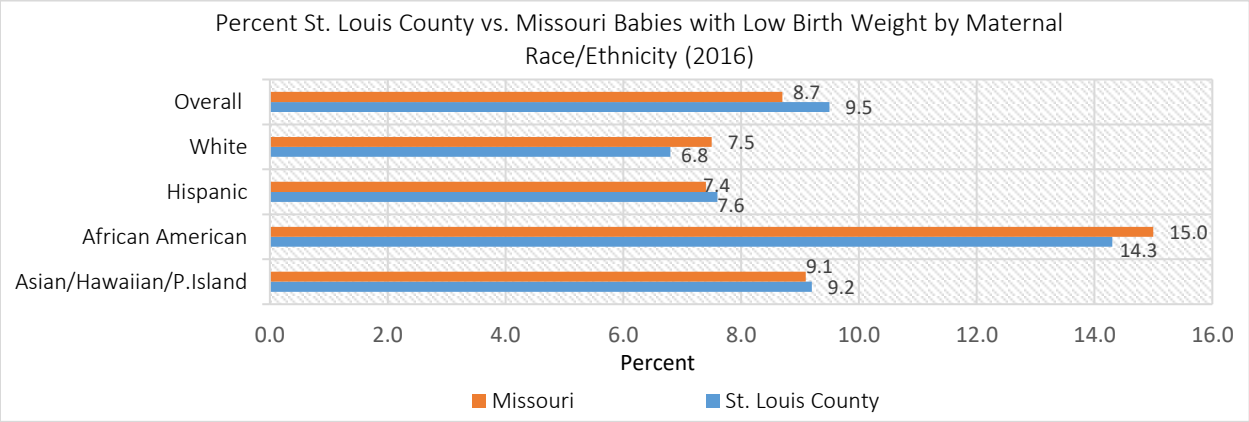


Source: Conduent Healthy Communities Institute

(*) Value may be statistically unstable and should be interpreted with caution



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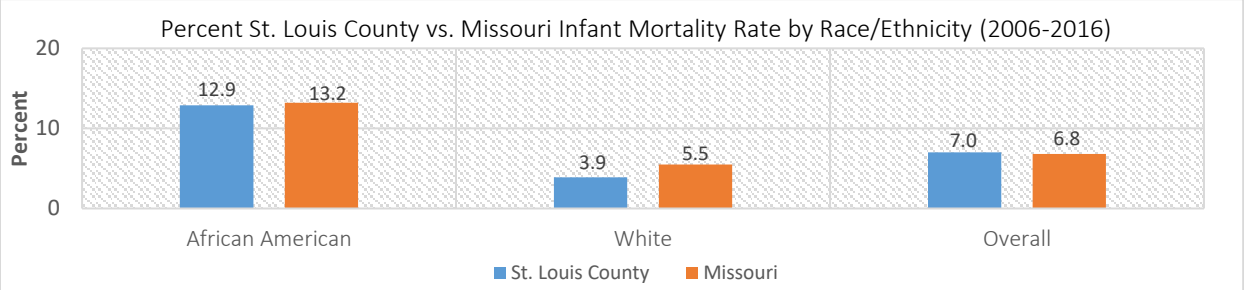
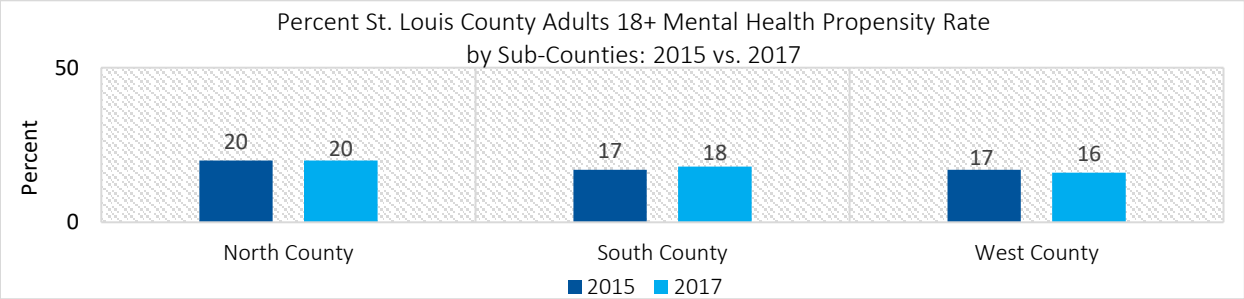
MATERNAL AND INFANT HEALTH

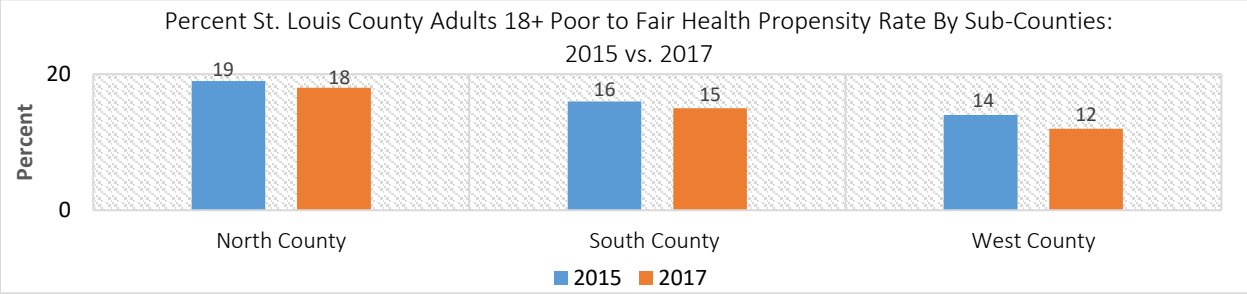


Source: Conduent Healthy Communities Institute

MENTAL/BEHAVIORAL HEALTH: MENTAL HEALTH



Source: Conduent Healthy Communities Institute



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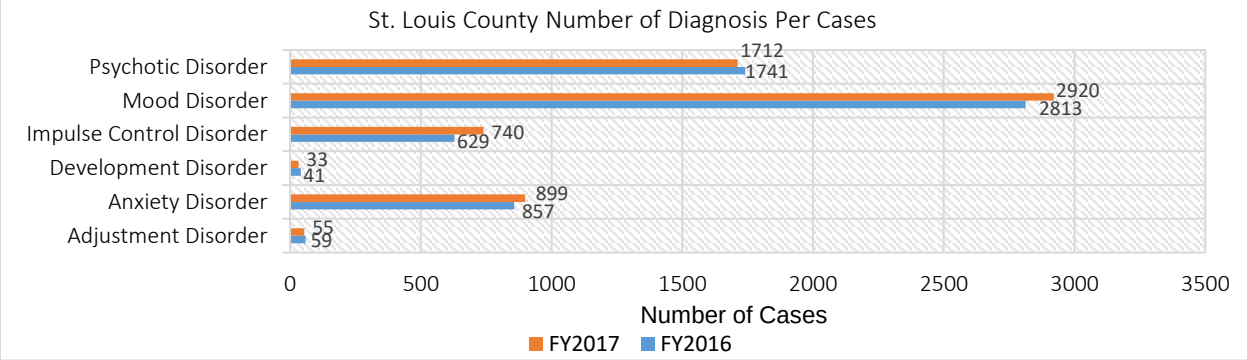
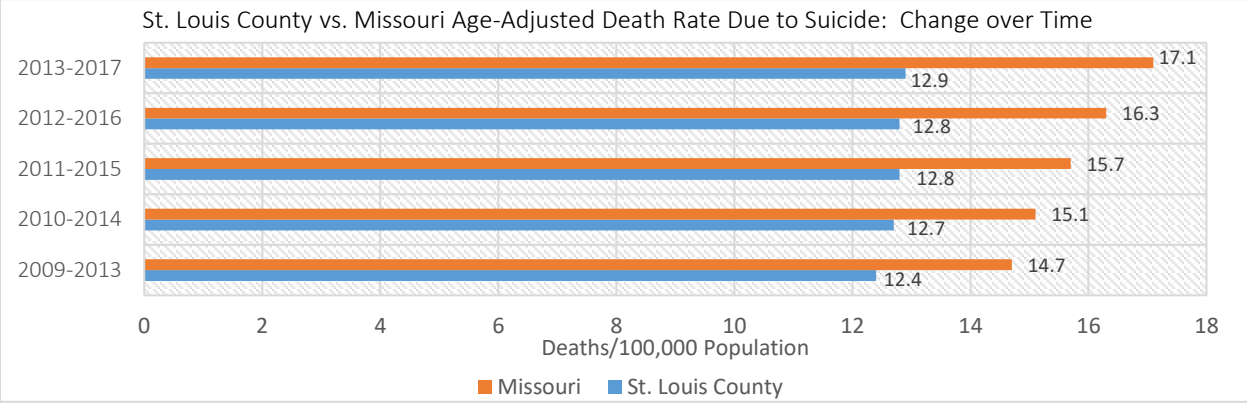
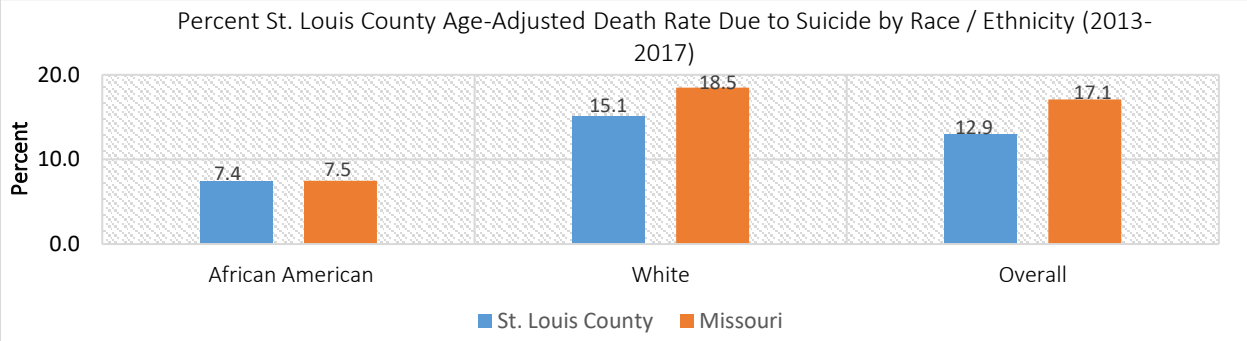


Source: Missouri Department of Mental Health

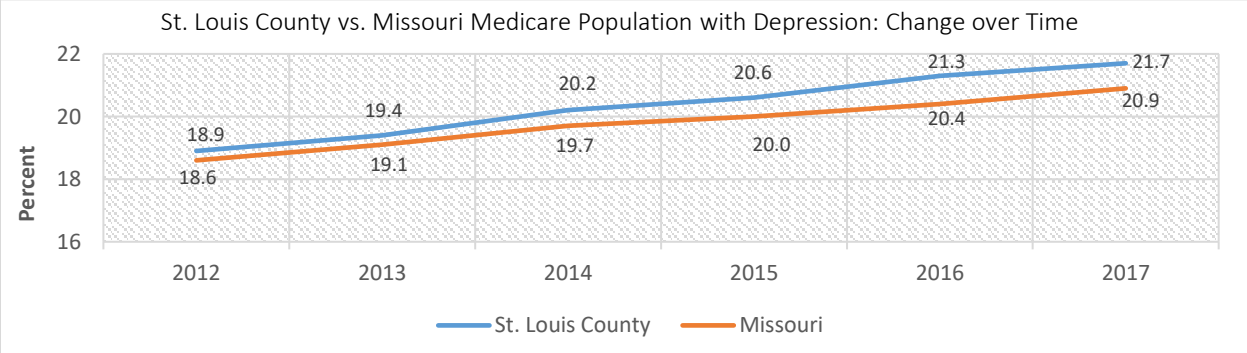
MENTAL/BEHAVIORAL HEALTH: MENTAL HEALTH



Source: Conduent Healthy Community Institute

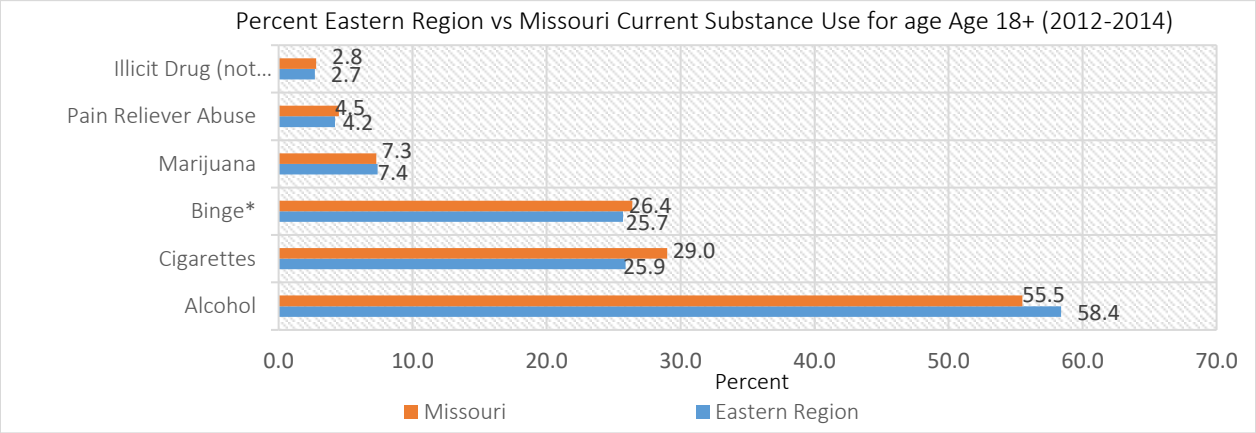


Source: Conduent Healthy Communities Institute

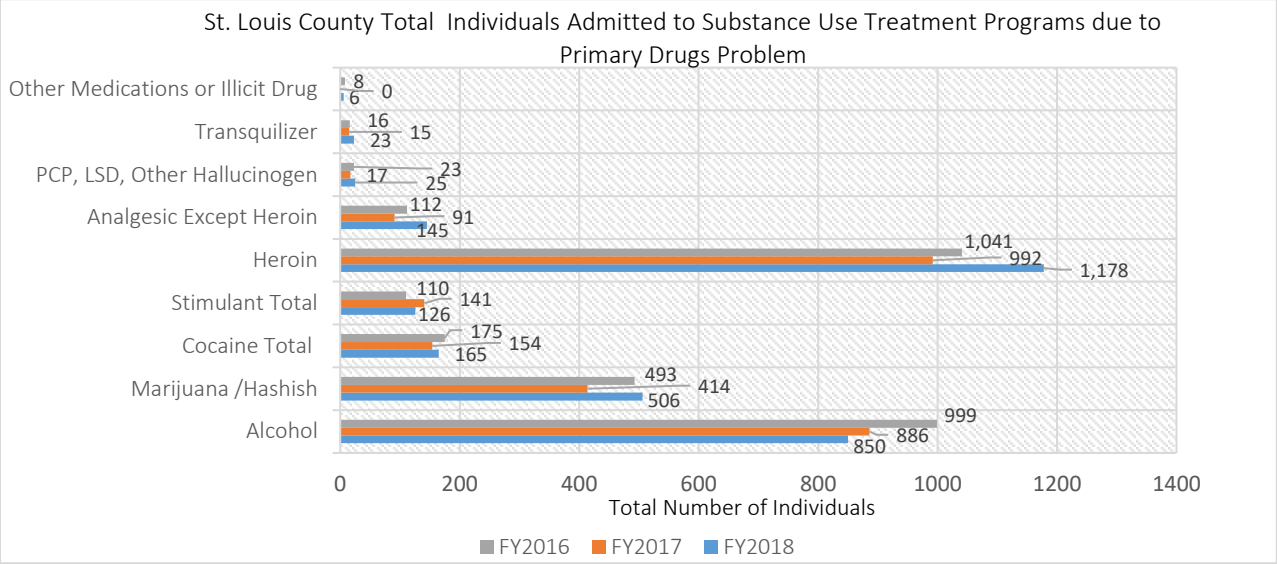


Source: Conduent Healthy Communities Institute

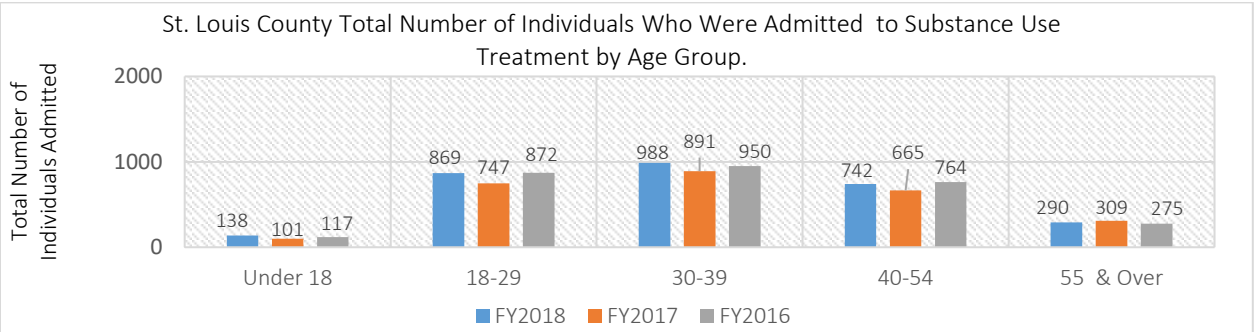
MENTAL/BEHAVIORAL HEALTH: SUBSTANCE ABUSE



Source: Missouri Department of Mental Health

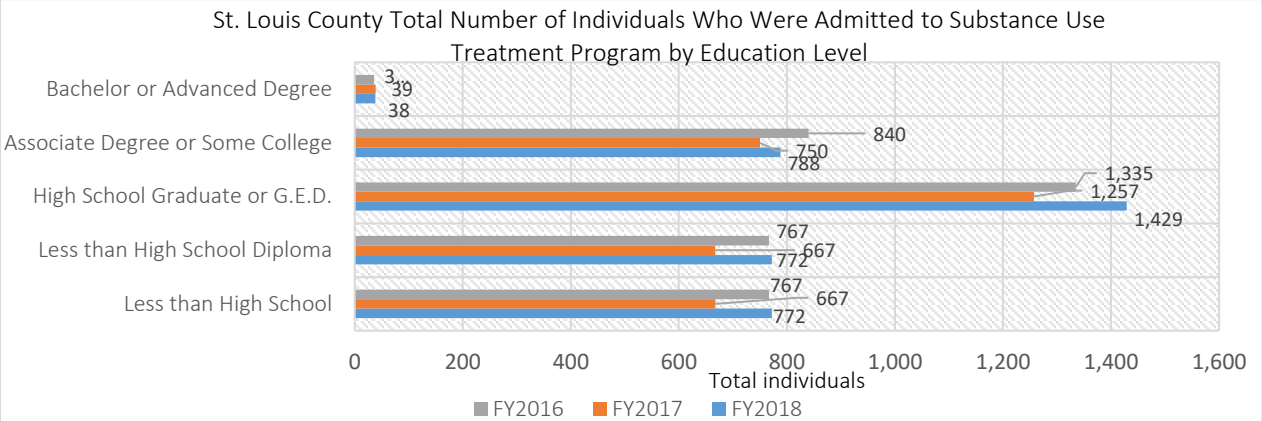


Source: Missouri Department of Mental Health

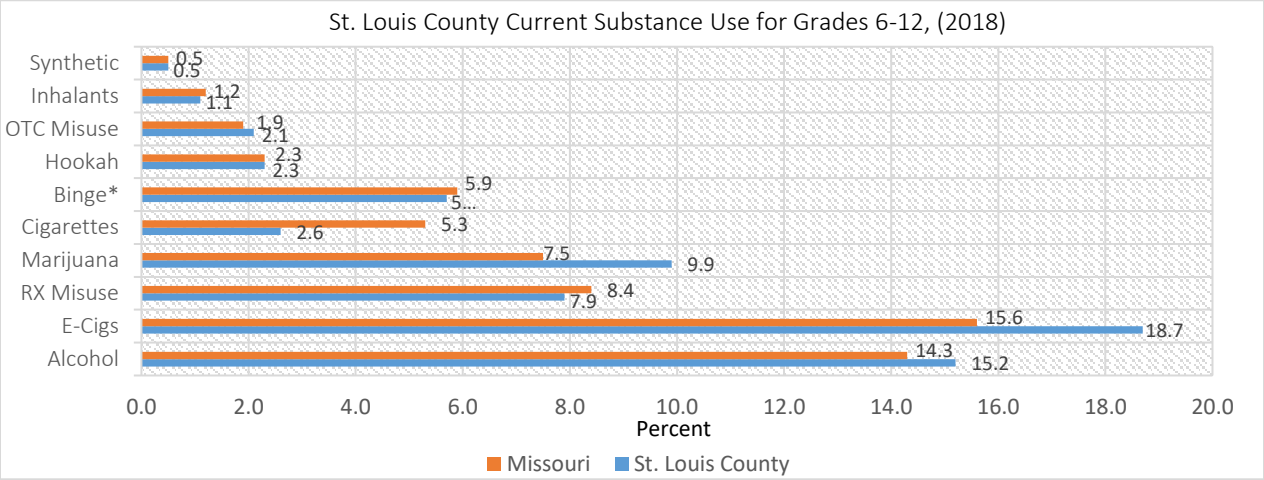


Source: Missouri Department of Mental Health

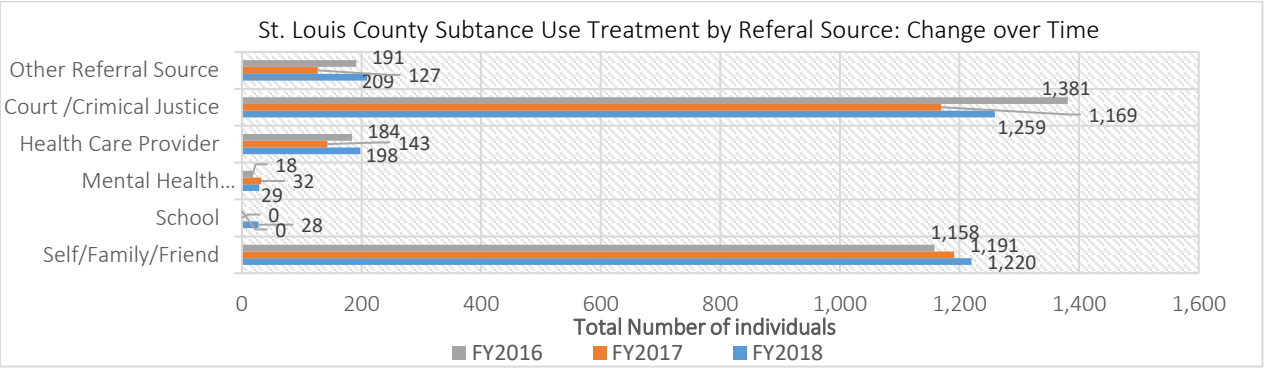
MENTAL/BEHAVIORAL HEALTH: SUBSTANCE ABUSE



Source: Missouri Department of Mental Health



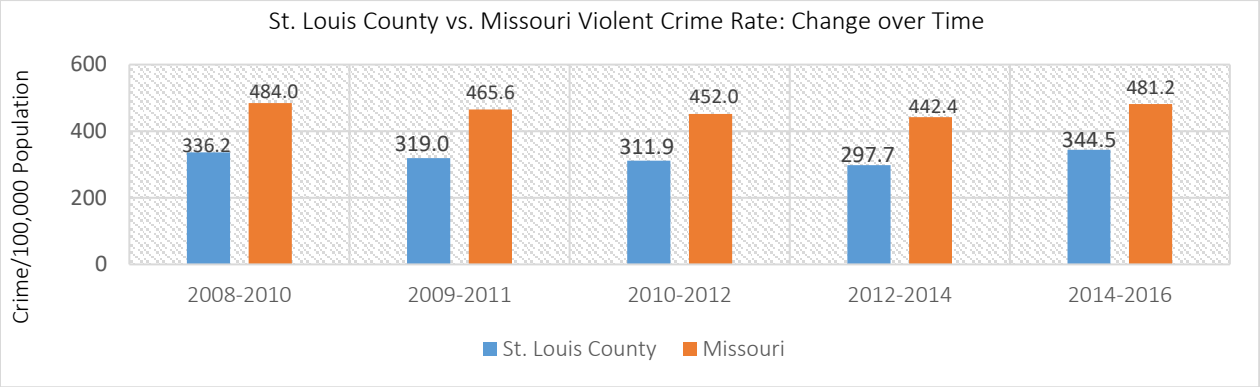
Source: Missouri Department of Mental Health



Source: Missouri Department of Mental Health

(*) Men consume 5 or more drinks or women consume 4 or more drinks in about 2 hours.

VIOLENCE



Source: Conduent Healthy Communities Institute

DATA SOURCES USED FOR THE SECONDARY DATA ANALYSIS INCLUDED THE FOLLOWING DESCRIBED BELOW:

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)/STATE CANCER PROFILES is a website that provides 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

CONDUENT HEALTHY COMMUNITIES INSTITUTE, an online dashboard of health indicators for St. Louis County, offers the ability to evaluate and track the information against state and national data and Healthy People 2020 goals. Sources of data include the National Cancer Institute; Environmental Protection Agency; U.S. Census Bureau; U.S. Department of Education, and other national, state and regional sources. https://healthycities.zendesk.com

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/crawford_link.html

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.

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/

IMPLEMENTATION STRATEGY








Community Health Needs to be Addressed

A. OPIOID USE DISORDER

Community Health Need Rationale

Opioid use has both immediate and long-term effects on a person's health and well-being. Opioids can cause slowed breathing, unconsciousness and death when ingested (used) in large amounts. Opioid use can lead to opioid tolerance and dependence meaning a person may ingest (use) more opioids to get the same effect previously experienced. When a person has developed an opioid tolerance and cannot reduce their use without experiencing withdrawal symptoms it can interfere with social functioning.

The EPICC Project provides the patient access to recovery coaching and support to engage in treatment as well as expedited access to substance abuse treatment services and medication assisted treatment. The coach will also provide opioid overdose education and a rescue kit that has Narcan (the opioid reversal agent).

Strategy Goal

Increase the number of patients referred from Christian Hospital to the EPICC Project

Strategy Objectives

Increase the number of patients referred from Christian Hospital to the EPICC Project by 10 percent every year starting from 2020 using 2018 as a baseline

Strategy Action Plan

- Educate clinicians (ED and inpatient nurses, emergency medical technicians, paramedics, advanced practice paramedics and physicians) on EPICC Project
- Implement Opioid Use Disorder Screening Tool in EMR to better identify patients that should be referred to the EPICC Project

Strategy Outcomes

- Improve opioid education and referral to treatment
- Number of patients referred to the EPICC Project
- Number of patients engaged in treatment services at outreach

Strategy Outcomes Measurement

- CH will obtain monthly data depicting the number of referrals made to Behavioral Health Response for participation in the EPICC Project
- CH will obtain monthly data depicting the number of successful outreach instances resulting from referrals

B. ACCESS TO CARE AND CARE COORDINATION

Community Health Need Rationale

Access to comprehensive, quality health care services is important for the achievement of health equity and for increasing the quality of a healthy life for everyone. Access to health services means the timely use of personal health services to achieve the best health outcomes. Disparities in access to health services affect individuals and society. Limited access to health care impacts people's ability to reach their full potential, negatively affecting their quality of life. Barriers to services include lack of availability, high cost and lack of insurance coverage. These barriers to accessing health services lead to:

- Unmet health needs
- Delays in receiving appropriate care
- Inability to get preventive services
- Hospitalizations that could have been prevented

Some residents in North County do not have access to a medical home and do not know how to navigate the health care system or even community resources. Residents that do not have access to a medical home or care coordination with health care and community resources are at risk for health problems such as heart disease, CHF, pneumonia, COPD, diabetes, hypertension and asthma. These factors can cause our community to become unhealthy. The Community Health Access Program (CHAP) from CH provides a holistic approach to the well-being and health in our community by going into the client's homes to provide access to care and bridge the services within our community.

PATHWAY TO HEALTH— A collaborative program with Salvation Army of Community Health Workers to reduce health disparities in patients that are uninsured or underinsured through connections to primary care and medical homes, medication assistance, health insurance via the Affordable Care Act and other social determinants of health barriers in high risk population zip codes.

COMMUNITY HEALTH ACCESS PROGRAM (CHAP)- Christian Hospital's Community Health Access Program (CHAP) is a care delivery model that unites a team of community health workers, social workers and a nurse practitioner (via telehealth) to further address disparities, and fill gaps in health care that impact readmissions.

The CHAP model sharpens the focus on community health to more effectively and efficiently ensure continuity of care in the community, as well as to reduce ED admissions and hospital readmissions. Benefits of the community health worker model include evidenced-based practice and outcome measures, as well as better aligning community needs with appropriate resources.

We utilize Epic moderate and high-risk score to identify patients residing in at risk zip codes to provide outreach. We have inclusion and exclusion criteria, along with evidence-based outcome measures provided by University of Pennsylvia's IMPACT- Community Health Worker model.

Strategy Goal

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

Strategy Objectives

- Enrollment in CHAP program by 5 percent from baseline
- Increase collaboration and connection to medical homes and health insurance by 5 percent from 2019 baseline of the target population
- Reduce hospital re-visits in the target populations with chronic health conditions by 2 percent in the enrolled population

Strategy Action Plan

- Our team utilizes the Epic Risk score, a predictive model to assess a patient's moderate to high risk of readmission.
- Patients are identified that currently reside in high risk zip codes
- We also have identified inclusion and exclusion criteria to determine the patient's enrollment in the program
- We have partnered with UPENN Community Health Worker evidenced based model to establish
  evidenced based outcome measures of program success

Strategy Expected Outcomes

- Utilization: reduction in E.D. utilization and 30d hospital readmissions
- Access to care: post-hospital primary care follow up
- Health: self-rated (a) physical and (b) mental health
- Likelihood to recommend program (net promoter score)
- Socioeconomic stability improvement in self-sufficiency score

Strategy Outcome Measurement

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

C. DIABETES

Community Health Need Rationale

- Prevalence of disease in community
- According to the American Diabetes Association, approximately 689,000 people in Missouri, or 13.4 percent of the adult population, have diabetes. In addition, 1,625,000 people in Missouri, 35.9 percent of the adult population, have prediabetes with blood glucose levels higher than normal but not yet high enough to be diagnosed as diabetes. Sources include:
    - Diabetes Prevalence: 2015 state diagnosed diabetes prevalence, cdc.gov/diabetes/data; 2012 state undiagnosed diabetes prevalence, Dall et al., "The Economic Burden of Elevated Blood Glucose Levels in 2012," Diabetes Care, December 2014, vol. 37
    - Diabetes Incidence: 2015 state diabetes incidence rates, cdc.gov/diabetes/data
    - Collective impact as diabetes aligns with BJC, the Diabetic Coalition and hospitals in St. Louis County
    - Alignment with Healthy People 2020 diabetes objectives (D-14 and D-15)

Strategy Goal

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

Strategy Objectives

a) Increase the proportion of persons with diabetes who receive formal diabetes education
b) Increase the proportion of persons with diabetes whose conditions have been screened

Strategy Action Plan

CH outpatient dietitians, as contracted through Morrison Healthcare, will provide physician-ordered one-on-one diabetes nutrition counseling, nutrition and diabetes courses, and educational resources free of charge.

Due to COVID-19, this will be done virtually.

Physicians can send referrals for diabetes education via fax or electronic charting system. Education/counseling will include discussion on the American Association of Diabetes Educators (AADE) 7 Self-Care Behaviors with primary focus on diet/nutrition.

1. Healthy Eating
2. Being Active
3. Monitoring
4. Taking Medication
5. Problem Solving
6. Reducing Risk

7. Healthy Coping

Appointments will be scheduled at the dietitian's availability. At a minimum, follow-up appointments will be scheduled at 3 months and at 6 months after the initial appointment.

During each session (initial, 3-month follow-up, and 6-month follow-up) the following assessment questions will be asked and used to measure program objectives. Increased adherence/improvement is shown as patient answers move towards the letter "a" with the exception of question 2a.

1. How often do you count carbohydrates at meals/snacks?
    a. Each meal and snack
    b. 2-3 times per day
    c. Daily
    d. <1 time per day
    e. Never

    2a. (if you answered a-d on previous question) When you count carbohydrates, how many grams of carbohydrates do you typically eat per meal?
    a. 30-45gm
    b. 45-60gm
    c. 60-75gm
    d. >75gm
2. How many times per week do you drink sugar-sweetened beverages and/or sweets (soda, alcohol, sweetened coffee, candy bars, etc.)?
    a. None
    b. 1-3
    c. 3-5
    d. >5x
3. How many minutes of exercise do you complete weekly?
    a. 150 minutes or more
    b. 120-150 minutes
    c. 90-120 minutes
    d. 60-90 minutes
    e. 30-60 minutes
    f. < 30 minutes
4. How often do you check your blood sugar at home?
    a. More than 1x per day
    b. Daily
    c. 3-5x per week
    d. 1-2x per week
    e. Never
5. How often do you forget/miss your dose of prescribed medications?

a. Never
b. 1-2x per month
c. 1x per week
d. >1x per week

6. On a scale of 1-5 (1 being poor, 5 being excellent) how confident do you feel in your problem-solving abilities in relation to your diabetes?
    a. 5
    b. 4
    c. 3
    d. 2
    e. 1
7. Have you gone to the dentist over the last 6 months and the eye doctor within the last year?
    a. Yes
    b. Only dentist or eye doctor
    c. Neither
8. How confident do you feel in your coping abilities?
    a. Very Well
    b. Well
    c. Reasonably well
    d. Not well
    e. Not very well

Strategy Outcomes

Increased adherence to individualized nutrition and diabetes-related goals

Strategy Outcomes Measurement

The dietitian will ask assessment questions at each visit and will document patient responses into charting system and an excel spreadsheet to determine change in behavior and adherence to dietitian recommendations. Within the spreadsheet a simple calculation will be used to determine if the patient has made changes to meet program objectives. Increased adherence/improvement is shown as patient answers move towards the letter “a” with the exception of question 2a.

- Healthy eating: 50 percent of clients will increase adherence/knowledge to dietary recommendations over their baseline
- Being Active: 50 percent of clients will increase activity level over their baseline
- Healthy Coping: 25 percent of clients will increase their confidence in their coping abilities over their baseline
- Reducing Risk: 10 percent of clients will increase preventive care over their baseline
- Monitoring: 10 percent of clients will increase times of checking blood sugar over their baseline

- Taking Medications: 5 percent of clients will improve adherence to taking prescribed medications over their baseline
- Problem solving: 25 percent of clients will increase confidence in problem solving in relation to diabetes.

Community Health Needs that Will Not be Addressed

CH is positioned to actively impact the top two community health needs as identified through this study. The health needs below are not currently being addressed through this study; however, the hospital has programs in place to influence five of the top 10 community health needs. (Listed in order of priority of needs 3-10)

CANCER

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

CHILD WELFARE

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

DENTAL HEALTH

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

HEART & VASCULAR: HEART

The hospital does not currently have the financial and staffing ability to actively educate and screen the community for heart and vascular disease. We do however, offer free screenings to the community for cholesterol and blood pressure through community events throughout the year, with follow-up from our CHAP program.

HEART & VASCULAR: STROKE

The hospital does not currently have the financial and staffing ability to actively educate and screen the community for stroke. We do however, offer education throughout the year at community events and offer a paper risk assessment for people to weigh their risk of stroke.

INFECTIOUS DISEASE

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

MENTAL/BEHAVIORAL HEALTH: MENTAL HEALTH

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

REPRODUCTIVE HEALTH

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

OBESITY

The hospital does not currently have the financial ability to actively educate the community for obesity. We do however, have the weight loss challenge that helps educate community members who choose to join and pay a small fee for nutrition, motivation and mental and physical benefits to losing weight.

SENIOR CARE

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

SMOKING/TOBACCO USE

The hospital does not currently have the financial ability to actively educate the community for smoking/tobacco use. We do however, provide smoking cessation for employees and family members along with promoting smoking cessation with flyers and brochures at community events.

SOCIO-ECONOMIC FACTORS

The hospital partners with organizations within the community to positively impact the growth of this area. We are a leading employer in the county and partner with various community development corporations and community development organizations in an effort to improve the neighboring communities.

VIOLENCE

The hospital is not equipped or trained to provide services to help combat violence in our community beyond the security of the hospital.