2019
Community Health Needs Assessment and Implementation Strategy

BARNES-JEWISH Hospital
BJC HealthCare

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

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EXECUTIVE SUMMARY

Barnes-Jewish Hospital, a member of BJC HealthCare, is a 1,315-bed academic medical center located in the city of St. Louis, Missouri. What began more than 100 years ago as two separate hospitals — Barnes Hospital and The Jewish Hospital of St. Louis — has evolved into a nationally recognized medical center delivering high quality health care services to patients across the St. Louis region. The hospital has also established effective partnerships toward the goal of improving the health of the community.

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

Barnes-Jewish conducted its first stakeholder assessment in 2012 and second assessment in 2016. For its third assessment in 2019, Barnes-Jewish and SSM St. Louis University Hospital agreed to work together. As part of the CHNA process, each hospital is required to define its community. Barnes-Jewish defined its community as St. Louis City.

Barnes-Jewish conducted its 2019 assessment in two phases. The first phase consisted of a focus group discussion with key leaders and stakeholders representing the community. This group reviewed the primary data and community health need findings from 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 Barnes-Jewish to collaborate with in addressing needs.

During phase two, findings from the focus group meeting were reviewed and analyzed by a hospital internal workgroup of clinical and nonclinical staff. Using multiple sources, including Conduent Healthy Communities Institute, a secondary data analysis was conducted to further assess the identified needs. This analysis identified unique health disparities and trends evident in St. Louis City when compared against state and national data.

At the conclusion of the comprehensive assessment process, Barnes-Jewish identified two health needs where focus is most needed to improve the health of the community it serves: Mental Health and Substance Abuse. The analysis and conclusions were presented, reviewed and approved by the Barnes-Jewish Board of Directors. The report was posted to the hospital's website to ensure easy access to the public.

COMMUNITY DESCRIPTION

GEOGRAPHY

Barnes-Jewish is the largest hospital in Missouri. Seventy-five percent of the hospital's patients come from the hospital's primary service area, including eight counties in Missouri and eight counties in Illinois. The remaining 25 percent of patients come from the surrounding 250 miles of St. Louis.

Barnes-Jewish is the largest of the 15 BJC HealthCare hospitals that comprise the system. BJC HealthCare hospitals serve urban, suburban and rural community locations primarily in the greater St. Louis, southern Illinois and mid-Missouri regions. Barnes-Jewish and St. Louis Children's Hospital are the two BJC HealthCare hospitals located in St. Louis City.

As the major safety net provider, Barnes-Jewish serves a larger community; however, for the purpose of the CHNA, Barnes-Jewish defined its community as St. Louis City. The shaded area in the map below represents St. Louis City.

This area includes the following ZIP codes:

63101 63102 63103 63104 63106 63107 63108 63109 63110 63111 63112
63113 63115 63116 63118 63120 63139 63147 63164 63166 63196 63199

POPULATION

Population and demographic data are necessary to understand the health of the community and plan for future needs. In 2017, St. Louis City reported a total population estimate of 308,626 compared to the state population of 6,113,532 or 5 percent of Missouri's total population. Since the 2010 census, the population of the city declined 3.3 percent while the state population increased 2.1 percent.

INCOME

St. Louis City's median household income for the five-year-period ending in 2017 was 25 percent lower than the state's median household income. Persons living below the poverty level in St.

Louis City totaled 25 percent compared to 14.6 percent in the state. For the five-year period ending in 2017, home ownership was lower in St. Louis City (35 percent) than Missouri (58 percent).

The overall rate of families living in poverty in St. Louis City was 19.7 percent, 91 percent higher than in the state. The Native Hawaiian/Other Pacific Islander population had the highest rate of families living below poverty by race in the city.

EDUCATION

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. 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. (Healthy Communities Institute)

In St. Louis City, 44.7 percent of the 18-24 age group's had some college or associate degree compared to Missouri (46.7 percent) and the U.S. (45.7 percent). This was the largest age group of education attainment for the city, state and U.S. (with no further education).

In St. Louis City, 23.2 percent of the population 25 and older graduated from high school compared to Missouri (30.9 percent) and the U.S. (27.3 percent).

White, non-Hispanic (91.9 percent) had the highest rate of individuals with a high school degree or higher in St. Louis City, followed by those who identify as Other (84.2 percent); Asian (81.8 percent); Two or more Races (81.5 percent); African American (79.8 percent); Hispanic or Latino (77.4 percent); and Native Hawaiian or Other Pacific Islander (74.2 percent). American Indian/Alaska Native alone had the lowest rate (67.5 percent).

St. Louis City had a 4.0 percent lower rate of individuals 25 + with a high school degree or higher when compared to same group in Missouri.

Compared to Missouri, individuals age 65 and over in St. Louis City had the largest disparity (10.2 percent lower) of individuals with a high school degree or higher when compared to other age groups; rates of those in the 25-34 age group in the city were slightly higher with the state.

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)

For the four-year period ending in 2017, the Asian population had the highest rate of individuals with a bachelor's degree or higher both in St. Louis City (55.1 percent) and Missouri (57.9 percent). African Americans (15.1 percent) had the lowest rate in St. Louis City followed by the American Indian or Alaska Native population (19.5 percent).

St. Louis City had a 21 percent higher rate of individuals 25 + with a bachelor's degree or higher than the state.

2016 CHNA MEASUREMENT AND OUTCOMES RESULTS

At the completion of the 2016 CHNA, Barnes-Jewish identified four health needs where focus was most needed to improve the health of the community served by the hospital:

- Access: Services
- Healthy Lifestyles
- Mental Health: Substance Abuse
- Violence

The following table details results, goals and current status of these community health needs.

TABLE 1: BARNES-JEWISH HOSPITAL 2016 MEASURES OF SUCCESS BY PRIORITY	
ACCESS: SERVICES	HEALTHY LIFESTYLE
PROGRAM GOALS:	PROGRAM GOALS:
Improve access to comprehensive, quality health care services.	Improve knowledge and skill in leading a healthy lifestyle.
PROGRAM OBJECTIVES	PROGRAM OBJECTIVES
1) Reduce avoidable Emergency Department (ED) utilization for patients who visit most often 2) Increase coordination of community resources to assist in reducing access challenges for patients 3) Identify methods for successful management of frequent and complex patients in the ED	1) Once phase one of tool development is complete, provide Your Disease Risk assessments to 100 community members each year 2) Improve knowledge of the importance of a healthful diet, physical activity and healthy weight in a minimum of 50% of participants who complete an assessment, as measured by pre- and post-tests 3) Improve the health of the people we serve as measured by the pre- and post-tests conducted after phase two of tool development is completed
PROGRAM ACTION PLAN	PROGRAM ACTION PLAN
Barnes-Jewish team partners with BJC's Center for Clinical Excellence to analyze barriers to accessing care. Regularly gathering a multi-disciplinary team to discuss a patient's care on an individual basis, the Barnes-Jewish team will work to improve the continuity of care for its patients and identify barriers that may be preventing the individual from being healthier.	Barnes-Jewish Hospital will partner with Siteman Cancer center to redevelop the comprehensive online Your Disease Risk tool to use as assessment tool for community events. Community members will use the online survey to take the Your Disease Risk Assessment. A second phase of the tool development will be conducted by 2019 in order to record risk by individual participants.
CURRENT ACTION	CURRENT ACTION
In 2017, the top 100 utilizers, "familiar faces," came to the ED nearly 2,400 times. Of 60,088 ED Outpatient Visits, 11.7% returned to the ED within 30 days. In measuring the success of follow-up appointments made at the COH Primary Medicine Clinic, our patients have an estimated 50% no-show rate. 60-day follow-up with case management/social work is not long enough to improve access measures and reduce unnecessary readmissions. Longer-term contact with patient is needed. Pilot partnership with Jewish Family & Children's Services was developed in 2017-18 with funding for year-long pilot approved in August 2018. The pilot project began January 2019; assessment of impact of pilot project will be conducted to determine future program needs and secure funding. This plan will remain as a priority, with additional partnerships planned. However, this need will not be included in the 2019 CHNA and implementation plan.	The updates to the Your Disease Risk online tool were completed in early 2017. The plan is on hold due to barriers with Information Technology/Services. The plan to implement this tool will remain a priority. However, this need will not be included in the 2019 CHNA and implementation plan.

TABLE 1: BARNES-JEWISH HOSPITAL 2016 MEASURES OF SUCCESS BY PRIORITY	
MENTAL/BEHAVIORAL HEALTH: SUBSTANCE ABUSE	VIOLENCE
PROGRAM GOALS:	PROGRAM GOALS
Increase awareness of prescription drug misuse.	Support the regional effort to make St. Louis a trauma-informed community and reduce the impact of violence on patient care and outcomes by training Barnes-Jewish Hospital team members in trauma-informed care.
PROGRAM OBJECTIVES	PROGRAM OBJECTIVES
1) In 2017, baseline percentage change from pre- and post-tests will be taken to show impact of education 2) By 2019, increase knowledge test scores of prescription drug misuse in 8% of the patients who participate as compared to 2017.	1) 75% of all Barnes-Jewish Hospital team members will be trained in trauma-informed care 2) 50% improvement in patient post-test scores compared to pre-tests.
PROGRAM ACTION PLAN	PROGRAM ACTION PLAN
1) Beginning in 2017, Barnes-Jewish Hospital will provide online training to health care providers on standards of care when reviewing opioid prescriptions. 2) Before a patient is discharged, the provider will review all instructions including but not limited to, dosage, home safety, risks of misuse and proper disposal. Offer immediate assistance to a patient who presents with a chemical dependency disorder. Raise awareness of resources through social media, and internal communications to physicians and clinical staff on the campus.	1) Beginning in 2017, Barnes-Jewish Hospital team members will be required to participate in training designed for trauma-informed communities. 2) Team members will be given access to resources for recognizing and addressing traumatic and toxic stress.
CURRENT ACTION	CURRENT ACTION
In alignment with NCADA, and in partnership with Barnes-Jewish West County Hospital and Missouri Baptist Sullivan Hospital, a project team determined a new action plan that will focus on awareness and education. NCADA confirmed informal partnership in summer 2018. Addressing substance abuse is a focus area of our 2019 CHNA and Implementation Plan, with a more strategic action plan being developed.	Along with St. Louis Children's Hospital, Saint Louis University Hospital and Cardinal Glennon, a grant was received from the Missouri Foundation for Health to address violence in St. Louis. Grant funding and implementation of this program began in June 2018. This plan and assessment of project impact will remain a priority. However, this need will not be included in the 2019 CHNA and implementation plan.

CONDUCTING THE 2019 CHNA

Primary Data Collection: Focus Group

Barnes-Jewish and SSM St. Louis University Hospital conducted a single focus group with public health experts and those with a special interest in the health needs of St. Louis City residents. Fifteen of 18 invited individuals representing various St. Louis City organizations participated in the focus group. (See Appendix E for participant list). The focus group was held March 6, 2018, at Boileau Hall on the campus of St. Louis University with the following objectives identified:

1. Determine whether the needs identified in the 2016 CHNA 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 gaps in the plan 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 that should be considered
6. Understand what other organizations are doing to impact the health of the community and how those activities might complement the hospital's initiatives
7. Evaluate what issues the stakeholders anticipate becoming a greater concern in the future that we need to consider now

2019 FOCUS GROUP SUMMARY

A general consensus was reached that needs identified in the previous assessment should remain as focus areas for the hospital. Some felt that Access to Services remained their highest concern. (See Appendix D for complete Focus Group Report)

NEEDS THAT SHOULD BE REMOVED/BE CONSIDERED

Nothing was identified to come off the list. Questions were raised and discussed regarding obesity, sexually transmitted disease and maternal deaths.

GAPS IN IMPLEMENTATION STRATEGIES

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

- Emphasis on one-on-one case management
- Mental Health
- Substance Abuse
- Access to care for some underserved and foreign-born populations
- Lack of personal relevance to health among individuals age 25 to 44

SPECIAL POPULATIONS

Discussion was held regarding individuals who are homeless, deaf and blind.

POTENTIAL PARTNER ORGANIZATIONS

Barnes-Jewish was recognized for its numerous collaborative efforts; one suggestion included reviewing the relationships the hospital has with homeless providers in the city to identify additional ways to address the needs of the homeless upon discharge.

NEEDS OF INCREASING IMPORTANCE

- Safety from Violence
- Access: Coverage
- Sexually Transmitted Disease
- Behavioral Health
- Chronic Conditions

OTHER ORGANIZATIONS FOR COLLABORATION

- A new data source (University of Missouri and the Missouri Hospital Association)
- Federally qualified health plans
- United Way 211 telephone line
- Behavioral Health Network
- Alive and Well Communities
- The Community Builders Network
- St. Louis Association of Community Organizations
- The Federation of Block Units

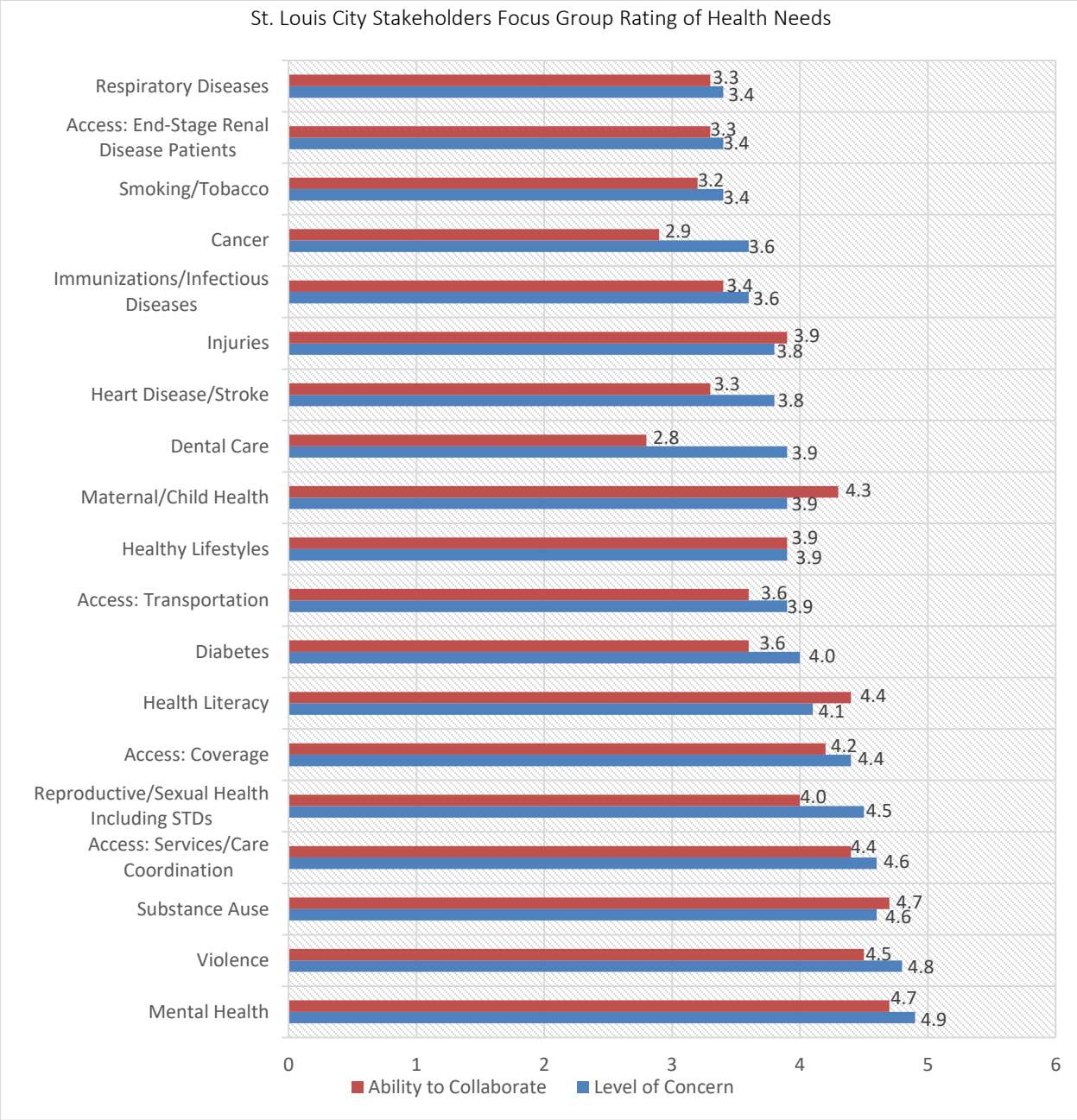
CHANGES SINCE THE 2016 CHNA/CONCERN FOR THE FUTURE

- Other addictive substances, with current emphasis on the opioid crisis
- American Pediatric Association's recommendation that all children be screened for depression

RATING OF THE HEALTH NEEDS

Participants were given the list of the needs identified in the 2016 assessment and directed to re-rank needs on a scale of 1 (low) to 5 (high), based on their perceived level of community concern and the ability of community organizations to address them collaboratively. The table on the following page shows the results of this ranking.

Mental Health and Violence rated highest in terms of level of concern and ability to collaborate. Mental Health and Substance Abuse were ranked highest in ability to collaborate.


St. Louis City Stakeholders Focus Group Rating of Health Needs
Respiratory Diseases
3.3
3.4
Access: End-Stage Renal Disease Patients
3.3
3.4
Smoking/Tobacco
3.2
3.4
Cancer
2.9
3.6
Immunizations/Infectious Diseases
3.4
3.6
Injuries
3.9
3.8
Heart Disease/Stroke
3.3
3.8
Dental Care
2.8
3.9
Maternal/Child Health
4.3
3.9
Healthy Lifestyles
3.9
3.9
Access: Transportation
3.6
3.9
Diabetes
3.6
4.0
Health Literacy
4.4
4.1
Access: Coverage
4.2
4.4
Reproductive/Sexual Health Including STDs
4.0
4.5
Access: Services/Care Coordination
4.4
4.6
Substance Ause
4.7
4.6
Violence
4.5
4.8
Mental Health
4.7
4.9
0
1
2
3
4
5
6
Ability to Collaborate
Level of Concern

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 City, the most up-to-date secondary data was collected (See Appendix G for complete secondary data analysis). A summary of observations noted for each health need follows.

- Access: Coverage
- Access: Transportation
- Asthma
- Cancer
- Diabetes
- Healthy Lifestyles
- Heart Health
- Maternal and Child Health
- Mental and Behavioral Health: Mental Illness
- Mental and Behavioral Health: Substance Abuse
- Public Safety: Violence
- Reproductive and Sexual Health

Like most cities, tremendous variation exists in demographic and health characteristics between neighborhoods in St. Louis City. Some areas have multiple, high-risk factors clustered together. However, most data are not available at a more granular level than by county. For this reason, the analysis was completed comparing St. Louis City, Missouri, and the U.S. When necessary during implementation, more specific data will be used when available.

ACCESS: COVERAGE

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

The overall rate of adults in St. Louis City with health insurance in 2017 was 86.1 percent, 0.8 percent lower than Missouri.

Comparing age groups with insurance in St. Louis City, the 19-25 age group had the lowest number of insured adults while the 55-64 age group had the most adults with health insurance.

When comparing the rate of adults insured by race/ethnicity, the city had higher rates of adults with health insurance among all races compared to the state except for African Americans.

The rate of primary care providers and mental health providers was higher in the city than the rate of providers in the state. Further, the rate of non-physician primary care providers was more

than double the rate in the city than in the state. The rate of dental providers was lower in the city than the rate in the state.

ACCESS: TRANSPORTATION

Owning a car has a direct correlation with the ability to travel. Individuals with no car in the household make fewer than half the number of trips compared to those with a car and have limited access to essential local services such as supermarkets, post offices, doctors' offices and hospitals. Most households with above-average income own a car while only half of low-income households have a car. (Healthy Communities Institute)

St. Louis City had nearly three times the number of households without a vehicle when compared to the state.

ASTHMA

Asthma affects millions of adults nationwide and is one of the most common long-term diseases of children. Symptoms, including tightness in the chest, coughing and wheezing, are often brought on by exposure to inhaled allergens, such as dust, pollen, mold, cigarette smoke, and animal dander, or by exertion and stress. While there is no cure for asthma, symptoms can be managed. In some cases, asthma symptoms are severe enough to warrant hospitalization, and can result in death. (Healthy Communities Institute)

The overall rate of asthma in adults in St. Louis City was 17.5 percent lower than in the state; the asthma rate among the Medicare population had a 23.3 percent higher rate than the state.

St. Louis City had significantly higher asthma deaths, asthma hospitalizations and asthma ER visits when compared to the state.

While both Whites and African Americans in St. Louis City had higher rates of asthma deaths, hospitalizations and ER visits compared to the state, African American rates in St. Louis City were significantly higher compared to the state. Whites in the city had an asthma death rate 26.5 percent higher than the state, while African Americans had a 69.5 percent higher asthma death rate than the state.

CANCER

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

St. Louis City had a cancer age-adjusted death rate that was 15.6 percent higher than the state and 25.9 percent higher than the U.S. Overall, African Americans had the highest rate of cancer in the city, state and in the country.

Even though the death rate due to cancer by both genders was higher in the city than in the state and in the country, the death rate due to cancer among females was lower in the city than the rate in the country. Males had a 17 percent higher death rate in the city when compared to the state and an 80 percent higher death rate when compared to the country.

DIABETES

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

The age-adjusted death rate of adults due to diabetes in the city was 32.3 percent higher than the state for the five-year period ending in 2017.

For the five-year period ending in 2017, the age-adjusted death rate among African Americans in the city was 2.3 percent higher when compared to the state. Whites in St. Louis City had a 1.6 percent higher death rate than the state during the same period.
In 2017, St. Louis City had a 14.7 percent higher rate of adults with diabetes than the state among the Medicare population.

HEALTHY LIFESTYLES

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

African Americans in the city had a 0.8 percent lower rate of obesity when compared to African Americans in the state. Whites in the city had a 9.5 percent lower rate of obesity when compared to Whites in the state. (2016)

HEART HEALTH

Heart disease is a term that encompasses a variety of different diseases affecting the heart and is the leading cause of death in the United States accounting for 25.4 percent of total deaths.
For the five-year period ending in 2017, the age-adjusted death rate due to stroke in St. Louis City was 17.2 percent higher when compared to the state. The age-adjusted death rate due to heart disease in St. Louis City was 19 percent higher than the rate in the state.

For the 11-year period ending in 2017, African Americans in St. Louis City had a 12.9 percent higher age-adjusted death rate due to heart disease compared to the same group in the state. For ischemic heart disease in the city, Whites had a 29 percent higher death rate compared to Whites.

MATERNAL AND CHILD HEALTH

Babies born with low birth weight are more likely than babies of normal weight to have health problems and require specialized medical care in the neonatal intensive care unit. Low birth weight is typically caused by premature birth and fetal growth restriction, both of which are

influenced by a mother's health and genetics. The most important things an expectant mother can do to prevent low birth weight are to seek prenatal care, take prenatal vitamins, stop smoking, and stop drinking alcohol and using drugs. (Healthy Communities Institute)

In 2016, the overall rate of babies with low birth weight for both genders in St. Louis City was 13.5 percent, 55.1 percent higher than Missouri.

For the 11-year period ending in 2016, the infant mortality rate in the city was 10.1 percent, 48.5 percent higher than the state. The rate of infant mortality among African Americans in the city was 3.1 times higher than the rate of Whites.

REPRODUCTIVE AND SEXUAL HEALTH

The Centers for Disease Control and Prevention (CDC) estimates that there are approximately 20 million new sexually transmitted disease (STD) infections each year—almost half of them among young people ages 15 to 24. The cost of STDs to the U.S. health care system is estimated to be as much as $16 billion annually. Because many cases of STDs go undiagnosed—and some common viral infections, such as human papillomavirus (HPV) and genital herpes, are not reported to the CDC at all—the reported cases of chlamydia, gonorrhea, and syphilis represent only a fraction of the true burden of STDs in the U.S. Untreated STDs can lead to serious long-term health consequences, especially for adolescent girls and young women. The CDC estimates that undiagnosed and untreated STDs cause at least 24,000 women in the U.S. each year to become infertile. (Healthy People 2020)

The rate of chlamydia in St. Louis City was more than 3 times the rate in the state. The rate of gonorrhea in the city was more than 5 times the rate in the state.

For the five-year period ending in 2014 in the city, the incidence rate of gonorrhea among African American females age 15-19 was 36 percent higher when compared to African American females in the state.

For the five-year period ending in 2014, the incidence rate of chlamydia among African American females age 15 to 19 in the city was 9 times higher than the rate of Whites females age 15-19 in the city.

MENTAL/BEHAVIORAL HEALTH: MENTAL HEALTH

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

Depression is a chronic disease that has a variety of symptoms; the most common include a feeling of sadness, fatigue and a marked loss of interest in activities that used to be pleasurable. Many people with depression never seek treatment; however, even those with the most severe depression can improve with treatments including medications, psychotherapies and other

methods. According to the National Comorbidity Survey of mental health disorders, people over the age of 60 have lower rates of depression than the general population. (Healthy Communities Institute)

For the five-year period ending in 2017, there was an estimated 9.8 million adults age 18 or older in the U.S. with serious mental illness. This number represented 4.2 percent of all U.S. adults. (National Institute of Mental Health) The age-adjusted death rate from suicide in the city was 32.2 percent lower than the state.

For the five-year period ending in 2017, males had a suicide death rate more than 4 times higher in the city compared to females. However, the suicide death rate for males in the city was 32 percent lower than males in the state.

For the five-year period ending in 2017, the age-adjusted death rate due to suicide among Whites in the city was 2.8 times higher when compared to the rate of African Americans in the city.

The age-adjusted death rate due to suicide among Whites in the state was 2.4 times the rate of African Americans in the state.

In 2017, the rate of depression in the city among the under 65 Medicare population was 6.7 percent lower than in the state. The rate of depression in the city among the 65 and over Medicare population was 9.3 percent higher than the state.

MENTAL/BEHAVIORAL HEALTH: SUBSTANCE ABUSE

The availability of county/city-level data on substance use and abuse is limited. According to the Missouri Department of Mental Health, there were 3,170 individuals in St. Louis City admitted into substance abuse treatment programs in 2017; 567 were primarily due to alcohol, 548 were due to marijuana and 95 were primarily due to prescription drugs. (2017)

In 2015, St. Louis City residents had a total of 305 alcohol-related and 587 drug-related hospitalizations. In addition, there were 2167 alcohol-related and 1417 drug-related ER visits that did not include a hospital stay.

African Americans had the highest number of individuals who attended substance abuse treatment programs. The 25-34 age group had the highest admissions for substance abuse treatment from 2015-2017, followed by the 35-44 age group. The under 18 age group had the least number of admissions all three years. Individuals with a bachelor's or advanced degree had the lowest number of individuals in substance abuse treatment followed by those with an associate degree or some college.

Heroin was the drug of choice among individuals admitted to substance abuse treatment programs in the city for the past three years. From 2016 to 2017, heroin treatment use among those admitted increased 11.1 percent.

PUBLIC SAFETY: VIOLENCE

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

For the three-year period ending in 2017, the age-adjusted death rate due to assault injury in St. Louis City was over 4 times higher than the rate in the state. The death rate due to firearms was nearly 5 times higher in the city than the state.

For the 11 year period ending 2017, the total number of assault injury deaths among African Americans were more than 11.2 times the rate of Whites in the city.

For the three-year period ending in 2015, hospitalization rates due to firearms assault in the city were more than 5 times the rate of hospitalizations in the state. Death due to firearms assault among African Americans in the city were nearly 15 times the rate of death among Whites in the city.

Child abuse was the second highest cause of emergency room visits in the city, 2.6 times the rate of the state.

Internal Work Group Prioritization Meetings

Barnes-Jewish chose 21 employees to participate on a CHNA internal workgroup representing various hospital departments, including Ambulatory Services; Case Management and Social Work; Center for Diversity and Cultural Competence; Emergency Department; Women & Infants; Communications and Marketing; Administration; Patient Experience; Business Development & Patient Access; Support Services; Guest Relations; Psychiatry; Siteman Cancer Center; and Washington University School of Medicine (See Appendix F for Internal Work Group Participants).

The CHNA internal workgroup met twice to analyze the primary and secondary data, complete the priority ranking for the hospital's CHNA and determine the community's most critical needs.

MEETING 1

The workgroup first met as a team Nov. 1, 2018, to review the purpose for the CHNA, role of the workgroup and goals for the project. The group reviewed the key findings from the 2016 CHNA and Implementation Plan report, as well as data provided by the community stakeholder focus group. Following the meeting, the group was asked to complete a survey to prioritize the health needs identified by the focus group. Table 2 on the following page provides the results of this initial ranking.

TABLE 2: BARNES-JEWISH HOSPITAL INTERNAL TEAM RANKING		
RANK	COMMUNITY HEALTH NEED	TOTAL SCORES
1	Mental/Behavioral Health: Mental Health	975
2	Mental/Behavioral Health: Substance Abuse	931
3	Violence	914
4	Access: Emergency Room Utilization	773
5	Access: Insurance/Coverage	763
5	Access: Service Availability & Care Coordination	763
7	Maternal/Child Health	759
8	Healthy LifeStyles/Obesity Prevention	710
9	Diabetes	705
10	Heart & Vascular Disease: Stroke	659
11	Health Literacy	656
12	Access: Transportation	654
13	Cancer	627
14	Respiratory Disease	565
15	Smoking/Tobacco	564
16	Reproductive /Sexual Health including STDs	549
17	Immunization/Infectious Disease	512
18	Dental Care	473
19	Injury Prevention	465

CLARIFICATION: It was later discovered that during the first internal workgroup meeting, the group was incorrectly guided during the ranking exercise. The group was instructed that ERD is an acronym for Emergency Room Discharge, when in fact, the term ERD is an acronym for End-stage Renal Disease. However, although used incorrectly, participants regarded ERD (Emergency Room Discharge) as significant and ranked the need 4th on the list of needs. This need is highlighted in tables 2, 3 and 4.

MEETING 2

The workgroup met again Dec. 6, 2018, to review the results of the initial feedback survey and secondary data analysis. The group considered and discussed these results along with the recommendation from the community focus group to maintain focus on the four health needs identified in the 2016 CHNA.

The internal workgroup members engaged in a lengthy discussion about the ability to make a greater impact by directing attention more specifically on fewer health needs. They determined that of the four identified focus areas, three were most critical:

- Mental Health
- Substance Abuse
- Violence

To pressure test this decision, after the meeting the workgroup completed a survey to prioritize needs using the rating method below:

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

1= Low	3=Neutral/Average	5=High

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

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

Score: Multiply rating and weight for final score

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

TABLE 3: BARNES-JEWISH HOSPITAL INTERNAL TEAM vs. COMMUNITY STAKEHOLDERS RANKING		
RANK	BARNES-JEWISH INTERNAL TEAM RANKING	COMMUNITY STAKEHOLDERS RANKING
1	Mental Health	Mental Health
2	Substance Abuse	Violence
3	Violence	Substance Abuse
4	Access: Emergency Room Utilization	Access: Services/Care Coordination
5	Access: Insurance/Coverage	Reproductive/Sexual Health Including STDs
5	Access: Services Availability & Care Coordination	Access: Coverage
7	Maternal / Child Health	Health Literacy
8	Healthy Lifestyle/ Obesity Prevention	Diabetes
9	Diabetes	Access: Transportation
10	Heart Disease: Stroke	Healthy Lifestyles
11	Health Literacy	Maternal/Child Health
12	Access: Transportation	Dental Care
13	Cancer	Heart Disease/Stroke
14	Respiratory Disease	Injuries
15	Smoking/Tobacco	Immunizations/Infectious Diseases
16	Reproductive/Sexual Health Including STDS	Cancer
17	Immunization/Infectious Diseases	Smoking/Tobacco
18	Dental Care	Access: End-Stage Renal Disease pts
19	Injuries	Respiratory Diseases

Table 3 illustrates the similarities between the internal workgroup ranking of needs and the community stakeholders ranking of needs. Mental Health was the most prevailing need identified both groups. Both groups ranked Substance Abuse and Violence as top needs.

TABLE 4: BJH INTERNAL TEAM vs. COMMUNITY STAKEHOLDERS RANKING vs. CONDUENT HEALTHY COMMUNITIES INSTITUTE			
RANK	BARNES-JEWISH INTERNAL TEAM RANKING	COMMUNITY STAKEHOLDERS RANKING	CONDUENT HEALTHY COMMUNITIES INSTITUTE
1	Mental Health	Mental Health	Asthma: Medicare Population
2	Substance Abuse	Violence	Chronic Kidney Disease: Medicare Population
3	Violence	Substance Abuse	Depression: Medicare Population
4	Access: Emergency Room Utilization	Access: Services/Care Coordination	Age-Adjusted Death Rate due to Unintentional Injuries
5	Access: Insurance/Coverage	Reproductive/Sexual Health	Babies with Low Birth Weight
5	Access: Services Availability & Care Coordination	Access: Coverage	Adults who Smoke
7	Maternal / Child Health	Health Literacy	Alzheimer's Disease or Dementia: Medicare Population
8	Healthy Lifestyle/ Obesity Prevention	Diabetes	Stroke: Medicare Population
9	Diabetes	Access: Transportation	Death Rate due to Drug Poisoning
10	Heart Disease: Stroke	Healthy Lifestyles	Cervical Cancer Incidence Rate
11	Health Literacy	Maternal/Child Health	Lung and Bronchus Cancer Incidence Rate
12	Access: Transportation	Dental Care	Premature Death
13	Cancer	Heart Disease/Stroke	Self-Reported General Health Assessment: Poor or Fair
14	Respiratory Disease	Injuries	All Cancer Incidence Rate
15	Smoking/Tobacco	Immunizations/Infectious Diseases	Preterm Births
16	Reproductive/Sexual Health	Cancer	Diabetes: Medicare Population
17	Immunization/Infectious Diseases	Smoking/Tobacco	Food Environment Index
18	Dental Care	Access: ERD pts	Food Insecurity Rate
19	Injuries	Respiratory Diseases	Heart Failure: Medicare Population

Table 4 shows:

- Needs ranked by the internal workgroup
- Primary data from the focus group ranking
- Results of the secondary data using a Conduent Healthy Communities Institute scoring tool that compared data from similar communities in the nation. The scoring tool provides a systematic ranking of indicators and helps prioritize the needs. The scoring is based on how a city compares to other similar cities within the state and U.S., the

average state value, the average U.S. value, historical indicator values, Healthy People 2020 targets, and locally set targets, depending on data availability.

Health needs noted by all three groups included: Mental Health; Maternal/Child Health; Heart Disease/Stroke; Cancer; Respiratory Disease/Asthma; Smoking/Tobacco Use; and Injuries. The internal work group and community stakeholders shared the same health needs.

CONCLUSION

The results of the needs prioritization survey from the second meeting of the internal workgroup validated its plan for limiting the focus areas to three community health needs: Mental Health, Substance Abuse and Violence. Communication was sent to the internal workgroup Jan. 11, 2019, to confirm final consensus of this recommendation.

Barnes-Jewish senior leadership received a presentation Jan. 14, 2019, where the following were reviewed: 2016 CHNA & Implementation Plan, community stakeholder focus group results, summary of secondary data and internal work group process/results.

The senior leaders were highly engaged in discussion of the internal workgroup's proposal to focus on three health needs. They acknowledged the decision-making process, and agreed with the internal workgroup's decision to limit focus to fewer areas of need for greater impact. However, the group agreed that in order to be most effective, focus should be on only two areas of need: Mental Health and Substance Abuse.

The factors that influenced this decision included:

- There are many other community organizations working together to address violence in St. Louis, and BJC HealthCare and Washington University play a vital role in supporting that work. The hospital will continue supporting these efforts without including them as priority focus areas.
- As an academic medical center and safety-net hospital, our ability to improve access to health care services and impact health needs related to mental and behavioral health, far outweigh our expertise in addressing violence.
- Factors contributing to poor mental health and substance abuse, as well as the tactics essential to addressing them, are often the same. Therefore, our collective efforts to address these two needs will have the greatest impact.

Following the discussion, senior leadership unanimously approved moving forward with two of the three recommended focus areas: Mental Health and Substance Abuse.

APPENDICES

Appendix A: Barnes-Jewish: Who we are

Barnes-Jewish at Washington University Medical Center is the largest hospital in Missouri and the largest private employer in the St. Louis region. An affiliated teaching hospital of Washington University School of Medicine, Barnes-Jewish has a 1,800 member medical staff with many who are recognized as "Best Doctors in America." They are supported by residents, interns and fellows, in addition to nurses, technicians and other healthcare professionals.

Recognizing its excellent nursing care, Barnes-Jewish was the first adult hospital in Missouri to be certified as a "Magnet Hospital" by the American Nurses Credentialing Center (ANCC). The Magnet Award is the highest honor awarded for hospital nursing by the ANCC.
Barnes-Jewish was created by the 1996 merger of Barnes Hospital and The Jewish Hospital of St. Louis. Each hospital brought a rich tradition of excellence. Barnes Hospital opened in 1914 and became one of the first medical teaching centers in the United States. Jewish Hospital opened in 1902 to care for St. Louis' growing immigrant population. Barnes-Jewish is a member of BJC HealthCare, one of the nation's leading healthcare organizations.

Exceptional quality and unmatched experience has earned Barnes-Jewish a place on the U.S. News & World Report honor roll of America's Best Hospitals for 25 consecutive years, with 12 nationally ranked medical specialties recognized in 2017.

Our patients have access to leading-edge treatments as a result of research from one of the top-ranked medical schools in the nation. As one of the leading recipients of National Institutes of Health grant money for medical research funding, Washington University School of Medicine and Barnes-Jewish are proud of advancements they've developed through bench-to-bedside research and treatment.

Barnes-Jewish's care extends into the community. Our refugee health department supports new immigrants, assisting patients in 33 different languages and dialects. Our AWARE program counsels victims of domestic violence. The Siteman Cancer Center focuses on outreach including providing mammograms, prostate PSA screenings and colonoscopy screening to the indigent. The hospital also provides more than 100 community education events annually.

In 2018, Barnes-Jewish provided $292,972,247 in community benefit serving 383,631 persons. This total includes:

- $73,449,372 in financial assistance and means-tested programs serving 59,041 individuals
- 107,038 individuals on Medicaid at a total net benefit of $72,452,421

Barnes-Jewish also provided a total of $147,070,454 to 217,552 persons in other community benefits including, community health improvement services, subsidized health services and in-kind donations. (See Appendix B for Community Benefit Expenses)

Appendix B: 2018 Total Net Community Benefit Expenses

BARNES-JEWISH HOSPITAL: 2018 TOTAL NET COMMUNITY BENEFIT EXPENSES		
CATEGORY	PERSONS SERVED	TOTAL NET BENEFIT
FINANCIAL ASSISTANCE AND MEANS-TESTED PROGRAMS		
Financial Assistance at Cost	59,041	$73,449,372
Medicaid	107,038	$72,452,421
TOTAL FINANCIAL ASSISTANCE AND MEANS-TESTED PROGRAMS	166,079	$145,901,793
OTHER COMMUNITY BENEFITS		
Community Health Improvement Services	88,792	$2,518,540
Health Professional	2,574	$106,386,738
Subsidized Health Services	126,186	$33,415,568
In-Kind Donation		$4,749,608
TOTAL OTHER COMMUNITY BENEFITS	217,552	$147,070,454
GRAND TOTAL	383,631	$292,972,247

Appendix C: St. Louis City Demographic

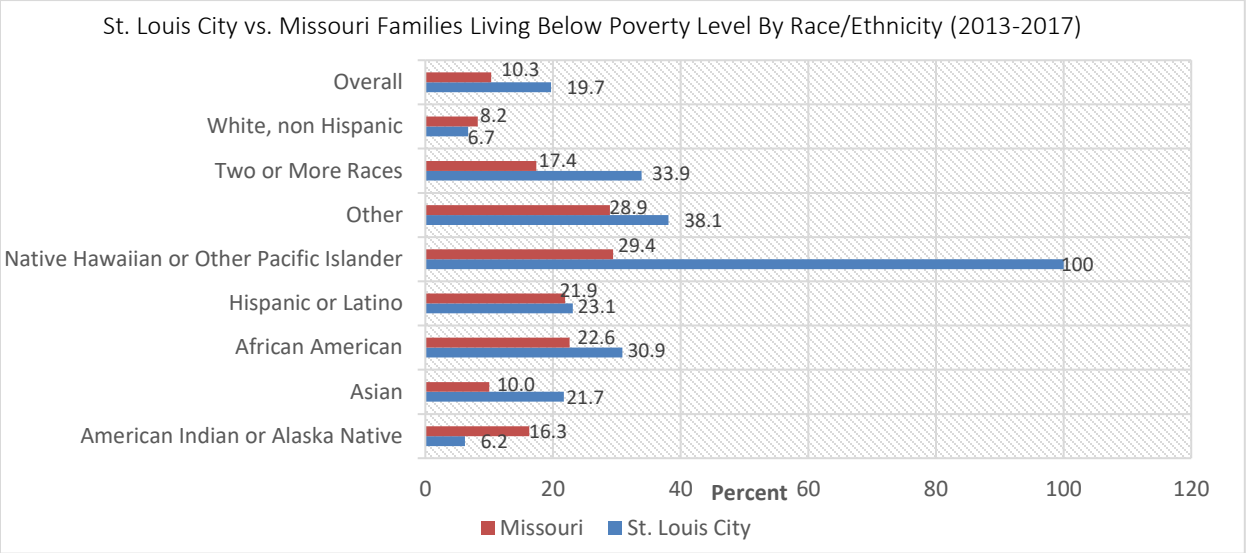
DEMOGRAPHIC OF ST. LOUIS CITY VS. MISSOURI		
	ST. LOUIS CITY	MISSOURI
GEOGRAPHY		
Land area in square miles, 2010	61.9	6,874,1.52
Persons per square mile, 2010	5157.5	87.1
POPULATION		
Population, 2010	319,294	5,988,923
Population, 2017	308,626	6,113,532
Population, Percent Change - 2010 -2017	-3.3	2.1
AGE		
Persons Under 5 Years, Percent, 2017	6.3	6.1
Persons Under 18 Years, Percent, 2017	19.4	22.6
Persons 65 Years and over, Percent, 2017	13.0	16.5
GENDER		
Female Person, Person, 2017	51.6	50.9
Male Persons, Percent, 2017	48.4	49.1
RACE / ETHNICITY		
White, Percent, 2017	47.2	83.1
African American Alone, Percent, 2017	46.5	11.8
White Alone, not Hispanic or Latino, Percent, 2017	43.9	79.5
Asian Alone, Percent, 2017	3.4	2.1
Hispanic or Latino, Percent, 2017	4.0	4.2
Two or More Races, Percent, 2017	2.5	2.3
American Indian and Alaska Native alone, Percent, 2017	0.3	0.6
Native Hawaiian and Other Pacific Islander Alone, Percent, 2017	0.1	0.1
LANGUAGE		
Foreign Born Persons, Percent, 2013-2017	6.8	4.0

Source: Conduent Healthy Communities Institute

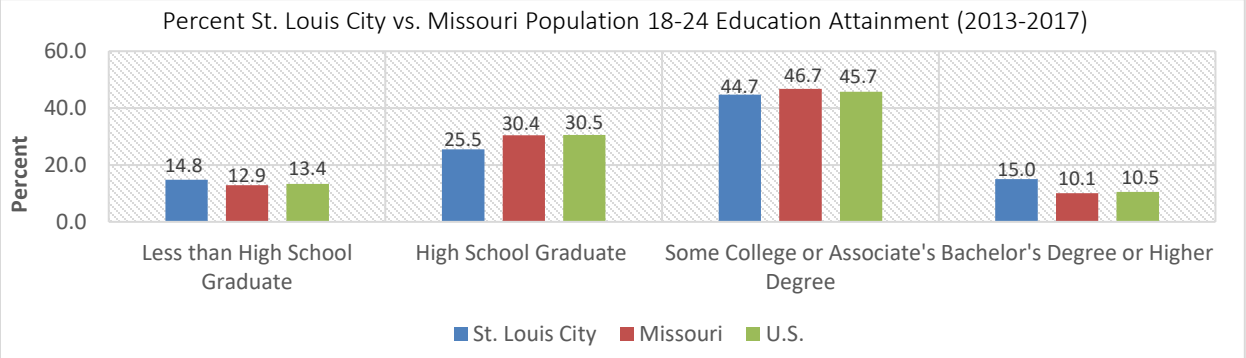
ST. LOUIS CITY DEMOGRAPHIC INCLUDING EDUCATION / INCOME / HOUSING VS. MISSOURI		
	ST. LOUIS CITY	MISSOURI
HOUSING		
Housing Units, 2017	176,846	2,792,506
Homeownership, 2013-2017	35	58
Median Housing Units Value, 2013-2017	123,800	145,400
FAMILY & LIVING ARRANGEMENTS		
Households, 2013-2017	139,741	2,386,203
Average Household Size, 2013-2017	2.2	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	85.7	89.2
Bachelor's Degree or Higher, Percent of Persons Age 25+, 2013-2017	34.1	28.2
INCOME & POVERTY		
Median Household Income, 2013-2017	$38,664.0	$51,542.0
Per Capita Income, 2013-2017	$26,739.0	$28,282.0
People Living Below Poverty Level, Percent, 2013-2017	25.0	14.60

Source: Conduent Healthy Communities Institute

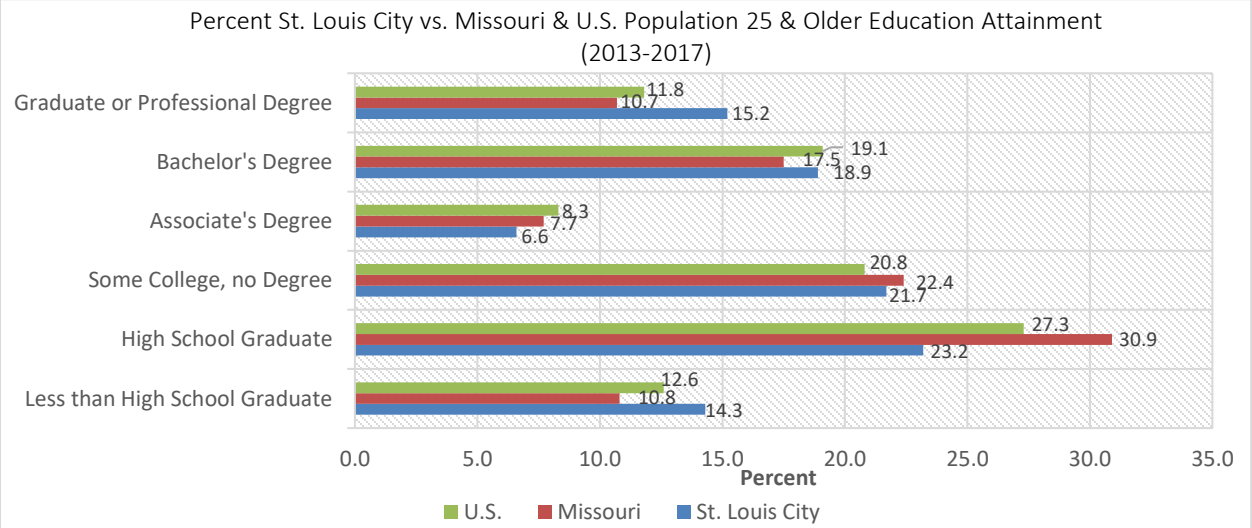
ST. LOUIS CITY POVERY LEVEL AND EDUCATION ATTAINMENT



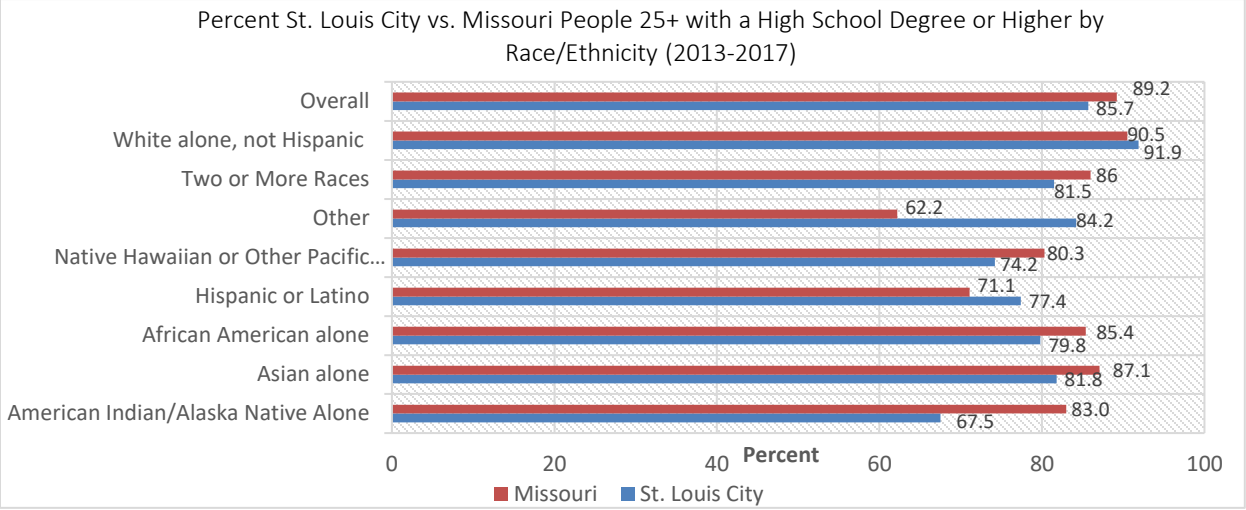
Source: Conduent Healthy Communities Institute



Source: United States Government Census Bureau



Source: United States Government Census Bureau



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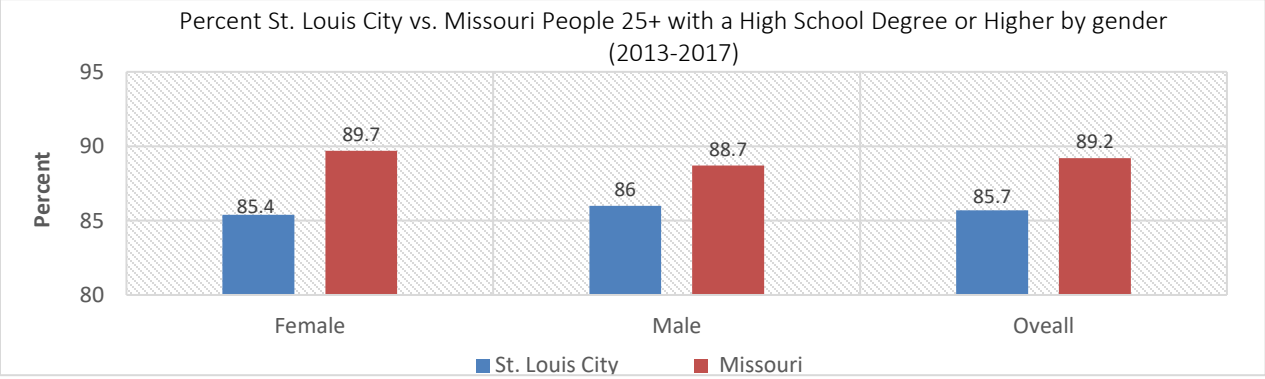

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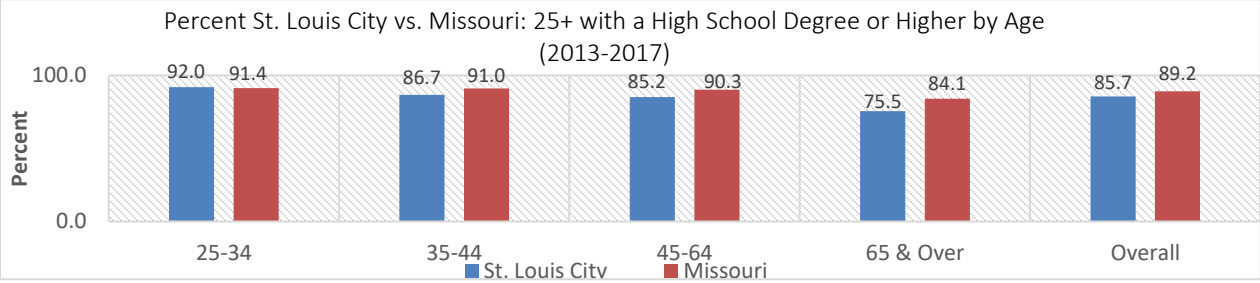

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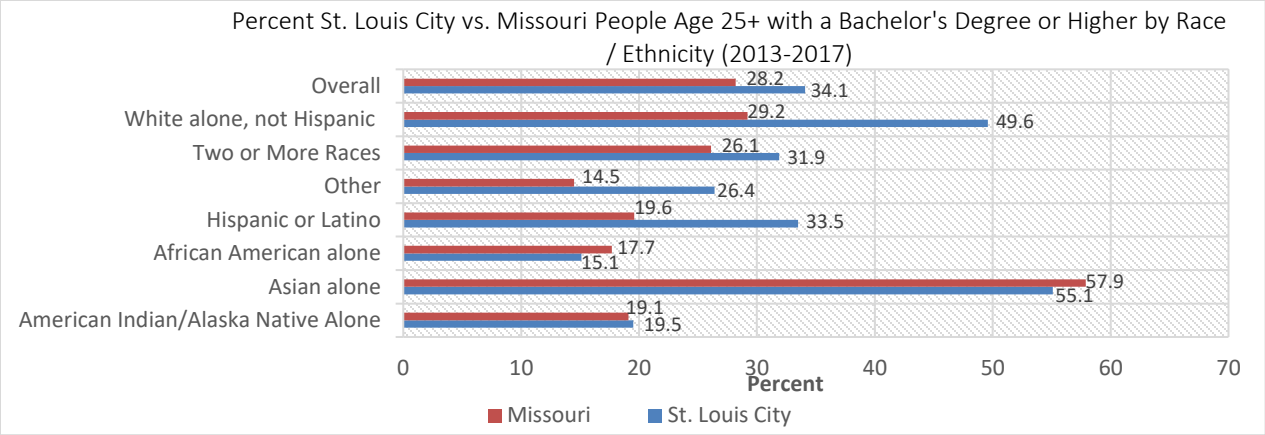

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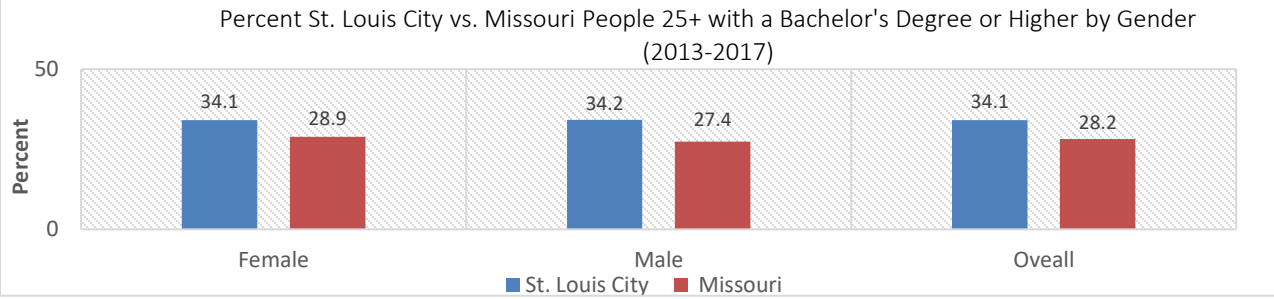

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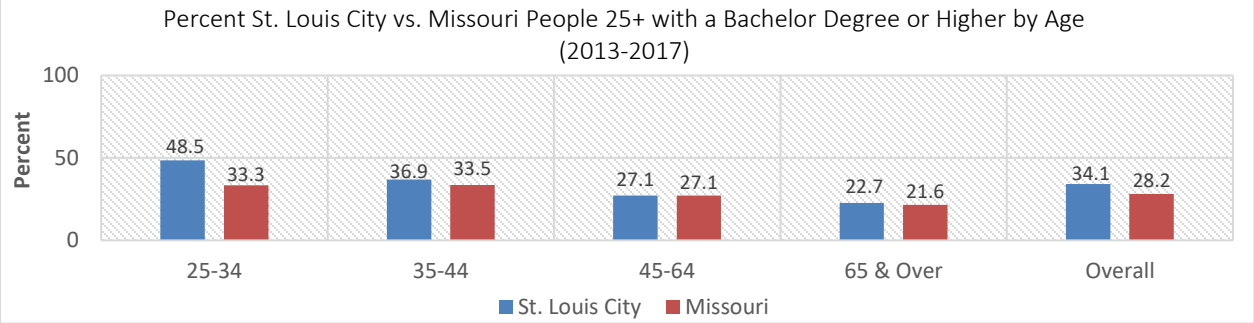

Source: Conduent Healthy Communities Institute

Appendix D: St. Louis City Community Stakeholders Focus Group

PERCEPTIONS OF THE HEALTH NEEDS

OF ST. LOUIS CITY RESIDENTS

FROM THE PERSPECTIVES OF COMMUNITY LEADERS

PREPARED BY:

Angela Ferris Chambers
Director, Market Research & CRM
BJC HealthCare

MARCH 26, 2018
Revised 12/5/18

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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 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.

Barnes-Jewish Hospital (BJH) conducted its first stakeholder assessment in 2012, followed by a second in 2015, with reports being submitted in 2013 and 2016, respectively. SSM St. Louis University Hospital (SLUH) was formerly part of Tenet Healthcare. The hospital joined SSM in 2015 and prepared its first CHNA in 2016.

Both hospitals are on slightly different timelines with this iteration. SLUH's next CHNA is due by the end of December 2018, while BJH's will be finalized by the end of December 2019.

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 St. Louis City.

Specifically, the discussion focused around the following ideas:

1) Determine whether the needs identified in the 2016 CHNAs are still the right areas on which to focus
2) Explore whether there are there any needs on the list that should no longer be a priority
3) Determine where there are the gaps in the 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 there new issues which should 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, Barnes-Jewish and SSM St. Louis University Hospital conducted a single focus group with public health experts and those with a special interest in the health needs of St. Louis City residents. It was held on March 6, 2018 at Boileau Hall on the campus of St. Louis University. The group was facilitated by Angela Ferris Chambers of BJC HealthCare. The discussion lasted about ninety minutes.

15 individuals representing various St. Louis City organizations participated in the discussion. Three others were invited, but were unable to attend (See Appendix).

Dr. John Lynch, Chief Medical Officer, Barnes-Jewish, welcomed participants at the beginning of the meeting. Those who were observing on behalf of the participating hospitals were also

introduced. At the conclusion of the meeting, Kelly Baumer, Vice President, SSM St. Louis University Hospital, 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 for 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 City, the needs prioritized by the hospitals in their most recent assessments, and the highlights of each hospital's implementation plan.

Because BJH and SLUH 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 2016 hospital CHNAs and implementation plans.

Needs Being Addressed	BJH	SLUH
Access to services	X	
Access to care: chronic kidney disease		X
Healthy lifestyles	X	
Mental and behavioral health: mental health		X
Mental health and behavioral health: substance abuse	X	X
Public safety: violence	X	X

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

Needs Not Being Addressed	BJH	SLUH*
Access to coverage	X	X
Access to transportation	X	
Cancer	X	
Care coordination		X
Chronic disease**		X
Dental care/oral health	X	X
Diabetes	X	
Health literacy	X	
Heart disease/stroke	X	
Immunizations/infectious disease	X	
Maternal & child health	X	
Nutrition	X	
Obesity	X	X
Poverty		X
Public safety: fatal injuries	X	
Reproductive & sexual health (including STDs)	X	X
Respiratory disease: asthma & COPD	X	
Smoking & tobacco education	X	X

* Also included minority care as a general health need.

** BJH broke these out into the specific disease categories.

The moderator also shared several pieces of information to help further identify the health needs of St. Louis City. These were based on comparisons between publically available St. Louis City 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 social determinants of health
- the worst performing health indicators

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 stakeholders were in general agreement that the needs the hospitals have chosen to address are ones that they also see as a high priority for St. Louis City, especially violence, mental health and substance abuse.

Some felt that access to services was still their highest concern. Even with more insurance coverage available, St. Louis City residents are not accessing care.

Some observed that the needs being addressed, like chronic kidney disease, pertain to diseases that are fully developed. The stakeholders would like to see more emphasis on prevention.

They felt positively that the hospital were collaborating with each other and other community agencies. The importance of coordination and collaboration was also recognized in addressing substance abuse and public safety/violence. There are many individual organizations working to address these needs; a much larger impact will result if everyone works together.

NEEDS THAT SHOULD COME OFF OF THE LIST/BE CONSIDERED:

Nothing was identified to come off the list.

A question was raised about why obesity was not identified as a priority need to be addressed, especially in light of the fact that it contributes to so many chronic conditions that disproportionally affect African Americans. A member of the BJH team explained that measuring the impact of various tactics on obesity requires tracking BMI, which is not being captured as part of their measures. However, nutrition and physical activity education are being addressed as part of healthy lifestyles.

Another question was raised about the high rate of sexually transmitted disease statistics that were shared, and whether they represent individuals who are St. Louis City residents, or individuals who were diagnosed in the city but may live elsewhere. If the statistics do represent St. Louis City residents, then the community representative felt that the hospitals should consider addressing it.

Many of the statistics that were shared related to the health of the Medicare population, even though the largest segment of the St. Louis city population is between ages 25 to 44. They suggested that the hospitals identify other data sources that give them more insight into this audience. The health indicators should provide evidence that this younger audience is predisposed to those disease conditions that are showing up among older adults.

- One indicator that did not appear among those in the top ranks is maternal deaths. One community representative shared that maternal deaths in St. Louis City are rising, and currently account for 50 maternal deaths per 100,000 pregnancies. This is twice the rate of the state of Missouri.

The data should also be disaggregated by race, when possible, to identify where disparities exist, and which can be masked when examined in total. For example, although infant mortality in St. Louis City is improving, it is due to improvement in white infant mortality. Black infant mortality has not achieved similar reductions.

GAPS BETWEEN DEFINED NEEDS AND OUR ABILITY TO ADDRESS THEM:

When it comes to exploring issues of access and care coordination, many of the community representatives feel that there should be an emphasis on one-on-one case management. Although these services require a greater initial investment, stakeholders feel that it is one of the most effective interventions with the potential to have the greatest impact on the health of St. Louis City.

- In the area of mental health services, community health workers often serve this role, but there are not enough of them working with the St. Louis City populations, especially on the north side.
- Another leader shared an example in which home visits by social workers were more effective in reducing A1C levels compared to previous patient education efforts outside the home.

Mental health and substance abuse continue to be the main priorities for many St. Louis City stakeholders.

- Emergency department staff do not feel equipped to manage those who present with acute mental illness, substance abuse or both.
- There is a lack of available treatment centers, even for those who have made the decision that they are ready to seek treatment.

There was discussion about how the hospital CHNAs and implementation plans relate to the work being done by St. Louis City and County. The question related both to time frame (a 3 year cycle for hospitals versus 5 years for the public health departments) as well as a difference in priorities identified by each group.

Although there was much agreement about the importance of addressing healthy lifestyles and obesity, a few stakeholders expressed concern that taking an online health risk appraisal, identified as a tactic by BJH, may not be the most effective approach.

- Others mentioned the increased importance in addressing these needs through coordinated efforts. There are many individual tactics targeted at improving healthy lifestyles, like community gardens, health fairs, the Be Fit partnership, and exercise programs at community centers. But are they working together and aligned to achieve the same results?

Access to care can be hampered by the lack of trust that some underserved and foreign-born populations have in the healthcare system. For some, their lack of experience with preventative care can be an obstacle. They are used to seeking care only when the situation becomes serious. Cultural sensitivity and competence must be a part of the approach.

This lack of experience also contributes to their limited knowledge of health literacy. Because they have not grown up with regular interactions with healthcare providers, they don't understand when they should be seeking out care or the value of preventive screenings and interventions.

Among individuals ages 25 to 44, there is a lack of personal relevance as to why they should be concerned about being healthy. If they don't feel like they have a reason to care about their own health, our efforts will fall on deaf ears. The WIFM (What's In It For Me) factor must be considered.

- We need to meet people where they are, with messages that are short, relevant and motivating, communicated in ways that fit with their schedules and lifestyles.
- Consider simple, inexpensive interventions like dropping a flyer in their bag at the grocery store.
- Find ways to use technology, sending short text messages or using on-hold telephone messages. The "six second sound bite" may be the type of messaging that will work with this audience.
- Use consistent messages, repeated frequently, to increase awareness about the importance of staying healthy.
- Make sure the messages are relevant based on the individuals, age, gender, race.
- Use "plain language" that is clear, to-the-point and easy to understand.
- Explore incentives that may be relevant and motivate individuals to take action. One stakeholder shared an example of a young person who complied with his insurance company's requirement for having an annual physical because, otherwise, his annual insurance costs would increase substantially.

The relative importance of being healthy is also impacted by an individual's ability to manage their basic needs for housing, paying their bills and having regular access to food. If those primary needs are not addressed, they will not prioritize actions to maintain their health until they are.

OTHER ORGANIZATIONS WITH WHOM TO COLLABORATE:

A new data source will soon be available that may help close some of the gaps in identifying the health needs of the community. The University of Missouri and the Missouri Hospital Association have created a data set that provides information at the ZIP code and county levels based on hospital discharges and utilization. It can be found at exploremohealth.org.

Some of the federally qualified health plans are doing a good job communicating effectively with individuals in our community, and need the continued support of our local hospitals.

The United Way 211 telephone line takes about 135,000 calls a year. The organization is open to collaborating with others to communicate specific health messages that are important and relevant to our community.

Two organizations that should be included as part of future stakeholder discussions are the Behavioral Health Network (BHN) and Alive and Well Communities. The BHN is an organization

that brings behavioral health providers together. The Alive and Well Communities promotes awareness of trauma and its impact on area residents.

The Community Builders Network (CBN) is an umbrella organization for community development work and can serve as a vehicle for pushing information out to different neighborhoods. The St. Louis Association of Community Organizations (SLACO) is a similar group that works with neighborhood associations. Both would be useful as additional conduits for getting relevant health messages and information at the specific community/neighborhood level.

The Federation of Block Units is also a part of the United Way. These are smaller groups of neighborhoods where there is often more trust among those who are involved, and another mechanism to get specific health messages into the community.

CURRENT COLLABORATIONS THAT WERE HIGHLIGHTED:

The relationship between BJC and the Urban League's Mobile Health Unit was identified as a way to "meet people where they are" when providing health services.

There was also mention of the St. Louis Partnership for a Healthy Community which includes the health departments of St. Louis City, St. Louis County and the hospital systems

The Spot was identified as a national model for addressing the physical health needs of teens and young adults. It was suggested that it could also be used as a model for developing an integrated system to also address mental health services.

The leader of a local homeless shelter shared that every family who arrives at the shelter has a medical evaluation immediately set up with Affinia. The goal is to uncover any medical issues and give them an opportunity to set out on a path to good health.

Another stakeholder mentioned that they have a mental health collaborative set up on their campus. It consists of five agencies who work with them to see mental health patients who do not have insurance.

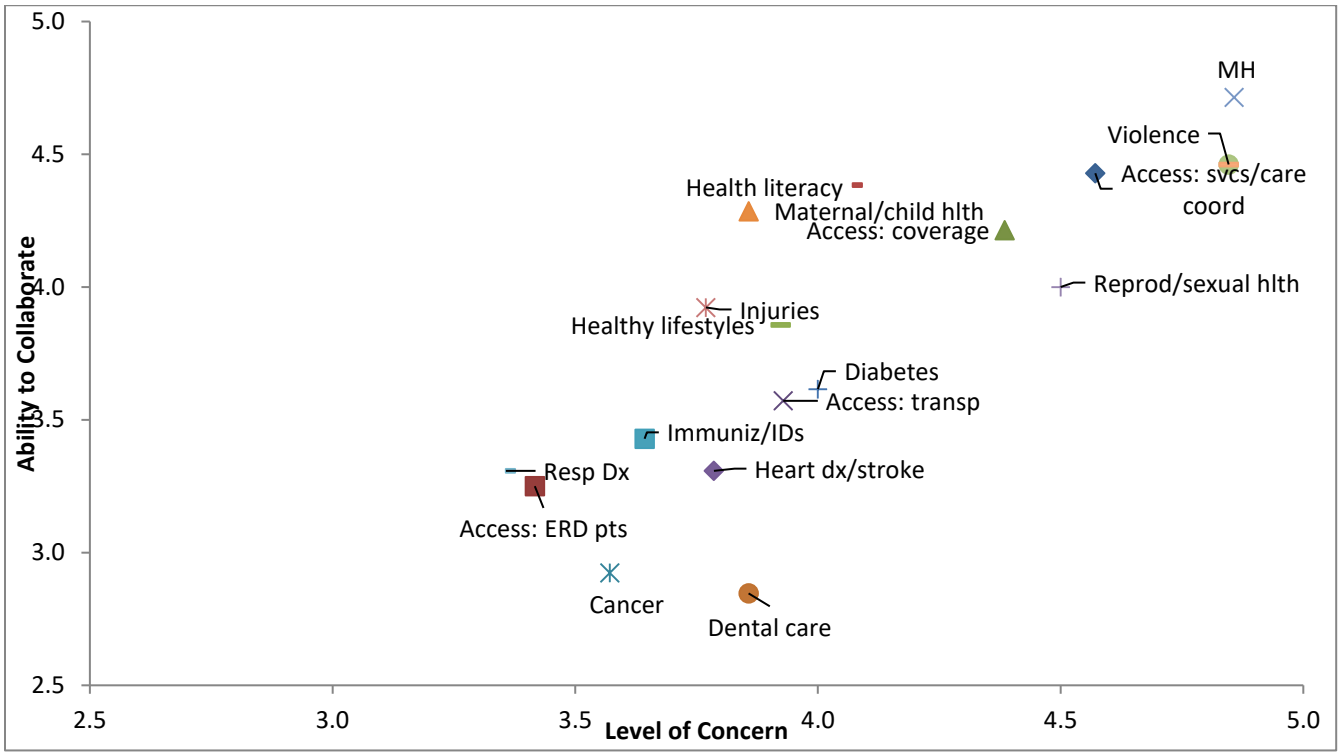
CHANGES SINCE THE 2016 CHNA/CONCERN FOR THE FUTURE:

With the current emphasis on addressing the opioid crisis, one community leader expressed concern that other addictive substances may not be getting the attention they need, and so may become more of an issue in the future. She was concerned about alcohol abuse, methamphetamines and cocaine. She recognized the importance of addressing opioid abuse at this present moment, but did not want us to be blindsided if we see a rise in the abuse of these other substances in the future.

Another stakeholder mentioned that during the week of the discussion (March 6, 2018), the American Pediatric Association recommended that all children be screened for depression. This reinforces the need for all healthcare providers to be comfortable talking about mental illness so they can raise the issue when dealing with patients.

RATING OF NEEDS

Participants rerated the needs identified in the 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 issues of mental health and violence were rated the highest in terms of level of concern. Substance abuse ranked next, but equaled violence in ability to collaborate.

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

	Level of Concern:	Ability to Collaborate:
Mental Health	4.9	4.7
Violence	4.8	4.5
Substance abuse	4.6	4.7
Access: services/care coordination	4.6	4.4
Reproductive/sexual health*	4.5	4.0
Access: coverage	4.4	4.2
Health literacy	4.1	4.4
Diabetes	4.0	3.6
Access: transportation	3.9	3.6
Healthy lifestyles	3.9	3.9
Maternal/child health	3.9	4.3
Dental care	3.9	2.8
Heart disease/stroke	3.8	3.3
Injuries	3.8	3.9
Immunizations/Infectious Diseases	3.6	3.4
Cancer	3.6	2.9
Smoking/tobacco	3.4	3.2
Access: ERD pts	3.4	3.3
Respiratory Diseases	3.4	3.3

* Including STDs

NEXT STEPS

Using the input the hospitals received from community stakeholders, Barnes-Jewish and SSM St. Louis University Hospital will consult with their internal work groups to evaluate this feedback. They will consider it with 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 St. Louis University Hospital and by December 31, 2019 for the Barnes-Jewish.

Appendix E: Focus Group Participants and Hospital Observers

ST. LOUIS CITY COMMUNITY STAKEHOLDERS FOCUS GROUP PARTICIPANTS AND HOSPITAL OBSERVERS			
ST. LOUIS CITY FOCUS GROUP PARTICIPANTS			
LAST NAME	FIRST NAME	ORGANIZATION	ATTENDANCE
Armbruster	Jenny	NCADA	X
Bentley	Judy	CHIPs	
Bowman	Barbara	Urban League of Greater St. Louis	X
Bradshaw	Karen	Integrated Health Network	X
Burgess	Ariel	International Institute	X
Connors	Kathy	Gateway 180	X
Copanas	Kendra	Generate Health	X
Davis	Marlene	Alderwoman, Ward 19	X
Freund	Rob	Regional Health Commission	X
Howard	Jennifer	Mental Health America of E MO	X
Hughes	Bob	MO Foundation for Health	X
Hurd	Brian	Rise Community Development	X
Kriesmann	Renee	St. Louis City Police Dept	
McKinney	Kimberly	Habitat for Humanity	X
Mosby	Garon	St. Louis Fire Dept/EMS	
Riopedre	Jorge	Casa de Salud	X
Schmid	Craig	City of St. Louis Health Dept.	X

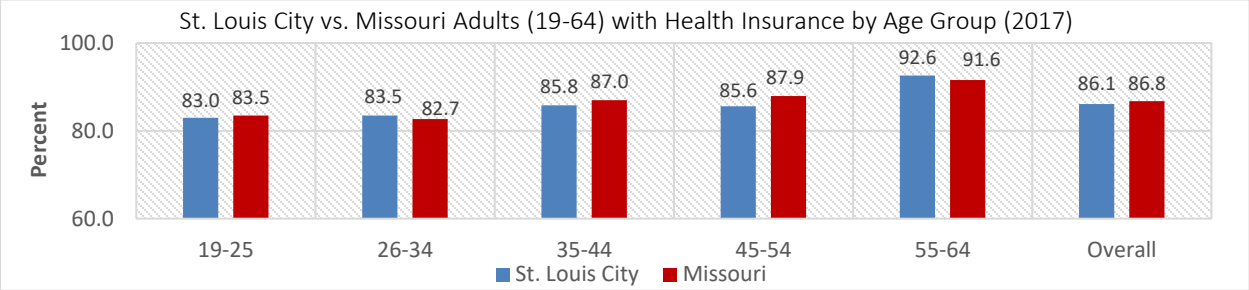
HOSPITAL OBSERVERS			
LAST NAME	FIRST NAME	ORGANIZATION	ATTENDANCE
Bakkar	Kim	SSM Health	X
Baumer	Kelly	SSM Health SLUH	X
Exline	Blake	Barnes-Jewish Hospital	X
Kalicak	Elizabeth	Barnes-Jewish Hospital	X
King	Karley	BJC HealthCare	X
Lourie	Michael	Barnes-Jewish Hospital	X
Lynch	John	Barnes-Jewish Hospital	X
Peluso	Dale	Barnes-Jewish Hospital	X
Randolph	Jacque	Barnes-Jewish Hospital	X
Simunovich	Kelly	Barnes-Jewish Hospital	X

Appendix F: Barnes-Jewish Internal Work Group

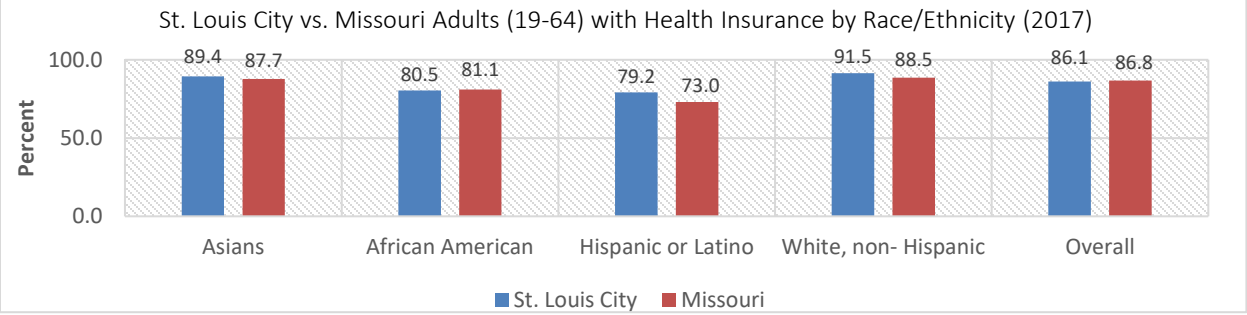
BARNES-JEWISH HOSPITAL COMMUNITY HEALTH NEED ASSESSMENT INTERNAL WORK GROUP			
LAST NAME	FIRST NAME	TITLE	DEPARTMENT
Bordewick	Roma	Director, Operations	Ambulatory Services
Hannah	Carmel	Associate Administrator, SVP	Administration/Directors Office
Carron	Jennifer	Executive Director	Patient Experience
Dannett	Kaci	Director, Operations	Siteman Cancer Center
El Hayek	Sahar Morkos	Chief Resident, Emergency Medicine	Washington University School of Medicine
Fowler	Rosi	Interim Director	Emergency Department
Hoerchler	James	Manager, Funds Management	Case Management & Social Work
Garascia	Maura	Manager, Case Coordination, SHOP	Case Management & Social Work
Kalicak	Elizabeth	Supervisor, Events & Activities	Communications & Marketing
Knight	Angela	Manager, Support Services	Siteman Cancer Center
Lourie	Michael	Director	Communications & Marketing
Lauer	Matt	Manager, Concierge Services	Guest Relations
Lauer	Mike	Executive Director	Support Services
Morrison	Karen	Manager, Community Relations	Center for Diversity & Cultural Competence
Mueller	Harold	Director	Business Development & Patient Access
Player	Steven	Director	Center for Diversity & Cultural Competence
Dr. Poirier	Robert	Asst. Professor	Emergency Medicine
Randolph	Jacque	Executive Director	Ambulatory Services
Simunovich	Kelly	Executive Director	Case Management & Social Work
Smith	Yvonne	Director	Women & Infants
Woods	Bonnie	Director, Patient Care	Psych

Appendix G: Secondary Data

ACCESS: COVERAGE



Source: Conduent Healthy Communities Institute



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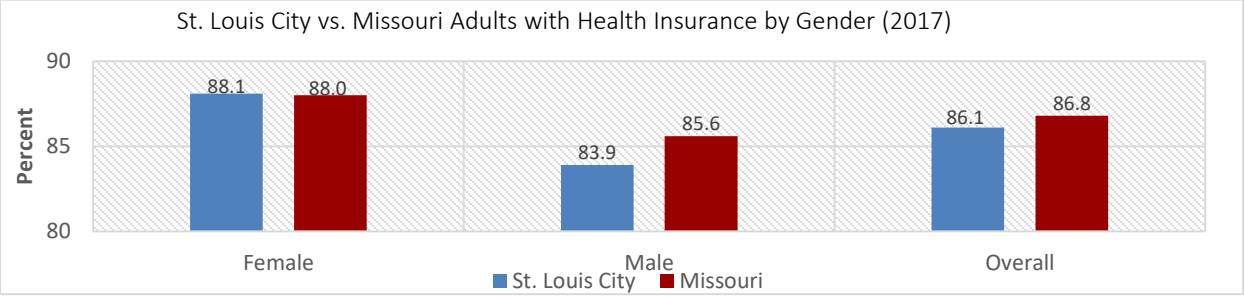


Source: Conduent Healthy Communities Institute

ACCESS: COVERAGE

ST. LOUIS CITY vs. MISSOURI ACCESS TO HEALTH CARE		
HEALTH INDICATORS	ST. LOUIS CITY	MISSOURI
Percent Adults with Health Insurance: Age 19-64 (2017)	86.1	86.8
Percent Children with Health Insurance (2017)	94.8	94.9
Primary Care Providers Rate / 100,000 Population (2016)	87	71
Dentist Rate/100,000 (2017)	54	57
Mental Health Providers Rate/100,000 Population (2018)	327	180
Non-Physicians Primary Care Providers Rate/100,000 Population (2018)	208	87
Preventable Hospital Stays per 1000 Medicare Enrollees (2015)	57	56.6

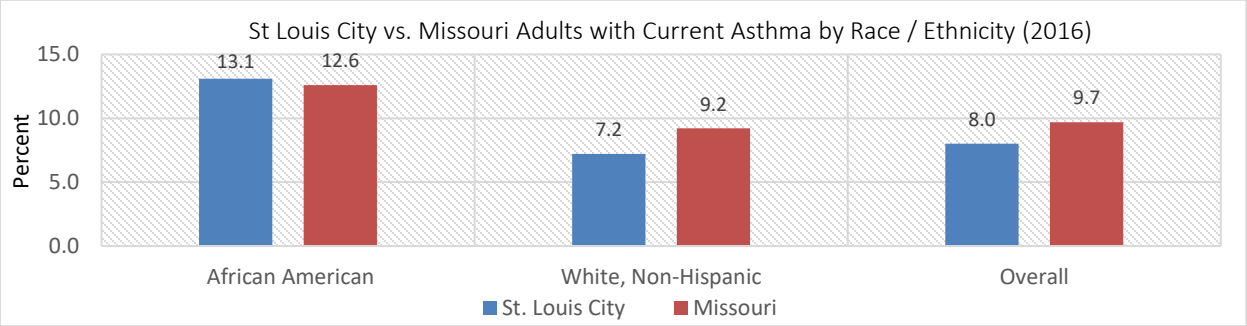
Source: Conduent Healthy Communities Institute

ACCESS: TRANSPORTATION

ST. LOUIS CITY vs. MISSOURI ACCESS TO HEALTH CARE: TRANSPORTATION (2013-2017)		
HEALTH INDICATORS	ST. LOUIS CITY	MISSOURI
Percent Households without a Vehicle	20.7	7
Percent Workers Commuting by Public Transportation	9.5	1.5
Mean travel time to work in minutes; Age 16+	24.1	23.4

Source: Conduent Healthy Communities Institute

ASTHMA

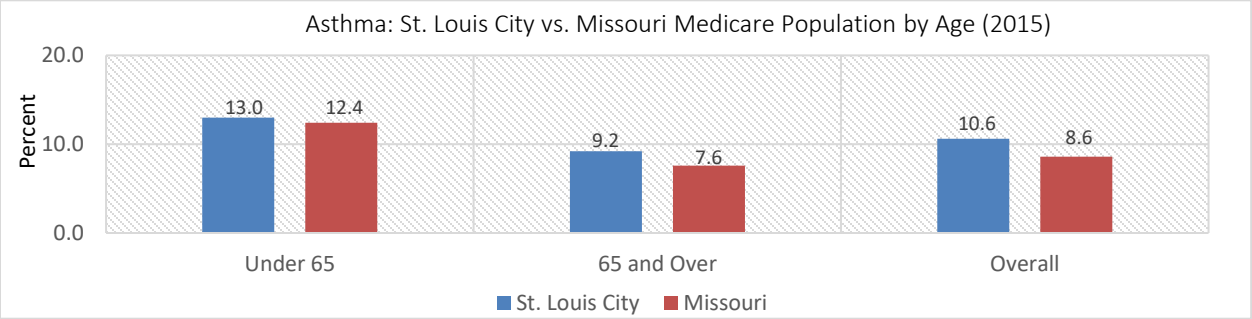


Source: Conduent Healthy Communities Institute

ASTHMA

ST. LOUIS CITY vs. MISSOURI ASTHMA DEATH, HOSPITALIZATION & EMERGENCY ROOM VISIT RATES		
HEALTH INDICATORS	ST. LOUIS CITY	MISSOURI
Asthma Deaths: 2007-2017	3.04	1.1
Asthma Hospitalizations: 2011-2015	32.65	11.27
Asthma ER Visits: 2011-2015	14.52	5.39

Source: Missouri Department of Health & Senior Services



Source: Conduent Healthy Communities Institute

ST. LOUIS CITY vs. MISSOURI ASTHMA RATES BY ETHNICITY/RACE				
	WHITE		AFRICAN AMERICAN	
HEALTH INDICTORS	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI
Death/100,000 Population (2007-2017)	1.05*	0.83	5.22	3.08
Hospitalizations/10,000 Population (2011-2015)	8.46	7.13	53.73	35.59
ER Visits/1,000 Population (2011-2015)	3.05	3.02	23.58	18.16

Source: Missouri Department of Health & Senior Services

**** Fewer than 20 events in numerator, rate is unreliable.***

ASTHMA

ST. LOUIS vs. MISSOURI THREE-YEAR MOVING ASTHMA RATES								
HEALTH INDICATORS	2010-2012		2011-2013		2012-2014		2013-2015	
	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI
Asthma Hospitalizations / 10, 000 Population	37.24	12.62	34.65	11.74	32.77	11.44	30	10.65
Asthma ER Visits/1000 Population	14.6	5.4	14.4	5.39	14.64	5.47	14.51	5.34

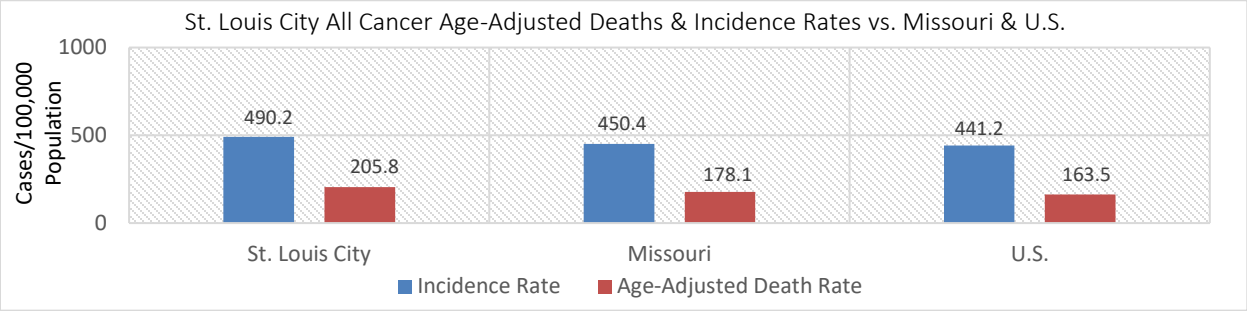
Source: Missouri Department of Health and Senior Services

(Asthma death trend analysis not displayed because at least one of the three-year period of the moving average has fewer than 20 events as per the source)

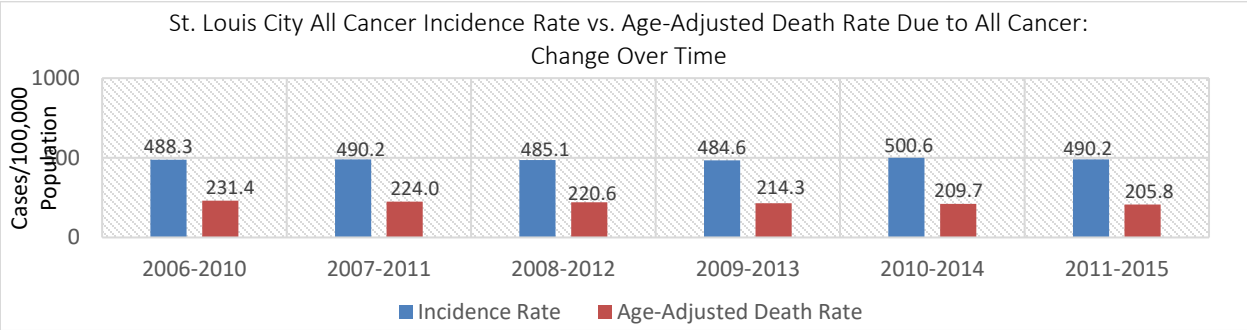
ST. LOUIS CITY vs. MISSOURI RATES OF RESPITATORY DISEASES		
HEALTH INDICATORS	ST. LOUIS CITY	MISSOURI
Adults with Current Asthma in Percent (2016)	8.0	9.7
Age-Adjusted Death Rate due to Chronic Lower Respiratory Disease /100,000 Population (2013-2017)	45.3	51.9
Asthma: Percent Medicare Population (2017)	7.2	4.7
COPD: Percent Medicare Population (2017)	12.5	13.9

Source: Conduent Healthy Communities Institute

CANCER



Source: Conduent Healthy Communities Institute



Source: Conduent Healthy Communities Institute

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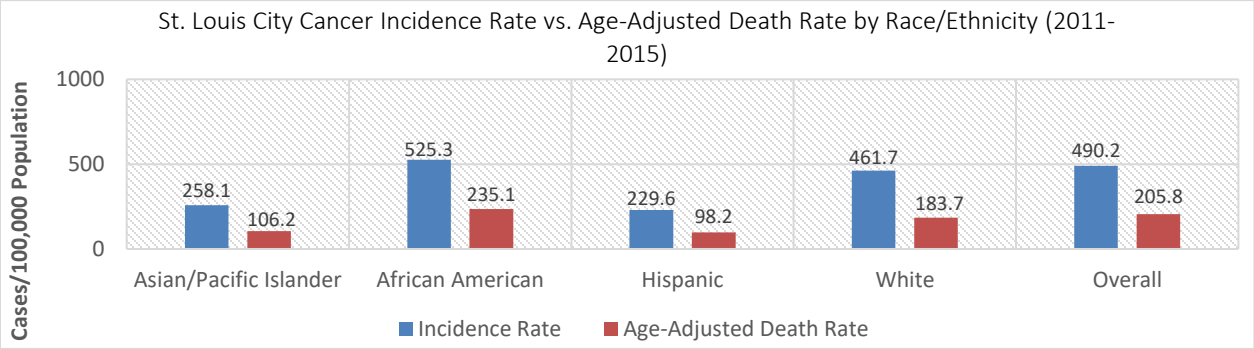

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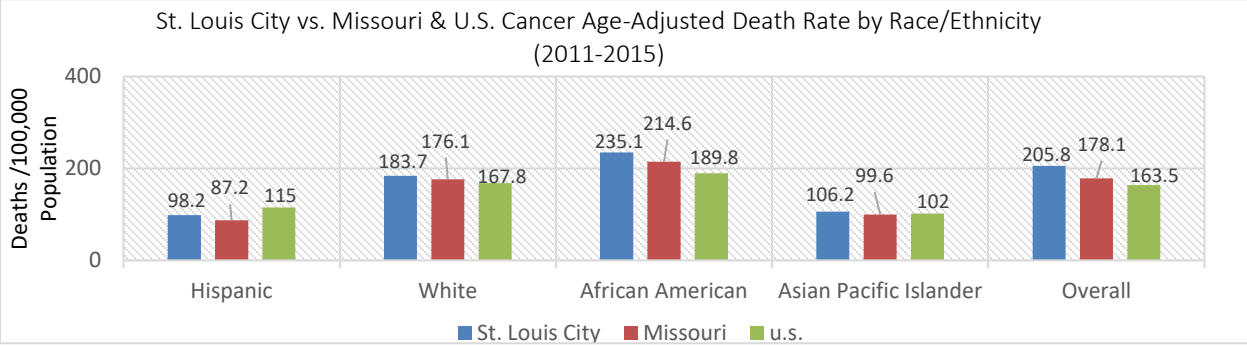
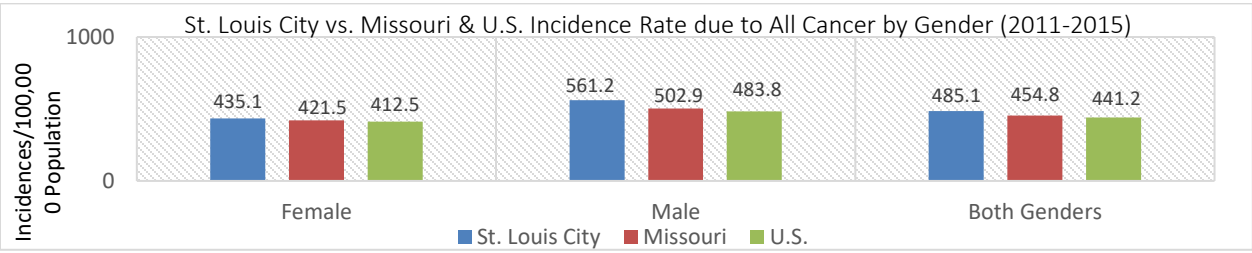


Source: Conduent Healthy Communities Institute



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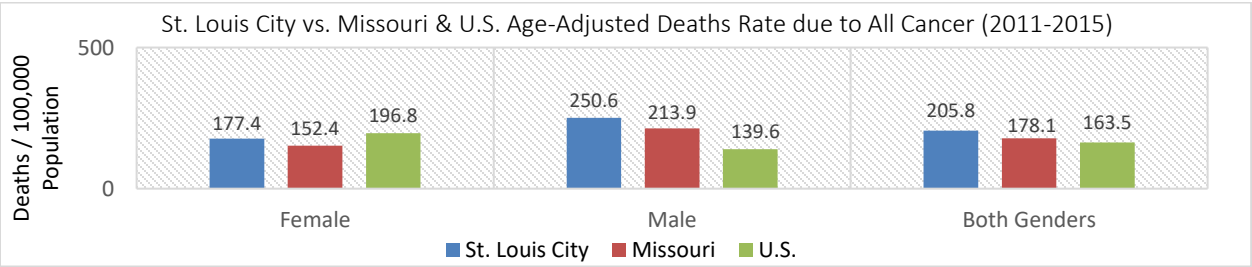
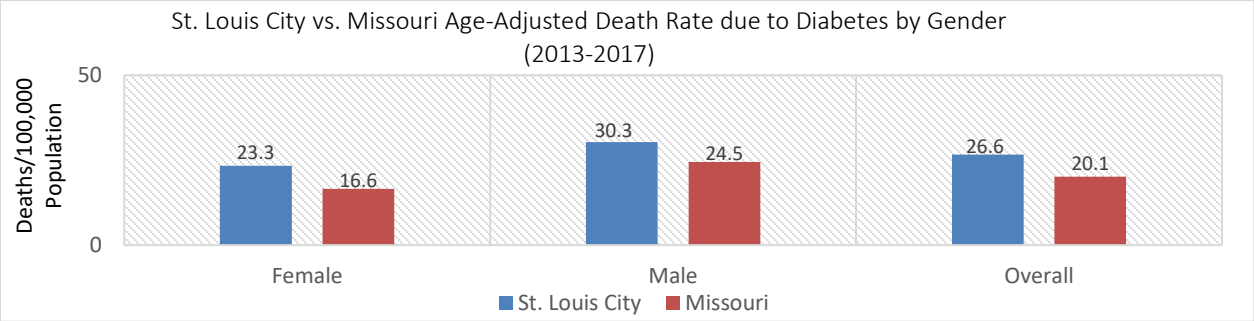


Source: Conduent Healthy Communities Institute

DIABETES



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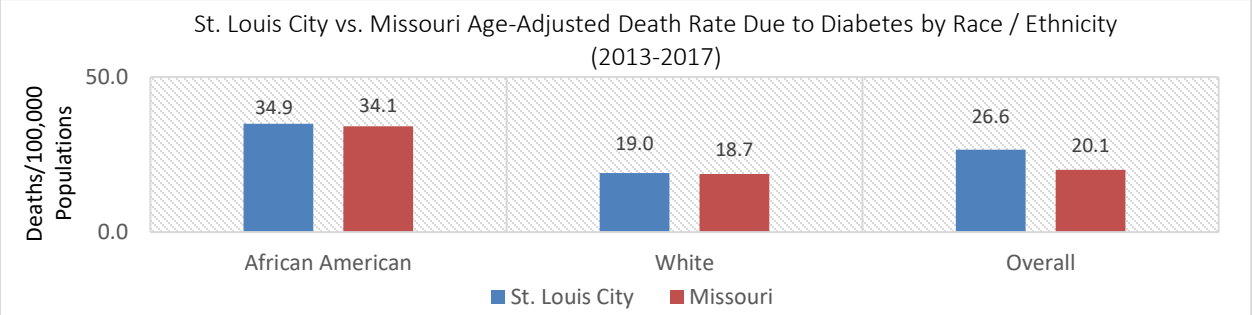

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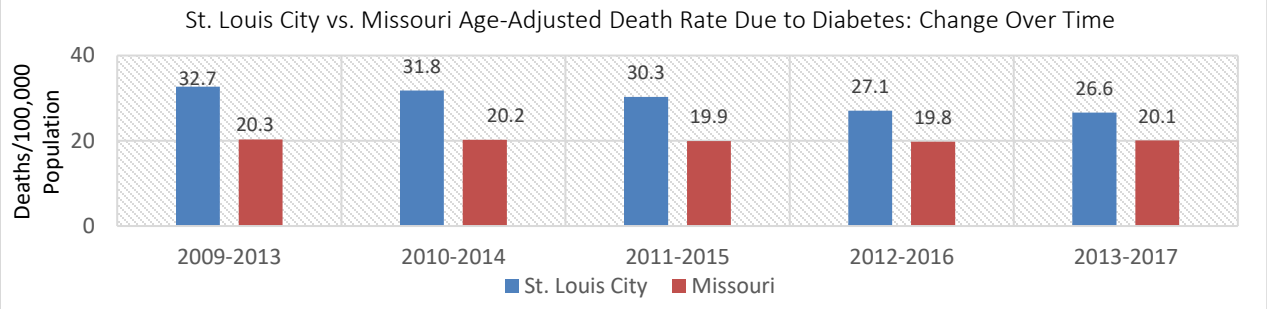

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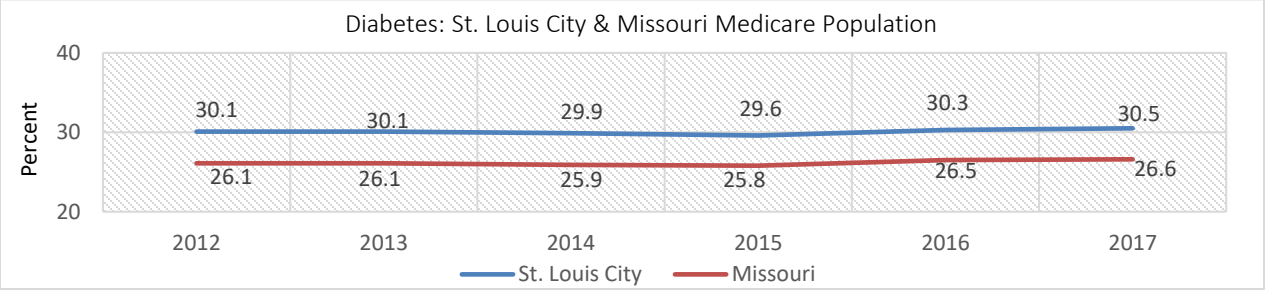

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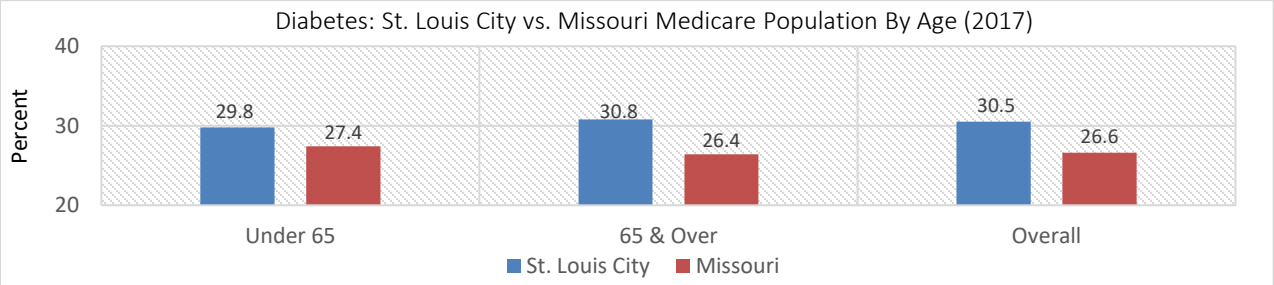
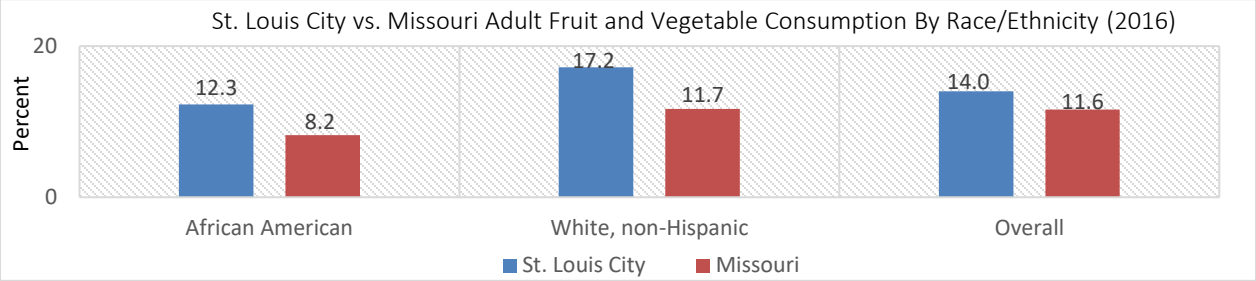
DIABETES



Source: Conduent Healthy Communities Institute

HEALTHY LIFESTYLES



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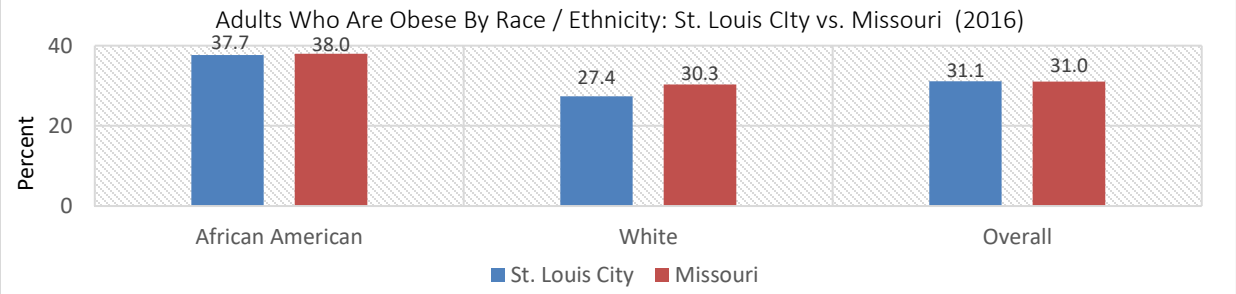

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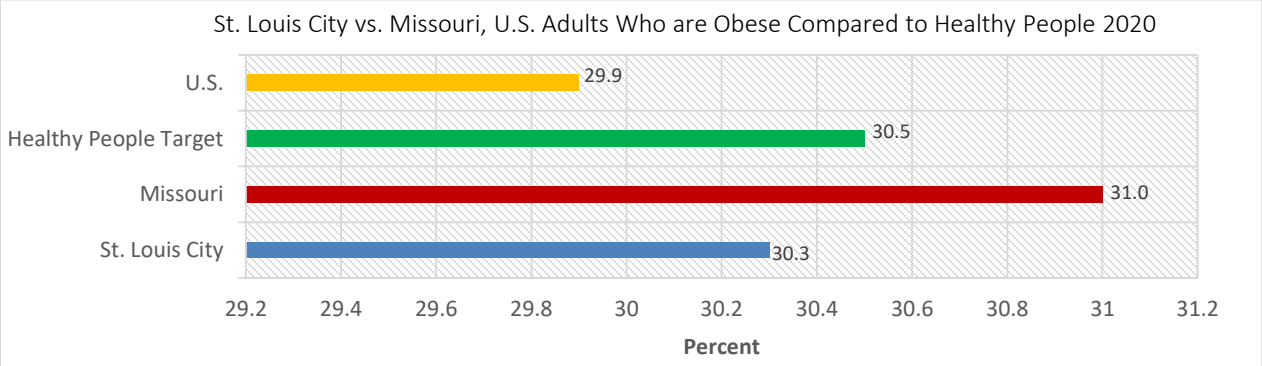
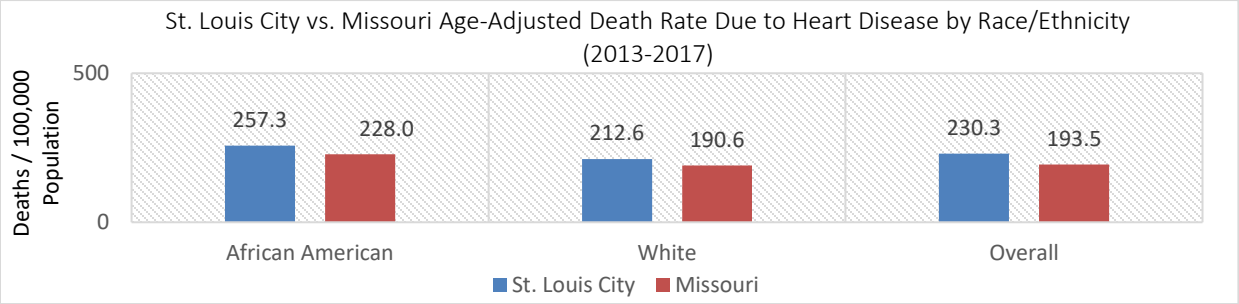


Source: Conduent Healthy Communities Institute

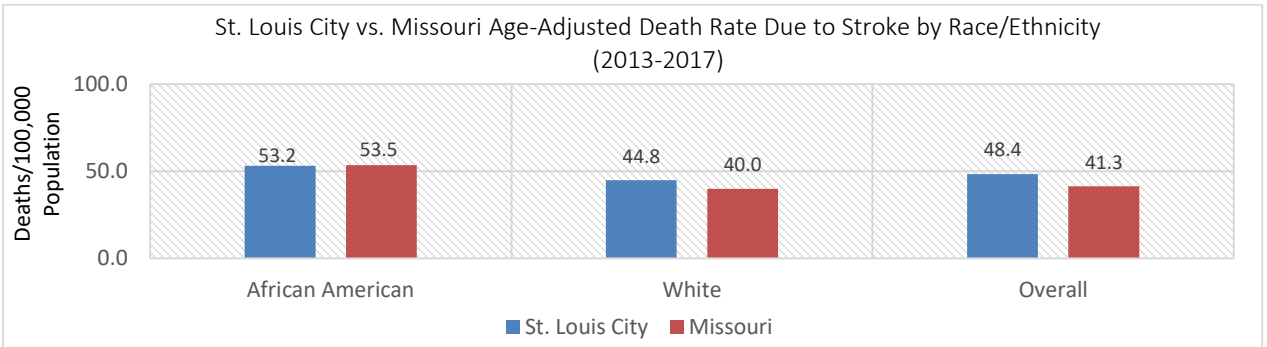
HEART HEALTH



Source: Conduent Healthies Community Institute

ST. LOUIS CITY vs. MISSOURI AGE-ADJUSTED RATE: HEART HEALTH & STROKE		
HEALTH TOPICS	ST. LOUIS CITY	MISSOURI
HEART DISEASE		
Deaths/100,000 Population (2007-2017)	247.73	199.32
ER Visits/1,000 Population (2011-2015)	16.28	15.12
ISCHEMIC HEART DISEASE		
Deaths/100,000 Population (2007-2017)	156.19	124.16
Hospitalizations/10,000 Population (2011-2015)	31.99	32.53
ER Visits/1,000 Population (2011-2015)	0.22	0.57
STROKE/OTHER CEREBROVASCULAR DISEASE		
Deaths/100,000 Population (2007-2017)	48.8	43.02
Hospitalizations/10,000 Population (2011-2015)	37.15	27.85
ER Visits/1,000 Population (2011-2015)	0.31	0.77

Source: Missouri Department of Health and Senior Services

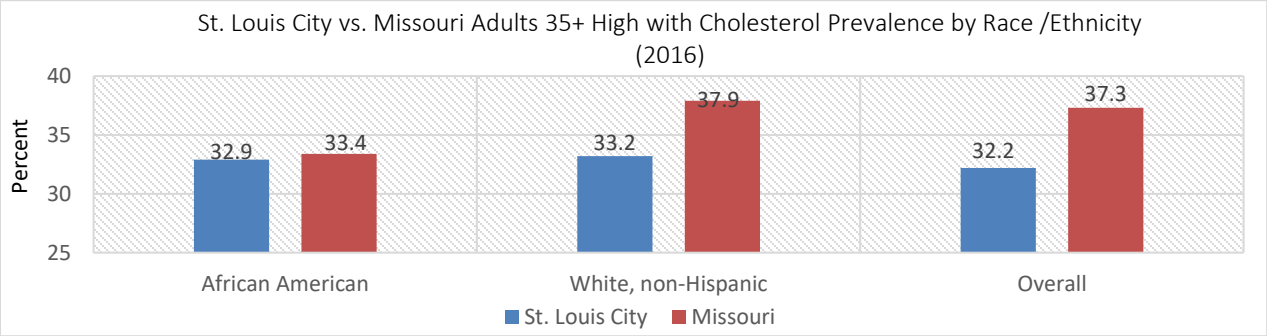


Source: Conduent Healthies Community Institute

HEART HEALTH

ST. LOUIS CITY vs. MISSOURI THREE-YEAR MOVING HEART DISEASE & STROKE AVERAGE RATES						
DEATH RATE: HEART DISEASES AND STROKE / 100,000 POPULATION						
HEALTH TOPICS	2013-2015		2014-2016		2015-2017	
	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI
Heart Disease	229.36	194.78	229.05	194.15	228.77	193.5
Ischemic Heart Disease	135.93	114.21	136.39	111.17	136.89	108.36
Stroke/Other Cerebrovascular Disease	48.82	40.56	47.18	40.55	47.74	40.65
HOSPITALIZATION RATE: HEART DISEASES & STROKE /10,000 POPULATION						
HEALTH TOPICS	2011-2013		2012-2014		2013-2015	
	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI
Heart Disease	145.01	115.58	138.13	108.12	133.63	102.68
Ischemic Heart Disease	32.4	34.89	30.73	31.91	30.86	30.04
Stroke/Other Cerebrovascular Disease	38.13	28.44	36.72	27.47	36.42	27.16
ER VISITS: HEART DIESEASES & STROKE/OTHER CEREBROVASCULAR/1,000 POPULATION						
HEALTH TOPICS	2011-2013		2012-2014		2013-2015	
	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI
Heart Disease	16.82	15.25	16.29	15.1	15.94	14.97
Ischemic Heart Disease	0.23	0.6	0.19	0.57	0.2	0.54
Stroke/Other Cerebrovascular Disease	0.3	0.78	0.29	0.76	0.31	0.75

Source: Missouri Department of Health and Senior Services



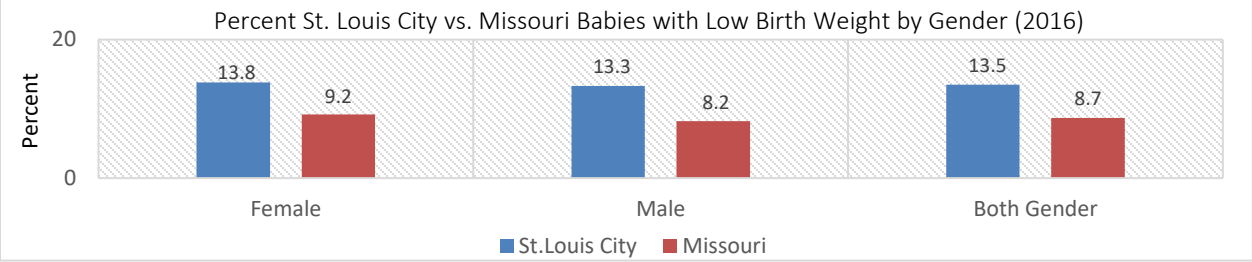
Source: Conduent Healthies Community Institute

HEART HEALTH

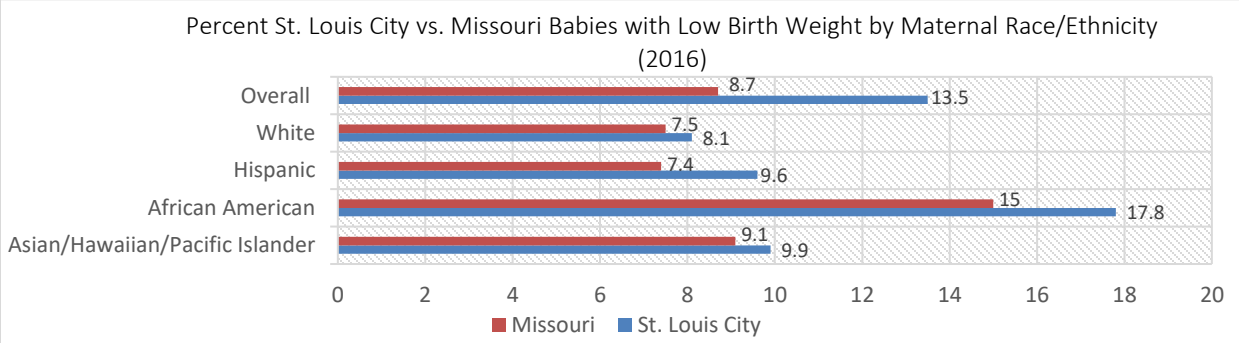
ST. LOUIS CITY vs. MISSOURI AGE-ADJUSTED RATE BY ETHNICITY/RACE: HEART DISEASE & STROKE				
HEALTH TOPICS	WHITE		AFRICAN AMERICAN	
	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI
HEART DISEASE				
Deaths/100,000 Population (2007-2017)	232.36	196.24	269.66	235.6
Hospitalizations/10,000 Population (2011-2015)	96.84	102.13	187.32	164.99
ER Visits/1,000 Population (2011-2015)	8.44	13.48	24.59	25.7
ISCHEMIC HEART DISEASE				
Deaths/100,000 Population (2007-2017)	159.2	123.1	155.83	141.23
Hospitalizations/10,000 Population (2011-2015)	27.34	32.06	36.88	33.04
ER Visits/1,000 Population (2011-2015)	0.15	0.59	0.29	0.35
STROKE/OTHER CEREBROVASCULAR DISEASE				
Deaths/100,000 Population (2007-2017)	42.94	41.62	55.14	56.71
Hospitalizations/10,000 Population (2011-2017)	26.91	25.66	47.9	44.57
ER Visits/1,000 Population (2011-2017)	0.19	0.77	0.44	0.69

Source: Missouri Department of Health and Senior Service

MATERNAL & CHILD HEALTH

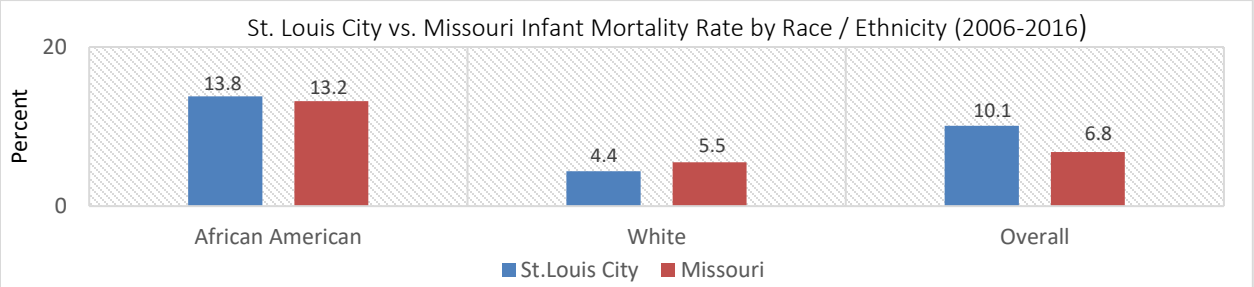


Source: Conduent Healthy Communities institute



Source: Conduent Healthies Communities Institute

MATERNAL & CHILD HEALTH



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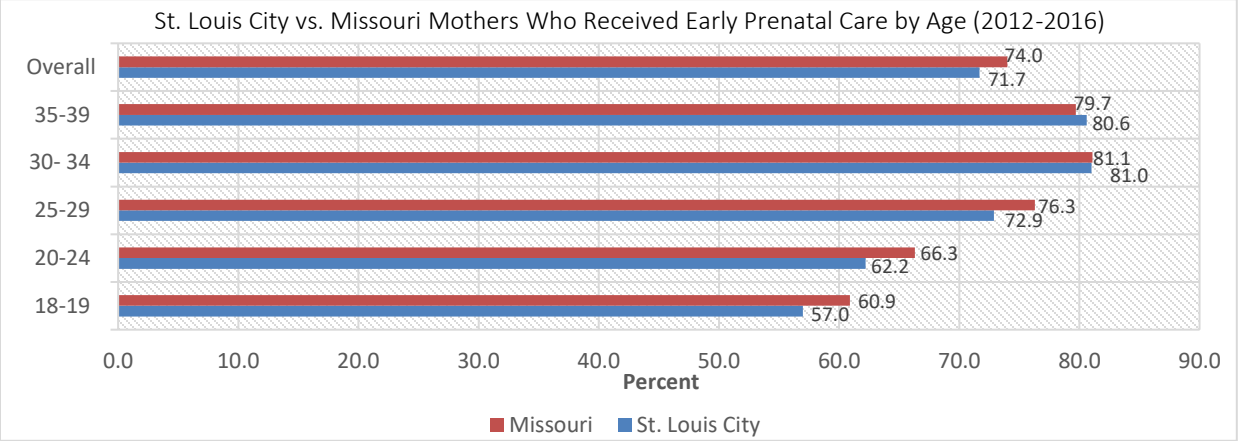

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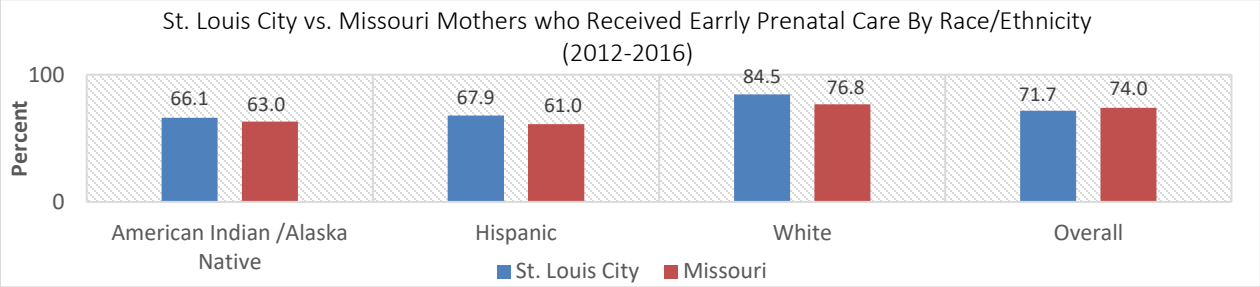
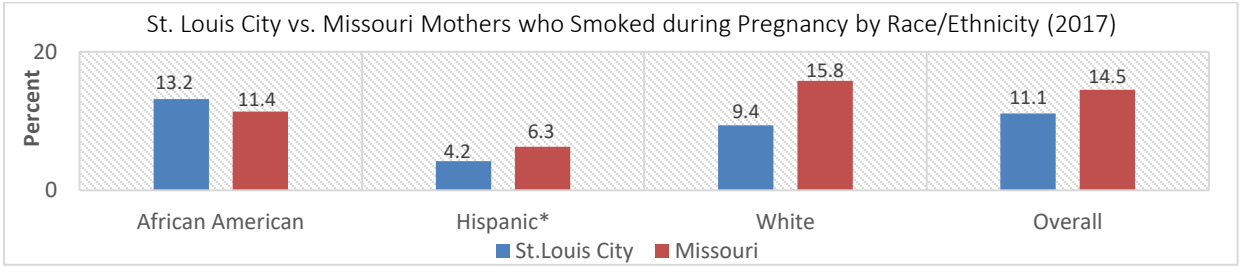
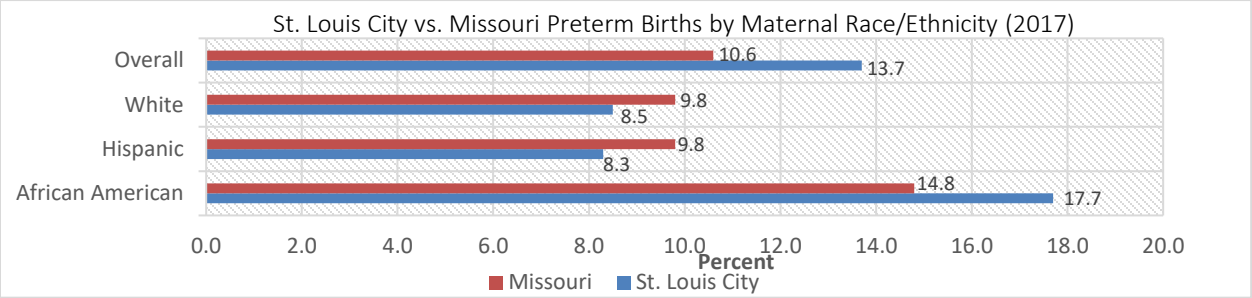


Source: Conduent Healthy Communities Institute



Source: Conduent Healthy Communities Institute

**** Fewer than 20 events in numerator, rate is unreliable.***



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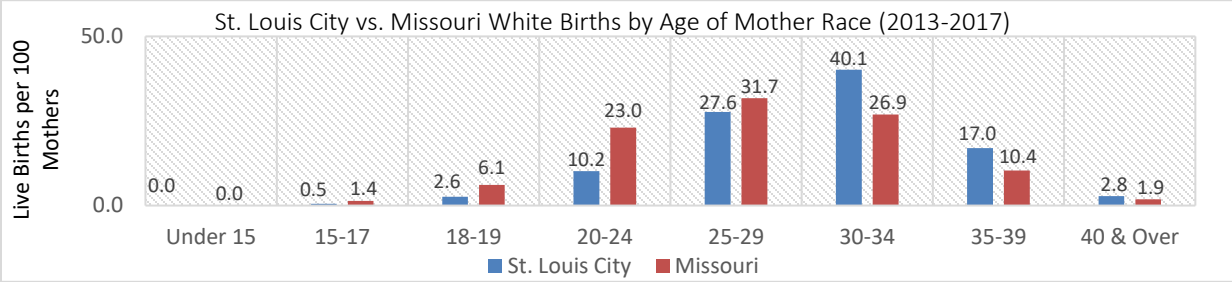
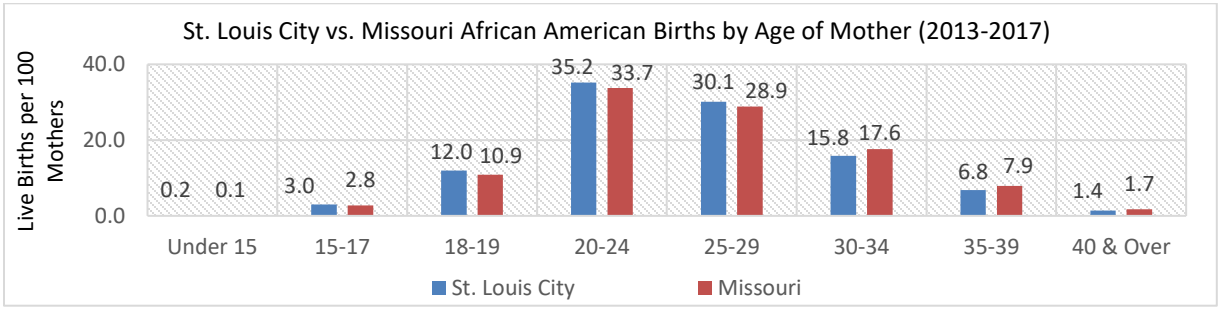


Source: Missouri Information for Community Assessment (MICA)



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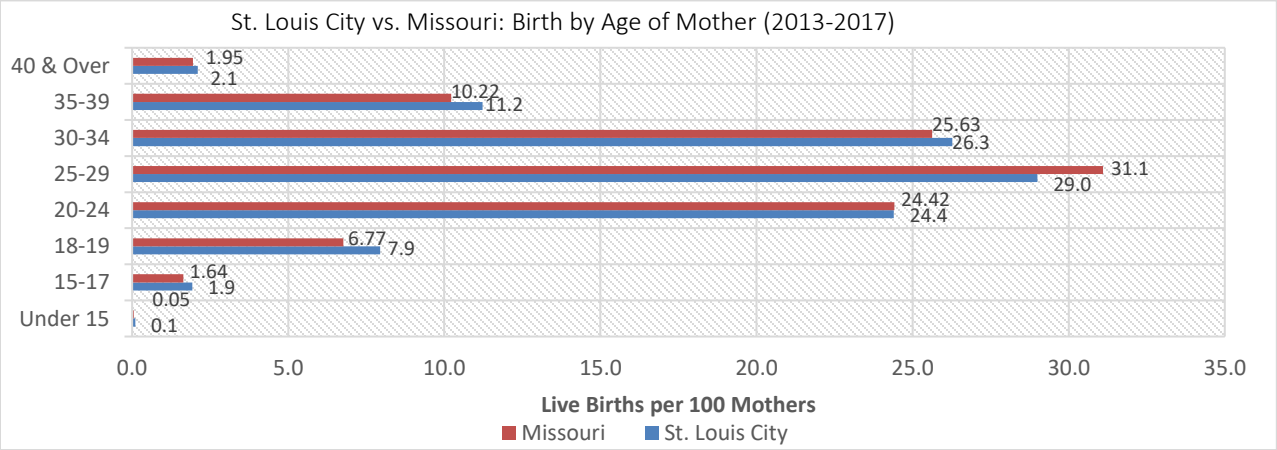
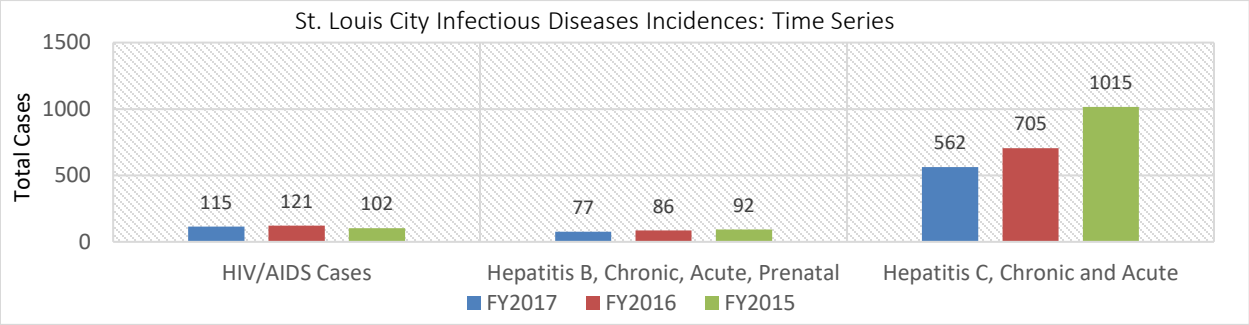
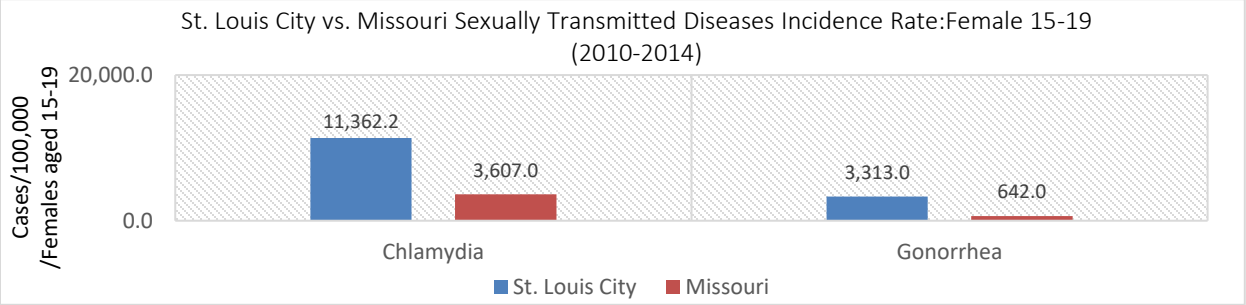


Source: Missouri Information for Community Assessment (MICA)

REPRODUCTIVE & SEXUAL HEALTH



Source: Missouri Department of Health & Senior Services



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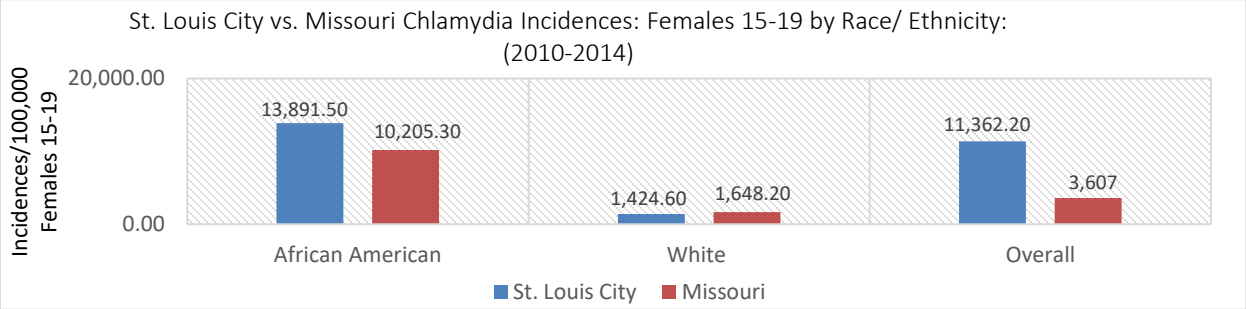

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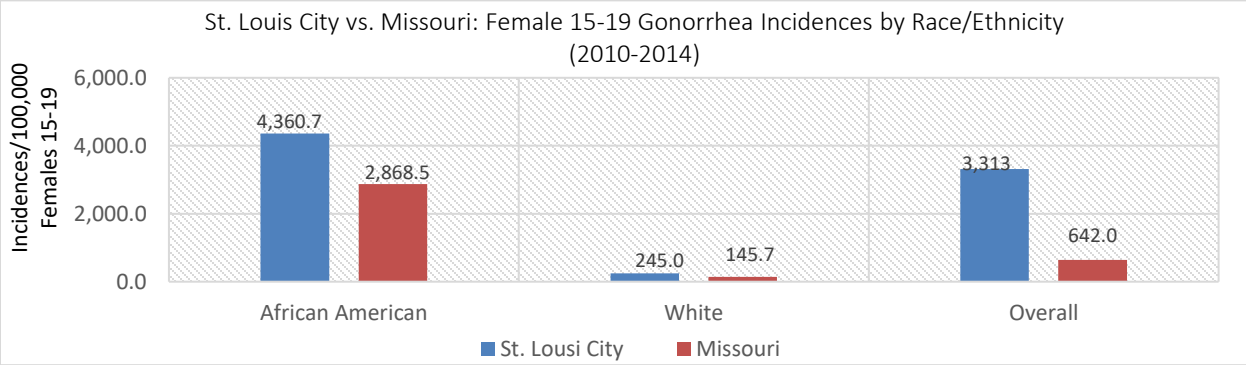
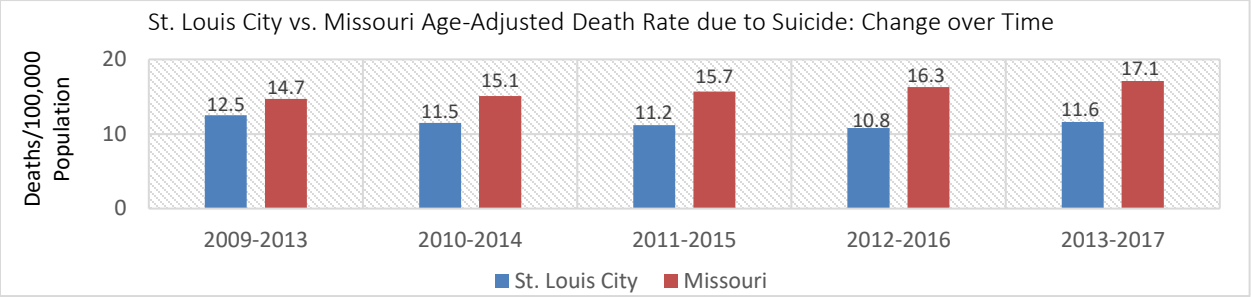


Source: Conduent Healthy Communities Institute

MENTAL AND BEHAVIORAL HEALTH: MENTAL HEALTH



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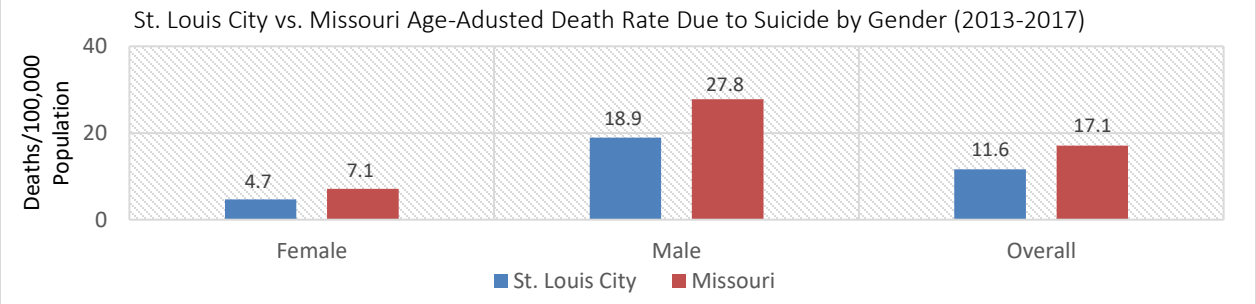

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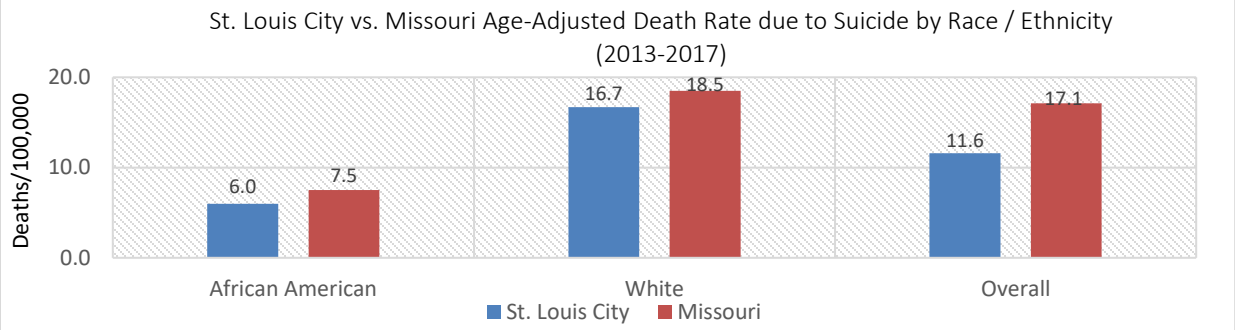

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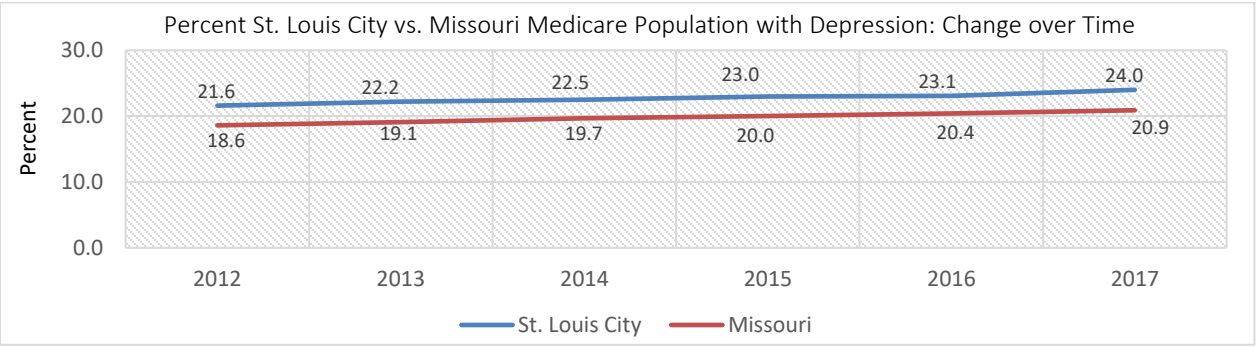

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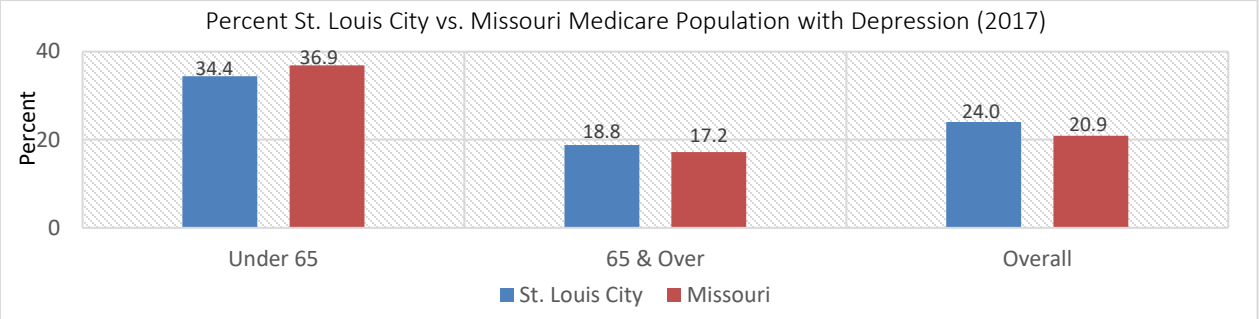
MENTAL AND BEHAVIORAL HEALTH: MENTAL HEALTH



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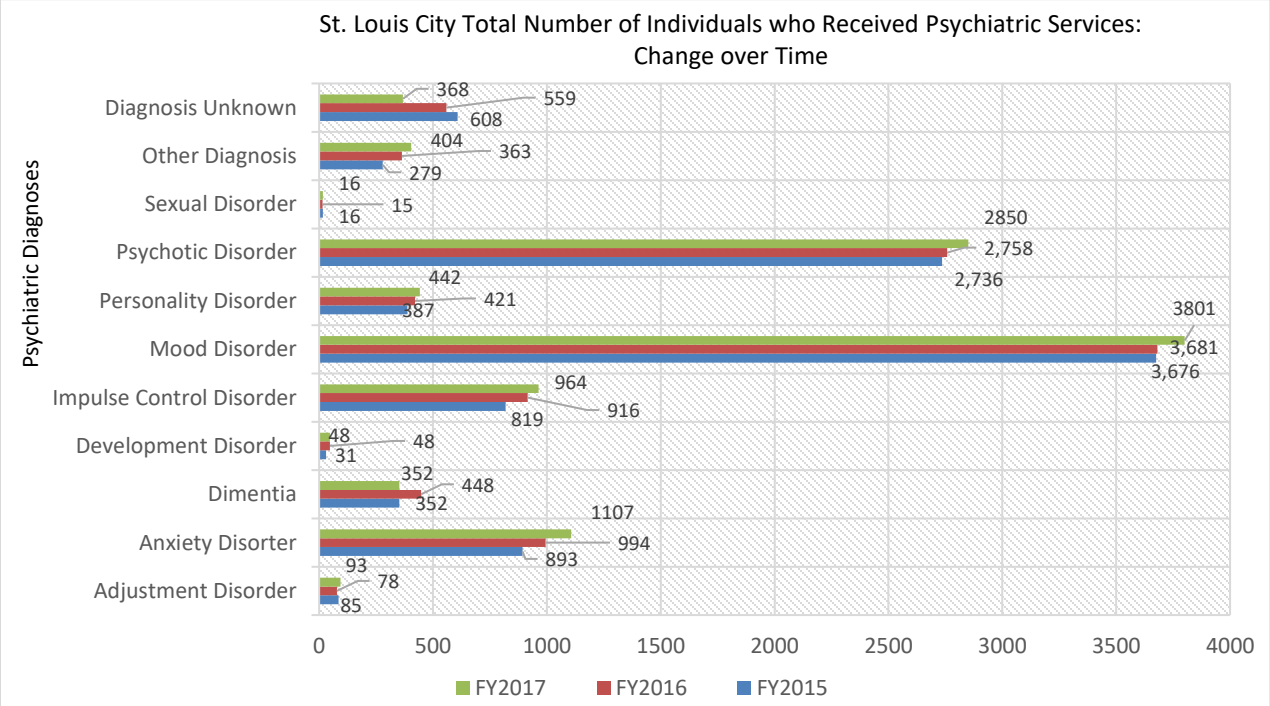
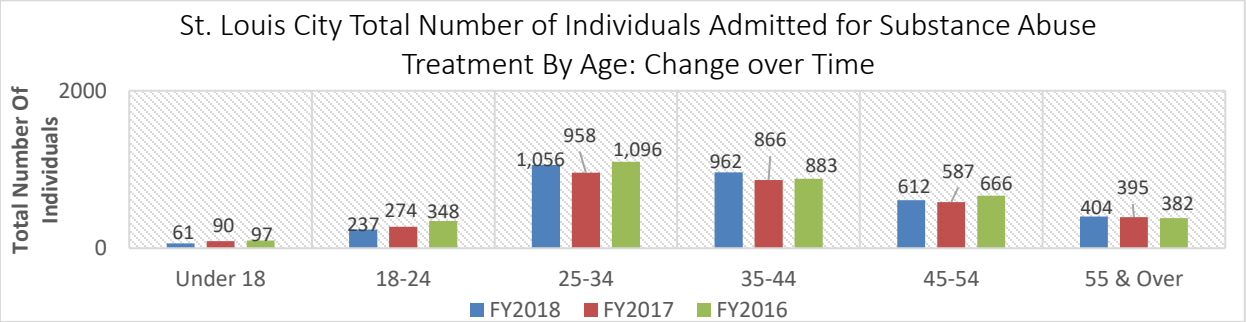


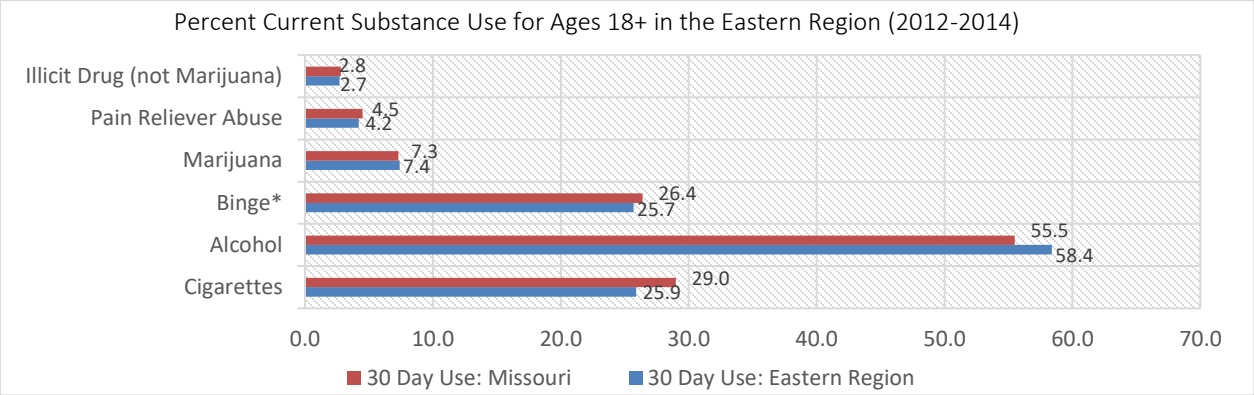
Source: Missouri Department of Mental Health

MENTAL AND BEHAVIORAL HEALTH: SUBSTANCE ABUSE



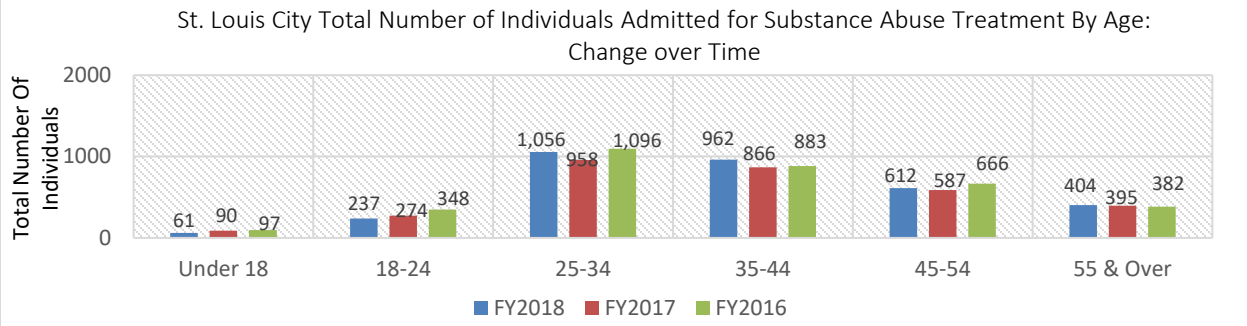
Source: Missouri Department of Mental Health

MENTAL AND BEHAVIORAL HEALTH: SUBSTANCE ABUSE

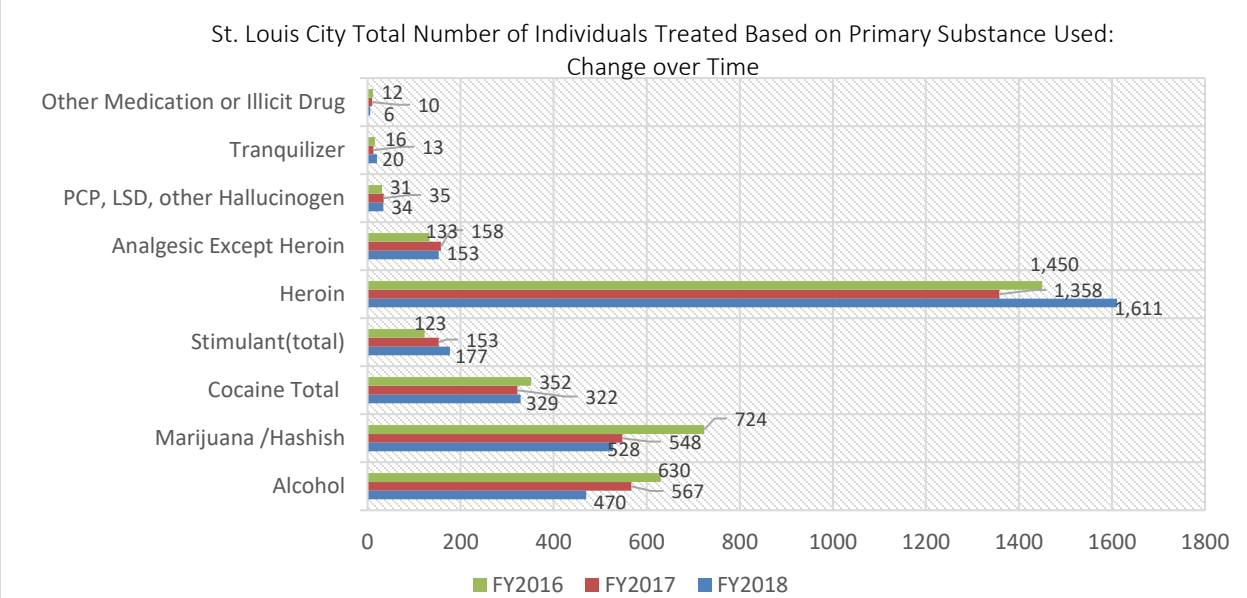


Source: Missouri Department of Mental Health

**5+ drinks on a single occasion in last 30 days.*

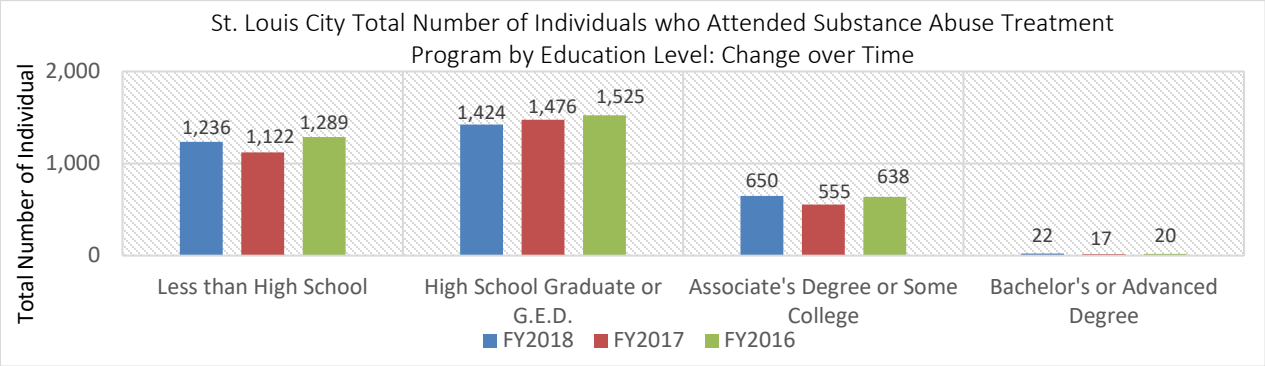


Source: Missouri Department of Mental Health

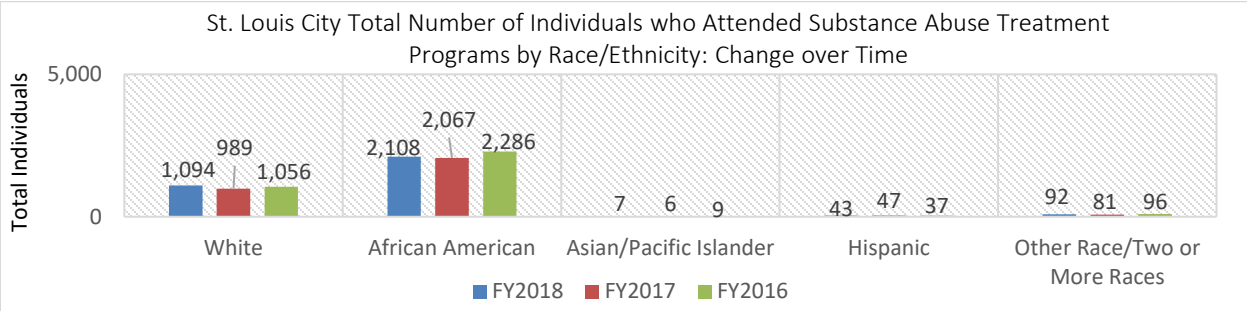


Source: Missouri Department of Mental Health

MENTAL AND BEHAVIORAL HEALTH: SUBSTANCE ABUSE



Source: Missouri Department of Mental Health



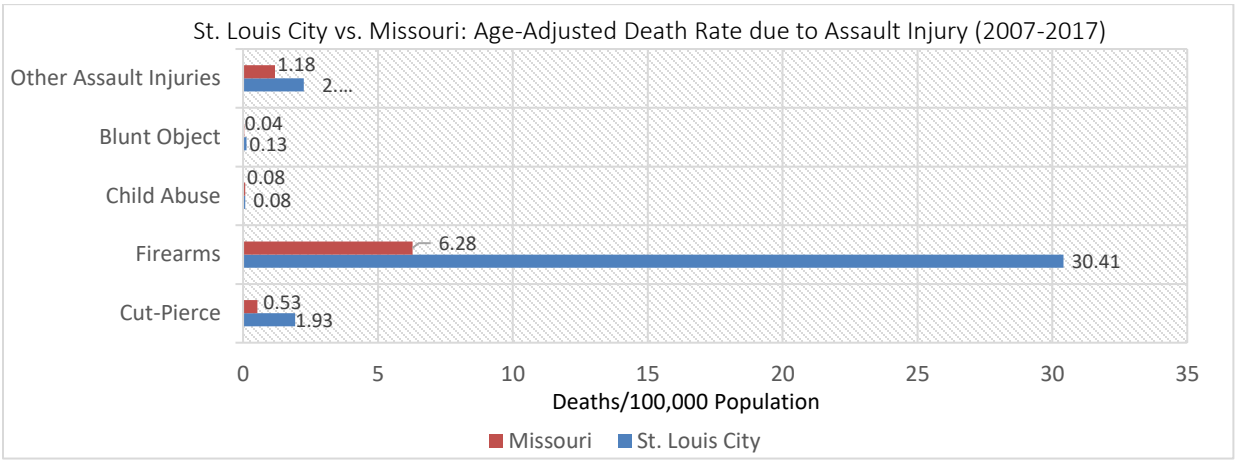
Source: Missouri Department of Mental Health

PUBLIC SAFETY: VIOLENCE

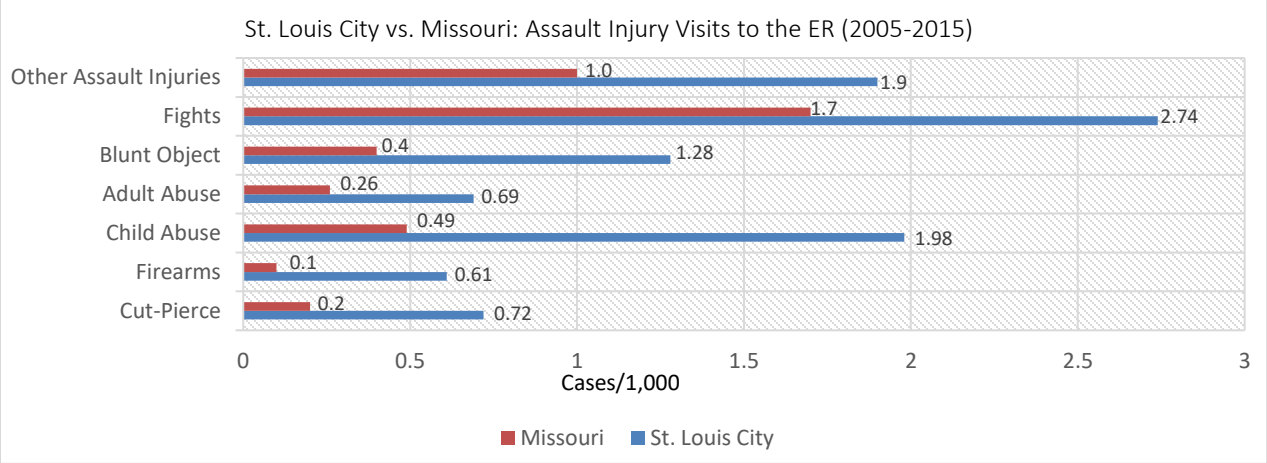
THREE-YEAR MOVING ASSAULT INJURY AVERAGE RATES: ST. LOUIS CITY vs. MISSOURI						
HEALTH INDICATORS	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI
	2013-2015		2014-2016		2015-2017	
Total Assault Injury Deaths /100,000 Population	34.46	7.89	40.58	8.98	45.53	10.23
Firearm Deaths/100,000 Population	30.74	6.18	37.2	7.22	42.96	8.62
	2011-2013		2012-2014		2013-2015	
Total Assault Injury Hospitalizations /10, 000 Population	8.64	2.52	9.48	2.46	9.62	2.44
Firearm Hospitalizations/10,000 Population	3.82	0.75	4.35	0.76	4.62	0.79
Total Assault Injury ER Visits /1,000 Population	8.11	3.82	7.26	3.59	6.86	3.43
Firearm ER Visits/1,000 Population	0.51	0.09	0.54	0.09	0.59	0.09

Source: Missouri Department of Health & Senior Services

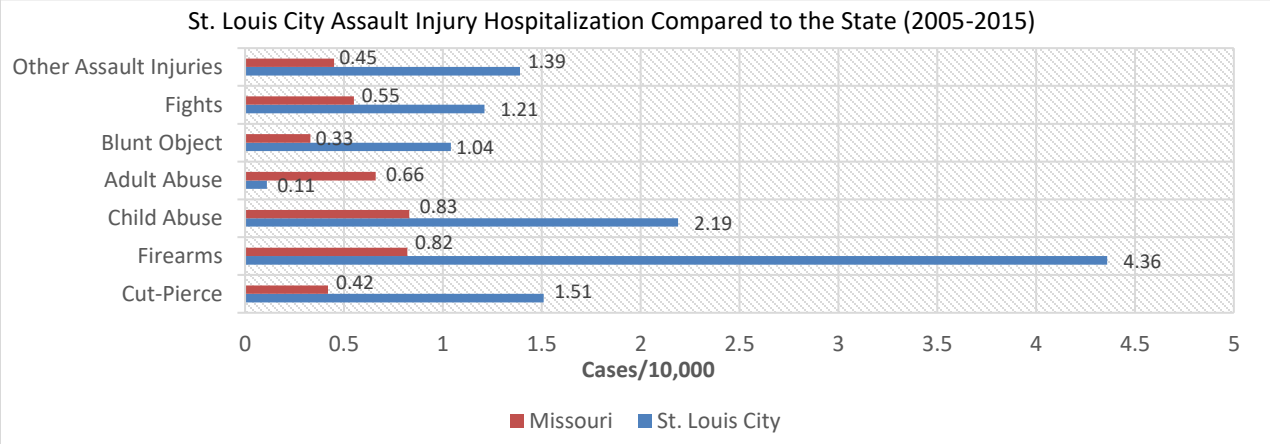
PUBLIC SAFETY: VIOLENCE



Source: Missouri Department of Health & Senior Services



Source: Missouri Department of Health & Senior Services



Source: Missouri Department of Health & Senior Services

PUBLIC SAFETY: VIOLENCE

ASSAULT INJURY RATE: ST. LOUIS CITY vs. MISSOURI BY ETHNICITY/RACE				
HEALTH INDICATORS	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI
TOTAL ASSAULT INJURY	WHITE		AFRICAN AMERICAN	
Death Rate /100,000 Population (2007-2017)	5.94	3.52	66.87	37.76
Hospitalizations/10, 000 Population (2005-2015)	3.17	1.55	16.99	10.34
Emergency Room Visits/1,000 Population (2005-2015)	3.43	2.85	12.95	9.45
FIREARM	WHITE		AFRICAN AMERICAN	
Death Rate/100,000 Population	4	2.12	60.03	32.44
Hospitalizations Rate/10,000 Population (2005-2015)	0.41	0.16	8.39	4.7
Emergency Room Visits/1,000 Population (2005-2015)	0.06	0.02	1.16	0.6

Source: Missouri Department of Health & Senior Services

DATA SOURCES USED FOR THE SECONDARY DATA ANALYSIS INCLUDED:

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)/STATE CANCER PROFILES is a website that provide data, maps, and graphs to help guide and prioritize cancer control activities at the state and local levels. It is a collaboration of the National Cancer Institute and the Centers for Disease Control and Prevention. https://statecancerprofiles.cancer.gov

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

MISSOURI DEPARTMENT OF MENTAL HEALTH provides numerous comprehensive reports and statistics on mental health diseases, alcohol and drug abuse.

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.

IMPLEMENTATION STRATEGY








Community Health Needs to be Addressed

MENTAL/BEHAVIORAL HEALTH: MENTAL HEALTH

Community Health Needs Rationale

This is a pilot program that provides housing and intensive case management services to Barnes-Jewish Hospital patients who are identified as being unhoused while also having a mental health disorder and/or substance use disorder and are high-utilizers of Emergency Department services at Barnes-Jewish Hospital. This program primarily is funded by the Barnes-Jewish Hospital Foundation and administered by the Barnes-Jewish Social Work department. A collaboration was formed with St. Patrick's Center for this project. St. Patrick's Center is a local expert in the provision of services for the unhoused and an excellent partnership of these services and healthcare.

Strategy Goal

To improve the health of Missouri residents through housing and supportive case management focused on improving access to mental health and medical care and treatment of substance use disorders.

Strategy Objectives

- Enroll 20 to 25 residents who are identified as unhoused while also diagnosed with either a mental health disorder and/or a substance use disorder and are frequent users of Emergency Department Services at Barnes-Jewish Hospital
- Provide intensive case management services to achieve 80 percent housing stability of the participants
- Report a reduced cost of care for program participants as compared to their preprogram healthcare usage and costs

Strategy Action Plan

- Utilizing Electronic Medical Record generating lists that identify the most frequent emergency department utilizers in the last 30- and 90-day rolling periods, patients will be identified that have a mental health disorder and/or substance used disorder and are unhoused.
- Patients will be offered the opportunity to enroll in the program whereby they receive comprehensive case management services and a fully furnished apartment.
- Enroll 20 to 25 individuals over a two-year cycle
- Offer intensive case management services aimed at the participants' individual personal improvement goals, including opportunities to secure long-term stable housing, re-establish relationships within their family and community, education, employment and general health and healthcare goals

Strategy Expected Outcomes

- 80 percent of participants will live in stable housing
- Participants will receive healthcare in appropriate venues, for including, primary care instead of emergent care and access to treatment of substance use disorders
- Participants' health will improve because of appropriate management
- Healthcare costs will decrease in aggregate for this group of patients

Strategy Outcomes Measurement

- All program costs will be tracked and reported
- All intensive case management services and interventions will be recorded and reported
- A dashboard will be created to track and monitor key metrics
- The oversight committee will meet regularly to review all aspects of the pilot

MENTAL/BEHAVIORAL HEALTH: SUBSTANCE USE DISORDER

Community Health Need Rationale

Substance use in the United States has been increasing. In 2013, an estimated 24.6 million Americans aged 12 or older — 9.4 percent of the population — had used a non-prescribed drug in the past month. This number is up from 8.3 percent in 2002. The increase mostly reflects a recent rise in use of cannabis, the most commonly used non-prescribed drug. (https://www.drugabuse.gov/publications/drugfacts/nationwide-trends)

According to the Missouri Department of Mental Health, there were 3,170 individuals in St. Louis City admitted into substance use treatment programs in 2017; 567 were primarily due to alcohol, 548 were due to marijuana and 95 were primarily due to prescription drugs. (2017)

In 2015, St. Louis City residents had a total of 305 alcohol-related and 587 drug-related hospitalizations. In addition, there were 2,167 alcohol-related and 1,417 drug-related ED visits that did not include a hospital stay.

The EPICC Project provides the patient access to medication, recovery coaching, and support to engage in treatment as well as expedited access to treatment of their substance use disorder which includes medication for addiction treatment (MAT) or medications for opioid use disorder (MOUD). A coach will also provide opioid overdose education and a rescue kit containing naloxone (Narcan), the opioid reversal agent.

Strategy Goal

Improve access to healthcare and other services for those who present with or recently experienced an opioid-related overdose

Strategy Objectives

- Expedite access to Medication for Addiction Treatment (MAT)/Medication for Opioid Use Disorder (MOUD)
- Improve coordination of care from the Emergency Department to community-based settings
- Initiate treatment of patients admitted to the hospital and connect them to long-term treatment utilizing community-based settings
- Increase harm reduction strategies, such as naloxone distribution

Strategy Action Plan

Partner with community organizations on local, regional and state-wide initiatives fostering collective impact

- Lead regional efforts in opioid overdose response in collaboration with the Behavioral Health Network through the EPICC and MO Hope projects
    - Emergency Medicine physicians trained and waivered to administer and prescribe buprenorphine from ED
    - Waiver training for all Emergency Medicine interns and residents
    - Coordination between Emergency Medicine/Medical Toxicology and Psychiatry departments to provide inpatient addiction consults

    - Coordinate transition of care with community substance use disorder clinics and designated outreach coordinators
    - Established a growing addiction medicine clinic (mainly for opioid use disorders and alcohol use disorders) run by the Medical Toxicology section
        - This clinic will soon be supporting patients from throughout the BJC system
- Featured opioids as the topic for the inaugural Larry Lewis Health Symposium (https://emergencymedicine.wustl.edu/events/lewis-health-policy-symposia/2017-about/)
- Host Continuing Medical Education (CME) course for medical professionals on opioid use and opioid use disorder; Past examples:
    - Medical Toxicology division has led x-waiver sessions (license needed to prescribe buprenorphine) for providers at any BJC facility as well as the community at large
    - In March 2020, organized opioid-relate CME event at the hospital (https://cme.wustl.edu/activity/13020)
- Emergency Medicine/Medical Toxicology developed inpatient opioid use disorder consultation service and Psychiatry is now consulting on these patients as well
- Medical Toxicology started a small addiction medicine clinic
- Psychiatry and Emergency Medicine/Medical Toxicology received a SAMHSA grant to educate medical students and residents on treating patients with OUD
- Infectious Disease, Emergency Medicine/Medical Toxicology, and Psychiatry received two CDC grants to expand treatment
- Part of the ED-INNOVATION trial, which is testing a new, injectable form of buprenorphine in patients being discharged from the ED
- Received BJH Foundation grant to increase treatment of patients with opioid use disorders
- Attempting to establish telehealth addiction service for the entire BJC system

Strategy Expected Outcomes

- Increased treatment completion and treatment retention
- Increased use of methadone and buprenorphine and increased naloxone distribution
- Increase treatment of patients with alcohol use disorder
- Increase treatment of infectious diseases and vaccination
- Increased use of app-based psychosocial treatments
- Increased screening
- Increased referral to treatment
- Increased job satisfaction
- Increase harm reduction education
- Decreased readmissions and decreased readmission to the ICU
- Decreased violence directed at staff

Strategy Outcomes Measurement

- Track buprenorphine and methadone use

- Track naltrexone use and other medications for alcohol use disorder
- Track how many are using screening tool
- Track referrals to EPICC
- Track AMA discharges
- Track drug use in the hospital
- Readmission data

Community Health Needs that Will Not be Addressed

ACCESS: COVERAGE

- Barnes-Jewish offers financial assistance to patients by providing assistance in applying for health insurance, applying for Medicaid and determining qualifications for financial assistance from BJC.
- Other organizations addressing this need include, but are not limited to:
    - Cover Missouri
    - St. Louis Regional Health Commission

ACCESS: END-STAGE RENAL DISEASE PATIENTS

- Barnes-Jewish provides financial assistance and resources to nephrology patients in need.
- Other organizations addressing this need include, but are not limited to:
    - National Kidney Foundation

ACCESS: SERVICES/CARE COORDINATION

- Barnes-Jewish provides numerous programs to improve access to healthcare services, reduce barriers to care and coordinate patient transition to other services.
- Other organizations addressing this need include, but are not limited to:
    - Integrated Health Network
    - St. Louis City and County Department of Health
    - SSM Health Saint Louis University Hospital
    - St. Louis Regional Health Commission

ACCESS: TRANSPORTATION

- Barnes-Jewish provides transportation assistance to qualified patients via cab vouchers. Additional work is being done to assess barriers in transportation and develop assistance programs for patients in need.
- Other organizations addressing this need include, but are not limited to:
    - Metro Transit – St. Louis
    - Organized Alternative Transportation Services (OATS)

CANCER

- Siteman Cancer Center provides a variety of health education and screening events for the community, as well as through the Program for the Elimination of Cancer Disparities (PECaD). Additionally, the cancer center conducts a more in-depth assessment on health needs related to cancer and develops implementation plans for priority needs.
- Other organizations addressing this need include, but are not limited to:
    - American Cancer Society
    - Cancer Support Community

DENTAL CARE

- Barnes-Jewish provides dental and oral assistance programs for patients in need.
- Other organizations addressing this need include, but are not limited to:
    - Affinia Healthcare

DIABETES

- Barnes-Jewish provides diabetes education and services through the Diabetes Center.
- Other organizations addressing this need include, but are not limited to:
    - American Diabetes Association
    - St. Louis County Department of Health

HEALTH LITERACY

- All patient education materials provided by Barnes-Jewish are reviewed by the Center for Practice Excellence to ensure they meet health literacy standards.
- Other organizations addressing this need include, but are not limited to:
    - Health Literacy Missouri

HEALTHY LIFESTYLES

- Barnes-Jewish provides education on prevention and healthy lifestyles through community outreach efforts, which include fulfilling requests for educational material, attending community events with education and screenings, and providing speakers at community events and meetings.
- Other organizations addressing this need include, but are not limited to:
    - City of St. Louis Department of Health
    - Missouri Foundation for Health
    - St. Louis County Department of Health

HEART DISEASE/STROKE

- Barnes-Jewish offers various opportunities for education and screenings for heart disease and stroke.
- Other organizations addressing this need include, but are not limited to:
    - American Heart Association
    - American Stroke Association

REPRODUCTIVE/SEXUAL HEALTH INCLUDING STDS

- Barnes-Jewish conducts ongoing education classes and programs for patients, caregivers and community members. Additionally, the hospital provides educational resources and connection to screening resources at no charge.
- Other organizations addressing this need include, but are not limited to:
    - Family Care Health Centers
    - Generate Health, formerly Maternal, Child & Family Health Coalition
    - La Leche League, Gateway Area
    - Myrtle Hilliard Davis Comprehensive Health Centers, Inc.

- People's Health Center, Inc.
- ThriVe St. Louis

MATERNAL/CHILD HEALTH

- Barnes-Jewish provides health education materials, hosts classes and attends community events, in support of expecting and new mothers.
- Other organizations addressing this need include, but are not limited to:
  - Generate Health, formerly Maternal, Child & Family Health Coalition
  - Annie Malone Children & Family Service Center

IMMUNIZATIONS/INFECTIOUS DISEASES

- Each year, Barnes-Jewish offers over 10,000 free flu shots to members of its community who would otherwise not have access. Additionally, educational resources are provided to patients and community members.
- Other organizations addressing this need include, but are not limited to:
  - City of St. Louis Department of Health
  - St. Louis County Department of Health

INJURIES

- Barnes-Jewish provides various opportunities for public safety and fatal injuries education and programs.
- Other organizations addressing this need include, but are not limited to:
  - American Trauma Society
  - ThinkFirst Saint Louis
  - Trauma Survivors Network

RESPIRATORY DISEASES

- Barnes-Jewish offers respiratory disease education through various programs for patients and the community.
- Other organizations addressing this need include, but are not limited to:
  - American Lung Association
  - Asthma & Allergy Foundation of America, St. Louis Chapter

SMOKING/TOBACCO

- Barnes-Jewish offers smoking and tobacco education through various patient and community programs.
- Other organizations addressing this need include, but are not limited to:
  - American Heart Association
  - American Lung Association

VIOLENCE

- Barnes-Jewish is dedicated to the Life Outside of Violence (LOV) program, which is a partnership between the Institute for Public Health at Washington University, University of Missouri-St. Louis, SSM Health Saint Louis University Hospital, St. Louis Children's

Hospital and SSM Health Cardinal Glennon Children's Hospital. The LOV program is the short name for the St. Louis Area Hospital-Based Violence Intervention Program that helps those harmed by stabbing, gunshot or assault receive the treatment, support and resources they need to find alternatives to end the cycle of violence.

- In addition to the partners above, organizations addressing violence include, but are not limited to:
    - Alive and Well STL
    - Community Mediation Services of St. Louis
    - Crime Action Advocacy Center of St. Louis
    - The Institute for Public Health at Washington University