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

Community Health Needs Assessment and Implementation Plan

2022

BARNES JEWISH Hospital

BJC HealthCare

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Executive Summary

Barnes-Jewish Hospital, a member of BJC HealthCare, is a 1,278-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.

In the past, community stakeholder health needs assessments were conducted in person via a moderated discussion. Due to COVID-19, BJC HealthCare, along with collaborative health system and hospital partners, conducted an online survey for the safety of community stakeholders. The survey provided stakeholders an opportunity to rank community health needs compiled by these partners.

During phase two, findings from the stakeholder survey were reviewed and analyzed by an internal hospital work group of clinical and non-clinical 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 to the state.

At the conclusion of the comprehensive assessment process, Barnes-Jewish identified mental health as the issue where focus is most needed to improve the health of the community it serves. The analysis and conclusions will be presented and reviewed for approval by the Barnes-Jewish Board of Directors. The report will be 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.

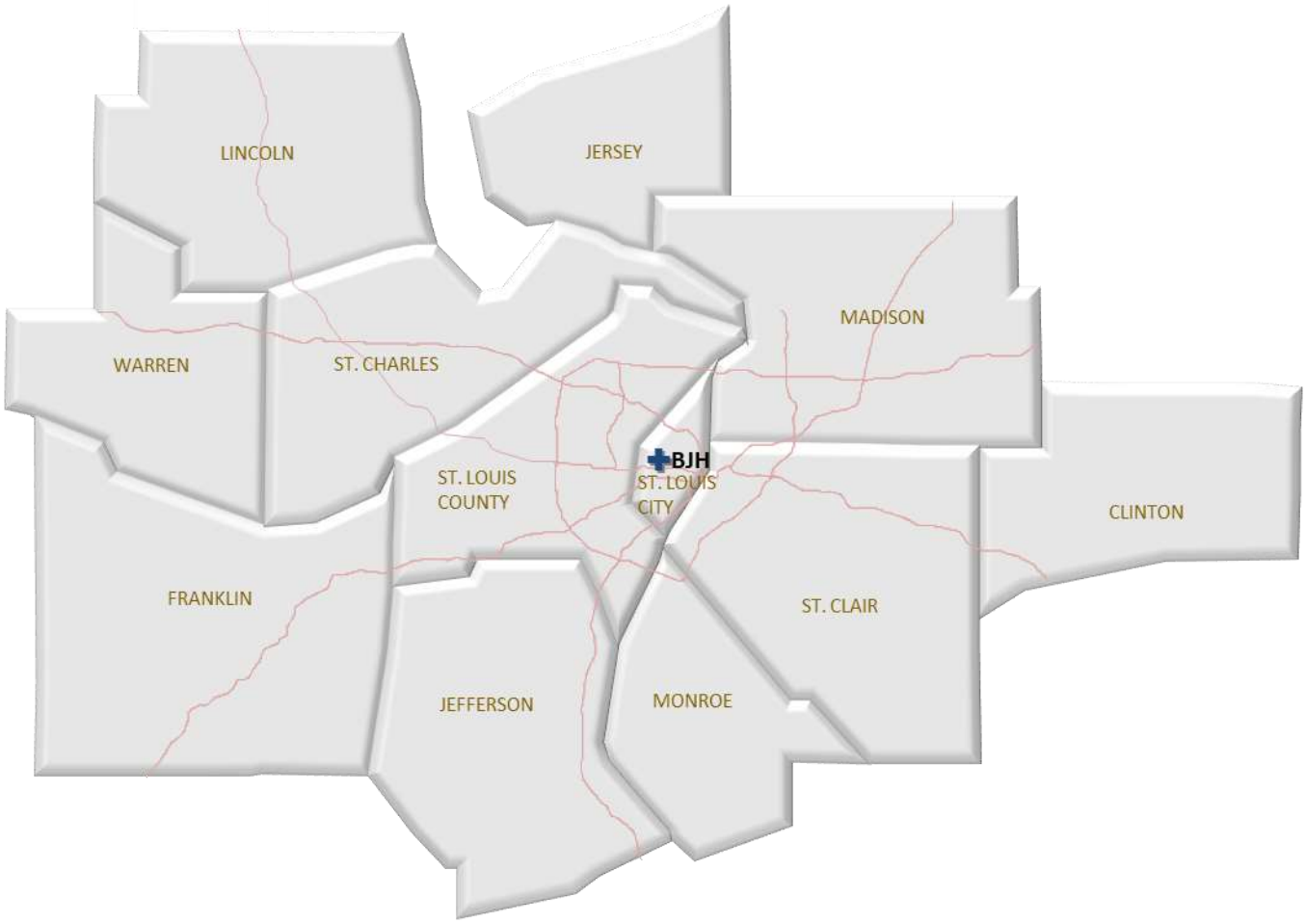
As the major safety net provider, Barnes-Jewish serves a larger community; however, for the purpose of the CHNA, Barnes-Jewish defined its community as St. Louis City. The shaded area in the map below represents St. Louis City.

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

BJH's Primary Service Area:

St. Louis Metropolitan Counties *(below)*



Population

Population and demographic data are necessary to understand the health of the community and plan for future needs. In 2021, St. Louis City reported a total population estimate of 293,310 compared to the state population of 6,168,187. Since the 2010 census, the population of the city declined 2.7 percent while the state population increased 2.1 percent.

Income

The median household income for the five-year-period ending in 2020 was $11,508 lower in St. Louis City, at $45,782, than the state's median household income of $57,290. Persons living below the poverty level in St. Louis City was 20.4 percent compared to 13.7 percent in the state.

For the five-year period ending in 2020, home ownership was lower in St. Louis City (44.1 percent) than Missouri (67.1 percent).

For the five-year period ending 2020, St. Louis City had a 69.8 percent higher rate of families living below the poverty level compared to the rate tin the state.

Education

Individuals who do not finish high school are more likely than people who finish high school to lack the basic skills required to function in an increasingly complicated job market and society. Adults with limited education levels are more likely to be unemployed, on government assistance or involved in crime. The Healthy People 2030 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 90.7 percent.

In St. Louis City, individuals who are White, non-Hispanic (94.4 percent) and Native Hawaiian/Other Pacific Islander (100 percent) had the highest rate of individuals 25+ with a high school degree or higher, followed by those who are Two or more Races (90.4 percent); Asian American (85.6 percent); African American (83.0 percent); and Hispanic or Latino (77.6 percent). The American Indian/Alaska Native alone population had the lowest rate (69.8 percent).

In St. Louis City, the rate of individuals 25 + with a high school degree or higher was 1.9 percentage points lower than the state rate for high school completion.

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 career opportunities in a variety of fields and is often the prerequisite for a higher-paying job. It is estimated that college graduates have about $1 million more in lifetime earnings than their peers without college degrees.

In St. Louis City for the five-year period ending 2019, 37.2 percent of the population 25 and older earned a bachelor’s degree compared to 29.2 percent in Missouri.

For the five-year period ending 2020, the Asian American population had the highest rate of individuals with a bachelor’s degree or higher both in St. Louis City (57.3 percent) and Missouri (60.9 percent). The American Indian/Alaska Native population had the lowest rate in St. Louis City (13.5 percent) followed by African Americans (16.0 percent).

Race and Ethnicity

The race/ethnicity makeup of St. Louis City is more diverse than the state. For 2020, Black/African American's comprised 45.7 percent of the city's population compared to 11.8 percent in the state, while Whites made up 46.7 percent of the city’s population compared to 82.9 percent in the state.

Additional demographic data on St. Louis City is available in Appendix C.

TABLE 1: ST. LOUIS CITY VS. MISSOURI POPULATION BY GENDER AND RACE/ETHNICITY		
	ST. LOUIS CITY	MISSOURI
TOTAL POPULATION, July 1, 2021, estimate	293,310	6,168,187
PERCENT POPULATION BY GENDER-JULY 1, 2021, ESTIMATE		
GENDER	ST. LOUIS CITY	MISSOURI
Female	51.5	50.9
Male	48.4	49.1
PERCENT POPULATION BY RACE/ETHNICITY-2020		
RACE/ETHNICITY	ST. LOUIS CITY	MISSOURI
White alone	46.4	82.9
White, not Hispanic or Latino	43.9	79.1
Black/African American, alone	45.7	11.8
Hispanic or Latino	4.1	4.4
Two or More Races	3.1	2.4
American Indian & Alaska Native	0.3	0.6
Asian, alone	3.4	2.2
Native Hawaiian & other Pacific Islander	0.1	0.2

Source: Conduent Healthy Communities Institute

Previous (2019) CHNA Measurement and Outcomes Results

At the completion of the 2019 CHNA, Barnes-Jewish identified Mental Health and Substance Abuse as the top priority heath needs where focus was most needed to improve the health of the community served by the hospital. The following table details goals and objectives to address these community health needs.

TABLE 2: BARNES-JEWISH HOSPITAL 2019 MEASURES OF SUCCESS BY PRIORITY	
MENTAL/BEHAVIORAL HEALTH: MENTAL HEALTH	MENTAL/BEHAVIORAL HEALTH: SUBSTANCE ABUSE
PROGRAM GOALS	PROGRAM GOAL
To improve the health of St. Louis City residents through housing and case management	To improve access to healthcare and other services for those who present with or recently experienced an opioid-related overdose
PROGRAM OBJECTIVES	PROGRAM OBJECTIVES
1) Enroll 20 to 25 St. Louis City residents who received care at Barnes-Jewish and identified as homeless, mentally ill and substance using and are frequent users of the Emergency department. **2)** Provide intensive case management services to achieve 80 percent housing stability of the participants. **3)** Report a reduced cost of care for program participants as compared to their preprogram healthcare usage and costs	**1)** Expedite access to Medication for Addiction Treatment (MAT) / Medication for Opioid Use Disorder (MOUD) **2)** Improve coordination of care from Emergency department to community-based settings **3)** Initiate treatment on patients admitted to the hospital and connect them to long-term treatment utilizing community-based settings **4)** Increase harm reduction strategies, such as naloxone distribution
CURRENT ACTION	CURRENT ACTION
The hospital continues to refer to "Familiar Faces," a program to assist patients with particular needs and mental health, and substance use treatment resources. Barnes-Jewish Hospital continues to assist patients who are homeless and have substance use and mental health disorders by referring them to Hospital to Housing program.	Continue to provide MOUD (suboxone) to many ED patients with opioid use disorder.

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Primary Data Collection: Survey of Community Stakeholders

Due to COVID-19, BJC HealthCare, along with collaborative partners SSM Health; Mercy Hospital St. Louis and Mercy Hospital South; and the St. Luke's network of care, which includes St. Luke's Hospital and St. Luke's Des Peres Hospital, conducted online surveys for the safety of our employees and of our community stakeholders who represent the broad interests of the community served by each hospital and those with special knowledge or expertise in public health. In the past, community stakeholder health needs assessments were conducted in person via a moderated discussion. (See Appendix D for the Stakeholder Assessment Report and Appendix E for the list of Participating Community Stakeholders)

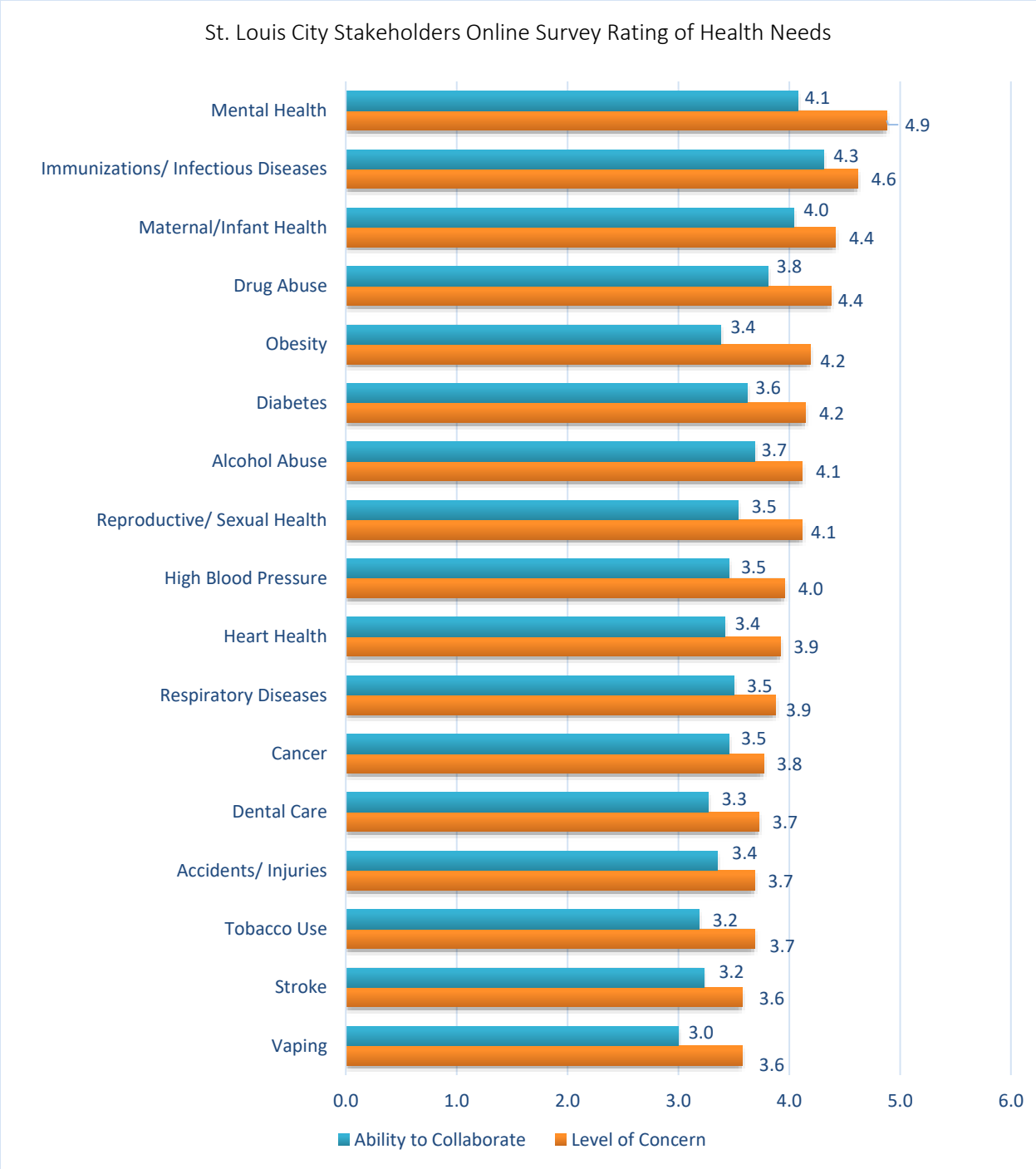
Summary: Stakeholder Key Findings

Mental health, immunizations/infectious diseases, maternal and infant health and drug abuse are the top four needs of greatest concern. These were also named as the same issues stakeholders felt there was the greatest potential to work together to address.

Financial barriers related to health insurance are having the greatest impact on access to health services in St. Louis City. Low-income populations are at greatest risk for poor health outcomes in St. Louis City. Poverty is the social factor that has the greatest impact on the health of those living in St. Louis City. Stakeholders identified the largest resource gaps in St. Louis City around jobs that pay a living wage followed by mental health resources. Stakeholders identified new issues of concern around mental health, the expanding gap in income, and housing.

In the view of stakeholders, the greatest impact of COVID-19 has been on the mental health of St. Louis City residents, evidenced by increased symptoms of depression and anxiety. The pandemic has also created financial hardship for area residents, resulting in loss of regular income.

Stakeholders mentioned North St. Louis City as the community at highest risk, although there is increasing concern about parts of South St. Louis City. (See Appendix D for complete Stakeholder Assessment Report)



Mental Health was rated the highest in terms of level of concern and Immunization/Infectious Diseases was rated the highest for ability to collaborate with community organizations.

Secondary Data Summary

Based on the needs reviewed by community stakeholders (see graph on previous page), key areas were identified for a secondary data analysis. These represent the areas of greatest concern identified by the stakeholders.

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. Most data, however, are not available at a more granular level. For this reason, the analysis was completed comparing St. Louis City and Missouri. When necessary, during implementation, more specific data will be used when available.

In order to provide a comprehensive overview (analysis of disparity and trend) the most up-to-date secondary data from Conduent Healthy Communities Institute (HCI) was included for the needs listed below. HCI is an online dashboard of health that offers the ability to evaluate and track the information against state and national data and Healthy People 2020 and 2030 goals. Sources of data include the National Cancer Institute, Environmental Protection Agency, U.S. Census Bureau, U.S. Department of Education, and other national, state, and regional sources.

Other data sources included:

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.

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

Community Health Needs

- Asthma
- Cancer
- Diabetes
- Heart Health
- Maternal and Child Health
- Reproductive and Sexual Health
- Mental and Behavioral Health: Mental Health
- Mental and Behavioral Health: Substance Abuse
- Injury

A summary of the secondary data follows below. Additional secondary data is available in Appendix G. All mortality and incidence rates are per 100,000 population.

Asthma

Asthma is a chronic lung disease characterized by periods of wheezing, chest tightness, shortness of breath, and coughing. Symptoms often occur or worsen at night or in the early morning.

These occurrences, often referred to as “asthma attacks,” are the result of inflammation and narrowing of the airways due to a variety of factors or “triggers.”

In St. Louis City, African Americans had a 4.0 percent higher rate of asthma compared to African Americans in the state; Whites had a 21.7 percent lower rate of asthma when compared to Whites in Missouri.

The asthma death rate in St. Louis City was 2.7 times higher when compared to the state. African Americans in St. Louis City had a rate 67.2 percent higher than African Americans in 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.

The all-cancer incidence rate in St. Louis City declined 8.7 percent from the five-year period ending 2014 compared to the five-year period ending 2018. The state rate remained relatively flat (+0.4 percent).

For the five-year period ending 2018, when comparing the St. Louis City all-cancer incidence rate by race/ethnicity, all groups had similar incidence rates compared to the same race/ethnicity rate in the state except American Indians/Alaska Natives, who had a 21.3 percent higher rate, and Hispanics who had a 13.5 percent lower rate compared to the state rate.

For the five-year period ending 2019, the St. Louis City age-adjusted death rate due to cancer was 7.8 percent higher than the rate in Missouri (179.3 vs. 166.3). The higher rate was driven by the Black/African American population who had a rate 8.1 percent higher than the state rate. Both Whites (5.5 percent lower) and Asians (23.1 percent lower) had rates lower in the city compared to the state. Hispanics had a similar rate in the city when compared to the state.

Diabetes

Diabetes is a leading cause of death in the U.S. 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.

While the age-adjusted death rate due to diabetes in St. Louis City declined 20.1 percent from the five-year period ending 2015 compared to the five-year period ending 2019, the city’s rate in 2019 was 18.0 percent higher than the state rate (24.2 vs. 20.5).

Among the Medicare population, St. Louis City had a 14.4 percent higher rate of diabetes compared to the state rate in 2018.

Heart Health

Heart disease and stroke are among the most preventable diseases in the U.S., yet they are the most widespread and costly health conditions facing the nation today. Heart disease and stroke are the first and third leading causes of death for both women and men.

For the five-year period ending 2019, the St. Louis City age-adjusted death rate due to heart disease was 17.9 percent higher when compared to the state. African American's had a rate 12.4 percent higher and Whites had a rate 10.5 percent higher than the state rate.

For the eleven-year period ending 2019, the St. Louis City death rate due to ischemic heart disease was 23.4 percent higher when compared to the state. The city's hospitalizations rate was 1.6 percent lower than the state rate.

Maternal and Child Health

Infant mortality rate continues to be one of the most widely used indicators of the overall health status of a community. The leading causes of death among infants are birth defects, preterm delivery, low birth weight, Sudden Infant Death Syndrome (SIDS), and maternal complications during pregnancy. This is a Healthy People 2030 Leading Health Indicator. The Healthy People 2030 national health target is to reduce the rate of infant deaths to 5.0 deaths per 1,000 live births.

Babies born premature are likely to require specialized medical care, and oftentimes must stay in intensive care nurseries. While there have been many medical advances enabling premature infants to survive, there is still risk of infant death or long-term disability. The most important things an expectant mother can do to prevent prematurity and low birth weight are to take prenatal vitamins, stop smoking, stop drinking alcohol and using drugs, and get prenatal care. The Healthy People 2030 national health target is to reduce the proportion of infants who are born preterm to 9.4 percent.

In 2019, St. Louis City's low birth rate was 38.2 percent higher than the state rate. When comparing by race/ethnicity, Hispanics had a 42.9 percent higher rate and African Americans had a 7.1 percent higher rate.

For the eleven-year period ending 2019, St. Louis City's infant mortality rate was 50 percent higher than the state rate. The rate for African Americans was 11.7 percent higher than the state rate, while the rate for Whites was 18.9 percent lower.

Reproductive and Sexual Health

Chlamydia, one of the most frequently reported bacterial sexually transmitted infections (STIs) in the United States, is caused by the bacterium, Chlamydia trachomatis. Although symptoms of chlamydia are usually mild or absent, serious complications that cause irreversible damage, including infertility, can occur "silently" before a woman ever recognizes a problem. Under-reporting of chlamydia is substantial because most people with chlamydia are not aware of their infections and do not seek testing. The Centers for Disease Control and Prevention recommends that all sexually active women ages 25 or younger be tested annually for chlamydia. Females ages 15 to 19 consistently have the highest rate of chlamydia compared with any other age or

sex group according to the Centers for Disease Control and Prevention. This group may be particularly susceptible because the cervix is not yet fully developed. Increased screening in this group, however, may partially contribute to increased rates of reported chlamydia.

For the ten-year period ending 2018, the St. Louis City chlamydia incident rate among females 15-44 was 125.2 percent higher when compared to the state. The rate for African Americans was 35.9 percent higher than the state rate, while Whites had a 29.7 percent lower rate compared to the state rate.

For the eleven-year period ending 2019, the St. Louis City HIV-AIDS death rate among African Americans was 34.3 percent higher than the state rate and Whites had a 279.4 percent higher rate than the state.

Mental/Behavioral Health: Mental Health

Individuals with serious mental illness are at higher risk for homicide, suicide and accidents as well as chronic conditions including cardiovascular and respiratory diseases and substance use disorders. In fiscal year 2020, 7,887 St. Louis City residents received treatment for serious mental illness at publicly-funded facilities. In St. Louis City, 15.9 percent of adults ages 18 years and older did not have good mental health for 14 days or more. While there are data on those who receive treatment, data on mental health in the general population is very limited. This is especially true at the local level. Serious mental health and mental illness is defined below by the National Institute of Mental Health:

- Serious mental illness (SMI) is defined as a mental, behavioral, or emotional disorder resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities. The burden of mental illnesses is particularly concentrated among those who experience disability due to SMI.

- Any mental illness (AMI) is defined as a mental, behavioral, or emotional disorder. AMI can vary in impact, ranging from no impairment to mild, moderate, and even severe impairment (e.g., individuals with serious mental illness as defined below).
https://www.nimh.nih.gov/health/statistics/mental-illness

In Eastern Missouri, 19.2 percent of those 18 and older had a mental illness in the past year, and 4.7 percent had a serious mental illness.

A major depressive episode is characterized by an extended period of depressed mood, loss of interest or pleasure, and impaired functioning. Approximately 8.4 percent of Eastern Missouri residents ages 18+ had at least one major depressive episode in the past year. Typically, females are more likely to report having had a major depressive episode.

Suicide is the 2nd leading cause of death for those ages 10-34 in Missouri. In 2019, 47 St. Louis City residents died by suicide.

For the five-year period ending 2019, St. Louis City had a 30.1 percent lower age-adjusted death rate due to suicide compared to the state.

Mental/Behavioral Health: Substance Abuse

The availability of county-level data on substance use is limited. National Survey on Drug Use and Health (NSDUH) and Centers for Disease Control and Prevention (CDC) PLACES are two data sources used to report data for adults at regional and county- level. In St. Louis City, the prevalence of binge drinking among adults 18 years and older is 18.7 percent. The prevalence of current smoking among the same age group is 24.3 percent.

Alcohol is the most commonly used substance in Missouri adults. In the Eastern region, approximately 59.5 percent of adults currently drink alcohol, and 27.9 percent have had 5 or more drinks of alcohol on a single occasion in the past 30 days. Cigarette use is of concern across the state. In the Eastern region, 19.3 percent of adults currently use cigarettes compared to 22.6 percent statewide. Marijuana use in Missouri continues to be of interest, particularly with recent shifts in legality of adult use across the nation and medical marijuana sales in the state since October 2020. In the Eastern region, approximately 9.1 percent of adults currently used marijuana in the past 30 days. Prescription drug misuse is of growing concern both across the nation and in Missouri. 3.8 percent of adults in the Eastern region reported misuse of prescription pain medication over the past year.

For the FY 2021, FY 2020 and FY 2019, heroin was the primary drug problem in St. Louis City.

Injury

Injury is the leading cause of death for children and adults between the ages of 1 and 45, with 240,000 people dying as a result of violence and unintentional injuries each year. The total economic cost of fatal and nonfatal injuries in the United States in 2019 was $4.2 trillion.

For the three-year period ending 2019, St. Louis City's firearm death rate was 4.3 times higher than the rate in Missouri (42.09 vs 9.62). When comparing firearm death rates by race in St. Louis City, African Americans had a rate significantly higher than Whites (63.9 vs 5.0) for the 10-year period ending 2019.

Internal Work Group Prioritization Meetings

Barnes-Jewish selected 18 employees to participate on an internal CHNA work group from various hospital departments in order to analyze the primary and secondary data, complete the priority ranking for the hospital's CHNA, and determine the community's most critical needs. (See Appendix F)

To prepare for the work group meeting, members reviewed the needs identified by the stakeholders and secondary data. (Table 3) Similarities observed in the top needs included diabetes, maternal health, mental health and substance abuse. Additionally, the work group was instructed to rank the seriousness and feasibility of addressing these health needs online using a Likert scale of 1-5. A Likert scale is a psychometric scale commonly used in research that employs questionnaires. The scores were then averaged for seriousness and feasibility and ranked. (Table 4)

TABLE 3: ST. LOUIS CITY STAKEHOLDERS VS. SECONDARY DATA RANKING

RANK	SECONDARY DATA RANKING	RANK	STAKEHOLDER'S RANKING
1	Diabetes	1	Mental Health
2	Prevention & Safety	2	Immunizations/ Infectious Diseases
3	Adolescent Health	3	Maternal/Infant Health
4	Children's Health	4	Drug Abuse
4	Maternal, Fetal & Infant Health	5	Obesity
6	Mental Health & Mental Disorders	6	Diabetes
7	Alcohol & Drug Use	7	Alcohol Abuse
8	Older Adults	7	Reprodctive/Sexual Health
9	Wellness & Lifestyle	9	High Blood Pressure
10	Cancer	10	Heart Health
11	Environmental Health	11	Respiratory Diseases
12	Heart Disease & Stroke	12	Cancer
13	Women's Health	13	Dental Care
14	Respiratory Diseases	14	Accidents/ Injuries
15	Immunizations & Infectious Diseases	14	Tobacco use
15	Health Care Access & Quality	16	Stroke
17	Oral Health	16	Vaping

TABLE 4: BARNES-JEWISH HOSPITAL INTERNAL TEAM PRELIMINARY HEALTH NEEDS RANKED BY SERIOUSNESS AND FEASIBILITY					
RANK	HEALTH NEEDS	SERIOUSNESS: AVERAGE	RANK	HEALTH NEEDS	FEASIBILITY AVERAGE
1	Drug Abuse	4.75	1	Immunizations / Infectious Diseases (COVID-19, Influenza, Pneumonia)	4.17
1	Mental Health	4.75	2	Diabetes	3.82
3	High Blood Pressure	4.33	2	High Blood Pressure	3.75
3	Maternal / Infant Health	4.33	4	Mental Health	3.67
5	Accidents / Injuries	4.17	5	Cancer	3.58
5	Immunizations / Infectious Diseases (COVID-19, Influenza, Pneumonia)	4.17	5	Drug Abuse	3.58
7	Cancer	4.09	5	Heart Health	3.58
8	Heart Health	4.00	5	Maternal / Infant Health	3.58
8	Obesity	4.00	5	Reproductive / Sexual Health (Including Sexually Transmitted Infections)	3.58
10	Alcohol Abuse	3.92	10	Dental Care	3.42
10	Diabetes	3.92	11	Stroke	3.33
12	Reproductive / Sexual Health (Including Sexually Transmitted Infections)	3.83	12	Alcohol Abuse	3.25
13	Tobacco Use	3.67	13	Obesity	3.18
14	Respiratory diseases (Allergies, Asthma, COPD)	3.58	14	Respiratory Diseases (Allergies, Asthma, COPD)	3.17
15	Dental Care	3.50	15	Accidents / Injuries	3.08
15	Stroke	3.50	16	Tobacco Use	3.00
17	Vaping	3.17	17	Vaping	2.75

The work group met on June 7, 2022, to review the purpose for the CHNA, role of the work group, and goals for the project. The 2021 stakeholder group perceptions were then discussed.

It was mentioned that since the stakeholder survey was completed in 2021, it was not a surprise to see immunizations, namely COVID-19 vaccinations and vaccine hesitancy, as the top need. This need may not rank as high if surveyed in 2022.

Next, the work group discussed the results of the ranking. (Table 5)

TABLE 5: BARNES-JEWISH HOSPITAL INTERNAL TEAM PRELIMINARY TOP TEN HEALTH NEEDS RANKED BY FEASIBILITY				
RANK BY FEASIBILITY	HEALTH NEEDS	FEASIBILITY AVERAGE	RANK BY SERIOUSNESS	SERIOUSNESS AVERAGE
1	Immunizations / Infectious Diseases (COVID-19, Influenza, Pneumonia)	4.17	5	4.17
2	Diabetes	3.82	10	3.29
3	High Blood Pressure	3.75	3	4.00
4	Mental Health	3.67	1	4.43
5	Cancer	3.58	7	3.43
5	Drug Abuse	3.58	1	3.86
5	Heart Health	3.58	8	3.29
5	Maternal / Infant Health	3.58	3	2.00
9	Reproductive / Sexual Health (Including Sexually Transmitted Infections)	3.58	12	3.43
10	Dental Care	3.42	15	3.14

The members reviewed both the seriousness and feasibility of addressing needs. The following points summarize the discussion of the work group members:

- Defined feasibility as the hospital's expertise in the area and human resources available in addition to funding for a program
- Removed immunizations, cancer, and dental care from the list due to programs in place currently and in the near future
- Discussed BJC HealthCare's future Community Health Improvement focus on maternal health and diabetes
- Discussed the importance and impact of diabetes and heart disease needs as well as mental health and substance abuse

The team decided to continue its dialogue on the top 4 needs based on feasibility and current and future resources (Table 6).

TABLE 6: BARNES-JEWISH HOPSITAL INTERNAL WORK GROUP TOP FOUR HEALTH NEEDS SELECTED FOR RANKING
Diabetes
Mental Health
Heart Health
Maternal/Infant Health

The work group agreed upon these four needs for priority ranking via an email survey.

The work group used a ranking process to assign weight to criteria by using the established criteria for priority setting above. Criteria of overriding importance were weighted as "3," important criteria were weighted as "2," and criteria worthy of consideration, but not a major factor, were weighted as "1." Health needs were then assigned a rating ranging from one (low

need) to five (high need) for each criteria. The total score for each need was calculated by multiplying weights by rating.

TABLE 7: CRITERIA FOR PRIORITY SETTING			
	RATING	WEIGHT	SCORE
A significant number of people in our community are affected by this health issue.			
There are significant consequences to not addressing the health issue.			
There are a lack of available programs to address the health issue.			
This health issue is important to people in our community.			
Vulnerable populations are more likely to be impacted by this health issue.			
TOTAL SCORE			

Table 8 shows the results of the priority ranking by the work group. Mental Health received the highest ranking.

TABLE 8: BARNES-JEWISH HOSPITAL TOP FOUR COMMUNITY HEALTH NEEDS RANKED: HIGHEST TO LOWEST		
RANK	COMMUNITY HEALTH NEEDS	AVERAGE SCORE
1	Mental Health	70.6
2	Maternal / Infant Health	56.4
3	Heart Health	51.0
4	Diabetes	45.0

The work group also reviewed results of the secondary data using the Healthy Communities Institute (HCI) Data Scoring Tool, which compares data from similar communities in the nation. The tool provides a systematic ranking of indicators for the county and helps prioritize the needs. The scoring is based on how a county compared to other similar counties within the state, the U.S. and Healthy People 2030 targets, depending on data availability. The team reviewed the scores by indicators.

Table 9 shows:

- results of HCI scoring tool
- stakeholder ranking
- work group ranking

TABLE 9: ST. LOUIS CITY STAKEHOLDERS VS. SECONDARY RANKING VS. INTERNAL WORK GROUP RANKING					
RANK	SECONDARY DATA RANKING	RANK	STAKEHOLDER'S RANKING	RANK	INTERNAL TEAM RANKING
1	Diabetes	1	Mental Health	1	Mental Health
2	Prevention & Safety	2	Immunizations/ Infectious Diseases	2	Maternal / Infant Health
3	Adolescent Health	3	Maternal/Infant Health	3	Heart Health
4	Children's Health	4	Drug Abuse	4	Diabetes
4	Maternal / Infant Health				

Maternal/Infant Health was ranked by all three groups; Mental Health was ranked by the stakeholders and the internal work group and Diabetes was ranked by the secondary data and the internal work group.

Conclusion

At the conclusion of the comprehensive assessment process to determine the most critical needs in St. Louis City, the group concluded that Barnes-Jewish will address mental health as the focus for the hospital's implementation plan.

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 28 years, with 11 nationally ranked medical specialties recognized in 2021.

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 Hospital is also a safety net hospital for the city of St. Louis when it comes to caring for the underserved and underinsured. For many in our community, the hospital is the only medical care to which they have access, and they are cared for by some of the country's best doctors and nurses. We also serve an incredibly diverse population, including caring for patients from around the world in over 100 different languages, and conducting a wide range of community health education programs in the St. Louis metropolitan area throughout the year.

In 2020, Barnes-Jewish provided $296,697,943 in community benefit serving 568,014 persons. This total includes:

- $137,408,898 in financial assistance and means-tested programs serving 148,829 individuals
- 102,826 individuals on Medicaid at a total net benefit of $87,975,337

Barnes-Jewish also provided a total of $159,289,045 to 419,185 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: 2020 Total Net Community Benefit Expenses

BARNES-JEWISH HOSPITAL: 2020 TOTAL NET COMMUNITY BENEFIT EXPENSES		
CATEGORY	PERSONS SERVED	TOTAL NET BENEFIT
FINANCIAL ASSISTANCE AND MEANS-TESTED PROGRAMS		
Financial Assistance at Cost	46,003	$49,433,561
Medicaid	102,826	$87,975,337
TOTAL FINANCIAL ASSISTANCE AND MEANS-TESTED PROGRAMS	148,829	$137,408,898
OTHER COMMUNITY BENEFITS		
Community Health Improvement Services	84,541	$3,512,323
Health Professional	2,236	$122,050,916
Subsidized Health Services	332,408	$18,581,902
In-Kind Donation		$15,143,904
TOTAL OTHER COMMUNITY BENEFITS	419,185	$159,289,045
GRAND TOTAL	**568,014**	**$296,697,943**

Appendix C: St. Louis City Demographic

DEMOGRAPHIC OF ST. LOUIS CITY VS. MISSOURI		
	ST. LOUIS CITY	MISSOURI
GEOGRAPHY		
Land area in square miles, 2010	61.91	68,741.52
Population per square mile, 2010	5,157.50	87.1
POPULATION		
Population, April 1, 2010	319,294	5,988,923
Population, April 1, 2020	301,578	6,154,913
Population, July 1, 2021, estimate	293,310	6,168,187
Population, Percent change - April 1, 2020 (estimate base) to July 1, 2021	-2.7	2.1
AGE		
Persons Under 5 Years, Percent, 2021	6.3	6
Persons Under 18 Years, Percent, 2021	19.1	22.3
Persons 65 Years and over, Percent, 2021	13.7	17.3
GENDER		
Female Persons, Percent, 2021	51.5	50.9
Male Person, Percent, 2021	48.5	49.1
RACE / ETHNICITY		
White alone, Percent, 2020	46.4	82.9
White alone, not Hispanic or Latino, Percent, 2020	43.9	79.1
African American alone, Percent, 2020	45.7	11.8
Hispanic or Latino, Percent, 2020	4.1	4.4
Two or More Races, Percent, 2020	3.1	2.4
American Indian and Alaska Native alone, Percent, 2020	0.3	0.6
Asian alone, Percent, 2020	3.4	2.2
Native Hawaiian and Other Pacific Islander alone, Percent, 2020	<0.1	0.2
LANGUAGE		
Foreign Born Persons, Percent, 2016-2020	6.9	4.2

Source: Conduent Healthy Communities Institute

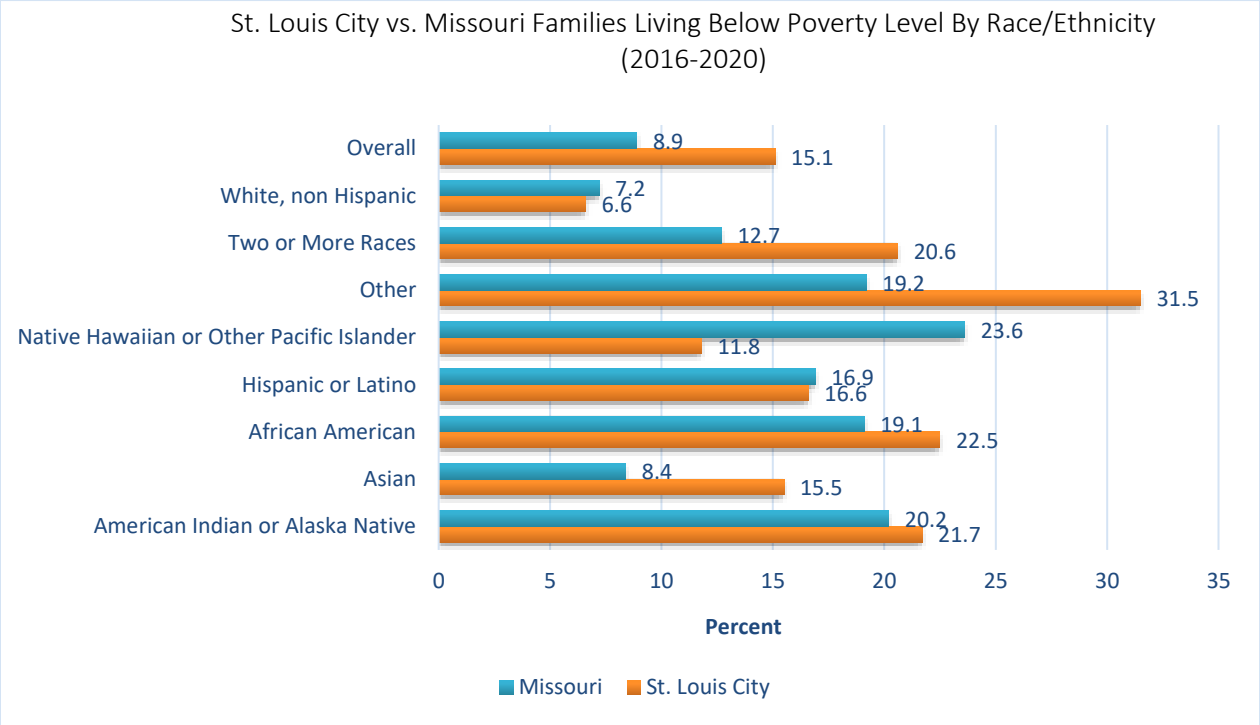
DEMOGRAPHIC OF ST. LOUIS CITY INCLUDING EDUCATION / INCOME / HOUSING		
	ST. LOUIS CITY	MISSOURI
HOUSING		
Housing Units, 2019	177,403	2,819,383
Homeownership Rate, percent, 2016-2020	44.1	67.1
Median Housing Units, Dollars, 2016-2020	143,700	157,200
FAMILIES & LIVING ARRANGEMENTS		
Households, 2016-2020	143,566	2,440,212
Persons per Household, 2016-2020	2.05	2.44
Language other than English spoken at home, percent of persons age 5 years +, 2016-2020	9.7	6.3
EDUCATION		
High School Graduate or Higher, Percent of Persons Age 25+, 2016-2020	88.7	90.6
Bachelor's Degree or Higher, Percent of Persons Age 25+, 2016-2020	37.2	29.9
INCOME		
Median Household Income, Dollars, 2016-2020	45,782	57,290
Per Capita Income in past 12 months (in dollars), 2016-2020	31,930	31,839
People Living Below Poverty Level, Percent, 2016-2020	20.4	13.7

Source: Conduent Healthy Communities Institute

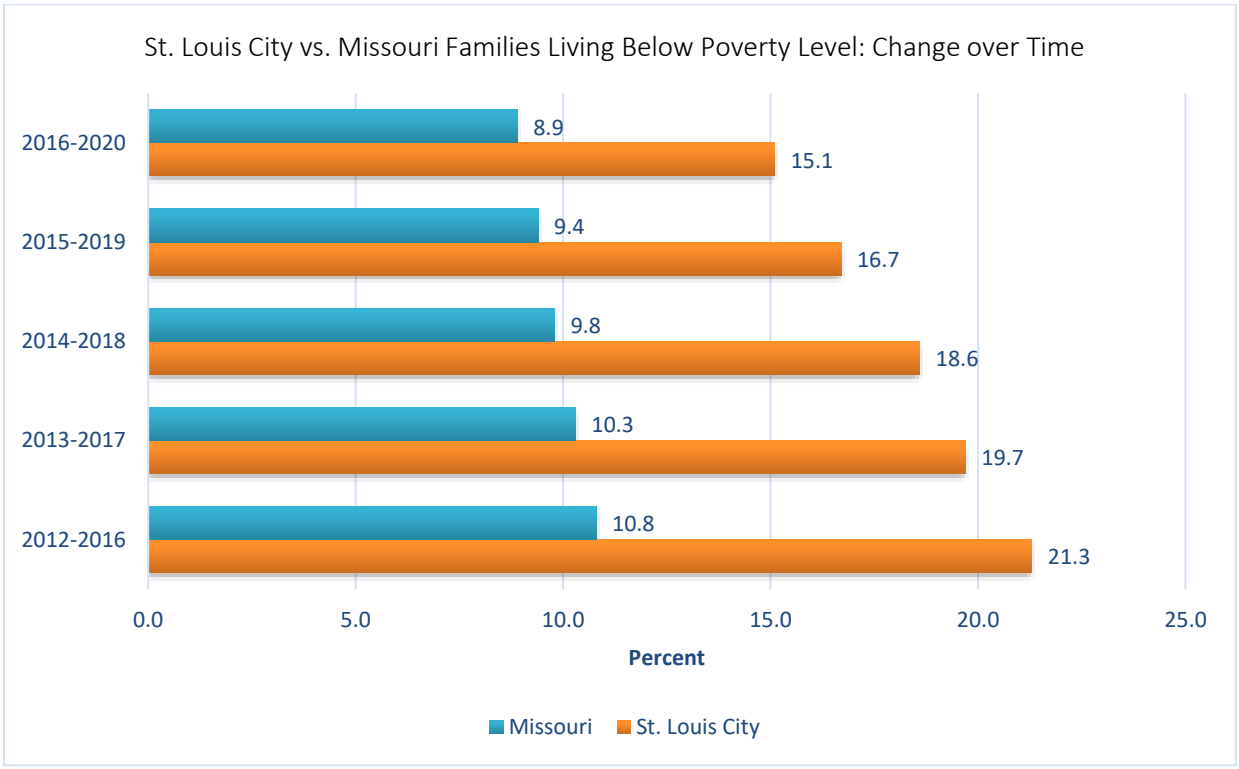
ST. LOUIS CITY vs. MISSOURI FAMILIES LIVING BELOW POVERTY LEVEL BY RACE/ETHNICITY		
RACE/ETHNICITY	ST. LOUIS CITY	MISSOURI
American Indian or Alaska Native, percent, 2016-2020	21.7	20.2
Asian, percent, 2016-2020	15.5	8.4
Black/African American, percent, 2016-2020	22.5	19.1
Hispanic or Latino, percent. 2016-2020	16.6	16.9
Native Hawaiian / Other Pacific Islander, percent, 2016-2020	11.8	23.6
Other, percent, 2016-2020	31.5	19.2
Two or More Races, percent, 2016-2020	20.6	12.7
White, non-Hispanic, percent, 2016-2020	6.6	7.2
Overall, percent, 2016-2020	15.1	8.9

Source: Conduent Healthy Communities Institute

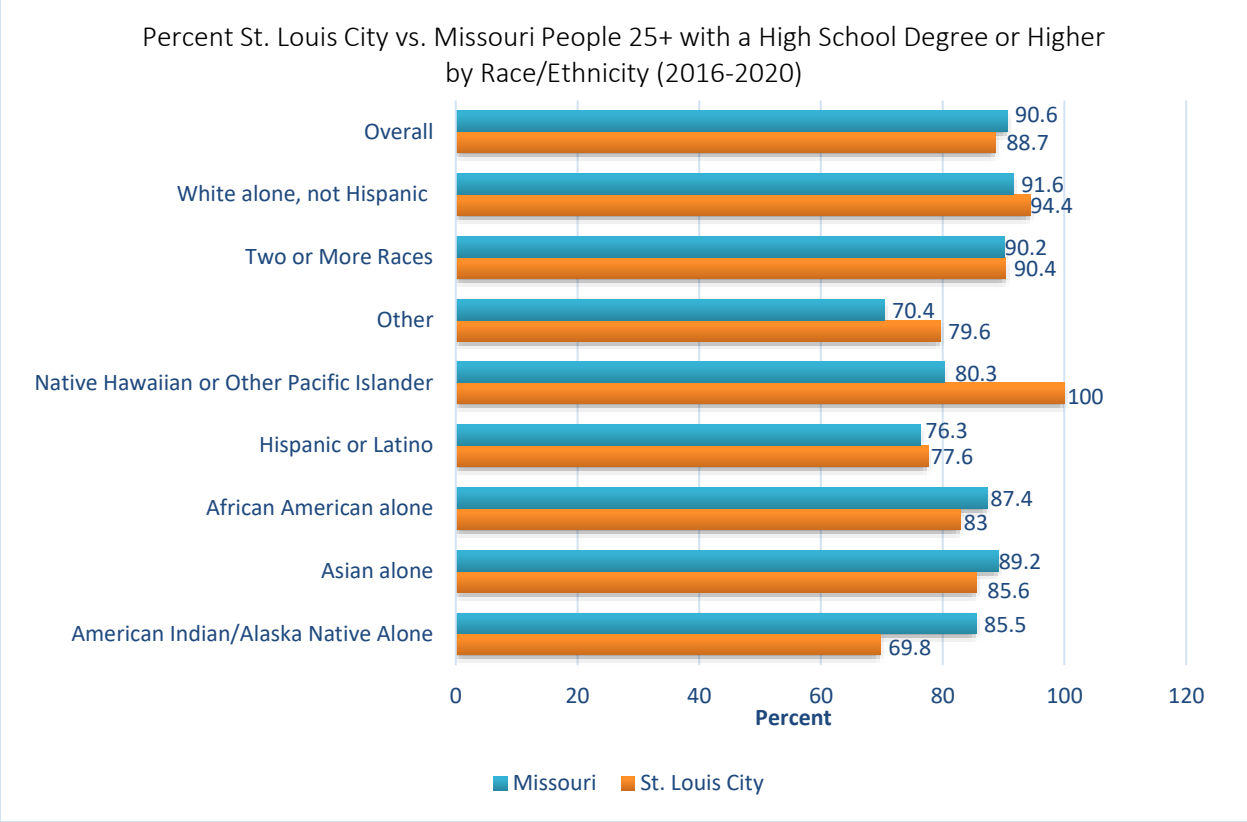
ST. LOUIS CITY POVERTY LEVEL AND EDUCATION ATTAINMENT



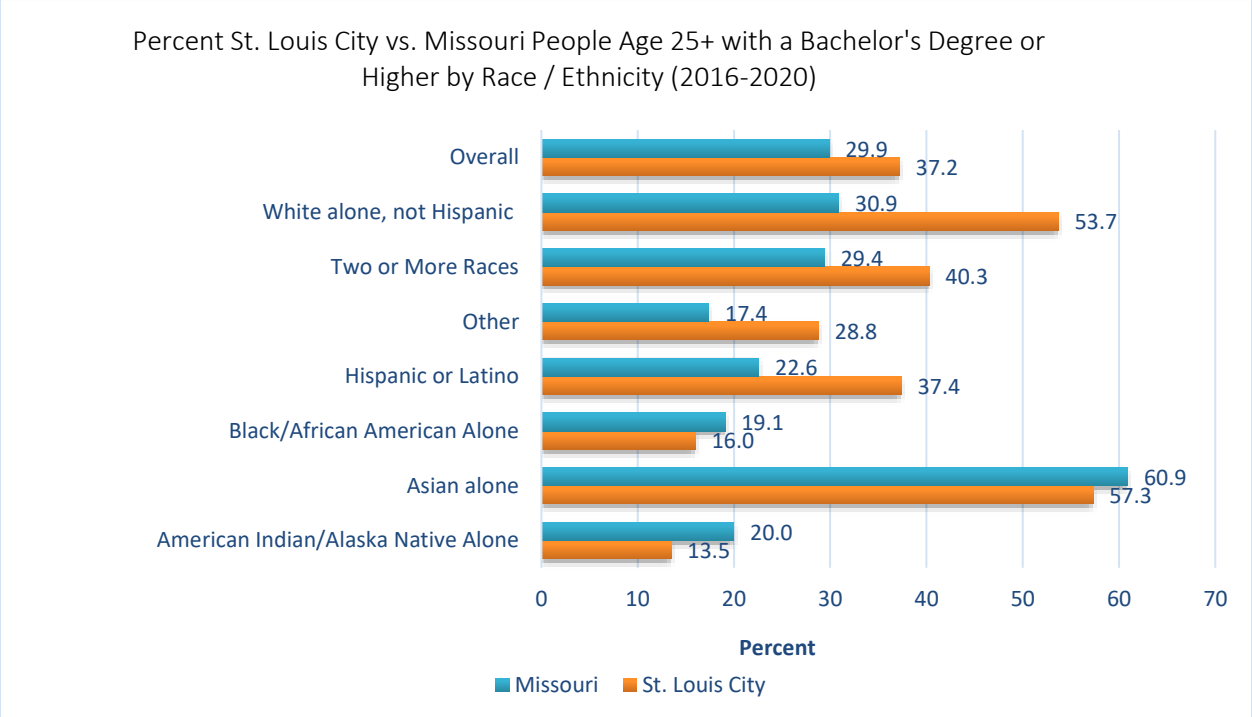
Source: Conduent Healthy Communities Institute



Source: United States Government Census Bureau



Source: United States Government Census Bureau



Source: Conduent Healthy Communities Institute

Appendix D: St. Louis City Community Stakeholders Online Survey Report

STAKEHOLDER ASSESSMENT OF THE HEALTH NEEDS OF

ST. LOUIS CITY

Prepared by:
BJC Market Research
September 3, 2021

Appendix E: Online Survey Participating Stakeholders

BACKGROUND

The Patient Protection and Affordable Care Act (PPACA) was passed in March 2010. It required that

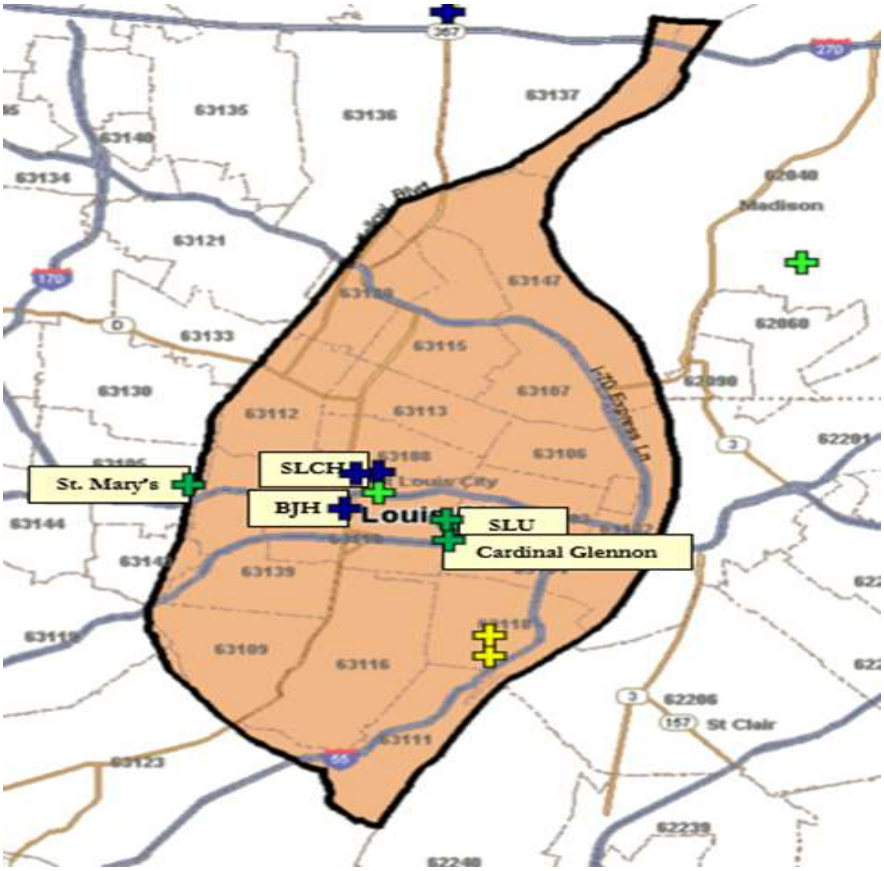
- Each 501(c)3 hospital must conduct a Community Health Need Assessment (CHNA) every three years.
- Each hospital must adopt an implementation strategy to meet the community health needs identified in the CHNA.
- The CHNA and Implementation Plan must be widely available to the public.

The assessment is required to consider **input from those who represent the broad interests of the community served by the hospital**, including those with special knowledge or expertise in public health.

METHODOLOGY

- In the past, community stakeholder health needs assessments were conducted in person via a moderated discussion.
- Due to COVID-19, BJC HealthCare, along with its collaborative partners, decided to conduct an online survey for the safety of our community stakeholders.
- Between June 7th and June 9th, email invitations were sent out to 33 stakeholders in St. Louis City from Barnes-Jewish Hospital and St. Louis Children's Hospital. Several reminders were sent out before the survey was closed for analysis on June 30.
- 26 community stakeholders completed the survey for a 79 percent response rate.

MARKET DEFINITION: ST. LOUIS CITY



KEY FINDINGS

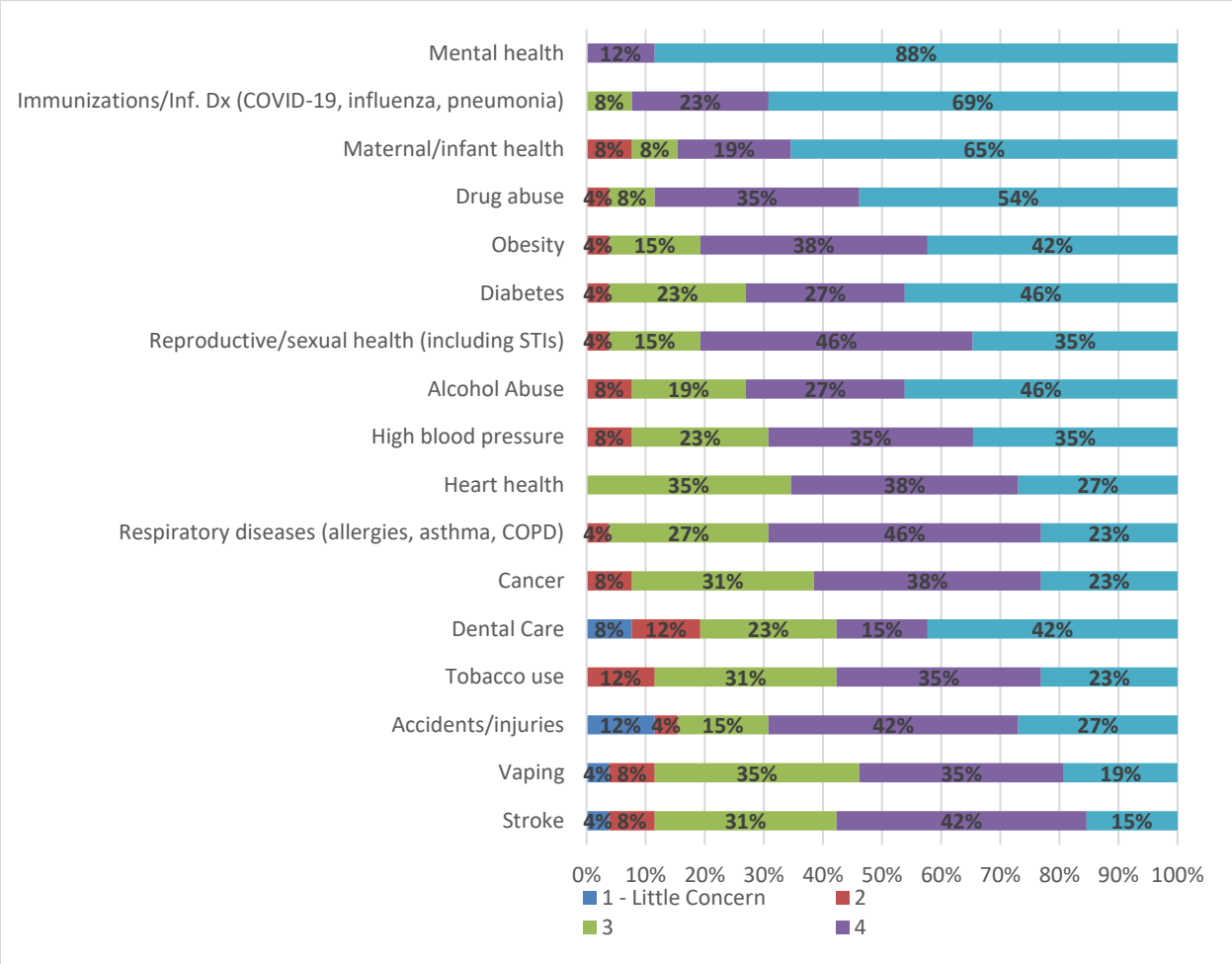
- There are four needs that are of greatest concern in St. Louis City: **mental health**, **immunizations/infectious diseases, maternal and infant health** and **drug abuse**. These are also the same issues around which stakeholders feel that there is the greatest potential to work together.
- **Financial barriers related to health insurance** are having the greatest impact on access to health services in St. Louis City. Concerns related to **transportation, fear** and **lack of mental health services** are next in importance, having more than 60 percent of stakeholders rating them a 5.
- **Low-income populations** are at greatest risk for poor health outcomes in St. Louis City. The **homeless** and **specific racial/ethnic groups** are ranked 2nd and 3rd. **Babies ages 0 – 12 months** are at greatest risk among all age segments.
- **Poverty** is the social factor that has the greatest impact on the health of those living in St. Louis City. **Crime and violence, discrimination and housing** rank next in importance.
- The greatest impact of COVID-19 has been on the **mental health** of St. Louis City residents, evidenced by increased symptoms of depression and anxiety. The pandemic has also created **financial hardship** for area residents, resulting in **loss of regular income**.

Some identify **difficulty accessing health services and medications** as another effect of the pandemic.

- Stakeholders identified the largest resource gaps in St. Louis City around **jobs that pay a living wage**, followed by **mental health** resources. Many other areas were identified, but to a lesser degree.
- Stakeholders identified new issues of concern around **mental health**, as well as **the expanding gap in income** and **housing.**
- Stakeholders most frequently mentioned **community organizations**, like the Behavioral Health Network and Crisis Nursery, as resources that community members may be unaware. Related to this are **community health advocates,** trusted members of the community who can have a positive impact on influencing healthy behaviors.
- Many stakeholders feel that **greater collaboration** will improve the health of the community. Others suggested that there should be greater **sharing of information** and addressing **how resources are distributed** as opportunities for improvement.
- **63106** and **63107** are the St. Louis City ZIP codes identified as being at greatest risk. Stakeholders mentioned **North St. Louis City** as the community at highest risk, although there is increasing concern about parts of **South St. Louis City**.

PRIORITY HEALTH NEEDS FOR ST. LOUIS CITY

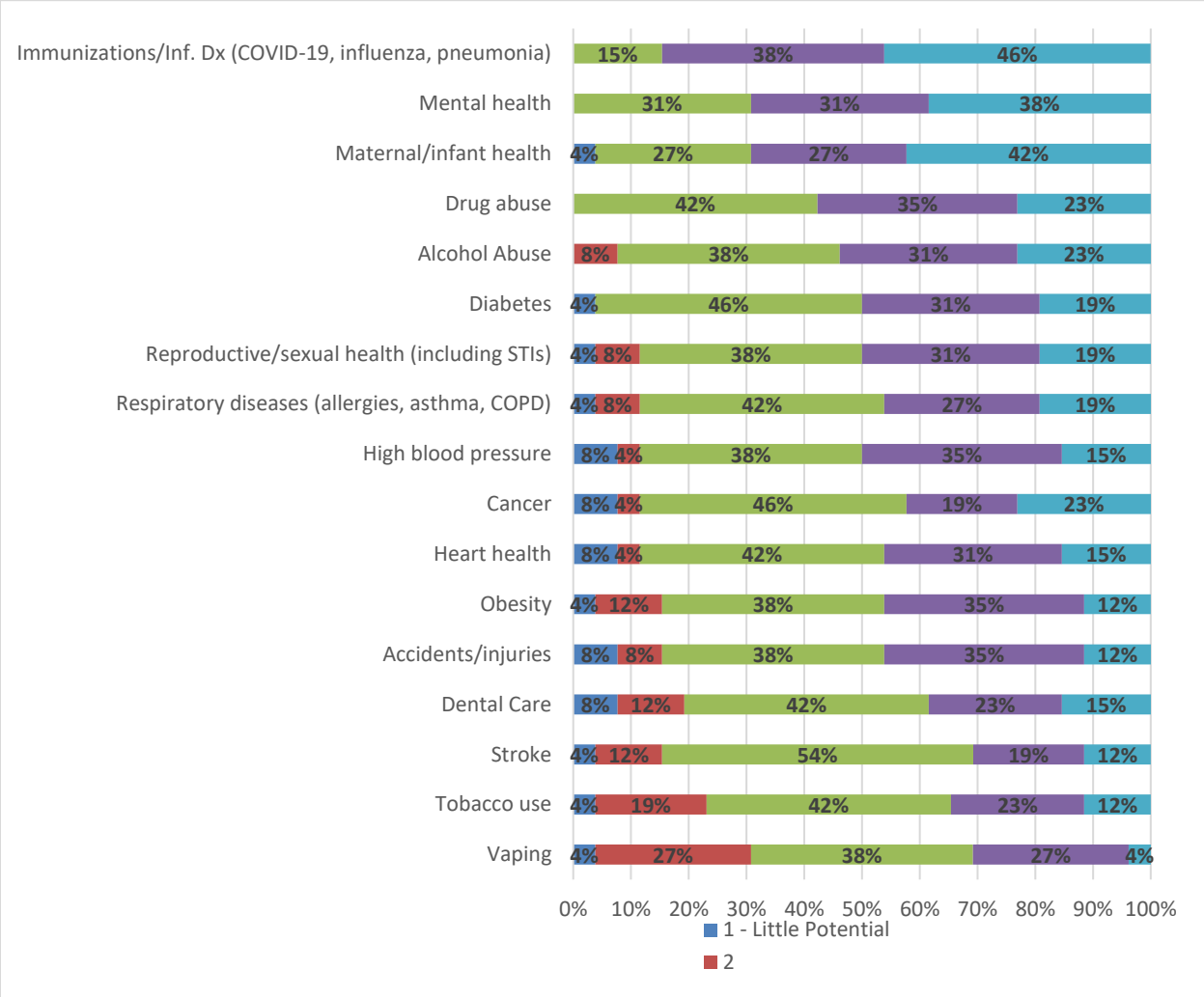
There are four needs that are of greatest concern in St. Louis City: **mental health**, **immunizations/infectious diseases, maternal and infant health** and **drug abuse**.



Q3 & Q4: *Thinking about St. Louis City, please rate your level of concern about each of these health needs on a scale 1 (little concern) to 5 (significant concern).*

NEEDS WITH GREATEST POTENTIAL FOR COLLABORATION IN ST. LOUIS CITY

Stakeholders feel that there is the greatest potential to work together around the issues of **immunizations /infectious diseases**, **mental health, maternal and infant health** and **drug abuse**.

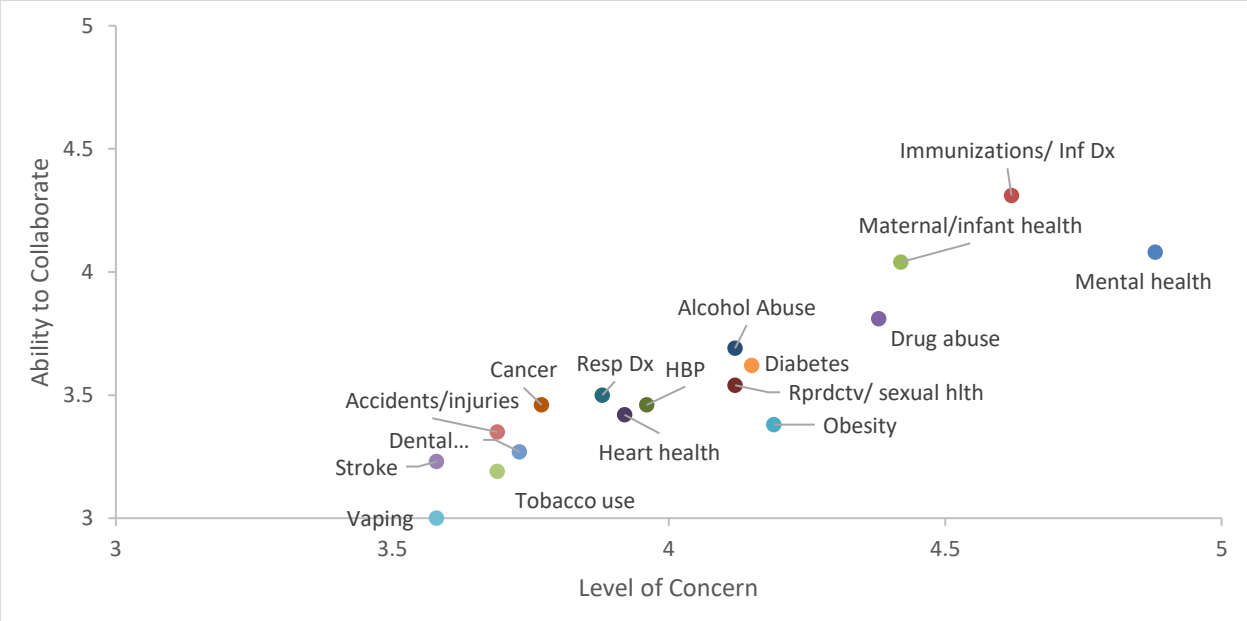


Q5 & Q6: *How would you rate the potential of community partners in St. Louis City to work together to address each of these health needs? Please rate each on a scale 1 (little potential) – 5 (significant potential).*

LEVEL OF CONCERN BY ABILITY TO COLLABORATE

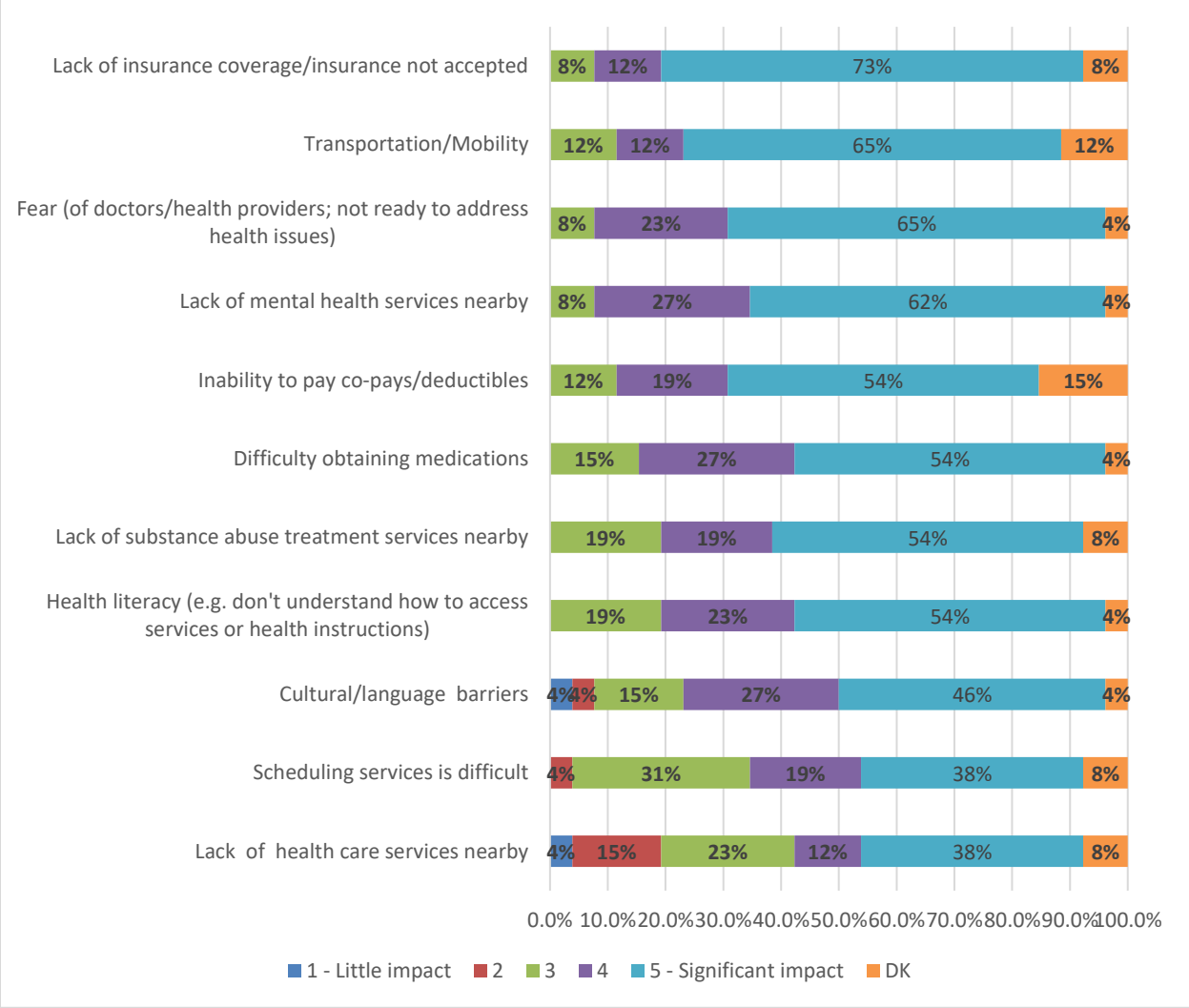
The stakeholders rate **mental health**, **immunizations and infectious disease, and maternal/infant health** as their top priorities based on level of concern and potential for collaboration. **Drug abuse** is next in importance.

Health Need	Level of Concern	Ability to Collaborate
Mental Health	4.9	4.1
Immunizations/ Infectious Diseases	4.6	4.3
Maternal/Infant Health	4.4	4.0
Drug Abuse	4.4	3.8
Obesity	4.2	3.4
Diabetes	4.2	3.6
Alcohol Abuse	4.1	3.7
Reproductive/ Sexual Health	4.1	3.5
High Blood Pressure	4.0	3.5
Heart Health	3.9	3.4
Respiratory Diseases	3.9	3.5
Cancer	3.8	3.5
Dental Care	3.7	3.3
Accidents/ Injuries	3.7	3.4
Tobacco Use	3.7	3.2
Stroke	3.6	3.2
Vaping	3.6	3.0


Ability to Collaborate
Level of Concern
5
4.5
4
3.5
3
3
3.5
4
4.5
5
Immunizations/ Inf Dx
Maternal/infant health
Mental health
Alcohol Abuse
Drug abuse
Cancer
Resp Dx
HBP
Diabetes
Accidents/injuries
Rprdctv/ sexual hlth
Obesity
Dental…
Heart health
Stroke
Tobacco use
Vaping

GREATEST BARRIERS TO ACCESS IN ST. LOUIS CITY

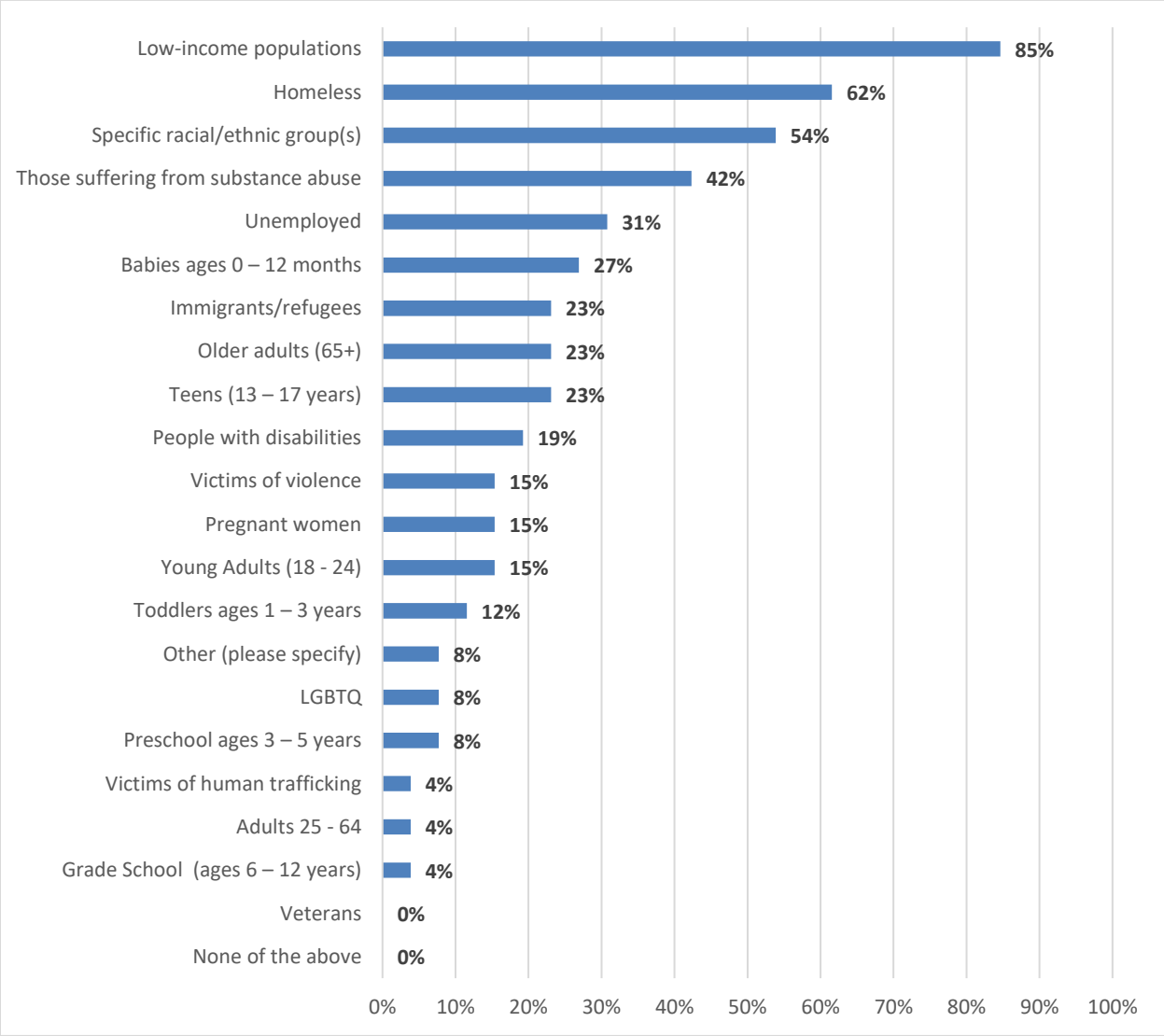
Stakeholders identify **financial barriers related to health insurance** as having the greatest impact on access to health services in St. Louis City. Concerns related to **transportation, fear** and **lack of mental health services** have more than 60% of stakeholders rating them a 5.



Q7: How impactful are each of the following barriers in St. Louis City to accessing health care? Rate each on a scale of 1 (little impact) – 5 (significant impact).

POPULATIONS AT GREATEST RISK IN ST. LOUIS CITY

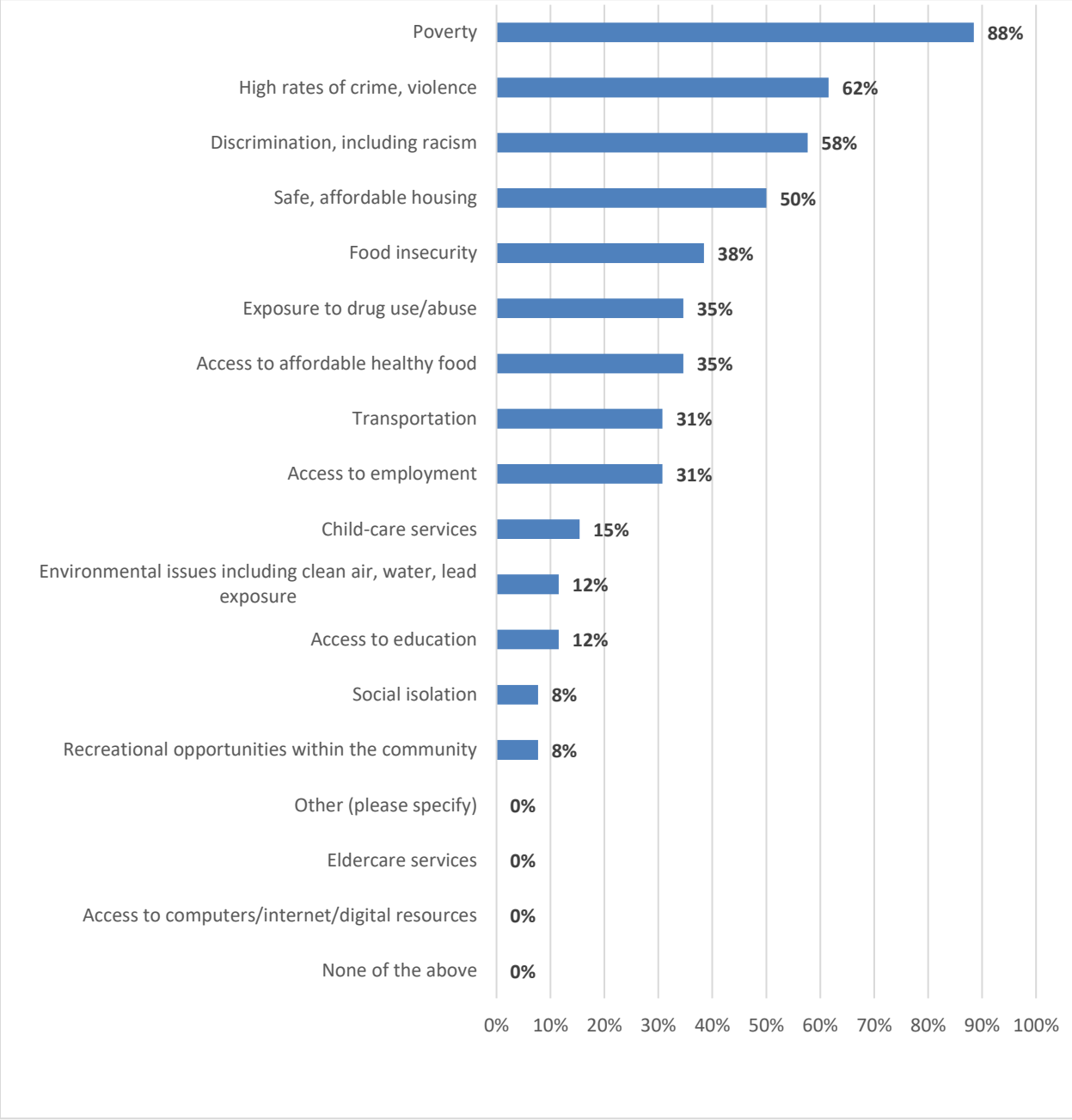
Most stakeholders identify **low-income populations** as being at greatest risk for poor health outcomes in St. Louis City. The **homeless** and **specific racial/ethnic groups** are ranked 2nd and 3rd. **Babies ages 0 – 12 months** are the specific age segment called out first.



***Q8:** Among those you serve in St. Louis City, which of the following populations are most at risk for poor health outcomes? Pick no more than five.*

SOCIAL FACTORS IMPACTING ST. LOUIS CITY

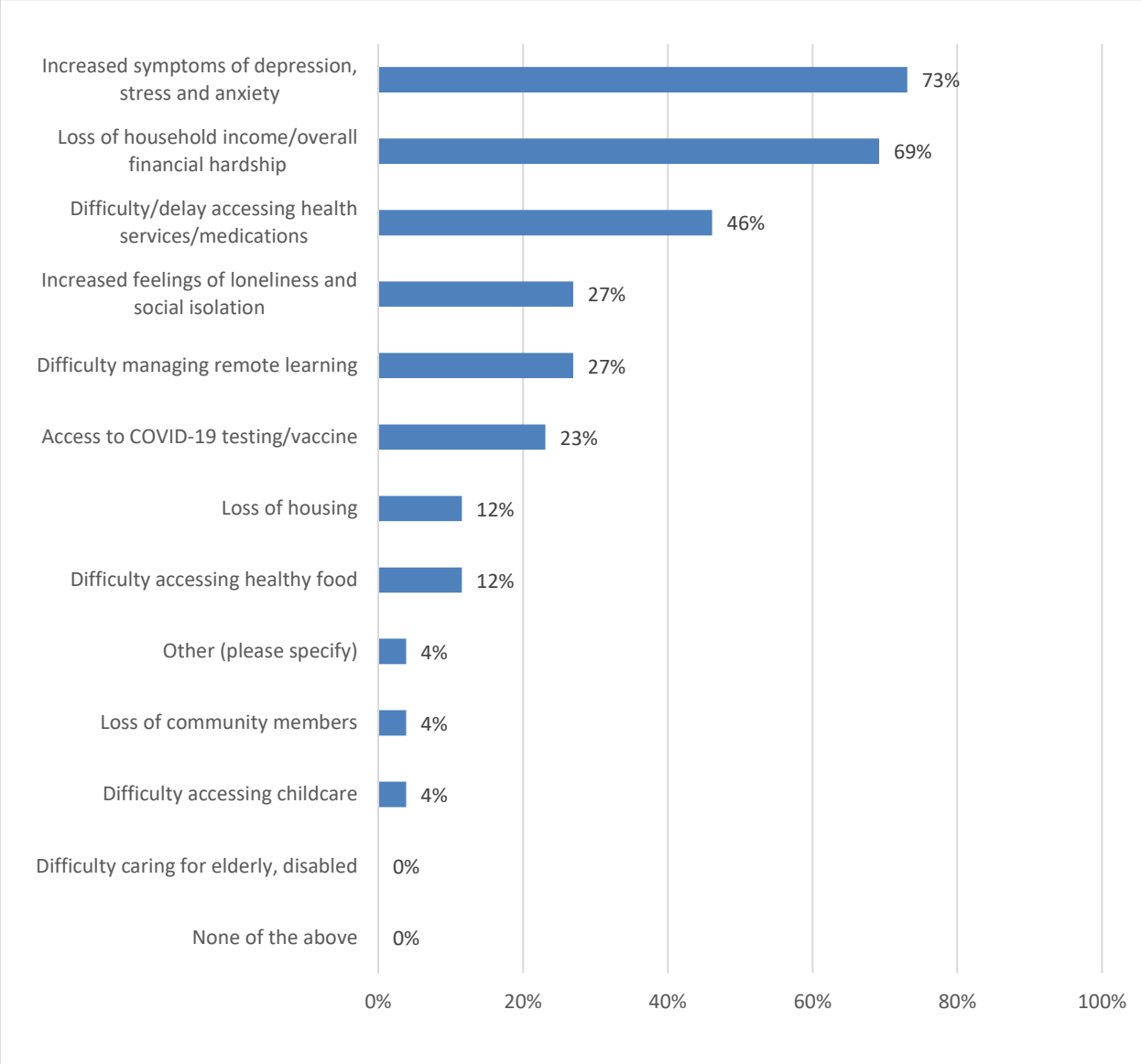
Stakeholders overwhelmingly agree that **poverty** is the social factor that has the greatest impact on the health of those living in St. Louis City. **Crime and violence, discrimination, and housing** rank next in importance.



Q9: *Which of the following social factors have historically had the greatest impact on the health of the communities you serve in St. Louis City. Pick no more than five.*

COVID-19'S IMPACT ON ST. LOUIS CITY

Stakeholders strongly agree that the greatest impact of COVID-19 has been on the **mental health** of St. Louis City residents, evidenced by increased symptoms of depression and anxiety. The pandemic has also created **financial hardship** for area residents, resulting in **loss of regular income**. Some identify **difficulty accessing health services and medications** as another effect of the pandemic.



Q10: *Thinking about the COVID-19 pandemic and its impact on St. Louis City, which of the following have had the greatest impact on the health of the community? Pick no more than three.*

BIGGEST GAPS IN RESOURCES

Stakeholders identified the largest resource gaps in St. Louis City around **jobs that pay a living wage**, followed by **mental health** resources. Many other areas were identified to a lesser degree.

NEED	GAP
Jobs (5 comments)	Loss of household income/overall financial hardship. Essential workers, who tend to be our more vulnerable populations that are least able to "weather" these circumstances, are losing retail, restaurant, hospitality, etc. jobs that cannot be performed remotely. This subjects them to job losses and requirements of quarantining, because they cannot avoid close personal contact.
	Better jobs and sources of income - Poverty limiting transportation and money for healthcare copays and stable housing
	Living Wage jobs
	Un and under employment. Lack of available and accessible jobs
	The greatest issue is employment connections for those with minimal education to marketplace needs.
Mental Health (4 comments)	Depression, stress and anxiety. I don't know anyone who is feeling joyful. Lives have been turned upside down, people are isolated, jobs lost, people dying or folks not believing COVID is real, mixed messages and untruths. These populations already have enough trauma without the addition of COVID uncertainties.
	Mental health, alcohol and substance abuse - treatment
	Behavioral Health Funding
	Lack of fiscal support for pre-admission outreach of vulnerable patients who need to transition from acute care (hospital) usage to ongoing community care, particularly for mental health and substance use services
Substance Abuse (3 comments)	Mental health, alcohol and substance abuse - treatment
	Opioid epidemic continues to be growing.
	Lack of fiscal support for pre-admission outreach of vulnerable patients who need to transition from acute care (hospital) usage to ongoing community care, particularly for mental health and substance use services
Technology (3 comments)	Difficulty managing remote learning -- digital gap access to wifi and tools; also packed housing with lots of people in the household. If parent(s) able to find work, no one there to assist/supervise and no childcare.
	Access to technology...phones in particular
	Internet services
Service Coordination (3 comments)	Gaps in resources are referral coordination among agencies, transportation coordination for residents in needs of different healthcare services.
	Coordinated care planning for those with multiple barriers/social determinants of health.
	Coordination across service and inclusion of varied partners contributes significantly to all areas of resource gap across the City of St. Louis region. The same players get most of the resources and maintain power to choose which partners to work with. New partners are often not included.
Housing (2 comments)	Homelessness and lack of stable housing also continues to grow
	Housing

Q11: *What are the biggest gaps in resources within this community to address the needs that you have identified? Please mention the need along with the missing resources.*

BIGGEST GAPS IN RESOURCES (CONTINUED)

NEED	GAP
Insurance (2 comments)	Insurance coverage -Lack of Health Insurance,
	Medicaid Expansion will continue to leave many without health insurance so ERs will likely continue to bare the burden of health care for the uninsured.
Access to Healthy Food (2 comments)	Grocery stores -Lack of affordable access to healthy food
	Access to healthy food.
Implicit Bias/Racism (2 comments)	Equitable resources across race and socioeconomic status
	Implicit Bias and institutional racism's effect on overall individual health, and desire to be seen in a traditional medical setting.
Vulnerable Neighborhoods (2 comments)	The generational poverty has created a sense of hopelessness and isolation. Investments in neighborhoods that have not received these investments in decades is critical to break these cycles. It will require layers of investments, not just from hospitals, but others as well.
	Areas within the city without access to good services and/or transportation to get there
Transportation (2 comments)	Adequate transportation
	Transportation
Political Divide (1 comment)	The political divide between politicians across the lines.
Health Care for Immigrants (1 comment)	Culturally and linguistically competent care, especially for under and uninsured immigrants.
Health Clinics in Schools (1 comment)	School located clinics
Community-based health services evenings, weekends (1 comment)	Health services in the evening and on weekends and located in the communities

Q11: *What are the biggest gaps in resources within this community to address the needs that you have identified? Please mention the need along with the missing resources.*

NEW/ADDITIONAL HEALTH/SOCIAL ISSUES

Stakeholders identified new issues of concern around **mental health**, as well as **the expanding gap in income,** and **housing.**

NEED	GAP
Mental Health (4 comments)	Not new but Covid showed the need for increased mental health services
	Mental health, particularly community trauma, is a critical issues. Many people don't discuss or recognize the problem, nor seek treatment.
	Culturally and linguistically competent mental health care
	Mental Health Needs of our Children as they return to school after COVID isolation and sub standard learning for the past year. Very concerned about pre K - 3rd grades and middle school/high school students
Widening Gap between Income Levels (2 comments)	Disparities between "haves" and "have nots" are increasing.
	The income gap is widening at a tremendous rate
Housing (2 comments)	The lack of affordable house and subsidized housing is a key contributor to individuals' poor health outcomes
	Housing and available healthy food sources of a wide variety.
Access to Technology	Access to Technology for school learning support
Child abuse	Violence- child abuse and neglect-
Culturally Sensitive Patient Care	I do see a need for culturally congruent and patient centered care.
Disability Rates	The rate of disability in people of working age is very high. A lot of this may be preventable if the causes are diabetes, obesity, strokes, injuries from violence or unsafe housing, and other preventable causes
Healthy Food	Housing and available healthy food sources of a wide variety.
Health Literacy	Despite the focus on health literacy that created Health Literacy Missouri (now Health Literacy Media, HLM) over a decade ago, efforts to integrate health literacy into health and social related activities are limited in the St. Louis region. Despite maintaining our base of operations in downtown St. Louis, the significant majority of our work is outside the city/state. Health literacy is not yet a priority and impacts the full spectrum of health and social concerns across populations and the lifespan.
Increased Mistrust	Greater levels of mistrust are brewing.
Limited Safe Recreational Opportunities for Youth	Young people do not have safe places for fun and recreation. This added to the isolation of COVID is a recipe for increased depression and anxiety.
Lost Learning Opportunities	I would say that it's probably well known (maybe not?) that some of our youths will find it difficult to catch up on lost learning opportunities.
Maternal and Child Health	Maternal and child health...not new but may not be large focus now
Racial and Health Iniquities	Understanding racial and health inequities.
Reproductive Justice	Reproductive justice for pregnant and parenting people- essentially perinatal care and not just prenatal care.
Social Determinants of Health	Mostly pre-existing social determinants of health, exacerbated by COVID.
Staffing	Significant staffing challenges; we cannot hire all the staff needed and meet the required credentials
Substance Abuse	The prevalence of alcoholism and drug use and the effects on families and the community is grossly underreported.

Q12: *What new/additional health or social issues are you aware of in this community that may not be widely known, yet are a concern for the future?*

COMMUNITY ASSETS THAT PROMOTE COMMUNITY HEALTH

Stakeholders most frequently mentioned **community organizations** as resources which community members may be unaware. Related to this are **community health advocates,** trusted members of the community who can have a positive impact on influencing healthy behaviors.

RESOURCE TYPE	RESOURCE
Community Organizations (4 comments)	Small businesses.
	Neighborhood councils, community development orgs, yoga/smaller exercise groups/studios
	Behavioral Health Network as a planning / coordinating body to support the "safety-net" of mental health and substance use services for un/under-insured persons
	Free care for kids at the Crisis Nursery!
Community Health Advocates (2 comments)	There are too many to recount. I suspect you know most, if not all, of them. However, I would point out the significance of "non-medical professionals" for improved healthcare and public health: Peer Supports, Community Health Workers, Promotores, Doulas. The more we train, utilize and compensate these non-medical professionals with deep roots in community, the better our health results will likely be. Engaging people in their health preservation prior to illness, the heathier our communities will be. Professionals in all other disciplines -- non-medical -- are essential assets for assuring health. Health in all policies, so that we don't have to constantly work around existing policies that are not healthful through massive healthcare interventions on the back end seem like great assets as well.
	There needs to be more community health advocates. People who live in the community and can be entrusted, while being incentivized can have a more effective impact.
Faith-based Organizations (2 comments)	Faith based organizations.
	Support from churches
Outdoor Recreational Areas (2 comments)	Safe and available outdoor spaces to walk, run, and general healthy movement.
	City parks
Art and Cultural Institutions	All communities have strength and resilience that should be celebrated. Even in areas of high poverty, investments in public art and cultural institutions can be healing.
Food Pantries	Food pantries
Community Coordination	Our ability to coordinate our efforts as a community...we need specific convener to bridge the gaps
	There needs to be more community health advocates. People who live in the community and can be entrusted, while being incentivized can have a more effective impact.
Faith-based Organizations	Faith based organizations.
Schools	Our children are in schools/families must be connected with schools... so lets rethink the role of schools in offering school health and mental health services.

Q13: *Think about health assets or resources as people, institutions, services, supports built resources (i.e. parks) or natural resources that promote a culture or health. What are the health assets or resources in St. Louis City that we may not be aware of?*

IDEAS FOR IMPROVING THE HEALTH OF THE COMMUNITY

Many stakeholders feel that **greater collaboration** will improve the health of the community. Others suggested greater **sharing of information** and addressing **how resources are distributed** as opportunities for improvement

NEEDS	DESCRIPTION
Greater Collaboration (12 Comments)	Recognize that we are all in this together and work to help the most marginalized (which will help the marginalized, but will also help everyone);
	Determine common goals and opportunities for cohesive/creative ways of communicating to directed audiences.
	Larger corporations and healthcare systems should financially support and partner with smaller grassroots non-profits who have direct connections with vulnerable populations - not just through grants/donations but through true supportive long term partnerships
	Give residents decision-making authority about where investments should be made, and pair them with culturally responsive implementation teams to make the investments happen.
	This community historically has done a poor job of partnering and working together. That really needs to change if we are going to improve
	Expand the communication to resources preventing silos of supports-continued growth of mobile services, grow the school-based health centers supports
	Form coalitions that represent regardless of race, color, creed, sexual orientation
	There is demonstrated benefit to coordinated and collective goals across the region and not siloed within organizations or providers. This region is too small to function alone or think people remain within one organization or health system
	Cooperation and open communication
	Break the silos and welcome new and different voices to the old, frequently stalled conversations.
	Create focus groups composed of non-profit, corporate, government leaders and community members.
	There must be a collective scorecard and shared vision. What are the goals that are measurable?
Share Information (5 Comments)	Share data and information while protecting privacy/confidentiality;
	Share the same information
	Sharing the outcomes of this survey with all partners that have completed it would be a start, and a list of the organizations participating so they may connect for possible collaboration
	Communicate efforts
	Maybe it is time to step back, look at what we are doing...is it working, if not--- let's go in another direction.
Address resource Distribution (4 comments)	Recognize each others strengths and share resources based on persons served not agencies - funding should follow the person
	Resources from the health care and corporate institutions commit to plan for developing a safe and productive community for low and mixed income families.
	Continue to fund programs that are getting great outcomes- not always looking for new programs-
	Share resources based on need (not equal or based on capacity to generate)
Focus on Wellness/Prevention	Work for more for health and illness prevention rather than illness and healthcare intervention;
Address Social Determinants	Work collaboratively on social determinants of health that are often not viewed as the province of healthcare institutions and are often addressed in a disjointed, ineffective way;
Address Racism	Seek racial truth telling and healing;
Address Housing	We need a collective, response to support residents who are unhoused to gain safe, affordable housing

Q14: *How can community stakeholders in St. Louis City work together to use their collective strengths to improve the health of the community?*

COMMUNITIES AT GREATEST RISK

63106 and 63107 are the ZIP codes identified as being at greatest risk. Stakeholders mentioned North St. Louis City as the community at highest risk, although there is increasing concern about parts of South St. Louis City.

ZIP CODES	COMMUNITIES
63106 (6 mentions)	North St. Louis City (8 mentions)
63107 (6 mentions)	South St. Louis City (4 mentions) (pockets; southeast)
63112 (3 mentions)	Neighborhoods with increasing immigrant communities
63113 (3 mentions)	Everywhere! No where is safe for our children
63115 (3 mentions)	Low-income families of color, both in north and south St. Louis, are especially vulnerable where crime and unemployment rates are high
63147 (3 mentions)	
63102 (2 mentions)	
1 mention each:	
63103	
63104	
63111	
63118	
63120	
63135	

Q15: *Within St. Louis City, which communities, neighborhoods or ZIP codes are especially vulnerable or at risk?*

NEXT STEPS

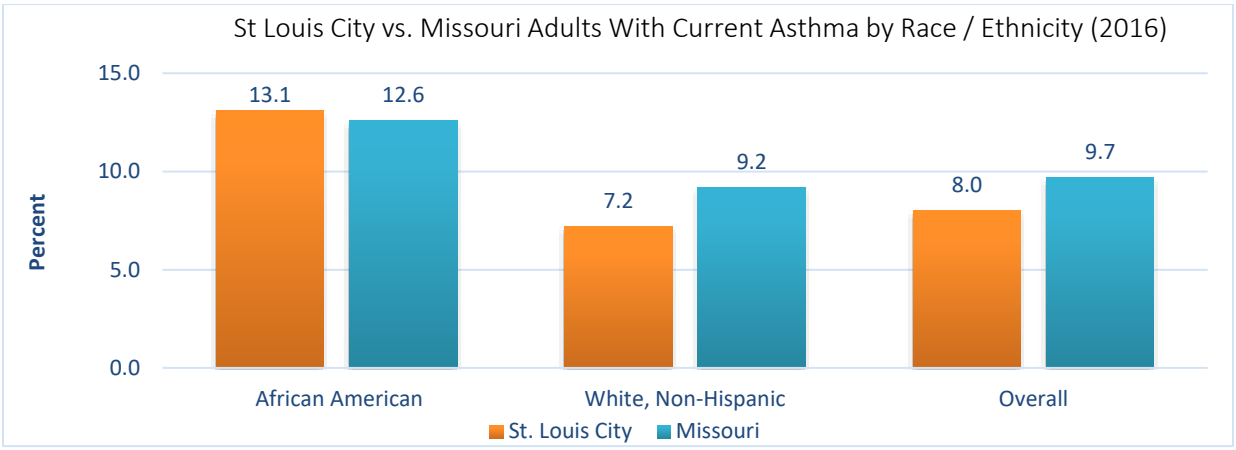
Using the input received from community stakeholders, Barnes-Jewish Hospital and St. Louis Children Hospital will consult with their internal workgroups to evaluate this feedback. They will also consider other secondary data and determine whether/how their priorities should change. The final needs assessment and implementation plan is due by December 31, 2022.

Appendix F: Barnes-Jewish Internal Work Group

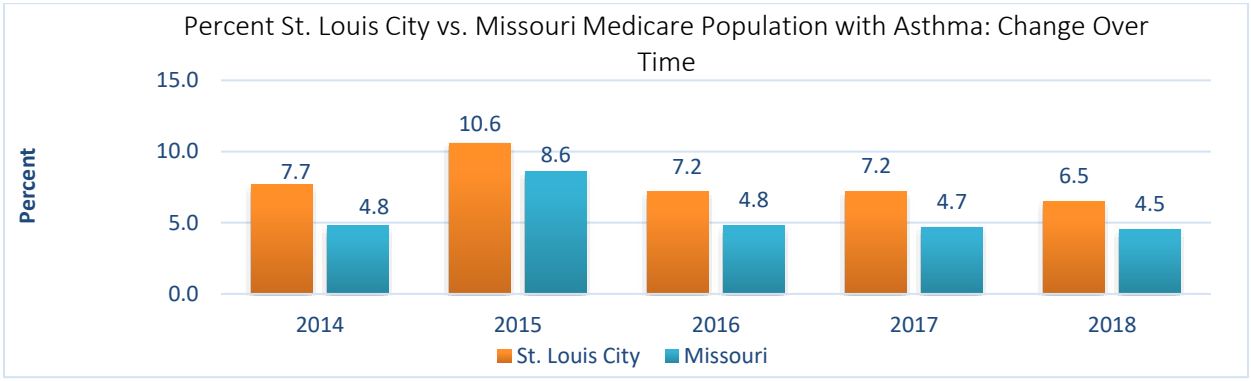
BARNES-JEWISH HOSPITAL INTERNAL WORK GROUP			
LAST NAME	FIRST NAME	TITLE	DEPARTMENT
Arevalo	Jesse	Vice President, Facilities and Support Services	Executive Administration
Bordewick	Roma	Director, Patient Support Services	Director's Office
Chi	John	Associate Professor of Otolaryngology	Otolaryngology
Dannatt	Kaci	Executive Director, Siteman Cancer Center	Cancer Center Admin
Fan	Christopher	Director, Languages Services	Language Services
Fasnacht	Allen	Executive Director, Emergency Department	Emergency Room
Fondahn	Emily	Executive Director, Associate CMO	Director's Office
Freibott	Puneet	Vice President, Associate Chief Nurse	Executive Administration
Garascia	Maura	Manager, Case Coordination	Social Services
King	Karley	Program Manager, Community Benefit	Communication and Marketing
Knight	Angela	Senior Manager, Clinical Program	Support Services Siteman Cancer Center
Lourie	Michael	Director	Communications & Marketing
Morkos El Hayek	Sahar	Assistant Professor of Emergency Medicine	Emergency Medicine
Poirier	Robert	Associate Professor of Emergency Medicine	Emergency Medicine
Randolph	Jacque	Executive Director, Ambulatory Services	Ambulatory Services
Repta	Shirley	Executive Director, Psychiatric Services	Psychiatric Services
Smith	Yvonne	Director, Women & Infants Services	Women & Infants
Tolliver	Shanequa	Senior Consultant, Community Outreach & Inclusion	Office of Diversity, Equity and Inclusion
Ward	Kara	Associate Administrator, Senior Vice President/GP	Director's Office

Appendix G: Secondary Data

Asthma



Source: Conduent Healthy Communities Institute



Source: Conduent Healthy Communities Institute

ST. LOUIS CITY VS. MISSOURI ASTHMA DEATH, HOSPITALIZATION & EMERGENCY ROOM VISIT RATES		
ASTHMA	ST. LOUIS CITY	MISSOURI
Deaths/100,000 population (2009-2019)	3.01	1.08
Hospitalizations / 10,000 population (2011-2015)	32.65	11.27
Emergency Room Visits / 1,000 (2011-2015)	14.52	5.39

Source: Missouri Department of Health & Senior Services

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 (2009-2019)	0.79*	0.79	5.35	3.2
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***

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/1,000 Population	14.6	5.4	14.4	5.39	14.64	5.47	14.51	5.34

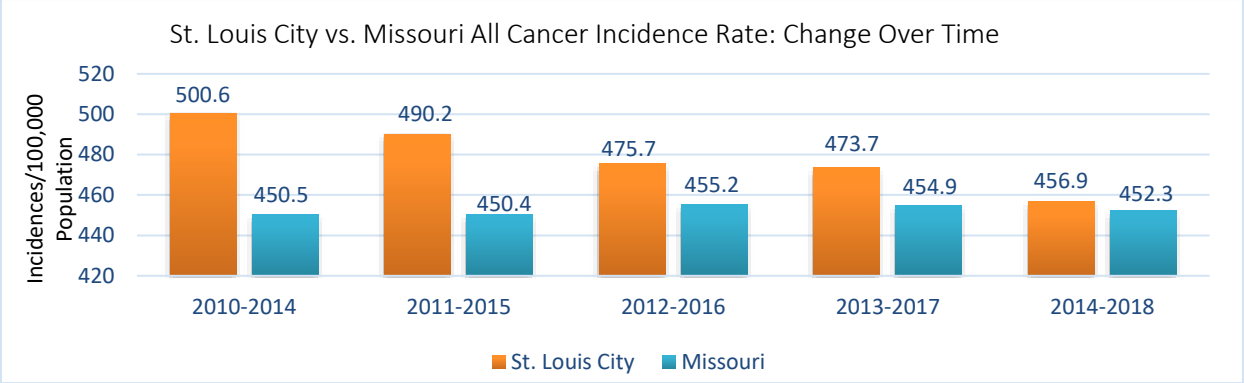
Source: Missouri Department of Health and Senior Services

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

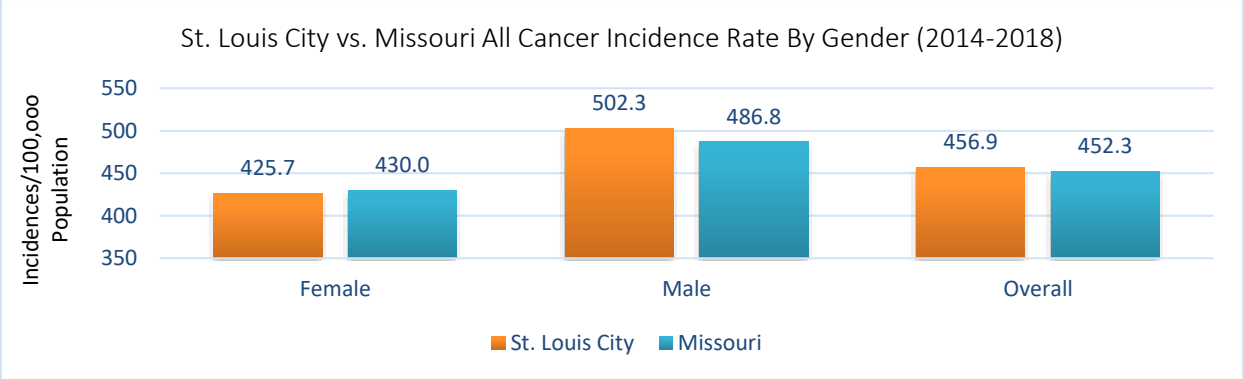
ST. LOUIS CITY vs. MISSOURI RATES OF RESPIRATORY DISEASES		
HEALTH INDICATORS	ST. LOUIS CITY	MISSOURI
Adults with Current Asthma in Percent (2016)	8.0	9.7
Age-Adjusted Death Rate due to Chronic Lower Respiratory Disease /100,000 Population (2015-2019)	39.3	50.4
Asthma: Percent Medicare Population (2018)	6.5	4.5
COPD: Percent Medicare Population (2018)	12.1	13.7

Source: Conduent Healthy Communities Institute

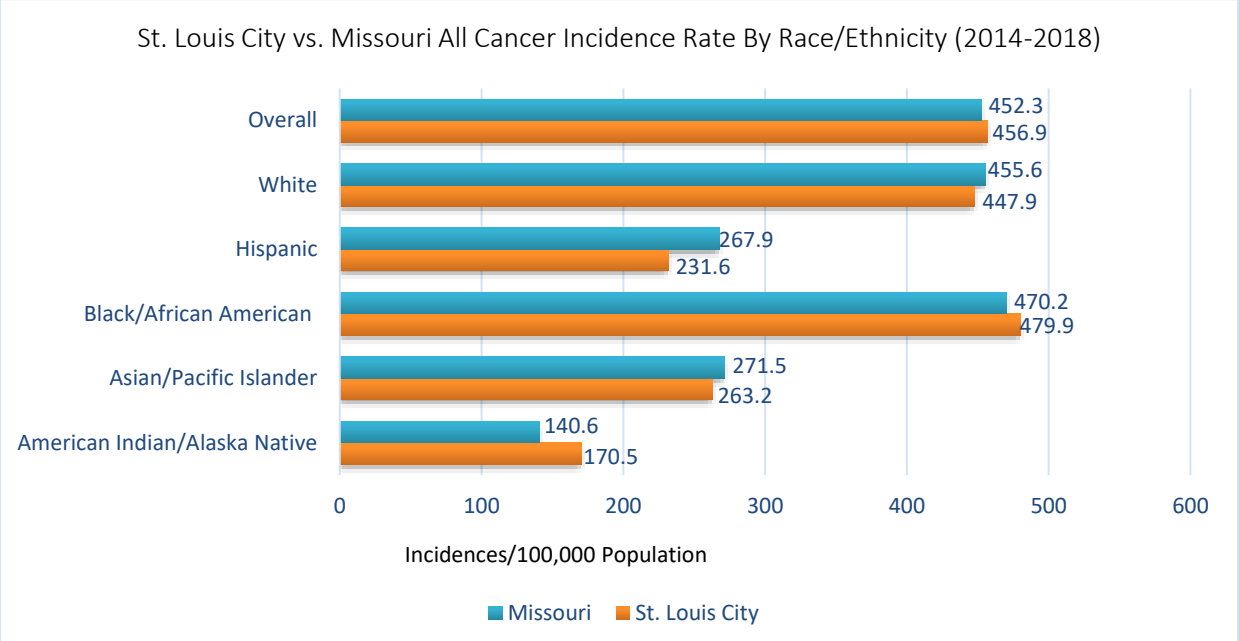
Cancer



Source: Conduent Healthy Communities Institute



Source: Conduent Healthy Communities Institute



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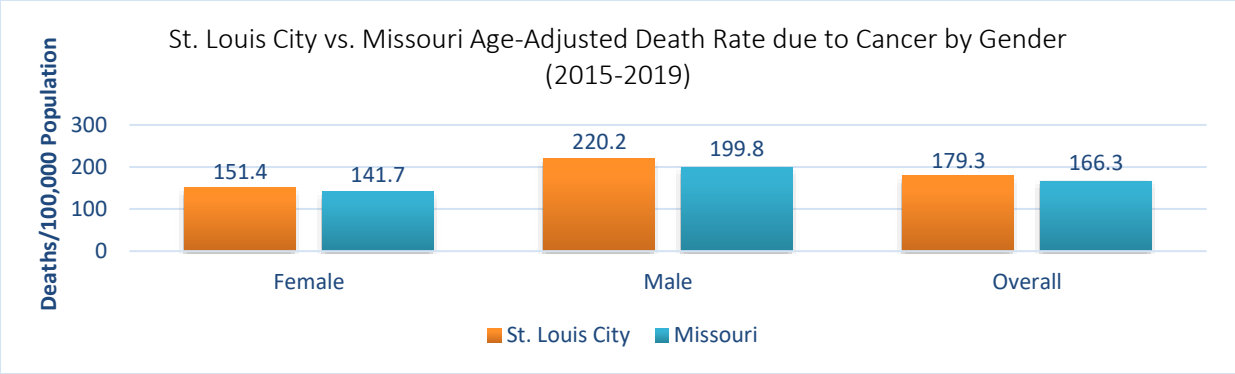

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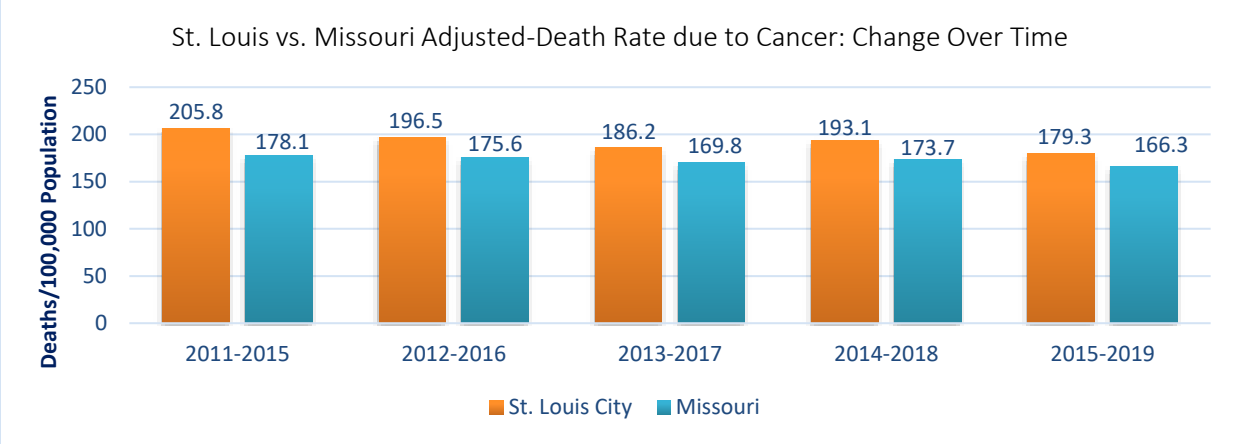

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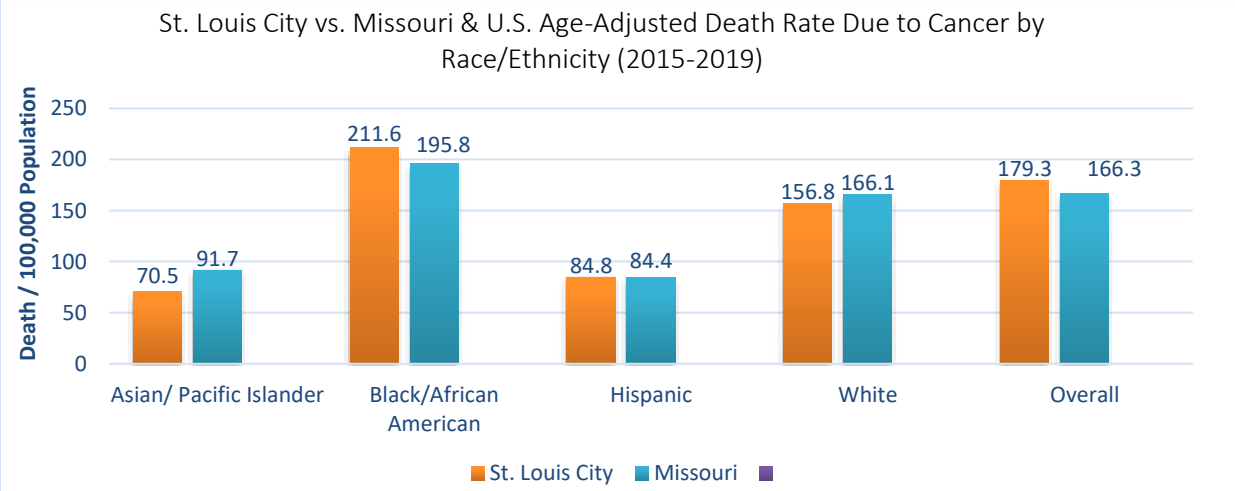
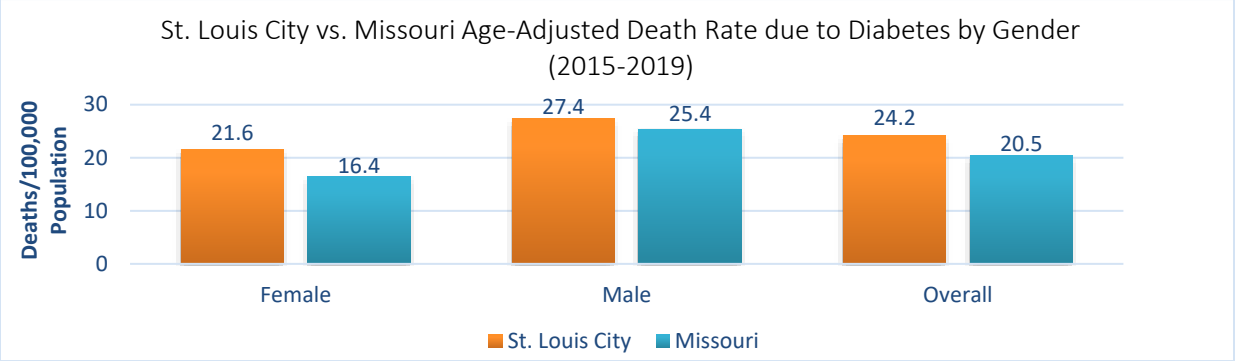


Source: Conduent Healthy Communities Institute

Diabetes



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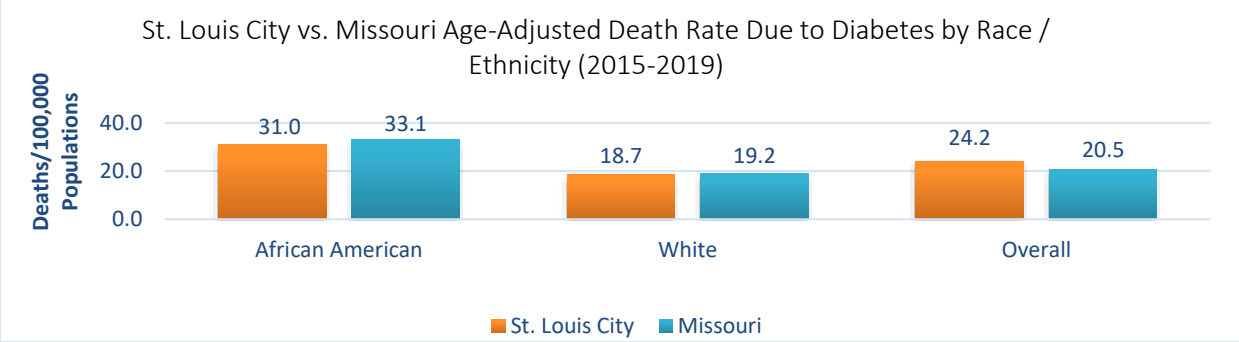

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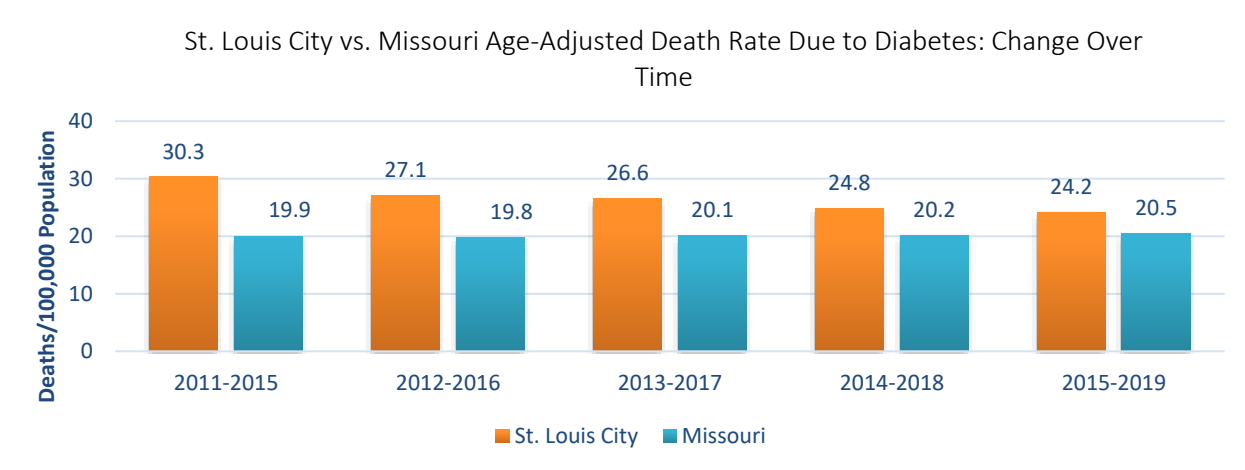

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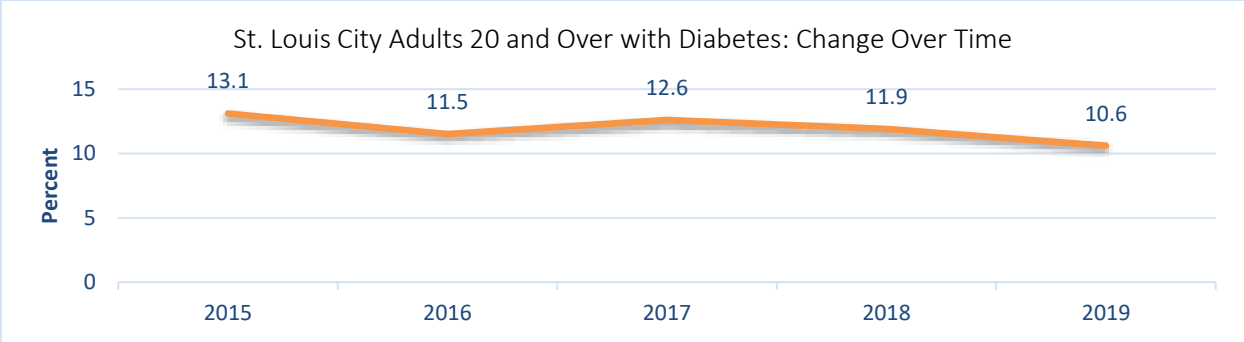

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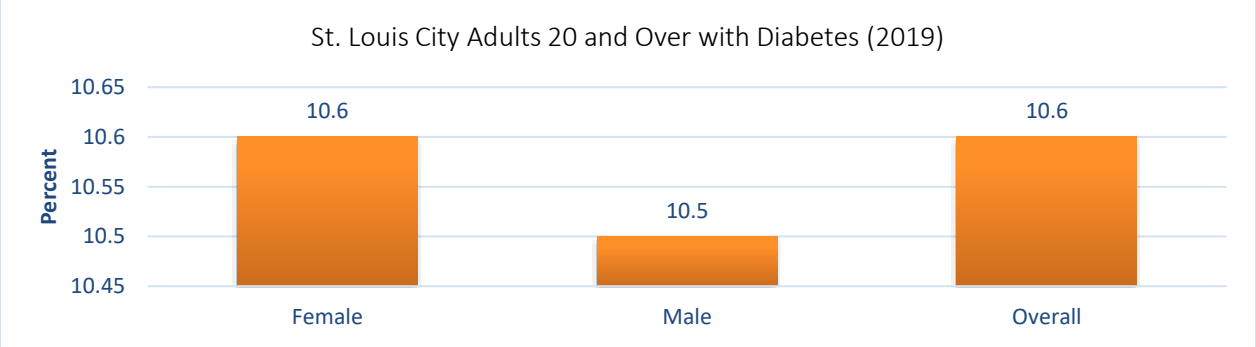

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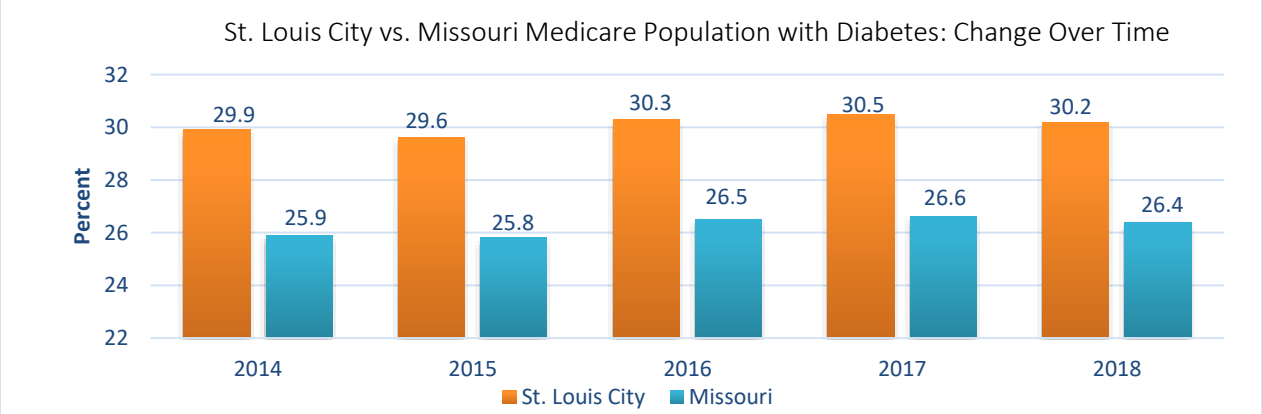
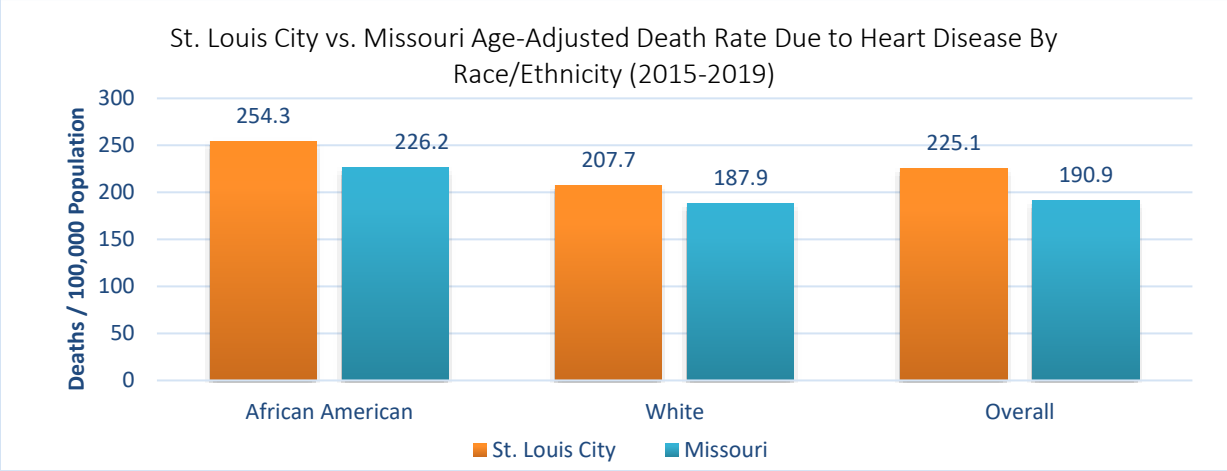


Source: Conduent Healthy Communities Institute

Heart Health



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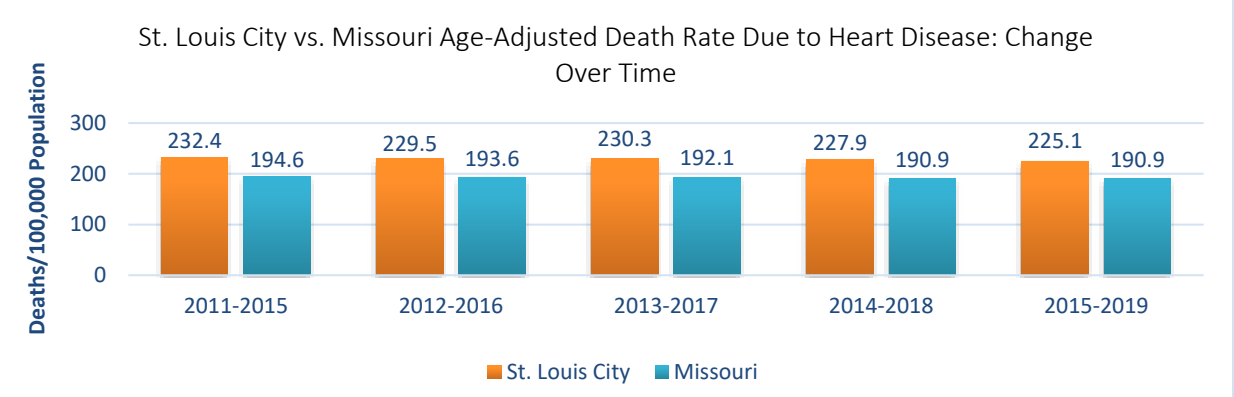

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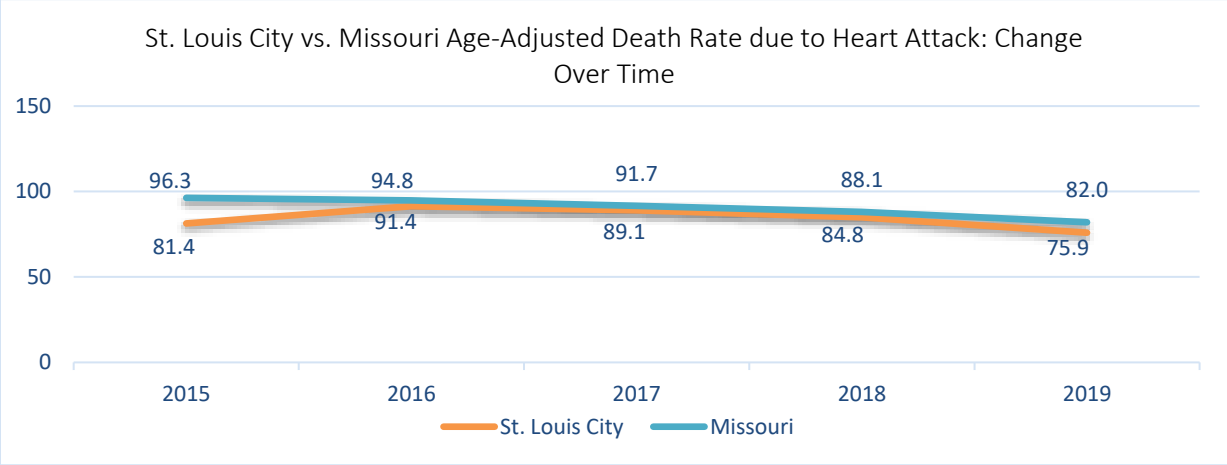

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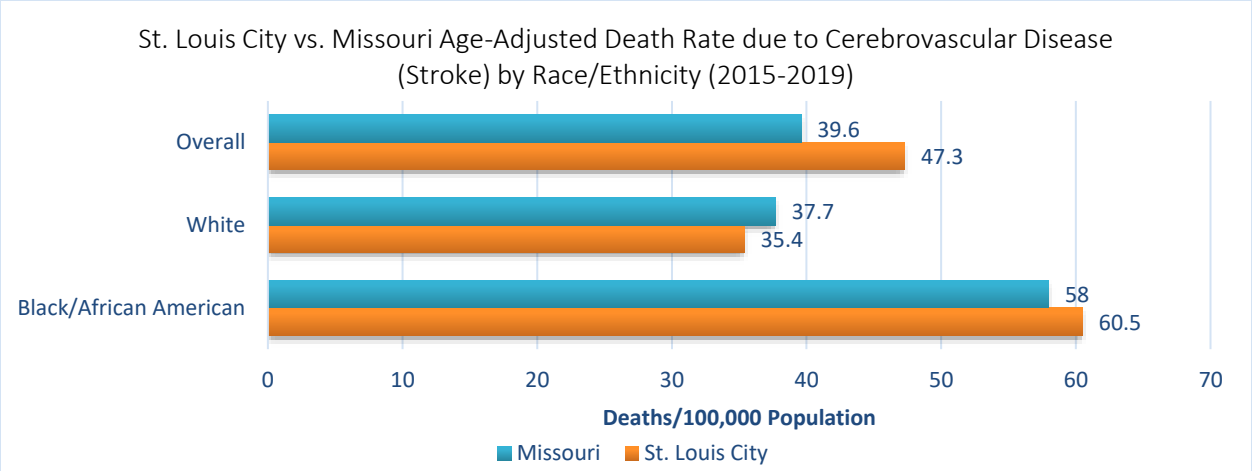

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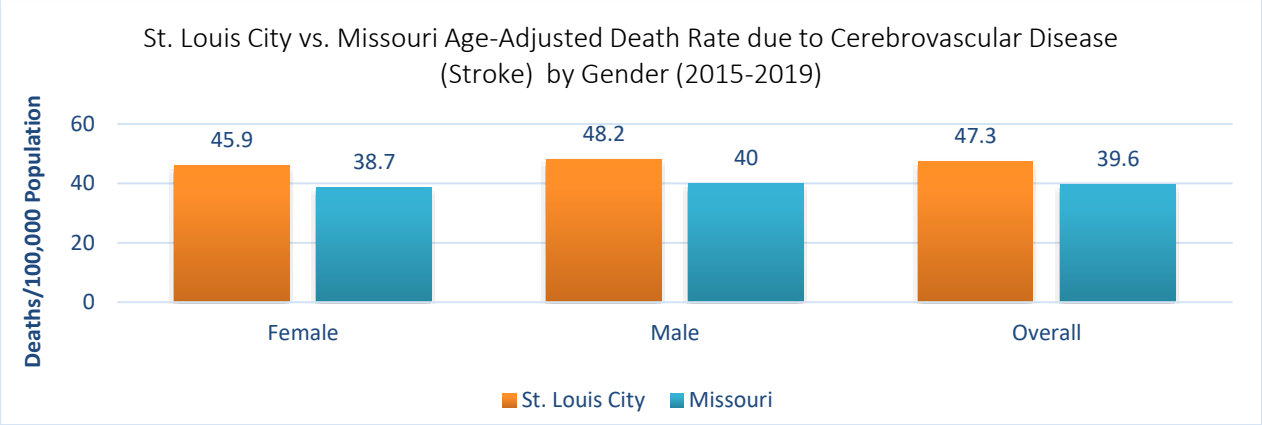

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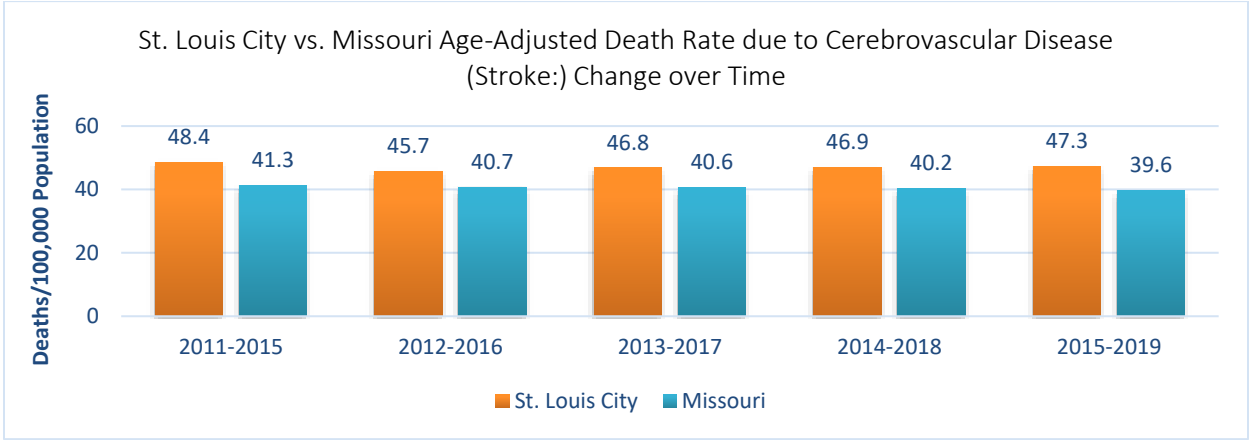

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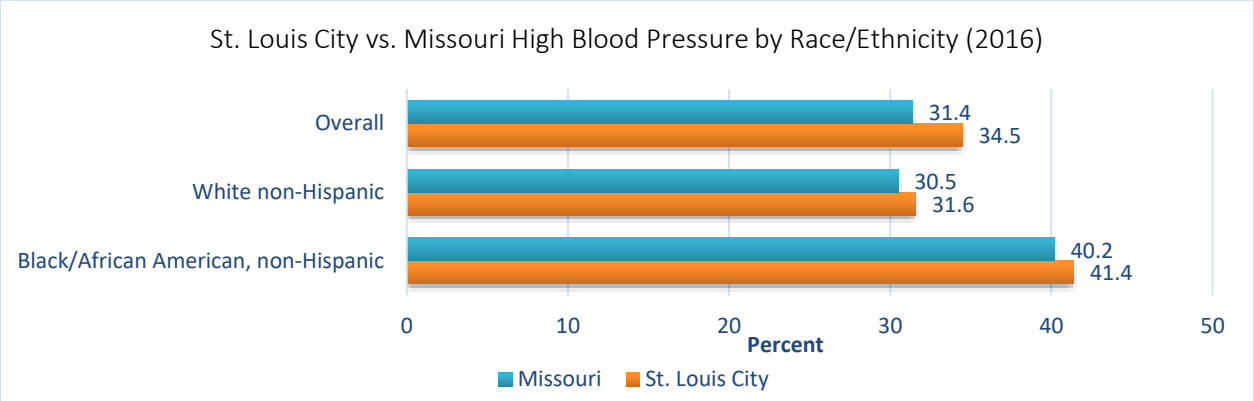


Source: Conduent Healthy Communities Institute

ST. LOUIS CITY vs. MISSOURI AGE-ADJUSTED RATE: HEART HEALTH & STROKE		
HEALTH TOPICS	ST. LOUIS CITY	MISSOURI
HEART DISEASE		
Deaths/100,000 Population (2009-2019)	247.73	199.32
Hospitalizations/10,000 Population (2011-2015)	139.94	109.46
ER Visits/1,000 Population (2011-2015)	16.28	15.12
ISCHEMIC HEART DISEASE		
Deaths/100,000 Population (2009-2019)	142.68	115.62
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 (2009-2019)	47.04	41.02
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

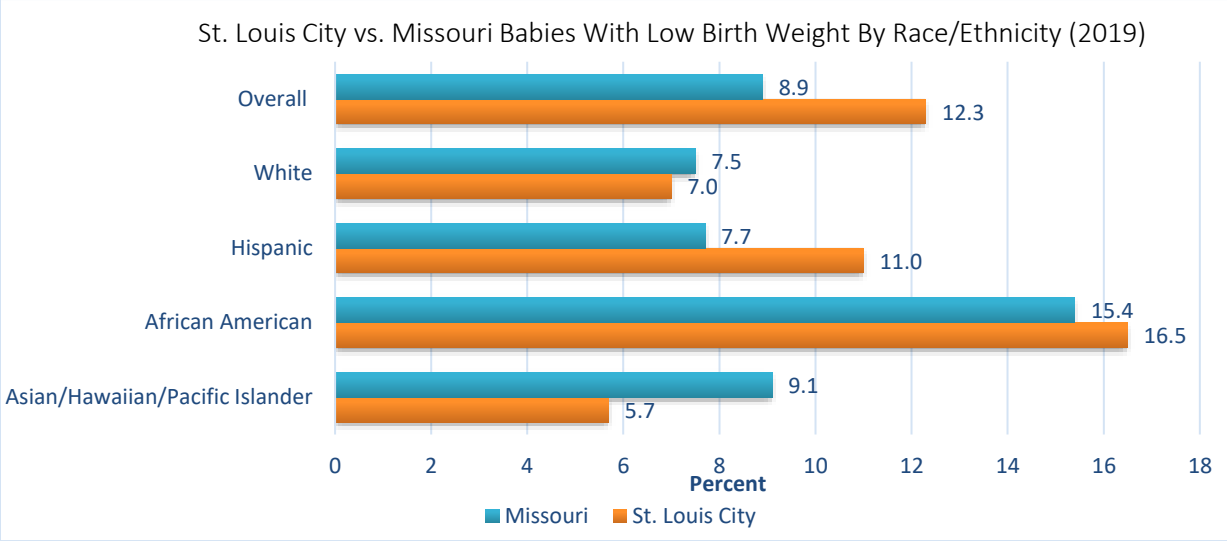
ST. LOUIS CITY vs. MISSOURI AGE-ADJUSTED RATE BY ETHNICITY/RACE: HEART DISEASE & STROKE				
HEALTH TOPICS	WHITE		AFRICAN AMERICAN	
	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI
HEART DISEASE				
Deaths/100,000 Population (2009-2019)	217.91	190.86	261.29	228.99
Hospitalizations/10,000 Population (2011-2015)	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 (2009-2019)	143.93	114.56	144.82	131.74
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 (2009-2019)	39.91	39.53	55.14	55.53
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 Services

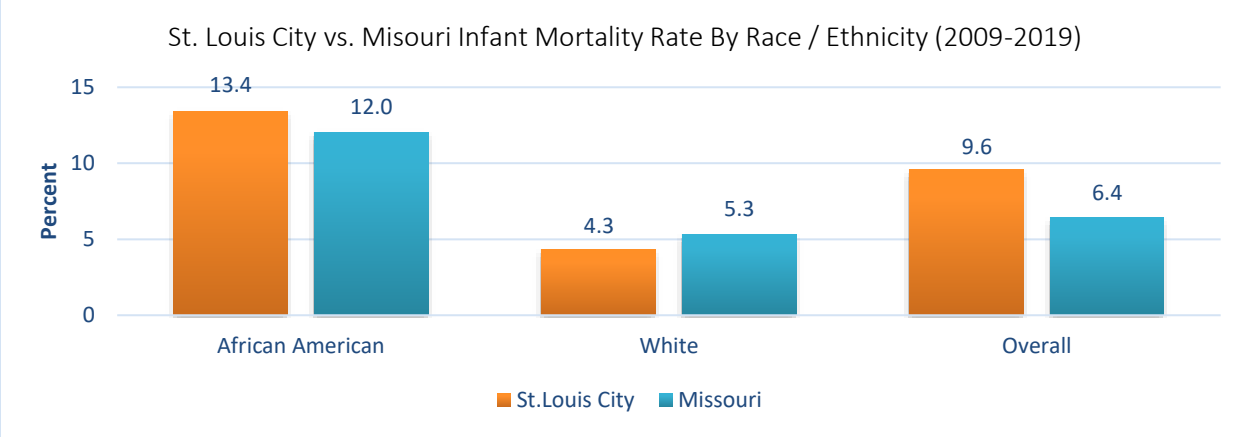
ST. LOUIS CITY VS. MISSOURI THREE-YEAR MOVING HEART DISEASE & STROKE AVERAGE RATES						
DEATH RATE: HEART DISEASES AND STROKE / 100,000 POPULATION						
HEALTH TOPICS	2015-2017		2016-2018		2017-2019	
	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI	ST. LOUIS CITY	MISSOURI
Heart Disease	228.77	193.5	227.39	190.44	223.32	188.49
Ischemic Heart Disease	136.89	108.36	133.68	105.2	124.54	102.31
Stroke/Other Cerebrovascular Disease	47.74	40.65	44.34	39.94	47.21	39
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

Maternal & Child Health



Source: Conduent Healthy Communities institute



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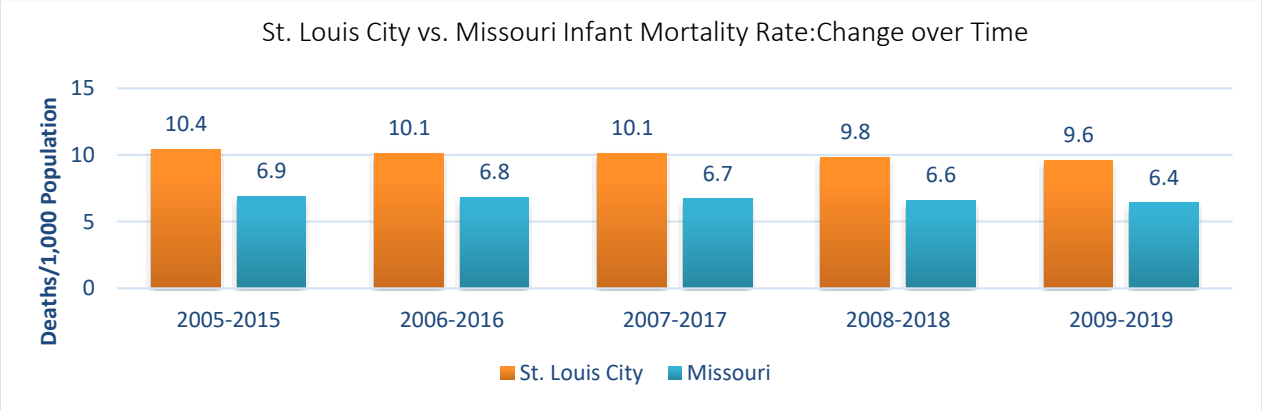

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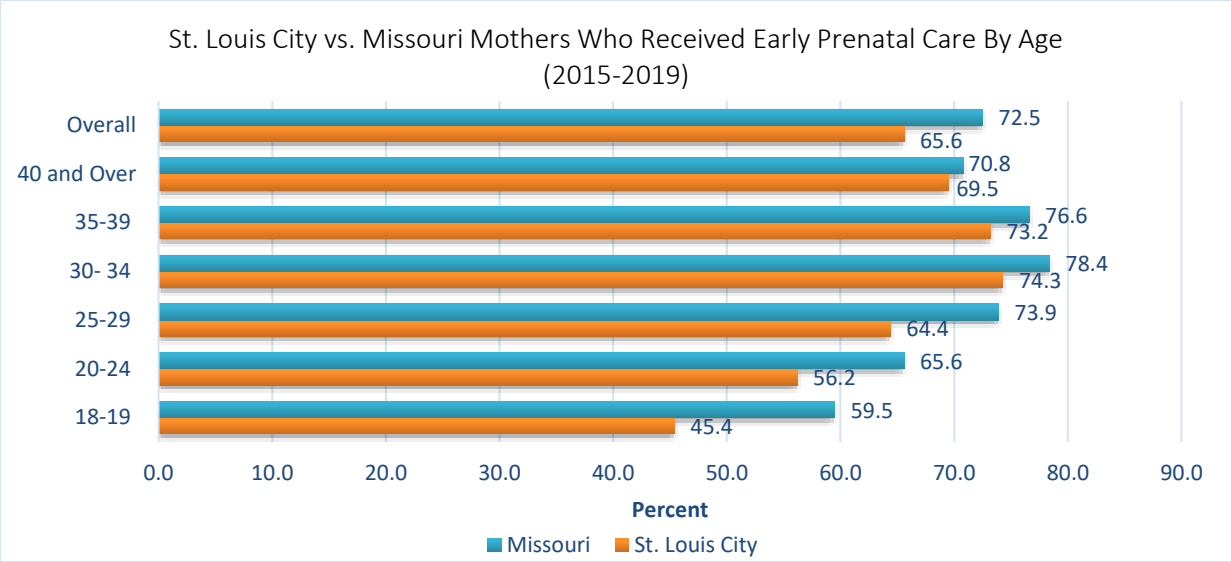

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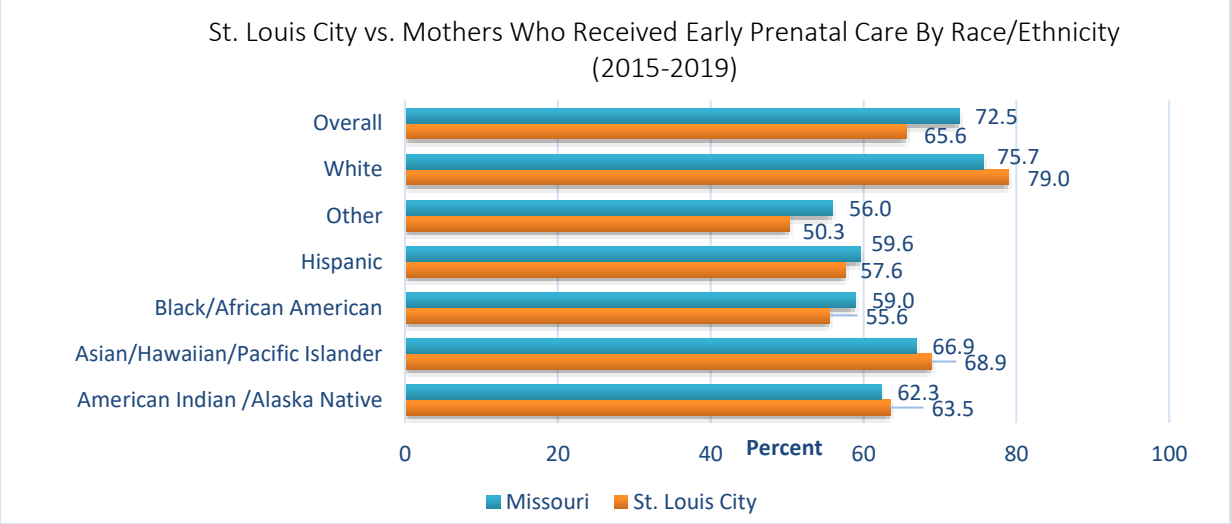

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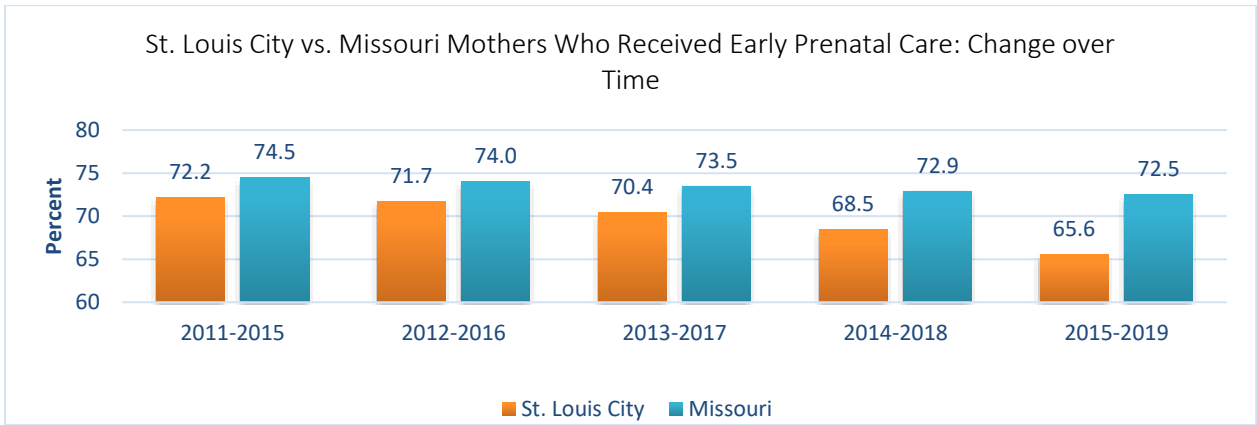

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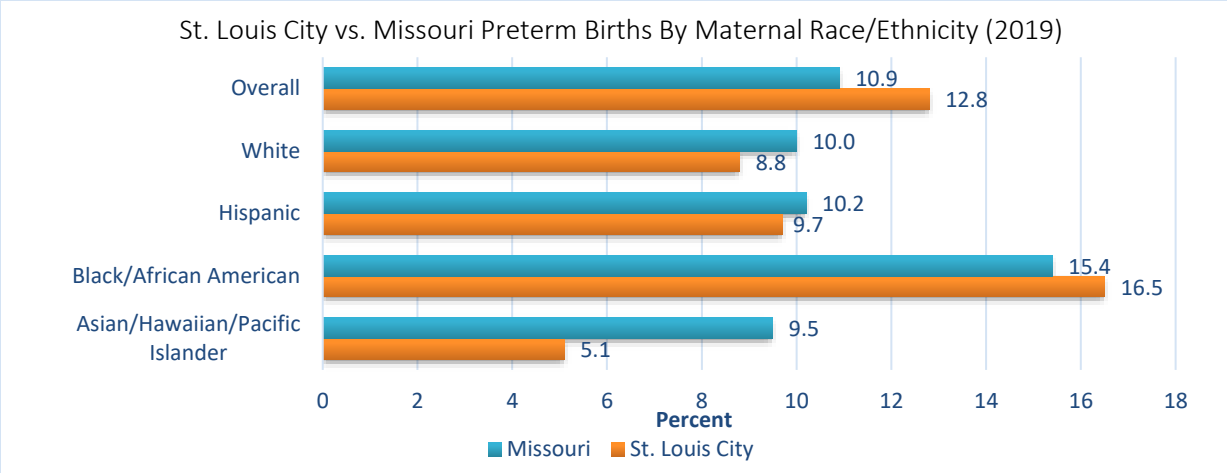

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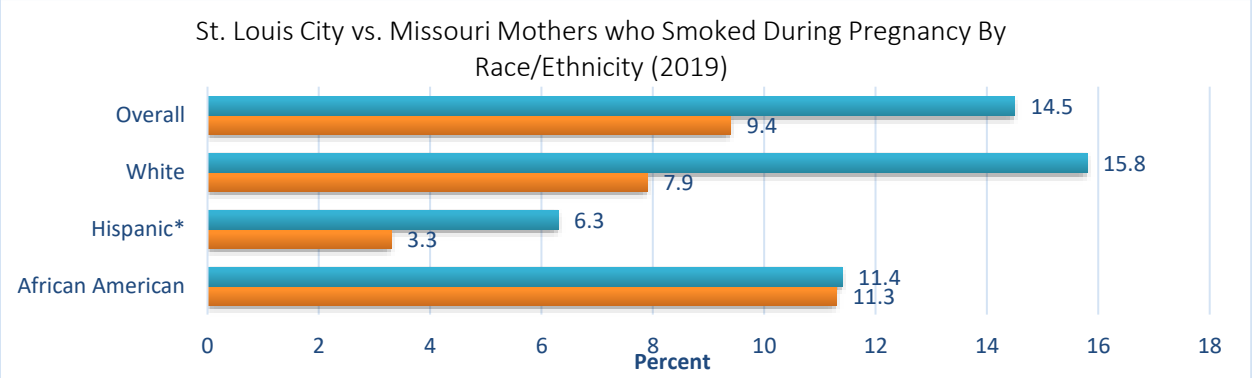
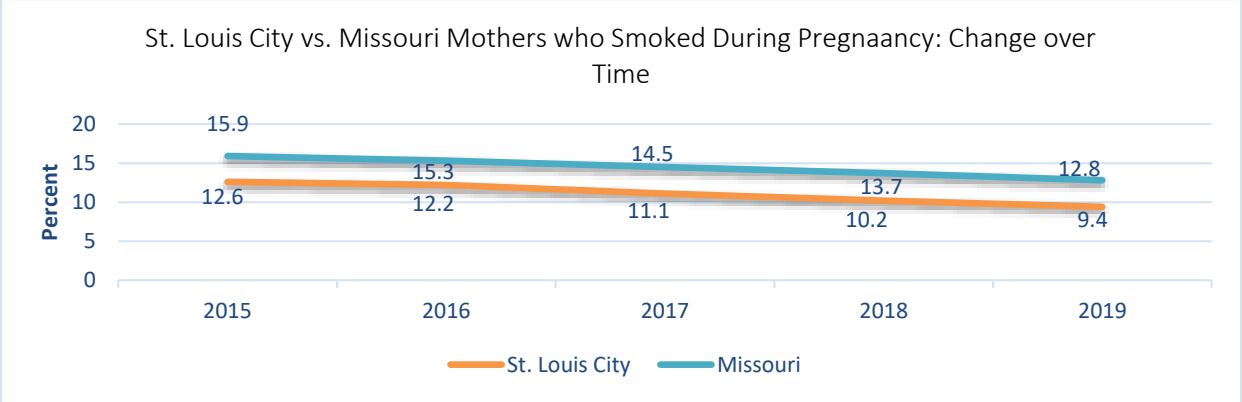
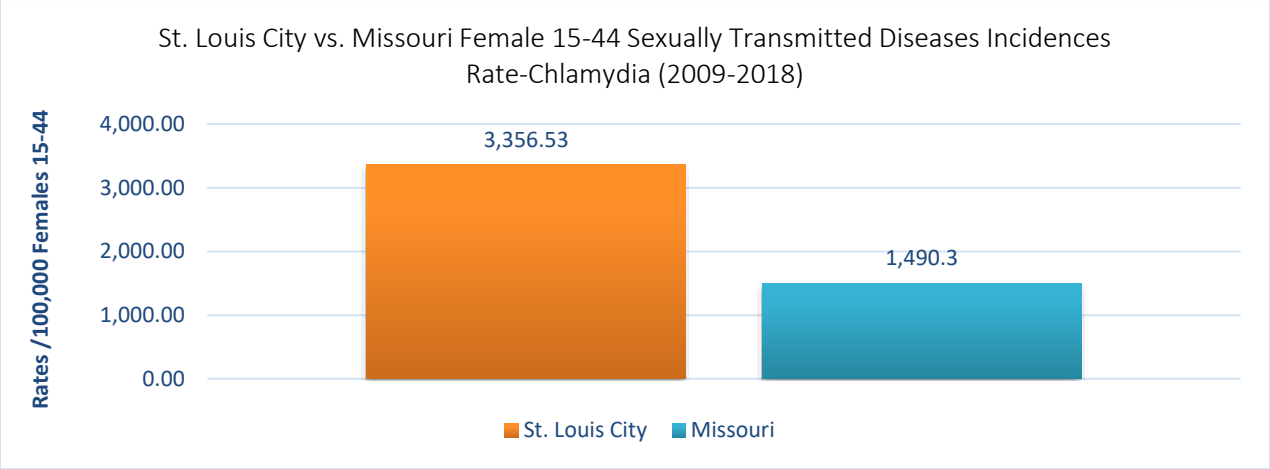


Source: Conduent Healthy Communities Institute

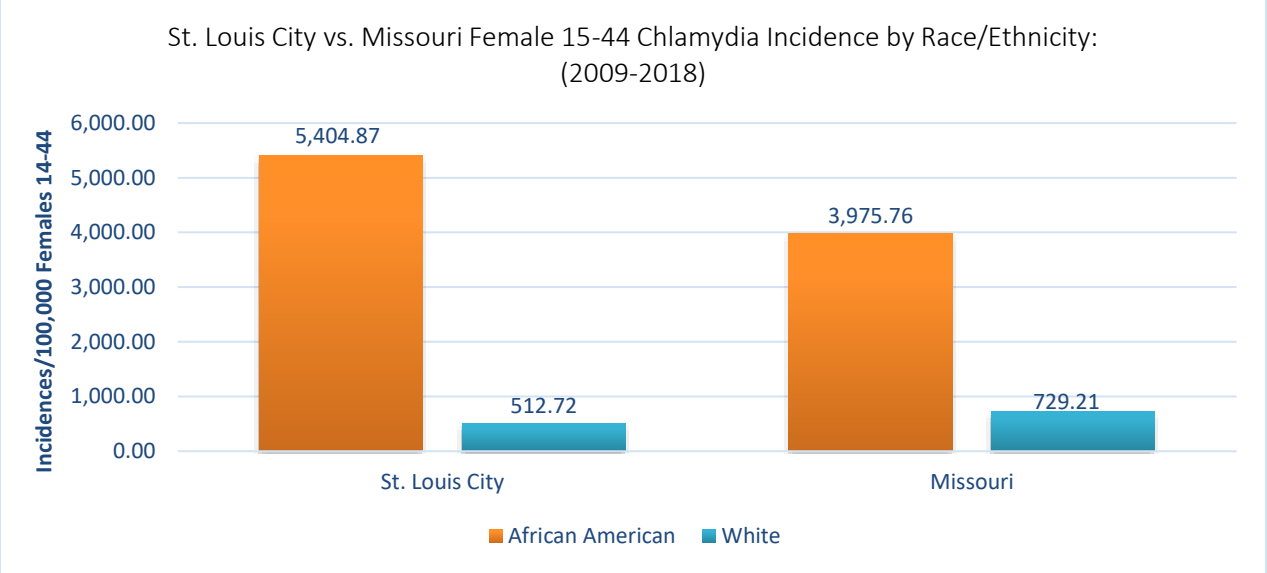


Source: Conduent Healthy Communities Institute

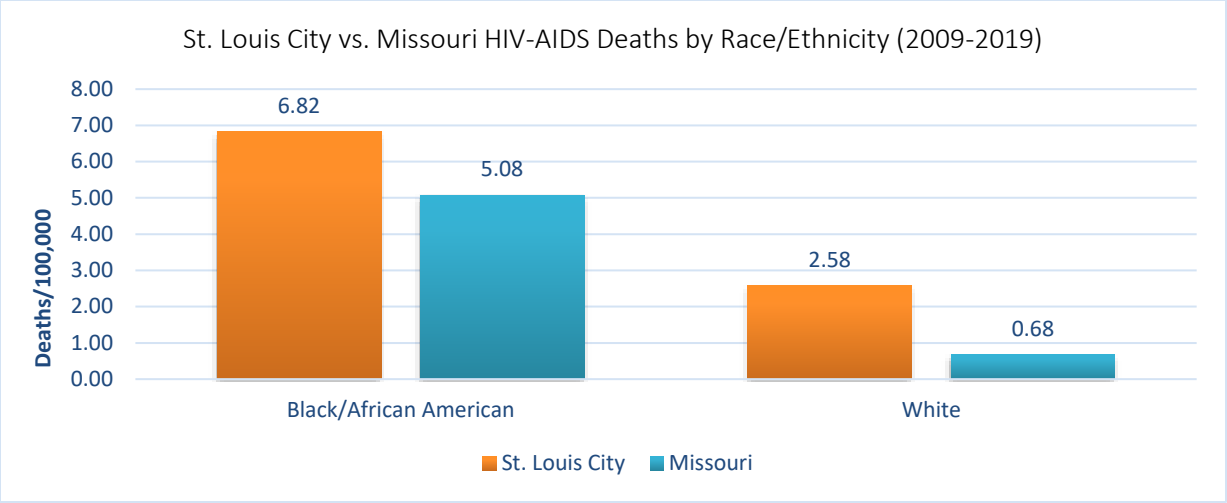
Reproductive & Sexual Health



Source: Source: Mo Department of Health & Senior Services: Women's Health

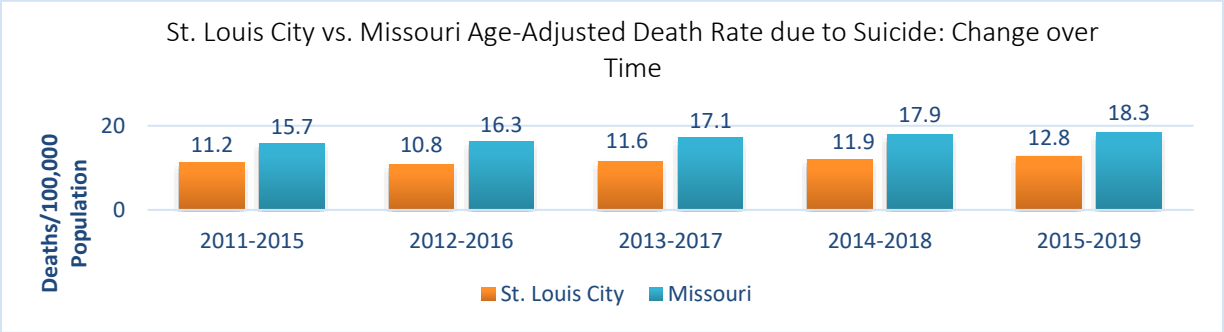


Source: Missouri Department of Health & Senior Services: Women's Health



Source: Missouri Department of Health & Senior Services: Minority Health

Mental and Behavioral Health: Mental Health



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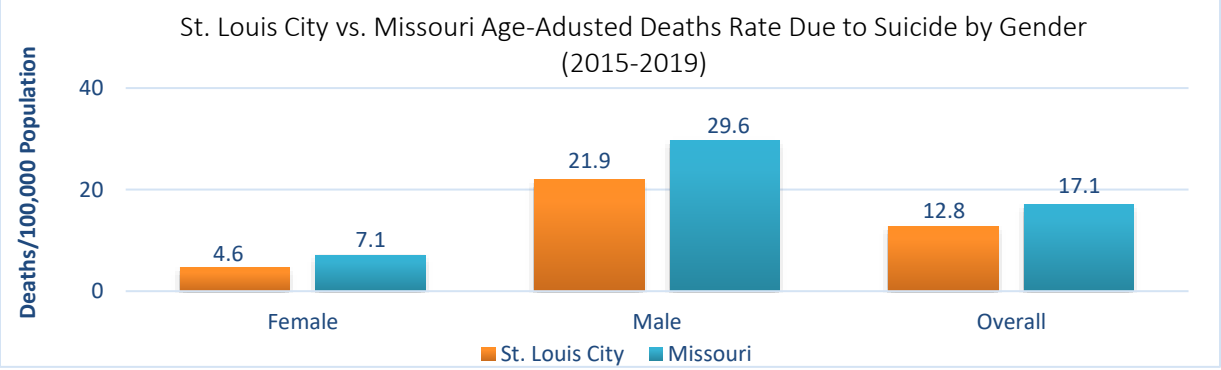

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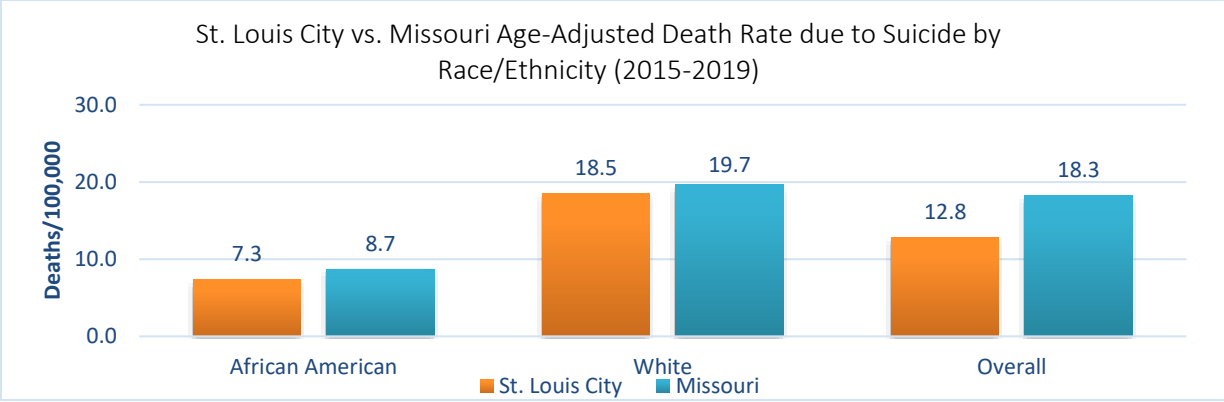

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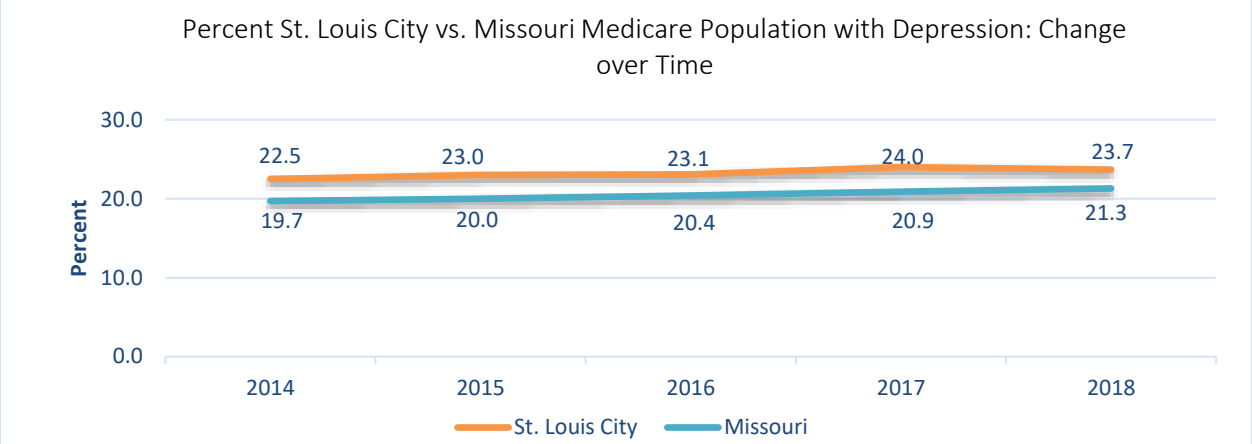

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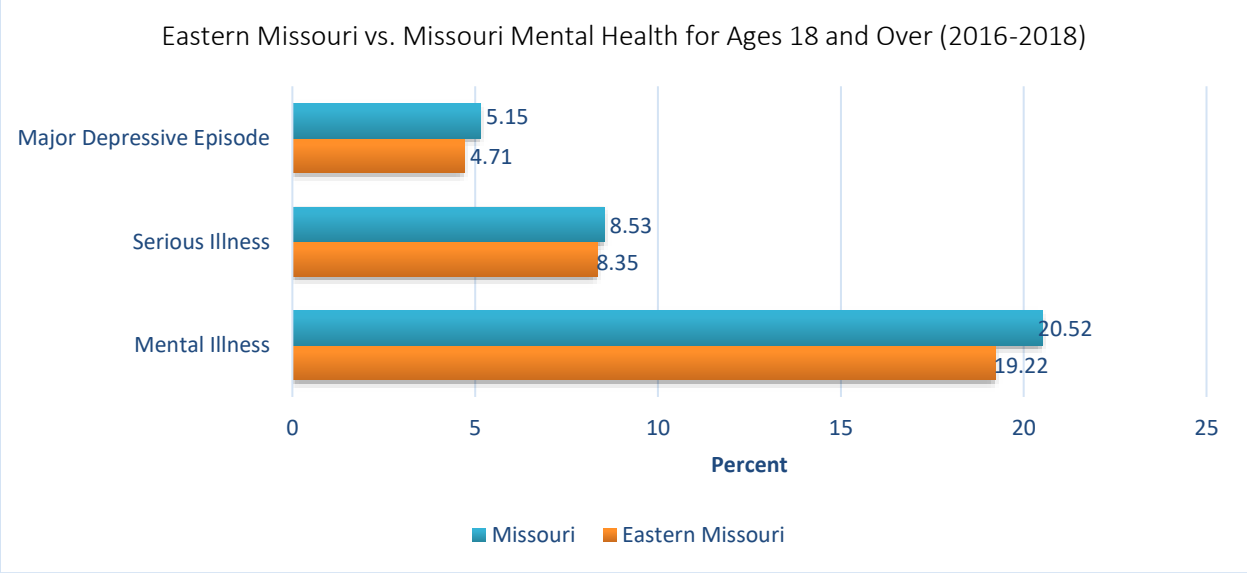
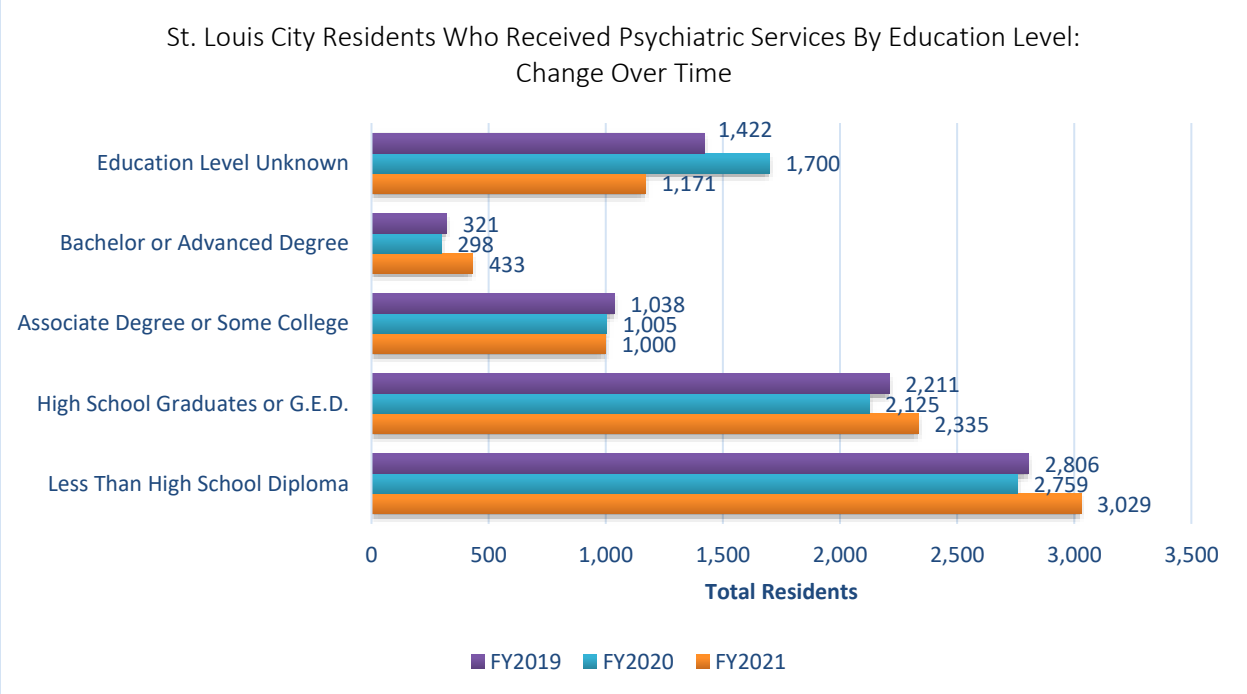


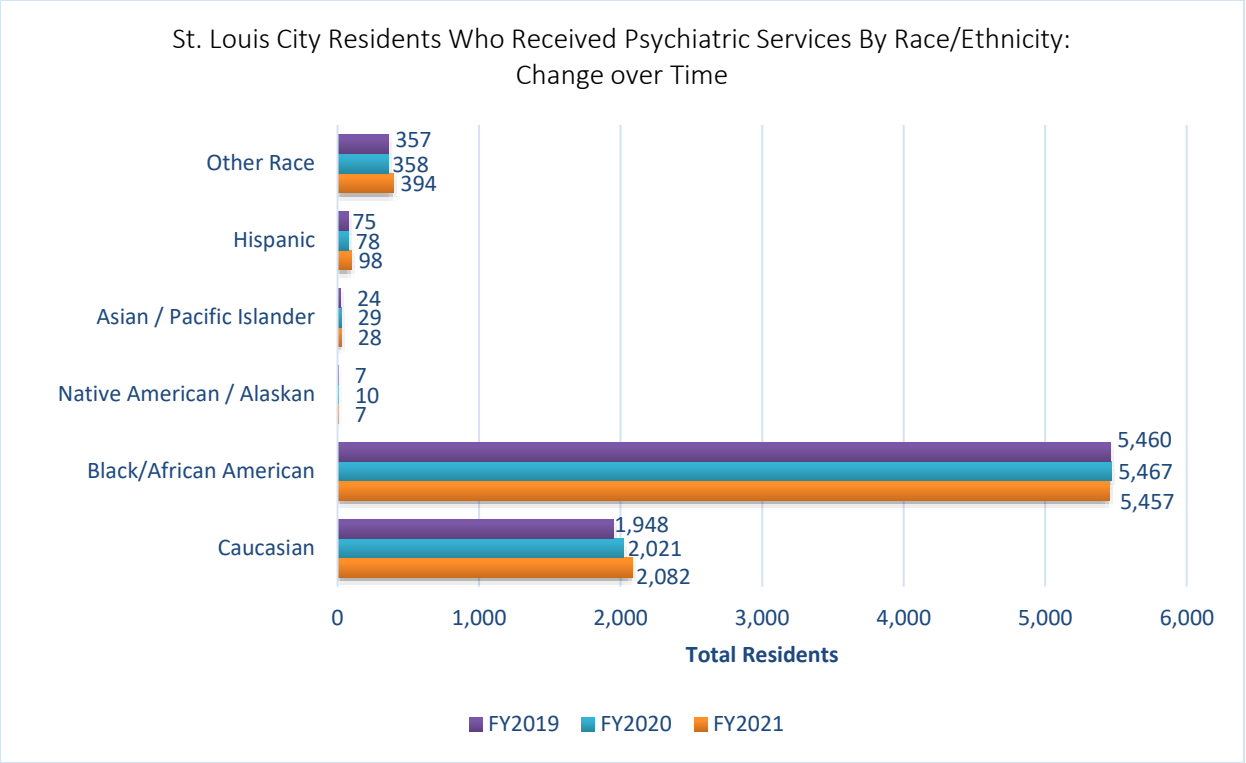
Source: Conduent Healthy Communities Institute

ST. LOUIS CITY TOTAL NUMBER OF ENCOUNTERS WHO RECEIVED PSYCHIATRIC SERVICES BY DIAGNOSIS: CHANGE OVER TIME			
DIAGNOSIS CATEGORY	FY2021	FY2020	FY2019
Anxiety and Fear Disorders	1,277	1,002	543
Bipolar Mood Disorder	1,761	1,760	1,591
Depressive Mood Disorders	3,875	3,679	2,980
Developmental and Age Related Disorders	1,103	1,055	993
Impulse Control and Conduct Disorders	528	523	459
Personality Disorders	755	709	652
Schizophrenia and Psychotic Disorders	2,878	2,944	2,664
Sexual Disorders	21	19	13
Trauma and Stress Related Disorders	1,465	1,176	755
Other Disorders	142	117	68
Diagnosis Unknown	54	67	450
TOTAL DISORDERS DIAGNOSED	**13,859**	**13,051**	**11,168**

Source: Missouri Department of Mental Health



Source: Missouri Department of Mental Health

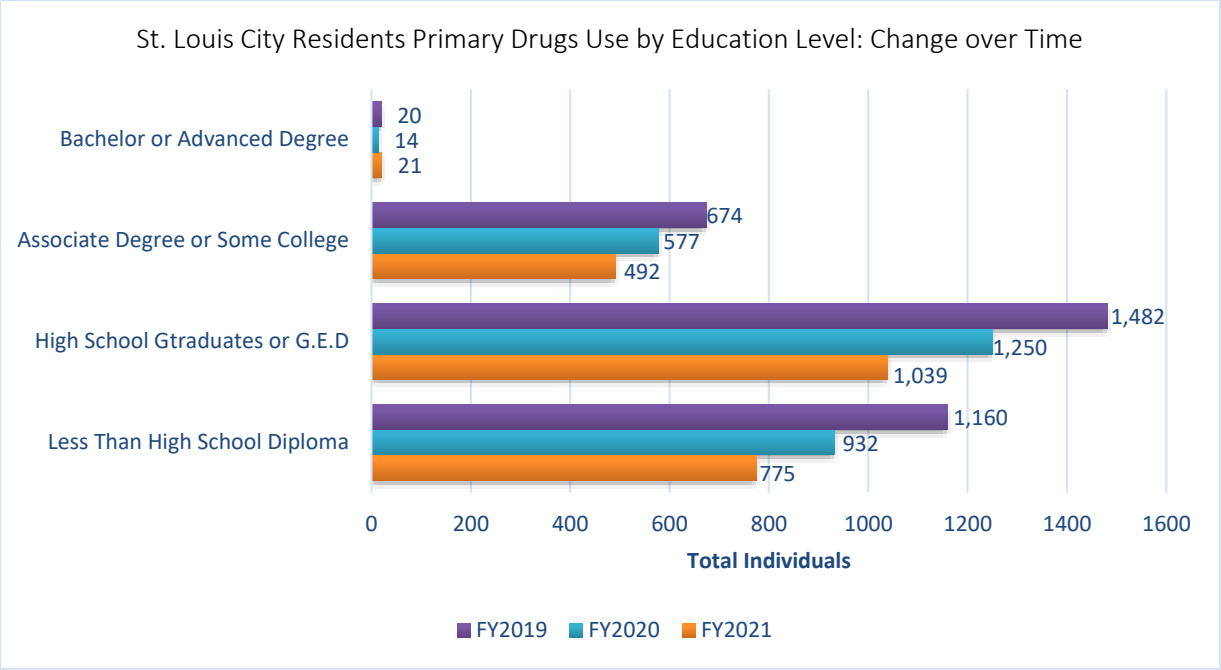


Source: Missouri Department of Mental Health

Mental and Behavioral Health: Substance Abuse

ST. LOUIS CITY TOTAL NUMBER OF INDIVIDUALS PRIMARY DRUG USE: CHANGE OVER TIME			
PRIMARY DRUG PROBLEM	FY2021	FY2020	FY2019
Alcohol	340	365	449
Marijuana/Hashish	223	354	487
Cocaine (Total)	173	251	301
-Crack	136	209	227
Stimulant (Total)	158	183	205
-Methamphetamine	151	175	197
Heroin	710	966	1,500
Analgesic Except Heroin	692	616	336
Phencyclidine Piperidine (PCP), Lysergic Acid Diethylamide (LSD), Other Hallicinogen	17	26	35
Tranquilizer	7	8	9

Source: Missouri Department of Mental Health



Source: Missouri Department of Mental Health

Injury

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
	2015-2017		2016-2018		2017-2019	
Total Assault Injury Deaths /100,000 Population	45.53	10.23	45.69	10.89	44.89	11.15
Firearm Deaths/100,000 Population	42.96	8.62	42.77	9.24	42.09	9.62
	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: Assaults Injury

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 (2009-2019)	7.06	3.69	69.91	41.11
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 (2009-2019)	5.01	2.34	63.91	36.45
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: Assaults Injury

Implementation Strategy











A. Community Health Needs to Addressed

MENTAL/BEHAVIORAL HEALTH: MENTAL HEALTH

RATIONALE:

About half of all people in the United States will be diagnosed with a mental disorder at some point in their lifetime.

Mental disorders affect people of all age and racial/ethnic groups, but some populations are disproportionately affected. And estimates suggest that only half of all people with mental disorders get the treatment they need.

In addition, mental health and physical health are closely connected. Mental disorders like depression and anxiety can affect people's ability to take part in healthy behaviors. Similarly, physical health problems can make it harder for people to get treatment for mental disorders. Increasing screening for mental disorders can help people get the treatment they need.

Substance use disorders in the United States and deaths from them continue to increase at alarming rates. In 2019, 13 percent of Americans aged 12 or older used an illicit drug within the past month. This is an increase of 9.4 percent from 2013. (https://www.cdc.gov/nchs/fastats/drug-use-illicit.htm). Nearly 92,000 persons in the U.S. died from drug-involved overdoses in 2020, including illicit drugs and prescription opioids, up from 71,000 deaths in 2019. (https://nida.nih.gov/research-topics/trends-statistics/overdose-death-rates).

According to the Missouri Department of Health and Senior Services, 284 people died in the city of St. Louis in 2021 from opioid overdoses resulting in 96.83/100,000 population deaths, one of the highest rates in the U.S. (https://health.mo.gov/data/opioids/)

Barnes Jewish Hospital will address mental health issues using three different strategies

STRATEGY I: FAMILIAR FACES

STRATEGY DESCRIPTION

Patients with chronic emergency department (ED) usage often have barriers to accessing services which would stabilize their condition. Some of these barriers include poor access to mental health services, poor access to a primary care provider (PCP) or specialist, unstable housing, untreated mental illness, and financial resource strain. High utilization of the ED often results in fragmented healthcare and poor health outcomes. Therefore, the "Familiar Faces" program was developed to provide case management services to those patients with high ED utilization.

STRATEGY GOAL

To improve the overall health of patients who frequently present to the ED by providing case management services to connect patients to outpatient resources and improve health outcomes.

STRATEGY OBJECTIVE

Report reduced ED utilization by five percent (5%) for participants 6 months after completing the program.

ACTION PLAN

- Identify the highest utilizers of the Barnes Jewish Hospital (BJH) ED based on a monthly report as a baseline.
- Gain consent from patients to participate in Familiar Faces during ED encounters. Once consent is obtained, the Complex Care Social Worker will complete a thorough chart review and psychosocial assessment with the patient to determine their needs.
- Provide in-person and telephonic case management to connect participants to the most appropriate outpatient community resources.
- Make referrals to the emergency room enhancement (ERE) program when patients are eligible to provide expedited access to behavioral health community support workers.
- Connect participants to services in the community that will meet the needs contributing to high utilization.
- Work with ED providers to coordinate care plans on each ED visit. Examples of this would be to contact community supports, make outpatient appointments, and assess for mental health diagnosis.
- Monthly meetings with ED providers, social workers, and key community stakeholders to review participants' progress and make changes to their care plans as needed.

EXPECTED OUTCOMES

- Participants will have decreased emergency utilization
- Participants will utilize community resources and outpatient, non-emergent medical care.
- Participants' overall health will improve because of appropriate management.

OUTCOMES MEASUREMENT

- Reports will be run monthly to determine participant utilization of inpatient and emergent services.
- Complex Care Social Workers' services and interventions will be recorded and reported.

STRATEGY II: ENGAGING PATIENT IN CARE COORDINATION (EPICC)

STRATEGY DESCRIPTION

The Engaging Patients in Care Coordination (EPICC) Project provides the patient access to recovery coaching while in the ED and hospital ward and support to engage in next day outpatient treatment. Expedited access to substance use treatment services and medication for opioid use disorder (also known as medication for addiction treatment) is also provided. A recovery coach provides motivational interviewing, opioid overdose education, a rescue kit containing naloxone, and other resources.

STRATEGY GOAL

Improve access to recovery coaches and outpatient addiction related healthcare for those who present to the BJH ED or hospital with or after recently experienced an opioid-related overdose or medical complication related to opioid use disorder.

STRATEGY OBJECTIVE

I. Expedite access to Medication for Addiction Treatment (MAT)/Medication for Opioid Use Disorder (MOUD) while in the ED or hospital ward. Increase MAT/MOUD use by 10% annually for eligible patients.
II. Improve coordination of care from ED or hospital ward to community-based recovery settings by 10% annually.
III. Initiate treatment on patients with opioid use disorders admitted to the hospital and connect them to long-term treatment utilizing community-based settings. Increase the intervention on eligible patients by 10% annually.
IV. Increase harm reduction strategies, such as naloxone distribution to eligible patients by 10% annually.

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.
- Increasing the emphasis on harm reduction for these patients.
- Get the patients tested and treated for HIV/Hep C.
- Provide 72 hours of methadone or buprenorphine to go home with.
- Increase the number of Emergency Medicine physicians trained and waivered to administer and prescribe suboxone from ED.
- Train all Emergency Medicine residents on MAT/MOUD therapy.
- Coordination between Emergency Medicine/Medical Toxicology and Psychiatry departments to provide inpatient addiction medicine consults.
- Coordinate transition of care with community substance use disorder clinics and designated outreach coordinators.
- Continue to enhance the small addiction medicine clinic (mainly for opioid use and alcohol use disorders) run by the Medical Toxicology section.

- Continue hosting Continuing Medical Education (CME) course for medical professionals on opioid use and opioid use disorder.
- Lead x-waiver sessions (license needed to prescribe buprenorphine) for providers at any BJC facility.
- Continue to apply for multidisciplinary grants to increase resources available. Psychiatry to further educate medical students and residents on treating patients with OUD.
- Increase the number of facilities using and total number of patients receiving telehealth addiction resources.

EXPECTED OUTCOMES

- Increased treatment completion.
- Increased use of methadone and buprenorphine for MAT/MOUD and increase naloxone distribution.
- Increased opioid use screening.
- Increased referral to treatment.
- Increased job satisfaction for nurses and doctors.
- Decreased readmissions for opioid use disorder complications.
- Decreased violence directed at staff.
- Decrease the number of deaths from opioid use in the city of St. Louis.
- Increase harm reduction services provided to this patient population.

OUTCOMES MEASUREMENT

- Track buprenorphine and methadone use in eligible patients.
- Track use of screening tools.
- Track referrals to EPICC.
- Track Readmission data.

STRATEGY III: HOSPITAL TO HOUSING

STRATEGY RATIONALE

This is a program that provides housing and intensive case management services to BJH patients who identify as homeless with behavioral health illness and substance using. In addition, these patients are high utilizers of BJH ED services. This program is funded both by the BJH Foundation and governmental grants. It is administered by the BJH Social Work department with ED involvement. A collaboration was formed with St. Patrick's Center for this project. St. Patrick's Center is a local expert in the provision of homeless services and an excellent partner providing homeless services and healthcare in the outpatient setting.

STRATEGY GOALS

I. To improve the health of St. Louis City residents through housing and case management.
II. Provide at least 20 identified Familiar Face BJH ED patients supportive housing annually.

STRATEGY OBJECTIVES

I. Enroll 20 to 25 St. Louis City residents who received care at BJH and identified as homeless, mentally ill and substance using and are frequent users of the ED.
II. Provide intensive case management services to achieve 80 percent housing stability of the participants.
III. Report a reduced cost of care for program participants as compared to their preprogram healthcare usage and costs.

STRATEGY ACTION PLAN

- Utilize the referral rosters from the BJH Familiar Faces program, the Behavioral Health Network (BHN) Emergency Room Enhancement program and the BHN EPICC program Engaging Patients in Care Coordination as well as ED provider referrals to vet and select potential program participants.
- Identify 20 to 25 individuals to enter the program.
- Place participants in individual housing units.
- Offer intensive case management services aimed at the participants' individual personal improvement goals, including the element that led them to homelessness, education, employment and health and healthcare goals.

EXPECTED OUTCOMES

- 80 percent of participants will live in stable housing.
- Participants will receive healthcare in appropriate venues, for example, primary care instead of emergent care.
- Participants' health will improve because of appropriate management.
- Healthcare costs will decrease in aggregate for this group of patients.

OUTCOMES MEASUREMENT

- Program costs will be tracked and reported.
- 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 aspects of the program.

B. Community Health Needs that Will Not be Addressed

ACCIDENTS/INJURIES

- Barnes-Jewish provides various opportunities for public safety and fatal injuries education and programs, including Stop the Bleed, Fall Prevention 101 and A Matter of Balance
- Other organizations addressing this need include, but are not limited to:
- American Trauma Society
- ThinkFirst Saint Louis
- Trauma Survivors Network

ALCOHOL USE

- Barnes-Jewish provides patients with access to recovery coaching while in the Emergency Department and support to engage in outpatient treatment.
- Other organizations addressing this need include, but are not limited to:
- Alcoholics Anonymous St. Louis
- Harris House Treatment and Recovery Center

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.
- Improve access to oral health care of transplant and head/neck cancer patients
- Other organizations addressing this need include, but are not limited to:
- Affinia Healthcare
- Still University's Missouri School of Dentistry & Oral Heath
- Delta Dental of Missouri

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
- DRUG USE
- Barnes-Jewish works to improve access to health care and other services for those who present with or recently experienced an opioid-related overdose
- Other organizations addressing this need include, but are not limited to:

- Behavioral Health Network of Greater St. Louis
- MO-HOPE project

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

HIGH BLOOD PRESSURE

- The Barnes-Jewish Primary Care Medicine Clinic offers free blood pressure cuffs for home monitors for patients

OBESITY

- The Barnes-Jewish Primary Care Medicine Clinic has a registered dietitian on staff to help connect patients with nutrition education and resources

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

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 USE/VAPING

- 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