

2019 Community Health Needs Assessment and Implementation Strategy



HOSPITAL • ST. LOUIS

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

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EXECUTIVE SUMMARY

St. Louis Children's Hospital (SLCH), a member of BJC HealthCare, is the pediatric teaching hospital for Washington University School of Medicine located in the City of St. Louis, Missouri. St. Louis Children's Hospital has 390 licensed beds, and each year approximately 275,000 patients visit the hospital. Since its founding in 1879, the hospital has provided comprehensive services in every pediatric medical and surgical specialty. St. Louis Children's Hospital has also established effective partnerships towards the goals of improving the health of the community.

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

As part of the CHNA process, each hospital is required to define its community. St. Louis Children's Hospital selected St. Louis City as its community. Once the community is defined, input must be solicited from those who represent the broad interests of the community served by the hospital, as well as those who have special knowledge and expertise in the area of public health.

St. Louis Children's Hospital conducted its 2019 assessment in two phases. The first phase consisted of a focus group discussion with key leaders and stakeholders representing the community. This group reviewed the primary data and community health needs findings from 2016 and discussed changes that had occurred since 2016. Additionally, the focus group reviewed gaps in meeting needs, as well as identified potential community organizations for the hospital to collaborate with in addressing needs. A Parent Health Concerns Survey was also administered to 1,003 parents living within the St. Louis Metropolitan region. This survey identified primary data on health needs.

During phase two, findings from the focus group meeting were reviewed and analyzed by a hospital internal work group of clinical and non-clinical staff. Using multiple sources, including Healthy Communities Institute and Priorities Missouri Information for Community Assessments (MICA) for Infants, Children and Adolescents, a secondary data analysis was conducted to further assess the identified needs.

At the conclusion of the comprehensive assessment process, St. Louis Children's Hospital identified 15 health needs where focus is most needed to improve the health of the community it serves. For its 2019 CHNA plan, the hospital will focus on: Asthma; Dental Health; Maternal/Child Health; Health Literacy; Healthy Lifestyles; Obesity; Mental/Behavioral Health; Allergy (Food); Diabetes; Public Safety; Access to Healthcare; Blood Diseases; Cancer; Infectious Diseases; and Sexually Transmitted Infections.

The analysis and conclusions were presented, reviewed and approved by the St. Louis Children's Hospital Board of Directors.

COMMUNITY DESCRIPTION

GEOGRAPHY

St. Louis Children's Hospital is a member of BJC HealthCare, one of the largest, nonprofit health care organizations in the country. BJC HealthCare hospitals serve urban, suburban and rural communities through 15 hospitals and multiple community health locations primarily in the greater St. Louis area, southern Illinois and mid-Missouri regions. St. Louis Children's Hospital and Barnes-Jewish Hospital are the two BJC HealthCare hospitals located in St. Louis City.

St. Louis Children's Hospital serves the health care needs of children, from infancy to adolescence, and advocates on behalf of children and families. It serves not just the children of St. Louis, but children across the world. For the purpose of the CHNA, the hospital defined its community as St. Louis City.



POPULATION TREND

Population and demographic data are necessary to understand the health of the community and plan for future needs. In 2017, St. Louis City reported a total population estimate of 308,626 compared to the state population of 6,011,532. St. Louis City comprised 5.0 percent of Missouri's total population.

ST. LOUIS CITY POPULATION GROWTH

As the second most populous county in Missouri with 308,626 people, St. Louis City is also geographically the smallest county in the state with 61.9 square miles (U.S. Census Bureau 2010). From 2000-2017, St. Louis City experienced a steady decrease in population (-3.3 percent) in comparison to the population increase of 2.1 percent for Missouri. Projections estimate a continued gradual decline in population from 2010-2030. St. Louis City's dense urban layout included 5,157.5 people per square mile compared to 87.1 people per square mile in Missouri.

AGE DISTRIBUTION

According to the 2017 U.S. Census Bureau, only 6.5 percent (20,582) of the population in St. Louis City were children under the age of 5 years, slightly lower than the population in Missouri. For those under 18 years, 19.9 percent (62,704) of the population resided in St. Louis City, above Missouri's 22.9 percent.

RACE AND ETHNICITY

In 2017, the racial composition percentage of St. Louis City for White (47.2 percent) and African American (46.5 percent) was similar. This differs drastically to Missouri where 83.1 percent of the population was White and 11.8 percent was African American. The city was 3.4 percent Asian

in comparison to the state's 2.1 percent. A greater number of St. Louis City residents (8.7 percent) spoke a language other than English in their home when compared to Missouri residents (6.0 percent).

GENDER

The percentage of females in the city was slightly higher than in the state while the male percentage in the city was slightly lower than the state.

SOCIOECONOMIC PROFILE

St. Louis City's median household income for the five-year period ending in 2017 was 24.99 percent lower than the state, overall. The home ownership rate was lower in St. Louis City (35 percent) than Missouri (58 percent). People living below the poverty level in St. Louis City totaled 25 percent compared to 14.6 percent in the state. Children and families living below the poverty level in St. Louis City was almost double the state and U.S.

EDUCATION

The Healthy People 2020 national health target is to increase the proportion of students who graduate high school within four years of their first enrollment in ninth grade to 82.4 percent. Individuals who do not finish high school are more likely than people who finish high school to lack the basic skills required to function in an increasingly complicated job market and society. Adults with limited education levels are more likely to be unemployed, on government assistance or involved in crime. (Healthy Communities Institute)

In St. Louis City, 85.7 percent of the population 25 and older had a high school diploma compared to Missouri at 89.2 percent; 34.1.0 percent had a bachelor's degree when compared to Missouri at 28.2 percent.

2016 CHNA MEASUREMENT AND OUTCOMES RESULTS

In 2016, SLCH prioritized community needs among 13 health topics and created an implementation plan to address these health topics. This report details the outcome measures from Jan. 1, 2016 – June. 30, 2018. These needs include:

TABLE 1: 2016 CHNA MEASUREMENT & OUTCOMES RESULTS: OBESITY

HEAD TO TOE	"FUN'TASTIC NUTRITION	EXPLORE HEALTH
PROGRAM GOAL	PROGRAM GOAL	PROGRAM GOAL
To improve knowledge and skill in leading a healthy lifestyle among children and their families by offering a multiple disciplinary approach to weight management.	To improve knowledge and emphasize the overall importance of healthy eating and good nutritional habits.	To improve knowledge and emphasize the overall importance of healthy eating and good nutritional habits.
PROGRAM OBJECTIVE	PROGRAM OBJECTIVE	PROGRAM OBJECTIVE
a) Provide intensive group educational sessions that focus on nutrition, physical activity and emotional health to 30 children per year. b) Increase knowledge of nutrition, physical activity and emotional health among participants by a 5 percent increase in average knowledge score among participants at post-test compared to pre-test.	Improve overall knowledge of healthy eating and nutritional habits of students by 10 percent from pre- to post-test assessment.	Improve overall knowledge of healthy eating and nutritional habits of students by 10 percent from pre- to post-test assessment.
CURRENT STATUS	CURRENT STATUS	CURRENT STATUS
During the 2017 - 2018 school year, Head to Toe provided intensive group educational sessions to 51 children. Participants increased their knowledge by 11 percent.	Improve overall knowledge of healthy eating and nutritional habits of students in grade 2-8 by 33 percent at the four of six, one-hour health education sessions during 2016 - 2018.	Students' knowledge level increased by 26 percent after four, one-hour health education sessions during 2016 - 2018.

TABLE 1 CONTINUED: 2016 CHNA MEASUREMENT & OUTCOMES RESULTS: OBESITY, DENTAL HEALTH & ALLERGIES

SNEAKERS	HEALTHY KIDS EXPRESS: DENTAL (HKED)	FOOD ALLERGY MANAGEMENT & EDUCATION (FAME)
PROGRAM GOAL	PROGRAM GOAL	PROGRAM GOAL
To improve knowledge and emphasize the importance of the relationship between how the body systems work and relate to physical activity.	Children will receive appropriate care to prevent dental cavities and treat oral health problems.	To reduce the number of allergic reactions and even deaths due to life-threatening food allergies.
PROGRAM OBJECTIVES	PROGRAM OBJECTIVES	PROGRAM OBJECTIVES
Improve overall knowledge of cardiovascular health and fitness principles of students by 10 percent from pre- to posttest assessment.	Provide dental exams, cleanings and restorative care to 500 children per year in high risk populations for free.	Distribute 50 food allergy management toolkits per year to schools or community organizations.
		Increase knowledge of educational session participants, measured by a 5 percent increase of average knowledge score at post-test compared to pre-test for a representative sample of participants
CURRENT STATUS	CURRENT STATUS	CURRENT STATUS
Students' knowledge level increased by 13 percent after four, one-hour health education sessions during 2016 - 2018.	During the 2017 - 2018 school year, Healthy Kids Express Dental provided dental exams, cleanings and restorative care to 2,241 children.	While included in the implementation plan, the FAME program was delivered only by request in 2016-2018. Web content is updated annually.

TABLE 1 CONTINUED: 2016 CHNA MEASUREMENT & OUTCOMES RESULTS: HEALTHY LIFESTYLE & ASTHMA

POWER OF CHOICE	HEALTHY KIDS EXPRESS: ASTHMA	SMOKE-FREE TEENS ON PURPOSE (STOP)
PROGRAM GOAL	PROGRAM GOAL	PROGRAM GOAL
To improve knowledge and emphasize the overall health issues associated with tobacco, alcohol and illicit drugs.	To reduce asthma morbidity, decrease asthma disparities, improve coordinated care efforts, and increase quality of life for asthma patients and their families.	To support high school students to be successful in their efforts to quit the harmful habit of using tobacco products.
PROGRAM OBJECTIVE	PROGRAM OBJECTIVE	PROGRAM OBJECTIVE
Improve overall knowledge of health issues associated with tobacco, alcohol, and illicit drug use by 10 percent from pre- to post-test assessment.	a) Enroll 250 elementary, middle or high school students each school year to provide medical care and social services for children who have asthma. b) Increase inhaler/aero chamber technique in 25 percent of students enrolled at the end of the school year compared to their baseline at the beginning of the program. c) Increase knowledge of asthma signs and symptoms among enrolled students by a 5 percent increase in overall asthma knowledge score at post-test compared to pre-test.	Improve overall knowledge of the harmful effects of tobacco use by 10 percent from pre- to post-test assessment.
CURRENT STATUS	CURRENT STATUS	CURRENT STATUS
Improve overall knowledge of health issues associated with tobacco, alcohol and illicit drug use of students in grades 5-12, during 2016 - 2018, by 47 percent after four, 45-minute health education sessions.	During the 2017 - 2018 school year, HKE Asthma had 509 enrolled children in the program; 27.7 percent of the children in the program improved their inhaler/aero chamber technique. Students increased their knowledge of asthma by 13.5 percent.	While included in the implementation plan, the STOP program was not delivered as a stand-alone program in 2016-2018. The curriculum was included in other BJC School Outreach and Youth Development Programs.

TABLE 1 CONTINUED: 2016 CHNA MEASUREMENT & OUTCOMES RESULTS: MATERNAL/CHILD HEALTH & MENTAL/BEHAVIORAL HEALTH

RAISING ST. LOUIS	TEEN OUTREACH PROGRAM (TOP)	BUDDIES
PROGRAM GOAL	PROGRAM GOAL	PROGRAM GOAL
For every child to be healthy and ready to learn in school.	Increase school success and prevent teen pregnancy by teaching life skills, sense of purpose and healthy behaviors.	To improve knowledge and emphasize the overall importance of healthy communication, problem-solving strategies, personal responsibility and other life skills.
PROGRAM OBJECTIVE	PROGRAM OBJECTIVE	PROGRAM OBJECTIVE
a) Improve birth outcomes (gestational age, birth weight) of children involved in the Raising St. Louis program. b) Perform exams and screenings to make sure child is healthy, safe and developing on track. c) Help adults learn effective parenting techniques	a) Operate at least 10 TOP clubs throughout the school year. b) Expose 200 students to the TOP curriculum. c) 80 percent of the students in the TOP program will complete at least 20 hours of community service.	Improve overall knowledge of positive social skills and the impact of bullying behavior of students by 10 percent from pre- to post-test assessment.
CURRENT STATUS	CURRENT STATUS	CURRENT STATUS
In 2017, 317 moms and 372 babies were active in the Raising St. Louis Program, among which 130 babies were born into the program. Preterm births decreased by 4 percent from 2016 (20 percent) to 2017 (16 percent). There were 1,074 health screenings conducted by nurses and parent educators. In the 2016 to 2017 program year, 75 percent of families were connected by their parent educator to at least one community resource.	During the 2017 - 2018 school year, TOP operated 26 TOP clubs and exposed 564 teens to the TOP club curriculum. 36 percent of teens completed 20 hours of community service.	Students' knowledge level increased by 36 percent during 2016 - 2018 after four, 45-minute health education sessions.

TABLE 1 CONTINUED: 2016 CHNA MEASUREMENT & OUTCOMES RESULTS: MENTAL/BEHAVIORAL HEALTH

DIFFERENCE MAKERS	INTERSECTIONS	CONNECTIONS
PROGRAM GOAL	PROGRAM GOAL	PROGRAM GOAL
To improve knowledge and emphasize the overall importance of healthy communication, problem-solving strategies, personal responsibility and other life skills.	To improve knowledge and emphasize social skills that contribute to healthy relationships and self-identity.	To improve knowledge and foster social intelligence, use assertive communication and make responsible decisions on information sharing.
PROGRAM OBJECTIVE	PROGRAM OBJECTIVE	PROGRAM OBJECTIVE
Improve overall knowledge of positive social skills and the impact of bullying behavior of students by 10 percent from pre- to post-test assessment.	Improve overall knowledge of positive social skills that contribute to healthy relationships and self-identity of students by 10 percent from pre- to post-test assessment.	Improve overall knowledge of social intelligence of students by 10 percent from pre- to post-test assessment.
CURRENT STATUS	CURRENT STATUS	CURRENT STATUS
While included in the implementation plan, the Difference Makers program was not delivered as a stand-alone program in 2016-2019. The curriculum was included in other BJC School Outreach and Youth Development Programs.	Students' knowledge level increased by 28 percent during 2016 - 2018 after six, 45-minute health education sessions.	Students' knowledge level increased by 37 percent after four, forty-five minute sessions during 2016 - 2018.

TABLE 1 CONTINUED: 2016 CHNA MEASUREMENT & OUTCOMES RESULTS: ACCESS (BLOOD DISEASE) & PUBLIC SAFETY

HEALTHY KIDS EXPRESS SCREENING: BLOOD DISEASES		SAFETY STREET	SAFETY STOP
PROGRAM GOAL		PROGRAM GOAL	PROGRAM GOAL
Increase access to health screenings for high-risk children by eliminating or reducing barriers to health care access.	To prevent injuries related to pedestrian, home and vehicle safety, playground/sports, water, strangers and stray animals.	To prevent injuries in children related to bicycle, home and vehicle safety.	
PROGRAM OBJECTIVE		PROGRAM OBJECTIVES	PROGRAM OBJECTIVES
Provide 300 blood screenings per year for children in high-risk populations, free of charge.	a) Trained program specialists will educate 2,000 elementary students per year on being safe in their community and at home during a one-hour interactive safety exhibit in the school or community setting. b) Participants will increase their knowledge of safety topics as shown by a 5 percent increase in average knowledge score at post-test compared to pre-test of a representative sample of participants.	a) Provide 1,000 child safety seat, bicycle helmet or home safety consultation to parent/caregivers per year. b) Increase knowledge among child seat safety consultation participants by 5 percent on post-test compared to pre-test.	
CURRENT STATUS		CURRENT STATUS	CURRENT STATUS
During the 2017-2018 school year, Healthy Kids Express provided 51,271 total screenings; 958 were screened for blood lead and anemia.	During the 2017-2018 school year, Safety Street staff saw 3,645 students and parents. Kindergarten - 2nd grade students exhibited an overall knowledge increase of 21 percent and 3rd - 5th grade students observed an increase of 28 percent.	Safety Stop provided 2,368 safety seat, bicycle helmet and home safety consultations during 2017. Child safety seat consultation participants had an overall increase in knowledge of 12 percent from pre- to post-test for rear-facing car seat consultations and 8 percent for forward-facing car seat consultations.	

TABLE 1 CONTINUED: 2016 CHNA MEASUREMENT & OUTCOMES RESULTS: ACCESS (SERVICES), INFECTIOUS DISEASES & SEXUALLY TRANSMITTED DISEASES

HEALTHY KIDS EXPRESS SCREENING: ACCESS & INFECTIOUS DISEASE		HEART 2 HEART
PROGRAM GOAL		PROGRAM GOAL
Increase access to health screenings for high-risk children by eliminating or reducing barriers to health care access.		To help students understand the human body and make good decisions about their sexual health.
PROGRAM OBJECTIVE		PROGRAM OBJECTIVE
a) Provide 4,000 screening services and immunizations per year for children in high-risk populations, free of charge. b) Connect 40 percent of participants who receive follow-up services to appropriate treatment.		Improve overall knowledge of sexual health of students by 10 percent from pre-to post-test assessment.
CURRENT STATUS		CURRENT STATUS
During the 2017 - 2018 school year, HKE Screening provided 51,271 total screenings, including height/weight, hearing, vision and immunizations: 41 percent of participants were connected to follow-up services: 1,019 immunizations were administered.		Improve overall knowledge of sexual health of students in grades 6-12 by 21 percent at the end of four, 45-minute health education sessions from 2016 - 2018.

CONDUCTING THE 2019 CHNA

Primary Data Collection: Focus Group

St. Louis Children's Hospital, SSM Cardinal Glennon Children's Hospital, and Shriners Hospitals for Children – St. Louis, conducted a focus group of community leaders to obtain input from pediatric and public health experts on the health needs of St. Louis City children ages 0-18. Fourteen of 15 invited individuals representing various St. Louis City organizations participated (See Appendix B for complete Focus Group Report). The focus group was held May 31, 2018, at the Central Reform Congregation with the following objectives identified:

- 1) Determine whether the needs identified in the 2016 CHNA are still the right areas on which to focus
- 2) Explore whether there are any needs on the list that should no longer be a priority
- 3) Determine where there are gaps in the plan to address the prioritized needs
- 4) Identify other organizations with whom these hospitals should consider collaborating
- 5) Discuss what has changed since 2015/2016 when these needs were prioritized, and whether there are new issues that should be considered
- 6) Understand what other organizations are doing to impact the health of the community and how those activities might complement the hospital's initiatives
- 7) Evaluate what issues the stakeholders anticipate becoming a greater concern in the future that we need to consider now

FEEDBACK ON NEEDS BEING ADDRESSED

- Mental Health is being addressed; specifically, tactics identified to address bullying
- Access to services is significant concern as insurance does not equal access
- Consider looking at data through lens of racial equity
- Missing data indicators on infant health
- Lack of data shared on lead screenings

NEEDS THAT SHOULD BE REMOVED/BE CONSIDERED

Nothing was identified to come off the list. Questions were raised and discussed regarding immunizations and children who have religious exemptions; reproductive and sexual health; sexually transmitted disease; asthma; mental/behavioral health; sickle cell disease; substance abuse; and gun violence.

GAPS IN IMPLEMENTATION STRATEGIES

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

- Access to health services, namely understanding how to apply for the benefits related to food programs such as free school lunch
- Mental/Behavioral Health services

- the lack of early intervention in school that leads to a child being removed from the home due to a situation that has reached a crisis
- improved coordination among hospitals, primary care and the Department of Mental Health to diagnose a child in order for that child to receive services
- barrier to receiving mental health services due to limited resources and application process

OTHER ORGANIZATIONS FOR COLLABORATION

- Urban League
- Parents as Teachers
- St. Louis Police Department's Door-to-Door initiative
- Allergy and Asthma Foundation
- Department of Mental Health
- faith community
- philanthropic organizations
- managed care organizations
- input from the community

CURRENT COLLABORATIONS HIGHLIGHTED

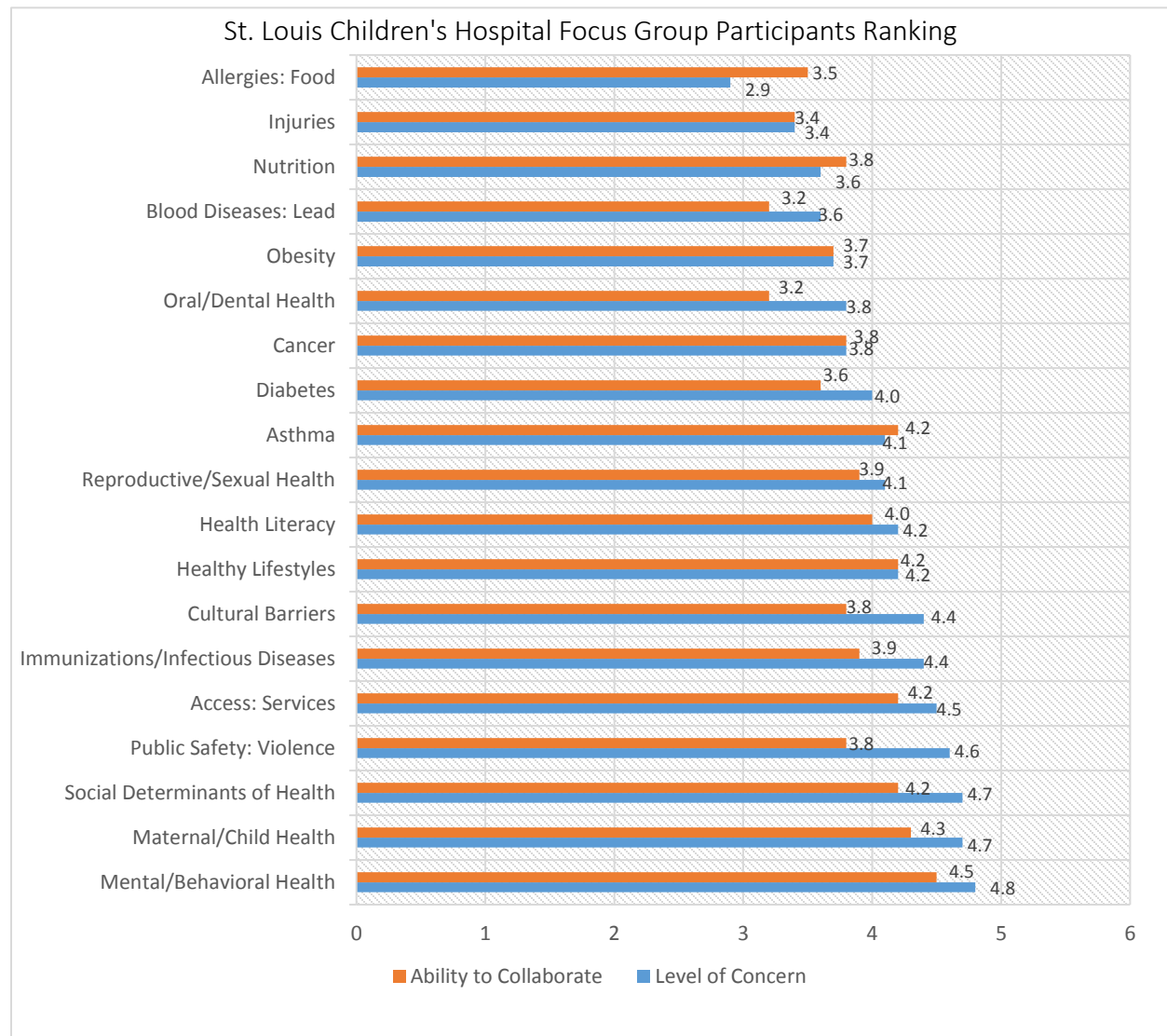
- use of mobile health units
- United Way's 211
- Flourish St. Louis Infant Mortality Reduction Initiative
- Nurses for Newborns
- Casa de Salud

CHANGES SINCE 2016 CHNA/CONCERN FOR THE FUTURE

- maternal mortality, especially among African Americans
- health of transient families
- need for culture of preventive health care
- role of social determinants of health
- state and federal funding and importance of advocacy
- substance abuse
- use of community health workers
- trauma-informed care
- screening for developmental delays
- cultural competency

RATING OF NEEDS

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



The issues of Mental/Behavioral Health were rated the highest both in terms of level of concern and ability to collaborate.

Maternal/Child Health, Social Determinants of Health and Public Safety: Violence rated next in terms of level of concern.

In looking at ability to collaborate, Maternal/Child Health, Social Determinants of Health, Access to Services, Healthy Lifestyles and Asthma all scored high.

Secondary Data Summary

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

In the City of St. Louis, health disparities exist between races resulting in higher rates of disease, injury and death in certain populations. African American children are one of the populations most impacted by health disparities. They are more likely to experience chronic diseases such as asthma, injury and poisoning, adverse pregnancy and birth-related outcomes, emergency mental health treatment and risk factors such as obesity. Access to resources and social and economic factors contribute to these persistent differences.

A summary of observations noted for each health need follows.

- Asthma
- Blood Lead
- Injury and Poisoning
- Maternal and Infant Health
- Sexually Transmitted Infections
- Mental Health

ASTHMA

Asthma in children is a serious public health problem in the U.S.; it is one of the most common long-term diseases in children. The National Health Interview Survey has found that persons under 18 years have higher rates of asthma than any other age group. Asthma in children results in missed days of school, limitations on daily activities, emergency department visits, and hospitalizations. Asthma disproportionately affects low-income and minority children.

Emergency room data points to racial health disparities between African American and White children. In children under 15 years of age, from 2011-2015, the emergency room rate for asthma in African Americans was 10 times the rate of Whites (50.7 percent compared to 5.8 ER visits per 10,000).

BLOOD LEAD

Lead exposure has a number of health effects, from causing high blood pressure and anemia to irreversibly damaging the nervous system. Children are particularly vulnerable to lead exposure. Even low levels of lead in children can have lifelong consequences of adverse developmental effects, including slowed growth, lowered intelligence, learning disabilities, and behavior or attention problems. Typically lead poisoning builds up slowly over time, without any obvious symptoms. The Centers for Disease Control and Prevention recommends public health actions be initiated in children with blood lead levels at or exceeding the current reference level of five micrograms per deciliter. The reference level is based on the highest 2.5 percent of blood lead levels in children who were tested for lead, and will be updated every four years.

Racial differences were also present in blood lead levels among children. African Americans had nearly two (2) times the rate of children age zero to 71 months with elevated blood lead levels compared to White children in 2017 (0.8 percent compared to 0.2* percent). (Children of the White race's value may be statistically unstable and should be interpreted with caution).

INJURY AND POISONING

Injuries are the leading cause of death in children ages 19 and younger. Most of these injuries can be prevented - parents and caregivers play a vital role in protecting children from injuries. According to the Centers for Disease Control and Prevention, every day, over 300 children (ages 19 and younger) in the United States are treated in an emergency department, and two children die, as a result of being poisoned. A poison is any substance that is harmful to your body when ingested, inhaled, injected or absorbed through the skin. Everyday items, such as medicines and household cleaners, can be poisonous to children as well. Medication dosing mistakes and unsupervised ingestions are common causes for poisoning in children.

Racial disparities existed when comparing populations and the ER rate due to injury and poisoning among children. In 2015, African Americans had nearly twice the rate of Whites (156.2 compared to 68.1 per 10,000).

MATERNAL AND INFANT HEALTH

Babies born with low birth weight are more likely than babies of normal weight to have health problems and require specialized medical care in the neonatal intensive care unit. Low birth weight is typically caused by premature birth and fetal growth restriction, both of which are influenced by a mother's health and genetics. The most important things an expectant mother can do to prevent low birth weight are to seek prenatal care, take prenatal vitamins, stop smoking, and stop drinking alcohol and using drugs.

The Healthy People 2020 national health target is to reduce the proportion of infants born with low birth weight to 7.8 percent.

Racial disparities are clearly evident when looking at infant health outcomes by race. African Americans experienced a higher infant mortality rate compared to Whites (13.9 percent compared to 4.5 deaths per 1,000 live births respectively) from 2007-2017. Furthermore, in 2017 African American babies had higher rates of preterm birth (17.7 percent versus 8.5 percent) and low birth weight (18.9 percent versus 6.8 percent) compared to White babies."

Babies born to mothers who do not receive prenatal care are three times more likely to have a low birth weight and five times more likely to die than those born to mothers who do get care. Early prenatal care (i.e. care in the first trimester of a pregnancy) allows women and their health care providers to identify and, when possible, treat or correct health problems and health-compromising behaviors that can be particularly damaging during the initial stages of fetal development. Increasing the number of women who receive prenatal care, and who do so early in their pregnancies, can improve birth outcomes and lower health care costs by reducing the likelihood of complications during pregnancy and childbirth.

The Healthy People 2020 national health target is to increase the proportion of pregnant women who receive prenatal care in the first trimester to 77.9 percent.

Smoking during pregnancy poses risks for both mother and fetus. A baby born to a mother who has smoked during her pregnancy is more likely to have less developed lungs and a lower birth weight, and is more likely to be born prematurely. According to the Centers for Disease Control and Prevention, it is estimated that smoking during pregnancy causes up to ten percent of all infant deaths. Even after a baby is born, secondhand smoking can contribute to SIDS (Sudden Infant Death Syndrome), asthma onset, and stunted growth.

The Healthy People 2020 national health target is to decrease the percentage of women who gave birth and who smoked cigarettes during pregnancy to 1.4 percent.

SEXUALLY TRANSMITTED INFECTIONS

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 age 25 or younger be tested annually for chlamydia. Females aged 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.

Gonorrhea is a sexually transmitted infection (STI) caused by *Neisseria gonorrhoeae*. It is typically asymptomatic, but easy to treat. However, gonorrhea has developed resistance to antibiotics over the years, complicating treatment. Left untreated, gonorrhea can cause serious and permanent health problems in both women and men. In women, gonorrhea is a common cause of pelvic inflammatory disease. In the United States, the highest reported rates of infection are among sexually active teenagers, young adults, and African Americans.

The incidence rate for females aged 15 to 19 years old was disproportionately higher among African Americans for gonorrhea and chlamydia. The rate for gonorrhea was almost 18 times higher in teenage, female, African Americans compared to Whites (4,361 versus 245 cases per 100,000). Furthermore, the rate for chlamydia was almost 10 times higher for African American, female teenagers compared to Whites (13,892 versus 1,425 cases per 100,000).

MENTAL/BEHAVIORAL HEALTH: MENTAL HEALTH

Psychological distress can affect all aspects of our lives. It is important to recognize and address potential psychological issues before they become critical. Occasional down days are normal, but persistent problems should be evaluated and treated by a qualified professional; proper management of mental/emotional health problems can prevent psychological crises warranting hospitalization. According to the National Center for Health Statistics, treatment for mental

disorders is a major cause of hospitalization for children and adolescents between the ages of 10 and 21 years.

The ER rate due to mental health for African American children was more than 3 times higher than the rate for White children (9.1 compared to 3.7 per 10,000).

PARENT HEALTH CONCERNS SURVEY

A team of six researchers from Washington University St. Louis and SLCH developed a survey to assess parents' health concerns for their children and for children in the community. The survey for the 2019 CHNA was altered from the survey used in 2016 and the edits to the list of health concerns was reviewed by managers in the Child Health Advocacy and Outreach Department, the Faith Advisory Board and by the Community Advisory Board. The survey was administered electronically via Qualtrics. The survey was posted to St. Louis Children's Hospital "About Us" section, included in one of the banners on the home page, on the Facebook page, and through email. Additionally, the survey was sent through Qualtrics to help sample the population; 1,003 parents participated. The survey asked parents to rank 44 items on a four-point scale of how much of a problem the item is for children in the community (large, medium, small or not a problem). The 44 items on the survey are listed in Table 2.

TABLE 2 : PARENT SURVEY HEALTH TOPICS

Access: Fruits & Vegetables	Motor Vehicle Accidents
Allergies (Including Food Allergies)	Neighborhood Safety (Including Assaults & Homicides)
Asthma	Obesity
Attention Deficit Hyperactivity Disorder (ADHD/ADD)	Opioid Use
Autism	Overuse of Antibiotics
Bullying (Being the Victim of a Bully)	Poisons (Household Cleaners, Detergents & Medicines)
Community Unrest	Poverty
Depression	Racial/Ethnic Issues
Diabetes	Risks Associated with Immunization Shots
Eating Disorders (Like Anorexia & Bulimia)	Risks Associated with not Getting Immunization Shots
Environmental Pollution	Safe Housing
Getting Health Insurance	School Shootings
Flu	School Violence (Not Including School Shootings)
Heavy Drinking of Alcohol	Sex Trafficking
HIV/AIDS	Sexually Transmitted Infections Other than HIV/AIDs (Chlamydia, Gonorrhea, etc.)
Illegal Drug Use (Not Including Opioids)	Smoking and Tobacco Use
Internet Safety (Cyberbullying & Stranger Encounters)	Sport & Play-Related Injuries
Kid Abuse & Neglect	Stress
Lack of Exercise	Suicide
Lead Toxicity/Poisoning	Teen Pregnancy
Marijuana Use	Understanding Information from Doctor
Measles	Zika

Internal Work Group Prioritization Meetings

The SLCH internal work group completed a series of surveys that provided input on determining the community's health needs. This group was comprised of pediatric medical directors, nurses, community health professionals and business and planning managers. The CHNA team invited experts from within BJC Health Care, SLCH, Washington University and Shriners' Hospital for Children to participate in an internal work group to prioritize health concerns. (Appendix D)

The group met in via conference call /webinar format to explain the group assignments and then each participant completed two assignments using secondary data sources:

- Priorities MICA for Infants and Children and
- Modified Hanlon and Pearl for Diseases and Risk Factors

Priorities Missouri Information for Community Assessments (MICA) for Infants and Children
MICA for Adolescents

Priorities Missouri Information for Community Assessment (MICA) is a system that helps to prioritize diseases using publically available data (<http://health.mo.gov/data/mica/MICA/>). Priorities MICA divides the 18 and younger population into two groups: infants/children and adolescents. The system also provides for the subjective input of experts to rank their perceived seriousness of each issue. The internal work group individually completed online surveys regarding their perception of the seriousness of each issue. Results were aggregated to determine the rank of each disease.

A list of the diseases that Priorities MICA ranked can be found in table 3.

TABLE 3: PRIORITIES MICA DISEASE LIST	
Abuse & Neglect	Gonorrhea
Affective Disorders	Hepatitis A
Alcohol- & Substance-Related	HIV/AIDS
Anemia (excluding Sickle Cell)	Infant Health Problems
Anxiety-Related Mental Disorders	Medical/Surgical Complications
Assaults/Homicides	Motor Vehicle Accidents
Asthma	Pneumonia & Influenza
Burns (Fire & Flames)	Poisoning
Burns (Scalds/Hot Objects)	Pregnancy Complications
Campylobacter	Salmonella
Childhood-Related Mental Disorders	Schizophrenia & Psychosis
Chlamydia	Sickle Cell Anemia
Dental Health Problems	Suicide & Self-Inflicted Injury
Diabetes	Syphilis
Elevated Lead	Tuberculosis
Falls	Vaccine-Preventable Diseases

MODIFIED HANLON METHOD FOR DISEASES AND RISK FACTORS

The internal work group completed a modified version of the Hanlon Method (or Basic Priority Rating System) to prioritize diseases. Using the Hanlon Method allowed the group to include diseases and risk factors not included in the Priorities MICA. Diseases and risk factors are ranked based on the size (how many people affected) and the seriousness (determined by the internal work group members via online survey). State, local and national data were collected using MICA and Healthy Communities Institute Dashboard.

- **Inclusion Criteria:** A disease or risk factor must have national, state or county level data available to calculate a rate per population.
- **Scoring Method:** Size of Disease/Risk Factor x Seriousness of Disease/Risk Factor = Final Score.
- **Size:** The number of people diagnosed with the disease per 100,000 persons (national, state or county level rate).
- **Seriousness:** Determined by using a Likert Scale of 1 (lowest) to 5 (highest). Each internal work group member rated the seriousness of each disease. This information was collected using Qualtrics. Individual scores were aggregated based on the average for each indicator.

TABLE 4: DISEASE AND RISK FACTOR TOPICS IN QUALTRICS SURVEY

Abuse & Neglect	Mental Health
Adolescents Who Smoke	Mothers who Receive Early Prenatal Care
Adults Who Smoke (Second-Hand Smoke)	Mothers Who Smoke During Pregnancy
Alcohol Abuse	Motor Vehicle Collisions
Allergies (Including Food Allergies)	Pneumonia and Influenza
Anemia (Excluding Sickle Cell)	Poisoning
Asthma	Pregnancy Complications
Babies With Low Birth Weight	Premature Death
Bullying	Preterm Births
Burns (Fire & Flames)	Primary Care Provider Rate
Burns (Scalds/Hot Objects)	Recreation & Fitness Facilities
Cancer	Sedentary Behavior
Child Abuse	Self-inflicted injury
Childhood Obesity	Sexually Transmitted Diseases (Inc. HIV/AIDS, Syphilis, Chlamydia, Gonorrhea)
Children Living Below Poverty Level	Sickle Cell Anemia
Children Without Health Insurance	Single-Parent Households
Dental Health Problems	Social Determinants of Health (Food Security, Housing, Utilities, etc.)
Diabetes	Students Eligible for the Free Lunch Program
Elevated Lead Blood Levels	Substance Abuse
Families Living Below Poverty Level	Suicide
Fruit & Vegetable Consumption	Unintentional Injuries
Health Literacy (Inc. Graduation Rates & Reading Proficiency, Cultural Competence)	Vaccine-Preventable Diseases
Infant Health Problems	Violent Crimes (Including Gun Violence)
Infant Mortality	Vision Problems
Injury From Falls/Falling	

PRIORITIZATION OF HEALTH NEEDS

In order to display each source's top diseases and risk factors, conclusive data were compiled from the external focus group, internal work group and the survey of parents.

TABLE 5: COMMUNITY HEALTH NEEDS ASSESSMENT: PRIMARY & SECONDARY DATA SUMMARY						
RANK	MICA ADOLESCENTS	MICA INFANTS	HANLON/PEARL RISK FACTORS	HANLON/PEARL DISEASES	EXTERNAL FOCUS GROUP	PARENT SURVEY
1	Motor Vehicle Accidents	Sickle Cell Anemia	Adolescents Who Smoke	Suicide	Mental/Behavioral Health	Stress
2	Assaults/Homicides	Infant Health Problems	Families Living Below Poverty Level	Violent Crimes (Including Gun Violence)	Maternal/Child Health	Bullying (Being the Victim of a Bully)
3	Asthma	Asthma	Bullying	Abuse & Neglect	Social Determinants of Health	Lack of Exercise
4	Pregnancy Complications	Pneumonia & Influenza	Children Living Below Poverty Level	Mental Health	Public Safety: Violence	Obesity
5	Dental Health Problems	Motor Vehicle Accidents	Percent Mothers Who do not Receive Early Prenatal Care	Asthma	Access: Services	Attention Deficit Hyperactivity Disorder (ADHD/ADD)
6	Sickle Cell Anemia	Vaccine-Preventable Diseases	Children Without Health Insurance	Self-Inflicted Injury (ER Visits, Ages 15-19)	Immunizations/ Infectious Diseases	Internet Safety (Cyberbullying & Stranger Encounters)
7	Pneumonia & Influenza	Assaults/Homicides	Social Determinants of Health (Food Security, Housing, Utilities, etc.)	Dental Health Problems	Cultural Barriers	Racial/Ethnic Issues
8	Vaccine-Preventable Diseases	Dental Health Problems	Substance Abuse	Babies with Low Birth Weight	Healthy Lifestyles	Depression
9	Suicide & Self-Inflicted Injury	Burns (Scalds/Hot Objects)	Alcohol Abuse	Infant Mortality	Health Literacy	Asthma
10	Schizophrenia & Psychosis	Falls	Mothers Who Smoke During Pregnancy	Infant Health Problems	Reproductive/Sexual Health*	Smoking and tobacco use
11	Anxiety-Related Mental Disorders	Affective Disorders	Students Eligible for the Free Lunch Program	Premature Death	Asthma	Illegal drug use
12	Diabetes	Poisoning	Adults Who Smoke (Second-Hand Smoke)	Preterm Births	Diabetes	Allergies (Including Food Allergies)
13	Affective Disorders	Medical/Surgical Complications	Primary Care Provider Rate	Childhood Obesity	Cancer	Poverty
14	Falls	Schizophrenia & Psychosis	Health Literacy (Including graduation rates and reading proficiency, cultural competence)	Unintentional Injuries	Oral / Dental Health	Getting Health Insurance
15	Burns (Scalds/Hot Objects)	Burns (Fire & Flames)	Sedentary Behavior	Pregnancy Complications	Obesity	Opioid Use
16	Medical/Surgical Complications	Diabetes	Single-Parent Households	Motor Vehicle Collisions (Deaths due to MVA)	Blood Diseases: Lead	Environmental Pollution
17	Chlamydia	Anxiety-Related Mental Disorders	Fruit and Vegetable Consumption	Sexually Transmitted Diseases (Inc. HIV/AIDS, Syphilis, Chlamydia, Gonorrhea)	Nutrition	Marijuana Use
18	HIV/AIDS	Abuse & Neglect	Recreation and Fitness Facilities	Child Abuse	Injuries	Community Unrest

TABLE 5 CONTINUED: COMMUNITY HEALTH NEEDS ASSESSMENT: PRIMARY & SECONDARY DATA SUMMARY						
RANK	MICA ADOLESCENTS	MICA INFANTS	HANLON/PEARL RISK FACTORS	HANLON/PEARL DISEASES	EXTERNAL FOCUS GROUP	PARENT SURVEY
19	Alcohol- & Substance-Related	Anemia (excluding Sickle Cell)		Allergies (Including Food Allergies)	Allergies: Food	Kid Abuse & Neglect
20	Anemia (excluding Sickle Cell)	Childhood-Related Mental Disorders		Diabetes		Flu
21	Gonorrhea	Elevated Lead		Vaccine-Preventable Diseases		Neighborhood Safety (Including Assaults & Homicides)
22	Poisoning	Tuberculosis		Pneumonia & Influenza		Teen Pregnancy
23	Syphilis	Hepatitis A		Injury from Falls/Falling		Suicide
24	Tuberculosis	Salmonella		Burns (Fire & Flames)		Heavy Drinking of Alcohol
25	Elevated Lead	Campylobacter		Sickle Cell Anemia		Autism
26	Burns (Fire & Flames)			Burns (Scalds/Hot Objects)		Diabetes
27	Hepatitis A			Anemia (Excluding Sickle Cell)		Motor Vehicle Accidents
28	Salmonella			Elevated Lead Blood Levels		School Violence
29	Campylobacter			Cancer		Sport & Play-Related injuries
30				Poisoning		Sexually Transmitted Infections other than HIV/AIDs (Chlamydia, Gonorrhea, etc.)
31				Vision Problems		Safe Housing
32						Understanding Information from doctor
33						Risks Associated with Not Getting Immunization Shots
34						Overuse of Antibiotics
35						Access to Fruits & Vegetables
36						Sex Trafficking
37						School Shootings
38						Eating Disorders (Like Anorexia & Bulimia)
39						Lead toxicity/poisoning
40						HIV/AIDS
41						Poisons (Household Cleaners, Detergents, & Medicines)
42						Risks Associated With Immunization Shots
43						Measles
44						ZIKA

Due to the language variance from each data source, indicators for each disease and risk factor were grouped by a color-coded health topic. Each health topic includes all of the data sources, indicators and definitions used during this process. A comprehensive table of health topics and indicators are included in Table 12.

The health topics were ranked based on a weighted number of mentions from the risk factors and diseases listed below. Each indicator was weighted from 44 (highest ranked) to 1 (lowest rank) and then divided by the total number of questions asked per topic. The overall rank of each

health topic is listed in Tables 8-9. The number in parenthesis represents the weighted number of mentions.

PRIMARY DATA CONSIDERED:

Column 5: External focus group-ranked results

Column 6 “Parents Health Concerns” survey-ranked results

SECONDARY DATA CONSIDERED:

Column 1: Priorities Missouri Information for Community Assessments (MICA) for Infants and Children ranked results

Column 2: Priorities Missouri Information for Community Assessments (MICA) for Adolescents ranked results

Column 3: Modified Hanlon Method for Risk Factors ranked results (or Basic Priority Rating System)

Column 4: Modified Hanlon Method for Disease Ranked Results (or Basic Priority Rating System)

RANK	HEALTH TOPIC	INDICATOR INCLUDED
1	Asthma	Allergies, asthma and pollution
2	Dental Health	Children with medical needs who also need dental care, dental exams for 3 – 5 year olds, follow up dental care, kids who need root canals under the age of 8, kids who need sedation to receive dental care, and preventive oral health.
3	Maternal, Child Health	Babies with low birth weight, infant mortality, infant health problems, mother who received early prenatal care, mothers who smoke during pregnancy, preterm births, pregnancy complications, and teen pregnancy.
4	Health Literacy	Cooperation for the chronically ill, cultural barriers, cultural competence, knowing when to go to the ER/managing minor ills, reading proficiency, and understanding the need for treatment.
5	Healthy Lifestyle	Access to fruits and vegetables, adolescents who smoke, adults who smoke, children living below poverty level, families living below poverty level, fruit and vegetable consumption, lack of exercise, poverty, recreation and fitness facilities, sedentary behavior, single-parent households, smoking and tobacco use, social determinants of health, students eligible for the free lunch program.
6	Obesity	Childhood Obesity and obesity
7	Mental/Behavioral Health	Abuse and neglect, affective disorders, alcohol- and -substance-related, anxiety-related mental disorders, Attention Deficit Hyperactivity Disorder (ADHD/ADD), Autism, bullying, childhood-related mental disorders, depression, eating disorders, (like anorexia and bulimia) heavy drinking of alcohol, internet safety (cyberbullying and stranger encounters), marijuana use, mental health, overuse of antibiotics, racial/ethnic issues, schizophrenia and psychosis, stress, suicide and self-inflicted injury.
8	Allergy (food)	Food allergies
9	Diabetes	Diabetes
10	Public Safety	Burns (scalds, hot objects, fire and flames from asphalt transfer stations, motor vehicle collisions/accidents, neighborhood recovery and restoration, poisoning, trauma, unintentional injury, community unrest, and violent crimes (assaults, homicide, gun violence).
11	Access to Healthcare	Children without insurance, hearing and vision screenings, maintaining a primary care provider, and medical/surgical complications.
12	Blood Diseases	Anemia, elevated lead, and sickle cell.
13	Cancer	All cancers excluding cervical cancer.
14	Infectious Disease	Influenza, overuse of antibiotics, Ebola, pneumonia, and vaccine preventable diseases.
15	STDs	Cervical cancer, chlamydia, gonorrhea, HIV/AIDS, and syphilis.

TABLE 7: HEALTH TOPICS RANKING FOR MENTIONS			
RANK	HEALTH TOPIC	WEIGHTED TOTAL MENTIONS	TOTAL NUMBER MENTIONS
1	Asthma	37.6	7
2	Dental Health	36.5	4
3	Maternal, Child Health	35.8	13
4	Health Literacy	35.0	3
5	Healthy Lifestyle	32.9	17
6	Obesity	32.8	4
7	Mental/Behavioral Health	32.3	35
8	Allergy (Food)	28.3	3
9	Diabetes	27.8	5
10	Public Safety	26.5	28
11	Access to Healthcare	24.5	10
12	Blood Diseases	24.4	11
13	Cancer	24.0	2
14	Infectious Disease	23.7	18
15	Sexually Transmitted Diseases	21.3	7

CONCLUSION

At the conclusion of the comprehensive assessment process to determine the most critical needs in St. Louis City, the group concluded that St. Louis Children's Hospital's ranks are as follows: Asthma; Dental Health; Maternal, Child Health; Health Literacy; Healthy Lifestyle; Obesity; Mental/Behavioral Health; Allergy (Food); Diabetes; Public Safety; Access To Healthcare; Blood Diseases; Cancer; Infectious Diseases; Sexually Transmitted Diseases.

APPENDICES

Appendix A: About St. Louis Children's Hospital

Founded in 1879, St. Louis Children's Hospital is one of the premier children's hospitals in the United States. It serves not just the children of St. Louis, but children across the world. The hospital provides a full range of pediatric services to the St. Louis metropolitan area and a primary service region covering six states. As the pediatric teaching hospital for Washington University School of Medicine, the hospital offers nationally recognized programs for physician training and research. St. Louis Children's Hospital was re-designated as a Magnet® hospital by the American Nurses Credentialing Center's Magnet Recognition Program, which recognizes excellence in nursing. Only 3 percent of hospitals nationally have achieved Magnet re-designation. St. Louis Children's Hospital is recognized in the top 7 percent nationally by U.S. News & World Report, which in 2017 ranked the hospital in all 10 specialties surveyed.

SLCH has 390 licensed beds, which includes a 41-bed pediatric intensive care unit, 38-bed heart center, a 125-bed newborn intensive care unit, and a 16-bed pediatric bone marrow transplant unit. Each year the hospital receives about 275,000 patient visits, and the school of medicine receives about 150,000 patient visits. SLCH extends its services to children and families in the community through numerous health workshops and outreach interventions. Recent advocacy efforts have included programs on nutrition and fitness, childhood immunizations, home safety for special needs children, car seat and helmet safety, and injury prevention. SLCH established the first dedicated pediatric mobile health program in the region, providing dental care, asthma care and health screening services free of charge, thanks to generous contributions to the hospital's foundation.

In 2018, SLCH provided \$197,185,076 in community benefit providing 301,473 individual service. This total includes:

- \$86,283,471 in financial assistance and means-tested programs and 85,751 individual's services.
- 77,277 individuals on Medicaid at a total net benefit of \$80,663,461

SLCH also provided a total of \$110,901,605 to 215,722 individual program in other community benefits including, community health improvement services, health professional, subsidized health services and cash & in-kind donations. (See Appendix B for Community Benefit Expenses)

Appendix B: SLCH 2018 Total Net Community Benefit Expenses

ST. LOUIS CHILDREN'S HOSPITAL: 2018 TOTAL NET COMMUNITY BENEFIT EXPENSES		
CATEGORY	PERSONS SERVED	TOTAL NET BENEFIT
FINANCIAL ASSISTANCE AND MEANS-TESTED PROGRAMS		
Financial Assistance at Cost	8,474	5,620,010
Medicaid	77,277	80,663,461
TOTAL FINANCIAL ASSISTANCE AND MEANS-TESTED PROGRAMS	85,751	86,283,471
OTHER COMMUNITY BENEFITS		
Community Health Improvement Services	210,093	3,817,414
Health Professional	1,113	76,717,941
Subsidized Health Services	4,516	1,626,137
In-Kind Donation		28,740,113
TOTAL OTHER COMMUNITY BENEFITS	215,722	110,901,605
GRAND TOTAL	301,473	197,185,076

Appendix C: Demographic of St. Louis City vs. Missouri

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

Source: Conduent Healthy Communities Institute

ST. LOUIS COUNTY DEMOGRAPHIC INCLUDING EDUCATION / INCOME / HOUSING VS. MISSOURI		
	ST. LOUIS CITY	MISSOURI
HOUSING		
Housing Units, 2017	176,846	2,792,506
Homeownership, 2013-2017	35	58
Median Housing Units Value, 2013-2017	123,800	145,400
FAMILY & LIVING ARRANGEMENTS		
Households, 2013-2017	139,741	2,386,203
Average Household Size, Percent, 2013-2017	2.2	2.5
Population Age 5+ with Language other than English Spoken at Home, Percent, 2013-2017	8.7	6.0
EDUCATION		
High School Graduate or Higher, Percent of Persons Age 25+, 2013-2017	85.7	89.2
Bachelor's Degree or Higher, Percent of Persons Age 25+, 2013-2017	34.1	28.2
INCOME & POVERTY		
Median Household Income, 2013-2017	\$38,664.0	\$51,542.0
Per Capita Income, 2013-2017	\$26,739.0	\$28,282.0
People Living Below Poverty Level, Percent, 2013-2017	25.0	14.6

Source: Conduent Healthy Communities Institute

PERCENT ST. LOUIS CITY vs. MISSOURI SOCIO-ECONOMIC INDICATORS			
INDICATORS	ST. LOUIS CITY	MISSOURI	U.S.
Students Eligible for Free Lunch Program, Percent, (2016-2017)	92.7	44.1	40.4
Infant Participating in WIC, Percent, (2016)	62.7	51.1	
Renters spending 30% or more on Income on Rent, Percent (2013-2017)	51.4	46.3	50.6
Children Living Below Poverty Level, Percent, (2013-2017)	39.8	20	20.3
Homeownership, percent, (2013-2017)	34.5	57.8	56
Families Living Below Poverty Level, Percent, (2013-2017)	19.7	10.3	10.5
Households With Cash Public Assistance Income, Percent, (2013-2017)	2.7	2.1	2.6
Unemployed Workers in Civilian Labor Force, Percent, (April 2019)	3.5	2.9	3.3

Source: Conduent Healthy Communities Institute

PERCENT ST. LOUIS CITY vs. MISSOURI FAMILIES LIVING BELOW POVERTY LEVEL BY RACE/ETHNICITY (2013-2017)		
RACE/ETHNICITY	ST. LOUIS CITY	MISSOURI
Native Hawaiian / Other Pacific Islander	100	29.4
Other	38.1	28.9
Two or More Races	33.9	17.4
African American	30.9	22.6
Hispanic or Latino	23.1	21.9
Asian	21.7	10.0
White, non-Hispanic	6.7	8.2
American Indian or Alaska Native	6.2	16.3
Overall	19.7	10.3

Source: Conduent Healthy Communities Institute

PERCENT ST. LOUIS CITY vs. MISSOURI CHILDREN LIVING BELOW POVERTY LEVEL BY AGE GROUP (2013-2017)		
AGE GROUP	ST. LOUIS CITY	MISSOURI
less than 6	38.8	22.7
6-11 years	44.5	20.7
12-17 years	36	16.8
Overall	39.8	20

Source: Conduent Healthy Communities Institute

PERCENT ST. LOUIS CITY vs. MISSOURI CHILDREN LIVING BELOW POVERTY LEVEL BY RACE/ETHNICITY (2013-2017)

RACE/ETHNICITY	ST. LOUIS CITY	MISSOURI
Native Hawaiian / Other Pacific Islander	100.0	44.0
Other	52.9	39.8
African American	50.5	39.2
Hispanic or Latino	45.2	30.5
Two or More Races	35.5	24.4
Asian	24.0	13.1
White, non-Hispanic	13.7	15.3
Overall	39.8	20.0

Source: Conduent Healthy Communities Institute

PERCENT ST. LOUIS CITY vs. MISSOURI INFANTS PARTICIPATING IN WIC BY RACE/ETHNICITY (2016)

RACE/ETHNICITY	ST. LOUIS CITY	MISSOURI
African American	88.5	82
White	26.1	42.2
Overall	62.7	51.1

Source: Conduent Healthy Communities Institute

Appendix D Focus Group Report

PERCEPTIONS OF THE PEDIATRIC HEALTH NEEDS
OF ST. LOUIS CITY RESIDENTS
FROM THE PERSPECTIVES OF COMMUNITY LEADERS

PREPARED BY:

Angela Ferris Chambers
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June 29, 2018

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BACKGROUND

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

St. Louis Children's Hospital (SLCH) and SSM Health Cardinal Glennon Children's Hospital conducted their first stakeholder assessment in 2012, followed by a second in 2015. Shriners Hospitals for Children – St. Louis officially joined the process for the first time this year.

The hospitals are on slightly different timelines with this iteration. The next CHNAs for Cardinal Glennon and Shriners Hospitals for Children – St. Louis are due by the end of December 2018, while SLCH's will be finalized by the end of December 2019.

RESEARCH OBJECTIVES

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

Specifically, the discussion focused around the following ideas:

- 1) Determine whether the needs identified in the 2015/2016 CHNAs are still the right areas on which to focus
- 2) Explore whether there are there any needs on the list that should no longer be a priority
- 3) Determine where there are the gaps in the plans to address the prioritized needs
- 4) Identify other organizations with whom these hospitals should consider collaborating
- 5) Discuss what has changed since 2015/2016 when these needs were prioritized, and whether there are there new issues which should be considered
- 6) Understand what other organizations are doing to impact the health of the community and how those activities might complement the hospitals' initiatives
- 7) Evaluate what issues the stakeholders anticipate becoming a greater concern in the future that we need to consider now

METHODOLOGY

To fulfill the PPACA requirements, St. Louis Children's Hospital, SSM Health Cardinal Glennon and Shriners Hospitals for Children – St. Louis conducted a single focus group with public health experts and those with a special interest in the health needs of St. Louis City children. It was held on May 31, 2018 at Central Reformed Congregation in the Central West End. The group was facilitated by Angela Ferris Chambers of BJC HealthCare. The discussion lasted about ninety minutes.

15 individuals representing various St. Louis City organizations participated in the discussion. (See Appendix)

Steven Burghart, President, SSM Health Cardinal Glennon Children's Hospital, welcomed participants at the beginning of the meeting. Those observing on behalf of the participating hospitals were also introduced. At the conclusion of the meeting, Joan Magruder, BJC Group President, St. Louis Children's Hospital, thanked everyone for sharing their perspectives.

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

The moderator shared the demographic and socioeconomic profile of St. Louis City, the needs prioritized by the hospitals in their most recent assessments, and the highlights of each hospital's implementation plan.

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

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

NEEDS BEING ADDRESSED	SSM CARDINAL GLENNON CHILDREN'S HOSPITAL	SHRINERS HOSPITALS FOR CHILDREN	ST. LOUIS CHILDREN'S
Access to Care/Services	X	X	X*
Allergies			X
Asthma	X		X
Blood Diseases (Lead Poisoning)			X
Health Literacy			X
Healthy Lifestyles			X**
Immunizations			X
Maternal/Infant/Child Health	X		X
Mental/Behavioral Health		X	X
Obesity			X
Oral/Dental Health			X
Public Safety: Injuries			X
Reproductive/Sexual Health Including (STDs)			X

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

NEEDS NOT BEING ADDRESSED	SSM CARDINAL GLENNON CHILDREN'S HOSPITAL	SHRINERS HOSPITALS FOR CHILDREN	ST. LOUIS CHILDREN'S HOSPITAL
Cancer	X		X
Blood Disease (Lead Poisoning)	X		
Cultural Barriers	X		
Diabetes			X
Immunizations	X		
Mental/Behavioral Health	X		
Nutrition	X		
Oral/dental Health	X		
Public Safety: Injuries	X		
Public Safety: Violence	X		
Social Determinants of Health	X		

* Includes screening for lead

** Includes smoking cessation/tobacco education

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

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

Other health indicators were shared describing access to health insurance, access to healthcare providers, infectious disease rates (including STDs), and children receiving cash assistance/SNAP benefits.

At the end of the presentation, the community stakeholders were asked to rate the identified needs based on their perceived level of concern in the community, and the ability of the community to collaborate around them.

KEY FINDINGS

FEEDBACK ON THE NEEDS BEING ADDRESSED:

The stakeholders felt positively that mental health was one of the needs being addressed, and specifically mentioned the tactics identified to address bullying. The representative from the St. Louis Police Department mentioned that there has been an increase in the number of retaliations related to bullying, which reinforces the need for programs not only to reduce bullying but to prevent the ones being bullied from responding in a negative way.

Some felt that access to services was still their highest concern. Although the statistics reflect that a large majority of children are eligible for insurance, this doesn't necessarily mean that they are enrolled. The same concern was expressed about the fact that although many may be

enrolled in an insurance program, they may not know how to access services. The person was making the point that insurance does not equal access, and we need to better understand these barriers.

- Some families are hesitant to apply for benefits for fear of “messing up” benefits that are attached to something else. There are automatic dis-enrollments that happen because a mother applied for SNAP and then lost her Medicaid. Or because a family’s income varies from month-to-month, they may be eligible at one point in time for services but ineligible over the course of a year. This creates a culture of fear within the population we are trying to reach.

After viewing all of the data on the health rankings, one stakeholder suggested that we must consider looking at the data through the lens of racial equity. The data might suggest that strides have been made in infant mortality, but it is not equal among all groups. This should be a part of the process as each of the identified needs are evaluated.

One stakeholder felt that data indicators are missing around infant health. Some are included to assess prenatal health, but indicators such as infant weight gain, head circumference, and achieving weight goals by the child’s first birthday should also be considered.

A question was raised about the lack of data that was shared on lead screening, even though lead levels in children have been tracked for over 20 years. In her organization, Vision for Children at Risk, there has been a decrease in the number of children screened for lead.

NEEDS THAT SHOULD COME OFF OF THE LIST:

Nothing was identified to come off the list.

ADDITIONAL NEEDS THAT SHOULD BE CONSIDERED:

The St. Louis City Department of Health director mentioned her ongoing concern about immunizations and that 137 children currently have a religious exemption. She is worried about her department’s ability to respond quickly if there is a potential outbreak in which those children and their families need to be notified.

The issue of reproductive and sexual health should be considered a higher priority, due to high rates of sexually transmitted diseases.

The school nurse representative identified asthma and mental/behavioral health as the areas that were most top-of-mind for her colleagues. Sickle cell disease should also be considered for addition to the list.

Substance abuse was identified as missing from the list of identified needs. Although often included as part of behavioral health, this stakeholder felt that it deserves to be named. The hospital can play an important role in education about use of prescription medications and pain management, both among children and their parents.

Although Public Safety: Violence was called out as a specific area of need, another stakeholder felt gun violence specifically needs to be identified, and as a public health issue rather than a criminal one.

GAPS BETWEEN DEFINED NEEDS AND OUR ABILITY TO ADDRESS THEM:

During the discussion of access to health services, one stakeholder felt that there is a gap in even knowing how to apply for the benefits related to food programs, like free lunch. This impacts children's health due to lack of nutritious food as well as an understanding of healthy lifestyles.

Another stakeholder commented about gaps in mental/behavioral health services in schools.

- The lack of early intervention may lead to a child being removed from his home due to a situation that has reached a crisis. If there was an opportunity to address issues earlier at the point when a child acts-out in school, the crisis might be prevented and the child may not need to be put in foster care.
- To receive services from the Department of Mental Health (DMH), a child must also have a diagnosis. If the child has only been seen in the emergency room, the physician is reluctant to give the child a diagnosis. This suggests that there is a need for improved coordination between hospitals, primary care and the behavioral health center.
- This also related to DMH requirements that an individual be classified as severe or serious enough to receive services. Because of limited resources, they cannot provide services to anyone except the most severe. The process to apply for mental health services was also described as cumbersome by those who are familiar with it, again creating a barrier to receiving mental health services.

OTHER ORGANIZATIONS WITH WHOM TO COLLABORATE:

One stakeholder was glad to see that many of the tactics are being implemented in collaboration with organizations that are physically located in the community and not in the hospitals. She felt that the impact is greater when the services are offered in the community, rather than requiring children and families to come to the hospitals to receive them.

The Urban League representative mentioned that at this time of year, families are coming in regularly for utility assistance, housing assistance and other services. This presents health care organizations with an opportunity to capture these families and inform them about health services.

Parents as Teachers regularly goes into homes bringing educational resources to young children. They could also become part of the conversation about how to access health resources.

The representative of the St. Louis Police Department mentioned that there is now a program in place where city representatives, including police officers, fire fighters and others are going door-to-door in St. Louis City to talk to area residents about their homes. They hand out a pamphlet with telephone numbers that identifies who to call for different services. They would be happy to add information related to available health services in St. Louis City. He offered the services of his four staff members to take the information door-to-door as long as people felt it was of value.

In addition, he suggested that it would be beneficial to have a central location to which they could direct area families to get more information about services that are available. It could be a web site, or a central call center number, that would direct them to some of the non-profit organizations that provide services to the community. It could help educate them about who they should be talking to, and what questions should they ask.

The Allergy and Asthma Foundation mentioned that they are coming full circle in the way they provide support by making home visits. Because you can visually identify triggers in the home, it often has a greater impact on reducing incidence of asthma attacks. When you see a child in the ED, you can't address those things if you don't know about them.

With all of the discussion that was taking place around mental health services, many felt that the state Department of Mental Health should have a seat at the stakeholder table. In addition, representatives of the faith community – the archdiocese and area pastors – would also be valuable resources and influencers. Many of them already have outreach programs in place on which healthcare organizations could piggyback to share information and services with the community. Another participant mentioned that we should engage philanthropic organizations and managed care organizations, as the latter has a major influence over what programs are financially supported.

Several suggested that there should be input from the community itself as to what they need. A few organizations mentioned hosting community cafes on various topics to solicit feedback. However, they mentioned that a lot of intention needs to go into how to organize and structure those meetings so you get the honest feedback you are looking for.

CURRENT COLLABORATIONS THAT WERE HIGHLIGHTED:

The use of mobile health units is a positive example of providing health services to people where they are, rather than making them come to us. Affinia, People's and Healthy Kids Express all have mobile units that have had a positive impact on our community.

The representative from Generate Health indicated that they have been working with the United Way's 211 centralized data base as a resource that residents can refer to for finding information about resources and how to access them. They have an action team that is part of the Flourish St. Louis Infant Mortality Reduction Initiative that meets every fourth Thursday of the month. They are exploring how to improve this system and make it accessible to everyone.

Nurses for Newborns has been reaching out to all of their referral sources to remind them that they serve babies and families prenatally. Because of their name, many were waiting until the baby was born to contact them. However, they know that their outcomes are much better if they can reach moms before the birth. Their service is free, and they have a goal to reach at least 50% of their moms prenatally.

The spokesperson for Casa de Salud mentioned that, because of their name, there is a misperception that they only serve Latinos. The organization's only criteria for service is that an individual be uninsured. Their case management program helps people navigate the system and access care. They currently have collaborations with six other agencies in their new mental health center that recently opened.

The representative from Abbott Ambulance suggested that all of the organizations who had gathered for this discussion were, among themselves, a rich set of resources that consumers should be aware of. Identifying a way to bring information about them to the families of St. Louis City would be an educational service to the community, and help them to help themselves.

CHANGES SINCE THE 2015/2016 CHNA/CONCERN FOR THE FUTURE:

There is a major concern about maternal mortality, especially among African American moms who are dying at higher rates during, and immediately after pregnancy.

Another concern is the health of transient families, who often do not have a regular source of health care. There is no good way to keep track of them as they move within the St. Louis region.

- Some feel that the best way to reach these families is through one-on-one door-to-door outreach. Others feel that the schools are the best way to reach these families because they need to submit their transfer documentation.

The culture of preventive health care - understanding that there is value in regular check-ups and health screening - was also identified as a consideration. This is a foreign concept to some families, who avoid seeing the doctor and only go when they are very sick. Children grow up believing the emergency room is where you go to receive health care, and then become adults who visit the ED for primary care later on in life.

There is also greater recognition today that social determinants of health play a larger role in a family's health than ever before. Many feel that hospitals need to figure out a way to help address them, or all of their other efforts will be wasted. One stakeholder mentioned a risk assessment tool called PREPARE that screens for multiple social risk factors and how they impact health. They are using the tool to understand how to engage people differently based on their needs and their attitudes.

The state representative mentioned that there also needs to be a recognition that "economic incentives are not going to change and they're going to get worse." State funding has been reduced to rely more on federal funding. But the federal government is trying to reduce their investment as well. So health organizations cannot expect to get help from the state. He pointed out the importance of advocacy and that personal relationships with government officials can often have an impact on getting small or pilot programs funded. Demonstrating the cost savings of a particular program can also carry a lot of weight in gaining support and funding. Substance abuse will become a more important concern as the use of opioids and synthetics increase. In families, more children will go into foster care because of parents who are using these substances and are unable to care for their children. There are questions, though, about having sufficient resources to address this growing need.

Discussion about using community health workers was not happening as much three years ago. In some communities, there are community health workers working with children with asthma and children with diabetes.

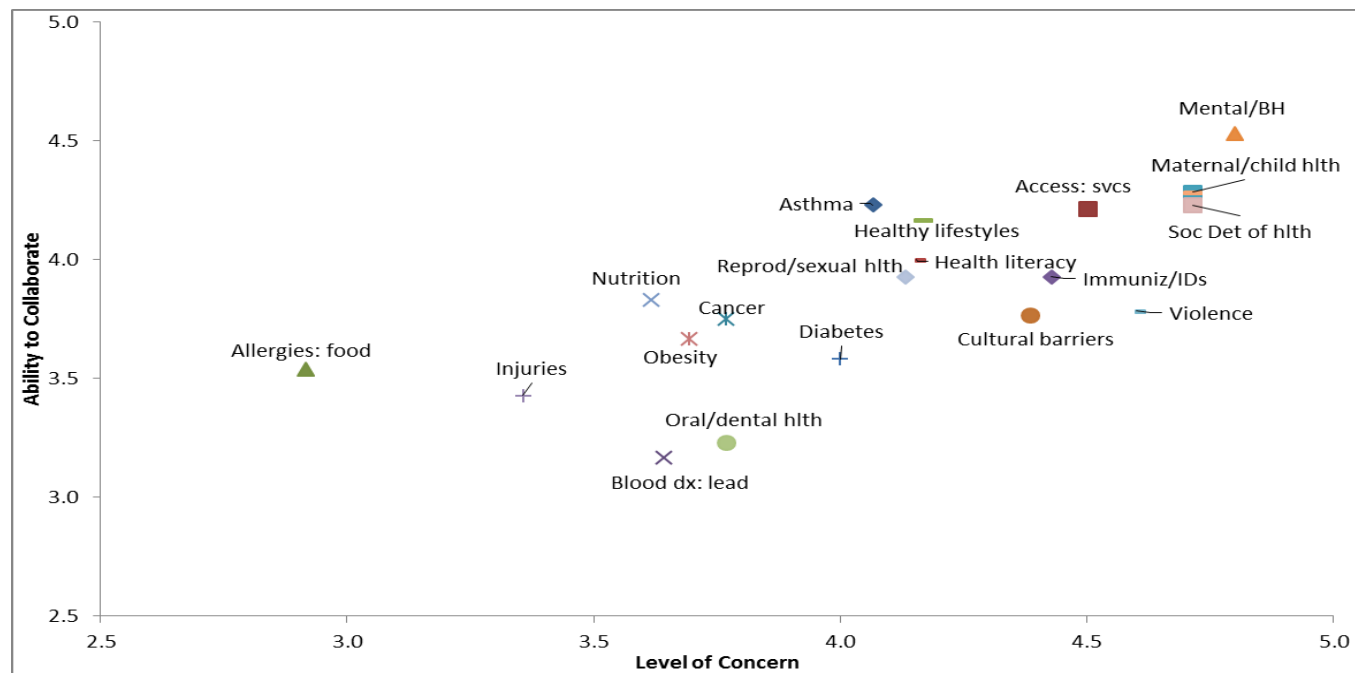
There is also more conversation now about trauma-informed care compared to three years ago. There are more discussions around trying to understand what happened to a child that resulted in their behavior, rather than asking “what’s wrong with you.”

There is also more discussion today in the early childhood field about screening for developmental delays. Identifying issues sooner allows them to be addressed sooner, but again, there are not always sufficient resources to do so.

There is a continuing trend in recognizing the importance of cultural competency in the way that health services are provided. St. Louis has been identified as one of the fastest growing metropolitan areas for the foreign-born. If that trend continues, then so will the importance of cultural competency.

RATING OF NEEDS

Participants rated the needs identified in the 2015/2016 assessment on a scale of 1 (low) to 5 (high), based on their perceived level of community concern and the ability of community organizations to collaborate around them.



The issues of mental/behavioral health were rated the highest both in terms of level of concern and ability to collaborate.

Maternal/child health, social determinants of health and public safety: violence rated next in terms of level of concern.

In looking at ability to collaborate, maternal/child health, social determinants of health, access to services, healthy lifestyles and asthma all scored high.

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

Average Scores

	Level of Concern	Ability to Collaborate
Mental/Behavioral Health	4.8	4.5
Maternal/Child hHealth	4.7	4.3
Social Determinants of Health	4.7	4.2
Public Safety: Violence	4.6	3.8
Access: Services	4.5	4.2
Immunizations/Infectious Diseases	4.4	3.9
Cultural Barriers	4.4	3.8
Healthy Lifestyles	4.2	4.2
Health Literacy	4.2	4.0
Reproductive/Sexual Health (STIs)	4.1	3.9
Asthma	4.1	4.2
Diabetes	4.0	3.6
Cancer	3.8	3.8
Oral/Dental Health	3.8	3.2
Obesity	3.7	3.7
Blood Diseases: Lead	3.6	3.2
Nutrition	3.6	3.8
Injuries	3.4	3.4
Allergies: Food	2.9	3.5

* Including STDs

NEXT STEPS

Using the input the hospitals received from community stakeholders, St. Louis Children's Hospital, SSM Health Cardinal Glennon Children's Hospital and Shriners Hospitals – St. Louis will consult with their internal workgroups to evaluate this feedback. They will consider it with other secondary data they may review, and determine whether/how their priorities should change.

Cardinal Glennon and Shriners must complete their needs assessments and associated implementation plans by December 31, 2018; St. Louis Children's Hospital must complete theirs by December 31, 2019.

Appendix E: Focus Group Participants & Hospitals' Observers

ST. LOUIS CHILDREN'S HOSPITAL FOCUS GROUP PARTICIPANTS		
NAME	ORGANIZATION	ATTENDANCE
Anderson-Rice, Rose	Generate Health	X
Buhlinger, Yvonne	Affinia Healthcare	X
Butler, Michael	State Representative	X
Cole, Marge	MO Dept of Health and Senior Services	X
Fleisher, Randy	Central Reform Congregation	
Franklin, Wil	People's Health Centers	X
Hoester, Liz	Vision for Children at Risk	X
Moore, Melba	City of St. Louis Dept of Health	X
Nelson, Reagan	Asthma and Allergy Foundation	X
Ohlemillerr, Melinda	Nurses for Newborns	X
Polak, Colleen	Voices for Children	X
Riopedre, Jorge	Casa de Salud	X
Simpson, Matthew	St. Louis Police Department	X
Swabby, Tracey	Abbott EMS / CG Parent Rep	X
Williamson-Powell, Tammie	Voices for Children	X

ST. LOUIS PEDIATRIC'S HOSPITALS OBSERVERS ROOSTER

NAME	ORGANIZATION	ATTENDANCE
Bakkar, Kim	SSM Health	X
Burghart, Steven	SSM Health Cardinal Glennon	X
Isaak, Elizabeth	Shriners Hospitals for Children	X
King, Karley	BJC HealthCare	X
Kozma, Nicole	St. Louis Children's Hospital	X
Magruder, Joan	St. Louis Children's Hospital	X
Pabst, Jessica	SSM Health	X
Schaeffer, Melody	St. Louis Children's Hospital	X
Strehlow, Denise	BJC HealthCare	X
Todd, Greta	St. Louis Children's Hospital	X
Ward, Kel	St. Louis Children's Hospital	X
Wickenhauser, Carol	Shriners Hospitals for Children	X
Wilhold, Diana	BJC HealthCare	X

Appendix F: St. Louis Children’s Hospital CHNA Internal Work Group

ST. LOUIS CHILDREN'S HOSPITAL INTERNAL WORK GROUP	
NAME	TITLE
Alison Nash, MD	Professor of Clinical Pediatrics
Alysa Ellis, MD	Assistant Professor of Pediatrics, Peds Allergy Immun Pulmonary Med
Andrea Al-Hussain	Clinical Supervisor, Call Center, BJC Behavioral Health
Carolyn Schainker, RD	Manager, Community Education and Events
Cydney Gilbert	Social Worker
Daniel Stoeckel, DDS	Instructor in Clinical Surgery, Washington University
Daniel Stoeckel, DDS	Dentist, St. Louis Children’s Hospital
David Hoffman	Director, Emergency Services
Diana Wilhold	Director, BJC School Outreach & Youth Development
Fahd Ahmad, MD	Assistant Professor of Pediatrics, Pediatrics Emergency Medicine
Greta Todd	Executive Director, Diversity & Inclusion, Child Health Advocacy & Outreach
Jane Garbutt, MD	Professor of Medicine, Internal Medicine – General Medical Science
Janis Stoll, MD	Assistant Professor of Pediatrics, Pediatrics Gastroenterology
Julie Bruns	Director, Call Center & Market Research
Katie Plax, MD	Ferring Family Chair Professor of Pediatrics, Pediatrics Diagnostic Center
Lisa Meadows	Director, Health Kids Express
Maggie Wolf	Director, Newborn Intensive Services
Mary Mike Cradock, PhD	Director of Behavioral Health
Melody Schaeffer, MPH	Supervisor, Community Benefit & Evaluation
Moe Schmid	Manager, EU, Transport, Trauma
Nicole Arciniega	Women’s Health Education and Outreach Coordinator, Women and Infants
Nicole Kozma, MPH	Director, Outreach Programs, Child Health Advocacy & Outreach Department
Shaneco Fennoy, MPH	Manager, Raising St. Louis
Susanne Rosenberg	Director, Hematology Oncology

Source: Conduent Healthy Communities Institute

Appendix G: Secondary Data

ASTHMA

ST. LOUIS CITY vs. MISSOURI ASTHMA RATE AMONG CHILDREN AGE 0-14 /10,000 POPULATION (2011-2015)					
PERCENT EMERGENCY ROOM RATE DUE TO ASTHMA AMONG CHILDREN UNDER 15 YEARS			PERCENT HOSPITALIZATION RATE DUE TO ASTHMA AMONG CHILDREN UNDER 15 YEARS		
Change over Time			Change over Time		
Change over Time	St. Louis City	Missouri	Change over Time	St. Louis City	Missouri
2007-2011	33.5	10.1	2007-2011	67.5	21.8
2008-2012	34.4	10.5	2008-2012	66.5	21.5
2009-2013	34.9	10.6	2009-2013	60.2	20.5
2010-2014	36.0	10.9	2010-2014	58.1	20.1
2011-2015	35.3	10.8	2011-2015	53.9	18.7
By Age Group			By Age Group		
Age Group	St. Louis City	Missouri	Age Group	St. Louis City	Missouri
Less than 1 year	11.4	4.8	Less than 1 year	12.7	8.7
1-4 year	47.4	15.2	1-4 year	71.9	31.2
5-9 year	40.2	12.2	5-9 year	59.5	20.0
10-14 year	24.4	7.1	10-14 year	41.1	9.5
Overall	35.3	10.8	Overall	53.9	18.7
By Gender			By Gender		
Gender	St. Louis City	Missouri	Gender	St. Louis City	Missouri
Female	28.7	8.3	Female	42.8	14.0
Male	41.6	13.1	Male	64.4	23.1
Overall	35.3	10.8	Overall	53.9	18.7
By Race/Ethnicity			By Race/Ethnicity		
Ethnicity/Race	St. Louis City	Missouri	Ethnicity/Race	St. Louis City	Missouri
African American	50.7	36.6	African American	77.4	54.7
White	5.8	5.0	White	9.3	9.8
Overall	35.3	10.8	Overall	53.9	18.7

Source: Conduent Healthy Communities Institute

BLOOD LEAD LEVEL

PERCENT ST. LOUIS CITY vs. MISSOURI CHILDREN AGE 0-71 MONTHS OF AGE WITH ELEVATED BLOOD LEAD LEVELS (2017)

CHANGE OVER TIME			BY RACE/ETHNICITY		
CHANGE OVER TIME	ST. LOUIS CITY	MISSOURI	RACE/ETHNICITY	ST LOUIS CITY	MISSOURI
2011	2.2	0.8	African American	0.8	0.3
2012	2.3	0.8	White	0.2*	0.1
2013	1.9	0.7	Overall	0.7	0.1
2014	4.5	0.8	(*) Value may be statistically unstable and should be interpreted with caution		
2016	0.7	0.1			
2017	0.7	0.1			

Source: Conduent Healthy Communities Institute

INJURY AND POISONING

ST. LOUIS CITY vs. MISSOURI INJURY AND POISONING RATE AMONG CHILDREN AGE 0-14 / 10,000 POPULATION (2011-2015)					
EMERGENCY ROOM RATE DUE TO INJURY & POISONING AMONG CHILDREN AGE 0-14 /10,000			HOSPITALIZATION RATE DUE TO INJURY & POISONING AMONG CHILDREN AGE 0-14 /10,000 POPULATION		
CHANGE OVER TIME			CHANGE OVER TIME		
CHANGE OVER TIME	ST. LOUIS CITY	MISSOURI	CHANGE OVER TIME	ST. LOUIS CITY	MISSOURI
2007-2011	130.0	113.3	2007-2011	42.8	26.1
2008-2012	133.6	112.0	2008-2012	42.6	24.8
2009-2013	136.1	109.9	2009-2013	39.3	23.5
2010-2014	129.1	105.6	2010-2014	37.5	22.1
2011-2015	129.7	103.5	2011-2015	34.4	21.1
BY AGE GROUP			BY AGE GROUP		
AGE GROUP	ST. LOUIS CITY	MISSOURI	AGE GROUP	ST. LOUIS CITY	MISSOURI
Less than 1 Year	86.5	70.0	Less than 1 Year	65.2	40.7
1-4 Years	157.8	129.1	1-4 Years	42.9	24.1
5-9 Years	117.0	89.2	5-9 Years	23.0	15.0
10-14 Years	127.6	104.3	10-14 Years	29.3	20.9
Overall	129.7	103.5	Overall	34.4	21.1
BY GENDER			BY GENDER		
GENDER	ST. LOUIS CITY	MISSOURI	GENDER	ST. LOUIS CITY	MISSOURI
Female	115.6	93.0	Female	30.3	17.5
Male	143.1	117.7	Male	38.4	24.4
Overall	129.7	105.6	Overall	34.4	21.1
BY RACE/ETHNICITY			BY RACE/ETHNICITY		
RACE/ETHNICITY	ST. LOUIS CITY	MISSOURI	RACE/ETHNICITY	ST. LOUIS CITY	MISSOURI
African American	156.2	91.7	African American	40.5	26.2
White	68.1	114.7	White	17.9	18.4
Overall	129.7	103.5	Overall	34.4	21.1

Source: Conduent Healthy Communities Institute

MATERNAL AND CHILD HEALTH

PERCENT ST. LOUIS CITY vs. MISSOURI MATERNAL AND CHILD HEALTH RATE					
BABIES WITH LOW BIRTH WEIGHT BY MATERNAL RACE/ETHNICITY (2017)			MOTHERS WHO SMOKED DURING PREGNANCY BY RACE/ETHNICITY (2017)		
RACE/ETHNICITY	ST. LOUIS CITY	MISSOURI	RACE/ETHNICITY	ST. LOUIS CITY	MISSOURI
Asian/Hawaiian/Pacific Island	13.3	8.9	Asian/Hawaiian/Pacific Island	3.3	2.2
African American	18.9	14.9	African American	13.2	11.4
Hispanic	6.7*	7.8	Hispanic	4.2*	6.3
White	6.8	7.5	White	9.4	15.8
Overall	13.0	8.7	Overall	11.1	14.5
MOTHERS WHO RECEIVED EARLY PRENATAL CARE BY RACE/ETHNICITY (2013-2017)			MOTHERS WHO RECEIVED NO PRENATAL CARE BY RACE/ETHNICITY (2013-2017)		
RACE/ETHNICITY	ST. LOUIS CITY	MISSOURI	RACE/ETHNICITY	ST. LOUIS CITY	MISSOURI
American Indian/Alaska Native	63.8	63.7	African American	2.2	2.7
Asian/Hawaiian/Pacific Island	75.0	69.4	Hispanic	1.6*	1.8
African American	61.2	60.9	Other	1.3	1.5
Hispanic	65.3	60.5	White	1.2	0.9
Other	60.1	60.8	Overall	2.6	1.2
White	82.7	76.3	(*) Value may be statistically unstable and should be interpreted with caution		
Overall	70.4	73.5	PRETERM BIRTHS BY MATERNAL RACE/ETHNICITY (2017)		
INFANT MORTALITY BY RACE/ETHNICITY BY RACE/ETHNICITY (2007-2017)			RACE/ETHNICITY	ST. LOUIS CITY	MISSOURI
RACE/ETHNICITY	ST. LOUIS CITY	MISSOURI	Asian / Hawaiian / Pacific Island	13.3	9.5
African American	13.9	12.9	African American	17.7	14.8
White	4.5	5.5	Hispanic	8.3	9.8
Overall	10.1	6.7	White	8.5	9.8
			Overall	13.7	10.6

Source: Conduent Healthy Communities Institute

SEXUALLY TRANSMITTED INFECTIONS

ST. LOUIS CITY vs. MISSOURI GONORRHEA/CHLAMYDIA INCIDENCE RATE: FEMALES / 100,000 FEMALES AGE 15-19 (2010-2014)

Gonorrhea Incidence Rate: Females 15-19: Change over Time			Chlamydia Incidence Rate: Females 15-19: Change over Time		
Change over Time	St. Louis City	Missouri	Change over Time	St. Louis City	Missouri
2005-2009	4,262.30	875.5	2005-2009	11,986.70	3,487.90
2006-2010	3,965.10	820.4	2006-2010	11,917.60	3,559.60
2007-2011	3,533.40	755.8	2007-2011	11,957.30	3,650.90
2008-2012	3,304.20	698.3	2008-2012	11,865	3,717.50
2009-2013	3,202.10	658.6	2009-2013	11,756.20	3,690
2010-2014	3,313	642	2010-2014	11,362.20	3,607
Gonorrhea Incidence Rate: Females 15-19 by Race/Ethnicity			Gonorrhea Incidence Rate: Females 15-19 by Race/Ethnicity		
Ethnicity/Race	St. Louis City	Missouri	Ethnicity/Race	St. Louis City	Missouri
African American	4,360.70	2,898.50	African American	13,891.50	10,205.30
White	245	145.7	White	1,424.60	16,48.2
Overall	3,313	642	Overall	11,362.20	3,607

Source: Conduent Healthy Communities Institute

MENTAL/BEHAVIORAL HEALTH

ST. LOUIS CITY vs. MISSOURI MENTAL HEALTH RATE AMONG CHILDREN AGE 0-14 / 10,000 POPULATION (2011-2015)

ER Rate due to Mental Health among Children over Time			Hospitalization Rate due to Mental Health among Children over Time		
Change over Time	St. Louis City	Missouri	Change over Time	St. Louis City	Missouri
2007-2011	4.5	2.9	2007-2011	39.0	55.3
2008-2012	4.9	3.1	2008-2012	40.4	57.1
2009-2013	5.7	3.4	2009-2013	46.4	59.7
2010-2014	6.5	3.8	2010-2014	54.7	62.7
2011-2015	7.4	4.2	2011-2015	59.7	64.5
ER Rate due to Mental Health among Children by Gender			Hospitalization Rate due to Mental Health among Children by Gender		
Gender	St. Louis City	Missouri	Gender	St. Louis City	Missouri
Female	6.8	4.2	Female	59.1	61.9
Male	7.9	4.2	Male	60.3	67.9
Overall	7.4	4.2	Overall	59.7	64.5
ER Rate due Mental Health among Children by Race / Ethnicity			Hospitalization Rate due Mental Health among Children by Race / Ethnicity		
Ethnicity/Race	St. Louis City	Missouri	Ethnicity/Race	St. Louis City	Missouri
African American	9.1	5.7	African American	62.2	80.1
White	3.7	3.7	White	37.1	55.2
Overall	7.4	4.2	Overall	59.7	64.5
ER Rate due to Mental Health among Children by Age (2010-2014)					
Age Group	St. Louis City	Missouri			
Less than 1 Year	0.5	0.3			
1-4 Years	0.9	0.1			
5-9 Years	6.4	2.8			
10-14 Years	17.2	9.2			
Overall	7.4	4.2			

Source: Conduent Healthy Communities Institute

DATA SOURCES USED FOR THE SECONDARY DATA ANALYSIS INCLUDED:

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

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. MICA provides a common means for users to access public health related data to assist in defining the health status and needs of Missourians. <https://healthapps.dhss.mo.gov/MoPhims/MOPHIMSHome>

IMPLEMENTATION STRATEGY



Community Health Needs to be Addressed

COMMUNITY HEALTH NEED: PUBLIC SAFETY

Community Health Need Rationale

According to Healthy People 2020, injuries are the leading cause of death for Americans age one to 44, and a leading cause of disability for all ages. Unintentional injuries are a common reason for ER utilization at SLCH and are often preventable.

SLCH currently operates Safety Street to address injury prevention at community sites across the metropolitan area. The Safety Street program is unique in both the defined community and the surrounding area and has shown to be effective at increasing safety knowledge among children. This program is delivered at community sites both in and outside the defined community.

PROGRAM: SAFETY STREET

Strategy Goal:

To prevent injuries related to pedestrian, home, and vehicle safety, playground/sports, water, strangers and stray animals. Safety Street, an interactive walk-on exhibit, teaches children how to avoid unintentional injuries.

Strategy Objective

Trained program specialists will educate 1,500 children and adults per year on being safe in their community and at home through an interactive safety exhibit in the school or community setting.

Strategy Action

The SLCH Child Health Advocacy and Outreach Department is responsible for this safety program. Safety Street staff will collaborate with local community organizations to provide education on safety topics relevant to elementary school students.

Strategy Outcomes

Through participation in this program, children will learn how to stay safe from common causes of injury and death.

Strategy Outcome Measurements

Progress will be evaluated by tracking data on the number of participants, and number of community events scheduled.

PROGRAM: SAFETY STOP

Safety Stop is a free service that educates parents and caregivers about car seat, helmet, home and sleep safety.

Strategy Goal

To prevent injuries in children related to bicycle, home, sleep and vehicle safety.

Strategy Objectives

- a) Provide 2,000 car seat, bicycle helmet, home safety or sleep safety consultations to parents/caregivers per year.
- b) Increase knowledge among child seat safety consultation participants by 5 percent on post-test compared to pre-test.

Strategy Action

SLCH's Community Education and Child Health Advocacy and Outreach departments. At the hospital safety center, certified child passenger safety technicians educate parents and caregivers on how to use safety equipment such as child safety seats and bicycle helmets. Motor vehicle, bicycle, and home safety equipment is available for purchase at a reduced rate. Staff provides free child safety educational presentations in the community and safety seat consultations, child safety seat installations, helmet safety checks, and home safety consults at the safety center.

Strategy Outcomes

Participants of this program will increase knowledge and skills of how to keep children safe in the car, on bicycles, at home and while sleeping.

Strategy Outcome Measurements

This program will be evaluated using a pre-and post-knowledge test for a sample of participants. Progress will also be evaluated by tracking the number of car seat, helmet, home and sleep safety consultations, number of pre- and posttests completed, and percent of car seats installed incorrectly upon arrival.

COMMUNITY HEALTH NEED: OBESITY

Community Health Need Rationale:

Obesity now affects 17 percent of all children and adolescents in the United States - triple the rate from just one generation ago according to the CDC. Childhood obesity can have a harmful effect on the body and lead to a variety of adult-onset diseases in childhood such as high blood pressure, high cholesterol, diabetes, breathing problems, socio-emotional difficulties and musculoskeletal problems.

PROGRAM: HEAD TO TOE

SLCH's Child Health Advocacy and Outreach Department currently provides the Head to Toe program twice annually to serve children from within St. Louis City as well as the surrounding community who have a written recommendation from their physician stating their need for the program.

Strategy Goal:

To improve knowledge and skill in leading a healthy lifestyle among children and their families by offering a multidisciplinary approach to weight management.

Strategy Objectives:

- a) Provide medium intensive group educational sessions that focus on nutrition, physical activity and emotional health to 30-60 families per year.
- b) Increase knowledge of nutrition, physical activity and emotional health among participants by a 5 percent increase in average knowledge score among participants at post-test compared to pre-test.

Strategy Action:

SLCH's Child Health Advocacy and Outreach Department is responsible for this program. An exercise specialist, registered dietitian, social worker and health promotion professionals facilitate 17 medium intensive group sessions on topics regarding physical activity, nutrition and emotional health.

Strategy Outcomes:

Participants learn skills and techniques that will help them incorporate heart healthy behavior into their lifestyles.

Strategy Outcome Measurements:

This program is evaluated by measuring improvements in physical activity, nutrition, self-image, family relationships and healthy behaviors. The tools used to measure these outcomes capture changes in behavior, knowledge, skill and readiness to change assessment tools. Progress will be evaluated by measuring the number of sessions and the number of participants who complete pre- and post- assessment tools.

PROGRAM: “FUN”TASTIC NUTRITION

Strategy Description:

BJC School Outreach and Youth Development currently provides “Fun”tastic Nutrition, a classroom-based program that teaches students in grades 2 to 5 the importance of healthy eating habits and a healthy lifestyle.

Strategy Goal:

To improve knowledge and emphasize the overall importance of healthy eating and good nutritional habits.

Strategy Objective:

- a) Improve overall knowledge of healthy eating and nutritional habits of students by 10 percent from pre- to post-test assessment.

Strategy Action:

“Fun”tastic Nutrition consists of four one-hour sessions taught by a registered dietitian and includes the following topics:

- Importance of healthy eating and MyPlate
- Exercise and heart health
- Label reading
- The digestive system

After the program is delivered, a final program report is given to teachers, administrators and staff to help foster future classroom-based education.

Strategy Outcomes:

The intended outcome of this program is to increase knowledge of healthy eating and good nutritional habits by 10 percent.

Strategy Outcome Measurements:

To measure the overall increase in knowledge, a pre- and post-test is administered to all students enrolled in the program. Questions on the assessments not only measure knowledge, but student attitude, perception, and intention to change specific health behaviors.

PROGRAM: EXPLORE HEALTH

Strategy Description

BJC School Outreach and Youth Development currently provides Explore Health, a classroom-based program that teaches students in grades 6 to 12 the importance of healthy eating habits and a healthy lifestyle.

Strategy Goal

To improve knowledge and emphasize the overall importance of healthy eating and good nutritional habits.

Strategy Objective

- a) Improve overall knowledge of healthy eating and nutritional habits of students by 10% from pre- to post-test assessment.

Strategy Action

Explore Health consists of four one-hour sessions taught by a registered dietitian and includes the following topics:

- Learning healthy eating basics
- Learning the importance of family medical history
- Learning how to read a food label and make informed decisions
- Examining food advertisements and learning how to evaluate claims made

After the program is delivered, a final program report is given to teachers, administrators and staff to help foster future classroom-based education.

Strategy Outcomes

The intended outcome of this program is to increase knowledge of healthy eating and good nutritional habits by 10 percent.

Strategy Outcome Measurements

To measure the overall increase in knowledge, a pre- and post-test is administered to all students enrolled in the program. Questions on the assessments not only measure knowledge, but student attitude, perception, and intention to change specific health behaviors.

PROGRAM: SNEAKERS

Strategy Description:

BJC School Outreach and Youth Development currently provides SNEAKERS, a classroom-based program that teaches students in grades 4 to 6 the importance of cardiovascular health and understanding fitness principles.

Strategy Goal:

To improve knowledge and emphasize the importance of the relationship between how the body systems work and relate to physical activity.

Strategy Objective:

- a) Improve overall knowledge of cardiovascular health and fitness principles of students by 10 percent from pre- to post-test assessment.

Strategy Action

SNEAKERS consists of four one-hour sessions taught by a registered dietitian and includes the following topics:

- Systems of the body
- Ways to keep the heart healthy
- Eating to maximize energy and muscle development
- How to exercise and stretch the major muscle groups
- Setting exercise goals

After the program is delivered, a final program report is given to teachers, administrators and staff to help foster future classroom-based education.

Program Outcomes:

The intended outcome of this program is to increase knowledge of cardiovascular health and fitness principles by 10 percent.

Program Outcome Measurements:

To measure the overall increase in knowledge, a pre- and post-test is administered to all students enrolled in the program. Questions on the assessments not only measure knowledge, but student attitude, perception, and intention to change specific health behaviors.

COMMUNITY HEALTH NEED: RESPIRATORY: ASTHMA

Community Health Need Rationale:

Asthma is the most common chronic disease in children ages 0-18. It is the No. 1 reason children miss school and a parent misses work. At SLCH, it is the top reason for admission. In the United States, 9.5 percent of children are living with asthma. Asthma affects 11.6 percent of black persons, 8.2 percent of white persons and 7.3 percent of Hispanic persons in the U.S. (Source: National Health Interview Survey, CDC).

This program is conducted in zip codes with very high rates of asthma prevalence and uncontrolled asthma among children. Students are selected for asthma both inside and outside the defined community in order to reach children with the highest need.

PROGRAM: HEALTHY KIDS EXPRESS ASTHMA (HKEA)

Strategy Goal

To reduce asthma morbidity, decrease asthma disparities, improve coordinated care efforts, and increase quality of life for asthma patients and their families.

Strategy Objectives

- a) Enroll 30 percent of children identified as having asthma into the intensive asthma program from the schools served for 2020-2021 school year and thereafter for three school years
- b) Develop asthma action plans for at least 90 percent of students enrolled in the program, according to National Asthma Education and Prevention Program standards.
- c) Ensure 70 percent of asthma coach patients have created disease management goals.
- d) Ensure 75 percent of families receiving asthma coach patients will attend at least 1 return visit to their PCP/Specialist during their 12 month participation in the asthma coach program.
- e) Increase participant knowledge/skills about asthma by 10 percent during intensive asthma program.
- f) Students will improve the use of their inhaler through a technique checklist by 20 percent compared to their first score by the end of 2020-2021 school year and thereafter for three school years

Strategy Action

SLCH's Child Health Advocacy and Outreach Department is responsible for disseminating the HKEA program to the community. Children enrolled in HKEA receive specialized asthma care and education from a team of nurses, nurse practitioners and asthma educators in a school setting. A social worker and asthma coaches are available to provide one-on-one education with parents and assist as needed with the many socioeconomic barriers families often experience. The program collaborates with multiple clinical advisory groups, hospital administrators, advocacy groups and local schools to connect children to asthma care and resources.

Strategy Outcomes:

We expect this program to impact children with asthma, teaching them to manage their asthma properly by increasing their knowledge of asthma signs and symptoms, improve their ability to use medications correctly and follow an asthma action plan. This intervention is intended to improve asthma related outcomes for these children.

Strategy Outcome Measures

This program is evaluated by measuring improvement in skill of using an inhaler/aero chamber, increase in asthma knowledge, and an increase in access to healthcare for at-risk children. The tools used to measure these outcomes include data tracking for the number of intensive program clinical encounters, the number of community events, absenteeism, emergency room visits, asthma coach encounters, and the number of PCP patient and staff encounters. Evidence-based guidelines for asthma programs are used to create evaluation tools.

COMMUNITY HEALTH NEED: ALLERGIES (FOOD)

Community Health Need Rationale

The Centers for Disease Control reported an 18 percent increase in life-threatening food allergies (LTFA) among children less than 18 years of age between 1997 and 2007. 16-18 percent of LTFA reactions happen in the school setting. Of the children who had reactions, 25 percent of them did not know they had a food allergy. Schools are a prime environment for preventing LTFA reactions and making sure school staff is trained to handle them when they do occur.

PROGRAM: FOOD ALLERGY MANAGEMENT AND EDUCATION (FAME) PROGRAM

Strategy Description

The Food Allergy Management and Education program (FAME) leads local and national partners to improve food allergy management best practices and ensures that efforts in St. Louis City lead the industry standard and best practices for the nation.

Strategy Goal

To reduce the number of allergic reactions and even deaths due to LTFA by providing resources and education to schools to create safe learning environments for students with LTFA.

Strategy Objective

Disseminate allergy management materials through an online microsite to 3,000 people.

Strategy Action

FAME staff provides education, training and resources on food allergy and anaphylaxis management for parents, students, all school personnel, as well as physicians and clinical staff through educational sessions and distribution of food allergy management toolkits and manuals free of charge.

Strategy Outcomes

This program seeks to impact knowledge of school personnel regarding food allergy management and to improve food allergy reaction avoidance practices and emergency protocols in schools.

Strategy Outcomes Measurement

The number of unique microsite visitors will be measured through the use of Google Analytics.

COMMUNITY HEALTH NEED: DENTAL HEALTH

Community Health Rationale

Tooth decay is one of the most common childhood diseases. It is five times more common than asthma and seven times more common than hay fever. Oral health is poorer among certain racial and ethnic groups including, non-Hispanic African Americans, Hispanics, American Indians and Alaska Natives. Mexican American and non-Hispanic African American children ages 2-8 are particularly at risk for poor oral health.

In Missouri, 27.1 percent of school-aged children have untreated tooth decay. In 2010, less than 30 percent of children with Medicaid received dental services of any kind.

PROGRAM: HEALTHY KIDS EXPRESS DENTAL (HKED) PROGRAM

Strategy Description

SLCH's Child Health Advocacy and Outreach department is responsible for HKED. HKED provides free comprehensive dental care in schools, early child care centers and at community youth and family organization sites. Locations are selected based upon a needs assessment that reviews access to local health clinics and socioeconomic barriers.

Strategy Goal

Children will receive appropriate care to treat dental cavities, prevent future oral health problems and connect with a community dental home.

Strategy Objectives

- a) HKED will provide free services to a minimum of 700 children per year from marginalized populations within a 60-mile-radius of SLCH.
- b) Services will include dental exams, X-rays, cleanings, and treatment of dental cavities and decay. HKED will also educate children and families serviced on oral hygiene/safety and proper food/nutrition to limit or prevent tooth decay.

Strategy Action

SLCH's Child Health Advocacy and Outreach department is responsible for this program. HKED staff includes a dentist, dental assistants, and social workers. HKED staff provides dental services for free in schools, child care centers and community youth and family organization sites. Schools and community sites are selected based on socioeconomic status and availability and access to local health clinics. Upon obtaining parent/guardian consent for service, children are given a dental exam, X-rays and cleaning. If dental cavities are determined, then the team will coordinate on-site restorative treatment or refer to the child to an appropriate community provider. Staff utilize anxiety reducing techniques to keep the patient calm and focused. They also promote oral health and hygiene by teaching children about brushing and flossing techniques, using fluoride and how to prevent dental cavities. HKED staff will work in partnership with BJC medical

interpreters, community site partners and community dental providers to meet the goals of this program.

Strategy Outcomes

Children participating in the program will receive proper dental treatment to prevent dental cavities and restore dental health.

Strategy Outcome Measurement

The number of children served, dental procedures administered, and oral hygiene knowledge will be used to measure the reach and progress of the program. An electronic dental record and tracking forms will be used to record the progress of patients in receiving appropriate treatment.

COMMUNITY HEALTH NEED: ACCESS: SERVICES & INFECTIOUS DISEASES

Community Health Need Rationale

According to the Brookings Institution, “Poor children in the United States start school at a disadvantage in terms of their early skills, behaviors and health.” In Missouri, 35 percent of children report not having a medical home and 13.3 percent of Missourians reported not seeing a doctor because of cost. Barriers to accessing immunizations and health screenings include transportation, lack of insurance and low rate of primary care providers accepting new Medicaid patients.

Health screenings can detect problems early that would eventually impede normal growth and learning. This is reflected in state guidelines for hearing, vision and growth screenings in schools. Additionally, Head Start programs require blood lead, blood iron, and blood pressure screenings for enrollment.

PROGRAM: HEALTHY KIDS EXPRESS MEDICAL SCREENING (HKEM) PROGRAM

Strategy Description:

SLCH’s Child Health Advocacy and Outreach Department is responsible for Healthy Kids Express Medical Screening. This program provides health screenings and administers immunizations to children in the community.

Strategy Goal

Increase access to health screenings for high-risk children by eliminating or reducing barriers to health care access.

Strategy Objectives

- a) Provide 7,800 screening services and immunizations per year for children in high-risk populations, free of charge
- b) Connect 80 percent of participants who receive follow-up services to appropriate treatment

Strategy Action

SLCH’s Child Health Advocacy and Outreach Department is responsible for these programs. HKEM staff will conduct health screenings (such as blood lead, hearing, vision, blood pressure, blood iron, height and weight) and administer immunizations to children ages 0-18 at schools and community youth and family organization sites. Children who are found to need further treatment receive follow-up from a social worker. The social worker works with the family to help them navigate health insurance, transportation and other healthcare access barriers to getting appropriate treatment.

HKEM staff partner with BJC medical interpreters, community site staff/administration, community health providers, state and local health departments and programs, local universities

and colleges, local coalitions, and state and local nurses associations to accomplish the goals of this program.

Program Outcomes

Children participating in the program will receive proper health screenings to detect health issues and receive follow-up services to link them to the proper treatment.

Program Outcomes Measurements

The number of children served, screenings given and children followed-up with will be used to measure the reach and progress of the program.

COMMUNITY HEALTH NEED: MENTAL/BEHAVIORAL HEALTH

Community Health Need Rationale

According to the U.S. Center for Safe and Drug-Free Schools, empathy skills are essential to learn to prevent and reduce violence associated with bullying. The lack of a clearly understood definition of bullying and how to address bullying behavior contribute to unsafe schools and communities. To address this community health need, BJC School Outreach and Youth Development implements the following programs:

PROGRAM: BUDDIES

Strategy Description

BJC School Outreach and Youth currently provides Buddies, a classroom-based program that helps students in grades K-5 understand the impact of bullying behaviors and provides training for healthy interactions.

Strategy Goal

To improve knowledge and emphasize the overall importance of healthy communication, problem-solving strategies, personal responsibility, and other life skills

Strategy Objective:

Improve overall knowledge of positive social skills and the impact of bullying behavior of students by 10 percent from pre- to post-test assessment

Strategy Action

Buddies consists of four 45 minute sessions taught by a Health Educator and includes the following topics:

- The definition of bullying and the impact of bullying behaviors
- Ways to handle bullying behaviors without retaliation
- Friendship skills and ways to show kindness
- How to admit mistakes and forgive the mistakes of others
- Acceptance
- Communication skills

After the program is delivered, a Final Program Report is given to teachers, administrators and staff to help foster future classroom-based education.

Strategy Outcomes

The intended outcome of this program is to increase knowledge of healthy communication, problem-solving strategies, personal responsibility, and other life skills by 10 percent.

Strategy Outcome Measurements

To measure the overall increase in knowledge, a pre- and post-test is administered to all students enrolled in the program. Questions on the assessments not only measure knowledge, but student attitude, perception, and intention to change specific health behaviors.

PROGRAM: INTERSECTIONS

Program Description:

BJC School Outreach and Youth provides Intersections, a classroom-based program that helps students in grades 6-8 learn the necessary life skills to achieve academic and social success.

Strategy Goal

To improve knowledge and emphasize social skills that contributes to healthy relationships and self-identity.

Strategy Objective:

- a) Improve overall knowledge of positive social skills that contribute to healthy relationships and self-identity of students by 10 percent from pre- to post-test assessment

Strategy Action

Intersections consists of six 45 minute sessions taught by a Health Educator and includes the following topics:

- Defining and identifying the hallmarks of emotional intelligence
- Strategies for thinking, learning and communicating more effectively
- Communication styles, both verbal and nonverbal
- Self-awareness and Star Qualities
- Successful relationships with peers and adults

After the program is delivered, a Final Program Report is given to teachers, administrators and staff to help foster future classroom-based education.

Strategy Outcomes

The intended outcome of this program is to increase knowledge of social skills that contribute to healthy relationships and self-identity by 10 percent.

Strategy Outcome Measurements

To measure the overall increase in knowledge, a pre- and post-test is administered to all students enrolled in the program. Questions on the assessments not only measure knowledge, but student attitude, perception, and intention to change specific health behaviors.

Program Description

BJC School Outreach and Youth provides ConneXtions, a classroom-based program that helps students in grades 6-8 learn to preserve overall body health when using digital communication.

Strategy Goal

To improve knowledge and foster social intelligence, use assertive communication, and make responsible decisions on information sharing.

Strategy Objective:

- a) Improve overall knowledge of social intelligence of students by 10 percent from pre- to post-test assessment

Strategy Action

ConneXtions consists of four 45 minute sessions taught by a Health Educator and includes the following topics:

- Communication – verbal, nonverbal and tone
- Bullying in all forms
- Social media
- Problem solving
- Information sharing, posting and sending

After the program is delivered, a Final Program Report is given to teachers, administrators and staff to help foster future classroom-based education.

Strategy Outcomes

The intended outcome of this program is to increase knowledge of social intelligence by 10 percent.

Strategy Outcome Measurements:

To measure the overall increase in knowledge, a pre- and post-test is administered to all students enrolled in the program. Questions on the assessments not only measure knowledge, but student attitude, perception, and intention to change specific health behaviors.

STRATEGY DESCRIPTION

Healthy Kids, Healthy Minds™ places full-time school nurses and mental health professionals in four St. Louis public schools. The nurses assess physical needs and the mental health care providers address the socioemotional components for the students. Through Healthy Kids, Healthy Minds collaborative efforts with staff and parents, both physical health and psychological needs of students are being addressed.

STRATEGY GOALS

To help students manage barriers to learning that stem from health, social emotional and behavioral needs.

STRATEGY OBJECTIVES

- a) Reduction of discipline referrals and suspensions for students on ESC's caseload by 3 percent
- b) Improvement in the immunization compliance rate to 100 percent
- c) Increase in the number of trauma informed practices implemented in the schools as determined by the trauma informed care environment plan established at the beginning by 3 percent

STRATEGY ACTION

A school nurse and behavioral health therapist are embedded in four schools to:

- Address access to services for pediatric behavioral/mental health
- Bridge health care and education
- Provide care coordination by setting specific health goals for the student

STRATEGY OUTCOMES

We expect this program to impact children with health and behavior/emotional needs, teaching them to strategies manage their concerns.

STRATEGY OUTCOME MEASUREMENTS - this program is evaluated by measuring:

- Reduction of discipline referrals and suspensions for students on ESC's caseload
- Improvement in the immunization compliance rate
- Increase in the number of trauma-informed practices implemented in the schools as determined by the trauma-informed care environment plan established at the beginning

COMMUNITY HEALTH NEED: HEALTHY LIFESTYLES: HEALTH EDUCATION

Community Health Need Rationale

Based on the outcomes provided by the Youth Risk Behavior Surveillance (YRBS) Survey, alcohol, tobacco and other illicit drug use are health behaviors that young people are too often involved with before school, during school and within their community. Educating youth by providing developmental and critical thinking skills to make informed decisions when confronted with use can reduce diseases, promote healthy choices that empower and advocate for a healthy lifestyle. To address this community health need, BJC School Outreach and Youth Development implements the following program:

PROGRAM: POWER OF CHOICE

Program Description

BJC School Outreach and Youth provides Power of Choice, a classroom-based program that helps students in grades 5-12 learn to make informed choices when it comes to the use and abuse of tobacco, alcohol and other drugs.

Strategy Goal

To improve knowledge and emphasize the overall health issues associated with tobacco, alcohol and illicit drugs.

Strategy Objective

Improve overall knowledge of health issues associated with tobacco, alcohol, and illicit drug use by 10 percent from pre- to post-test assessment

Strategy Action

Power of Choice consists of four 45 minute sessions taught by a Health Educator and includes the following topics:

- Reasons people choose to use or not use substances
- Healthy alternatives and great natural highs
- Media “hooks” that encourage use and media “counter-ads” that discourage use
- Long-term consequences of use as seen in healthy and diseased organs
- Resources to assess addiction and access help, if necessary

After the program is delivered, a Final Program Report is given to teachers, administrators and staff to help foster future classroom-based education.

Strategy Outcomes: The intended outcome of this program is to increase knowledge of health issues associated with tobacco, alcohol and illicit drug use by 10 percent.

Strategy Outcome Measurements

To measure the overall increase in knowledge, a pre- and post-test is administered to all students enrolled in the program. Questions on the assessments not only measure knowledge, but student attitude, perception and intention to change specific health behaviors.

COMMUNITY HEALTH NEED: HEALTHY LIFESTYLES/ STD

Community Health Need Rationale.

Adolescents are faced with many influences that impact decisions regarding sexual behavior and self-identity. Therefore, this health education program provides students with sexual health knowledge and critical thinking skills that translate into changes in attitudes and behaviors, leading to better health. To address this community health need, BJC School Outreach and Youth Development implements the following program:

PROGRAM: HEART 2 HEART

Strategy Description

BJC School Outreach and Youth Development implements Heart 2 Heart, a classroom-based program that helps students in grades 6-12 make healthy decisions about their relationships and sexuality.

Strategy Goal

To help students understand the human body and make good decisions about their sexual health.

Strategy Objective

- a) Improve overall knowledge of sexual health of students by 10 percent from pre- to post-test assessment

Strategy Action

Heart 2 Heart consists of four 45 minute sessions (grades 6-8) or six 45 minute sessions (grades 9-12) taught by a Health Educator and includes the following topics:

- Media influences and messages
- Self-esteem and body image
- Healthy and unhealthy relationships
- Communication skills (Middle School only)
- Refusal Skills (Middle School only)
- Sexually transmitted infections (High School only)
- Teen pregnancy (High School only)

After the program is delivered, a Final Program Report is given to teachers, administrators and staff to help foster future classroom-based education.

Strategy Outcomes

The intended outcome of this program is to increase knowledge of sexual health by 10 percent.

Strategy Outcome Measurements

To measure the overall increase in knowledge, a pre- and post-test is administered to all students enrolled in the program. Questions on the assessments not only measure knowledge, but student attitude, perception, and intention to change specific health behaviors.

COMMUNITY HEALTH NEED: ACCESS: BLOOD DISEASES

Community Health Need Rationale:

Head Start programs require blood lead, blood iron and blood pressure screenings for enrollment.

PROGRAM: HEALTHY KIDS EXPRESS MEDICAL SCREENING (HKEM) PROGRAM

Program Description

SLCH's Child Health Advocacy and Outreach Department is responsible for Healthy Kids Express Medical Screening. This program provides health screenings and administers immunizations to children in the community.

Strategy Goal

Increase access to health screenings for high-risk children by eliminating or reducing barriers to health care access.

Strategy Objective

Provide 300 blood screenings per year for children in high-risk populations, free of charge

Strategy Action

Child Health Advocacy and Outreach Department is responsible for these programs. HKEM staff will conduct health screenings (such as blood lead, blood pressure, blood iron, blood glucose and blood cholesterol) to children ages 0-18 at schools and community youth and family organization sites.

HKEM staff partner with BJC medical interpreters, community site staff/ administration, community health providers, state and local health departments and programs, local universities and colleges, local coalitions, state and local nurses association to accomplish the goals of this program.

Strategy Outcomes

Children participating in the program will receive proper health screenings to detect health issues.

Strategy Outcomes Measurements

The number of screenings given will be used to measure the reach and progress of the program.

COMMUNITY HEALTH NEED: MATERNAL / CHILD HEALTH

Community Health Need Rationale

According to Healthy People 2020, improving the well-being of mothers, infants and children is an important public health goal for the United States¹. As the Center on the Developing Child at Harvard University stated: “When developing biological systems are strengthened by positive early experiences, healthy children are more likely to grow into healthy adults.”²

PROGRAM: RAISING ST. LOUIS (RSTL)

Strategy Description

SLCH’s Child Health Advocacy and Outreach Department is responsible for RSTL. RSTL provides home visitation services to improve child health, meet developmental milestones, and support parents in raising children to reach their full potential. Any woman or family who lives within an identified 22 ZIP code area and is pregnant or has a child up to age 4 is eligible to participate at no cost to the participant. The program offers monthly group and family connections for peer support, Community Health Workers help parents navigate resources to meet family goals and offer specialized programming for fathers and all males. RSTL connects with mothers, fathers and other family members to help build and sustain the family unit, reduce the high infant mortality rate, promote literacy and increase access to health care.

Strategy Goal

For every child to get the best start on a healthy and full life.

Strategy Objectives

- 1) Improve birth outcomes by focusing on 4 core areas:
 - a) Birth weight and gestational age
 - b) Improved child health and development
 - c) Birth Spacing
 - d) Community Health Workers
- 2) In five years (end of 2024) see a 12.5 percent reduction in (gestational age, birth weight) of children involved in the RSTL program.
- 3) Provide 1,174 exams and screenings to 89 percent of clients to improve child health and development.
- 4) 60 percent of mothers who deliver in 2019 will have a pregnancy spacing of 8 to 12 months.
- 5) Community Health Workers will help to bridge cultural and language barriers and improve health care outcomes by providing 400 clients with 800 resources, social services, visitation(s) and outreach.
- 6) Father engagement programming to offer specialized programming for 100 fathers and all males per year.

Strategy Action

The core program components will include referrals to appropriate prenatal care, evidence-based home visitation programs, parent support groups and navigation of healthcare and social services. Our program is available to pregnant women residing in the north St. Louis zip codes of:

63101,63102,63103,63104,63106,63107,63108,63112,63113,63115,63120, 63130, 63134,63135,63136,63137,63138,63140,63147,63031,63033,63034.

Strategy Outcomes

Through participation in the RSTL program, children will be healthy, developing at an age-appropriate level, have developmentally delays identified and referrals given to appropriate practitioners and organizations. Improve systems of care by helping participants navigate and find appropriate medical homes and other resources to address social determinant of health.

Strategy Outcome Measurements

This program will be evaluated by utilizing a mixed-methods approach to ensure outcomes are being met. Progress will be evaluated by tracking data on the number of participants, birth outcomes, social/emotional and developmental screenings, referrals to resources and social services, and participant satisfaction.

PROGRAM: TEEN OUTREACH PROGRAM

Program Description

SLCH's Child Health Advocacy and Outreach Department is responsible for the Teen Outreach Program (TOP), which is a positive youth development classroom curriculum for grades 6-12. This program promotes academic success, life and leadership skills, and healthy behaviors and relationships.

Strategy Goal

Increase school success and prevent teen pregnancy and risky behaviors by teaching life skills, sense of purpose, and healthy behaviors and relationships.

Strategy Objectives:

- a) Operate at least 22 TOP clubs throughout the school year
- b) Expose 500 students to the TOP curriculum
- c) 85 percent of the students in the TOP program who attend at least 24 sessions over 9 months will complete at least 17 hours of community service
- d) At post-test, less than 10 percent of youth participating in the TOP program will report a pregnancy or fathering a child

Strategy Action

SLCH's Child Health Advocacy and Outreach Department is responsible for this program. Teen Outreach Program staff includes health educators and a supervisor. Staff provides weekly lessons throughout the school year in the classroom to 6-12th grade students to engage teens in the TOP curriculum-guided discussion and community service learning.

Strategy Outcomes

Participants increase social emotional and life skills, develop a positive sense of self and strengthen relationships with others and connections to community and as a result improve academic outcomes and lower risky behavior and pregnancy.

Strategy Outcome Measurement

Participants in the TOP club complete a self-report pre- and post-survey. TOP health educators will monitor attendance and record the number of community service hours completed by each individual student and club.

Community Health Needs that Will Not be Addressed

The hospital does not currently focus any community benefit programs on the health topic of cancer. The health topic of cancer only received two mentions as stated in this report; therefore, the internal focus group did not create an implementation strategy for this health topic. In addition, there are no resources to address this issue in the community. The hospital does not currently offer any community benefit programs focused on the topic of diabetes, although it does offer programs to address obesity, a major risk factor of diabetes.

The hospital plans to continue to offer activities and initiatives already in place to address the follow health needs: mental health, social determinants of health, health literacy and blood diseases.