COMMUNITY HEALTH

NEEDS ASSESSMENT

REPORT AND IMPLEMENTATION PLAN

Children's
HOSPITAL • ST. LOUIS
BJC HealthCare

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY

St. Louis Children's Hospital, 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 280 licensed beds, and each year approximately 275,000 patients visit the hospital. Since its founding in 1879, St. Louis Children's 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. (See Appendix A).

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 2016 assessment in two phases. The first phase consisted of a focus group discussion with key leaders and stakeholders representing the community. This group reviewed the primary data and community health needs findings from 2013 and discussed changes that had occurred since 2013. Additionally, the focus group reviewed gaps in meeting needs, as well as identified potential community organizations for the hospital to collaborate with in addressing needs. A Parent Health Concerns Survey was also administered to 1,083 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 and 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 2016 CHNA plan, the hospital will focus on: Obesity; Dental Health; Allergy (Food); Healthy Lifestyles; Respiratory: Asthma; Maternal/Child Health; Diabetes; Mental/Behavioral Health; Health Literacy; Blood Diseases; Public Safety; Cancer; Access: Services; Infectious Diseases; and STD: Health Education.

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

II. COMMUNITY DESCRIPTION

A. 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, southern Illinois and mid-Missouri regions. Barnes-Jewish Hospital and St. Louis Children's 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.

B. Population Growth

Population and demographic data is necessary to understand the health of the community and plan for future needs. In 2015, St. Louis City reported a total population estimate of 315,685 compared to the state population of 6,083,672. St. Louis City comprised 5.2 percent of Missouri's total population.

St. Louis City Total Population

- 315,685
- 51.7 percent Female (163,209)
- 48.30 percent Male (152,476)
- 47.1 percent White (148,688)
- 46.9 percent African American (148,056)
- 3.9 percent Hispanic or Latino (12,312)
- 2.4 percent Two or More Races (7,576)
- 3.3 percent Asian (10,418)

Missouri 2015 Total Population

- 6,083,672
- 50.9 percent Female (3,096,590)
- 49.1 percent Male (2,987,082)
- 83.3 percent White (5,067,699)
- 11.8 percent African American (717,873)
- 4.1 percent Hispanic or Latino (249,431)
- 2.2 percent Two or More Races (133,841)
- 2.0 percent Asian (121,673)

St. Louis City Population Growth

As the fourth most populous county in Missouri with 315,685 people, St. Louis City is also geographically the smallest county in the state with 61.9 square miles (U.S. Census Bureau 2010). From 2000-2015, St. Louis City experienced a steady decrease in population with -1.2 percent in comparison to the population increase of 1.6 percent for Missouri. Projections estimate a continued gradual decline in population from 2010-2030. St. Louis City's dense urban layout includes 5,157.5 people per square mile compared to 87.1 people per square mile in Missouri.

Table 1. Geography and Population Growth

GEOGRAPHY	St. Louis City	Missouri
Land area in square miles, 2010	61.9	68,741.5
Persons per square mile, 2010	5,157.50	87.1
POPULATION	35.9 %	40.9 %
Population, July 1, 2015 estimate	315,685	6,083,672
Population, 2010 (April 1) estimates base	319,365	5,988,923
Population, percent change - April 1m 2010 to July 1, 2015	-1.2%	1.6%
Population, 2010	317,294	5,988,927

Source: United States Census Bureau

C. Age Distribution

According to the 2015 U.S. Census Bureau, only 6.7 percent (21,151) of the population in St. Louis City were children under the age of 5 years, slightly higher than the population in Missouri. For those under 18 years, 20.1 percent (63,453) of the population resided in St. Louis City, slightly below Missouri's 22.9 percent.

Table 2. St. Louis City Age Distribution	St. Louis City	Missouri
Persons under 5 years, percent, 2015	6.7%	6.2%
Persons under 18 years, percent, 2015	20.1%	22.9%
Persons 65 years and over, percent, 2015	8.9 %	5.9 %

Source: United States Census Bureau

D. Race and Ethnicity

The racial composition of St. Louis City was similar for White and African American populations. St. Louis City was 47.1 percent White compared to 83.3 percent in Missouri. The city was 46.9 percent African American in comparison to the state of Missouri's 11.8 percent. The city was 3.3 percent Asian in comparison to the state's 2.0 percent. From 2010-2015, the number of Whites and African Americans slightly decreased (0.7 percent, 1.2 percent respectively) while those of "other" races increased 1.2 percent. A greater number of St. Louis City residents (9.6 percent) speak a language other than English in their home in comparison to 6.1 percent in Missouri.

Table 3. Race and Ethnicity	St. Louis City	Missouri
White alone, percent, 2015	47.1%	83.3%
African American alone, percent, 2015	46.9%	11.8%
White alone, not Hispanic or Latino, percent, 2015	44.0%	79.8%
Hispanic or Latino, percent, 2015	3.9%	4.1%
Asian alone, percent, 2015	3.3%	2.0%
Two or more races, percent, 2015	2.4%	2.2%
American Indian and Alaska Native alone, percent, 2015	0.3%	0.6%
Native Hawaiian and other Pacific Islander alone, percent, 2015	0.0%	0.1%
Language other than English spoken at home, percent of age 5 years+, 2010-2014	9.6%	6.1%
Foreign born persons, percent, 2010-2014	6.8%	3.9%

Source: United States Census Bureau

E. Gender

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

Table 4. Race and Ethnicity	St. Louis City	Missouri
Female persons, percent, 2015	51.6%	51.0%
Male persons, percent, 2015	48.4%	49.0%

Source: United States Census Bureau

F. Socioeconomic Profile

St. Louis City's median household income for the five-year period ending in 2014 was 27 percent lower than the state overall. Persons living below the poverty level in St. Louis City totaled 28.8 percent compared to 15.5 percent in the state. Home ownership was higher in St. Louis City (70.8 percent) than Missouri (67.9 percent).

Table 5. Education, Income and Housing	St. Louis City	Missouri
EDUCATION		
High school graduate or higher, percent of persons age 25+, 2010-2014	83.2%	88.0%
Bachelor's Degree or higher, percent of persons age 25+, 2010-2014	30.4%	26.7%
INCOME		
Per capita money income in the past 12months (2011 dollars), 2010-2014	$23,244	$26,606
Median household income (in 2014 dollars), 2010-2014	$34,800	$47,764
Person in poverty, percent, 2010-2014	28.8%	15.5%
HOUSING		
Housing units, July 1, 2014	175,355	2,735,742
Home ownership rate, 2010-2014	70.8%	67.9%
Housing units in multi-unit structures,, percent, 2010-2014	22.7%	19.7%
Median value of owner-occupied housing units, 2010-2014	118,600	136,700
Households, 2010-2014	139,594	2,361,232
Persons per household, 2010-2014	2.2	2.5

Source: United States Census Bureau

In St. Louis City, 83.2 percent of the population 25 and older had a high school diploma compared to Missouri at 88.0 percent; 30.4 percent had a bachelor's degree when compared to Missouri at 26.7 percent.

III. PREVIOUS (2013) CHNA MEASUREMENT AND OUTCOMES RESULTS

At the completion of the 2013 CHNA, St. Louis Children's Hospital prioritized community needs among 10 health topics and created an implementation plan to address these health topics. This report details the outcome measures from Jan. 1, 2014 – Dec. 31, 2015. These needs included public safety, fitness, nutrition and weight, asthma, maternal and child health, mental health, social determinants of health, behavioral health, dental health, infectious disease, and health literacy.

Table 6: CHNA Measurement and Outcomes Results

Safety Street	Safety Stop	Head to Toe
Goals	**Goals**	**Goals**
To prevent injuries related to pedestrian, home vehicle safety, playground/sports, water, strangers and stray animals. Safety Street, an interactive walk-on exhibit, teaches children how to avoid unintentional injuries.	To prevent injuries in children related to bicycle, home, and vehicle safety.	To improve knowledge and skill in leading a healthy lifestyle among children and their families.
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.	To provide 1,000 child safety seats, bicycle helmets or home safety consultations to parents/caregivers per year.	To provide intensive group educational sessions that focus on nutrition, physical activity and emotional health to 30 children per year.
Participants will increase their knowledge of safety topics a shown by a five percent increase in average knowledge score at post-test compared to per-test of a representative sample of participants.	To increase knowledge among child seat safety consultation participants by 5 percent on post-test evaluations compared to pre-test evaluations.	To 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.
Current Status	**Current Status**	**Current Status**
During the 2014-2015 school year, Safety Street staff saw 8,048 students and parents. Kindergarten to 2nd grade students exhibited and overall knowledge increase of 15.5 percent and 3rd-5th grade students observed an increase of 20.6 percent.	During the 2014-2015 school year, Safety Stop had a total of 2m025 consultations. Participants increased their knowledge by 5.5 percent.	During the 2014-2015 school year, Head to Toe enrolled 37 children. Participants increased their knowledge by 28 percent.

Table 7: CHNA Measurement and Outcomes Results			
Healthy Kids Express Asthma	**Fame**	**Healthy Kids Express Screening**	**Healthy Kids Express Dental**
Goals	**Goals**	**Goals**	**Goals**
To reduce asthma morbidity, decrease asthma disparities, improve coordinated care efforts, and increase quality of life for asthma patients and their families.	To reduce the number of allergic reactions and even deaths due to life threatening food allergies (LFTA) by providing resources and educating to schools to create safe learning environments for students with LFTA.	To increase access to health screenings for high-risk children by eliminating or reducing barriers to health care access.	To provide dental exams, cleanings and restorative care to 500 children per year in high-risk populations free of charge.
To enroll 250 elementary, middle or high school students each school year to provide medical care and social services for children with asthma.	To distribute 50 food allergy management toolkits per year to schools or community organizations.	To provide 4,000 screening services and immunizations per year for children in high-risk populations, free of charge.	Children participating in the program will receive proper dental treatment to prevent tooth decay and restore dental health.
To increase inhaler/area 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.	To 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 preventative sample participants.	To connect 40 percent of participants who receive follow-up services to appropriate treatment.	
To 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.			
Current Status	**Current Status**	**Current Status**	**Current Status**
During the 2014-2015 school year, Healthy Kids Express Asthma had 460 enrolled children in the program. 44 percent of the children in the program improved their inhaler/ aero chamber technique. Students increased their knowledge of asthma by 18 percent.	During the 2014-2015 school year, 1,694 allergy management toolkits were downloaded from the website. Participants increased their knowledge by 17 percent.	During the 2014-2015 school year, Healthy Kids Express Screening provide 56,996 total screening and immunization services. 73 percent of participants were connected to follow-up services.	During the 2014-2015 school year, Healthy Kids Express Dental provided a total of 1,804 services.

Table 8: St. Louis Children's Hospital's 2013 CHNA Outcomes			
Explore Health/Healthy Lifestyle Choice	**SNEAKERS / Cardiovascular Health**	**Buddies / Difference Makers**	**Intersections**
Goals	**Goals**	**Goals**	**Goals**
Improve knowledge and emphasize the overall importance of healthy eating and good nutritional habits.	Improve knowledge and emphasize the importance of the relationship between how the body systems work and relate to physical activity.	Improve knowledge and emphasize the overall importance of healthy communication, problem-solving strategies, personal responsibility, and other life skills.	Improve knowledge and emphasize social skills that contribute to healthy relationships and self-identity.
Improve overall knowledge of healthy eating and nutritional habits of students in grade 9-12 by 10 percent after six, one-hour health education sessions.	Improve overall knowledge of cardiovascular health and fitness principles of students in grade 3-6 by 10 percent after four, one-hour health education sessions.	Improve overall knowledge of positive social skills and the impact of bullying behavior of students in grades K-8 by 10 percent after four, 45-minute health education sessions.	Improve overall knowledge of positive social skills that contribute to healthy relationships and self-identity of students in grades 6-8 by 10 percent after six, 45-minute health education sessions.
Current Status	**Current Status**	**Current Status**	**Current Status**
While included in the implementation plan, the Explore Health program was not delivered in 2013.	Students' knowledge level in 2013 increased by 10 percent after four, one-hour health education sessions.	Students' knowledge level in 2013 increased by 27 percent after four, 45-minute health education sessions.	Students' knowledge level in 2013 increased by 30 percent after six, 45-minute health education sessions.

Table 9: St. Louis Children's Hospital's 2013 CHNA Outcomes			
Smoke-free Teens on Purpose (STOP)	**ConneXtions**	**School Nurse Survival Training**	**Career Exploration Programs**
Goals	**Goals**	**Goals**	**Goals**
Support high school students to be successful in their efforts to quit the harmful habit of using tobacco products.	Improve knowledge and foster social intelligence, use assertive communication, and make responsible decisions on information sharing	Improve health literacy, access to health resources, and support for children, families and healthcare providers within the school/ community environment.	Improve health literacy, access to health care career choices, and educational opportunities for school-aged youth.
Improve overall knowledge of the harmful effects of tobacco use of students in grades 9-12 by 10 percent after eight, one-hour health education sessions.	Improve overall knowledge of social intelligence of students in grade 6-8 by 10 percent after four, 45-minute health education sessions.	Ninety percent of conference participants will complete an after-program evaluation.	Expose youth to careers in the healthcare sector through classroom presentations, job shadowing, mentoring, week-long exploration camps, and internships.
Current Status	**Current Status**	**Current Status**	**Current Status**
While included in the implementation plan, the STOP program was not delivered in 2013.	While included in the implementation plan, the ConneXtions program was not delivered in 2013.	In 2013, 97 percent of conference participants submitted an after-program evaluation.	In 2013, over 760 students were exposed to careers in the healthcare sector.

Table 10: St. Louis Children's Hospital's 2013 CHNA Outcomes			
Heart 2 Heart	**Power of Choice**	**Olweus Bullying Prevention Program**	**"Fun"tastic Nutrition**
Goals	**Goals**	**Goals**	**Goals**
Help students understand the human body and make good decisions about their sexual health.	Improve knowledge and emphasize the over health issues associated with tobacco, alcohol, and illicit drugs.	Provide training to create a system-wide healthy and safe school climate and address bullying behavior.	Improve knowledge and emphasize the overall importance of healthy eating and good nutritional habits.
Improve overall knowledge of sexual health of students in grades 6-12 by 10 percent at the end of four, 45-minute health education sessions.	Improve overall knowledge of health issues associated with tobacco, alcohol, and illicit drug use of students in grades 5-12 by 10 percent after four, 45-minute health education sessions.	Provide technical assistance to schools currently implementing the Olweus program and assess the readiness level of schools to implement the Olweus program.	Improve overall knowledge of healthy eating and nutritional habits of students in grade 2-8 by 10 percent at the end of six, one-hour health education sessions.
Current Status	**Current Status**	**Current Status**	**Current Status**
Students' knowledge level in 2013 increased by 20 percent after four, 45-minute health education sessions.	Students' knowledge level in 2013 increased by 29 percent after four, 45-minute health education sessions.	In 2013, one school was supported through the Olweus Bullying Prevention Program.	Students' knowledge level in 2013 increased by 23 percent after six, one-hour health education sessions.

IV. CONDUCTING THE 2016 CHNA

A. Primary Data Collection: Focus Group

St. Louis Children's Hospital and SSM Health Cardinal Glennon Children's Medical Center conducted a focus group to obtain input from pediatric and public health experts on the health concerns of St. Louis City children ages 0-18. These pediatric hospitals collaborated on their first needs assessment in 2012.

Fourteen of 21 invited participants representing various St. Louis City organizations participated in the focus group. (See Appendix B). The focus group was held May 26, 2015 at the Chase Park Plaza Hotel with the following objectives identified:

1. Determine whether the needs identified in the 2013 CHNA remain the correct focus areas.
2. Explore whether any needs on the list should no longer be a priority.
3. Determine where gaps exist in the plan to address the prioritized needs.
4. Identify other potential organizations for collaboration.
5. Discuss how the community had changed since 2013 when these hospitals first identified these needs and whether there are new issues to consider.
6. Evaluate what issues the stakeholders anticipate becoming a greater concern in the future to consider now.

2016 Focus Group Summary

A general consensus was reached that needs identified in the previous assessment should remain as focus areas for the hospital. These needs represent the major causes of disease and disability in children.

- Asthma was identified as a chronic condition that continues to be a major concern.
- Health literacy, in the form of education on the appropriate way to access the health system, was a high priority for many members.

Gaps in Implementation Strategies

Although nothing was identified that should be removed from the list of prioritized needs, gaps were identified in the ways the following needs are being addressed:

- Access: Services
- Access: Coverage
- Health Literacy
- Social Determinants of Health
- Behavioral/Mental Health Issues

Special Populations

Transient families were a special concern. There is a lot of movement between St. Louis City and St. Louis County and it is very easy to lose track of families who have been enrolled in pilot programs.

Potential Partner Organizations

Several organizations were identified as good partners for collaboration, including: Healthy and Sustainable Homes; Asthma Coalition; United Way: Ready by 21 St. Louis; St. Louis Public School Foundation; YMCA; and EMS.

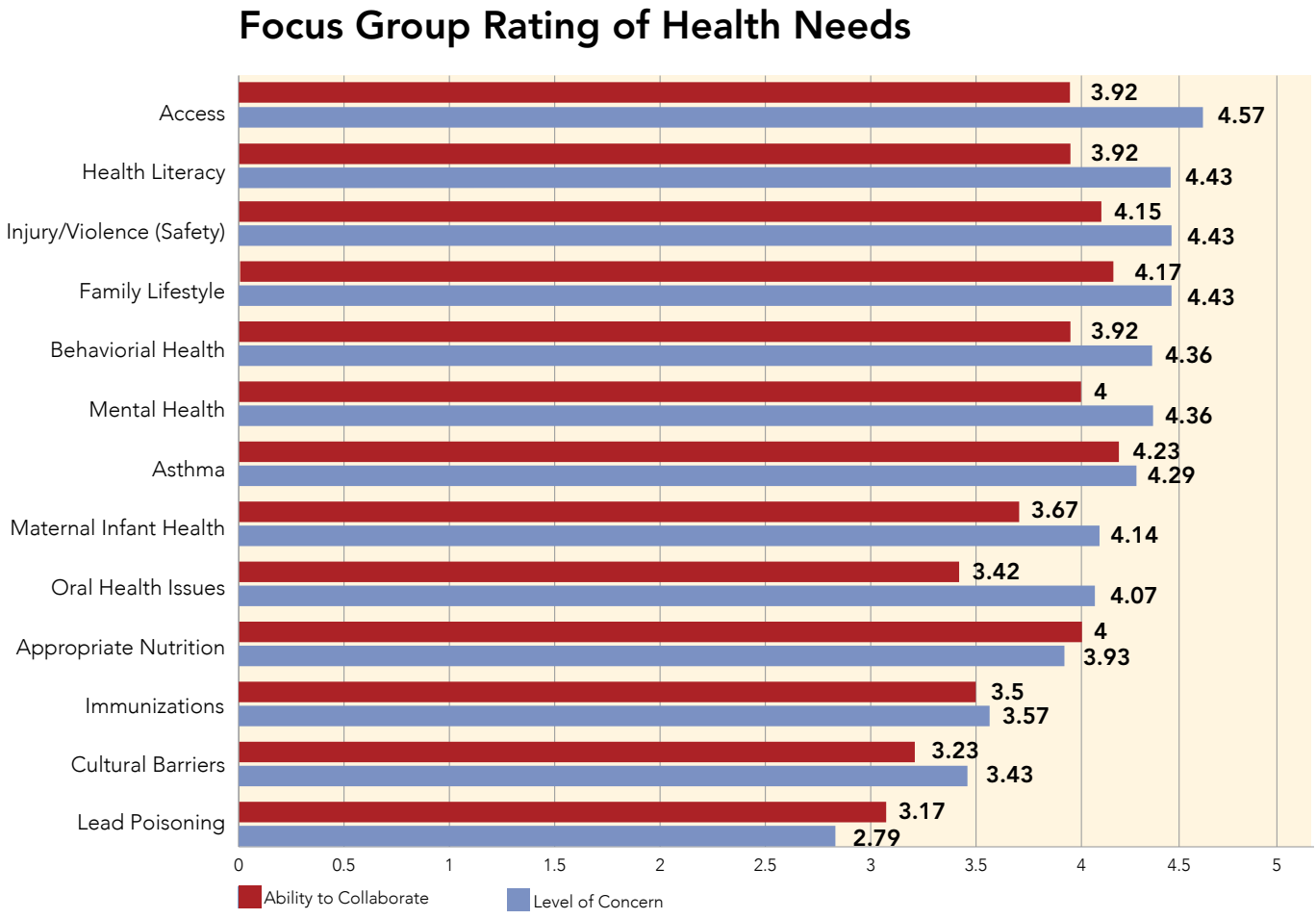
New Issues of Concern

Immigrants and Refugees – Many immigrants and refugees speak languages for which we have no interpreters; many are survivors of war and torture. More organizations need to be trauma-informed.

Food Allergies – These are a now a greater concern for school nurses than childhood asthma. Very often, there are also associated issues of depression and anxiety.

Rating of Needs

Participants were given the list of the needs identified in the 2013 assessment and directed to re-rank them on a scale of 1 (low) to 5 (high), based on their perceived level of community concern and the ability of community organizations to collaborate in addressing:



Access was rated highest in terms of level of concern and Asthma was rated highest for ability to collaborate. Lead poisoning rated the lowest on ability to collaborate and the level of concern.

Parent Survey

Staff members from the Child Health Advocacy and Outreach Department conducted a Parent Health Concerns Survey. This survey was adapted from a previous study by researchers from Washington University in St. Louis and St. Louis Children's Hospital. This survey was developed to assess parents' health concerns for their children and for children in the community. This survey was distributed to parents through the online Qualtrics survey database; 1,083 parents participated. The survey asked parents to rank 40 items on a 4-point scale of how much of a problem the item is for children in the community (large, medium, small or not a problem). The 40 items on the survey are listed in Table 11.

Table 11. Parent Survey Health Topics	
Access to Fruits and Vegetables	Marijuana Use
Allergies (including food allergies)	Measles
Asthma	Motor Vehicle Accidents
Attention Deficit Hyperactivity Disorder (ADHD/ADD)	Neighborhood Safety (including assaults and homicides)
Autism	Obesity
Bullying	Overuse of Antibiotics
Kid Abuse and Neglect	Poisons (household cleaners, detergents, and medicines)
Community Unrest	Poverty
Depression	Racial/Ethnic Issues
Diabetes	Risks Associated with Immunizations
Eating Disorders (such as Anorexia and Bulimia)	Risks Associated with not getting Immunizations
Ebola	Safe Housing
Environmental Pollution	School Violence
Getting Health Insurance	Sexually Transmitted Infections other than HIV/AIDS (Chlamydia, Gonorrhea, etc.)
Heavy Drinking of Alcohol	Smoking and Tobacco Use
HIV/AIDS	Sport and Play-Related Injuries
Illegal Drug Use	Stress
Internet Safety (cyberbullying and stranger encounters)	Suicide
Lack of Exercise	Teen Pregnancy
Lead Toxicity/Poisoning	Understanding Information from a Doctor

Parents identified lack of exercise, stress, attention deficit disorder, obesity, bullying, Internet safety, allergies, asthma, illegal drug use and depression as the most important health problems for children in the community.

Table 12. Parent Survey Rating Result (Highest to Lowest)			
Rank	**Parents Survey Health Topics**	**Rank**	**Parents Survey Health Topics**
1	Lack of exercise	**21**	Diabetes
2	Stress	**22**	Sport and play-related injuries
3	Attention Deficit Hyperactivity Disorder (ADHD/ADD)	**23**	Environmental pollution
4	Obesity	**24**	Teen pregnancy
5	Bullying (being the victim of a bully)	**25**	Suicide
6	Internet safety (cyberbullying and stranger encounters)	**26**	Community unrest
7	Allergies (including food allergies)	**27**	Neighborhood safety (including assaults and homicides)
8	Asthma	**28**	Risks associated with not getting immunizations shots
9	Illegal drug use	**29**	Understanding information from doctor
10	Depression	**30**	Sexually Transmitted Infections other than HIV/AIDS (Chlamydia, Gonorrhea, etc.)
11	Racial/Ethnic issues	**31**	Safe Housing
12	Smoking and tobacco use	**32**	Eating disorders (like anorexia and bulimia)
13	Autism	**33**	Access to fruits and vegetables
14	Marijuana use	**34**	School violence
15	Getting Health insurance	**35**	Lead toxicity/poisoning
16	Poverty	**36**	Poisons (household cleaners, detergents, and medicines)
17	Kid abuse and neglect	**37**	HIV / AIDS
18	Motor vehicle accidents	**38**	Risks associated with immunization shots
19	Heavy drinking of alcohol	**39**	Measles
20	Overuse of antibiotics	**40**	Ebola

B. Secondary Data Analysis

Secondary data includes community health indicators necessary to understand exactly where the community stands relative to health.

Secondary Data Sources

1. **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 publicly available data (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 13.

2. 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 (Table 13). Diseases and risk factors are ranked based on the size (how many people affected) and the seriousness (determined by the Internal Work Group members).

- 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**
  1. **Size:** The number of people diagnosed with the disease per 100,000 persons (national, state or county level rate).
  2. **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 mode for each indicator. Indicators with the most number of mentions were ranked from 1-13.

Table 13. Priorities MICA Disease List

Abuse and Neglect	Falls
Affective Disorders	Gonorrhea
Alcohol- and Substance-Related	Heart Disease
Alzheimer's/Dementia/Senility	Hepatitis A
Anemia (excluding Sickle Cell)	HIV/AIDS
Anxiety-Related Mental Disorders	Infant Health Problems
Arthritis/Lupus	Lung Cancer
Assaults/Homicides	Medical/Surgical Complications
Asthma	Motor Vehicle Accidents
Breast Cancer	Pneumonia and Influenza
Burns (Fire and Flames)	Poisoning
Burns (Scalds/Hot Objects)	Pregnancy Complications
Campylobacter	Prostate Cancer
Cervical Cancer	Salmonella
Childhood-Related Mental Disorders	Schizophrenia and Psychosis
Chlamydia	Sickle Cell Anemia
Chronic Obstructive Pulmonary Disease (COPD)	Stroke/Other Cerebrovascular Diseases
Colorectal Cancer	Suicide and Self-Inflicted Injury
Dental Health Problems	Syphilis
Diabetes	Tuberculosis
Elevated Lead	Vaccine-Preventable Diseases

C. Organizational Structure

The St. Louis Children's Hospital work group was comprised of pediatric medical directors, nurses, community health professionals, and business and planning managers. Table 14 describes the full list of the internal work group.

Table 14. St. Louis Children's Internal Work Group
Professor of Clinical Pediatrics
Manager, Community Education
Director, BJC School Outreach and Youth Development
Manager, Trauma Services
Instructor in Clinical Surgery, Washington University
Dentist, St. Louis Children's Hospital
Director, Child Health Advocacy and Outreach Department
Associate Professor of Medicine and Pediatrics
Director, Call Center and Market Research
Assistant Professor of Pediatrics, Emergency Pediatric Services
Associate Professor of Pediatrics, Adolescent Medicine
Clinical Education Specialist, Trauma Services
Manager, Child Health Advocacy and Outreach Department
Evaluation and Analytics Coordinator
Evaluation and Analytics Coordinator

D. Prioritization of Health Needs

The St. Louis Children's Hospital internal work group completed a series of surveys to prioritize the community's health needs. The group participated in a one-hour webinar that provided instructions for completing the surveys. The survey was administered via Qualtrics. Using the Qualtrics database, the health topics were ranked based on a weighted number of mentions from the risk factors and diseases listed in Table 13. Each indicator was weighted from 13 (highest ranked) to 1 (lowest ranked). The surveys were then analyzed to determine the top ranked health needs by the group.

Conclusive data from the external focus group, internal work group, and the survey of parents were compiled to display each data source's top diseases and risk factors. The overall rank of each health topic is listed in Tables 15-16.

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 listed in Table 17.

Primary Data Considered

On the next page, Table 15 lists the primary data considered. Column 2 represents the external focus group ranked results and column 3 shows the ranked results of the "Parents' Health Concerns for Children." Access, Family Lifestyle, Injury/Violence (safety), Health Literacy and Mental Health were the top five health needs ranked by the external focus group while the parent group ranked lack of exercise, stress, attention deficit hyperactivity disorder (ADHD/ADD), obesity and bullying (being the victim of a bully).

Table 15: Community Health Needs Assessment Primary Data Summary		
Weight	**External Focus Group**	**Parents Survey**
1	Access	Lack of exercise
2	Family lifestyle	Stress
3	Injury/Violence (safety)	Attention Deficit Hyperactivity Disorder (ADHD / ADD)
4	Health literacy	Obesity
5	Mental health	Bullying (being the victim of a bully)
6	Behavioral health	Internet safety (cyberbullying and stranger encounter
7	Asthma	Allergies (including food allergies)
8	Maternal infant health	Asthma
9	Oral health issues	Illegal drug use
10	Appropriate nutrition	Depression
11	Immunizations	Racial/Ethic issues
12	Cultural barriers	Smoking and tobacco use
13	Lead poisoning	Autism
14		Marijuana use
15		Getting Health insurance
16		Poverty
17		Kid abuse and neglect
18		Motor vehicle accidents
19		Heavy drinking of alco
20		Overuse of antibiotics
21		Diabetes
22		Sport and play-related injuries
23		Environment pollution
24		Teen pregnancy
25		Suicide
26		Community unrest
27		Neighborhood safety (including assaults and homicides)
28		Risks associated with not getting immunization shots
29		Understanding information from doctor
30		Sexually transmitted infections other than HIV / AIDS (Chlamydia, gonorrhea, etc.)
31		Safe housing
32		Eating disorder
33		Access to fruits and vegetables
34		School violence
35		Lead toxicity/poisoning
36		Poisons (household cleaners, detergents, and medicines)
37		HIV / AIDS
38		Risks associated with immunization shots
39		Measles
40		Ebola

The secondary data is represented in Table 16 on the following page. Column 2 shows the results of Priorities Missouri Information for Community Assessments (MICA) for Infants and Children; column 3 shows Priorities Missouri Information for Community Assessments (MICA) for Adolescents ranked results; column 4 provides Modified Hanlon Method for Diseases ranked results (or Basic Priority Rating System); and column 5 represents Modified Hanlon Method for Risk Factors ranked results (or Basic Priority Rating System).

The top ranked health needs varied among each source listed on the secondary data source. Asthma ranked the top health need for priority MICA for infant; Assaults/Homicides for priority MICA for adolescent; Fruit and Vegetable Consumption for Hanlon/Pearl Risk Factors; and Dental Health Problems for Hanlon/Pearl Diseases.

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 listed in Table 17.

Table 16: Community Health Needs Assessment Secondary Data Summary

Weight	MICA Infants/Children	MICA Adolescents	Hanlon/Pearl Risk Factors	Hanlon/Pearl Diseases
1	Asthma	Assaults/Homicides	Fruit and Vegetable consumption	Dental health problems
2	Infant health problems	Motor vehicle accidents	Students eligible for the free lunch program	Anemia (excluding Sickle Cell)
3	Motor vehicle accidents	Dental health problems	Single-parent households	Preterm births
4	Sickle Cell Anemia	Pregnancy complications	Children living below poverty level	Childhood Obesity
5	Vaccine-prevetable diseases	Asthma	Health literacy (inc. graduation rates and reading proficiency, cultural competence)	Babies with low birth weight
6	Pneumonia and influenza	Pneumonia and influenza	Social determinants of health (food security, housing, utilities, etc.)	Premature death
7	Assaults/Homicides	Sickle Cell Anemia	Sedentary behavior	Diabetes
8	Dental health problems	Anxiety-related mental disorders	Families living below poverty level	Vaccine-preventable diseases
9	Diabetes	Affective Disorders	Adults who smoke	Sexually transmitted diseases (inc. HIV/ AIDS, Syphilis, Chlamydia, Gonorrhea)
10	Falls	Diabetes	Mothers who receive early prenatal care (% of those who do not)	Vision problems
11	Anxiety-related mental disorders	Schizophrenia and Psychosis	Alcohol abuse	Allergies (inc. food allergies)
12	Affective disorders	Suicide and self-inflicted injury	Substance abuse	Injury from fall/falling
13	Burns (scolds/hot objects)	Vaccine-preventable diseases	Mothers who smoke during pregnancy	Violent crimes (inc. gun violence)
14	Schizophrenia and Psychosis	Falls	Adolescents who smoke	Elevated lead blood level
15	Medical/surgical complications	Chlamydia	Children without health insurance	Infant mortality
16	Burns (fire and flames)	Burns (scolds/hot objects)	Primary care provider rate	Unintentional injuries
17	Poisoning	Alcohol- and substance-related	Recreation and fitness facilities	Asthma
18	Abuse and neglect	Medical/surgical complications		Abuse and neglect
19	Childhood-related mental disorders	Anemia (excluding Sickle Cell)		Cancer
20	Anemia (excluding Sickle Cell)	Gonorrhea		Child abuse
21	Elevated lead	HIV / AIDS		Hearing problems
22	Salmonella	Poisoning		Mental health
23	Tuberculosis	Syphilis		Burns (fire and flames)
24	Hepatitis A	Elevated lead		Poisoning
25	Campylobacter	Tuberculosis		Sickle Cell Anemia
26		Salmonella		Pregnancy complications
27		Burns (fire and flames)		Pneumonia and Influenza
28		Hepatitis A		Suicide
29		Campylobacter		Motor vehicle collisions
30				Self-inflicted injury

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 39 (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 below in Table 17. The number in parenthesis represents the weighted number of mentions.

Table 17: Health Topics and Indicators

Rank	Health Topic	Indicators Included
1	Obesity (36.0)	Childhood Obesity and Obesity.
1	Dental Health (36.0)	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 eight, kids who need sedation to receive dental care, and preventative oral health.
2	Allergy (Food) (31.0)	Food allergies.
3	Healthy Lifestyle (30.5)	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.
4	Respiratory: Asthma (29.2)	Allergies, asthma and pollution.
4	Maternal, Child Health)29.2)	Babies with low birth weight, infant mortality, infant health problems, mothers who receive early prenatal care, mothers who smoke during pregnancy, preterm births, pregnancy complications, and teen pregnancy.
5	Diabetes (28.3)	Diabetes.
6	Mental/Behavior Health (25.2)	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) heave 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.
7	Health Literacy (23.0)	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.
8	Blood Diseases (22.9)	Anemia, elevated lead, and Sickle Cell.
9	Public Safety (21.6)	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).
10	Cancer (21.0)	All cancers excluding cervical cancer.
11	Access: Services (20.4)	Children without insurance, hearing and vision screenings, maintaining a primary care provider, and medical/surgical complications.
12	Infectious Diseases (18.4)	Influenza, overuse of antibiotics, Ebola, pneumonia, and vaccine preventable diseases.
13	STDL Health Education (17.9)	Cervical cancer, chlamydia, gonorrhea, HIV/AIDS and syphilis.

Table 18: Health Topics Rankings for Mentions			
Rank	**Health Topic**	**Weighted Total Mentions**	**Total # Mentions**
1	Obesity	36	2
1	Dental Health	36	3
2	Allergy (Food)	31	2
3	Healthy Lifestyle	30.5	14
4	Respiratory: Asthma	29.2	5
4	Maternal, Child Health	29.2	10
5	Diabetes	28.3	4
6	Mental/Behavior Health	25.2	32
7	Health Literacy	23	2
8	Blood Diseases	22.9	10
9	Public Safety	21.6	25
10	Cancer	21	1
11	Access: Services	20.4	9
12	Infectious Diseases	18.4	16
13	STDL Health Education	17.9	7

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 ranks are as follows: Obesity; Dental Health; Allergy (Food); Healthy Lifestyles; Respiratory: Asthma; Maternal; Child Health; Diabetes; Mental/Behavioral Health; Health Literacy; Blood Diseases; Public Safety; Cancer; Access: Services; Infectious Diseases; and STD: Health Education.

APPENDICES

APPENDIX A: ST. LOUIS CHILDREN'S HOSPITAL

St. Louis Children's Hospital is one of the premier children's hospitals in the United States. 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 provides a 30-bed pediatric intensive care unit, a 31-bed heart center, a 70-bed newborn intensive care unit, and a 6-bed pediatric bone marrow transplant unit.

St. Louis Children's Hospital is recognized as one of America's top children's hospitals by *U.S.News & World Report,* which in 2016 ranked the hospital in all 10 specialties surveyed.

In 2015 St. Louis Children's Hospital was re-designated as a Magnet® hospital by the American Nurses Credentialing Center's (ANCC) Magnet Recognition Program, which recognizes excellence in nursing. Only 3 percent of hospitals nationally have achieved Magnet re-designation.

St. Louis Children's Hospital has made a significant commitment to promote child health through advocacy and outreach programming beyond the hospital setting. Through programs such as smoking prevention and cessation classes and accident prevention education, advocacy seeks to enhance opportunities for children and families to make healthy choices and also calls public attention to issues affecting children's health. The hospital also has a formal community education program that offers educational classes to schools and community organizations throughout St. Louis. Topics include parenting, health and wellness issues and more.

Appendix B: Focus Group Participants and Observers

Focus Group Participants

NAME	ORGANIZATION	ATTENDED
Liaqq Alshate	Youth in Need	X
Michael Butler	State Representative	X
Wray Clay	United Way	X
Marge Cole	MO Dept of Health and Senior Services	X
Kendra Copanas	Maternal Child and Family Health Coalition	X
Kate Costen	Dental Care for Kids	X
Jama Dodson	St. Louis Mental Health Board	X
Flint Fowler	Herbert Hoover Boys & Girls Club	
Jacqueline Harvey	People's Health Center	X
Margo Hoelscher	MO Health Net	
Sharon Holbrooks	YMCA	X
Joy Krieger	Asthma & Allergy Foundation	X
Suzanne LeLaurin	International Institute	
Mike McMillan	Urban League	
Melba Moore	City of St. Louis Department of Health	X
Rich Patton	Vision for Children at Risk	
Mark Sanford	Betty Jean Health Center	
Matt Simpson	St. Louis Police Department	X
Tracey Swabby	Abbott EMS/Cardinal Glennon Parent	X
Ron Tompkins	Nurses for Newborns	X
Starsky Wilson	Deaconess Foundation/Ferguson Commission	

Focus Group Observers	
BJC HealthCare Observers	**SSM CGCMC Observers**
Angela Chambers	Kim Bakker
Joan Magruder	Shawn Dryden
Greta Todd	Lauren Lubus
Kel Ward	Kate Becker
Nicole Kozma	Abi Ottenburg
Catherine Rains	
Peggy Gordin	
Melody Schaeffer	
Diana Wilhold	
Karley M. King	

Appendix C: St. Louis Children's Hospital Internal Work Group Members	
Name	**Department**
Alison Nash, MD	Professor of Clinical Pediatrics
Carolyn Schainker, RD	Manager, Community Education
Diana Wilhold (participated by proxy via Denise Strehlow and Haley Beth Organ)	Director, BJC School of Outreach and Youth Development
Mary Mike Cradock, PhD	Director, Behavioral Health
Steven Woods, RN, BSN, MBA	Manager, Trauma Services
Bob Strunk, MD	Professor of Pediatrics, Asthma
Alysa Ellis, MD	Assistant Professor of Pediatrics; Director, Health Start Clinic
Katie Barbier, MPH, MWS, CLC	Woman's Health Educator, Teen Pregnancy Clinic
Tyrone Ford, MSW, LCSW	Social Worker, Emergency Room
Fahd Ahmad, MD	Physician, Emergency Room
Daniel Stoeckel, DDS	Instructor in Clinical Surgery, Washington University and Dentist, St. Louis Children's Hospital
Greta Todd, MA	Director, Diversity, Inclusion, and Community Affairs
Jane Garbutt, MD	Associate Professor of Medicine and Pediatrics
Julie Bruns, MS	Director, Specialized Care Center at St. Louis Children's Hospital
Katie Plax, MD	Associate Professor of Pediatrics, Adolescent Medicine
Ray Rohr	Community Outreach Coordinator, Shriners Hospital
Perry Schoenecker, MD	Schriners Hospital
Beth Rotter, PhD	BJC Raising St. Louis
Nicole Kozma, MPH	Manager, Child Health Advocacy and Outreach Department
Catherine Rains, MPH	Evaluation and Analytics Coordinator
Melody Schaeffer	Evaluation and Analytics Coordinator

APPENDIX D

PERCEPTIONS OF THE PEDIATRIC HEALTHCARE NEEDS OF ST. LOUIS CITY RESIDENTS FROM THE VIEWPOINT OF COMMUNITY LEADERS

Prepared by:

Angela Ferris Chambers

Manager, Market Research

BJC HealthCare

Prepared for:

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St. Louis Children's Hospital

Shawn Dryden

Director, Strategy and Business Development

SSM Cardinal Glennon Children's Medical Center

July 14, 2015

TABLE OF CONTENTS

BACKGROUND

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

St. Louis Children's Hospital (SLCH) and SSM Cardinal Glennon Children's Medical Center (CGCMC) collaborated on their first needs assessment in 2012, although each was on a different timetable. CGCMC completed its needs assessment at the end of 2012 and is in the final year of its implementation plan to address those prioritized needs. SLCH completed its needs assessment at the end of 2013 and is now in the middle of its implementation, which runs through the end of 2016.

Both hospitals are in the process of preparing their next CHNA and agreed to continue their collaboration to assess feedback of those community stakeholders who have an interest in the health of St. Louis City children.

RESEARCH OBJECTIVES

The main objective for this research is to solicit input from healthcare experts and those who have a special interest in the healthcare needs of St. Louis city children served by both Cardinal Glennon Children's Medical Center and St. Louis Children's Hospital. Specifically, the discussion focused around the following objectives:

1) Determine whether the needs identified in the 2012/2013 CHNAs are still the right areas on which to focus
2) Explore whether there are there any needs on the list that should no longer be a priority
3) Determine where there are gaps in the plan to address the prioritized needs
4) Identify other organizations with whom we should consider collaborating
5) Discuss how the world has changed since 2012/2013 when CGCMC and SLCH first identified these needs and whether there are there new issues they should consider
6) Evaluate what issues the stakeholders anticipate becoming a greater concern in the future that we need to consider now

METHODOLOGY

To fulfill the PPACA requirements, CGCMC and SLCH 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 26, 2015 at the Chase Park Plaza Hotel in the city of St. Louis. The group was facilitated by Angela Ferris Chambers, Manager of Market Research & CRM for BJC HealthCare. The discussion lasted ninety minutes.

14 individuals representing various St. Louis city organizations participated in the discussion. Six others were invited, but were unable to attend (Appendix A).

Kate Becker, CGCMC President, welcomed participants at the beginning of the evening. Those who were observing on behalf of CGCMC and SLCH were also introduced to the group (Appendix A). Joan Magruder, President of SLCH, thanked the community representatives for their participation.

During the group, the moderator reminded the community leaders why they were invited - that their input is needed to help each hospital move forward in this next phase of the needs assessment process. The hospitals view this iteration of its CHNA as more of a "tweak" than a total revision of the first assessment; insufficient time has passed for them to have a substantive impact on the needs that were prioritized.

The moderator shared the needs prioritized by each hospital in the first assessment and discussed where each hospital is in its implementation plan. She also mentioned that each system is working to standardize the language for identifying prioritized needs across all of its hospitals so that impact can be measured consistently. This will allow the sharing of best practices among all system facilities.

CGCMC and SLCH identified three of the same priorities in their 2012/2013 CHNAs:

- Asthma
- Health Literacy
- Preventable Childhood Injuries (CGCMC)/ Public Safety (SLCH)

St. Louis Children's Hospital identified an additional seven priorities on which to focus:

- Fitness, Nutrition and Weight
- Dental Health
- Infectious Diseases
- Access to Healthcare
- Social Determinants of Health
- Behavioral Health
- Sexually Transmitted Diseases

After the discussion, the participants were asked to rank these identified needs based on their level of concern and ability to address them via community collaboration.

KEY FINDINGS

PERCEPTION OF 2012/2013 PRIORITIES:

There was general consensus that the needs identified in the previous assessment are still those on which the two children's hospitals should focus. They represent the major causes of disease and disability in children.

- **Asthma** was identified as a chronic condition that continues to be of major concern. If not well controlled, it impacts the ability of children to perform well in school, which can lead to them being held back, and ultimately, unable to graduate. Parents continue to need support to understand how to best manage this chronic condition.
- **Health literacy,** in the form of education on the appropriate way to ways to access the health system, was a high priority for many in the room.
  - The Director of the Health Department shared the example of how parents often self-medicate their children when Shigella occurs, resulting in antibiotic-resistant strains of the bacterium. In conjunction with "day-care hopping," the disease is easily spread due to lack of knowledge among parents about how to appropriately access services to diagnose and treat it.

GAPS IN IMPLEMENTATION STRATEGIES:

Although nothing was identified that should come off the list of prioritized needs, there were gaps identified in the ways in which they are being addressed.

ACCESS: SERVICES:

- Inappropriate use of services (including the emergency department) might be avoided if non-traditional hours were available to access primary care services (evenings and weekends).
- The availability of more navigator-type services, in addition to the Community Resource Coordinators (CRCs), would help parents learn how to navigate the system on behalf of their children. There was some mention that CRCs are no longer available in the emergency department to help transition families from the emergency room to primary care at the FQHCs (federally qualified health centers). Community leaders would like to see them brought back.
- More formal ways to communicate about, and coordinate services, related to physical, dental and mental health are needed. Many communication channels that currently exist were created informally. Providers would like better information so they know what's available and whom to call when a particular need arises.
- School nurses should be considered a part of the medical care team. Once a child enters school, the school nurse sees them on a regular basis. However, many St. Louis City schools only have a school nurse one or two days a week. On the remaining days, the principal and teachers are filling that role.
- Children with asthma who live in East St. Louis come to Missouri for care, but no one is tracking them on the Illinois side.

- All organizations who receive Medicaid funds should be involved in a conversation about partnership and how to work together to better use those resources.

ACCESS: COVERAGE:

- Some mentioned a gap in coverage between emergency care and primary care. There is more charitable care for emergency services compared to primary care which creates incentives to use the emergency room.
- Those who turn 18 and who have parents with no health insurance will also not have health insurance.

HEALTH LITERACY:

- If school nurses and other health professionals were better trained in "motivational interviewing" skills, they might more clearly identify what parents want/need to know about managing their child's asthma or other chronic conditions.
- Parents need help understanding how to navigate the health system as do their children. They use the emergency room because they don't know where else to go. We need to give parents the tools to learn how to access services for themselves. Kids learn from their parents and need to have appropriate role models

SOCIAL DETERMINANTS OF HEALTH:

- Issues of poverty and homelessness contribute to a lack of health. There are models of medical/legal partnerships that can direct families to legal services to help alleviate some of these issues. If they can be addressed, the family can then focus on issues related to their health.
- Children who drop out of school are more likely to live in poverty.
  - Those with chronic conditions, like asthma and diabetes, may miss more school. These increased absences cause them to fall further behind, increasing their likelihood of not graduating and being unemployed.
  - Teen pregnancy also is more likely to cause a young woman to drop out of school.

BEHAVIORAL/MENTAL HEALTH ISSUES:

- There is a need for better integration of behavioral health and physical health services.
- There is also a lack of child and adolescent psychiatrists in the state of Missouri. There are opportunities for nurse practitioners to enter the behavioral health field to perform evaluation and diagnosis. There are not enough diagnosticians in this area.

SPECIAL POPULATIONS:

TRANSIENT FAMILIES: Transient families are a special concern. There is a lot of movement between St. Louis City and St. Louis County and it is very easy to lose track of families who have been enrolled in pilot programs. This makes it difficult to measure the impact of these programs, especially if it is based on an analysis of a specific geography, like a ZIP code. It also makes it difficult to communicate with these families effectively. There needs to be a better way to keep track of these families as they move in and out of St. Louis City.

OTHER ORGANIZATIONS WITH WHOM TO CONSIDER PARTNERING:

"Intentional and strategic community partnerships" are important because hospitals alone cannot address these issues. Several organizations were identified as good partners for collaboration. They included:

- Healthy and Sustainable Homes: a collaboration of non-profits who can help to better "connect the dots" between families and the services they need.
- Asthma Coalition: meets quarterly
- United Way: Ready by 21 St. Louis
- St. Louis Public School Foundation: a partnership to track and coordinate services that are provided in the public schools. There are many not-for-profit agencies in the St. Louis public schools, but no one is tracking them and determining their effectiveness.
- YMCA: This organization is willing to be an active partner in helping to communicate information to parents and children.

- EMS: These frontline personnel often are the first healthcare providers with whom a parent and child come into contact. They can serve a role as an information source. They suggested that a single two-sided document that lists organizations that provide services to children with their telephone numbers would be extremely valuable. It could be kept on the EMS trucks and distributed to those who need help.

NEW ISSUES OF CONCERN:

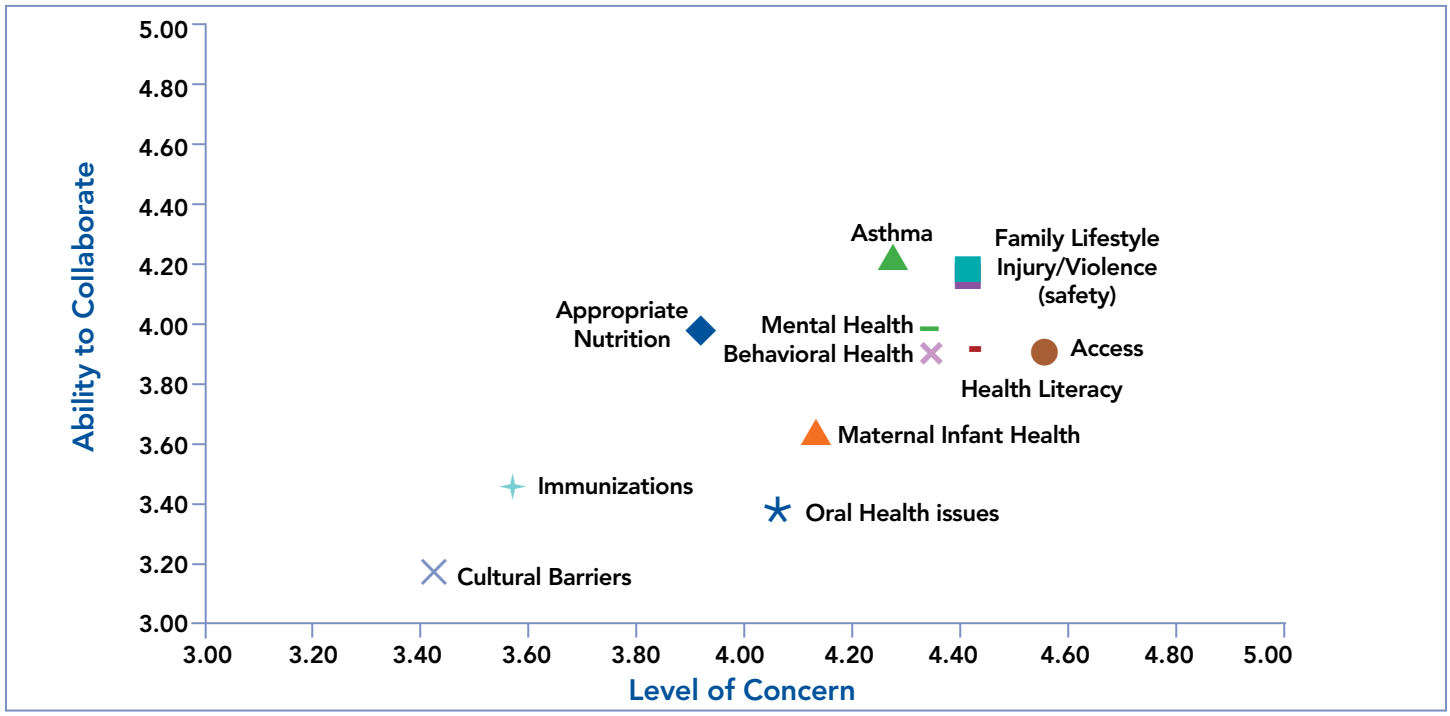
IMMIGRANTS AND REFUGEES: Many speak languages for which we have no interpreters. Many are survivors of war and torture. More organizations need to be trauma-informed.

FOOD ALLERGIES: These are a now a greater concern for school nurses than childhood asthma. Very often, there are also associated issues of depression and anxiety.

RATING OF NEEDS

Participants were given a list of the needs that were identified in the 2012/2013 assessment. They were asked to re-rank them on a scale of 1 (low) to 5 (high) based on their perceived level of community concern and the ability of community organizations to collaborate around them.

Access, family lifestyle issues (which included social determinants of health), injury/violence (safety) and health literacy all ranked high in terms of concern. Asthma ranked highest in terms of ability to collaborate. Cultural Barriers included the needs of refugee and immigrant populations.



Health Need	Level of Concern	Ability to Collaborate
Access	4.57	3.92
Family lifestyle	4.43	4.17
Injury/Violence (safety)	4.43	4.15
Health Literacy	4.43	3.92
Mental health	4.36	4.00
Behavioral Health	4.36	3.92
Asthma	4.29	4.23
Maternal infant health	4.14	3.67
Oral Health issues	4.07	3.42
Appropriate nutrition	3.93	4.00
Immunizations	3.57	3.50
Cultural barriers	3.43	3.23
Lead poisoning	2.79	3.17

NEXT STEPS

Based on the input the hospitals received from community stakeholders, St. Louis Children's Hospital and Cardinal Glennon Children's Medical Center will examine secondary data for St. Louis City to explore the size of the needs that have been identified.

Each hospital has established an internal stakeholder workgroup to assess this information and evaluate whether the priorities should change.

The needs assessment and associated implementation plan must be revised and updated for release by December 31, 2015 for Cardinal Glennon, and 2016 for SLCH.

The community stakeholder group will continue to be updated about the progress of the internal work groups as they work to meet these deadlines.

V. Implementation Plan

The purpose of an implementation plan is to identify the goals, objectives, rationale, activities, outcomes, responsible parties, time frame and evaluation strategy to meet the community health needs identified through the assessment. St. Louis Children's Hospital prioritized the needs primarily based on the ranking of each health topic. Implementation summaries were written for 12 of the health needs identified on the assessment process. St. Louis Children's Hospital, and BJC School Outreach and Youth Development will address several of the health topics in the community that BJC hospitals serve. BJC School Outreach Department programs are included in the implementation plan because they have a focus on children and provide outreach on different health topics than some other programs already provided by the hospital.

A. Community Health Needs to be Addressed

Community Health Need: Obesity

Rationale:

Obesity now affects 17 percent of all children and adolescents in the U.S. - triple the rate from just one generation ago, according to the Centers for Disease Control. 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

Program Description:

St. Louis Children's Hospital 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.

Goal:

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

Objective:

- Provide intensive group educational sessions that focus on nutrition, physical activity and emotional health to 30 children per year.
- 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.

Action Plan:

An exercise specialist, registered dietician, social worker and health promotion professionals facilitate 12 intensive group sessions on topics regarding physical activity, nutrition and emotional health.

Outcomes:

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

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

Program Description:

BJC School Outreach and Youth Development currently provides "Fun"tastic Nutrition, a classroom-based program that teaches students in grades 2-8 the importance of healthy eating habits and a healthy lifestyle.

Goal:

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

Objective:

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

Action Plan:

"Fun"tastic Nutrition consists of six, 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
- Healthy snacks
- The digestive system
- Calcium and bone health

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

Outcomes:

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

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

Program Description:

BJC School Outreach and Youth Development currently provides Explore Health, a classroom-based program that teaches students in grades 9-12 the importance of healthy eating habits and a healthy lifestyle.

Goal:

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

Objective:

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

Action Plan:

Explore Health consists of six, 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 the impact of food choices on heart health
- Learning how to read a food label and make informed decisions
- Exploring current diets and learning health consequences of fad dieting
- 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.

Outcomes:

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

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

Program Description:

BJC School Outreach and Youth Development currently provides SNEAKERS, a classroom-based program that teaches students in grades 3-6 the importance of cardiovascular health and understanding fitness principles.

Goal:

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

Objective:

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

Action Plan:

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.

Outcomes:

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

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: Dental Health

Rationale:

A dental checkup is recommended every six months for children and adults. 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. Lack of access to providers is a major barrier for low-income children to be treated. Only 10.8 percent of dental providers in Missouri participate in the Medicaid program. In 2010, less than 30 percent of children with Medicaid received dental services of any kind. Additional barriers to accessing dental health services includes transportation, long wait times for appointments at Federally Qualified Health Centers and unaffordable co-pay fees. Healthy Kids Express has the expertise, resources and ability to address this need.

Community sites are determined based on socioeconomic status, and availability and access to area health clinics. Schools or sites come from both outside and inside the defined community.

Program: Healthy Kids Express Dental (HKED) Program

Program Description:

St. Louis Children's Hospital Child Health Advocacy and Outreach Department is responsible for Healthy Kids Express Dental. 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.

Goal:

Children will receive appropriate care to prevent dental carries and treat oral health problems.

Objectives:

- Provide dental exams, cleanings and restorative care to 500 children per year in high risk populations for free.

Action Plan:

Children are given a dental exam, dental cleaning and are provided with or referred to the appropriate treatment. Staff also promotes oral health and hygiene by teaching children about brushing and flossing techniques, using fluoride, and how to prevent dental carries. HKED staff coordinates with school or child care representatives by providing referral services and follow-up care for a child if needed. HKED staff work in partnership with BJC medical interpreters, community site partners and community dental providers to meet the goals of this program.

Outcomes:

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

Outcome Measurement:

The number of children served and dental procedures administered 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: Allergies (Food)

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. Sixteen to 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.

A needs assessment among St. Louis area school nurses, administrators, students and parents identified a need for both internal and external support in managing LTFA. St. Louis Children's Hospital uses their expertise to address this issue in schools and agencies in the defined community and by reaching out to a national audience. Food Allergy Management and Education (FAME) leads local and national partners to improve food allergy management best practice and ensures that efforts in St. Louis City lead the industry standard and best practices for the nation.

Program: Food Allergy Management and Education (FAME) Program

Program Description:

St. Louis Children's Hospital Child Health Advocacy and Outreach Department currently provides FAME, which is a

program that 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.

Goal:

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

Objectives:

- 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 pretest for a representative sample of participants.

Action Plan:

In order to enhance education and resources, FAME has organized an advisory board of national, as well as local, leaders in the food allergy field to create and distribute a national tool-kit and manual that will be available throughout the United States.

Partners to address this need include: county, state and national organizations that support asthma and food allergy activities. This program will also partner with local school nutrition personnel, nurses, teachers and parents. It currently has support of a national advisory board, which is instrumental in the program's success.

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.

Outcomes Measurement:

This program is evaluated by measuring improvement in LTFA knowledge, and the number of people receiving education and resources. The tools used to measure these outcomes include data tracking for the number of manuals/ tool-kits distributed, curriculum guides distributed, and program participants trained.

Community Health Need: Healthy Lifestyles

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.

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.

Goal:

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

Objective:

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

Action Plan:

Power of Choice, which 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" which encourage use and media "counter-ads" which 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.

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.

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: Smoke-free Teens on Purpose (STOP): An adolescent tobacco cessation

Rationale:

Research shows that the adolescent brain becomes addicted to nicotine faster than the adult brain. According to the Centers for Disease Control and Prevention, smoking is the number one preventable cause of death in the United States. Intervening at an early stage in the addiction cycle may help adolescents stop the harmful habit.

Program Description:

BJC School Outreach and Youth Development implements STOP, a voluntary classroom-based program that helps students in grades 9-12 stop using tobacco.

Goal:

To support high school students to be successful in their efforts to quit the harmful habit of using tobacco products.

Objective:

Improve overall knowledge of the harmful effects of tobacco use by 10 percent from pre- to post-test assessment.

Action Plan:

STOP consists of eight one-hour sessions and monthly follow-up sessions that include the following topics:

- Short- and long-term health effects of tobacco use
- Weight concerns and healthy lifestyle choices
- Stress management techniques and ways to handle cravings and triggers
- Facts and tips for stopping tobacco use
- Setting smoke-free/tobacco-free "dates"
- Unveiling the truth in tobacco advertising
- Dealing with relapse and handling high-risk situations

Outcomes:

The intended outcome of this program is that 10 percent of students who complete the program will be tobacco-free.

Outcome Measurements:

To measure reduction in tobacco use, students are asked to self-report on a weekly basis their progress. In addition, random Smokerlyzer tests are administered to measure students' level of carbon monoxide.

Community Health Need: Respiratory: Asthma

Rationale:

Asthma is the most common chronic disease in children ages 0-18. It is the number one reason children miss school and a parent misses work. At St. Louis Children's Hospital, it is the top reason for admission. In the U.S., 9.5 percent of children are living with asthma. Asthma affects 11.6 percent of African Americans, 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)

Program Description:

St. Louis Children's Hospital Child Health Advocacy and Outreach Department at is responsible for disseminating the HKEA program to the community through a multi-disciplinary care team.

Goal:

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

Objectives:

- Enroll 250 elementary, middle or high school students each school year to provide medical care and social services for children who have asthma.
- 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.
- 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.

Action Plan:

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.

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.

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: Maternal, Child Health

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 has stated: "When developing biological systems are strengthened by positive early experiences, healthy children are more likely to grow into healthy adults."2

Programs: Raising St. Louis

Program Description:

St. Louis Children's Hospital Child Health Advocacy and Outreach Department is responsible for providing Raising St. Louis which will work with families in the City of St. Louis beginning in pregnancy and continuing until the child is ready to enter third grade.

Goal:

For every child to be healthy and ready to learn in school.

Objectives:

- Improve birth outcomes (gestational age, birth weight) of children involved in the Raising St. Louis program.
- Perform exams and screenings to make sure child is healthy, safe and developing on track.
- Help adults learn effective parenting techniques.
- Provide timely information and connections to resources and social services.

Action Plan:

The core program components will include referral to appropriate prenatal care, evidence-based home visitation programs, parent support groups and navigation of healthcare and social services. We partner with existing effective organizations such as Nurses for Newborns and Parents as Teachers to bring services to families in a coordinated, systematic way. Our program is available to pregnant women residing in the north St. Louis City zip codes of: 63106, 63107, 63112, 63113, 63115 and 63120. Our long term goal is to expand the program throughout the City of St. Louis.

Outcomes:

Through participation in the Raising St. Louis program, children will be healthy, developing at an age-appropriate rate, and ready to learn effectively by the time they reach the third grade.

Outcome Measurements:

This program has a comprehensive evaluation plan that utilizes 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.

Community Health Need: Mental/Behavioral Health & Maternal, Child Health

Rationale:

According to the Centers for Disease Control and Prevention, in 2014, almost 250,000 babies were born to women aged 15–19 years, for a birth rate of 24.2 per 1,000 women in this age group. Giving birth during the teen years has been linked with increased medical risks and emotional, social, and financial costs to the mother and her children. Becoming a teen mom affects whether the mother finishes high school, goes to college, and the type of job she will get, especially for younger teens ages 15 to 17. More can be done to prevent younger teens from becoming pregnant, particularly in health care.

According to the National Institute of Mental Health; suicide is the 10th leading cause of death in the United States, and claims the lives of more than 34 thousand people each year. Social and emotional learning (SEL) is the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions.

The Wyman Teen Outreach Program empowers teens who are at-risk with the tools and opportunities needed to avoid risky behaviors – like dropout and teen pregnancy – and become leaders with a powerful vision for their future.

Program: Teen Outreach Program (TOP)

Program Description:

St. Louis Children's Hospital's Child Health Advocacy and Outreach Department is responsible the Teen Outreach Program, which is a classroom curriculum- sixth-12th grade students. This program promotes community purpose and school success.

Goal:

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

Objectives:

- Operate at least 10 TOP clubs throughout the school year.
- Expose 200 students to the TOP curriculum.
- 80 percent of the students in the TOP program will complete at least 20 hours of community service.

Action Plan:

Teen Outreach Program staff includes health educators and a supervisor. Staff provides weekly lessons throughout the school year in the classroom to sixth-12th grade students to engage teens in the Wyman Teen Outreach Program (TOP) curriculum-guided discussion and community service learning.

Outcomes:

Participants increase sense of purpose and decrease risk of school suspension, course failure, school dropout, and teen pregnancy.

Outcome Measurement:

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

Community Health Need: Mental/Behavioral Health

Rationale:

According to the US 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.

Program: Buddies

Program 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.

Goal:

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

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.

Action Plan:

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.

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.

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: Difference Makers

Program Description:

BJC School Outreach and Youth provides Difference Makers, a classroom-based program that helps students in grades 6-8 understand the impact of bullying behaviors and provides training for healthy interactions.

Goal:

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

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.

Action Plan:

Difference Makers 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.

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.

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

Rationale:

Developmentally, adolescents are in a crucial time for developing self-awareness and social skills, known as emotional intelligence. According to the National Threat Assessment Center, emotional intelligence is essential to preventing school violence and fostering healthy relationships. These skills can help students experience academic and social success.

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.

Goal:

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

Objective:

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.

Action Plan:

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.

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.

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.

Rationale:

Social networking, texting, and messaging are common pastimes in the lives of middle school students. As technology develops, so does the opportunity to teach students social intelligence – the ability to connect with others in meaningful ways. According to Common Sense Media, digital citizenship is a life skill for youth and can be tied to public health outcomes.

Program: ConneXtions

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.

Goal:

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

Objective:

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

Action Plan:

ConneXtions consists of four, 45-minute sessions taught by a health educator and includes the following topics:

- Communication – verbal, nonverbal, and tone
- Healthy and toxic behaviors
- Social media
- Healthy balance of media
- 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.

Outcomes:

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

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

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." Thirty-five percent of children in Missouri report not having a medical home. 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.

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

Healthy Kids Express has the expertise and resources to reduce these barriers and help children receive appropriate treatment and prevent future illness. Community sites are determined based on socioeconomic status, availability and access to area health clinics, and capacity of the school or site to provide care. Some schools or sites may be outside the defined community if they show from these criteria that they have a need.

Program: Healthy Kids Express Medical Screening (HKEM) program

Program Description:

St. Louis Children's Hospital 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.

Goal:

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

Objectives:

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

Action Plan:

HKEM staff will conduct health screenings for blood lead 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.

Outcomes:

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

Outcomes Measurements:

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

Community Health Need: Public Safety

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 St. Louis Children's Hospital and are often preventable.

St. Louis Children's Hospital currently operates Safety Street to address injury prevention at community and school 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 to schools and community sites both in and outside the defined community.

Program: Safety Street

Program Description:

St. Louis Children's Hospital Child Health Advocacy and Outreach Department delivers Safety Street, an interactive walk-on exhibit, teaches children how to avoid unintentional injuries.

Goal:

To prevent injuries related to pedestrian, home, and vehicle safety, playground/sports, water, strangers and stray animals.

Objectives:

- 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.
- 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.

Action Plan:

Safety Street staff will collaborate with local schools, community organizations and volunteers to provide education on safety topics relevant to elementary school students during a one-hour interactive safety lesson to local schools and community organizations.

Outcomes:

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

Outcome Measurements:

This program will be evaluated using a pre- and post-knowledge test for a representative sample of participants. Progress will also be evaluated by tracking data on the number of participants, number of community events scheduled, number of school sites visited, and number of pre- and post-tests completed.

Community Health Need: Public Safety

Rationale:

Proper use of safety equipment can help prevent injury and death among children.

Motor vehicle accidents are the greatest cause of injury death. The correct use of child safety seats can prevent death by 71 percent for infants and 54 percent for toddlers. Booster seats reduce injury risk by 59 percent for children four to seven years old. According to the Centers for Disease Control, 72 percent of people who use child safety seats with their child are using them incorrectly.

St. Louis Children's Hospital currently operates Safety Stop, a hospital safety center, and provides multiple safety presentations at community sites.

Program: Safety Stop

Program Description:

St. Louis Children's Hospital Community Education and Child Health Advocacy and Outreach Departments provide this program. 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.

Goal:

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

Objectives:

- Provide 1,000 child safety seat, bicycle helmet or home safety consultations to parents/caregivers per year.
- Increase knowledge among child seat safety consultation participants by 5 percent on post-test compared to pre-test.

Action Plan:

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.

Outcomes:

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

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 consultations, number of community events scheduled, number of pre- and post-tests completed, percent of child safety seats installed correctly, helmets and gear checks, and home consults scheduled.

Community Health Need: Access: Services & Infectious Diseases

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." Thirty-five percent of children in Missouri report not having a medical home. Thirteen 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.

Healthy Kids Express has the expertise and resources to reduce these barriers and help children receive appropriate treatment and prevent future illness. Community sites are determined based on socioeconomic status, availability and access to area health clinics, and capacity of the school or site to provide care. Some schools or sites may be outside the defined community if they show from these criteria that they have a need.

Program: Healthy Kids Express Medical Screening (HKEM) program

Program Description:

St. Louis Children's Hospital 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.

Goal:

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

Objectives:

- Provide 4,000 screening services and immunizations per year for children in high-risk populations, free of charge.
- Connect 40 percent of participants who receive follow-up services to appropriate treatment.

Action Plan:

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.

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.

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: STD: Health Education

Rationale:

Adolescence is a period of uncertainty, confusion and conflict, as well as excitement, challenge and tremendous growth. 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.

Program: Heart 2 Heart

Program 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.

Goal:

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

Objective:

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

Action Plan:

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.

Outcomes:

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

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.

B. Additional Health Activities

The hospital plans to continue to offer activities and initiatives already in place to address the following health need:

Health Literacy: According to the American Academy of Pediatrics, health literacy interventions improve outcomes of both low and high literacy families with the presence of patient educators, patient advocates, care coordinators and medical interpreters. The hospital provides a Family Resource Center to help families in the hospital and community learn more about their child's health condition. Information resources are customizable to the needs of the requester's spoken language, reading level, and learning style.

C. Community Health Needs Not Currently Addressed

The hospital does not currently focus any community benefit programs on the health topic of Cancer. The health topic of cancer only received one mention as stated in this report; therefore the internal focus group did not create an implementation strategy for this health topic. In addition, there are not resources to address this issue in the community.

The hospital does not currently focus any community benefit programs on the health topic of diabetes. In the 2013 CHNA, diabetes was categorized under the Fitness, Nutrition, and Weight health topic, but it was pulled out to stand alone during the 2016 CHNA nomenclature development. 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.