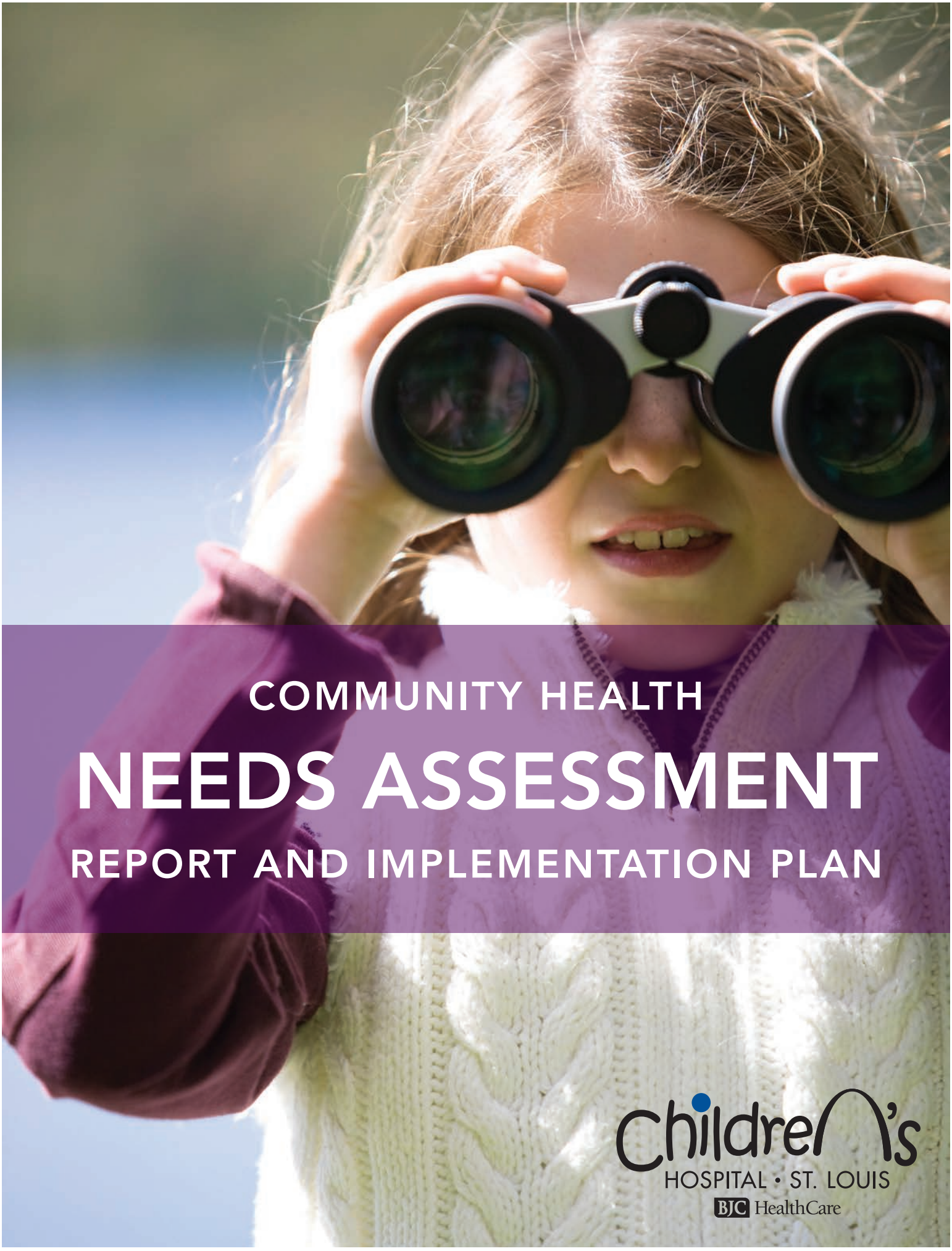

COMMUNITY HEALTH

NEEDS ASSESSMENT

REPORT AND IMPLEMENTATION PLAN

Children's HOSPITAL • ST. LOUIS

BJC HealthCare

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I. EXECUTIVE SUMMARY

In spring and summer 2012, St. Louis Children's Hospital (SLCH) conducted a citywide Community Health Needs Assessment (CHNA). The assessment, partly conducted in collaboration with SSM Cardinal Glennon Children's Medical Center (CGCMC), was designed to identify the most important pediatric health issues in the city of St. Louis, using scientifically valid health indicators and comparative information. An internal work group, consisting of hospital staff and medical personnel, guided this process for SLCH. They analyzed primary and secondary data to determine the top health needs in the community.

Primary data collection included two external focus groups held with community members, including a representative from the St. Louis Health Department, and a survey to assess parents' health concerns for their children and for children in the community. Please see the appendix for input from the health department representative. Secondary data included data available on Priorities Missouri Information for Community Assessment (MICA) related to infants, children, and adolescents. In addition, secondary data included a modified Hanlon Method for diseases and risk factors.

In summary, an external focus group and an internal work group determined the top 10 pediatric health needs in the community to be **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.**

II. DEFINITION OF COMMUNITY

For the purposes of this community health assessment, our community is defined as St. Louis city. St. Louis Children's Hospital (SLCH) serves the health care needs of children, from infancy to adolescence, and advocates on behalf of children and families. Founded in 1879, SLCH is the oldest pediatric hospital west of the Mississippi River and the seventh oldest in the United States. SLCH has 264 licensed beds. The hospital features a 36-bed pediatric intensive care unit (including a 12-bed cardiac intensive care unit), a 70-bed newborn intensive care unit and a six-bed pediatric bone marrow transplant unit. Each year the hospital receives about 275,000 patient visits.

St. Louis Children's Hospital offers comprehensive services in every pediatric medical and surgical specialty. In 2013, *U.S. News & World Report* named St. Louis Children's Hospital to its Honor Roll of America's Best Children's Hospitals. Children's Hospital was one of ten hospitals on the elite list. The hospital has been honored by *U.S. News and World Report* 11 consecutive years.

While SLCH has served patients from all 50 states and more than 80 countries, the hospital primarily serves St. Louis city in community health advocacy and outreach efforts.

The population data used for this Community Health Needs Assessment was accessed from the Healthy Communities Institute web-based secondary data resource *(http://www.stlouischildrens.org).* US Census Bureau 2010 Census estimates were used for this report. These estimates were also used to determine all rates (e.g. hospitalization rates) that included population-based denominators.

Population Growth

As the fourth most populous county in Missouri with 319, 294 people, St. Louis city is also geographically the smallest county in Missouri with 61.91 square miles (U.S. Census Bureau 2010). From 2000-2010, the city has experienced a steady decrease in population with a percent change of 8.3 percent in comparison to the population increase of 7.0 percent for Missouri. A gradual decline in population from 2010-2030 is projected. The city's dense urban layout has 5,157.5 people per square mile in comparison to the 87.1 people per square mile for Missouri.

Age Distribution

According to the US Census Bureau, only 21.2 percent (67,690) of this population are children under the age of 18 (U.S. Census Bureau, 2010) which is less than the Missouri total. The largest percentage of St. Louis city residents are between the ages of 25-44 and represent 30.7 percent of the population which is larger than the percentage statewide. (U.S. Census Bureau 2010, retrieved from MICA). The number of older adults (45+) in the city is 35.9 percent, less than the state's 40.9 percent. According to the Missouri Office of Administration, the numbers of births and deaths for the city have continually decreased in the past five years—evidence that the older population is increasing.

Table 1. Age Distribution in St. Louis City and Missouri, U.S. Census 2010

Age	St. Louis city	Missouri
0-18	21.2 %	23.8 %
25-44	30.7 %	25.4 %
45+	35.9 %	40.9 %

Race and Ethnicity

According to the U.S. Census 2010, the largest racial segment in St. Louis city is black, representing 49.2 percent of the population (Missouri: 11.6 percent). Other segments: 43.9 percent white (Missouri: 82.8 percent), 2.9 percent Asian (Missouri: 1.6 percent) From 2000-2010, the number of blacks and whites in the city decreased slightly (1.2 percent, 0.7 percent respectively) while those of other races increased 1.2 percent. A greater number of city residents (8.9 percent) speak a language other than English in their home in comparison to 5.9 percent for Missouri.

Table 2. Race and Ethnicity in St. Louis City and Missouri, U.S. Census 2010

Ethnicity	St. Louis city	Missouri
Asian	2.9 %	1.6 %
Black	49.2 %	11.6 %
White	43.9 %	82.8 %
Speak a language other than English at home	8.9 %	5.9 %

Gender

The city's population as a whole is evenly divided between males and females ages 0-64. However, for adults age 65 and older, the percentage of women outweighs men 61.6 percent to 38.4 percent (MICA, 2010). This trend is also seen statewide.

Socioeconomic Profile

St. Louis city residents are more likely to rent their homes, live in a multi-unit structure, and have a per capita income and median household income below that of the state average. From 2007-2010, the percentage of persons living below the federal poverty level was 26.0 percent for the city and 14.0 percent for Missouri.

The percentage of persons over the age of 25 with a high school diploma is below that of Missouri, 80.6 percent and 86.2 percent respectively (U.S. Census, 2010). The percentage of those age 25+ with a bachelor's degree or greater is higher in the city (27.7 percent) than for Missouri (25.4 percent) overall.

III. CONDUCTING THE NEEDS ASSESSMENT

A. Organizational Structure

The St. Louis Children's Hospital internal work group completed a series of surveys that provided input on determining the community's health needs. This group was comprised of pediatric medical directors, nurses, community health professionals, business and planning managers. The internal work group met several times to evaluate the CHNA, and its members are listed in Table 3.

Table 3: Internal Work Group Titles
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

B. Primary Data Collection

Primary data are gathered directly from stakeholders and the community through surveys and face-to-face focus groups. The external focus group and internal work group completed separate types of surveys to capture their qualitative and quantitative feedback on the community's health needs. The sources of primary data are listed below.

1. **External Focus Group**

   To fulfill the requirements of the Patient Protection and Affordable Care Act, the two local pediatric hospitals, Cardinal Glennon Children's Medical Center (CGCMC) and St. Louis Children's Hospital (SLCH), collaborated to obtain input from pediatric and public health experts. Hospital representatives formulated a two-step process. The two institutions established a focus group of eighteen community leaders to obtain feedback on health concerns for children ages 0-18 in St. Louis City. The BJC Market Research Manager facilitated the focus groups, which were held in winter 2012.

An initial focus group was conducted to solicit feedback from experts on the needs of St. Louis city children. A second meeting was held to share the results of the focus group as well as the findings from additional secondary data analyses. Statistics were presented on 13 health topics. Eighteen individuals representing various St. Louis city organizations attended the first focus group meeting. Each individual completed a worksheet prior to the meeting to identify their perceptions of the greatest health care needs of city children, their knowledge of available resources to address these needs and the greatest "gap" that exists between need and available resources.

ORGANIZATIONS REPRESENTED AT FOCUS GROUP
St. Louis School Nurse Association
Urban League of Metropolitan St. Louis
Jerusalem Missionary Baptist Church
International Institute
Vision for Children at Risk
Health and Dental Care for Kids
St. Louis Maternal Child and Family Health Coalition (MCFHC)
St. Louis Police Department
Boys and Girls Clubs of Greater St. Louis
United Way of Greater St. Louis
St. Louis Regional Asthma Consortium
Deputy Director, MO HealthNet
St. Louis Health Commissioner, City of St. Louis Health Department
St. Louis Mental Health Board
St. Louis Alderman, Ward 20
SSM Cardinal Glennon Children's Medical Center/EMS Professional Parent
St. Louis Crisis Nursery
Youth in Need

**A full list of external focus group names and organizations are listed in the appendix.*

Focus Group Key Findings

During the first meeting, the focus group provided feedback on the perceived needs in the community; during the second meeting health statistics on each topic were presented. Each participant anonymously completed two surveys that scored each of the thirteen health topics. We received a total of 16 matching surveys from participants who attended both focus group meetings. The "seriousness" and "greatest potential to unify" surveys used a scale of one (lowest score) to five (highest score). SLCH program evaluators aggregated participant responses by health topic. Each health topic could receive a maximum value of 80 (5 points*16 people). Tables 4 and 5 (see page 6) show the results of both surveys. In Table 5, topics with a score of 65 or greater were placed in the high category. Topics with a score below 65 were placed in the low category.

In summary, **access to health care, injury /violence (safety),** and **maternal/infant health** received the highest rank for seriousness and potential to unify.

Table 4: Community Health Needs Assessment Focus Group Results

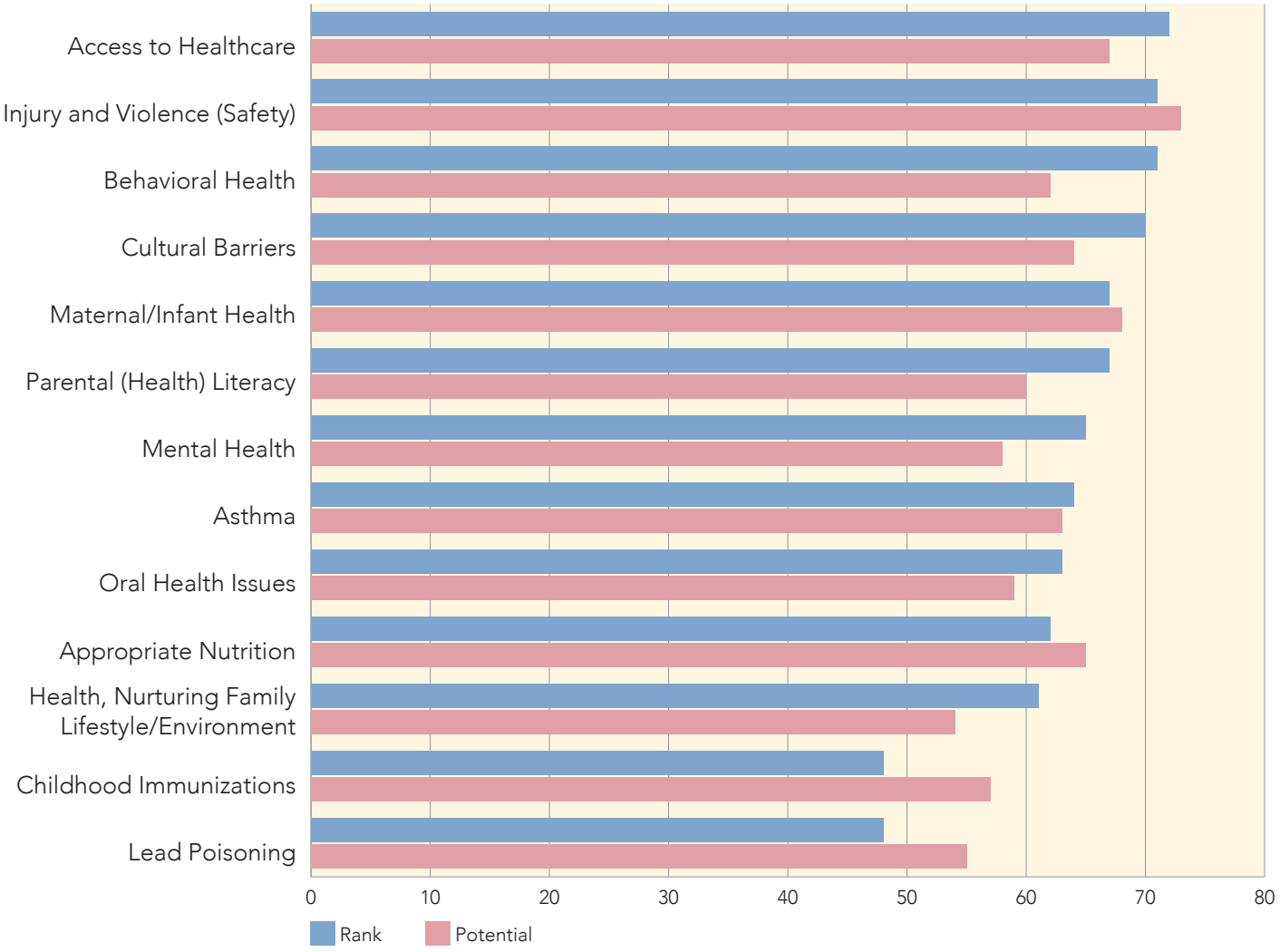

Table 5. Health Topic Ranking

POTENTIAL TO UNIFY		HEALTH TOPIC RANKING	
	High	Appropriate Nutrition	Access to Healthcare Injury and Violence (Safety) Maternal/Infant Health
	Low	Asthma Oral Health Issues Nurturing Family Lifestyle/Environment Childhood Immunizations Lead Poisoning	Cultural Barriers Behavioral Health Parental (Health) Literacy Mental Health
		Low	High
SERIOUSNESS			

2. Parent Survey

A team of six researchers from Washington University in St. Louis and St. Louis Children's Hospital developed a survey to assess parents' health concerns for their children and for children in the community. This survey was distributed to parents attending the office of a pediatrician in the Washington University Pediatric and Adolescent Ambulatory Research Consortium (WU PAARC). Parents were approached in the waiting room by a research assistant and invited to participate, and 1,119 parents participated in the survey. Survey results appear in the paper *What are Parents Worried About? Health Problems and Health Concerns for Children* (Garbutt et al, 2011).

The collaborators of this survey are listed in Appendix B.

The survey asked parents to rank 30 items on a four-point scale of how much of a problem the item is for children in the community (large, medium, small, not a problem). The 30 items on the survey are listed in Table 6.

Table 6. Parent Survey Health Topics

Items Listed on Parent Health Concerns Survey		
ADHD	Heavy Drinking of Alcohol	Overuse of Antibiotics
Allergies	HIV/AIDS	Poverty
Asthma	Illegal Drug Use	Risks Associated with Immunization Shots
Autism	Internet Safety	School Violence
Bullying	Lack of Exercise	Smoking/Tobacco Use
Child Abuse and Neglect	Lead Toxicity Poisoning	Sport/Play Related Injuries
Depression	Marijuana Use	STDs
Diabetes	Motor Vehicle Accidents	Suicide
Eating Disorders	Neighborhood Safety	Swine Flu
Environmental Pollution	Obesity	Teen Pregnancy

Parents identified **allergies, lack of exercise, asthma, attention deficit disorder, internet safety, obesity, smoking,** and **bullying** as the most important health problems for children in the community.

C. 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 *(http://health.mo.gov/data/mica/MICA/).* Priorities MICA divides the 18 and younger population into two groups: infants/children and adolescents. The system also provides for the subjective input of experts to rank their perceived seriousness of each issue. The internal work group individually completed online surveys regarding their perception of the seriousness of each issue. Results were aggregated to determine the rank of each disease. A list of the diseases that Priorities MICA ranked can be found in Table 7 (see page 8).

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 7). 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 the Survey Monkey tool. Individual scores were aggregated based on the mode for each indicator. Indicators with the most number of mentions were ranked from 1-13.

Table 7. 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

D. Prioritization of Health Needs

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

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

The health topics were ranked based on a weighted number of mentions from the risk factors and diseases listed above. Each indicator was weighted from 13 (highest ranked) to 1 (lowest ranked). The overall rank of each health topic is listed in Tables 8-9. The number in parenthesis represents the weighted number of mentions.

Primary Data Considered:

Column 1: External focus group-ranked results

Column 2: "Parents' Health Concerns for Children" survey-ranked results

Secondary Data Considered:

Column 3: Priorities Missouri Information for Community Assessments (MICA) for Infants and Children ranked results

Column 4: Priorities Missouri Information for Community Assessments (MICA) for Adolescents ranked results

Column 5: Modified Hanlon Method for Risk Factors ranked results (or Basic Priority Rating System)

Column 6: Modified Hanlon Method for Diseases ranked results (or Basic Priority Rating System)

Table 8: Community Health Needs Assessment Primary and Secondary Data Summary

Rank	Focus Group	"Parents' Health Concerns for Children" Survey	MICA-Infants & Children	MICA-Adolescents	H&P-Risk Factor	H&P-Disease
1	Access to healthcare	Allergies	Asthma	Motor vehicle collisions	Single-parent households	Dental health problem
2	Injury and violence	Lack of exercise	Unintentional injuries	Unintentional injuries	Fruit and vegetable consumption	Asthma
3	Maternal/infant health	Asthma	Pneumonia and influenza	Asthma	Poverty (families below poverty level, free & reduced lunch)	Preterm births
4	Appropriate nutrition	ADHD	Motor vehicle collisions	Pregnancy complications	Substance abuse	Childhood obesity
5	Cultural barriers	Internet safety	Infant health problems	Mental health	Health literacy	Babies with low birth weight
6	Behavioral health	Obesity	Mental health	Falls	Sedentary behavior	Unintentional injuries
7	Health literacy	Smoking/tobacco use	Burns (scalds/hot objects)	Schizophrenia and psychosis	Adults who smoke	Diabetes
8	Mental health	Bullying	Dental health problem	Pneumonia and influenza	Social determinants of health	Anemia (excluding sickle cell)
9	Asthma	Illegal drug use	Burns (fire and flames)	Sickle cell anemia	Mothers who receive early prenatal care	Sexually transmitted diseases
10	Oral health	Motor vehicle accidents	Sickle cell anemia	Anxiety-related mental disorders	Alcohol abuse	Premature death

Table 8: Community Health Needs Assessment Primary and Secondary Data Summary (continued)

Rank	Focus Group	"Parents' Health Concerns for Children" Survey	MICA-Infants & Children	MICA-Adolescents	H&P-Risk Factor	H&P-Disease
11		Environmental pollution	Falls	Suicide (self-inflicted injury)	Adolescents who smoke	Allergies (including food allergies)
12		Teen pregnancy	Vaccine-preventable diseases	Vaccine-preventable diseases	Mothers who smoke during pregnancy	Vaccine-preventable diseases
13		Marijuana use	Medical/surgical complications	Dental health problem	Children without health insurance	Violent crimes
14		Heavy drinking of alcohol	Poisoning	Burns (scalds/hot objects)	Primary care provider rate	Elevated lead
15		Child abuse and neglect	Anxiety-related mental disorders	Diabetes	Recreation and fitness facilities	Falls
16		Depression	Schizophrenia and psychosis	Medical/surgical complications		Infant mortality and health problems
17		STDs	Elevated lead	Chlamydia: women 15-19		Mental health
18		Autism	Anemia (excluding sickle cell)	Anemia (excluding sickle cell)		Child abuse (including bullying)
19		Poverty	Diabetes	Gonorrhea		Pregnancy complications
20		Sport/play related injuries	Abuse and neglect	HIV/AIDS		Vision problems
21		Diabetes	Pregnancy complications	Burns (fire and flames)		Hearing problems
22		School violence	Suicide (self-inflicted injury)	Substance abuse		Abuse and neglect
23		Neighborhood safety	HIV/AIDS	Poisoning		Burns (fire/flames, scalds/hot objects)
24		Overuse of antibiotics	Substance abuse	Elevated lead		Sickle cell anemia
25		Eating disorders	Chlamydia: women 15-19	Syphilis		Poisoning
26		Lead toxicity poisoning	Gonorrhea			Cancer
27		HIV/AIDS	Syphilis			Self-inflicted injury
28		Risks associated with immunization shots				Suicide
29		Suicide				Pneumonia and influenza
30		Swine flu				Motor vehicle collisions

Table 9. Health Topics and Indicators		
Rank	**Health Topic**	**Indicators Included**
1	Public Safety (109)	Burns (scalds, hot objects, fire and flames), falls, fumes from asphalt transfer station, motor vehicle collisions/accidents, neighborhood recovery and restoration, poisoning, trauma, unintentional injury, and violent crimes (assaults, homicide, gun violence).
2	Fitness, Nutrition, and Weight (71)	Access to healthy, affordable food, childhood obesity, diabetes, fruit and vegetable consumption, recreation and fitness facilities sedentary behavior, and understanding healthy eating.
3	Asthma (71)	Allergies, asthma, food allergies, and pollution.
4	Maternal, Child Health (66)	Babies with low birth weight, infant mortality, infant health problems, mothers who received early prenatal care, mothers who smoke during pregnancy, preterm births, pregnancy complications, and teen pregnancy.
5	Mental Health (53)	ADHD, autism, affective disorder, anxiety-related mental disorders, childhood-related mental disorders, depression, emotional stability, inadequate social support, misdiagnosis of mental health issue due to cultural illiteracy, schizophrenia, psychosis, and suicide (self-inflicted injury).
6	Social Determinants of Health (50)	Bullying, child abuse and neglect, children and families below the poverty level, food security, housing, internet safety, poverty, primary care provider rate, single-parent households, students with free and reduced lunch, and utilities.
7	Behavioral Health (49)	Eating disorders, lifestyle choices, substance abuse (alcohol, drugs, and smoking), and second hand smoke (adults who smoke).
8	Dental Health (29)	Children with medical needs who also need dental care, dental exams for 3 - 5 year olds, follow up dental care, kids who need root canals under the age of 8, kids who need sedation to receive dental care, and preventive oral health.
9	Infectious Diseases (27)	Influenza (including swine flu), overuse of antibiotics, pneumonia, and vaccine preventable diseases.
10	Health Literacy (25)	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.
11	Blood Diseases (22)	Anemia, elevated lead, and sickle cell.
12	Access to Healthcare (19)	Children without insurance, hearing and vision screenings, maintaining a primary care provider, and medical/surgical complications.
13	STDs (15)	Cervical cancer, chlamydia, gonorrhea, HIV/AIDS, and syphilis.
14	Cancer	All cancers excluding cervical cancer

Conclusion

In summary, the external focus group and internal work group determined that the top fourteen needs in the community are **public safety, fitness, nutrition and weight, asthma, maternal child health, mental health, social determinants of health, behavioral health, dental health, infectious disease, health literacy, blood diseases, access to health care, STDs,** and **cancer.**

Table 10: Health Topic Ranking for Mentions

Rank	Health Topic	Weighted Total # Mentions	Total # Mentions
1	Public Safety	109	24
2	Fitness, Nutrition, and Weight	71	11
3	Asthma	71	8
4	Maternal Child Health	66	12
5	Mental Health	53	15
6	Social Determinants of Health	50	10
7	Behavioral Health	49	12
8	Dental Health	29	5
9	Infectious Diseases	27	9
10	Health Literacy	25	3
11	Blood Diseases	22	10
12	Access to Healthcare	19	7
13	STDs	15	11
14	Cancer	1	1

IV. 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 ten of the health needs identified in the assessment process.

St Louis Children's Hospital and the BJC School Outreach and Youth Development department 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 NEEDS: PUBLIC SAFETY

Rationale: According to Healthy People 2020, injuries are the leading cause of death for Americans ages 1 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 St. Louis 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.

Programs: Safety Street

Goal: 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.

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 five percent increase in average knowledge score at post-test compared to pre-test of a representative sample of participants.

Action Plan: The St. Louis Children's Hospital Child Health Advocacy and Outreach Department oversees this safety program. 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 on-site interactive safety lesson.

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.

Program: Safety Stop

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 4 to 7 years old. The Centers for Disease Control and Prevention reports that 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.

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 evaluations compared to pre-test evaluations.

Action Plan: This program is led by two departments at St. Louis Children's Hospital, Community Education and Child Health Advocacy and Outreach. 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. At the safety center, staff provide free child safety educational presentations in the community and safety seat consultations, child safety seat installations, helmet safety checks, and home safety consults.

Outcomes: Program participants will increase knowledge and skills in 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-/post-tests completed, percent of child safety seats installed correctly, helmets and gear checks, and home consults scheduled.

Program: Helmet Checks

Rationale: Unintentional injuries are a common reason for emergency room utilization at St. Louis Children's Hospital and are often preventable. The Centers for Disease Control and Prevention reports that wearing bicycle helmets can reduce the risk of brain injury due to bicycle-related accidents.

St. Louis Children's Hospital currently operates Safety Stop, a hospital safety center, to provide education and training to properly use helmets and safety gear.

Goal: To prevent injuries in children related to bicycle and sports safety.

Objectives

- Educate 1,000 children, parents and caregivers per year to be safe in their community and at home.
- Provide 200 free helmet safety checks per year.

Action Plan: The St. Louis Children's Hospital Community Education Department is responsible for this safety program. At the hospital safety center, certified child passenger safety technicians fit bicycle helmets and safety gear to children and educate children, parents and caregivers on how to use safety equipment such as bicycle helmets and protective sports gear. Safety equipment is available for purchase at a reduced rate.

Outcomes: The intended outcome of this program is to increase safety knowledge by five percent and increase access to safety tools among 95 percent of participants.

Outcome Measurements: Progress will also be evaluated by tracking data on the number of participants/consults, number of community events scheduled, and number of helmets and gears checked.

COMMUNITY HEALTH NEEDS: FITNESS, NUTRITION AND WEIGHT

Rationale: Obesity now affects 17 percent of all children and adolescents in the United States — triple the rate from just one generation ago according to the Centers for Disease Control and Prevention. 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. To address this community health need, BJC School Outreach and Youth Development implements the following programs:

Program: Head to Toe

St. Louis Children's Hospital 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: Improving knowledge and skill in leading a healthy lifestyle among children and their families.

Objectives

- 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 five percent increase in average knowledge score among participants at post-test compared to pre-test.

Action Plan: The Child Health Advocacy and Outreach Department at St. Louis Children's Hospital is responsible for this program. A team of professionals including an exercise specialist, registered dietitian, social worker and health promotion team member 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 tests.

Program: Just Like You at the Zoo

St. Louis Children's Hospital currently provides a program called "Just Like You at the Zoo" at the St. Louis Zoo to provide nutrition and exercise education in a community setting.

Goal: To improve knowledge of leading a healthy lifestyle among children and their families through nutrition education.

Objectives

- Provide educational lessons to 2,500 children per year focusing on healthy nutrition and exercise.
- By 2016, develop an evaluation plan for measuring program outcomes.

Action Plan: The Community Education department at St. Louis Children's Hospital oversees this program. Staff provide nutrition and physical activity education for free at the St. Louis Zoo. Children learn about exercise and nutrition in an interactive lesson format to understand the importance of proper nutrition and exercise behavior.

Outcomes: This program increases knowledge about nutrition and physical activity among participants.

Outcome Measurements: This program will be evaluated using a pre- and post-knowledge test for a representative sample of participants. Program progress will be measured by the number of children receiving nutrition and exercise education from this program.

Program: "Fun"tastic Nutrition

Program Description: "Fun"tastic Nutrition is 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: Explore Health is 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: SNEAKERS is a classroom-based program that teaches students in grades 3-6 the importance of cardiovascular health and 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 increase 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: 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 United States, 9.5 percent of children are living with asthma. Asthma affects 11.6 percent of black persons, 8.2 percent of white persons and 7.3 percent of Hispanic persons in the U.S. (Source: National Health Interview Survey, CDC).

This program is conducted in ZIP codes with 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: St. Louis Children's Hospital's Healthy Kids Express Asthma mobile health program. (HKEA)

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 with 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 five percent increase in overall asthma knowledge score at post-test compared to pre-test.

Action Plan: The Child Health Advocacy and Outreach Department at St. Louis Children's Hospital is responsible for disseminating the HKEA program to the community. Children enrolled in HKEA receive specialized asthma care and education from a team of nurses, nurse practitioners, and asthma educators in the 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 help children with asthma, teaching them to manage their asthma properly by increasing their knowledge of asthma signs and symptoms, improving their ability to use medications correctly and following 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 the skill of using an inhaler/aero chamber, increasing asthma knowledge, and increasing access to health care 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.

Program: Food Allergy Management and Education (FAME) Program

Rationale: The Centers for Disease Control and Prevention reported an 18 percent increase in LTFA among children under age 18 between 1997 and 2007. About 16-18 percent of LTFA reactions happen in the school setting. Of the children who had reactions, 25 percent of them did not know they had a food allergy. Schools are a prime environment for preventing LTFA reactions and making sure school staff are 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. The hospital's Food Allergy Management and Education (FAME) program collaborates with local and national partners on this effort.

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 pre-test for a representative sample of participants.

Action Plan: FAME staff provide 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.

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

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 that is instrumental in the program's success.

Outcomes: This program seeks to increase the knowledge of school personnel regarding food allergy management and 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: 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 blacks, Hispanics, American Indians and Alaska Natives. Mexican-American and non-Hispanic black children ages 2-8 are particularly at risk for poor oral health.

In Missouri, 27.1 percent of school-age children have untreated tooth decay. Lack of access to providers is a major barrier for low-income children needing treatment. 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 include 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, 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

Goal: Children will receive appropriate care to prevent tooth decay and treat oral health problems.

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

Action Plan: St. Louis Children's Hospital's Child Health Advocacy and Outreach Department is responsible for this program. HKED staff include a dentist, dental assistants, and social workers. They provide dental services 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. Children are given a dental exam and cleaning, then provided with or referred to the appropriate treatment. Staff also promote oral health and hygiene by teaching children about brushing and flossing techniques, using fluoride, and how to prevent tooth decay. In collaboration with school or child care representatives, HKED staff coordinate 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 tooth decay 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: INFECTIOUS DISEASES

Rationale: According to the Centers for Disease Control and Prevention, hand washing can reduce the risk of respiratory infections by 16 percent, reduce the spread of food-borne illness and other infections, and reduce diarrheal disease-associated deaths by up to 50 percent.

The use of alcohol gel hand sanitizer in the classroom also provides an overall reduction in absenteeism due to infections.

St. Louis Children's Hospital's Glitter Bug Hand Washing Program offers expertise and resources to improve skill and technique among children and families to prevent future illness. The program is offered to community sites both within and outside the defined community.

Program: Glitter Bug Hand Washing

Goal: Increase skill of hand washing to prevent the spread of infectious disease.

Objectives

- Provide 300 children per year with lessons in prevention and health literacy education (infectious disease spread).
- By the end of 2016, develop an evaluation plan to measure program outcomes.

Action Plan: St. Louis Children's Hospital's Community Education Department is responsible for this program. Staff helps children and families learn how to properly wash their hands, use hand sanitizer, and increase their knowledge of how to reduce the spread of preventable diseases in community settings. Children practice these skills in a hand washing activity. Children apply a special lotion that represents the germs on their skin and look at their hands under a black light before hand washing. They then use proper hand washing technique to see the effects of hand washing on eliminating germs.

Outcomes: Participants increase knowledge and skills of proper hand washing technique to prevent the spread of infectious disease.

Outcomes Measurement: This program will be evaluated by educator observation of hand washing skills for each participant. Progress will be tracked by the number of participants who complete the intervention.

COMMUNITY HEALTH NEED: HEALTH LITERACY

Rationale: 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.

According to Health Literacy Missouri, "Low health literacy costs the U.S. economy between $106 billion and $236 billion annually. For Missouri, the number ranges from $3.3 billion to $7.5 billion annually." Low health literacy leads to numerous increased health risks.

To help children grow into adults who can make smart decisions about their health, BJC and St. Louis Children's Hospital provide model programs and resources for children and families that improve their health literacy.

Program: Parenting Presentation

Goal: Increase health literacy, access to health resources, and support for children, families, and health care providers.

Objective: Educate 300 parents in small-group learning opportunities with hands-on activities and discussions about a child's health every year.

Action Plan: Multiple departments within BJC and St. Louis Children's Hospital are responsible for this program. Partners to address this need include: medical interpreters, community sites and health providers, state and local health departments, and local coalitions.

Outcomes: The intended short-term outcome of this program is to initiate a change in health behavior by increasing health literacy knowledge.

Outcomes Measurement: The percentage of parents receiving health literacy education and the number of resources disseminated will be tracked. This program will be evaluated using a pre- and post-knowledge test of the participants.

Program: Career Exploration Programs

Rationale: According to the Department of Labor, exposing youth to a particular career pathway at an early age and providing them with work-based learning experiences improves their knowledge of the industry. Such an effort also secures a future workforce. In addition, this educational opportunity helps youth make informed health care decisions, including when and where to seek health care and the resources available when needed. To address this community health need, BJC School Outreach and Youth Development implements the following program:

Program Description: Our Career Exploration programs expose middle and high school students to the health care sector through various opportunities.

Goal: To increase health literacy, access to health care career choices, and educational opportunities for school-aged youth.

Objective: Expose youth to careers in the health care sector through classroom presentations, job shadowing, mentoring, week-long exploration camps, and internships.

Action Plan: BJC School Outreach and Youth Development provides career exploration opportunities by partnering with BJC HealthCare member hospitals, Washington University School of Medicine, the Goldfarb School of Nursing at Barnes Jewish Hospital and the St. Louis College of Pharmacy. Program participants learn from clinicians and other industry experts.

Outcomes: Increase the number of students enrolled in the school-based health career talks, job shadowing, intern/externship, group career exploration, and health care camps by 5 percent each year.

Outcome Measurements: Progress will be evaluated by tracking data on the number of participants, number of sessions scheduled, and number of school sites visited. Program participants are also asked to self-report their satisfaction with the program and their intent to pursue post-secondary plans.

Program: School Nurse Survival Training

Rationale: Health care professionals who work in the school/community setting are influential in delivering health resources and information to children and their families. The need for these professionals to stay abreast and learn about new and current health information for school-aged children is essential to their development. To address this community health need, BJC School Outreach and Youth Development implements the following program:

Program Description: School Nurse Survival Training, a two-day conference for professional school and community nurses.

Goal: To increase health literacy, access to health resources, and support for children, families and health care providers within the school/community environment.

Objectives

- Educate school nurses by offering hands-on clinical assessment support and youth development education to refresh their clinical knowledge and skills.
- Connect school nurses with local and state-wide health resources to increase health literacy.
- 90 percent of conference participants will complete an after-program evaluation.

Action Plan: BJC School Outreach and Youth Development engages multiple departments within BJC HealthCare to design, plan, develop, implement, and evaluate this two-day school nurse professional development program.

Outcomes: The intended short-term outcome of this program is to increase knowledge of school nurses through a hands-on clinical skills assessment lab and discussion of current prevention and intervention topics on pediatric diseases.

Outcomes Measurement: Participants in the School Nurse Survival Training are asked to complete an after-program evaluation and self-report their level of knowledge on the health topics covered.

COMMUNITY HEALTH NEED: ACCESS TO HEALTHCARE

Rationale: According to the Brookings Institution, "Poor children in the United States start school at a disadvantage in terms of their early skills, behaviors, and health." In Missouri, 35 percent of children report not having a medical home, 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, low rate of primary care providers accepting new Medicaid patients, and long wait times for appointments at federally qualified health centers.

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.

St. Louis Children's Hospital's Healthy Kids Express mobile health program has the expertise and resources to reduce these barriers and help children receive appropriate treatment and prevention. 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 a need based on these criteria.

Program: Healthy Kids Express Medical Screening (HKEM) program

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

To accomplish program goals, 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.

Outcomes: Children participating in the program will receive proper health screenings to detect health issues. They will also receive follow-up services to link them to 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: SOCIAL DETERMINANTS OF HEALTH

Program: Buddies

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. To address this community health need, BJC School Outreach and Youth Development implements the following programs:

Program Description: Buddies is 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: Difference Makers is 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. To address this community health need, BJC School Outreach and Youth Development implements the following program:

Program Description: Intersections is 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 contribute 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.

Program: ConneXtions

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. To address this community health need, BJC School Outreach and Youth Development implements the following program:

Program Description: ConneXtions is 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 forty-five 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.

Program: Olweus Bullying Prevention

Rationale: System-wide change to reduce and prevent bullying needs to take place on the individual, classroom, school, and community level. To address this community health need, BJC School Outreach and Youth Develop implements the following program:

Program Description: The Olweus Bullying Prevention Program is a school-wide program that aims to reduce and prevent bullying behaviors through coalitions, student surveys, and engaging community members.

Goal: To provide training to create a system-wide healthy and safe school climate and address bullying behavior.

Objectives:

- Provide technical assistance to schools currently implementing the Olweus program.
- Assess the readiness level of schools to implement the Olweus program.

Action Plan: Certified Olweus trainers from BJC School Outreach and Youth Development work with administrators, teachers, parents, and board/community members to form a coalition and train them to become a bullying prevention coordinating committee. In addition, BJC staff assist with the following:

- Administering surveys
- Kickoffs
- Staff trainings
- Parent meetings
- Class meetings
- Grade specific, one-time and long-term programs

Outcomes: The intended outcome is to reduce existing bullying problems among students, prevent new bullying problems, and achieve better peer relations at school.

Outcomes Measurements: This bullying prevention program will be evaluated annually by the Olweus Bullying Questionnaire. This assessment is administered to all students in grades 3-12.

COMMUNITY HEALTH NEED: BEHAVIORAL HEALTH

Program: Power of Choice

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 that empower them to make informed decisions and choose a healthy lifestyle. To address this community health need, BJC School Outreach and Youth Development implements the following program:

Program Description: Power of Choice is 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 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" that discourage use
- Long-term consequences of use as seen in healthy and diseased organs
- Resources to assess addiction and access help, if necessary

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

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. To address this community health need, BJC School Outreach and Youth Development implements the following program:

Program Description: STOP is 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: SEXUALLY TRANSMITTED DISEASES (STDS)

Program: Heart 2 Heart

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. To address this community health need, BJC School Outreach and Youth Development implements the following program:

Program Description: Heart 2 Heart is 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 needs: mental health, social determinants of health, health literacy, and blood diseases.

Mental Health: According to the American Academy of Pediatrics, health care professionals and medical institutions can support parents of children with a medical condition by providing institutional support through outlets such as a sibling playroom or bereavement support. The hospital currently operates a sibling playroom within the facility. Healthy siblings who are in a hospital room can make it more challenging for a parent or caregiver to attend to the needs of the patient and can be a distraction to the parent when the staff is conveying important medical information. The Sibling Playroom provides an active space where brothers and sisters can play. It is a place where the sibling's needs are the focus. This service can be available for siblings of inpatient and outpatient clients.

In addition, the hospital social work department coordinates bereavement support. Families are assisted by trained social workers and receive pastoral support while at the hospital and 18 months after losing a loved one.

Social Determinants of Health: The basic needs of a child that should be met by a parent or primary care provider are food, shelter, safety, protection, and emotional stimulation. The hospital provides a department of social workers who assist families with basic needs, social services and other support.

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. Low health literacy leads to numerous increased health risks. The Answer Line – 314.454.KIDS (5437) is a resource that provides the community with health literacy information and access to health resources. In addition, 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 customized to the needs of the requester's spoken language, reading level, and learning style.

Blood Diseases: The hospital community education department will continue to offer the Blood Volume Education presentation. This presentation teaches children about the circulatory system, its role in the body, and how to keep it healthy through an interactive display.

C. COMMUNITY HEALTH NEEDS NOT CURRENTLY ADDRESSED

At this time, St. Louis Children's Hospital does not address maternal child health in the community but will reconsider this endeavor during the next community health needs assessment. Currently, hospital resources are limited and there are not adequate resources to address this issue in the community. St. Louis Children's Hospital staff are represented on multiple local coalitions focused on maternal child health.

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 on page 12 on this report; therefore the internal focus group did not create a implementation strategy for this health topic. In addition, there are not resources to address this issue in the community.

D. INPUT FROM THE ST. LOUIS CITY HEALTH DEPARTMENT

It is a IRS requirement to include the expert opinion of community health needs by a member of the local health department. Our community health department is the St. Louis City Health Department. A representative from the St. Louis City Health Department has provided the input from the department's perspective, and her name is included in the appendix of this report, page 30.

Health Department Representative: Melba Moore

Title/Department Name: Commissioner, City of St. Louis Department of Health

Source of Need Information: 2012 City of St. Louis Community Health Improvement Plan

Public Health Department Identified Need #1: Decrease morbidity and mortality from diabetes, cardiovascular disease, cancer and murder.

St. Louis Children's Hospital will address this need by focusing on reducing pediatric obesity through several programs including Head to Toe and Just Like You at the Zoo; and SNEAKERS and Explore Health (in collaboration with BJC School Outreach and Youth Development).

The anticipated impact of these programs is to reduce childhood obesity, which is often a precursor of these chronic conditions.

These programs will be evaluated by measuring improvements in physical activity, nutrition, self-image and healthy behaviors.

Public Health Department Identified Need #2: Provide every child access to high quality education.

This need will not be addressed by St. Louis Children's Hospital because it is beyond of the scope of services that St. Louis Children's Hospital provides.

Public Health Department Identified Need #3: Prevent and deter violence.

In collaboration with BJC School Outreach and Youth Development, St. Louis Children's Hospital offers programs that deter bullying, including Buddies, Difference Makers and Intersections.

The anticipated impact of these programs is to increase the use of appropriate communication skills and knowledge of strategies for empowerment when confronted with conflict and bullying behavior.

The programs will be measured by identifying the number of children who go through them and measuring their knowledge before and after the programs.

Public Health Department Identified Need #4: Decrease self-destructive behaviors.

St. Louis Children's Hospital will address this need by offering programs that encourage positive mental health, including Bereavement Support and Family Care. In conjunction with BJC School Outreach and Youth Development, they will offer programs that focus on reducing substance abuse, including Power of Choice and Smoke-free Teens on Purpose. BJC School Outreach and Youth Development also offers programs to encourage healthy relationships like Heart to Heart.

The anticipated impact of these programs is to influence youth to make informed decisions about substance use and relationship issues that promote healthy lifestyles and reduce disease.

These programs will be evaluated by tracking the number of individuals who are enrolled and their knowledge of these subject areas before and after their participation.

Public Health Department Identified Need #5: Foster more equitable distribution of wealth.

This need will not be addressed by SLCH because it is beyond of the scope of services that St. Louis Children's Hospital provides.

APPENDICES

APPENDIX A: PARENT SURVEY RESEARCHERS

Parent Survey Researchers	
NAME	ORGANIZATION
Jane M. Garbutt, MD, ChB	Department of Pediatrics, Washington University in St. Louis Department of Medicine, Washington University in St. Louis
Erin Leege, BS	Department of Pediatrics, Washington University in St. Louis
Randall Sterkel, MD	Department of Pediatrics, Washington University in St. Louis St. Louis Children's Hospital
Michael Wallendorf, PhD	Department of Biostatistics, Washington University in St. Louis
Robert C. Strunk, MD	Department of Pediatrics, Washington University in St. Louis

APPENDIX B: EXTERNAL FOCUS GROUP

PARTICIPANT ROSTER		
1.	Surilla Shaw	St. Louis School Nurse Association
2.	Barbara Bowman	Urban League
3.	Charlie Roach	Pastor
4.	Nathanial Curry	Aide to Pastor Roach
5.	Suzanne LeLaurin	International Institute
6.	Rich Patton	Vision for Children at Risk
7.	Valerie Esker	Health and Dental Care for Kids
8.	Kendra Copanas	MCFHC
9.	Matt Simpson	St. Louis Police Department
10.	Flint Fowler	Herbert Hoover
11.	Wray Clay	United Way
12.	Bill Kincaid	STL Regional Asthma Consortium
13.	Margo Hoelscher	Deputy Director, MO HealthNet
14.	Melba Moore	STL Health Commissioner
15.	Jama Dodson	STL Mental Health Board
16.	Craig Schmid	STL Alderman, Ward 20
17.	Tracey Swabby	Parent from CGCMC/EMS Professional
18.	Dave Campbell, MD	Physician for Crisis Nursery
19.	Linda Armstrong	Youth in Need

BJC attendees	CGCMC attendees:
1. Angela Chambers (focus group facilitator)	1. Sherlyn Hailstone
2. Carrie Kenyon (focus group facilitator)	2. Judy Dungan
3. Greta Todd	3. Dennis O'Connor, MD
4. Kel Ward	4. Kim Bakker
5. Debra Denham	5. Jimmie Carter
6. Lee Fetter	