CHILDHOOD OBESITY IN MISSOURI

Childhood obesity is a leading public health concern in the United States. It is a complex issue with significant health, social, and economic implications that threaten to reverse decades of progress in improving the health of Americans. Missouri is one of the heaviest states in the country, with 30% of the total adult population and 31% of children ages 10 to 17 obese. While both genetics and individual behavior play a role, the increased prevalence of childhood obesity is a consequence of environmental changes that have substantially modified caloric intake.

THE HEALTHY SCHOOLS HEALTHY COMMUNITIES INITIATIVE

The Healthy Schools Healthy Communities (HSHC) initiative is a comprehensive approach established by the Missouri Foundation for Health (MFH) to address childhood obesity in regions of Missouri. The goal is a 5% decrease in the percentage of children who are overweight and obese as measured by the BMI-for-age percentile. The initiative includes a school focus in conjunction with community-based and statewide efforts aimed at improving access to healthy foods and opportunities for physical activity. Work at the school and community level is framed by the Alliance for a Healthier Generation’s Healthy Schools Program Framework — of best practices — and the YMCA’s Community Healthy Living Index (CHLI). In addition, MFH has contracted with the Alliance for a Healthier Generation, PedNet, TrailNet, Missouri Department of Health and Senior Services, and GMMB to provide training and technical assistance to the local level, multi-sectoral partnerships in communicating and implementing their targeted strategies.

THE HEALTHY SCHOOLS HEALTHY COMMUNITIES EVALUATION

JSI Research & Training Institute, Inc. (JSI), a public health research and consulting firm, has been contracted by MFH to conduct a comprehensive evaluation of HSHC’s school, community, and state-level activities. From the start, JSI has collaborated with MFH, the school and community partners, and contractors to develop and employ a mixed-methods evaluation that captures the complexity of the initiative while ensuring realistic and feasible data collection. Specific objectives of the evaluation include assessing (1) the process of school and community partnerships to develop and implement multifactorial interventions, including their ability to adopt and sustain change, and (2) the impact of a collection of school and community-based interventions, including programs, policies, and environmental changes aimed at promoting physical activity and healthy eating.

ACKNOWLEDGEMENTS

Our sincere appreciation and thanks go to MFH, the HSHC grantees, and contractors for their participation and dedication to the evaluation of the HSHC.

This report was produced by JSI Research & Training Institute, Inc. (JSI) in Boston, Massachusetts. We would like to acknowledge the contribution of our Evaluation Team:

Tammy Calise
Wendy Chow
Sarah Martin
Rebecca Millock
Amanda Ryder
Joe Rego

Graphic design by Victor H. Aranda.
REPORTED SUCCESSES
As a result of participation in HSHC, multi-sectoral partnerships across the schools and communities reported a number of successes during Year 1. Some highlights included:

SCHOOLS
- HSHC allowed Ava PE teachers to attend professional development trainings for the first time.
- “In Cabool schools, this grant isn’t perceived as another grant program that will disappear once funding ends, but as a sustainable initiative.”
- Cooter Cubs on the Track was developed to give students an opportunity to be active during the school day; the interest and support for this activity resulted in its expansion from once to twice a month.
- Every morning, 150 Eldon students at the Upper Elementary School now walk or participate in workouts.
- “A 3rd grade Hayti student participating in the Mathis Walk/Run Club lost 6 pounds since joining. Her success motivated the entire family to join the Caruthersville Recreation Center.”
- The Hermitage weight room was revamped with HSHC funding. The school is now able to offer two PE classes at a time (instead of one), thereby increasing the number of PE classes offered.
- In Kennett schools, the Breakfast in the Classroom program ensures all students have breakfast daily. As a result, teachers are reporting positive changes in the classroom.
- School/community capacity to address obesity has improved in Moberly due to increased awareness.
- In Monett, the grant has resulted in increased communication with the Hispanic community.
- The grant has allowed Normandy schools to adequately address the health education curriculum, which will now reach over 2,000 students.
- In Salem, Move It Mondays, a program to increase opportunities for youth to be active during the school day, was so successful that it was expanded to Wednesdays.
- Skyline students now have physical activity opportunities offered in the classroom three days a week.

COMMUNITIES
- In Dent County, the community has developed a different mindset and feels that HSHC funds will make change possible.
- The Douglas County Community Coordinator was invited to present the HSHC initiative to the City Council, where information was well-received by all.
- The Department of Health and Senior Services is now involved with local daycares in Hickory County. As a result, new equipment has been purchased.
- In Miller County, a previously private parcel of land adjacent to Rock Island Park was obtained, which allowed for the extension of a walking trail.
- HSHC partners in St. Louis County are now collaborating outside of the grant, which has increased the community’s capacity to address priority issues.
- Community awareness around healthy eating and active living increased in Sullivan County. For example, WIC parents with kids in public schools started to talk about the importance of getting their younger children to eat healthier.

EVALUATION FRAMEWORK
The evaluation is informed by the socio-ecological model and the RE-AIM framework. As such, it answers practical questions about implementation and sustainability at the individual (i.e., child), organizational (i.e., schools), community and state levels. Components of RE-AIM include:

- **Reach:** reaching the intended population including those at greatest risk
- **Effectiveness:** the impact on nutrition, physical activity, obesity, and health
- **Adoption:** the ability/willingness of organizations to initiate and participate in the intervention
- **Implementation:** the delivery of the intervention and its cost
- **Maintenance:** the long-term sustainability of the intervention

The table below outlines the evaluation methods and indicators for each component of the RE-AIM framework.

<table>
<thead>
<tr>
<th>RE-AIM</th>
<th>Evaluation Method</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reach</td>
<td>Monitoring System</td>
<td>Number of attendees at events, program participants, and youth reached via policy and environmental change</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>Student Survey (5th-8th grade)</td>
<td>Healthy Eating: % youth reporting eating fruit and/or vegetables ≥ 5 times/day % youth reporting drinking soda or sugar-sweetened beverage ≥ 1 time/day % youth reporting eating breakfast and school lunch over the past 7 days % youth reporting food is healthy in a variety of school settings</td>
</tr>
<tr>
<td></td>
<td>Physical Activity</td>
<td>% youth reporting ≥ 60 minutes of physical activity over past 7 days % youth reporting participating in organized activities % youth reporting ≥ 1 hour or more of sedentary time % youth reporting enjoyment PE class % youth reporting being very active during PE class</td>
</tr>
<tr>
<td></td>
<td>Height and Weight Measurements</td>
<td>BMI: % youth categorized as healthy weight, overweight, obese</td>
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<tr>
<td></td>
<td>Fitness Testing</td>
<td>Aerobic Capacity: % youth categorized in the Healthy Fitness Zone, needing improvement or at a health risk</td>
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<tr>
<td></td>
<td>Misconduct</td>
<td>% of total misconduct episodes categorized into six types of misconduct</td>
</tr>
<tr>
<td></td>
<td>Attendance</td>
<td>% school minutes attended compared to total number of possible school minutes</td>
</tr>
<tr>
<td></td>
<td>Academic Performance</td>
<td>Score difference from the state Missouri Assessment Program (MAP) for each school district’s grade and content area</td>
</tr>
<tr>
<td>Adoption</td>
<td>Monitoring System Interviews</td>
<td>Average # and types of partners attending meetings Organization impacted by policy or environmental change Key stakeholders involved in policy or environmental change</td>
</tr>
<tr>
<td>Implementation</td>
<td>Monitoring System Interviews</td>
<td># of meetings held # of events and programs # of media/awareness activities Resources leveraged Technical assistance hours provided Successes and challenges of implementation</td>
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<tr>
<td>Maintenance</td>
<td>Monitoring System Interviews</td>
<td># of policy and environmental changes and youth impacted</td>
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REPORT PURPOSE
This report summarizes key findings from data collected during Year 1 for the thirteen school districts (September 1, 2013 – July 31, 2014) and community partners (December 1, 2013 – June 15, 2014).
PLANNING & IMPLEMENTATION

School and community wellness coordinators document the planning and implementation activities of their multi-sectoral partnerships in an online Monitoring System. Data are entered on a routine basis and include information pertaining to meetings, resources/tools, resources leveraged, media/awareness, events and programs, policy and environmental changes, challenges and successes. JSI reviews the Monitoring System monthly and conducts interviews twice a year with the school and community wellness coordinators to ensure data are of high quality and complete.

MEETINGS/STAKEHOLDERS

School and community stakeholders participated in meetings aimed at advancing the initiative. Agenda items included increasing awareness, garnering support, conducting school and community assessments, and planning activities.

- On average, 10 school and community stakeholders (highlighted below with larger, bolder names indicating greater involvement) were frequently in attendance.
- 530 HSHC-related meetings were held.

OTHER SCHOOL STAFF

KANSAS CITY HEALTHY KIDS

Mid-American Regional Council

Children’s Mercy Hospital/Weighing in Collaborative

SCHOOLS

Mo DHSS

Trailnet

Economic Developers/Officials

Mo Department of Mental Health

Greater Kansas City Health Care Foundation

Department of Social Services

Mis Springfield Partnership

Missouri Breastfeeding Coalition

PedNet

Missouri Parks & Rec Association

Girls on the Run

Grocers

Head Start

State Legislature

Wash U

DeSe

Funders

Media

Usda

Obesity Society

Primary Care Practices

University of Missouri Extension

Department of Agriculture

American Heart Association

Childcare Facilities

Farmers

Bjc Healthcare

LocaL Public Health Agencies

American Academy of Pediatrics

Ymca

Department of Transportation

Local Investment Commission

Missouri Council for Activity and Nutrition

Analysis.

CAPACITY TO ADDRESS OBESITY

The majority of interviewees reported an improvement in the capacity to address obesity. Interviewees credited increased funding which allowed for resources and trainings, as well as increased awareness of obesity prevention as a priority issue. Some cited a greater willingness for collaboration, as well as improved communication and alignment of goals. Interviewees also mentioned areas needing improvements to sufficiently increase capacity, such as better coordination, increased education for policy makers, more support for community- and school-based efforts, and better integration of equity into efforts.

KEY PARTNERS

There are a number of key partners throughout the state, and nation, involved in childhood obesity prevention efforts in Missouri. The word cloud below highlights the many partner organizations cited by interviewees, giving greater prominence to those mentioned more frequently.
**STATEWIDE EVALUATION**

In September 2014, 10 interviews, each lasting about 30 minutes, were conducted with statewide partners such as Audio recordings were transcribed and a thematic analysis was conducted by two evaluators trained in qualitative

**FINDINGS**

Interviewees were asked about their perception of MFH’s areas of work, statewide roles, strengths, as well as additional roles they would like MFH to assume in the future. Most interviewees identified MFH’s childhood obesity prevention strategy and/or specifically referenced Healthy Schools Healthy Communities as a key area of work. Healthy policy, increasing access to health insurance, health equity, oral health, infant mortality, and health literacy were other areas frequently mentioned.

Interviewees perceived MFH to have four primary statewide roles including: 1) convener, 2) educator/trainer, 3) collaborator, and 4) funder. The most notable strengths mentioned were MFH’s knowledgeable, dedicated, and diverse staff, focus on evidence-based initiatives and policies, statewide perspective, and communication efforts.

Finally, interviewees suggested additional roles for MFH to consider. The most commonly mentioned role was related to advocacy. While interviewees recognized that MFH is unable to lobby, they would like to see increased support for those who can. Overall, they felt that MFH has a lot of influence and should use it for advocacy.

Interviewees also suggested that MFH work with other organizations to identify statewide priority issues to fund to maximize collective impact.

**STATEWIDE OBESITY PREVENTION**

Interviewees mentioned numerous obesity prevention activities and accomplishments that have occurred across Missouri, some of which have a state-level impact. Highlights included:

- Increased funding (private and public) for community initiatives and local public health agencies.
- Implementation of environmental changes including built environment improvements (e.g., Safe Routes to School and Complete Streets), healthy corner store initiatives, and urban gardening.
- Development of strong, diverse partnerships such as the Missouri Convergence Partnership, Missouri Council for Activity and Nutrition (MOCAN), and Greater Kansas City Food Policy Coalition.
- Implementation of programs at the state (DHHS’s Child and Adult Care Food Program and Eat Smart and Move Smart, Breastfeeding Friendly Worksite Program), regional (Children’s Mercy Hospital & Clinics’ Weighing In program, NICHQ’s Collaborate for a Healthy Weight Initiative), and local (school- and community-based) levels.
- Adoption of policies including SNAP at farmers markets, Farm-to-Institution statewide policy, the Urban Agriculture Act, and the Fresh Food Tax Exemption (near passing).

**EVENTS/PROGRAMS**

Efforts to increase opportunities for, and knowledge of, physical activity and healthy eating were offered over the course of the year in the form of one-time events and multi-week programs.

22,724 adults and children were reached through 85 events, including:

- Get Moving Glow Run – Night run with glow sticks to celebrate the reopening of the Salem school track.
- Walk & Bike to School Day – Milan students K-8 met for a healthy grab-and-go breakfast and then walked/ biked to school.
- Food Power Adventure - An interactive walk through the body to educate Ava students about digestion.

14,750 adults and children were reached through the implementation of 62 programs, including:

- GoNoodle Brain Breaks – Physical activity breaks in many schools’ classrooms.
- Weekly Dance Sessions – Hermitage students danced for 10-15 minutes at the end of the day.
- Taste Test Tuesday – Monett students tried a new fruit or vegetable once a month.

88 media/awareness activities were conducted with an estimated 391,610 impressions/individuals reached.

- Most popular forms of promotion include: Local newspaper articles (42), Websites and social media including Facebook and Twitter (15), School newsletters (6), Flyers for students (3), School board meeting presentations (3), school assemblies/announcements (3), and radio spots (3).
- Most announcements in local newspapers were about specific events (i.e. a “Walk to School Day”); flyers for students presented tips for being healthy; school presentations, assemblies/announcements, and radio spots focused on HSHC partnerships, program goals, and obesity prevention.

85% of the media/awareness activities were conducted with an estimated 391,610 impressions/individuals reached.

**RESOURCES LEVERAGED**

School and community stakeholders have taken steps to support and sustain efforts to improve healthy eating and increase physical activity, beyond the HSHC funding. $2,488,933 in funding and 1,638 in-kind volunteer hours were leveraged to support the HSHC initiative, including:

- MO Department of Transportation secured $2,000,000 for Douglas County to build sidewalks.
- 40 volunteers donated 65 hours to speak with students about healthy habits and lead morning exercises during Wellness Week in Eldon schools.
- The City of Hayti matched a grant of $25,476 awarded to Pemiscot County by the Department of Natural Resources for city park improvements.

**MEDIA/AWARENESS**

Note: Numbers reported may not represent unique individuals.

**STATEWIDE OBESITY PREVENTION ACTIVITIES & ACCOMPLISHMENTS**

- Increased funding
- Implementation of environmental and policy changes
- Development of diverse partnerships
- Implementation of programs at the state, regional, and local-levels

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To increase the likelihood of success, school and community stakeholders were strongly encouraged to use evidence-based tools and resources such as fact sheets, curriculum, training materials, and programs. 45 unique tools/resources were used. The most commonly cited sources for these tools were MFH, PedNet, Trailnet, the Alliance for a Healthier Generation, and University of Missouri Extension.

### Schools
29 of the unique tools/resources used included:
- Healthier Generation videos/information
- Go Noodle
- Healthier Birthday Celebration video from the Foundation
- Fact Sheet on Employee Wellness
- Healthy Schools Program Framework
- Health training
- AAHPERD convention

### Community
16 of the unique tools/resources used included:
- PedNet resources such as information on Complete Streets and community gardens
- PedNet webinars
- MFH Action Plan template

### Technical Assistance
To build capacity at the local level, and increase the likelihood of success, MFH has contracted with several organizations to provide training and technical assistance (T/TA) to the school and community stakeholders. The Alliance for a Healthier Generation worked with the schools and provided a total of 347 hours of T/TA between September 2013 and July 2014. PedNet and Trailnet worked with the communities and provided a total of 708 hours of T/TA between January 2014 and June 2014. A breakdown of the hours by period is provided below.

#### Alliance for a Healthier Generation

<table>
<thead>
<tr>
<th>Period</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2013 - January 2014</td>
<td>259</td>
</tr>
<tr>
<td>February 2014 - July 2014</td>
<td>88</td>
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</table>

#### PedNet & Trailnet

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2014 - March 2014</td>
<td>298</td>
</tr>
<tr>
<td>April 2014 - June 2014</td>
<td>410</td>
</tr>
</tbody>
</table>

### Policy and Environmental Changes
Comprehensive efforts to address childhood obesity must foster supportive policies as well as social and physical environments that encourage healthy lifestyles. To help in achieving the HSHC goal, school and community stakeholders have identified a number of policy and environmental strategies aimed at increasing opportunities for physical activity and healthy eating. To date, the school districts and community partners have made 26 policy or environmental changes including:

#### Physical Activity
- Increased number of weekly PE classes in Ava schools from 1 to 2 days a week.
- Installed a walking track around the perimeter of the elementary school’s upper playground and playground equipment in Cabool.
- Increased PE classes in Eldon schools from a 6-day rotation to a 5-day rotation.
- Revamped the existing weight room into a fitness facility in Hermitage.
- Passed a bond to build an auxiliary gym and revamp the playground area in Hermitage/Hickory County.
- Adopted a policy in Skyline to offer recess before lunch.
- Changed the Ozarks Family YMCA to a 24-hour facility.

#### Healthy Eating
- Installed water bottle filling stations in Cabool elementary school.
- Adopted a policy to offer all students breakfast daily in Hermitage and Kennett schools.
- Installed 3 salad bars in the Eldon elementary schools and 1 in the Cabool middle school.
- Added a salad bar to offer healthier food options at a local grocery store in Hickory County.
- Adopted a No Outside Food policy at Girls Inc. in St. Louis County.
The Missouri Department of Health and Senior Services (DHSS) is working with childcare facilities within the HSHC targeted communities to implement Eat Smart & MOve Smart guidelines. Participating facilities conducted an assessment of current practices, set goals, and submitted action plans to increase opportunities for physical activity and healthy eating and to engage parents.

During Year 1, 7 childcare facilities from the eleven counties were recruited to participate. Across these facilities, 86 areas of improvement were identified, some of which include:

• Incorporating physical activity into classroom learning activities.
• Serving fresh (not canned or frozen) fruits and vegetables.
• Serving dark green or orange fruits or vegetables.
• Providing training on children’s physical activity to all staff.
• Offering education on children’s physical activity to families via special programs, newsletters, etc.
• Ensuring family fundraising activities are supportive of physical activity and healthy eating.
• Making play equipment and indoor play space available.
• Making menus available to staff and parents.

Note: Identified areas of improvement include overlap.

A survey was administered in the winter of 2013 and the spring of 2014 to better understand perceptions of the food and physical activity environment as well as food consumption and physical activity behaviors. Approximately 3,955 5th-8th grade students in the thirteen school districts completed the survey both times.*

The surveys asked a few questions about students’ gender, age, grade, and race/ethnicity. Respondents for both surveys were 50% male and 50% female.

• Approximately 3/4 of student respondents were between 11 and 13 years old.
• 23% of student respondents were age 14 or older in spring 2014, up from 17% in winter 2013.
• 5% of student respondents were 10 years or younger in spring 2014, down from 11% in winter 2013.

• About 28% of student respondents were in the 5th grade and 25% of students were each in the 6th, 7th, and 8th grade.

• About 70% of student respondents were white, 20% were black or African American, and 6% were American Indian/Alaska Native. 4% of students identified with two or more races.
• About 12% of student respondents were Hispanic/Latino.

* Note: Caution should be made when comparing data across time periods. The time between survey administration was brief and other factors such as weather and maturation may account for observed differences (or lack thereof).
FOOD & THE ENVIRONMENT

The chart to the right presents data on responding students’ perceptions of the availability of healthy foods in a variety of school settings.

- Fewer than 1/2 of students believed that school breakfast and lunch are healthy (44.0% and 44.4%, respectively).
- Over 1/4 of students reported that the food sold in the vending machines (27.5%) and at events outside of school (31.8%) is healthy, and even fewer students reported food sold in the school store is healthy (20.7%).

The chart below presents data on responding students’ breakfast and lunch consumption. Students reported the number of days they ate breakfast and school lunch in the past seven days.

- Fewer than 1/2 of students believed that school breakfast and lunch are healthy (44.0% and 44.4%, respectively).
- Over 1/4 of students reported that the food sold in the vending machines (27.5%) and at events outside of school (31.8%) is healthy, and even fewer students reported food sold in the school store is healthy (20.7%).

- 49.7% of students reported daily breakfast consumption in spring 2014, up from 48.6% in winter 2013.

ACADEMIC PERFORMANCE

Healthy students are better learners. The MO Assessment Program (MAP) Performance Index (MPI), which is a composite number that represents the performance of students in grades 3-8 was used as an indicator of academic achievement.\(^5\)

Average MAP scores across the 13 districts for the 2012-2013 school year are presented and will continue to be monitored annually.

ATTENDANCE

Evidence shows that students demonstrate improvements in behavior when given increased opportunities for physical activity and healthy eating. Schools provided misconduct reports for students in grades K-8 for the 2012-2013 school year. The evaluation team grouped all episodes into one of six categories.

Evidence indicates that regular physical activity and better nutrition in schools can improve student attendance. Schools monitor student attendance by tracking the proportion of school minutes attended compared to the total number of possible school minutes. Attendance data for the 2012-2013 school year are presented and will continue to be monitored annually.

GRADES

<table>
<thead>
<tr>
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Healthy students are better learners. The MO Assessment Program (MAP) Performance Index (MPI), which is a composite number that represents the performance of students in grades 3-8 was used as an indicator of academic achievement.\(^5\)

Average MAP scores across the 13 districts for the 2012-2013 school year are presented and will continue to be monitored annually.

Evidence indicates that regular physical activity and better nutrition in schools can improve student attendance. Schools monitor student attendance by tracking the proportion of school minutes attended compared to the total number of possible school minutes. Attendance data for the 2012-2013 school year are presented and will continue to be monitored annually.

GRADES

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WEIGHT STATUS

Students in grades 1, 3, 5, and 7 had their height and weight measured, which was then used to calculate Body Mass Index (BMI). BMI is an indicator of body fat and is used to screen for weight categories that may lead to health problems. One of the Healthy People 2020 goals is to reduce the proportion of children and adolescents aged 2 to 19 who are considered obese to 14.5%. The chart below presents the percentage of students who were overweight and obese in each grade during winter 2013 and spring 2014.

**17.9% OF ALL STUDENTS WERE OVERWEIGHT AND 22.4% WERE OBSESE AT BASELINE.**

For both screening periods, the percent of overweight or obese kids increased by more than 10 percentage points from 1st to 7th grade. 42.2% of males and 40.6% of females were overweight or obese in spring 2014, compared to 40.7% of males and 39.7% of females in winter 2013.

AEROBIC CAPACITY

An adequate level of fitness is necessary for good health and can reduce the risk of disease. Schools provided data on the aerobic capacity/fitness tests completed by students in grades 1, 3, 5, and 7. Scores for students who took the 1-mile run, 15-meter PACER test, or 20-meter PACER test during winter 2013 and/or spring 2014 were measured against the FITNESSGRAM Healthy Fitness Zone (HFZ) Standards, which factor in different fitness levels required for health based on age and gender.

**CONSUMPTION OF FOOD & BEVERAGES**

The U.S. Dietary Guidelines recommend that youth consume between 2.5 AND 6.5 CUPS of fruits and vegetables each day. The chart below presents the reported fruit and vegetable consumption of responding students.

For both screening periods, the percent of overweight or obese kids increased by more than 10 percentage points from 1st to 7th grade. 42.2% of males and 40.6% of females were overweight or obese in spring 2014, compared to 40.7% of males and 39.7% of females in winter 2013.

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<th>SPRING 2014</th>
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<tr>
<td>NEEDS IMPROVEMENT HEALTH RISK</td>
<td>19.5%</td>
<td>19.0%</td>
</tr>
<tr>
<td>NEEDS IMPROVEMENT</td>
<td>14.7%</td>
<td>15.0%</td>
</tr>
<tr>
<td>HEALTHY FITNESS ZONE</td>
<td>65.9%</td>
<td>67.0%</td>
</tr>
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*Percentages shown exclude students with <10 laps on 20m PACER which has no 1 mile run equivalent for calculating HFZ.

It is also recommended that youth DRINK FEWER SUGAR-SWEETENED beverages, more water and low-fat or fat-free milk, and limited amounts of 100% fruit juices. The chart below presents the reported soda/pop and sugar-sweetened flavored drink consumption of responding students.

- Fewer than 1/4 of students reported eating fruits and vegetables 5 times or more per day (21.4% winter 2013, 21.5% spring 2014).

- Approximately 2/3 of students reported consuming soda/pop and/or a sugar-sweetened flavored drink one or more times per day (57.3% winter 2013, 68.2% spring 2014).
PHYSICAL ACTIVITY AND THE ENVIRONMENT

PHYSICAL ACTIVITY IN SCHOOLS
Students were asked about their level of enjoyment and level of activity in physical education classes.

- Most students strongly agreed or agreed that they enjoy their physical education class (87.2% winter 2013, 87.1% spring 2014).
- Most students reported being very active ‘QUITE OFTEN’ or ‘ALWAYS’ during their physical education class (82.4% winter 2013, 80.9% spring 2014).

PHYSICAL ACTIVITY IN COMMUNITIES
Students were asked about their perceptions of their environment including safety and opportunities to be physically active in their neighborhood/community.

- Most students (85.5% winter 2013, 87.6% spring 2014) reported feeling safe doing physical activity outside, nearly 2/3 of students (64.3% winter, 65.0% spring) reported having access to many places to do physical activity, and over 1/3 (42.9% winter, 40.7% spring) reported having no one to do physical activities with.
- 72.9% of students agreed there were afterschool physical activity opportunities (e.g., afterschool programs, intramurals, or club sports) and 28.5% agreed there were before-school physical activity opportunities.

PHYSICAL ACTIVITY
The Physical Activity Guidelines for Americans, issued by the U.S. Department of Health and Human Services, recommend that children and adolescents aged 6-17 years have 60 minutes or more of physical activity each day. The chart below presents the number of days students reported being active for this amount of time over the past 7 days.

- Roughly 1/2 of students (46.8% winter, 57.2% spring) reported being physically active 5 or more days for a total of at least 60 minutes per day over the previous 7 days.
- The chart to the right presents student participation in sports and organized activities during different seasons. Participation varies slightly by season with the highest participation in the summer and the lowest participation during the winter months.

SEDENTARY TIME
In addition to being physically active, it is recommended that children and adolescents reduce their sedentary time. The chart to the left presents the percentage of students who reported 3 or more hours per day of “screen time,” which includes watching TV, playing video games, or using the computer for things other than school work.

- Nearly 1/2 of students reported sedentary behavior for 3 hours or more on the average school day (49.2% winter, 46.8% spring). At both points in time, students reported being more sedentary on weekend days compared to school days.
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Students in grades 1, 3, 5, and 7 had their height and weight measured, which was then used to calculate Body Mass Index (BMI). BMI is an indicator of body fat and is used to screen for weight categories that may lead to health problems. One of the Healthy People 2020 goals is to reduce the proportion of children and adolescents aged 2 to 19 who are considered obese to 14.5%. The chart below presents the percentage of students who were overweight and obese in each grade during winter 2013 and spring 2014.

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AEROBIC CAPACITY

An adequate level of fitness is necessary for good health and can reduce the risk of disease. Schools provided data on the aerobic capacity/fitness tests completed by students in grades 1, 3, 5, and 7. Scores for students who took the 1-mile run, 15-meter PACER test, or 20-meter PACER test during winter 2013 and/or spring 2014 were measured against the FITNESSGRAM Healthy Fitness Zone (HFZ) Standards, which factor in different fitness levels required for health based on age and gender.

CONSUMPTION OF FOOD & BEVERAGES

The U.S. Dietary Guidelines recommend that youth consume between 2.5 AND 6.5 CUPS of fruits and vegetables each day. The chart below presents the reported fruit and vegetable consumption of responding students.

Weight Status Graph

Aerobic Capacity Table

Consumption of Food & Beverages Table

For both screening periods, the percent of overweight or obese kids increased by more than 10 percentage points from 1st to 7th grade. 42.2% of males and 40.6% of females were overweight or obese in spring 2014, compared to 40.7% of males and 39.7% of females in winter 2013.

It is also recommended that youth DRINK FEWER SUGAR-SWEETENED beverages, more water and low-fat or fat-free milk, and limited amounts of 100% fruit juices. The chart below presents the reported soda/pop and sugar-sweetened flavored drink consumption of responding students.

WINTER 2013      SPRING 2014

NEEDS IMPROVEMENT HEALTH RISK 19.5% 19.0%

NEEDS IMPROVEMENT HEALTHY FITNESS ZONE 65.9% 67.0%

*Percentages shown exclude students with <10 laps on 20m PACER which has no 1 mile run equivalent for calculating HFZ.

Consequences of weight and fitness levels:

- Fewer than 1/4 of students reported eating fruits and vegetables 5 times or more per day (21.4% winter 2013, 21.5% spring 2014).
- For both screening periods, the percent of overweight or obese kids increased by more than 10 percentage points from 1st to 7th grade.
- 42.2% of males and 40.6% of females were overweight or obese in spring 2014, compared to 40.7% of males and 39.7% of females in winter 2013.

*Percentages are the sum of soda and sugar-sweetened flavored drink consumption.

*Percentages shown are the sum of fruit and vegetable consumption.

*Percentages shown exclude students with <10 laps on 20m PACER which has no 1 mile run equivalent for calculating HFZ.
FOOD & THE ENVIRONMENT

The chart to the right presents data on responding students’ perceptions of the availability of healthy foods in a variety of school settings.

- Fewer than 1/2 of students believed that school breakfast and lunch are healthy (44.0% and 44.4%, respectively).
- Over 1/4 of students reported that the food sold in the vending machines (27.5%) and at events outside of school (31.8%) is healthy, and even fewer students reported food sold in the school store is healthy (20.7%).

The chart below presents data on responding students’ breakfast and lunch consumption. Students reported the number of days they ate breakfast and school lunch in the past seven days.

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The chart below presents data on responding students’ breakfast and lunch consumption. Students reported the number of days they ate breakfast and school lunch in the past seven days.

- 49.7% of students reported daily breakfast consumption in spring 2014, up from 48.6% in winter 2013.

The chart below presents data on responding students’ breakfast and lunch consumption. Students reported the number of days they ate breakfast and school lunch in the past seven days.

- Fewer than 1/2 of students believed that school breakfast and lunch are healthy (44.0% and 44.4%, respectively).

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Healthy students are better learners. The MO Assessment Program (MAP) Performance Index (MPI), which is a composite number that represents the performance of students in grades 3-8 was used as an indicator of academic achievement. Average MAP scores across the 13 districts for the 2012-2013 school year are presented and will continue to be monitored annually.

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Note: Attendance data from Kennett, Normandy, Salem, and Skyline were unavailable. Hermitage and Monett data were from the 2013-2014 school year.

MISCONDUCT

Evidence shows that students demonstrate improvements in behavior when given increased opportunities for physical activity and healthy eating. Schools provided misconduct reports for students in grades K-8 for the 2012-2013 school year. The evaluation team grouped all episodes into one of six categories.

- Alcohol/Drugs/Tobacco/Gambling
- Individual-related Misconduct
- Defiance/Disrespect/Discipline
- Vandalism/Shaming
- Bullying/Violent Act
- Other (no description given)

Total misconduct episodes: 14,195

Evidence indicates that regular physical activity and better nutrition in schools can improve student attendance. Schools monitor student attendance by tracking the proportion of school minutes attended compared to the total number of possible school minutes. Attendance data for the 2012-2013 school year are presented and will continue to be monitored annually.

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- Alcohol/Drugs/Tobacco/Gambling
- Individual-related Misconduct includes behavior whose consequences were confined to the offender.
- Defiance/Disrespect/Discipline includes behavior whose consequences impacted others, such as teachers and other students.
- Bullying/Violent Act includes behavior that threatened or harmed another individual’s physical and/or mental well-being.

5 http://mcds.dese.mo.gov/Pages/default.aspx

6 http://mcds.dese.mo.gov/guidedinquiry/Achievement%20Level%20%204%20Levels/Achievement%20Level%204%20Report%20-%20Public.aspx

7 *District MAP Index scores were found on the DESE website. (http://mcds.dese.mo.gov/guidedinquiry/Achievement%20Level%20%204%20Levels/Achievement%20Level%204%20Report%20-%20Public.aspx)

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CHILDCARE

The Missouri Department of Health and Senior Services (DHSS) is working with childcare facilities within the HSHC targeted communities to implement Eat Smart & MOve Smart guidelines. Participating facilities conducted an assessment of current practices, set goals, and submitted action plans to increase opportunities for physical activity and healthy eating and to engage parents.

During Year 1, 7 childcare facilities from the eleven counties were recruited to participate. Across these facilities, 86 areas of improvement were identified, some of which include:

• Incorporating physical activity into classroom learning activities.
• Serving fresh (not canned or frozen) fruits and vegetables.
• Serving dark green or orange fruits or vegetables.
• Providing training on children’s physical activity to all staff.
• Offering education on children’s physical activity to families via special programs, newsletters, etc.
• Ensuring family fundraising activities are supportive of physical activity and healthy eating.
• Making play equipment and indoor play space available.
• Making menus available to staff and parents.

Note: Identified areas of improvement include overlap.

STUDENT SURVEY

A survey was administered in the winter of 2013 and the spring of 2014 to better understand perceptions of the food and physical activity environment as well as food consumption and physical activity behaviors. Approximately 3,955 5th-8th grade students in the thirteen school districts completed the survey both times.*

STUDENT CHARACTERISTICS

The surveys asked a few questions about students’ gender, age, grade, and race/ethnicity. Respondents for both surveys were 50% male and 50% female.

• Approximately 3/4 of student respondents were between 11 and 13 years old.
• 23% of student respondents were age 14 or older in spring 2014, up from 17% in winter 2013.
• 5% of student respondents were 10 years or younger in spring 2014, down from 11% in winter 2013.

• About 28% of student respondents were in the 5th grade and 25% of students were each in the 6th, 7th, and 8th grade.

• About 70% of student respondents were white, 20% were black or African American, and 6% were American Indian/Alaska Native. 4% of students identified with two or more races.
• About 12% of student respondents were Hispanic/Latino.

* Note: Caution should be made when comparing data across time periods. The time between survey administration was brief and other factors such as weather and maturation may account for observed differences (or lack thereof).
To increase the likelihood of success, school and community stakeholders were strongly encouraged to use evidence-based tools and resources such as fact sheets, curriculum, training materials, and programs. 45 unique tools/resources were used. The most commonly cited sources for these tools were MFH, PedNet, Trailnet, the Alliance for a Healthier Generation, and University of Missouri Extension.

### Tools/Resources

**Schools**
- Healthier Generation videos/information
- Go Noodle
- Healthier Birthday Celebration video from the Foundation
- Fact Sheet on Employee Wellness
- Healthy Schools Program Framework
- Health training
- AAHPERD convention

**Community**
- PedNet resources such as information on Complete Streets and community gardens
- PedNet webinars
- MFH Action Plan template

### Technical Assistance

To build capacity at the local level, and increase the likelihood of success, MFH has contracted with several organizations to provide training and technical assistance (T/TA) to the school and community stakeholders. The Alliance for a Healthier Generation worked with the schools and provided a total of 347 hours of T/TA between September 2013 and July 2014. PedNet and Trailnet worked with the communities and provided a total of 708 hours of T/TA between January 2014 and June 2014. A breakdown of the hours by period is provided below.

**Alliance for a Healthier Generation**

<table>
<thead>
<tr>
<th>Period</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2013 - January 2014</td>
<td>259</td>
</tr>
<tr>
<td>February 2014 - July 2014</td>
<td>88</td>
</tr>
</tbody>
</table>

**PedNet & Trailnet**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2014 - March 2014</td>
<td>298</td>
</tr>
<tr>
<td>April 2014 - June 2014</td>
<td>410</td>
</tr>
</tbody>
</table>

### Policy and Environmental Changes

Comprehensive efforts to address childhood obesity must foster supportive policies as well as social and physical environments that encourage healthy lifestyles. To help in achieving the HSHC goal, school and community stakeholders have identified a number of policy and environmental strategies aimed at increasing opportunities for physical activity and healthy eating. To date, the school districts and community partners have made 26 policy or environmental changes including:

**Physical Activity**
- Increased number of weekly PE classes in Ava schools from 1 to 2 days a week.
- Installed a walking track around the perimeter of the elementary school’s upper playground and playground equipment in Cabool.
- Increased PE classes in Eldon schools from a 6-day rotation to a 5-day rotation.
- Revamped the existing weight room into a fitness facility in Hermitage.
- Passed a bond to build an auxiliary gym and revamp the playground area in Hermitage/Hickory County.
- Adopted a policy in Skyline to offer recess before lunch.
- Changed the Ozarks Family YMCA to a 24-hour facility.

**Healthy Eating**
- Installed water bottle filling stations in Cabool elementary school.
- Adopted a policy to offer all students breakfast daily in Hermitage and Kennett schools.
- Installed 3 salad bars in the Eldon elementary schools and 1 in the Cabool middle school.
- Added a salad bar to offer healthier food options at a local grocery store in Hickory County.
- Adopted a No Outside Food policy at Girls Inc. in St. Louis County.
STATEWIDE EVALUATION

In September 2014, 10 interviews, each lasting about 30 minutes, were conducted with statewide partners such as Audio recordings were transcribed and a thematic analysis was conducted by two evaluators trained in qualitative

FINDINGS

Interviewees were asked about their perception of MFH’s areas of work, statewide roles, strengths, as well as additional roles they would like MFH to assume in the future. Most interviewees identified MFH’s childhood obesity prevention strategy and/or specifically referenced Healthy Schools Healthy Communities as a key area of work. Healthy policy, increasing access to health insurance, health equity, oral health, infant mortality, and health literacy were other areas frequently mentioned.

Interviewees perceived MFH to have four primary statewide roles including: 1) convener, 2) educator/trainer, 3) collaborator, and 4) funder. The most notable strengths mentioned were MFH’s knowledgeable, dedicated, and diverse staff, focus on evidence-based initiatives and policies, statewide perspective, and communication efforts.

Finally, interviewees suggested additional roles for MFH to consider. The most commonly mentioned role was related to advocacy. While interviewees recognized that MFH is unable to lobby, they would like to see increased support for those who can. Overall, they felt that MFH has a lot of influence and should use it for advocacy. Interviewees also suggested that MFH work with other organizations to identify statewide priority issues to fund to maximize collective impact.

STATEWIDE OBESITY PREVENTION

Interviewees mentioned numerous obesity prevention activities and accomplishments that have occurred across Missouri, some of which have a state-level impact. Highlights included:

- Increased funding (private and public) for community initiatives and local public health agencies.
- Implementation of environmental changes including built environment improvements (e.g., Safe Routes to School and Complete Streets), healthy corner store initiatives, and urban gardening.
- Development of strong, diverse partnerships such as the Missouri Convergence Partnership, Missouri Council for Activity and Nutrition (MOCAN), and Greater Kansas City Food Policy Coalition.
- Implementation of programs at the state (DHHS’s Child and Adult Care Food Program and Eat Smart and MOve Smart, Breastfeeding Friendly Worksite Program), regional (Children’s Mercy Hospital & Clinics’ Weighing In program, NICHQ’s Collaborate for a Healthy Weight Initiative), and local (school- and community-based) levels.
- Adoption of policies including SNAP at farmers markets, Farm-to-Institution statewide policy, the Urban Agriculture Act, and the Fresh Food Tax Exemption (near passing).

STATEWIDE OBESITY PREVENTION ACTIVITIES & ACCOMPLISHMENTS

- Increased funding
- Implementation of environmental and policy changes
- Development of diverse partnerships
- Implementation of programs at the state, regional, and local-levels

EVENTS/PROGRAMS

Efforts to increase opportunities for, and knowledge of, physical activity and healthy eating were offered over the course of the year in the form of one-time events and multi-week programs.

22,724 adults and children were reached through 85 events, including:

- Get Moving Glow Run – Night run with glow sticks to celebrate the reopening of the Salem school track.
- Walk & Bike to School Day – Milan students K-8 met for a healthy grab-and-go breakfast and then walked/biked to school.
- Food Power Adventure – An interactive walk through the body to educate Ava students about digestion.

14,750 adults and children were reached through the implementation of 62 programs, including:

- CoNoodle Brain Breaks – Physical activity breaks in many schools’ classrooms.
- Weekly Dance Sessions – Hermitage students danced for 10-15 minutes at the end of the day.
- Taste Test Tuesday – Monett students tried a new fruit or vegetable once a month.

88 media/awareness activities were conducted with an estimated 391,610 impressions/individuals reached.

- Most popular forms of promotion include: Local newspaper articles (42), Websites and social media including Facebook and Twitter (15), School newsletters (6), Flyers for students (3), School board meeting presentations (3), school assemblies/announcements (3), and radio spots (3).

- Most announcements in local newspapers were about specific events (i.e. a “Walk to School Day”); flyers for students presented tips for being healthy; school presentations, assemblies/announcements, and radio spots focused on HSCH partnerships, program goals, and obesity prevention.

RESOURCES LEVERAGED

School and community stakeholders have taken steps to support and sustain efforts to improve healthy eating and increase physical activity, beyond the HSCH funding. $2,488,933 in funding and 1,638 in-kind volunteer hours were leveraged to support the HSCH initiative, including:

- MO Department of Transportation secured $2,000,000 for Douglas County to build sidewalks.
- 40 volunteers donated 65 hours to speak with students about healthy habits and lead morning exercises during Wellness Week in Eldon schools.
- The City of Hayti matched a grant of $25,476 awarded to Pemiscot County by the Department of Natural Resources for city park improvements.
School and community wellness coordinators document the planning and implementation activities of their multi-sectoral partnerships in an online Monitoring System. Data are entered on a routine basis and include information pertaining to meetings, resources/tools, resources leveraged, media/awareness, events and programs, policy and environmental changes, challenges and successes. JSI reviews the Monitoring System monthly and conducts interviews twice a year with the school and community wellness coordinators to ensure data are of high quality and complete.

**MEETINGS/STAKEHOLDERS**

School and community stakeholders participated in meetings aimed at advancing the initiative. Agenda items included increasing awareness, garnering support, conducting school and community assessments, and planning activities.

- On average, 10 school and community stakeholders (highlighted below with larger, bolder names indicating greater involvement) were frequently in attendance.
- 530 HSHC-related meetings were held.

**KANSAS CITY HEALTHY KIDS**

**MID-AMERICAN REGIONAL COUNCIL**

**CHILDREN’S MERCY HOSPITAL/WEIGHING IN COLLABORATIVE**

**SCHOOLS**  MO DHSS

**TRAILNET**  ECONOMIC DEVELOPERS/OFFICIALS

**MO DEPARTMENT OF MENTAL HEALTH**  GREATER KANSAS CITY HEALTH CARE FOUNDATION

**DEPARTMENT OF SOCIAL SERVICES**

**MO SPRINGFIELD PARTNERSHIP**  MISSOURI BREASTFEEDING COALITION

**MISSOURI PARKS & REC ASSOCIATION**

**DEPARTMENT OF MENTAL HEALTH**  AMERICAN HEART ASSOCIATION

**DEPARTMENT OF AGRICULTURE**  CHILDREN’S MERCY HOSPITAL/WEIGHING IN COLLABORATIVE

**UNIVERSITY OF MISSOURI EXTENSION**

**AMERICAN ACADEMY OF PEDIATRICS**

**B.J.C. HEALTHCARE**

**CHILD CARE FACILITIES**

**DESE**  USDA  OBESITY SOCIETY

**HEAD START**  ECONOMIC DEVELOPERS/OFFICIALS

**FAITH COMMUNITIES**

**KANSAS CITY HEALTHY KIDS**

**LOCAL PUBLIC HEALTH AGENCIES**

**AMERICAN ACADEMY OF PEDIATRICS**

**YMCA**

**DEPARTMENT OF TRANSPORTATION**

**LOCAL INVESTMENT COMMISSION**

**MISSOURI BREASTFEEDING COALITION**

The majority of interviewees reported an improvement in the capacity to address obesity. Interviewees credited increased funding which allowed for resources and trainings, as well as increased awareness of obesity prevention as a priority issue. Some cited a greater willingness for collaboration, as well as improved communication and alignment of goals. Interviewees also mentioned areas needing improvements to sufficiently increase capacity, such as better coordination, increased education for policy makers, more support for community- and school-based efforts, and better integration of equity into efforts.

**KEY PARTNERS**

There are a number of key partners throughout the state, and nation, involved in childhood obesity prevention efforts in Missouri. The word cloud below highlights the many partner organizations cited by interviewees, giving greater prominence to those mentioned more frequently.
REPORTED SUCCESSES

As a result of participation in HSHC, multi-sectoral partnerships across the schools and communities reported a number of successes during Year 1. Some highlights included:

SCHOOLS

- HSHC allowed Ava PE teachers to attend professional development trainings for the first time.
- "In Cabool schools, this grant isn’t perceived as another grant program that will disappear once funding ends, but as a sustainable initiative."
- Cooter Cubs on the Track was developed to give students an opportunity to be active during the school day, the interest and support for this activity resulted in its expansion from once to twice a month.
- Every morning, 150 Elton students at the Upper Elementary School now walk or participate in workouts.
- "A 3rd grade Hayti student participating in the Mathis Walk/Run Club lost 6 pounds since joining. Her success motivated the entire family to join the Caruthersville Recreation Center."
- The Hermitage weight room was revamped with HSHC funding. The school is now able to offer two PE classes at a time (instead of one), thereby increasing the number of PE classes offered.
- In Kennett schools, the Breakfast in the Classroom program ensures all students have breakfast daily. As a result, teachers are reporting positive changes in the classroom.
- School/community capacity to address obesity has improved in Moberly due to increased awareness.
- In Monett, the grant has resulted in increased communication with the Hispanic community.
- The grant has allowed Normandy schools to adequately address the health education curriculum, which will now reach over 2,000 students.
- In Salem, Move It Mondays, a program to increase opportunities for youth to be active during the school day, was so successful that it was expanded to Wednesdays.
- Skyline students now have physical activity opportunities offered in the classroom three days a week.

COMMUNITIES

- In Dent County, the community has developed a different mindset and feels that HSHC funds will make change possible.
- The Douglas County Community Coordinator was invited to present the HSHC initiative to the City Council, where information was well-received by all.
- The Department of Health and Senior Services is now involved with local daycares in Hickory County. As a result, new equipment has been purchased.
- In Miller County, a previously private parcel of land adjacent to Rock Island Park was obtained, which allowed for the extension of a walking trail.
- HSHC partners in St. Louis County are now collaborating outside of the grant, which has increased the community’s capacity to address priority issues.
- Community awareness around healthy eating and active living increased in Sullivan County. For example, WIC parents with kids in public schools started to talk about the importance of getting their younger children to eat healthier.

EVALUATION FRAMEWORK

The evaluation is informed by the socio-ecological model and the RE-AIM framework. As such, it answers practical questions about implementation and sustainability at the individual (i.e., child), organizational (i.e., schools), community and state levels. Components of RE-AIM include:

- **Reach**: reaching the intended population including those at greatest risk
- **Effectiveness**: the impact on nutrition, physical activity, obesity, and health
- **Adoption**: the ability/willingness of organizations to initiate and participate in the intervention
- **Implementation**: the delivery of the intervention and its cost
- **Maintenance**: the long-term sustainability of the intervention

The table below outlines the evaluation methods and indicators for each component of the RE-AIM framework.

<table>
<thead>
<tr>
<th>RE-AIM</th>
<th>Evaluation Method</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reach</td>
<td>Monitoring System</td>
<td>Number of attendees at events, program participants, and youth reached via policy and environmental change</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>Height and Weight Measurements</td>
<td>BMI: % youth categorized as healthy weight, overweight, obese</td>
</tr>
<tr>
<td></td>
<td>Fitness Testing</td>
<td>Aerobic Capacity: % youth categorized in the Healthy Fitness Zone, needing improvement or at a health risk</td>
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<tr>
<td></td>
<td>Misconduct</td>
<td>% of total misconduct episodes categorized into six types of misconduct</td>
</tr>
<tr>
<td></td>
<td>Attendance</td>
<td>% school minutes attended compared to total number of possible school minutes</td>
</tr>
<tr>
<td></td>
<td>Academic Performance</td>
<td>Score difference from the state Missouri Assessment Program (MAP) for each school district’s grade and content area</td>
</tr>
<tr>
<td>Adoption</td>
<td>Monitoring System Interviews</td>
<td>Average # and types of partners attending meetings Organization impacted by policy or environmental change Key stakeholders involved in policy or environmental change</td>
</tr>
<tr>
<td>Implementation</td>
<td>Monitoring System Interviews</td>
<td># of meetings held # of events and programs # of media/awareness activities Resources leveraged Technical assistance hours provided Successes and challenges of implementation</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Monitoring System Interviews</td>
<td># of policy and environmental changes and youth impacted</td>
</tr>
</tbody>
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REPORT PURPOSE

This report summarizes key findings from data collected during Year 1 for the thirteen school districts (September 1, 2013 – July 31, 2014) and community partners (December 1, 2013 – June 15, 2014).
CHILDHOOD OBESITY IN MISSOURI
Childhood obesity is a leading public health concern in the United States. It is a complex issue with significant health, social, and economic implications that threaten to reverse decades of progress in improving the health of Americans. Missouri is one of the heaviest states in the country, with 30% of the total adult population and 31% of children ages 10 to 17 obese. While both genetics and individual behavior play a role, the increased prevalence of childhood obesity is a consequence of environmental changes that have substantially modified caloric intake.

THE HEALTHY SCHOOLS HEALTHY COMMUNITIES INITIATIVE
The Healthy Schools Healthy Communities (HSHC) initiative is a comprehensive approach established by the Missouri Foundation for Health (MFH) to address childhood obesity in regions of Missouri. The goal is a 5% decrease in the percentage of children who are overweight and obese as measured by the BMI-for-age percentile. The initiative includes a school focus in conjunction with community-based and statewide efforts aimed at improving access to healthy foods and opportunities for physical activity. Work at the school and community level is framed by the Alliance for a Healthier Generation’s Healthy Schools Program Framework – of best practices – and the YMCA’s Community Healthy Living Index (CHLI). In addition, MFH has contracted with the Alliance for a Healthier Generation, PedNet, TrailNet, Missouri Department of Health and Senior Services, and GMMB to provide training and technical assistance to the local level, multi-sectoral partnerships in communicating and implementing their targeted strategies.

THE HEALTHY SCHOOLS HEALTHY COMMUNITIES EVALUATION
JSI Research & Training Institute, Inc. (JSI), a public health research and consulting firm, has been contracted by MFH to conduct a comprehensive evaluation of HSHC’s school, community, and state-level activities. From the start, JSI has collaborated with MFH, the school and community partners, and contractors to develop and employ a mixed-methods evaluation that captures the complexity of the initiative while ensuring realistic and feasible data collection. Specific objectives of the evaluation include assessing (1) the process of school and community partnerships to develop and implement multifactorial interventions, including their ability to adopt and sustain change, and (2) the impact of a collection of school and community-based interventions, including programs, policies, and environmental changes aimed at promoting physical activity and healthy eating.

ACKNOWLEDGEMENTS
Our sincere appreciation and thanks go to MFH, the HSHC grantees, and contractors for their participation and dedication to the evaluation of the HSHC.

This report was produced by JSI Research & Training Institute, Inc. (JSI) in Boston, Massachusetts. We would like to acknowledge the contribution of our Evaluation Team:

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Healthy Schools
Healthy Communities
LET’S BUILD A HEALTHIER FUTURE