Table of Contents

Background 4
Capacity Development 9
Moving HSHC Forward 13
Progress 22
Successes and Summary 47
“I tied [our local efforts] into the Healthy Schools Healthy Communities initiative so they could understand it’s really a bigger project than just what we are doing here…”

~HSHC Grantee
Background

In 2013, Missouri Foundation for Health established a five-year Healthy Schools Healthy Communities (HSHC) initiative to address childhood obesity through prevention efforts in select communities. The overarching goal is to decrease childhood obesity (Figure 1), in addition to improving attendance rates, fitness, conduct at school and academic performance.

HSHC brings together schools, community organizations, businesses, parents and residents to identify and work towards changes that increase access to healthy food and physical activity where our kids live, learn and play.

The initiative supports partnerships between schools and community organizations in order to make it easier for kids to eat healthy and be active. In 2013, Cohort 1 brought on 12,942 students in 12 school districts, and in 2014 Cohort 2 brought on an additional 5,254 students in 12 new school districts. The Foundation added the final Cohort 3 districts in fall 2015, they are not included in this report. Today there are 33 HSHC school districts and 13 HSHC community collaboratives across Missouri working together to creating healthy opportunities for kids in the classroom, on the playground, at home and throughout the community.

From introducing healthier foods and more opportunities for physical activity in schools, to improving parks and sidewalks, to building new bike trails— communities are making changes to schools and local environments that will have lasting impact. And HSHC is providing the knowledge, tools and support to help families make change happen at home.

HSHC school and community coordinators are supported in their work by technical assistance (TA) providers through the assessment, planning, implementation and communication of their action plans. TA providers include: Alliance for a Healthier Generation, PedNet, Trailnet, Missouri Department of Health and Senior Services, Ozarks Regional YMCA, and GMMB. While work varies statewide based on school and community needs and resources, the objectives and strategies are comparable across grantees. Figure 2 presents the HSHC targeted sectors, overarching objectives, and strategies to date.
Figure 1. HSHC Logic Model

Goal: 5% decrease in the percentage of children who are overweight and obese in targeted school districts as measured by the BMI-for-age percentile.

Resources
- MFH and State Assets
  - Funding
  - Network support
  - Technical assistance
  - Evidence-based policies and practices
  - Material resources
  - Media/communications
  - Statewide partners/collaboration

Activities
- Capacity Development
  - Provide strategic direction and oversight
  - Serve as a resource to schools and communities
  - Establish linkages/network of stakeholders and technical assistance
  - Support organizations involved in advocacy and collaborative efforts

- Moving HSHC Forward
  - Recruit partners
  - Engage stakeholders/build partnerships
  - Develop leadership
  - Provide training and access to resources
  - Advocate for change/raise awareness/communicate (e.g., importance of policy and environmental supports)
  - Leverage resources
  - Conduct an assessment
  - Prioritize opportunities/problems and develop action plan
  - Implement plan (use evidence-based strategies, mix of interventions, intensity/focus of intervention: promote adoption of policies/environmental change that increase healthy eating and active living in children)

Long-term Outcomes (3-8 years)
- Improved academic performance
- Improved conduct at school
- Improved attendance rates
- Increased percentage of healthy weight youth

Intermediate Outcomes (2-3 years)
- Increased local and statewide capacity for obesity prevention
- Increased advocacy for change
- Increased adoption of evidence-based environmental and policy changes for physical activity and healthy eating
- Improved perceptions of opportunities and the environment
- Increased physical activity/utilization of physical activity opportunities and consumption of healthy foods

Short-term Outcomes (1-2 years)
- Strong durable partnerships
- Regular collaboration and communication
- Increased linkages among organizations
- Supportive leadership and advocacy
- Increased leveraging of resources
- Changes in individual awareness, knowledge, attitudes
- Use of evidence-based programs and policies
- Increased awareness and support for adoption of environment and policy change
COUNTY STRATEGIES

361 TARGETED STRATEGIES (2013-2015)

147 physical activity strategies
9 school policy
27 physical education
10 recess
11 employee wellness
7 physical activity in class
2 professional development
24 infrastructure
4 joint use agreement
29 outside of school hours
3 health education
11 walk to school
10 communication

97 physical activity & healthy eating strategies
19 school policy
14 employee wellness
2 collaboration
38 communication
1 physical activity in class
5 professional development
10 health education
2 water
6 outside of school hours

117 healthy eating strategies
9 school policy
2 employee wellness
2 infrastructure
2 collaboration
9 water
15 outside of school hours
18 communication
2 professional development
1 walk to school
28 school food
16 food sold in community
6 farm to school
3 gardens
4 health education

EAT SMART MOVE START CHILDCARE:

84 TARGETED STRATEGIES (2014-2015)

37 physical activity strategies
8 physical activity space
3 physical activity policy
3 staff training/participation
5 physical activity equipment
2 integrate activity into learning
4 physical activity skills
11 physical activity time/opportunities
1 MOve Smart certification

4 physical activity & healthy eating strategies
1 student education
2 family participation
1 staff training

43 healthy eating strategies
28 meals/menus
6 nutrition education
1 family involvement
1 family style meals
1 increase variety of meals
1 nutrition policy
3 gardening
1 family participation
1 Eat Smart certification
The goals of the HSHC evaluation are to: 1) assess and understand the areas of intervention reach, organizational adoption, and implementation of the multiple strategies, and 2) determine impact on student perceptions and behaviors, misconduct, academic performance, attendance, and body weight. A practice-based evaluation such as this helps to explain the long, complex, and multi-step processes that are taking place. It further provides a basis for improvements, guides TA, and can help garner support for additional changes in interventions, environments, and policies.

The phases of HSHC (Figure 3) include:

- Capacity Development – providing resources and ongoing guidance and support.
- Moving HSHC Forward – the multi-step processes happening to work toward the overall goal.
- Progress – the progress to date.

Table 1 presents the different evaluation strategies associated with each phase.

This report includes data collected between August 1, 2014, and July 31, 2015.
In order to make changes at the county or state level you need to take some time away from daily work and really think critically about changing the landscape and how that can/has to be done.”

~HSHC Grantee
Public health stakeholders and others are being asked to implement policy and environmental change interventions as key strategies to obesity prevention efforts like HSHC. Yet, many of these practitioners lack the knowledge, skills, and resources to do so.\(^1\) Building capacity to implement programs, policies, and environmental changes to support healthy behaviors like physical activity and healthy eating is a key component to HSHC. In addition to ongoing communication with grantees, MFH and TA providers use evaluation data to ensure the support and resources are responsive to community needs. Overall, this framework helps to ensure accountability to the HSHC goals and evidence-based strategies.

This section of the report presents the types of guidance, areas of focus, and networking and information-sharing activities that have helped to develop capacity among grantees and their partners.

---

Guidance and Support

The Alliance for a Healthier Generation, PedNet, TrailNet, Missouri Department of Health and Senior Services, GMMB, and Ozarks Regional YMCA help to develop grantee capacity. Guidance is delivered via tailored TA and training, assistance with planning, and support with implementation of grantee action plans. This assistance helps to ensure school, community, and childcare grantees follow a consistent and coordinated approach (e.g., needs assessment, defined priorities, action plans).

3,342 hours of guidance and support were provided to the grantees.

Figure 5. HSHC Capacity Development

62% of all the support provided was in the form of training and technical assistance.

*The communication scope of work was modified to include more individual training and technical assistance and, therefore, only includes two months of data.
Networking and Information Sharing

Through HSHC, grantees are connected to a breadth of resources. In addition to the expertise provided by the TA providers, HSHC offers an opportunity for partner organizations within the targeted county – as well as across counties – to network and share information with one another. During grantee interviews, school and community coordinators continued to report the desire to learn from others and to be provided with example templates and protocols to accomplish their work. They also welcomed opportunities to share their best practices and lessons learned with other HSHC grantees.

“It is much easier to see things that other schools have done that have been successful and to build off of that. We get the best feedback when we meet with the HSHC groups to see what they’ve done and what they have struggled with.”

~HSHC grantee

- 25% statewide partners
- 49% of the resources used by the grantees were from the TA providers.
- 15% county-specific partners
- 6% other HSHC coordinators
- 5% MFH
“Being team players and being able to work and collaborate together and not just doing it on their own shows [partners’] commitment. We all have different ideas and we have to piece them together in order for the picture to be complete.”

~HSHC Grantee
Moving HSHC Forward

Creating an environment that is supportive of healthy behaviors is a long, complex, multi-step process. The process tends to be incremental and cyclical, involving multi-sector collaboration, leveraging of resources, and awareness raising about obesity and potential solutions. This section of the report presents the work to date to move HSHC forward across all participating counties, as well as, progress on the short-term outcomes.

Moving HSHC Forward

When you believe in something, your ability to be a supporter of it is easier because it is something that you are practicing in your own life. I also believe that being team players and being able to work and collaborate together and not just do it on our own shows commitment in that we all have different ideas and we have to piece them together in order for the picture to be complete.”

~HSHC Grantee

Figure 6. Highlighting Moving HSHC Forward on Logic Model
Before [community organizations] have sometimes been at the same place doing the same thing but separately. Just being able to actually work together and meet and talk about these things has been huge...[HSHC] has helped us personally get to know each other better and that has been huge.”

~HSHC Grantee
Community partnerships are key to implementing initiatives like HSHC. Working together, stakeholders from different sectors of the community can more easily identify and work towards changes that increase access to healthy food and physical activity where our kids live, learn, and play.

Meetings are one way to document collaboration. HSHC stakeholders participated in a number of meetings aimed at advancing the initiative.

940 HSHC-related meetings were held with an average attendance of 9 school and community stakeholders. Agenda items included increasing awareness, garnering support, conducting school and community assessments, and planning HSHC activities.

In addition to the community coordinator being present nearly 100% of the time, a number of other partners routinely participated in HSHC-related meetings. The figure below shows the top five sectors involved in the community-based meetings.

In addition to the school representation at the community meetings, a number of individuals also met on a regular basis to discuss school-specific strategies. PE teachers (50.7%), principals and superintendent (49.5%), school nurse (38.1%), parent organizations and other family members (34.4%), and the community coordinator (23.3%) were most likely to be in attendance at these meetings.
We are so blessed to have this grant. Our school is the hub for our little community here. So it has been so fantastic to see the community support this and the increased involvement from parents and students. Kids are so excited and thrilled about physical activity...The grant has been such a fantastic resource for us to be able to provide that to them.”

~ HSHC Grantee
This year, grantees have been able to continue to leverage HSHC grant dollars with the help of volunteers who donated their time and organizations who have provided additional funds. In addition, grantees have been successful in receiving other grant dollars to improve healthy eating and increase physical activity.

6,364 volunteer hours helped to move HSHC grantees forward including:
- 75 hours to staff the Tiger Trail kick-off in Dent County.
- 567 volunteer hours to help with the Walk-to-School series in Barry and Lawrence Counties.
- 420 hours provided by Washington University students to assess early childhood programs in St. Louis County.

Some of the resources leveraged include:
- **$60,000** awarded to provide before-and-after school programs in Hickory County.
- **$16,000** worth of labor provided by Ameren Missouri to repair lighting in St. Louis City.
- **$13,651** awarded to Texas County through the USDA Fresh Fruit and Vegetable Program.
- **$15,000** donated for appliances and labor for Dunklin County’s new community kitchen.

$796,036 was leveraged beyond the HSHC grant

- **$650,211** was physical activity-related
- **$145,825** was healthy eating-related
In an effort to increase opportunities for, and knowledge of, physical activity and healthy eating, HSHC coalitions offered one-time events and multi-week programs.

“We have a program starting next week with two of the churches... opening up that partnership with them has branched us off into a different audience of families and kids that we might not have been able to reach.”

~ HSHC Grantee
Some HSHC **events** were:

- **Lil’ Cutie Healthy Valentine’s Day**
  Elementary students in Hickory County were given a bag with mandarin oranges instead of candy for Valentine’s Day.

- **Tiger Trail Kickoff**
  This event featured a ribbon-cutting ceremony for the new 1.5 mile Tiger Trail located in Dent County.

- **Family Fun Walk**
  As part of HSHC’s “Healthy Push” in March, students and families in Pemiscot County were encouraged to walk for fun during parent teacher conferences.

- **Perfect Attendance Event**
  Students in Texas County with perfect attendance were rewarded with a Wii fit-and-dance party.

- **Walk/Bike to School Day**
  Students in Sullivan County to walk or bike to school.

- **Award yourself with Good Health Day**
  An inaugural event in St. Louis City for parents, students, staff, and the community to learn about physical activity, healthy eating, and HSHC.

Some HSHC **programs** were:

- **Healthy Food Pantry**
  Miller County community wellness distributed healthy food at the local food pantry.

- **Taste Buddies Kitchen Club**
  This was a five-week cooking program for 1st–8th grade students in Dunklin County with curriculum provided by the University of Missouri Extension.

- **CATCH After School Program**
  An after-school program in Barry/Lawrence County was implemented using the Coordinated Approach to Child Health (CATCH) curriculum to increase physical activity.

- **NOCO Moo Do Kwan**
  St. Louis County organized a martial arts program for children and their families.

- **Traveling Apple Program**
  Classrooms in Douglas County performed healthy activities and the winning class was awarded the “Traveling Apple” plaque and got fun & fitness time.

- **Get Mooo’ving Staff Wellness Challenge**
  Randolph County staff competed to increase healthy eating and physical activity.
Media and awareness activities have several primary purposes: 1) increase familiarity of HSHC and available opportunities in the schools and communities; 2) strengthen residents' understanding of the importance of regular physical activity and healthy eating; and 3) garner the support of diverse stakeholders (including residents and decision-makers) to ensure policy and environmental changes are made to support healthy behaviors.

2,883,038 impressions/individuals* reached overall through 246 media/awareness activities.

*may not be unique individuals and does not include social media.
Communities have so many priorities that are so far above childhood obesity that this issue gets very little airtime and bandwidth in conversation. The only way you change or fix that is to create a larger number of people that care about the issue...[because] bandwidth is responsive to the number of constituents it represents.”

~ Statewide Partner
HSHC Progress

This section presents the progress of HSHC on intermediate and long-term outcomes:

- Practice, policy, and environmental changes.
- Reported perceptions and behaviors.
- Physical activity.
- Weight status.
- Misconduct at school.
- Student attendance.
- Academic performance.

“Funding communities to implement HSHC is increasing our momentum.”

~Statewide Partner

**Figure 7. Highlighting Progress on Logic Model**

- **Long-term Outcomes (3-8 years)**
  - Improved academic performance
  - Improved conduct at school
  - Improved attendance rates
  - Increased percentage of healthy weight youth

- **Intermediate Outcomes (2-3 years)**
  - Increased local and statewide capacity for obesity prevention
  - Increased advocacy for change
  - Increased adoption of evidence-based environmental and policy changes for physical activity and healthy eating
  - Improved perceptions of opportunities and the environment
  - Increased physical activity/utilization of physical activity opportunities and consumption of healthy foods
Where we live, learn, work, and play (including homes, schools, businesses, stores, parks, streets) affects our daily lives, including our health. Practice, policy, and environmental changes can make it easier for all individuals to make healthy choices. Although they can “reach” many people, these changes require many partners to work together and can take time to fully implement.

Policy and environmental changes can start in the form of a practice change (an improvement in the way things are done within an organization). While practice changes can support healthy behaviors, they can be temporary if they are not adopted and documented as a policy.

HSHC practice, policy, and environmental changes include:

- Randolph County staff incorporated healthier foods into parties and celebrations and used more non-food rewards.
- St. Louis City piloted a “Grandparent Club” to recruit recess volunteers to supervise and promote activity.
- Healthier concessions were added in Dunklin County.
- Douglas County implemented recess before lunch.
- Miller County developed a joint use policy for the school playground to allow community use after school hours.
- Dent County passed a sales tax on commodities to generate revenue for the Parks & Recreation Department to be used for new playground equipment.
- A Barry and Lawrence County school district revised its school wellness policy.
- Schools in Texas County obtained salad bars to increase access to healthy food for students and staff.
- Playground equipment was installed in many counties to promote physical activity.
- Pemiscot County installed lights around the track to provide a safe space for community members to be active.
Childcare

According to the U.S. Census Bureau, preschool children in full daycare spend about 33 hours per week in childcare. Engaging childcare centers to make practice, policy, and environmental changes to ensure children have access to healthy foods and opportunities for physical activity is an important part of the HSHC initiative.

The Missouri Department of Health and Senior Services is working with childcare facilities within many of the HSHC counties 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.

18 childcare facilities participated*

*only includes childcare centers enrolled for a complete year

This year, participating childcare facilities have made improvements related to nutrition and physical activity that are in alignment with a number of Eat Smart and MOve Smart’s advanced standards including:

**Healthy Eating**
- A whole grain food is served at least two times per week for breakfast, lunch, and snack.
- Fresh fruits or vegetables are served for lunch at least two times per week.
- Dark green or orange fruits or vegetables are served at least four times per week.
- Sweet snacks are served two times per month or less.
- A written policy regarding food for holidays and celebrations is written, followed, and shared with parents.
- Children are taught about food and nutrition one or more times per week.
- Posters, books, or games are used to encourage healthy nutrition habits in every classroom.

**Physical Activity**
- At least 30 minutes of adult-led physical activity are provided to preschool children daily.
- At least five to six types of play equipment are available.
- There is available indoor play space for all activities including running.
- Staff incorporate physical activity into classroom learning activities one or more times per day.
- A written policy that addresses physical activity practices exists, is followed by all staff, and communicated to parents.
- All staff receive training on children’s physical activity at least one hour or more per year.
- Staff supervise, verbally encourage, and often participate in physical activity during preschool children’s active play time.
I think the mindset is changing; people are paying more attention to being physically active and eating right and just living a healthy lifestyle in general, and they want that for their kids.”

~HSHC Grantee
A survey was administered to 5th–8th grade students in fall 2013 (Cohort 1 baseline), spring 2014, fall 2014 (Cohort 2 baseline), and spring 2015. The purpose of the survey was to assess students’ 1) beliefs and perceptions of their physical activity and healthy eating opportunities and environments and 2) food consumption and physical activity behaviors. Cohort 1 and Cohort 2, 5th–8th grade survey results are presented for each survey period. The statements compare the baseline data with spring 2015.

*The cohorts are made up of all the schools that received grant funding at the same time.*

### Characteristics of Survey Respondents

<table>
<thead>
<tr>
<th>Cohort 1</th>
<th>Cohort 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,949 students on average completed the survey at each of the three time points (30.5% of all Cohort 1 students)</td>
<td>1,972 students on average completed the survey at each of the two time points (37.0% of all Cohort 2 students)</td>
</tr>
<tr>
<td>12.3 years</td>
<td>12.2 years</td>
</tr>
<tr>
<td>50% girls</td>
<td>48% girls</td>
</tr>
<tr>
<td>50% boys</td>
<td>52% boys</td>
</tr>
</tbody>
</table>
### Reported Perceptions – Cohort 1

<table>
<thead>
<tr>
<th>Fall 2013</th>
<th>Spring 2014</th>
<th>Spring 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>76.5%</td>
<td>75.3%</td>
<td>76.2%</td>
</tr>
</tbody>
</table>

The percentage of students who reported **enjoying their PE class** remained the same since Fall 2013.

A lower percentage of students reported there were **places in their neighborhood to do physical activities** in Spring 2015 compared to Fall 2013:

<table>
<thead>
<tr>
<th>Fall 2013</th>
<th>Spring 2014</th>
<th>Spring 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>49.1%</td>
<td>48.5%</td>
<td>47.6%</td>
</tr>
</tbody>
</table>

A lower percentage of students reported there were **options after school to be physically active** in Spring 2015 compared to Spring 2014:

<table>
<thead>
<tr>
<th>Spring 2014</th>
<th>Spring 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>59.3%</td>
<td>57.8%</td>
</tr>
</tbody>
</table>

The percentage of students who reported there were **options before school to be physically active** remained the same since Fall 2014:

<table>
<thead>
<tr>
<th>Spring 2014</th>
<th>Spring 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.1%</td>
<td>18.5%</td>
</tr>
</tbody>
</table>

The percentage of students who reported **foods sold at events outside of school were healthy** remained the same since Spring 2014:

<table>
<thead>
<tr>
<th>Spring 2014</th>
<th>Spring 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.1%</td>
<td>15.6%</td>
</tr>
</tbody>
</table>
A slightly higher percentage of students reported school breakfasts were healthy in Spring 2015 compared to Spring 2014

\[21.9\% \quad 22.5\%\]

Spring 2014 \quad Spring 2015

The percentage of students who reported school lunches were healthy remained the same since Spring 2014

\[20.1\% \quad 20.4\%\]

Spring 2014 \quad Spring 2015

A higher percentage of students reported foods sold in the vending machines were healthy in Spring 2015 compared to Spring 2014

\[14.2\% \quad 15.9\%\]

Spring 2014 \quad Spring 2015

A higher of students reported being active for a total of at least 60 minutes per day in Spring 2015 compared to Fall 2013

\[19.7\% \quad 28.0\% \quad 29.1\%\]

Fall 2013 \quad Spring 2014 \quad Spring 2015

A slightly higher percentage of students reported always being very active during PE class in Spring 2015 compared to Fall 2013

\[50.1\% \quad 49.5\% \quad 51.1\%\]

Fall 2013 \quad Spring 2014 \quad Spring 2015

♦ All Cohort 1 Schools
Too much **sedentary time** such as watching TV can be a health risk, even when children are physically active.³

### The percentage of students who reported walking or biking to school every day remained the same since Fall 2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2013</td>
<td>11.1%</td>
</tr>
<tr>
<td>Spring 2014</td>
<td>12.5%</td>
</tr>
<tr>
<td>Spring 2015</td>
<td>11.9%</td>
</tr>
</tbody>
</table>

### A higher percentage of students reported walking or biking home from school every day in Spring 2015 compared to Fall 2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2013</td>
<td>15.7%</td>
</tr>
<tr>
<td>Spring 2014</td>
<td>16.9%</td>
</tr>
<tr>
<td>Spring 2015</td>
<td>17.8%</td>
</tr>
</tbody>
</table>

### A lower percentage of students reported 3 or more hours of screen time in an average weekday in Spring 2015 compared to Fall 2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2013</td>
<td>49.2%</td>
</tr>
<tr>
<td>Spring 2014</td>
<td>46.8%</td>
</tr>
<tr>
<td>Spring 2015</td>
<td>46.4%</td>
</tr>
</tbody>
</table>

### A lower percentage of students reported 3 or more hours of screen time on an average weekend day in Spring 2015 compared to Fall 2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2013</td>
<td>66.9%</td>
</tr>
<tr>
<td>Spring 2014</td>
<td>61.7%</td>
</tr>
<tr>
<td>Spring 2015</td>
<td>62.3%</td>
</tr>
</tbody>
</table>

---

The percentage of students who reported **eating 5 or more servings of fruits and/or vegetables per day** remained the same since Fall 2013:

- Fall 2013: 21.4%
- Spring 2014: 21.5%
- Spring 2015: 20.7%

A lower percentage of students reported **drinking soda and/or a sugar-sweetened beverage 1 time or more per day** in Spring 2015 compared to Fall 2013:

- Fall 2013: 67.3%
- Spring 2014: 68.2%
- Spring 2015: 65.5%

A slightly lower percentage of students reported **eating the school lunch every day** in Spring 2015 compared to Fall 2013:

- Fall 2013: 61.4%
- Spring 2014: 60.2%
- Spring 2015: 60.5%

The percentage of students who reported **eating breakfast every day at home or school** remained the same since Fall 2013:

- Fall 2013: 48.6%
- Spring 2014: 49.7%
- Spring 2015: 48.3%
Reported Perceptions – Cohort 2

A higher percentage of students reported *enjoying their PE class* in Spring 2015 compared to Fall 2014.

<table>
<thead>
<tr>
<th></th>
<th>Fall 2014</th>
<th>Spring 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>74.9%</td>
<td>79.6%</td>
</tr>
</tbody>
</table>

The percentage of students who reported *there were places in their neighborhood to do physical activities* remained the same since Fall 2014.

<table>
<thead>
<tr>
<th></th>
<th>Fall 2014</th>
<th>Spring 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>48.5%</td>
<td>48.2%</td>
</tr>
</tbody>
</table>

The percentage of students who reported *there were options after school to be physically active* remained the same since Fall 2014.

<table>
<thead>
<tr>
<th></th>
<th>Fall 2014</th>
<th>Spring 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>24.4%</td>
<td>22.7%</td>
</tr>
</tbody>
</table>

A lower percentage of students reported *there were options before school to be physically active* in Spring 2015 compared to Fall 2014.

<table>
<thead>
<tr>
<th></th>
<th>Fall 2014</th>
<th>Spring 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>14.5%</td>
<td>13.0%</td>
</tr>
</tbody>
</table>

A lower percentage of students reported *foods sold at events outside of school were healthy* in Spring 2015 compared to Fall 2014.

<table>
<thead>
<tr>
<th></th>
<th>Fall 2014</th>
<th>Spring 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>59.5%</td>
<td>59.3%</td>
</tr>
</tbody>
</table>

♦ All Cohort 2 Schools
### Reported Behaviors – Cohort 2

#### Fall 2014 vs. Spring 2015

<table>
<thead>
<tr>
<th>Category</th>
<th>Fall 2014</th>
<th>Spring 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>School breakfasts were healthy</td>
<td>23.1%</td>
<td>20.5%</td>
</tr>
<tr>
<td>School lunches were healthy</td>
<td>22.6%</td>
<td>17.6%</td>
</tr>
<tr>
<td>Foods sold in vending machines were healthy</td>
<td>10.8%</td>
<td>11.6%</td>
</tr>
<tr>
<td>Being active for a total of at least 60 minutes per day</td>
<td>28.1%</td>
<td>31.7%</td>
</tr>
<tr>
<td>Always being very active in PE class</td>
<td>52.2%</td>
<td>54.0%</td>
</tr>
</tbody>
</table>

- **A lower percentage of students reported** school breakfasts were healthy **in Spring 2015 compared to Fall 2014**
- **A lower percentage of students reported** school lunches were healthy **in Spring 2015 compared to Fall 2014**
- **The percentage of students who reported** foods sold in vending machines were healthy **remained the same since Fall 2014**
- **A higher percentage of students reported** being active for a total of at least 60 minutes per day **in Spring 2015 compared to Fall 2014**
- **A higher percentage of students reported** always being very active in their PE class **in Spring 2015 compared to Fall 2014**

♦ All Cohort 2 Schools
A slightly higher percentage of students reported walking or biking to school every day in Spring 2015 compared to Fall 2014

13.0%  14.1%

Fall 2014  Spring 2015

A slightly higher percentage of students reported 3 or more hours of screen time on an average week day in Spring 2015 compared to Fall 2014

45.2%  46.9%

Fall 2014  Spring 2015

A higher percentage of students reported walking or biking home from school every day in Spring 2015 compared to Fall 2014

14.7%  17.0%

Fall 2014  Spring 2015

A lower percentage of students reported 3 or more hours of screen time on an average weekend day in Spring 2015 compared to Fall 2014

64.0%  62.6%

Fall 2014  Spring 2015

*All Cohort 2 Schools*
The percentage of students who reported eating 5 or more servings of fruits and/or vegetables a day remained the same since Fall 2014.

- Fall 2014: 20.3%
- Spring 2015: 19.8%

A higher percentage of students reported drinking soda and/or sugar-sweetened beverages 1 time or more per day in Spring 2015 compared to Fall 2014.

- Fall 2014: 68.2%
- Spring 2015: 70.0%

A lower percentage of students reported eating the school lunch every day in Spring 2015 compared to Fall 2014.

- Fall 2014: 62.0%
- Spring 2015: 57.5%

A lower percentage of students reported eating breakfast every day at home or at school in Spring 2015 compared to Fall 2014.

- Fall 2014: 50.0%
- Spring 2015: 45.0%
Physical activity plays an important role in maintaining a healthy weight. Without daily physical activity, there is an increased likelihood that children will live less healthy lives than their parents. High-quality pedometers provide an accurate and objective measurement of physical activity among youth.4 Beginning in fall 2014, all 5th graders wore a pedometer and logged their accumulated physical activity time and steps twice per day (every morning and right before the end of school). Students were asked to wear their pedometers all day for four consecutive days.

5th graders in Cohort 1 averaged 1 hour and 39 minutes of physical activity per day.
5th graders in Cohort 2 averaged 1 hour and 43 minutes of physical activity per day.

Average steps per day among 5th graders in Cohort 2

11,724 steps
School coordinators (or school staff) take height and weight measurements for all 1st, 3rd, 5th, and 7th grade students twice a year (winter and spring). Data are used to calculate Body Mass Index (BMI), an indicator of body fat, which is expressed as a percentile relative to a child’s age and gender. The figure shows the percentage of Cohort 1 students who are at a healthy weight (between 5th to less than 85th percentile) in spring 2015 compared to winter 2013 (baseline).

The percentage of Cohort 1 students who were obese decreased from 23.4% to 22.7% between winter 2013 and spring 2015.
The percentage of Cohort 2 students who were obese decreased from 23.0% to 22.3% between winter 2014 and spring 2015.
The percentage of Cohort 1 students who had a healthy weight increased among 1st, 3rd, and 7th graders and decreased among 5th graders over time.

A higher percentage of all Cohort 2 students in all grades had a healthy weight in Spring 2015 compared to Winter 2014.
Evidence shows improvements in behavior when students are more physically active and eat healthy.\textsuperscript{5}

Each year, the evaluation team reviews and categorizes each misconduct episode into one of six categories: 1) alcohol, tobacco, substances, gambling; 2) individual-related misconduct (behavior whose consequences were confined to the offender); 3) defiance, disrespect, or disruptive (behavior whose consequences impacted others); 4) bullying or violent act (behaviors that threatened or harmed another individual’s physical and/or mental well-being); 5) vandalism or stealing; and 6) other. The figures show the total number of episodes per year and the breakdown by category for the 2013-2014 year.


The total number\textsuperscript{*} of Cohort 1 misconduct episodes (K-8) has decreased since the 2012-2013 school year (baseline)

\begin{table}
\centering
\begin{tabular}{ll}
\textbf{2012-13} & 13,919 \\
\textbf{2013-14} & 10,486 \\
\end{tabular}
\end{table}

\begin{flushright}
\textbf{Launch of the HSHC initiative}
\end{flushright}

\textsuperscript{*}Kennett South Elementary School data was not submitted for the 2013-2014 year, so it has been excluded from baseline.

\textbf{4,972} total number of Cohort 2 misconduct episodes (K-8) in 2013-2014 school year.
42% of the misconduct episodes for Cohort 1 and Cohort 2 in the 2013-2014 school year were related to being defiant, disrespectful, or disruptive.

- 18% bullying or violent act
- 16% individual-related
- 22% other
- <1% alcohol, drugs, tobacco, and gambling
- 2% vandalism or stealing
The Cohort 1 student attendance rate has decreased slightly since 2013-2014.

<table>
<thead>
<tr>
<th>Year</th>
<th>Cohort Attendance</th>
<th>Missouri State Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-2013</td>
<td>94.8%</td>
<td>95.1%</td>
</tr>
<tr>
<td>2013-2014</td>
<td>94.7%</td>
<td>95.4%</td>
</tr>
<tr>
<td>2014-2015</td>
<td>94.2%</td>
<td>95.2%</td>
</tr>
</tbody>
</table>

The Cohort 2 student attendance rate has remained consistent over the past two years at 94.9%.

<table>
<thead>
<tr>
<th>Year</th>
<th>Cohort Attendance</th>
<th>Missouri State Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-2014</td>
<td>94.9%</td>
<td>95.4%</td>
</tr>
<tr>
<td>2014-2015</td>
<td>94.9%</td>
<td>95.2%</td>
</tr>
</tbody>
</table>

Research suggests that students who consume healthy meals at school and get more physical education and physical activity have reduced rates of absenteeism and tardiness. Attendance data are obtained from the Missouri Department of Elementary and Secondary Education and presented as a percentage of the total number of hours attended.

8. Missouri Department of Elementary and Secondary Education. [http://mcds.dese.mo.gov/guidedinquiry/Pages/District-and-School-Information.aspx](http://mcds.dese.mo.gov/guidedinquiry/Pages/District-and-School-Information.aspx)
Students who are physically active and consume healthy diets tend to have better grades and improved cognitive performance.\(^9\) Benefits on academic performance can be both immediate and long-term. Shortly after engaging in physical activity, children are better able to concentrate on classroom tasks, which can enhance learning. Over time, this can impact academic performance.\(^10\) The MO Assessment Program (MAP), which is a composite number that represents the performance of students in grades 3-8 was used as an indicator of academic achievement.\(^11\) Data for the 2014-2015 school year are presented in this section.

Cohort 1 Schools’ MAP scores were lower than the state for all grades and subjects, but followed the general trend of the state MAP scores during the 2014-2015 school year.

---

Cohort 2 Schools’ MAP scores were lower than the state for all grades and subjects, but followed the general trend of the state MAP scores during the 2014-2015 school year.
A lot of people are reluctant to see change unless they have all the facts and information in front of them. Some things are kind of hard to promote because all you have are the ideas and the steps in place. Getting people to accept the ideas is the challenge. On the other hand, when they see stuff coming in, their eyes are slowly opened and it is slowly sinking in.”

~HSHC Grantee
Successes and Summary

While there is still work to be done, there are positive signs of progress. This year, HSHC grantees celebrated the following successes:

A land agreement was signed with a church in Barry and Lawrence County to create a community garden.

Residents utilized the new EBT machines and $10 match offered at the Hickory County farmers market.

Healthier food options in Texas County schools have fewer teachers leaving during the day to get lunch.

A Pemiscot County school district worked towards revising their wellness policy.

Two Dunklin County schools and four St. Louis County schools were awarded the Bronze Award in the Alliance for a Healthier Generation’s Healthier US School Challenge.

All 3rd and 4th grade students in one Barry and Lawrence County school district met or exceeded their overall fitness level this spring!

Teachers in Douglas County reported improved classroom behavior as a result of physical activity breaks.

99 people signed up for a step challenge in Miller County in just three days.

Summary

HSHC coordinators have begun to mobilize a large partner base including schools, community-based organizations, and childcare centers to identify and work towards changes that increase access to healthy food and physical activity. Together, partners have generated resources to support and sustain HSHC, communicated through multiple channels to raise awareness about the collaborative efforts and strategies, implemented numerous events and programs, and made practice, policy, and environmental changes that support healthy behaviors.
Acknowledgments

This report was prepared by:

**JSI Research & Training Institute, Inc. (JSI)**
Tamara Calise, DrPH, M.Ed, Evaluation Director
Amanda Ryder, MsPH, Evaluator
Wendy Chow, MPH, Analyst
Joe Rego, Project Associate
Rebecca Millock, Project Associate
Ashley Hatcher, Project Associate

**Other Contributors**

A special thanks to the Healthy Schools Healthy Communities grantees, statewide partners, and technical assistance providers – Alliance for a Healthier Generation, PedNet, Trailnet, Missouri Department of Health and Senior Services, and GMMB – and Missouri Foundation for Health (MFH) for their dedication and participation in the evaluation. The quotes presented throughout the report were obtained during evaluation interviews with HSHC grantees and statewide partners. Thanks to the grantees and their partners for sharing the highlighted photos.