



# *Investing in Kentucky's Future*

Community-Driven Strategies  
for Obesity Prevention and  
Building Resilience in Children



FOUNDATION FOR A  
**HEALTHY  
KENTUCKY**

# *Investing in Kentucky's Future*

## Community-Driven Strategies for Obesity Prevention and Building Resilience in Children

The Foundation for a Healthy Kentucky is a nonpartisan organization with a mission to address the unmet health needs of Kentuckians by developing and influencing policy, improving access to care, reducing health risks and disparities, and promoting health equity.

This report was prepared by Amalia Mendoza A. Senior Program Officer in charge of the Investing in Kentucky's Future initiative at the Foundation for a Healthy Kentucky. April 2019.

The Foundation has produced two videos related to the Investing in Kentucky's Future initiative; the following are links to the videos:

Adverse Childhood Experiences: [Foundation Healthy KY-ACEs](#)

Childhood Obesity Prevention: [Foundation Healthy KY-Childhood Obesity Prevention](#)

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# executive summary

Investing in children's health sets a series of changes into motion that result in healthier, better educated and more productive adults. It is also of critical importance because poor health during children's early years can permanently impair them over the course of their life. The Foundation for a Healthy Kentucky's **Investing in Kentucky's Future (IKF)** initiative was designed to reduce the risk that today's school-aged children will develop chronic diseases as they grow into adults. The six-year initiative was a partnership between the Foundation and seven local health coalitions throughout the Commonwealth, selected as demonstration projects to support the capacity of community organizations to find local, comprehensive, systemic solutions to complex health issues to improve the health of their children and communities.

Investing in Kentucky's Future served rural and urban communities: three counties in the Appalachian eastern Kentucky region, two in western Kentucky, one in northern Kentucky and one in Louisville Metro, the largest metropolitan area of the state. Six of the grantees chose to address childhood obesity prevention and the Louisville coalition addressed the issue of Adverse Childhood Experiences (ACEs)<sup>1</sup> and building resilience in children.

The IKF initiative was a catalyst for tackling community health improvement in a new and bigger way than the coalitions had before, through population health interventions. The results of the initiative couldn't be more auspicious:

- **38 local policies were adopted** by the communities at a county, city and organizational level.
  - The policies related to **childhood obesity prevention** include complete streets, expanded physical education in middle school, shared-use agreements between the schools and the community, a county-wide healthy food resolution, healthy food policies in school, physical activity programs integrated into the school curriculum, healthier food at park concessions.



**“The IKF initiative was a catalyst for tackling community health improvement in a new and bigger way than the coalitions had before, through population health interventions. The results of the initiative couldn’t be more auspicious”**

- The policies adopted related to **supporting resilience in children** include training on ACEs as part of required training for certification of out of school time youth care workers; Louisville Metro Government's Office of Youth Development requiring ACEs training for organization executives who receive external agency funding; and trauma-informed training becoming required of all schools in the largest school district in Kentucky.
- **Important changes to the built environment** were implemented by each community and they included the creation of new parks and park renovations, sidewalks to school, walking paths in schools, playgrounds, splash parks, filtered drinking water fountains in schools, fitness equipment in parks, renovations to sports fields, community trails, standing desks in schools.
- **System changes and enhancements** took place, including:
  - **Youth engagement** in health coalitions and health promotion activities. This included the creation of youth health councils and youth participating as members of the coalition boards.
  - **Parent engagement** was achieved through parent support and awareness programs in the pilot schools addressing ACEs and resilience. As a result, parent conferences

jumped from 231 to 681 and PTA membership grew from zero to 213 members over the course of the grant.

- **Community engagement** was ample and reflected in expanded membership to the health coalitions, new partnerships with business and the media, coordination with other community-based coalitions and groups and community health events. Additionally, the IKF communities developed farmers markets, school-based clinics, and leveraged other funding opportunities involving the coalitions. Overall, the grant led to increased community awareness and the development of environments supportive of physical activity, nutrition and support to resilience.
- **Improved coalition capacity**, as measured by a baseline and post survey applied to members of participating coalitions, with demonstrated improved capacity in terms of planning, collaboration, leadership and decision making, communication, ability to influence policy and environmental changes, and sustainability.

- **Improved health behaviors and environments** were a result of the initiative. The initiative had a strong evaluation component and tracked several indicators to reflect improvements in healthy behaviors and environments to support resilience. Some of the changes seen include:

Childhood obesity prevention

- In the elementary school survey applied to students in participating schools, baseline and post: desirable behavior changes were indicated in 92% of the survey response options for the survey questions related to increased physical activity and improved nutrition.
- In the middle school survey applied to students in participating schools, baseline and post: desirable behavior changes were indicated

in 91% of the survey response options for the survey questions related to increase physical activity and improved nutrition.

#### Adverse Childhood Experiences:

- 86% of staff (teachers, administrators and support staff like bus drivers and cafeteria workers) described their skill in providing effective support to students experiencing traumatic events as “adequate” or “extensive” in the spring of 2017 compared to just 30% in the fall of 2014.
- Student school climate surveys showed gains for 9 of 9 items, while the control school failed to show gains for any of the items.
- Teacher retention improved: 90.2% in 2017 vs. 87.8% in 2014.

The design of the investing in Kentucky's Future initiative influenced these outcomes. The initiative had the following characteristics:

- **Community-Driven Grant Approach:** local health coalitions assessed the health of the children in their community and determined their health priorities and the strategies and policies they would use to address them.
- **Coalition Approach:** grantees were selected on the presence of a cross-sectoral collaboration of civic leaders committed to improving the health of their community, of great importance because of the complexity of the health issues selected. School engagement was central to addressing the issues of the population of focus.
- **A Planning Phase and Capacity Building Support to Promote Equity:** because communities have varying levels of ability to compete for and implement grant programs, the Foundation included funding in the grant program for a required planning phase during which grantees would be supported in the development of a structured business plan

to address their selected health issue. The planning phase made the grant more accessible to communities with fewer resources. The Foundation also provided training, technical assistance and coaching during the implementation of the grant to support local coalition capacity building.

- **Sustainability Elements:** there were grant requirements that focused on sustainability, including a 50 percent cash match, the planning phase, a focus on changing policies in the community, and an assessment and evaluation component. These all contributed to coalition members' skills and experience to continue to improve the health of their communities in the future. An engaged, cross-sector coalition is a strong element of sustainability.

The initiative implemented in the seven communities involved 28 schools around the Commonwealth with 12,816 students in the participating schools. The Foundation invested \$2.4 million over the six years of the initiative in planning and implementation grants to the coalitions. The communities contributed over \$1.7 million over the course of the initiative, since some communities even exceeded the 50 percent cash match requirement.

The success of the initiative has led the Foundation to expand its policy work in the areas of children's health, obesity prevention and Adverse Childhood Experiences.



# Introduction

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Two principles guided the Investing in Kentucky's Future (IKF) initiative: **if the problem lies in the community, the solution to the problem lies with the community; and health is achieved by addressing the root causes of disease.**

The Foundation for a Healthy Kentucky's Board chose to work in partnership with community-based organizations to address the root causes of health with a focus on intervening as early as possible by investing in the health of children. IKF was therefore developed as a local coalition-led initiative designed to create healthier environments and a culture that would help reduce the risk that these children and youth would develop many of the chronic diseases that currently impact Kentucky adults. The initiative promoted the adoption of prevention strategies and policies capable of resulting in longer term population health improvements.

The health of Kentucky's citizens is not good. The list of diseases that affect the Commonwealth is long. Kentucky has the highest cancer rate in the country and the highest cancer death rate in the nation as well. There are counties in the state with smoking rates as high as 30 percent, when the national average is 14. Kentucky's high school-age children rank third in the nation for obesity, with a 20.2 percent rate. And 34 percent of children in Kentucky have two or more Adverse Childhood Experiences (ACEs). Chronic diseases like diabetes, heart disease and substance abuse occur at higher rates in Kentucky than in most states in the nation.

Given the community driven approach of the initiative, it was up to the coalitions themselves to select which health issue they found more pressing as it related to the health of the children in their communities. They would address this issue during the life of the grant. Childhood obesity prevention and Adverse Childhood Experiences were selected.



Given the community driven approach of the initiative, it was up to the coalitions themselves to select which health issue they found more pressing as it related to the health of the children in their communities. ”

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Childhood obesity prevention was selected in recognition of the rising obesity rates in children and youth in the communities, even children of preschool age. The coalitions knew obesity would cause serious health problems to the children as they grew. Children who are obese, when no intervention is offered, are likely to become obese adults. In the six counties that prioritized obesity prevention, the obesity rates already ranged from 33% to 41% of adult residents.

The communities also recognized what these high percentages of people with obesity would mean in terms of rising economic costs. A report from the National League of cities estimates annual health care costs of obesity-related illness at \$190.2 billion or nearly 21% of annual medical spending in the United States and childhood obesity alone is responsible for \$14 billion in direct medical costs<sup>2</sup>, meaning that with no action to prevent obesity, the medical costs would only continue to rise for the community.

Obesity is, at the same time, one of the negative health results seen in adults who as children suffered from Adverse Childhood Experiences. As research has demonstrated over the past two decades, the health impact of ACES is dramatic. People with multiple ACEs have a significant increased risk of heart disease, lung cancer, depression, substance use and other chronic health diseases and can have a reduced life expectancy of up to 20 years as compared to adults with none.<sup>3</sup>

As complex as these health issues are, their root causes are more, including tremendous socio economic and racial inequities and disparities. This complexity made it a central tenet towards a solution to work across sectors, support multi-stakeholder coalitions, where public and private organizations and community members come together and are the drivers of change in their communities. A main objective of the grant was to support the capacity of communities to address these and other health issues through a cross-sector approach and the report tracks the progress made in this area.

The report outlines the Investing in Kentucky's Future initiative model and presents some of the capacity building outcomes resulting from the Foundation's support to local health coalitions.

The report provides an overview of how the selected issues of childhood obesity prevention

and Adverse Childhood Experiences were addressed by the communities through local health coalitions and the adoption of policies and strategies in the six-years of the partnership.

The community transformation and innovations that the Investing in Kentucky's Future initiative has achieved are presented, along with the policy, systems and behavior changes. The final section provides some recommendations from the coalitions themselves for other community coalitions interested in approaching health issues in a collaborative fashion.

If solutions are to be found for complex health issues in order to improve the health of the people in Kentucky, the results of this initiative speak to the need to continue to support community-driven and cross sector approaches towards local policies and strategies, with an emphasis on prevention and early intervention.



# The IKF Model Overview

## Core Elements

The understanding behind the Investing in Kentucky's Future initiative was that children that grow up healthy are those in environments that support healthy behaviors, provide the space and opportunities to engage in healthy behaviors, and support families and systems who protect and nurture children. The Foundation Board proposed an initiative that would strengthen the

communities' ability to create healthy places to live, work and play; reduce risk behaviors that are linked to the most common chronic diseases; and increase protective factors that help young people make choices that can help them to be healthy.

This led to the stated aim of the Investing in Kentucky's Future initiative:

### AIM:

*To improve the health of Kentucky's children by engaging communities in testing innovative strategies*

Three broad long-term goals were set forth by the Foundation Board at the beginning of the IKF initiative:

- Seven local communities are engaged and using evidence-based strategies to address children's health issues;
- Other communities are embracing approaches tested in the target communities; and

- At the state and local levels, the Foundation has advanced health policy in Kentucky.

In designing the evaluation of the initiative, the Foundation determined three intermediate outcomes to assess progress towards the above-mentioned longer-term goals, as reflected in Figure 1.

**Figure 1: IKF Evaluation Outcomes**



*What does success look like?*

The initiative was originally designed as a five-year, \$3 million investment, extended an additional year, with two fully-funded phases for the selected coalitions: a **planning phase** (Phase I) and an **implementation phase** (Phase II). The total amount awarded to the seven communities in grants, both planning and implementation, was \$2.4 million.

The IKF initiative was designed with a health equity approach, given the Foundation's mission to promote equity for communities in the Commonwealth, recognizing that underserved and under-resourced communities have a disadvantage in competing for and effectively implementing grants. The initiative was therefore designed to fund communities with differing levels of capacity, recognizing that some would need additional time and support to successfully complete grant requirements. This approach included funding a planning phase, flexibility

with grant timelines, and technical assistance, coaching, and training.

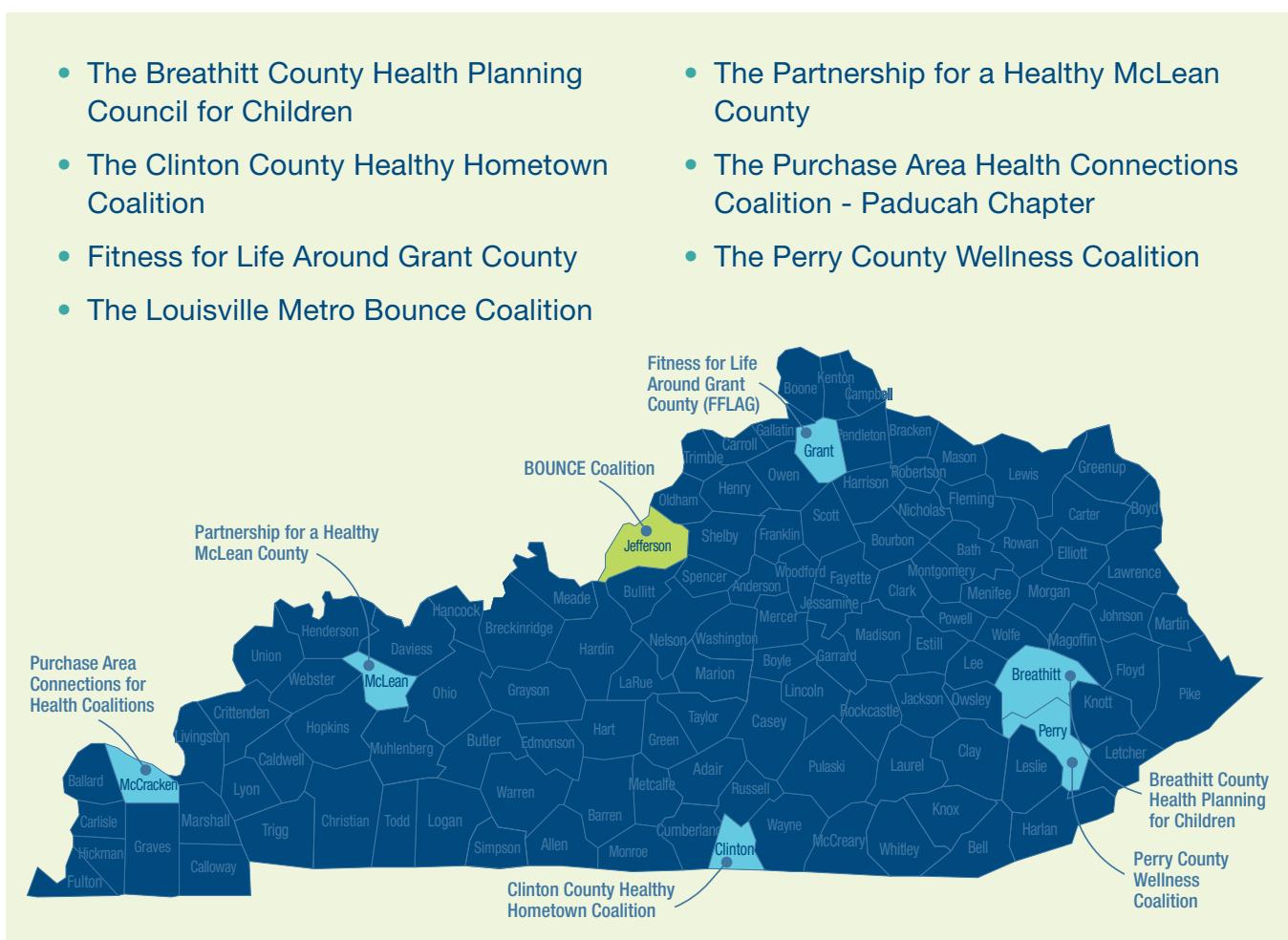
## The Partnership

This was not your typical philanthropic grant. Investing in Kentucky's future was a partnership. The Foundation chose to partner with **established local coalitions** concerned with improving the health of their communities, in recognition that any solution to improve children's health requires the participation of systems and stakeholders with influence and oversight of children's issues. The coalitions already had many of the partners necessary to impact change at the table. The health issue they chose to address through the grant was the proving ground for approaching other health issues in the community once the grant concluded.

The local health coalitions selected for the IKF initiative were:

- The Breathitt County Health Planning Council for Children
- The Clinton County Healthy Hometown Coalition
- Fitness for Life Around Grant County
- The Louisville Metro Bounce Coalition

- The Partnership for a Healthy McLean County
- The Purchase Area Health Connections Coalition - Paducah Chapter
- The Perry County Wellness Coalition



Each health coalition was unique in its composition, membership and the other activities in which it engaged. The size of the membership varied among the coalitions (Breathitt-19, Clinton-39, Grant-23, Louisville-24, McLean-38, Paducah-54, and Perry-20), but all of them included a representative from: the local schools, public health, healthcare, local government, extension services, Family Youth Resource Service Centers, and local businesses or nonprofits. Additionally, some coalitions had representatives from parks and recreation, youth, out of school time providers, faith-based organizations, and the media.

## Assessing, Prioritizing and Planning

During the planning phase, which began in 2013, the Foundation provided funding and the technical assistance and tools to support the coalitions to:

- 1 Work effectively as a team;
- 2 Assess the children's health resources and needs in the community; and
- 3 Identify and plan for implementation of a promising or evidence-based approach to address the coalition's priority concern.

The ultimate product of the planning phase was a **business plan** to address the prioritized child health issue. The Foundation supported the development of the business plan through technical assistance and coaching from social entrepreneurship planning experts.

A business plan, rather than a grant application, was the preferred vehicle to obtain the community investment and a 50 percent cash match was required of the participating communities for the implementation phase of the grant. Because this was a partnership, the Foundation and the coalitions contributed to funding the programs and strategies implemented. The Foundation's decision to promote the use of a business plan as the vehicle for the design and implementation of the IKF funding is part of a growing interest of the nonprofit sector in entrepreneurial ventures which could lead to more sustainable programing, such as is occurring with program related or social impact investment projects.

Each community participating in the IKF grant took the time they needed to move through the planning phase, which is how the coalitions engaged in IKF began implementation of their business plans on a rolling basis beginning late 2014.



## Supporting Capacity Building

The Foundation believed that it had to bring more than funding to the partnership and worked to ensure that capacity building support for the organizations in these communities was given equal if not more importance. Since the Foundation has access to information on best and promising practices, connections to national organizations and experts, and a long history and experience of supporting projects in health around the Commonwealth, it is well situated to obtain the pertinent training, coaching and technical assistance for its local partners in the development and implementation of their projects, policies and system changes.

The coalitions engaged in the evaluation efforts that were a requirement of the initiative. The Foundation contracted with the Center for Community Health and Evaluation (CCH) of the Kaiser Permanent Health Research Institute for five years to provide evaluation support to the IKF grantees and conduct external evaluation on the Foundation's work.

The coalitions were also required to participate twice a year in training and peer-learning activities at the two-day IKF Convenings developed by the Foundation. At these convenings they shared their challenges and successes, their strategies and innovations.

The Foundation brought in national and state experts for training to IKF coalition leaders. These trainings were designed as a local capacity building effort. Table 1 lists the topics covered.

**Table 1: IKF Convenings**

▶ Building Effective Coalitions	▶ Evaluation Plan Development
▶ Tools for Community Change	▶ Youth Engagement and Empowerment
▶ Social Entrepreneurship	▶ Social Marketing
▶ Health Equity	▶ Adverse Childhood Experiences (ACEs)
▶ Results-Based Accountability (RBA)	▶ Obesity Prevention Strategies
▶ Developing Business Plans that Stand Out	▶ Developing a Community Pedestrian plan
▶ Creating Supportive Infrastructure for Coalition Building	▶ The Whole School, Whole Community, Whole Child framework and Every Student Succeeds Act
▶ Developing Policies and Influencing Policymakers	▶ School Wellness Policies
▶ Planning for Sustainability	▶ Collaboration as Key to Success

Content experts were also contracted by the Foundation to provide one-on-one coaching and technical assistance to the coalitions that requested them. Additionally, Foundation program officer support was provided, and ongoing periodic technical assistance conference calls took place with the grantees. In a survey conducted by the CCH evaluators, they concluded: "Overall, grantees reported that IKF was allowing them to successfully address a key

health concern in their community and were grateful to be participating in IKF."<sup>4</sup>

With ongoing technical assistance and training provided by the Foundation and a strong emphasis on peer learning, the coalitions developed business, evaluation and sustainability plans around the targeted health issue. The coalitions combined the implementation of new best practice approaches and integrated their work into existing processes and organizations.

# Coalitions

## *The Decisive Factor*



***The Perry County Wellness Coalition.***

The Foundation for a Healthy Kentucky's vision is **a Kentucky where every individual and community reach their highest levels of health**. Reaching this vision requires a cultural change in Kentucky, one in which communities focus on health and wellbeing and work towards the prevention of chronic diseases, addressing the root causes of disease. Achieving this goal requires collaborative engagement of local public systems, community organizations and community members.

Communities with some of the poorest health outcomes and most complex chronic diseases are ones also facing economic isolation and can additionally face significant organizational capacity issues, so require the most support to organizational capacity development.

Supporting the cross-sector, community-driven approach with the different instruments mentioned in the previous section was a focus of the grant. Coalition capacity building became the decisive factor in the outcomes obtained, in the community buy-in, and the sustainability of the projects.

In interviews by the external evaluators, the IKF coalitions consistently reported that the coalition approach contributed to their success by helping them engage key partners, access support from decision makers, ensure appropriate strategy selection, and leverage community resources, ensuring that IKF-funded activities were appropriate and relevant to the local context.



“

Capacity building was accomplished continually during the IKF grant. The IKF grant strengthened collaboration and encouraged growth through community partners. Partnerships between Council membership agencies became stronger as the grant progressed. Grant writing skills matured, resources were discovered and shared that allowed projects to thrive during the IKF project years.

The Breathitt County Health Planning Council for Children will continue to build a strong community that allows children and families to have access to resources to live healthier, happier and more productive lives.”

— *Breathitt County Health Planning Council for Children Coalition 2018 Final Report*

## Strength and Durability of Community Partnerships

In order to measure the impact of the IKF initiative's support to coalition capacity building, one of the three overarching intermediate outcomes established was the **strength and**

### ***durability of community partnerships.***

A survey was developed by the evaluation consultants and applied to all the members of the coalitions participating in the IKF initiative at the beginning of the initiative in 2013 and again at the end of the grant in 2018. The purpose of the survey is presented in Figure 2.

**Figure 2: The IKF Coalition Survey**



## The survey addressed seven aspects of collaboration:

- 1 **Shared Vision and Planning**, which encompassed the coalition's ability to articulate vision and goals, complete a community assessment, and balance the individual's own interest with the shared interests of the coalition.
- 2 **Partnering and Collaboration**, which included identifying key stakeholders, engaging community-based organizations and leaders in community health projects and promoting shared investments and rewards in collaborative ventures.
- 3 **Decision Making**, which involved the coalition having thorough discussions of issues before making decisions.
- 4 **Leadership**, which referred to establishing clear leadership roles and responsibilities, giving members the opportunity to take leadership roles, effectively use the abilities and skills of coalitions members, and lead others in implementing community change.
- 5 **Effective Communication**, which included the coalition's ability to communicate information about the coalition's work to members and the community, frame messages effectively, and coordinate with the media.
- 6 **Policy and Environment**, which encompassed the coalition's ability to address social determinants of health, promote health equity, obtain political support for the coalition's efforts and influence policy.
- 7 **Sustainability**, which covered the coalition being successful in getting community support for its activities, obtaining resources to support its work, continuing the changes and working together beyond the period of the IKF initiative, and planning for how to address additional priority issues.



The IKF grant increased coalition membership by reaching out to stakeholders, community organizations and residents for assistance on initiatives. The IKF grant raised awareness of FFLAG as a community coalition and on-going Starting with Children efforts helped engage and retain coalition members.

The grant process encouraged coalition leadership and provided specific individuals/organizations with tasks to move initiatives forward. The Starting with Children initiative really was a collaborative effort that brought together the community as a whole. Lastly, this grant required learning how to leverage resources, mange funding and timelines. With that being said, the experience has set us up to pursue other large grants and feel confident doing so."

*Fitness for Life Around Grant County Coalition  
2018 Final Report*

The results of the coalition survey showed growth in all seven aspects of collaboration. More than 82% of the coalition members responding to the coalition post survey indicated that the ability of the coalition was good or outstanding at the end of the grant in the selected categories. The “outstanding” responses increased in over ten percentage points as well within each aspect.

## Coalitions Influencing Community Change

Coalitions have reported that the Investing in Kentucky's Future initiative has led to expanded coalition engagement, including youth and parent engagement, increased coalition capacity, and strengthened organizational partnerships, especially with the schools. These have been instrumental in developing a change in the community's culture to improve health.

The sections of the report that follow present an in-depth view with respect to the childhood obesity prevention and Adverse Childhood Experiences strategies and policies implemented by the coalitions participating in IKF. However, the following are some additional concrete achievements that exemplify the increased capacity of the coalitions participating in the IKF initiative and the impact of the grant on the coalitions' ability to improve in the seven aspects of collaboration.

- **Breathitt County** reported that “relationships between agencies invested in health living within Breathitt County improved overall.” Positive impacts include:

- The establishment of a **Breathitt County Youth Health Council**.
- The creation and coordination with a **Breathitt County Diabetes Coalition**.
- The hiring of two **Community Health Educators**, who among other things will work to support the Breathitt County Youth Health Council.

- Grant funding of physical activity and health motivated activities by the **Family Resource Youth Service Centers** and the school's Century 21 programming
- **The Breathitt County Community Health Foundation** (BCCHF) was established and has collaborated with Kentucky River Area Development District to submit and obtain the PEW Charitable Trusts' **Health Impact Assessment** (HIA) program.



*5K Run in Breathitt County.*

- **The City of Paducah** secured a \$400,000 contribution from the Rotary Club to construct a play-by-design playground in the health park developed with IKF funding and then received a \$500,000 donation to construct the second phase of the park.

The Kentucky League of Cities gave the City of Paducah a 2017 **Enterprise Cities Award** for the park. The city also received a **Smoke-Free Community Award** from the Kentucky Center for Smoke-Free Policy.

- **The Clinton County Healthy Hometown Coalition**, through the enhanced capacity, was able to obtain additional grants and expand programs for different organizations participating in the coalition:

- Clinton County Health Department was awarded a grant for Farmers Market and Pedestrian Planning.
- Clinton County Extension Office was awarded a grant from the Centers for Disease Control and Prevention (CDC) to focus on obesity in the community.

- Clinton County Schools received a \$25,000 grant from the Kentucky Department of Education to purchase new kitchen equipment.
- The paving project at Mountain View Park was completed, thanks to donations from several community groups.
- The Healthy Hometown Coalition spearheaded the effort for a walking track and is coordinating with the city and county governments to develop a sidewalk from the downtown area to the schools and library.

- **Fitness for Life Around Grant County** has been able to lead county and city-wide changes and increase the capacity of their community partners:

- FFLAG received funding from the Kentucky Department of Health for piloting an **Edible City** in Williamstown. Edible Cities are public places that produce an abundance of fresh and healthy food each year. All produce can be harvested by the general population. Produce that is out of reach to the general public will be harvested and given to the school district.

*Fit trail in Clinton County.*



- The Grant County **school food service department** piloted and eventually created a new solution to increase school breakfast participation.
- Grant County received a **Smoke-Free Community Award** from the Kentucky Center for Smoke-Free Policy for their comprehensive smoke-free policies and the Mayor of Williamstown received the 2019 **Smoke-free Advocate of the Year Award**.
- FFLAG was awarded a grant from Interact for Health for the planning of **a trail system**. A feasibility study was completed and a **48-mile trail system** from north to south of the county with ancillary trails is in development. The trail system will connect neighborhoods to schools, places of work as well as many destinations along the way. The sidewalks that were completed as part of the IKF grant are incorporated in the trail system plans.
- The coalition worked with five elementary schools in Grant County to submit and obtain the *Every Kid Healthy* grant, which funded more **outdoor play equipment** for students to use during recess, complete with storage sheds.
- Grant County and Williamstown School Districts' participation in the coalition led to collaboration with the University of Connecticut's Rudd Center for Food Policy & Obesity and the health department to provide additional incentives for participating schools in both districts for the WellSAT 2.0 and WellSAT-I assessment projects. These evidence-based tools provide scores and feedback **for wellness policies and for wellness policy implementation**.

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**“**The success of the [IKF] grant has been directly aligned with the community support. It is pleasantly surprising the level of commitment we have seen from the community. Having community support, a strong and dedicated coalition and help from partnering organizations is what made the successes possible.”

*FLAGG Coalition  
2018 Final Report*

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# Childhood Obesity Prevention *IKF Strategies and Outcomes*



When the coalitions participating in Investing in Kentucky's Future completed their child health assessments, obesity rose to the top of the list of health concerns. This was not a surprise. Kentucky has the third highest obesity rate for youth ages 10 to 17 in the nation. Nearly 36 percent of Kentucky's young people are overweight or obese. Kentucky has the eighth highest obesity rates for adults, currently 34.3%, up from 21.7% in 2000 and from 12.7% in 1990.<sup>5</sup> Obesity among prime working age adults (25 to 54 years old) is 38.5%.<sup>6</sup> For the six counties that participated in the IKF initiative, obesity rates range from 33% in McCracken county to 41% in Breathitt county.

Once the health issue was prioritized, the Foundation prepared materials to support the coalitions with information related to the best practices in childhood obesity prevention. Of central importance was an **understanding that obesity is a complex condition with biological, genetic, behavioral, social, and environmental influences**. Therefore, addressing some of the environmental, social and behavioral aspects that have influenced the rise in obesity would require the cross-sectoral approach the coalitions brought.

Obesity can be addressed from the nutrition side

(excess caloric intake), from the physical activity side (inadequate amounts of physical activity), or, what is considered best practice, addressing both the nutrition and physical activity components, which is what the IKF initiative recommended.

In children, addressing physical activity is certainly an area that requires strong and many times expensive interventions. A quick example of where we stand with respect to providing an adequate amount of physical activity to children is the dramatic reduction of physical education (PE) in schools over the years. From the most recent Kentucky Youth Risk Behavior Survey data, **81% of middle and high school students did not attend a physical education class** in all 5 days of the previous week surveyed.<sup>7</sup> The IKF student survey also showed that 80% of high school students surveyed did not attend a PE class the previous week.<sup>8</sup>

The lack of physical education in schools is exacerbated by unsafe neighborhoods for physical activity, lack of sidewalks, no safe playgrounds or parks, which lead to less outdoor play outside the school day. Additionally, there has been a substantial increase in screen time, leading to **inadequate sleep** and **increased stress**, which also play a role in the development of obesity.



*Walking path in Clinton County*

Similar critical unhealthy changes have occurred in terms of excess caloric intake: “food deserts” or places with limited-to-no access to healthy foods; larger portion sizes; eating away from home; parents working multiple, low-income jobs that don’t allow acquiring and preparing healthy food; increased snacking; greater exposure to food advertising; unhealthy fast foods, snacks and sugar sweetened beverages; and more.

Addressing both nutrition and physical activity demanded that the coalitions develop policies and strategies that would require engagement and coordination with their multiple partners, principally the schools, the parks and recreation departments, extension services, local government, public health prevention and health services, parents and the youth themselves.

## Comprehensive, School-Based Approaches

In the development of the business plans addressing childhood obesity prevention and following the literature on evidence-based strategies, the coalitions were asked to consider

programs and strategies that would support healthy choices through:

- **Changes to the built environment**
- **Promotion and support of physical activity**
- **Promotion and support of nutrition programs and education**
- **Local policy changes**

The school setting was ideal for the interventions to reach children and youth. The White House Task Force on Childhood Obesity report had already emphasized that schools were a key setting for policy change, given the significant amount of time children spend in this setting. Children are in school for more than 1,000 hours a year and consume up to fifty percent of their daily calories at school.<sup>9</sup> As an Institute of Medicine (IOM) report noted that “Children spend up to half their waking hours in school. In an increasingly sedentary world, schools therefore provide the best opportunity for a population-based approach for increasing PA among the nation’s youth”.<sup>10</sup> Table 2 lists the schools that participated in each of the Investing in Kentucky’s future communities; a total of 28 schools with 12,816 students.

**Table 2:** Schools participating in IKF

ADVERSE CHILDHOOD EXPERIENCES (ACES) INTERVENTIONS			
Louisville Bounce Coalition	<ul style="list-style-type: none"> <li>• Semple Elementary (Elem.)</li> <li>• Wheatley Elem.</li> <li>• Blue Lick Elem.</li> <li>• Engelhard Elem.</li> <li>• Shelby Traditional Academy Elem.</li> </ul>		
CHILDHOOD OBESITY PREVENTION INTERVENTIONS			
Breathitt Planning Council for Children	<ul style="list-style-type: none"> <li>• Breathitt High School</li> <li>• Sebastian Middle School</li> <li>• L.B.J. Elem.</li> <li>• Highland-Turner Elem.</li> <li>• Marie Roberts-Caney Elem.</li> </ul>	Clinton County Healthy Hometown Coalition	<ul style="list-style-type: none"> <li>• Albany Elem.</li> <li>• Clinton Cty. Middle School</li> <li>• Clinton Cty. High School</li> </ul>
Fitness for Life Around Grant County	<ul style="list-style-type: none"> <li>• Grant County High School</li> <li>• Grant County Middle School</li> <li>• Crittenden-Mt. Zion Elem.</li> <li>• Dry Ridge Elem.</li> <li>• Mason-Corinth Elem.</li> <li>• Sherman Elem.</li> </ul>	Partnership for a Healthy McLean County	<ul style="list-style-type: none"> <li>• Calhoun Elem.</li> <li>• Livermore Elem.</li> <li>• Marie Gatton Phillips Elem.</li> </ul>
Perry County Wellness Coalition	<ul style="list-style-type: none"> <li>• Hazard Middle School</li> <li>• Buckhorn School K-12</li> </ul>	Purchase Area Health Connections-Paducah Chapter	<ul style="list-style-type: none"> <li>• Clark Elem.</li> <li>• McNabb Elem.</li> <li>• Morgan Elem.</li> </ul>

For children and youth from low-income families, schools offer opportunities to achieve healthier eating and routine physical activity. Schools can improve the quality of school meals, introducing changes to ensure food served and sold at school support healthier diets. Schools can provide the infrastructure and policies that increase access to and encourage physical activity. They can boost or re-instate strong physical education programs that engage children and youth in moderate to vigorous physical activity.

The community can also create safer and

healthier spaces to live, work and play; establish policies to promote healthier foods; and encourage community-wide changes to support healthy behaviors.

The IKF grantees took these best practice strategies and recommendations to heart. All six of the grantees have made changes to the built environment in their communities and have implemented strategies and programs to improve nutrition and physical activity, many of them through schools. All of them have adopted policies and made system changes to impact obesity and promote healthy weight.

## Changes to the Built Environment

For children and youth to be able to engage in physical activity, they need to have safe spaces to play and exercise. Changes to the built environment are central to any childhood obesity prevention initiative. The built environment refers to the human-made surroundings that provide the setting for activities to occur.

There is the belief that lack of safe places to play and exercise is mainly an urban problem. This is not the case. Many rural communities do not have sidewalks and lack public transportation, so access to parks or other public facilities that are safe to exercise is a challenge. Many rural schools lack the necessary infrastructure for physical activity to occur, with no gymnasiums or playgrounds.

The IKF coalitions made special efforts to address these problems and, in the process, were able to actively engage their communities in the changes. Through the investments made by the community and the IKF grant, these communities now have new parks, more sidewalks, walking paths in schools, playgrounds in schools and parks, splash parks, sports fields, standing desks and “pedal-cycle” seats in classrooms.

Grant county constructed a sidewalk that made it possible for students to walk to school, an activity

that was previously prohibited by ordinance because of the safety issues that exist when children walk to school when there are no sidewalks.

The initial IKF investment in a new playground at the Mountain View Park in Clinton County, led the coalition to leverage additional community, businesses and grant investments to add a toddler playground, a multi-purpose field, a batting cage, a walking path and fitness stations. This park has now become a central gathering place for physical activity in the community.

The city of Paducah created a completely new community Health Park that would serve three low-resourced neighborhoods. The park has fitness stations, a build-by-design playground, community gardens, and walking paths.

As previously mentioned, the IKF investment generated tremendous community excitement and was the catalyst for a \$500,000 donation for a second phase of the park which will include a pedestrian plaza and potentially a small clinic for preventive health services.

In the Appalachian community of Breathitt County, the coalition supported the parks and rec department in securing land between two exiting parks, creating a larger park where a walking path, fitness stations and handicap accessible tables were added with the IKF investment.



McClean County built walking paths in the middle school to promote walking in this age group where there is little PE offered and kids no longer have recess to exercise. The McLean schools also brought in SPARK physical activity equipment and program and developed activities around the walking path.

Schools in many of the coalitions now have school gardens, created and maintained by the students, which are part of the nutrition education

programs introduced in schools by the IKF grant. These gardens not only provide hands-on lessons in nutrition education, but the fruits and vegetables are used in the school cafeteria, providing healthy options to the proud students that grow the produce.

Table 3 provides a list of the changes that were made to the built environment in the six communities addressing childhood obesity prevention.

**Table 3: IKF Changes to the Built Environment**

 <b>BREATHITT</b>	Fitness Stations at Douthitt park   Handicap accessible tables at Douthitt park   Church playground and physical activity equipment   School track and equipment for physical education   Filtered water fountains in schools   Water filling stations at park
 <b>CLINTON</b>	Playground at Mountain View Park   Walking Path at Albany Elementary school   Walking Path from middle school to park   Fitness equipment at schools   Farmers Market   School gardens   Disc Golf Course at Albany Elementary School
 <b>GRANT</b>	Paved walking paths in 5 elementary schools and 1 middle school   Public sidewalks linking neighborhoods to schools   Splash park   Walking paths in parks   Playgrounds at school   Play/sports spaces in public parks (basketball, tennis, volleyball)   School Gardens   Standing desks in schools
 <b>MCLEAN</b>	Walking track at McLean County Middle School   Playground and fitness equipment at Myers Creek Park   SPARK physical education equipment for elementary, middle and high schools
 <b>MCCRACKEN (Paducah)</b>	COMMUNITY HEALTH PARK: Exercise path   Inclusive playground equipment   Community garden to allow residents and elementary schools to grow their own produce   Fitness equipment station   Open free play field
 <b>PERRY</b>	School walking tracks with landscaping   Playground upgrades   Splash pad   Outdoor exercise equipment at schools   School gardens   Filtered water fountains at schools   Climbing wall   Community walking trail and health mile   Standing desks in schools

Creating the changes to the built environment also helped engage the community at large and increased awareness of the issue being addressed, of central importance when developing a culture of health in a community. In Clinton and McCracken counties, the

playgrounds were part of a community build activity, with many volunteers participating as part of community spirit building. The playground in the city of Paducah was a large contribution from the Rotary Club to the park and had 900 volunteers working in shifts to build it.



**Splash park in Grant County**

## Physical Activity Programs and Strategies

Children and adolescents should do 60 minutes or more of moderate-to-vigorous physical activity daily, according to the guidelines issued by the Federal Government.<sup>11</sup> Despite the extensive evidence related to the health as well as academic achievement benefits that physical activity provides children and adolescents, including being an important childhood obesity prevention strategy, most children and youth do not meet the physical activity guideline.

Given that children and adolescents spend so many hours at school, school-related physical activity is a large contributor to overall physical activity. Yet only 8 states in the nation require daily recess for elementary school students and 31 states in the nation allow substitutions for physical education class time or credit.<sup>12</sup>

In Kentucky, students need only earn 0.5 physical education credit for graduation. The state does not require a minimum weekly amount of physical activity time for middle school/junior high school or high school students. Classroom physical activity breaks are not required. The state does not prohibit the use of withholding physical activity, including recess, as punishment for disciplinary reasons, nor does it prohibit using physical activity as punishment for inappropriate behavior.<sup>13</sup>

Changes to physical activity in schools are not easy to make since they require an investment of time and space. IKF coalitions made important progress in including physical activity strategies and programs.

Physical education is the gold standard for physical activity in schools, yet disinvestments in schools have made it almost nonexistent as an everyday practice for most students beyond elementary school, as reported. However, the Clinton County Healthy Hometown Coalition was able to adopt the policy of expanding physical education for all middle school students, every day as a result of this initiative.

All six of the grantees worked on integrating physical activity and nutrition programs into the schools, using research-based physical activity programs. The SPARK program was adopted in McLean, Clinton and Perry Counties. Breathitt, Clinton, and Grant counties adopted Take 10!<sup>14</sup>, a program that combines academic instruction with 10 minutes physical activity breaks to get kids moving without sacrificing time dedicated to academic learning. The CATCH program<sup>15</sup>, a physical activity and nutrition program proven to be useful in obesity prevention was integrated into the Paducah schools.



**Take 10! in a Clinton school classroom.**



Breathitt County's Superhero Run

Other school-based physical activity and nutrition programs, such as Planet Health, Kids Yoga and Go Noodle, were also used by some of the grantee schools.

The coalitions were also innovative in their approaches to physical activity. Most of the grantees organized community-based health fairs and physical activity events such as 2k, 5k, 10k runs ("Run for the Roses", "Superhero Run", "Glo run", "Run for the Honey", "Derby Dash" "Mud Run Obstacle Course"). These community events were also used to provide health information. The events grew in numbers as the coalitions engaged more partners.

Walking and biking programs were also implemented. The Grant county coalition recruited high school students for the Step It Up! program, designed to promote walking, biking and overall active living. Walking clubs in and out of school were implemented, for students, staff and community members in more than one coalition.

The Clinton County Healthy Hometown Coalition set up a successful program called Fitness Buddies in which a group of high school students with strong leadership skills signed up to be Fitness Buddies to 3rd and 4th graders with a high Body Mass Index (BMI). With parental permission, the high school students go to the elementary school to meet with their fitness buddies and engage in 30 minutes of extra intense physical activity in the middle of the school day.



Clinton County's Fitness Buddies program

## A Story of Impact

**“** Fitness Buddies was a great program and students enjoyed it. Parents, teachers and students noticed changes and bragged on the program and the effects it had on students. One mother told me her son lost 7 pounds since he started the program, another mom stated her daughter is drinking more water and less sugary beverages now and one mom told me her son lost 8 pounds and is more comfortable walking in front of his peers now. This program has made a wave of changes at every school in our district.”

Clinton County Healthy Hometown Coalition  
2018 Final Report

## Nutrition Programs and Strategies

For many residents of communities in rural areas of the state, eating healthy is impaired by lack of access to healthy and affordable food. Paradoxically, even in rural communities where food is grown there are “food deserts”, that is a lack of food retailers and limited supplies of fresh, affordable foods.

Transportation presents a problem for many low-income families in rural areas to get to larger grocery stores, and the closer gas stations or convenience stores offer less nutritious options. Therefore, limited access to healthy foods and food insecurity, having access to a reliable source of food during the year, are quite prevalent in many communities around the Commonwealth.

Once again, schools offer an important setting and opportunity for children and even families to eat healthier. All six IKF coalitions actively sought to change their food environments, beginning with improvements to the school cafeteria nutrition, and getting rid of deep fryers and replacing them with ovens to offer baked goods; utilizing the school gardens and partnering with the local farmer’s markets in farm-to-school programs, where they exist; and providing students with nutrition education.



*Healthy snacks at school in Clinton County*

Additionally, to address the issue of food insecurity, McLean, Breathitt, and Clinton coalitions instituted or expanded healthy backpack programs for low-income students to take home healthy meals. And Perry and Clinton County had mobile summer eating programs for children in low-income neighborhoods, such as the *Bus Stop Café* in Clinton County, which provided breakfast and lunch to children, making scheduled stops in various low-income neighborhoods in a bus donated by the school, painted and adapted by the students, and run by volunteers from the community.



*Bus Stop Café in Clinton County*

The Clinton County schools also instituted a breakfast cart and started a *Try This* activity at the elementary school, where children were introduced to new fruits and vegetables. This coalition also instituted a free healthy snack program for all students. Similar to this was the *Farm Fresh Friday* program in Breathitt County.



**School garden in Perry County**

The IKF grantees also engaged community partners in nutrition programs. Breathitt County originally instituted the North Carolina developed Faithful Families Eating Smart and Moving More (FFESMM) program. In Perry County, a Carrot Cash program was developed with the UK Northfork Clinic, a health care provider of the area to provide “prescriptions” in the form of vouchers for the local farmer’s market to low income families with children with high BMIs.

The IKF coalitions began coordination with other groups that were working on similar issues in the community, to engage the parents of children being served through the schools. In Breathitt County, this led to the establishment of a diabetes coalition. In Clinton and Breathitt County, the local library was engaged in nutrition education, health cooking classes, and a seed library program. The youth in Clinton County

prepared public service announcements on the radio with messages on healthy food and nutrition which they delivered over the summer.

Community events where healthy foods and recipes were introduced were also sponsored by the IKF coalitions, like the “Plate it Up” recipes in Clinton County, the Annual Nutrition Fair in McLean County, the “Seed to Table” program in McCracken County, or the “Healthy Chili Cookout” in Breathitt County, in which the youth working with the coalition took the lead.

As reported on the IKF student behavior survey, 72% of students on the post-survey reported eating fruits or vegetables (including salad) in school on the previous day compared to 50% on the baseline. This was higher for elementary schools on

the post-survey (81%) and baseline (55%). Across all grades, 55% of students on the post-survey indicated that they consumed fruits or vegetables only at school on the previous day compared to 36% on the baseline survey.<sup>16</sup>

Along with addressing the need to eat healthier food, the IKF coalitions also took steps to increase water consumption and reduce children and youth consumption of sugar sweetened beverages (SSBs), which increase the risk for obesity, diabetes and poor oral health. To this end, the IKF coalitions in Appalachia installed filtered drinking water fountains in schools and in the parks and students began peer campaigns such as *Rethink your Drink, You are Sweet Enough, Don’t Sugarcoat Our Future*. In the IKF student survey, respondents reporting drinking SSBs dropped from 86% at baseline to 64% of respondents on the post-survey.<sup>17</sup>

## Childhood Obesity Prevention Policies and Systems Changes

Adopting policies and introducing systemic changes are a strong path towards sustainability for communities. This was also the second of the three intermediate outcomes of the IKF initiative. The Investing in Kentucky's Future Coalitions were successful in these achievements, more so considering that they took place during the few

years of the grant's implementation.

Some of the policies adopted were county wide, some at the city level, and many more at the level of the participating organizations, such as the schools or parks.

All grantees had policy wins and instituted changes to their systems. Table 4 contains a listing of all the policies adopted by the IKF coalitions related to childhood obesity prevention during this initiative.



**Table 4: Childhood Obesity Prevention Policies Adopted through the IKF Initiative**

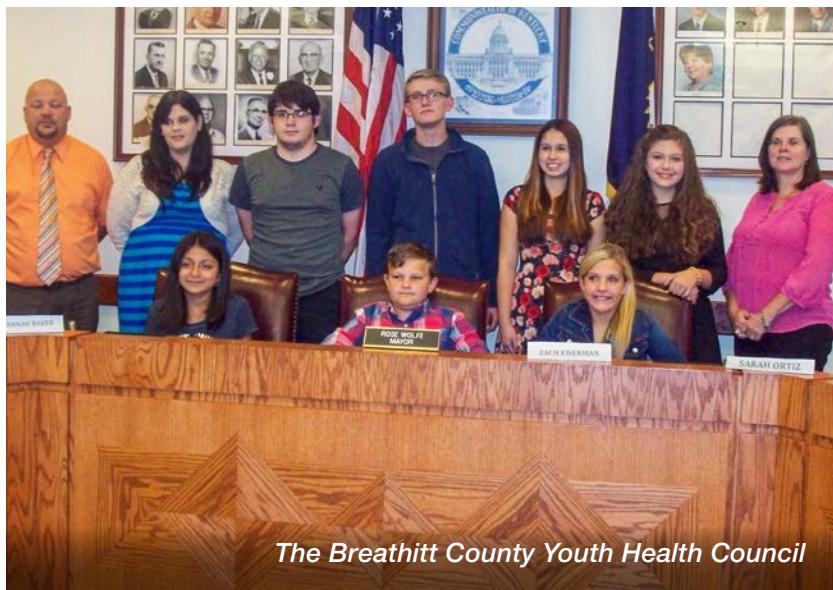
<b>COMMUNITY POLICIES</b> 	<ol style="list-style-type: none"> <li>1. County-wide “Complete Streets” policy</li> <li>2. County “Child Health Day” proclamation</li> <li>3. City-wide Healthy Food Policy resolution</li> <li>4. Shared use agreements – schools, parks, college</li> <li>5. Park policy for longer hours and added safety</li> <li>6. Healthy snack choices required at park concession stands</li> <li>7. Parks Family Multi-Participant Discount policy for sports leagues</li> </ol>
<b>SCHOOL PHYSICAL ACTIVITY POLICIES</b> 	<ol style="list-style-type: none"> <li>8. County-wide expanded Physical Education for middle school students, every day</li> <li>9. Physical activity, recess will not be used for or withheld as punishment for students</li> <li>10. Physical education requirements are not waived for other activities, classes, or for disciplinary reasons</li> <li>11. Physical activity curriculum will be incorporated into the classrooms</li> <li>12. Free participation in physical activities opportunities after school</li> </ol>
<b>SCHOOL NUTRITION/HEALTHY EATING POLICIES</b> 	<ol style="list-style-type: none"> <li>13. Remove unhealthy foods from fund raisers, school parties, vending machines</li> <li>14. Prohibit the sale of high-fat, high-calorie snacks to students at school</li> <li>15. Food will not be used as a reward or reinforcement for students</li> <li>16. Students will have healthy alternatives to sugary drinks and snacks</li> <li>17. Expand healthy food choices for school backpack programs</li> <li>18. Limit food and beverages as fund raisers during the school day</li> <li>19. Monitor foods at celebrations during school day</li> <li>20. Ensure that students at all levels within the school district have access to nutrition education</li> <li>21. Deep fryers are eliminated from school cafeteria</li> <li>22. Universal free breakfast / lunch to students</li> </ol>
<b>OTHER RELATED SCHOOL POLICIES</b> 	<ol style="list-style-type: none"> <li>23. Health and wellness are a standing item on the agenda for the Superintendents Advisory Council</li> <li>24. Healthy behavior will be incorporated into existing school clubs and activities</li> <li>25. Teachers and staff will be provided with professional development focused on alternative methods of reward and punishment</li> <li>26. Training and meetings at school that are more than one hour in length will offer physical activity breaks</li> <li>27. The school will make efforts to provide physical activity opportunities and healthy eating programs</li> <li>28. Integrate programs like Take 10! and Planet Health as much as possible into areas of social studies, science, math, language arts, and health</li> <li>29. Health and Wellness will be promoted by the Student Advisory Council during Student Senate meetings</li> <li>30. Staff will be given information on preventive health, physical activity, good nutrition</li> <li>31. School's wellness goals are integrated into School Improvement Plan</li> <li>32. Family members and guardians have the opportunity to provide input to the implementation of wellness policy activities</li> <li>33. Healthy Kids Clinic is established in the school</li> <li>34. Staff is encouraged to model healthy behaviors, encourage students to make good nutrition choices, promote the benefits of physical activity</li> </ol>

As important as the policies are, some of the systemic changes that took place in the IKF communities produced equally important impact. One of these was **youth engagement** in the coalitions and the work related to obesity prevention.

Breathitt county established the Breathitt County Youth Health Council. The participating youth are now health ambassadors and important voices for their peers in school and community activities. The youth council has also established a social marketing campaign: #gethealthybc.

Clinton County has instituted youth participation as members of the coalition, so meeting schedules and dynamics are adapted to include youth representation. Grant county had youth engaged in conducting and participating in the analysis of a walkability assessment, as well as having the youth present to the City Council for the approval of a complete streets policy.

Additional changes include stronger coordination between the schools and other community programs. For example, in Perry County, the IKF *Kids on the Move!* project has expanded to incorporate work with the *Girls Planning for Success* after school program. In Breathitt County there is coordination with the Diabetes Coalition and the 4-H program.



*The Breathitt County Youth Health Council*

Other examples include the incorporation of physical activity programs permanently into the school curricula. In Grant County, due to the success of the standing desks in the classrooms, the schools have decided to replace any desk that breaks with standing desks.



*Standing desk in Grant County school*

## Changes in Behavior: The IKF Student Survey

The third intermediate evaluation outcome established for the IKF initiative related to childhood obesity prevention was behavior change in children and youth in the participating IKF schools. The IKF evaluation efforts included an IKF Evaluation Advisory Committee comprised of expert evaluators, specifically in evaluation of childhood obesity interventions. The advice provided led to the recognition that a complex issue like childhood obesity would not likely result in significant changes in BMI or behavior in the time allotted for grant implementation and with the dose of the IKF initiative. Changes to child BMI and strong changes in behavior take a longer time and greater investments.

The Foundation proceeded, however, to apply a baseline survey for 4th- 5th grade level students and one for 7th- 9th grade in 2015. The IKF student survey was developed by the Center for Community Health and Evaluation (CCH), adapted from a survey developed and implemented by Kaiser Permanente's National Community Benefit Program as part of a community-based obesity prevention initiative that focused on several regions across the country. All coalitions surveyed a sample of students targeted by their IKF efforts. CCH reported baseline data collected from spring 2015 to early 2017 for 21 schools with just over 1900 participating students. Five grantees administered the post-surveys in 2018 in a total of 20 schools and collected data from 1655 students. The post survey analysis was conducted by Kentucky-based Winsch Evaluation Services.<sup>18</sup>

The survey included about 25 questions related to physical activity and nutrition, such as "During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?" or "About how often are you given candy, cookies, cake or that kind of food in class as part of a party or as a reward?". Separate Foundation reports are dedicated exclusively to this survey, explaining the methodological challenges with the administration of the baseline and post-surveys.<sup>19</sup>

In terms of the frequency count of any positive change, the baseline to post survey analysis showed:

- In the elementary school survey, desirable behavior changes were indicated in 92% of the survey response options for the survey question, with the highest percent of changes indicated for the survey item "Minutes of Vigorous Physical Activity in the Previous Day" (63% avg).
- In the middle school survey, desirable behavior changes were indicated in 91% of the survey response options for the survey questions, with the highest percent of changes indicated for the survey item "Unhealthy Foods in Class".

- Behavior changes for the high school were seen with 66% of the survey response options. Like middle schools, the survey item "Unhealthy Foods in Class" showed the highest percent of changes.

As expected, given the short time between the application of the baseline and post survey the changes in behavior are still limited. While there was an overall increase in reported use of indoor recreational facilities and frequency of Physical Education (PE) increased for some elementary students, no school met the state and national averages for 60 minutes or more of physical activity.

Changes in nutritional behavior gained more ground. Student responses indicated a positive change in knowledge regarding the importance of healthy foods and drinking water. The survey also demonstrated the importance of schools in providing sound nutrition to students, with most students reporting that school had been their sole source for fruits or vegetables on the previous day. Providing fresh fruits and vegetables at snack time appears to be a successful strategy to increase consumption of healthy foods. The installation of filtered drinking fountains and peer group promotions also seem to have helped decrease consumption of unhealthy drinks while increasing consumption of water.<sup>20</sup>



# Adverse Childhood Experiences *IKF Strategies and Outcomes*

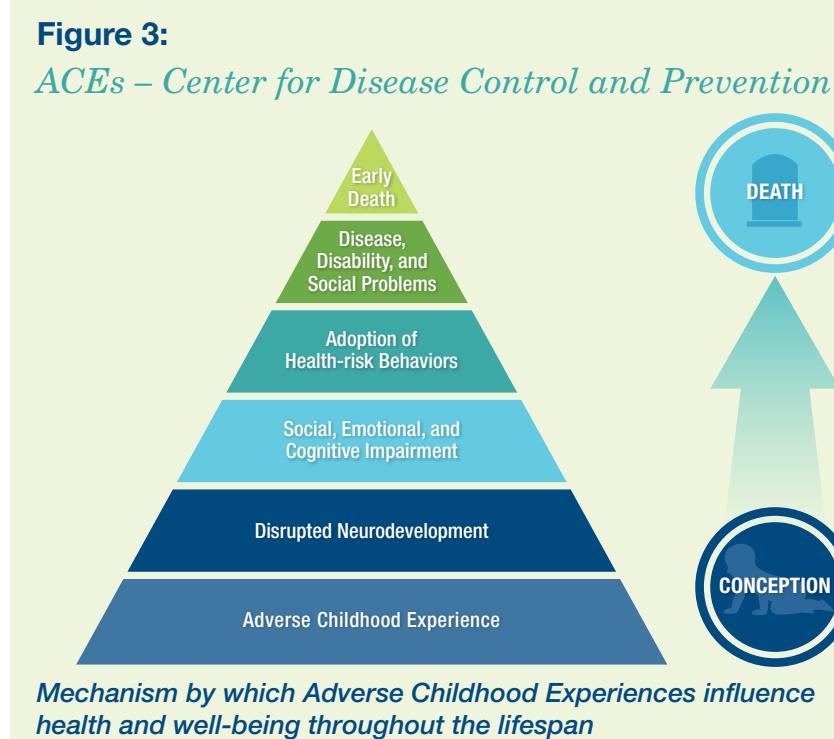
Nearly 20 years of research demonstrates that adverse childhood experiences (ACEs), those experiences that happen to children under 18 and produce toxic stress, directly correlate to negative health outcomes in adulthood. Adverse childhood experiences lead to coronary heart disease, obesity, depression, autoimmune disease, substance abuse disorders, among others, and to an early death, as seen in the Center for Disease Control and Prevention's (CDC) graphic in Figure 3.

The ACE Study<sup>21</sup>, on which this framework was developed, conducted by researchers from Kaiser Permanente and the CDC, demonstrated the clear relationship between experiences of abuse (physical, emotional and sexual), neglect (physical, emotional) and family dysfunction (caregiver substance use, mental illness, incarcerated relative, mother treated violently, divorce) and disease and health risk behavior in adulthood. The more ACEs a child experiences, the greater his or her chances of experiencing poor health outcomes in adulthood.

More than half (59%) of Kentucky residents have experienced at least one ACE. Of those that have experienced at least one ACE, 64% have experienced two or more ACEs. 29% have experienced 4 or more ACEs.<sup>22</sup>

Children today, especially children in poverty who live at much greater risk and have

higher incidences of ACEs due to adverse community experiences, face toxic stressors that can have a life-long impact on their ability to thrive—physically, emotionally, and socially. While it may not be possible to readily eliminate the negative adverse experiences, it is important to help children and youth respond to adversity by building resiliency, which is the ability to recover from stress. The more resiliency that is fostered, the greater the ability to recover.



Trauma does not need to define one's destiny and understanding the impact of ACEs, shifting the perspective from "What is wrong with you?" to "What happened to you?", building protective factors, and helping children with resiliency skill sets, all contribute towards reducing the negative health impact of ACEs. This has been the mission and the work of the seventh Investing in Kentucky's Future grantee working in Louisville Metro, the Bounce Coalition.

## The Bounce Coalition: Building Resilient Children and Families

The Bounce Coalition has brought together critical community organizations to foster resiliency in Jefferson County and in Jefferson County Public Schools (JCPS), the largest district in Kentucky with around 110,000 students.

In 2014 Bounce began implementation of a trauma resilience model in a pilot elementary school - working with administrators, teachers, staff, students and families- and expanded its work to organizations outside the school setting.

The Bounce Coalition designed a three-tier program compatible with the district's multi-tiered support services paradigm for student supports. The primary focus of Bounce was to provide Tier 1 interventions that included professional development, classroom guidance lessons, resiliency building and training for parents. The Bounce program also worked with school personnel to ensure that students needing Tier 2 supports were identified and that resources were in place and provided with services such as coping and social skills groups conducted by the school counselor and/or in-school mental health professional. Bounce also worked with school personnel to ensure that Tier 3 supports were available to identified students and was instrumental in expanding in-school mental health services delivered by the local community mental health provider, a coalition member organization.

Like the other Investing in Kentucky's Future grantees, Bounce formed its plan to work in low-income neighborhoods that typically overrepresent children with higher incidences of ACEs. The first schools where Bounce applied the three tier interventions were Semple (Years 1-3) and Wheatley Elementary (Years 2-3) schools. In the third year of implementation and in coordination with JCPS, Bounce expanded to



three more schools: Engelhard, Blue Lick and Shelby. Additionally, the Bounce curriculum was adapted for out-of-school-time (OST) providers and delivered to nearly 1,000 YMCA of Greater Louisville staff.

The Bounce parent engagement strategies have also been central to the model. The Bounce Coalition merged its Parent Engagement Committee with the School Based Parent Committee to plan and execute activities to engage parents. Some of these activities included: Parent Lunch and Learns, *1-2-3 Magic* (Effective Discipline for Children), Kindergarten Camp, a Back to School Bash, a Spring Fling, Homework Help and *Grandparents Raising Grandchildren*.

The results from these parent engagement strategies couldn't be greater, as parent conferences jumped 195% from 2014 to 2017; parent response rates for the annual school climate survey continued to improve and to outpace the district; and PTA membership grew from zero in 2014 to 213 members in 2017.



*Families at Spring Fling Semple Elementary School*

The coordination between Bounce and the JCPS district has been ongoing and includes coordination to weave together Bounce and the JCPS Trauma-Informed Program and to have Bounce provide the current schools with an intense first year of training with ongoing support from JCPS. Recently, school administration approached Bounce to institutionalize the training in the onboarding of new district staff.

The Foundation's grant also helped Bounce leverage other grants and supports to expand their work outside the school setting. For example, with support from the Kentucky Department of Public Health, two world café gatherings, known as Building Resilience in Our Community's Kids (BRICK) were held in 2016 with some 85 community leaders to discuss ACEs and practical strategies for building resilience across the community, state and region.

## *A Story of Impact*

"The Bounce program gave me the confidence and awareness to address students who are facing or have faced traumatic events in their lives. As a class we read the story "If She Only Knew." It is about a student who faces different events each day making it difficult to focus while at school. Then I gave my first-grade students a paper with a prompt (If Ms. Carter only knew...) and a box for a picture. I told my students only I would see them and to share whatever they wanted with me.

The responses were eye-opening.

"If Ms. Carter only knew.... I get my sister ready in the morning and that's why we are always late."  
"If Ms. Carter only knew... I live with my grandparents because my mom and dad are both in jail."  
And the most heartbreakin one...

"If Ms. Carter only knew.. she is the only one who loves me."

I was able to address these students in the appropriate manner because of the relationships I formed with my students based on the training and support I received this year. This was the most close-knit class I have ever had, and I owe it all to the Bounce Program!"



— Christina Carter, First Grade Teacher

Built upon outcomes from BRICK, the Humana Foundation and the C.E. and S. Foundation collaborated with Bounce to conduct six large-scale screenings and discussions of the documentary film "Resilience: The Biology of Stress & The Science of Hope," seen by more than 1,000 residents.<sup>23</sup>

Bounce has expanded its scope to develop curriculum and train healthcare providers through coordination with Norton Healthcare and Passport Health, two large health care organizations in Kentucky. It is now also getting requests from various counties and other organizations serving children and families, to support them in fostering resiliency-building practices in systems across the community, region and a neighboring state.

## Bounce Outcomes and Policy Changes

Bounce's work has led to significant systems-level change and policies:

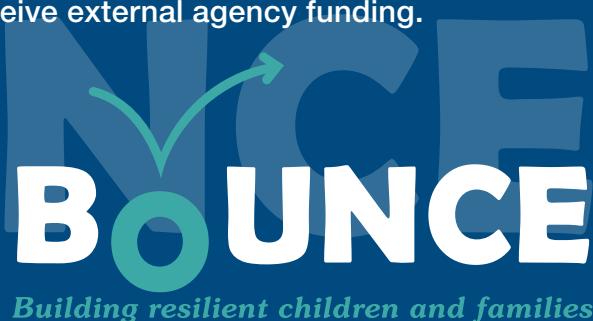


**Bounce World Cafe**

The efficacy of the Bounce interventions has been measured by rigorous evaluation. The Bounce evaluation was developed and conducted by Dr. Beverly Winsch, then employed by the Data Management, Research, and Program Evaluation Department of the Jefferson County Public Schools District. The measures selected included: teacher retention, student attendance, out-of-school suspensions, school climate, parent engagement and staff perceptions of skillset. The pilot public schools selected were in low-income neighborhoods and a control was identified. Using Comprehensive School Survey Data, the comparison was also made to the Jefferson County Public School District (JCPS).

### Policies Changes Related to Adverse Childhood Experiences

- Bounce is now part of required training offered by Building Louisville's Out of School Time Coordinating Services (BLOCS) which annually certifies youth care workers.
- Louisville Metro Government's Office of Youth Development requires Bounce training for organization executives who receive external agency funding.
- In 2018, the Bounce approach was adopted by JCPS for district-wide integration into staff professional development.
- Trauma-informed training became required of all JCPS schools in the 2018-2019 school year.



The evaluation for the original Bounce school concluded in 2017 and the outcomes are promising:

- 86% of staff (teachers, administrators and support staff like bus drivers and cafeteria workers) described their skill in providing effective support to students experiencing traumatic events as “adequate” or “extensive” in the spring of 2017 compared to just 30% in the fall of 2014.



- Student school climate surveys showed gains for 9 of 9 items while the control school failed to show gains for any of the items. For instance, “My school provides a caring and supportive environment for students” moved from 87% in 2014 to 91% agreement in 2017. Other highlights of Bounce outcomes include:
  - Out-of-school suspensions increased at a lower rate than the control school while the overall suspension rate for elementary school increased 94%.
  - Parent conferences jumped 195% from 2014 to 2017. Parent response rates for the annual school climate survey continued to improve and to outpace the district.
  - PTA membership grew from zero in 2014 to 213 members in 2017.
  - Teacher retention improved: 90.2% in 2017 vs. 87.8% in 2014.

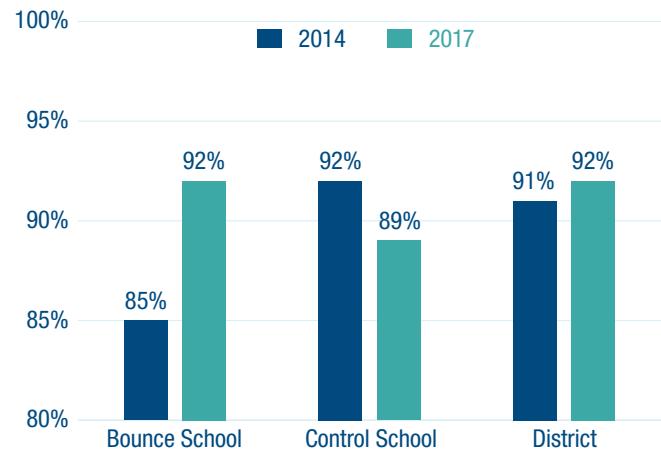
Since Adverse Childhood Experiences is an area of focus within the 2019-2020 Foundation for a Healthy Kentucky Strategic Plan, the Foundation has partnered with the Bounce Coalition to

implement a rural ACEs project in Eastern Kentucky. The Foundation and the Bounce Coalition are coordinating work with the state agencies addressing ACEs, offering the Bounce interventions, curriculum and results as a model to be expanded statewide.

## Gains on Comprehensive School Survey Items

- **BOUNCE** — All nine items showed gains
- **CONTROL** — No items showed gains
- **DISTRICT** — Five items showed gains

### ***I Feel Safe at School***



# Looking Ahead

## *Coalition to Coalition Recommendations*



The Investing in Kentucky's Future initiative has demonstrated the impact of community driven, cross sector approaches. During the development of the initiative, participant coalitions have gained insights into what contributed to their achievements. The following are recommendations made by the coalitions in their final reports to the Foundation and some lessons learned that may benefit other coalitions and cross sector collaborations.

**Adapt and thrive.** Flexibility is seen as a key ingredient to success. Adjustments to program plans are necessary. It is not uncommon that there will be changes within the partner agencies, such as new school superintendents or food services directors, so adjusting to turnover and maybe even modifying plans and strategies to keep partners engaged is something coalitions need to contemplate.

Adapting to where the coalition partners are in terms of engagement is also important. Some new partners may need to gain trust to move towards the larger coalition goals, such as policy changes, but will be comfortable with supporting some programs or strategies. So, meeting the partners where they are at is important. This

makes communication and follow up with new partner agency coalition representatives a priority.

**Find and maintaining a project advocate and “champion” throughout the project.** Each of the coalitions found those health “champions”, the people who are willing to go the extra mile towards things like finding the community segment interested in promoting a message, navigating the policy conversations, bringing together new partners, or leading by modeling. In some coalitions this was the city mayor, in others an assistant superintendent, a nutrition director, a youth group, or the health and wellness committee. For coalitions working on children’s health issues, keeping the school system engaged and making sure they have an internal advocate for the project was also essential to the project’s success.

**Steady and slow wins the race.** When different agencies are at the table their activities and schedules don’t always line up. Learning to accommodate stakeholders and making the space for partners varying time commitments and activities is important. Ensuring they are all heard and participate may take more time but will also lead to achieving the collaborative goals together and “winning the race”.

**Managing through changing priorities of partners.** Schools and districts often have priorities that compete for time. Working with the coalitions requires strategic management (on all sides) to stay on top of other commitments of full-time work. Time constraints and other deadlines were managed for project success.

**Keeping partners accountable.** Partners need to feel accountable for their part of the process, so developing mechanisms for tracking participation, updating plans, roles and expectations and continuous communication is important.

**Broad and multiple representation.** Some coalitions felt it was better to have more than one representative from the key organizations so

that there would be a broader knowledge base and so that if turnover occurred, less time would be spent in catching up.

Creating and sustaining coalitions is not an easy path, but it most certainly is a rewarding one, as the coalitions that participated in the Investing in Kentucky's Future initiative show. To tackle some of the more complex health issues our society faces today, such as childhood obesity prevention or fostering resilience for adverse childhood experiences, it is really the only path towards long-lasting change. Investment and support of coalitions are a best practice model that the Foundation, through its IKF initiative, has proven successful.



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