

Alternative School Breakfast: A sustainable and equitable solution to addressing child hunger



Introduction

In 2018, the United States Department of Agriculture reported 13.9 percent of US households with children were food insecure—an estimated 11.2 million children.¹ Households below 185 percent of the poverty threshold report higher food insecurity,¹ while an international study of more than 40 countries shows a link between family affluence and breakfast consumption, with lower and medium family affluence related to decreased daily breakfast consumption.² Federal school meal programs offer one strategy to address food insecurity. Children who participate in school breakfast not only have reduced risk of food insecurity, but they also have improved behavioral outcomes, such as less depression and hyperactivity; improved mood, alertness and contentment; and a decrease in school absenteeism.³⁻⁵

Although there are many benefits to school breakfast programs, the average U.S. daily participation in school breakfast continues to fall short. During the 2017–2018 school year, when compared to school lunch, for every 100 lunches served to low income children, only 57 school breakfasts were served.⁶

Traditionally, school breakfast has been served in cafeterias. However, alternative school breakfast models (ABM), such as breakfast in the classroom, have been implemented to help increase the number of children served. The implementation of these models has resulted in a positive impact on breakfast participation, school attendance, and improved nutritionally substantive breakfast.⁷⁻¹⁰ Additionally, children have reported fewer reasons for why they did not previously eat school breakfast, including skipping breakfast because they were too busy to eat or not hungry, or that school breakfast takes too much time.¹¹

Background

Founded in 2002 by 16th U.S. Surgeon General Dr. David Satcher, Action for Healthy Kids (AFHK) is a national nonprofit organization that mobilizes family-school partnerships to prepare kids to be healthy in body and mind. AFHK was created to address the childhood obesity epidemic and a national need for

improved school wellness policies and practices that contribute to improved health and educational outcomes for children. Recognizing that today's children face an unprecedented set of challenges to their physical, mental, social, and emotional health and well-being, AFHK collaborates with families, schools and school districts in underserved communities to support three key areas of child health: food access and nutrition education; physical activity and play; and social emotional learning and risk behavior prevention. Through funding opportunities, technical assistance, educational opportunities, and a network of parent leaders, AFHK builds the capacity and resources of these three groups to work together to lead and implement changes that create healthy school environments and communities where children can grow and thrive. AFHK's grassroots network of more than 150,000 volunteers and champions—including school administrators, educators, district and school health and wellness leaders, parents, and community members—has helped AFHK reach more than 20 million children in more than 50,000 schools across the country.

Since 2009, AFHK has implemented its school breakfast intervention programming to school districts and schools (kindergarten through 12th grade) across the US to address food insecurity among children. Annually, districts are invited to submit a grant application through an open request for proposal process to be considered for the school breakfast program intervention, which includes a blend of capital directed through school grants, best practice programmatic resources, and expert technical assistance. AFHK has administered and evaluated this programming in 573 school districts to help 3,627 schools produce an additional 70 million new breakfast meals for hungry students (who were eligible but otherwise not accessing school breakfast prior to the intervention), while producing an Average Daily Participation (ADP) of 50%.

In this report, AFHK examines the sustainability of ABMs and student participation. During the 2019–2020 school year, AFHK conducted a longitudinal study with a cohort of schools that received funding and technical assistance from AFHK between 2015–2018.

The study explored the following research questions among schools defined as successful while funded and supported by AFHK:

1. Were schools able to sustain their ABM and breakfast participation rates?
2. What are the best practices that have facilitated success surrounding ABM sustainability?
3. What barriers do schools face in delivering ABMs?
4. How has the implementation of ABMs impacted other school and child health improvements?

Methods

Population

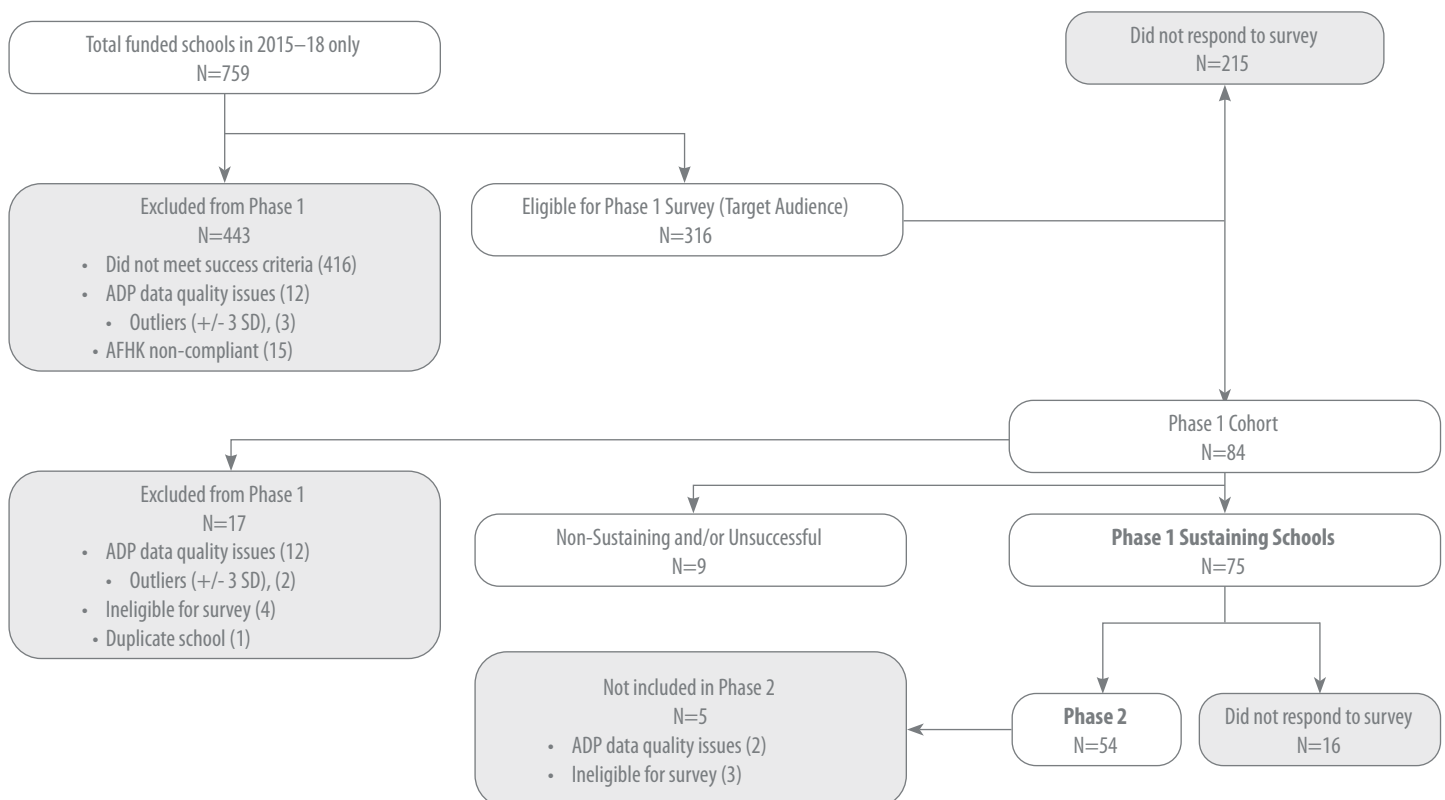
To address these research questions, AFHK conducted a study with primary grant contacts representing schools that received grant awards to support ABMs. Typically, district-level school nutrition directors and school-level cafeteria managers served as the primary contact for AFHK on school grant implementation. The inclusion criteria to establish the sample size was defined as schools that were funded by the Walmart Foundation during 2015–2018. Schools deemed successful while funded were invited to participate in the study. Success was defined as a school having increased its ADP from baseline to end of funding by at least 33 percentage points (one-third) and/or achieving 85 percent ADP at the end of funding. The 85 percent threshold identifies schools in an ideal participation range and the

33-percentage point increase identifies schools with a substantial increase during implementation. These criteria provided a sufficient sample size for the study.

AFHK conducted this study in two phases with the same cohort of schools. Phase 1 was conducted as a first examination of sustainability of breakfast programs. There were 316 schools identified for the study, and among the sample, 101 school representatives responded. The final sample size for the Phase 1 survey included 84 schools, of which 75 met the criteria for sustainability and 9 were considered non-sustaining and/or unsuccessful. Among the 75 Phase 1 sustained schools, 59 responded to the Phase 2 survey, producing a sample size of 54 schools. At each phase, exclusion criteria were applied. Outliers were defined as being three standard deviations above or below the mean ADP (+/- 3 SD). Reference **Figure 1** below for the complete sampling framework, exclusion criteria, and number of responses.

To assess responder bias in the study, the characteristics of the schools that responded to the survey were compared to non-respondents. There was no difference in survey responsiveness by school characteristics or student demographics, such as free and reduced-price meals (FRM), enrollment size, or type of ABM. However, schools that were AFHK grantees for two or more years were more likely to respond to the survey compared to those funded for one year (41% vs. 19%). Respondents were not different enough from the rest of the target population to warrant weighting the data.

Figure 1: Study Design Framework



Data Sources and Instruments

A variety of data sources and instruments were used to collect quantitative and qualitative data from schools. Trained AFHK evaluation staff developed, administered, and monitored all data collection practices. All quantitative data is stored in AFHK Salesforce or Salesforce connected applications.

National Center for Education Statistics (NCES). Through the Market Data Retrieval platform (MDR), NCES provides data on school characteristics and student demographics. Most of this information comes from the 2017–2018 NCES (e.g. grade levels, FRM rate, enrollment size).

Grant Applications and Final Reports. Schools submit grant applications each year to AFHK through an online portal between February and April. Grant applications are reviewed by AFHK national staff and awarded based on FRM eligibility or Community Eligibility Provision, ADP, and capacity to implement, which can include administrative support and school building logistics. In their application, schools are required to select an ABM to implement and report the previous October's ADP as their baseline. Final reports are required at the end of each school year. In 2015–2016 school year, schools reported their end-of-funding ADP via their final report.

Monthly ADP Reports. Starting in 2016–2017, AFHK grantees were required to submit monthly ADP reports in order to track their breakfast participation. These reports included the following: average attendance, number of breakfasts served, and days of breakfast service.

Phase 1 Survey. Primary grant contacts in the target audience group were emailed the Phase 1 survey in June 2019. Targeted schools were emailed the Phase 1 survey up to three times through September 2019. Incentives were offered to increase response rates. The survey was designed to capture whether schools continued their ABM. It asked about April 2019 breakfast ADP, the facilitators and barriers to success, and the impacts of the program on the school community.

Phase 2 Survey. Phase 1 respondents were invited to a Phase 2 survey in February 2020. Targeted schools were emailed surveys up to three times through April 2020 and were provided an incentive for their participation. This survey served two purposes: 1) to ask additional questions about the sustainability of their ABM including January 2020 ADP and 2) to conduct a needs assessment in order to gather information that would inform AFHK's expanded food access and nutrition education programming, which includes school meal participation as a key component.

Follow-up Interviews. Due to the large number of schools within their districts participating in the study, two district-level school nutrition directors based in Austin, Texas and Greeley, Colorado responded to the Phase 2 survey and were selected to participate in follow-up interviews in June 2020. These interviews were designed to gain a deeper understanding of the facilitators and barriers of sustaining ABMs and stakeholder engagement in the program. Quotes from these follow up interviews are inserted throughout this report.

Measures

In this study, the key outcome measure is ADP. Average daily participation is the average number of student reimbursable

meals served in a school nutrition program on a daily basis. Schools submitted the number of breakfasts served, total days of service, and average attendance for a given month, and AFHK calculated the monthly school breakfast ADP. For the purposes of this report, ADP was examined at four points in time: application (baseline), end of funding (end-of-funding report), Phase 1 (April 2019), and Phase 2 (January 2020). The types of ABM implemented included breakfast in the classroom (breakfast is delivered to the classroom and students eat at their desks), grab-and-go breakfast (breakfast is offered to students from serving carts or kiosks located in easily accessible locations in the school), and second chance breakfast (breakfast is offered to students during a break in the morning, often between first and second period or midway between breakfast and lunch).

Due to small sample sizes across school characteristic and student demographic data, some categories were collapsed. Middle and high schools were combined to form a non-elementary group. Schools funded for more than one year were combined to form a multi-year funded category. Due to the wide range in responses for continuous variables, data was grouped into categorical variables. The percent of AFHK schools with students eligible for FRM ranged from 34 percent to 100 percent (median = 80.2 percent). AFHK considers those with at least 74.5 percent of students eligible for FRM to be underserved. School enrollment varied from 161 students to 2,680 (median = 492) and was collapsed into small, medium, and large enrollment. The percent of the student population that were non-white at a school varied from 1 percent to 100 percent (median = 73 percent). Schools with non-white students representing more than 50 percent of their student population were considered a majority non-white school.

Data Analysis

Descriptive analyses were conducted with Phase 1 data in order to understand the study population. Phase 1 ADP was compared to end-of-funding ADP using a t-test to assess sustainability. To assess potential predictors of Phase 1 ADP, t-tests, ANOVAs, and regressions were conducted comparing ADP by school characteristics. A repeated measures ANOVA test was conducted with baseline, end-of-funding, Phase 1, and Phase 2 ADP to assess longer term sustainability in a select subgroup of the study. All analyses were conducted using IBM SPSS 24.0.

Results

The Phase 1 study found the majority of schools sustained their ABM (90.5 percent). Breakfast in the classroom was the most commonly cited model (61.9 percent). See **Figure 2**.

Figure 2: Types of Alternative School Breakfast Models Implemented—Phase 1

	# of schools	%
Breakfast in the Classroom	52	61.9
Grab-and-Go	21	25.0
Second Chance	4	4.8
We no longer offer an alternative model of breakfast	7	8.3
Total	84	100.0

The main study sample in this report excludes nine schools from Phase 1: seven that no longer have a program and two that reported their program was unsuccessful. The remaining Phase 1 results include 75 schools from 28 districts in 17 states. The number of schools per district ranged from one to 16 (median = 2). **Figure 3** and **Figure 4** show characteristics of the 75 Phase 1 schools. See **Figure 12** in the appendix for full list of school districts, states, and number of schools per district.

Figure 3: States with Phase 1 School Districts that Implemented Alternative School Breakfast Models

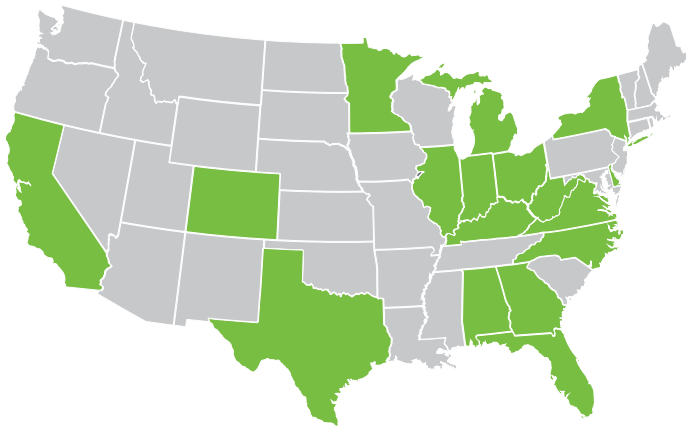


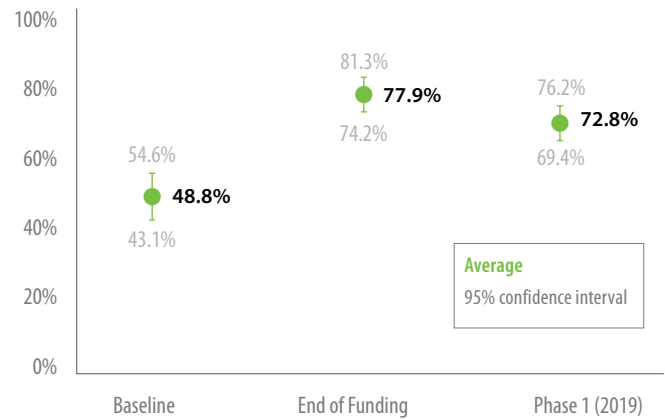
Figure 4: Phase 1 School Characteristics and Student Demographics (n=75)

# of Schools		%	# of Schools		%
School Type			Population Density		
Elementary	56	74.7	Urban	36	48.0
Middle school	9	12.0	Suburban	15	20.0
High school	8	10.7	Rural	23	30.7
Missing	2	2.7	Missing	1	1.3
Years Funded			Enrollment Size		
One	35	46.7	Small (161 to 400)	25	33.3
Two	30	40.0	Medium (401 to 496)	25	33.3
Three	10	13.3	Large (497 to 2,680)	25	33.3
Underserved Schools			Majority Non-White		
Yes	31	41.3	Yes	49	65.3
No	43	57.3	No	25	33.3
Missing	1	1.3	Missing	1	1.3

Phase 1 Assessment

We examined the ADP from three time periods: baseline (pre-intervention), end of funding, and Phase 1 (April 2019). Overall, we found that schools considered successful while funded by AFHK were able to continue to implement ABMs as well as maintain their ADP. Phase 1 schools saw a large increase in ADP from baseline (48.8%) to end-of-funding (77.9%). Although these schools saw approximately a 5% decrease in ADP from end of reporting to Phase 1 (72.8%), Phase 1 was substantially higher than baseline. See **Figure 5**.

Figure 5: Average Daily Breakfast Participation for Phase 1 Schools at Three Time Points (n=75)



Two districts in the study contained 26 schools (Austin Independent and Weld Colorado-Greeley) that accounted for 35 percent of the study population. To assess the impact of these two districts on the results, we compared the 26 schools from the two districts to the others. At a school level, we found that the end-of-funding ADP was higher for the 26 schools than the other schools (mean: 84 percent vs. 74 percent), and that they decreased their ADP at Phase 1 at a higher rate than the other schools (8 percent vs 3 percent). Had fewer schools from those two districts been included in the study, our main finding of a 5 percent decline from end-of-funding reporting to Phase 1 may have been smaller.

To assess possible predictors of sustainability, bivariate analyses were conducted to test the relationship between school characteristics and student demographics with Phase 1 ADP. When looking at school type, we found that elementary schools had a significantly different ADP than non-elementary schools. Elementary schools had a higher Phase 1 ADP compared to middle and high schools. As seen in **Figure 6**, no other school characteristic (e.g., enrollment size, geographic area) was associated with Phase 1 ADP. This indicates that schools with a variety of characteristics are able to sustain a high ADP after funding has ended.

Figure 6: Potential Predictors of a Higher Phase 1 Average Daily Breakfast Participation (n=75)

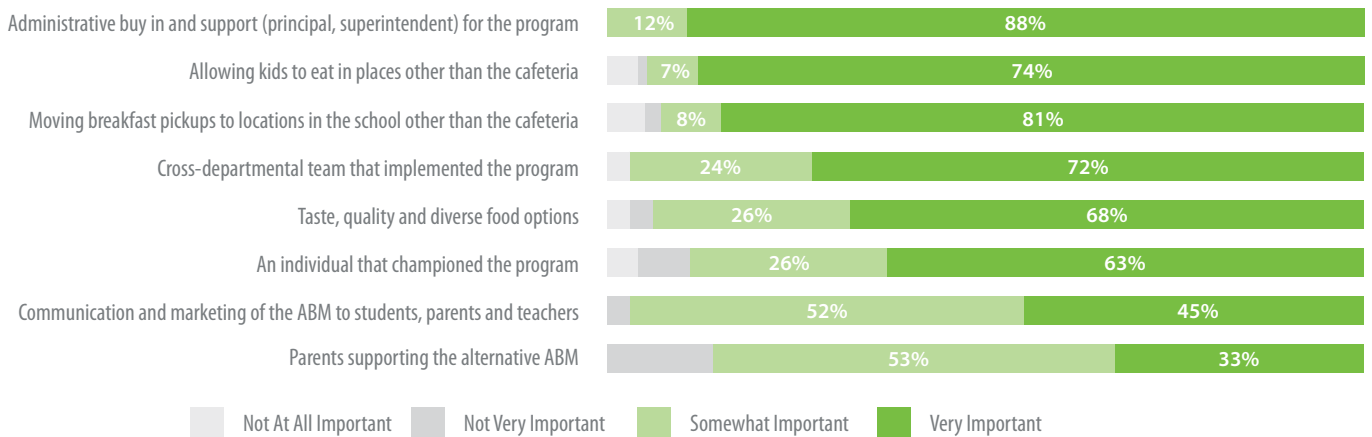
School Type (Elementary and Non-Elementary)	Elementary Higher ADP
Enrollment Size (Small, Medium, and Large)	No difference in ADP
Population Density (Urban, Suburban, and Rural)	No difference in ADP
Breakfast Model (Breakfast in the Classroom and Grab-and-Go)*	No difference in ADP
Years Funded (One Year vs. Multiple Years)**	No difference in ADP
Underserved Schools	No difference in ADP
Majority Non-White	No difference in ADP

*Second chance breakfast accounted for less than five percent of the study population so it was not included in the breakfast model analysis.

**Includes schools with first year of funding in 2015–2016 or 2016–2017. Schools funded for the first time in 2017–2018 did not have an opportunity to be funded for more than one year and were excluded from this comparison.

Phase 1 schools were asked how important certain factors were in the success and sustainability of their ABM. All reported that administrative buy in and support were either somewhat or very important (100 percent). Offering students flexibility by moving breakfast pickups and allowing students to eat in places other than the cafeteria also were cited as very important (74 percent and 81 percent respectively). Having cross-departmental teams and individuals championing the program also were noted as either somewhat or very important to sustaining models (96 percent and 89 percent respectively).

Figure 7: Self-Reported Importance of Factors in Alternative School Breakfast Models' Success and Sustainability (n=75)

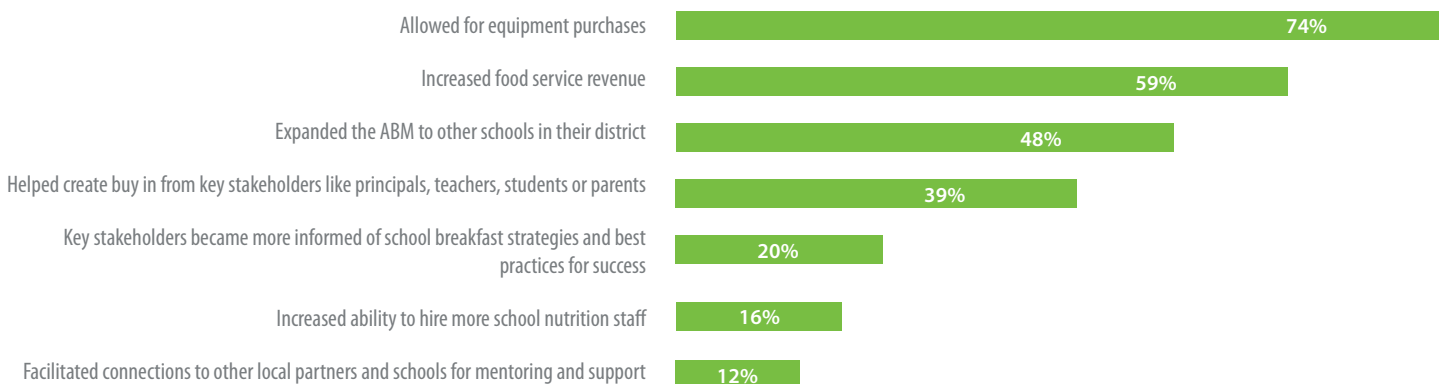


*Schools responding "I don't know/not sure" are excluded from the denominator. More than 10 percent of schools reported "I don't know/not sure" for each factor.

Some communities of parents were really excited, and others were worried about not having traditional school breakfast in the cafeteria and what that change would mean...so we spent time with parents talking through what the menu could look like and made them feel good about the program.

Phase 1 schools were asked to report the impact of direct financial support, technical assistance, and resources from AFHK on their school nutrition services. Three out of four schools reported that the support allowed for equipment purchases and about 60 percent said it helped to increase food service revenue. Consistent with the interviews conducted, the support from AFHK permitted districts to expand ABM into other schools within their district—often creating buy in from key stakeholders, such as administrators and teachers along the way.

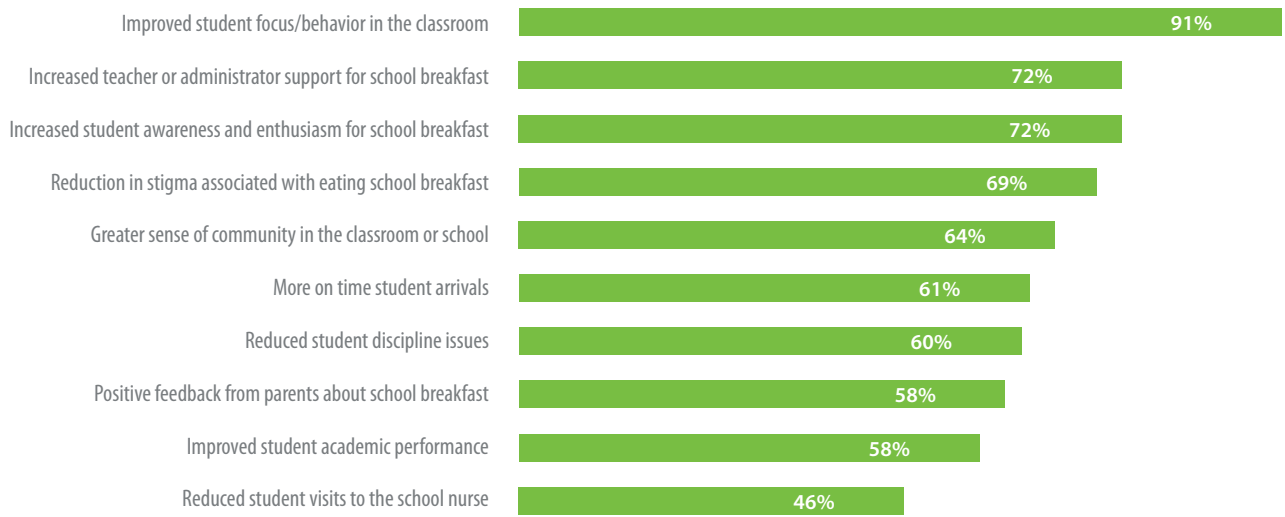
Figure 8: Self-Reported Impacts of AFHK Support on Alternative School Breakfast Models Success and Sustainability (n=75)



Just finding two or three schools who were open to being champions for the program...share how it worked for them...can ignite the fire and then allow for a larger [district] implementation. After each [school] roll out, they customized their plans, and we incorporated their learnings for the next school.

When asked about larger school community impacts, schools most frequently reported improved student focus and behavior in the classroom (91 percent). Additionally, as a result of implementing an ABM, Phase 1 schools reported increased awareness, enthusiasm, and support for school breakfast throughout the school.

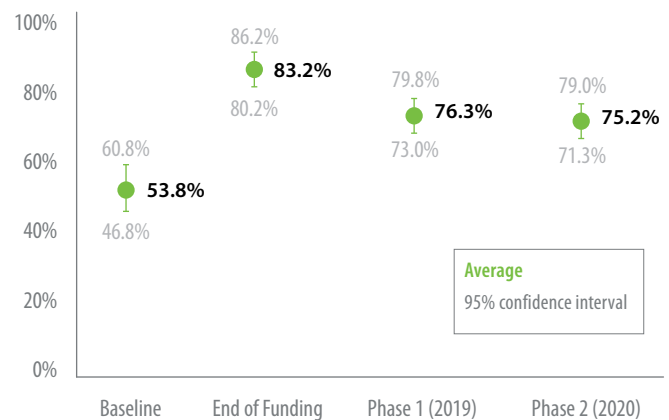
Figure 9: Self-Reported Impacts of Alternative School Breakfast Models on the School Community (n=75)



Phase 2 Assessment

The 54 Phase 2 respondents represent a convenience sample of the Phase 1 cohort. ADP was examined across four time periods: baseline (pre-intervention), end-of-funding, Phase 1 (April 2019), and Phase 2 (January 2020). We found that schools able to achieve ADP success while funded by AFHK were able to continue sustaining their efforts years later. Similar to Phase 1 findings, the Phase 2 schools saw a large increase in ADP from baseline (53.8%) to end of funding (83.2%) and then a small decline to Phase 1 (76.3%). The Phase 2 time period (75.2%) was similar to Phase 1 demonstrating sustainability one year later. Overall, both Phase 1 and Phase 2 were still a substantial increase from baseline.

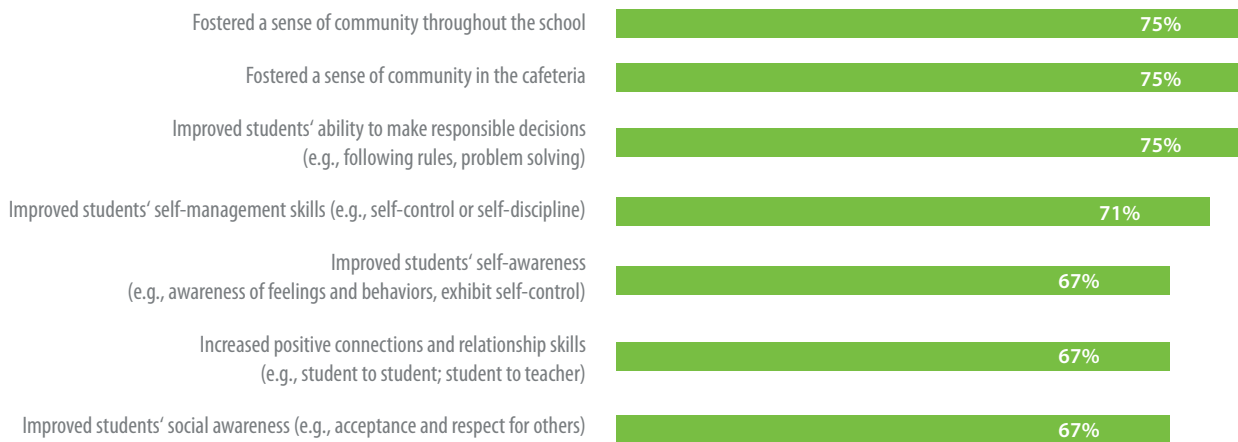
Figure 10: Average Daily Breakfast Participation for Phase 2 Schools at Four Time Points (n=54)



We communicated with the principals and custodians about utilizing breakfast in the classroom as a practical life skill opportunity for kids. [We ordered] child size brooms, mops and other cleaning supplies so that the kids could clean up as well so not everything would fall on the custodians. I think that there's even equity education that goes on.

Phase 2 schools were asked about how the alternative school breakfast program has impacted the school climate and students' social emotional learning competencies. Three out of four schools reported a fostered sense of community, whether in the cafeteria or school wide, as well as improvement in students' ability to make responsible decisions. The majority of schools reported that students improved their social-emotional skills, such as self-management (71%), self-awareness (67%), positive connections (67%), and social awareness (67%)

Figure 11: Self-Reported Impacts of Alternative School Breakfast Models on School Climate and Student Social-Emotional Skills (n=54)



Discussion

AFHK's ABM programming is a promising, equitable intervention to sustain longer-term school breakfast participation in school districts across the United States. This program also addresses food insecurity by ensuring children who qualify for FRM have access to nutrition in the morning. In this study, AFHK found that regardless of student demographics, years of funding, or geographic location, schools were able to maintain their ADP years post-funding. AFHK also found that the impacts of school breakfast extend beyond increasing access to healthy meals, including improved student focus and behavior in the classroom and fostering a sense of community throughout the school and cafeteria, suggesting that an ABM is an effective approach to development of social-emotional learning outcomes among students.

ADP Sustainability

Overall, schools that participated in this study were able to successfully sustain their ABM and ADP, ranging from one to three years beyond the AFHK grantee cycle. Although there was a slight decrease in ADP from end of funding to Phase 1, AFHK defines sustained participation as maintaining ADP within five to 10 percent of where schools reported ADP at the end of the grant cycle. We include this range in our definition to acknowledge that district and student demographics may change (e.g. redistricting or families moving in and out of communities), and that new programming often experiences a plateau after it becomes a normal part of the school day. In an interview with Austin Independent School District, the following quote illustrates this experience: "In the beginning, there's a lot of excitement—everybody's participating and they go through the menu cycles a couple times. It becomes a regular routine for the class. I think we have a little bit of plateauing there. Even in the beginning, we'll have kids participate just

because everybody is doing it." Additionally, assessing breakfast participation at two points in time post-funding—Phase 1 and Phase 2—also revealed that once a high ADP is achieved, schools are able to maintain that level years later even in the absence of continued financial support or technical assistance from AFHK.

The only school characteristic that predicted higher Phase 1 ADP was related to school type, with higher Phase 1 ADP among elementary schools compared to middle and high schools. Research has shown that elementary school students are three times more likely to participate in school breakfast programs than middle and high school students.¹² Elementary school students are at an impressionable age in their development. They are accustomed to observing direction from staff and easily influenced by the cues from teachers and peers.¹³ For example, if a staff member is encouraging the participation in breakfast and healthy habits, young students are more likely to follow suit. If staff are participating and modeling the behavior when breakfast is served, students are likely to notice and become influenced to mirror the behavior. Literature supports these examples and suggests young children are also more likely to participate and try new things, as they are eager to learn and are in the prime of their cognitive development.¹⁴ School breakfast provides the opportunity for students to try new foods, engage in new learnings and discussions (i.e., conversations around the importance of breakfast, feedback on school meals, nutrition education lessons), participate in a new approach to breakfast delivery, and take on new roles and responsibilities in the classroom (i.e., food distribution and clean-up). Middle and high school age students are often presented with different

challenges as it relates to school breakfast participation. Older students tend to have busier schedules in the morning and the opportunity to tailor their morning routine, both of which can be barriers to breakfast participation.¹⁵ Barriers such as stigma and convenience are also common among middle and high school students.

While several interventions have examined the positive impact of providing school breakfast programs to students, there is limited evidence on the sustainability of such programs, and, to AFHK's knowledge, there are no studies that specifically demonstrate the sustainability of ADP rates after intervention support ends. One study by Pew Charitable Trusts assessed strategies to maintain or increase student participation. It found that 86 percent of school nutrition directors employed best practice strategies such as training staff to encourage students to try unfamiliar foods; providing nutrition education on the importance of eating a healthy meal; and conducting surveys to gauge the level of interest that students, parents and the community have in meal programs.¹⁹ Another study found that school breakfast policy development, whether state agency or district, is an important tool for achieving sustainable change.²⁰ However, the AFHK Phase 2 survey found that only nine percent of schools had an alternative school breakfast policy included in their district wellness policy. This gap presents an opportunity to work with districts to integrate school breakfast programs into their district wellness policy language to ensure sustainability beyond one to three years post grant implementation.

Student and School Community Impacts

This study demonstrates, and reinforces findings in other research studies, that the implementation of ABMs does more than increase access to school meals, but it also can improve student focus and behavior in the classroom. Students who participate in school breakfast show improved behavior, attendance, and academic performance.⁴ School meals have positive effects on classroom behavior, such as paying attention in class and completing tasks,¹⁶ and participation in the ABM also facilitates responsible decision making and self-management. Schools may delegate responsibilities during breakfast service, such as food distribution and clean-up. Students take an active role and it provides them with an opportunity to make decisions and be an integral part of the breakfast program.

ABMs also foster a sense of community among students and staff. Relationship skills are organically introduced through interactions between students and staff when participating in the breakfast program.¹⁷ Teachers and school nutrition professionals can form nurturing relationships with students by engaging in conversations and role modeling eating breakfast. With the implementation of ABMs, students are given the option to eat breakfast outside of the traditional setting and congregate with peers, promoting relationships and building connectedness.² These findings suggest that ABMs provide an opportunity for students to develop their social-emotional skills outside of the classroom.

Breakfast in the classroom really helped integrate the food service department into the school and has helped us forge relationships with our teachers and principals. We have a better overall culture when it comes to food in the schools. We know more kids are starting the day with breakfast, which is so important.

Facilitators of Sustainability

This study illustrates two key facilitators of sustainability: 1) administrator buy-in and support and 2) flexibility for students. Schools with administrative support show quick program start-up and ease in implementation.¹⁸ When school leadership is on board with an ABM, they serve as a champion for the effort and are able to model this value for others within the school and district. Instituting flexibility for students by allowing them to eat breakfast outside of the cafeteria is critical to address barriers to student participation.⁸ By shifting the delivery system and providing a new approach to breakfast participation, the culture associated with school breakfast is altered for a more positive perspective. When the school's culture supports school breakfast through program promotion and innovative delivery models, it eliminates the stigma and creates an atmosphere that is inviting and conducive to participating.¹⁷

Barriers to Sustainability

Among the nine schools that reported they no longer offer an ABM and/or the program was deemed unsuccessful, the most commonly cited reasons for discontinuing their program included: a lack of commitment from administrative leaders (i.e. principals/superintendents); a lack of student interest in school breakfast; and logistics such as bus and classroom schedules. These barriers are not unique to this study. According to one study, 33.6 percent of school administrators surveyed reported bus schedules as a key barrier and 20.4 percent reported school schedules as a challenge.²¹ Additionally, a lack of support from administrators may occur due to scheduling, staff, or cost issues. However, getting administrative support early in the planning stages is crucial for program success. Solutions for garnering support from administrators may include sharing information about successful ABMs or demonstrating creativity and flexibility in addressing scheduling issues. One interviewed district reported administrative support as being a key challenge. There was reluctance by administrators to make changes to breakfast programming even with data to support the need. To move these schools forward and secure buy-in, they adjusted the program model to fit their needs. The AFHK grant was used as leverage to encourage principals to participate. To address challenges related to a lack of student interest in school breakfast, strategies such as changing menu items or conducting taste promotions to seek student feedback on breakfast options may improve participation in school breakfast.^{11, 22}

The schools that no longer offered ABMs reported infrastructure limitations, such as space and reliable internet connection. Infrastructure limitations, particularly in rural communities, is a commonly cited barrier to implementing an ABM.²³ Rural schools face unique challenges, but the implementation of an ABM can increase participation among students who were considered at-risk for not eating breakfast, and among groups of students that were eligible for FRM.²⁴ Additionally, internet is necessary for some point of sale (PoS) systems, and this could inhibit rural schools from moving breakfast service from the cafeteria to a mobile location. However, identifying a PoS system that functions without WiFi, using breakfast carts to resolve space issues, or seeking federal or state funding to support larger infrastructure barriers are solutions to address these challenges.²³

Study Limitations

This study has several limitations. Schools were selected to participate through a convenience sample of past grantees using an AFHK-developed definition of success. This study design dictates that our findings are only generalizable to schools that achieved significant participation growth and/or had high participation rates at the end of funding. In addition, schools that responded to our surveys may have different sustainability patterns than schools that did not respond. Most of the survey questions focused on factors of success (e.g. facilitators and impacts on school community). A deeper understanding of the barriers faced and how to overcome them were not studied. There were two interviews conducted and they were with the districts with the most schools participating in the study. It is possible their experiences are different than districts with only one or two schools in the study. In addition, neither of the interviewed districts were from rural areas.

In order to design the sustainability study, we had to exclude schools who continued or started funding in the 2018–2019 school year. This truncation ensured each school in the study had at least one year since funding ended in order to be assessed for sustainability. An implication is that schools funded for the first time in 2017–2018 could only be eligible for our study if they did not get re-funded in 2018–2019. Re-funding is based on program success, so our study includes some schools that aren't representative of all funded schools. A more complete picture of school sustainability would include schools from 2018–2019 and 2019–2020 grant years, conducted at least one year after their grants ended. Finally, the time period from funding to study was relatively short to measure sustainability. Future studies should assess the long term impact of the program on all schools in order to capture the full picture regardless of a school's success while funded.

The program has instilled a lot of pride in our staff because we've gotten so much recognition for what we're doing. In the beginning, they were very scared about the change of work and perception of more work. And in the end, they were really proud of the work they're doing. They know that they're feeding more kids.

Next Steps

This study demonstrates the critical role that support from school administrators has in the success of school breakfast programs. AFHK recommends that school breakfast and child anti-hunger advocates increase education and awareness building among school administrators around the impact of ABMs on hunger, social-emotional health and academic success. Additionally, because this study demonstrates an opportunity to improve social-emotional learning competencies through ABMs, AFHK recommends that ABMs are marketed as a sustainable approach to not only improve access to school meals, but to also strengthen an approach to social-emotional learning.

Beginning in the 2020–2021 school year, AFHK is expanding its school meal programming to increase access to all federal school meal programs. In addition, the expanded program aims to integrate nutrition education with promotion and increase parent engagement in school nutrition and healthy eating. Nutrition promotion can take place across the school, formally and informally, inside and outside of the classroom, for example, in the cafeteria, in the hallway and at school events. It's a great way to complement structured nutrition education occurring in the classroom. The expansion will support schools in implementing a comprehensive school nutrition model that addresses the demand for and supply of healthy foods in schools. AFHK is integrating the lessons learned and best practices from this study into its enhanced programming. Through this new programming, AFHK strives to ensure that every child not only has access to healthy food, but also has the knowledge and skills to select healthy foods throughout their lifetime.

Acknowledgment

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Appendix

Figure 12: Phase 1 U.S. School Districts With Number of Schools

States	School Districts	# of Schools
AL	Sylacauga City	1
CA	Oakland Unified	4
CO	Boulder Valley	4
CO	Lake County	1
CO	Weld County Gilcrest	1
CO	Weld County Greeley	10
DE	Brandywine	3
FL	Pasco County	6
GA	Cherokee County	1
GA	Fulton County	2
IL	Beach Park	1
IL	Chicago Heights	1
IN	Fayette County	2
KY	Bourbon County	1
MI	Coloma Community	2
MN	Little Falls Independent	2
NC	Guilford County	1
NC	North Carolina Department of Education	1
NC	Wilson County	2
NY	Lyons Central	1
OH	Kenton City	1
TX	Austin Independent	16
TX	DeSoto Independent	1
TX	Moody Independent	1
VA	Augusta County	3
VA	Bristol Virginia	3
VA	Greensville County	1
WV	Doddridge County	2

Figure 13: Number of Phase 1 Funded Schools By Year

Funding Year	# of Schools
2015–2016	26
2016–2017	53
2017–2018	46