



**Children's
Health Fund**

Lessons Learned from a Decade of Childhood Obesity Prevention Programming

About Children's Health Fund

Children's Health Fund is committed to ensuring high-quality healthcare for children living in this country's most marginalized communities. We understand the role that racism and systems of oppression play in shaping health and are committed to addressing the root causes that perpetuate inequities. The programs we support bring comprehensive primary care directly to children and families where they live, learn, and play; we partner with communities to create a supportive environment to decrease the impact of trauma on children; and we work to improve the quality of life for families through policy and advocacy efforts that drive systems change. Collectively, these efforts help to advance health equity. We support 25 programs that comprise a National Network of local partners located in 15 states, Puerto Rico, and Washington, D.C.

Authors:

Chantal Hoff, MPH | Annisa Harsha, MSPH | Chloé Smith, MPH

Contributors:

Research assistance:

Wenimo Okoya, EdD

Editorial assistance:

Luke Gerber, MA | Kelly Rigney, MPH | Susan Spalding, MD | Kamillah Wood, MD MPH

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Introduction

Based on the most recent National Survey of Children's Health¹, the obesity rate for youth ages 10 to 17 is about 15.3%. However, that number masks significant health disparities—22.2% of black and 19% of Hispanic children are obese compared to only 11.8% of white youth. Since children of color suffer disproportionately from poor nutrition and obesity, several CHF partner programs incorporate a unique spectrum of obesity prevention and control services—from intensive clinical intervention for the most at-risk patients to school- or community-based nutrition education and activities targeting a broader range of children and families. These programs primarily serve black (25%) and Hispanic (48%) patients, with the exception of the West Virginia program which serves a primarily white community, where many families live in extreme poverty and struggle with addiction. The communities served by each program vary considerably: families living in shelters in New York City and Dallas; communities located near the Mexican border in Southern Arizona; isolated rural communities in West Virginia and Tennessee; and urban settings in Baton Rouge, Dallas, and New York City. Across these communities, children and their families face similar challenges in making healthy nutritional and lifestyle choices, including a lack of knowledge about nutrition, transportation and insurance issues, and limitations imposed by social and physical environments that do not support healthy eating and physical activity. As a result, 44% of the children, ages 2-19 years, seen by these programs are overweight or obese.

Through support from the Walmart Foundation, CHF supported seven community pediatric partner programs from the National Network in implementation of their healthy weight management and nutrition education programming. The grant included a diverse array of programs in both rural and urban areas, and in different settings such as fixed-site and mobile medical clinics, schools, shelters, and community sites. The funded CHF programs were located in Baton Rouge, LA; Cochise County, AZ; Dallas, TX; Huntington, WV; Los Angeles, CA; New York City, NY; and rural West TN². These programs aim to prevent obesity by providing health education in both clinical and community settings, and by advocating for policies to improve nutrition knowledge and food environments in the larger community. All the programs share a commitment to serving resource-limited communities, where high levels of poverty and inadequate access to healthcare persist as barriers to sustaining a healthy weight and an active lifestyle.

To address obesity, the programs provide standard BMI (body mass index) screening, nutritional counseling, and physical activity counseling for pediatric patients during routine well child visits. Children identified as overweight or obese received additional one-on-one nutrition or health education counseling, with family members being encouraged to participate when possible. The Southern AZ program routinely provides integrated behavioral health visits for patients identified as obese, while other programs offer behavioral health intervention on a more limited scale. To promote healthy behaviors, the programs offer a health education curriculum, either one the program developed, or an existing one such as 5210+10 or 85210³. Programs deliver these curricula either as one-on-one counseling or as group health education classes. Some programs deliver curricula through innovative group sessions to both children and caregivers in schools, Head Start centers, shelters, clinics, and summer camps- such as the Dallas program's Camp CHAMPS (Choosing Healthy Activities, Meals and Positive Self-esteem), Los Angeles's school gardening classes, or New York's cooking classes and

Diabetes Prevention Program Junior. Some programs organize community health events to reach more families in the community, and others, like the West Tennessee program, refer patients to school-based providers for intensive nutrition counseling.

In the final year of this initiative, CHF sought to understand the lessons learned from the programs' obesity prevention initiatives and to disseminate those learnings and best practices to not only our National Network partners, but also to the broader field. To that end, we conducted 12 interviews with physicians, health educators, nurses, and program administrators at all seven funded National Network programs between April and June 2019. This report summarizes the challenges and successes of the initiative including recommendations for providers, families, and grant-making organizations on best practices for implementing healthy weight management and nutrition education programming in resource-limited communities.



Lessons Learned

Engage the whole family to impact childhood obesity

Programs understood that engaging the whole family, especially the caregiver, is vital for children to successfully adopt healthy behaviors. A pediatrician in the West Virginia program described the importance of family engagement, explaining that in many homes, ***“kids don’t really have a choice of what they eat. I try to educate parents so that they can make better choices when they are purchasing the food and cooking it. I try to talk to the kids about exercise and to the parents about going for a walk as a family.”*** Given that, in most families, caregivers set the expectations for children’s health behaviors, providers aimed to engage the whole family in the programming.

Despite their efforts to work with multiple members of a family, providers found that parents and guardians were often difficult to engage. Several programs shared that they had limited success encouraging caregivers to attend health education sessions and events, despite their expressed interest or concern for their child’s health. Often, programs found that parents were unable to attend health education sessions with children or meet with providers due to work schedules and the costs/availability of transportation. One clinician explained that families in resource-limited communities are living with many stressors, making prevention of future health problems caused by obesity a low priority in their “hierarchy of needs.”

Programs used creative approaches to overcome their engagement challenges. Several programs realized that they needed to maximize the time they had with families so patients and caregivers were encouraged to meet with a dietitian or health educator at the time of a sick or well child visit. Another creative solution that allowed providers to engage caregivers with challenging schedules was staying after group education sessions to meet caregivers as they were picking up their children. Other programs found that engaging caregivers in informal ways, through group discussions, physical activities, or cooking classes was effective.

One program described this sort of non-traditional effort where they invited families to a variety of fitness and cooking classes:

“So we came up with an idea of let’s do a fitness concert of instructors that would teach classes in a concert fashion. And we found a lot of parents would come out and they would bring their children and they work out together and they get educated together when they go to the different tables based on our initiative, and so that was a good way to get them on board with their children and get them both on the same page... And the Mayor’s office, they adopted it. Once they saw it, they adopted it, and they saw that it was effective in getting parents and children together working out and being educated together...” (Baton Rouge, Health Educator)

Challenges



- While caregiver engagement is important for success, families can be difficult to engage in programming.
- Time and financial constraints, as well as transportation issues, make it difficult for families to participate in healthy lifestyle programs.

Successful Strategies



- Offering obesity prevention services, such as an appointment with a dietitian, health educator or behavioral health counselor, at the time of a well child or sick visit can be efficient and effective.
- Using creative strategies in informal settings, such as group discussions, cooking classes or community events, can engage parents.



Create multidisciplinary teams

Several programs adopted a holistic approach to healthy weight management and nutrition education programming. This approach was successful in sustaining family engagement and encouraged programs to consider the many factors affecting children's mental and physical health in addition to obesity. For example, children who are overweight or obese may be bullied because of their weight or may experience a worsening of other health conditions (e.g. asthma). Addressing these factors adequately meant that programs had to adopt integrated, multidisciplinary approaches. In the early days of some programs, physicians often implemented the programming, but recognized that they were not always experts in nutrition. Among these programs, some programs had expertise on-staff but had not been coordinating their efforts effectively, whereas others did not have dietitians or health educators on staff at all.

The formation of multidisciplinary teams evolved at different rates and included different staff members across the programs. The commonality was that these teams aimed to provide integrated services so that kids could see all relevant providers (e.g. dietitian, doctor, and behavioral health specialist) in one day, in order to support their healthy lifestyle changes. Several permutations of multidisciplinary teams existed across the programs, including: a physician, nurse, and a health educator; a physician, dietitian, and a behavioral health specialist; and a physician, dietitian, psychologist, and a personal trainer. As one provider explained, this allowed the physicians and nurses on the team to do their "medical due diligence" before handing the child off to the content expert, often the dietitian or the health educator. Another provider explained how having a multidisciplinary team improved implementation:

“So when they identify a family, they would come out of the room and bring in, at that very moment, a dietitian and then piggy-back on a behavioral health provider. The dietitian might come in and say, ‘Okay. You know this is, let’s talk about what sort of beverages your family’s drinking,’ and maybe target the beverages on that visit, just one small change. And then the behavioral health provider might come in and say, ‘Okay. You guys are thinking about doing this change, what do you think it will take to make this happen? And what are you going to do when your children complain that there’s no more juice or soda in the house?’ You know, how are they going to address those behavioral aspects of it? So that’s the ideal team approach, and it all is integrated into one visit...” (Southern Arizona, Pediatrician)



Challenges

- Causes of obesity are complex and influenced by various structural and lifestyle factors.
- Families often have difficulty keeping referrals and follow-up appointments related to healthy weight management.



Successful Strategies

- Multidisciplinary teams allow programs to address various factors influencing healthy weight management.
- Co-located, multidisciplinary teams provide an opportunity to engage patients and caregivers at a single visit.



Work creatively within program and community resource constraints

Programs faced logistical challenges implementing obesity prevention programming in resource-limited settings, including programmatic resource constraints and structural challenges in the community. For many programs, inadequate staffing, physical space constraints, or working in a new or unfamiliar setting (e.g. schools, community organizations) hindered implementation. Structural challenges in the community, such as the lack of an accessible grocery store or lack of a safe place to exercise outdoors, also affected participants' abilities to make the healthy changes emphasized in the curricula. In order to address these challenges, teams used creative and flexible approaches.

Sometimes it was not possible to provide the full complement of integrated services, or a team member would be out sick and the rest of the team would have to take on additional activities to keep the program running smoothly. One provider had program staff adopt an attitude of flexibility when dealing with such logistical challenges:

“Yep. That’s my nickname, Mr. Flexibility. And that’s what I always tell my staff. Every time I send out an email with the upcoming camps it’s like, ‘Hey, be flexible. We know not everything’s going to go according to plan.’ So that’s our biggest key is to be flexible. And that’s why I cross train a lot of staff as well because if my exercise guy’s out, hey, somebody’s going to have to jump in, and so we can do that.” (Dallas, Program Administrator)

Other programs dealt with logistical constraints in their programming, such as a lack of appropriate space. Space that was large enough for physical activity and more engaging than a clinic or a classroom was also hard to find. Programs that taught cooking lessons or how to grow fruits and vegetables needed specialized space. For example, one program offered exercise classes in a large community setting, but, when they had to move their health education services to a smaller space in their clinic, the provider started offering cooking classes, taking into account what they thought would engage kids and parents. These cooking classes turned out to be a successful way to model healthy eating habits for families while introducing them to nutritious foods that they otherwise might not have tried.

The strategies above were large-scale shifts in program implementation, which were not feasible for all programs in all settings. Other programs made smaller changes to overcome program and community resource constraints, including:

- Playing “bumper cars” with rolling chairs in a conference room to get children physically active during the program despite space constraints.
- Relating the curriculum to what children are learning in school (e.g. Black History month) kept children engaged and made the material more accessible.
- Teaching children exercises they can do from the safety of their bedroom (e.g. dancing, push-ups) encouraged them to stay active, even if they couldn’t go outside.

Challenges



- A lack of adequate staffing can make it challenging to reliably offer nutrition and health education services to families.
- Logistical constraints, such as a lack of physical space or working in unfamiliar settings, can limit a provider’s ability to implement more interactive group interventions.

Successful Strategies



- Cross-training can help programs with limited staffing capacity to provide more consistent nutrition and health education services.
- Adopting flexible and creative approaches that engage participants with the curriculum can help to address logistical challenges.



Leverage community partnerships to address structural factors affecting childhood obesity

Programs quickly recognized that addressing childhood obesity requires leveraging community stakeholders in partnership. For families living in resource-limited communities facing multiple systemic barriers to healthy habits, including food deserts⁴, lack of transportation, and limited family incomes to purchase healthy foods, a single program cannot fully address these structural factors. Providers knew that to change a participant's BMI would necessitate addressing aspects of childhood obesity beyond the scope of their programs.

Several programs cultivated relationships with community partners in order to address childhood obesity at a systems level. Community partners included schools, parks and recreation departments, local governments, and community leaders. One provider even lobbied her state senator to visit the local community and witness how living in a food desert negatively impacted the health of the community. As one provider put it:

“Even if you are in a resource poor community, there are people out there trying. There are city parks and recs ... the health departments that are in every community, schools that serve the children. And so I think you just have to develop those relationships and be resourceful.” (Southern Arizona, Pediatrician)

These partnerships, through their connections to and status within their communities, help address the barriers that families face attempting a healthier lifestyle. Other examples include a partnership between one program and the mayor's office to reach more families through fitness events; these events became part of the culture shift towards healthier lifestyles in the community. Another program refers participants to a local community-based organization that supplies participants with access to free fresh fruits and vegetables. In some cases, developing a strong relationship with a single person at a community organization (e.g. the school secretary) was the key to fostering an organizational partnership. Overall, reaching out to community partners was a successful and well-received approach, as these organizations also cared about the health of their community.



Challenges

- Systemic and structural barriers, like living in a food desert, lack of access to transportation, and lack of adequate income to buy healthy foods, pose real challenges to addressing childhood obesity and are often too big for any one organization to solve.



Successful Strategies

- Building partnerships with community organizations, including local schools and government, as well as with respected community leaders, was a successful strategy for overcoming barriers.
- Personal relationships with trusted staff in community organizations, such as the secretary or principal of a local school, went a long way towards cultivating and maintaining strong partnerships between the program and the community.



Meet patients and families where they are

Programs found that individual patients entered programs with varied goals and experienced unique barriers to improving health habits. Children and teens in particular could be hard to engage as they often had other interests and choices that competed with their participation in programming (e.g. playing on their smartphone, after school activities). As a result, providers learned that delivering the same material in the same way to every participant failed to achieve the desired patient engagement or behavior change. Instead, meeting patients where they are was an important way to cultivate buy-in and tailor lessons to promote individual success.

Providers used a variety of techniques to tailor programs for individual participants. Developing a personal connection to individual participants was often essential to maintain engagement. Several providers explained that getting to know patients on an individual level allowed them to connect health education messages to patients' long-term goals in sports, career, or academics, therefore motivating patients to make changes. Programs also found that adjusting the delivery of their curriculum to best fit participant age was important for engagement. While content largely remained the same, younger children benefited from more hands-on activities (e.g. using food models to demonstrate healthy portion sizes).

For some programs, meeting patients where they are meant taking a strengths-based approach and acknowledging small improvements in eating or exercise habits. One provider gave the example of a

conversation he had with a family in which he explained, ***“If you like cheese with your broccoli, it may not be ideal but hey, that’s a start. At least you’re eating your broccoli. And we can move from there...”*** (Baton Rouge, Health Educator). These seemingly small actions, like developing a personal relationship or becoming a champion for each student’s success, were important strategies for maintaining engagement, despite competing interests and demands. As another provider put it:

“...if I could tell programs anything, you can educate these kids. You can educate the family. But if you do not form a relationship with these children and their families and bring them back on a regular basis and be a cheerleader for success, they may not lose any weight but they’d stop drinking sodas ... little successes.”
(Pediatrician)

For other programs, meeting patients where they are meant allowing patients and caregivers to drive the conversation during health education sessions. Providers explained that this enabled them to address families’ or communities’ most pressing needs as well as build a foundation of trust. With trust, the provider was able to integrate healthy lifestyle curriculum in a way that was most relevant to families. One provider explains:

“Once we meet them where they’re at, they see that we’re willing to do the work to meet them where they’re at, and they’re willing to support us and come out and ask for us and be open to what we have to share with them. And if I’ve learned anything from this whole experience... it’s all about building those initial relationships and that trust and having communities maybe leave and understand and trust that you’re there for them, and you’re there for their health... And I think once they understand that you’re really there for them, they’re more than willing and open to help and be open to the messages that you have to offer them.” (Nutrition and Fitness Coordinator)

Challenges



- Standard curriculum delivery isn’t engaging or fitting for all children and caregivers due to financial, cultural and other barriers.
- Families can be difficult to engage until trust is built with providers.
- Children and teens have other interests and choices that compete with their engagement in programming (e.g. playing on their smartphone, after school activities).



Successful Strategies

- Remain flexible with curriculum delivery and allow participants to guide group health education sessions.
- Modify curriculum delivery for different age groups, and include hands on activities and movement for young participants.
- Adopt a strengths-based approach that acknowledges and builds on existing healthy habits.
- Foster personal relationships with participants and their families to keep them engaged with the programming.



Define success in ways that are meaningful to patients and programs

Many providers emphasized the importance of defining success in ways that were meaningful to both patients and programs, as this encouraged patient buy-in and supported patients in adopting more feasible healthy habits. Due to the brief length of many programs (ex. the duration of a school year or summer camp), moving the needle on standard indicators of obesity, like BMI, was challenging, if not impossible. Providers had to consider several key factors when defining patient success, such as systemic and structural barriers and a child's lack of autonomy. If a child lived in an unsafe neighborhood, this impacted their ability to exercise outdoors. Children did not have control over their fruit and vegetable consumption, because they did not buy their own food. Many standard obesity indicators do not consider the many challenges families and providers face living in resource-limited communities, making those metrics largely unsuitable when measuring programmatic success.

To address these obstacles to a healthy lifestyle, providers individualized how they defined success for each child. Meaningful indicators of success included: increased knowledge of nutrition and healthy lifestyles content, participant satisfaction with programming; intergenerational transmission of knowledge; and long-term (> 2 years) behavioral changes. For example, children often had more control over cutting food out of their diets, like sugary beverages, rather than increasing their fruit and vegetable consumption. This was a meaningful outcome for both program implementers and children, and children often found success with this outcome, which further encouraged their buy-in. As described by one provider:

“...they get to see almost like the quick return...by reducing sugary drinks. So a lot of times I go in the order of the curriculum, but I focus on sugary drinks first because when they see it's something that they can specifically control by drinking water more and come back and get on the scale and see that difference...they're excited... and when they see that improvement, they're hooked in.” (Baton Rouge, Health Educator)

Providers also gauged programmatic success based on participants' engagement. Interventions that fostered high levels of participant buy-in and quickly engaged children were deemed successes, because providers could see families enacting healthy behaviors. Interactive and hands-on experiences were an effective approach to teach children and families about healthy foods, as described by this provider:

“I think one of the most unique components of our obesity prevention programs is the hands-on cooking classes. I think it’s one of the activities that our participants enjoy the most and learn most from, because having that hands-on experience opens up their senses to what it is to have a healthy balanced meal...So they do everything from washing the vegetables to chopping up vegetables and following a recipe...And then they get really excited about being involved in the kitchen. For the most part, at least one parent stays in the room, so they have that parental guidance as well as reassurance that they’re doing something right...We encourage the parents to let them practice those skills...” (New York, Director of Nutrition Services and Outreach)

Another outcome that providers considered meaningful to define program success was whether participants taught the content they learned to others in their family, leading to multi-generational translation of knowledge. As one provider put it:

“What I think counts as success?...I have children that come on the bus and they can teach it better than I can. When they’ve learned it, when they’ve internalized it, when they’ve changed their mindset...and they start to teach it back to me then I really feel like it’s a success because they can teach it to their parents, they can teach it to their grandparents, and they can teach it to their peers on the campus. So that’s one of my biggest things that I take pride in, them being able to teach it back to me.” (Baton Rouge, Health Educator)

Selecting these meaningful outcomes for patients and programs reinforces many of the other strategies already mentioned, including fostering meaningful engagement with families and meeting them where they are. It also helps to cultivate personal agency for children and their families. When a child shares the information and lessons that they’ve learned through the program, they can engage the rest of their family with the content in a way that is relevant to their particular family situation. Ideally, these messages are then further supported by the efforts of individuals and organizations in their community who are working together to address childhood obesity.



Challenges

- Shorter implementation timelines make it challenging to define success using standard indicators of obesity, such as BMI.
- Adding additional servings of fruits and vegetables was rarely a meaningful indicator of success, as families had limited incomes or lacked access to fruits and vegetables. In many cases, program participants were not the ones buying food for the family, which made this indicator unsuitable for most programs.
- Systemic and structural barriers, such as living in an unsafe neighborhood or not having the adequate space to exercise, made it challenging for children to increase their physical activity, and for programs to use this as a measure of success.



Successful Strategies

- Selecting behavior change outcomes that patients have more control over, such as decreasing sugary beverage consumption or replacing sugary beverages with water, were more meaningful to children, and programs found more success by focusing on this outcome.
- Providers gauged the success of their programs by looking at increased participant engagement and buy-in, as well as the reach of their programming, such as children sharing their knowledge with their families.
- Individualizing how you define success for each child can help to address obstacles children may face in resource-limited communities.

Conclusion & Recommendations

In this report, we leverage nearly a decade of experience implementing childhood obesity prevention and nutritional health programming to provide key lessons learned from program implementers across the country. When building child obesity prevention programming, we recommend that stakeholders keep the following in mind:

- Engage the whole family to impact childhood obesity.
- Create multidisciplinary teams.
- Work creatively within program and community resource constraints.
- Leverage community partnerships to address structural factors affecting childhood obesity.
- Meet patients and families where they are.
- Define success in ways that are meaningful to patients and programs.

In our interviews with providers, we asked for recommendations for the Walmart Foundation to inform future grant solicitations and programming, and share those here.

First, standard indicators of obesity programming, such as BMI and increasing servings of fruits and vegetables, were difficult to achieve on short implementation timelines and failed to recognize the many challenges facing families and providers in resource-limited communities. Given this limitation, if programs are asked to demonstrate large returns on childhood obesity programming, funding should support systems-level approaches that tackle the many social determinants of health that contribute to obesity, including poverty, lack of access to fresh fruits and vegetables, and safety in the community.

Second, program implementers were clear that the Walmart Foundation should invest in communities, and invest in breaking down the many structural barriers that undermine the health of the American public. Solutions could range from a fresh fruit snack stand, healthy food sign-posting, or food vouchers in Walmart grocery stores to partnering with community-led efforts to promote economic opportunity, increase access

to transportation, or combat food deserts. To effect change on the many social determinants of health that contribute to childhood obesity, providers and programs in resource-limited communities must be supported by meaningful, long-term investments in their communities.

Collectively, these recommendations provide great insight on ways to drive deep impact around obesity prevention programming in resource-limited communities. From fostering agency of families and curating interventions that meet them where they are to the importance of addressing the system-level barriers that contribute to obesity, we hope that these learnings will help the broader field to implement and fund interventions that are holistic, thoughtful and sustainable, and reflect the community's true needs.

Appendix: Methods

Key informant interviews were conducted to identify lessons learned from the last decade of obesity prevention programming. Twelve individuals, representing all seven funded National Network programs were interviewed using a semi-structured interview guide. Interviewees included physicians, health educators, nurses, and program administrators. Most interviews were conducted remotely with the help of video-conferencing software.

Data from the 12 interviews were examined to identify key concepts and coded for analysis. Three interviews were coded by all three of the authors to reach reliability, and the remaining nine interviews were coded individually. The team examined codes that occurred across most or all interviews, as well as codes that commonly occurred together, in order to generate themes. Each team member worked individually to identify these themes, and then met to reach consensus. The team identified excerpts that best exemplified each theme. These themes formed the backbone of our lessons learned.

Notes

1. Sources: 2017-2018 National Survey of Children's Health (<https://mchb.hrsa.gov/data/national-surveys>) and <https://stateofchildhoodobesity.org/children1017/>.
2. The Los Angeles program was included in four out of the nine years of funding.
3. 5210+10 refers to a daily recommendation of 5 fruits and veggies, 2 hours or less of recreational screen time, 1 hour or more of physical activity, 0 sweetened drinks, and 10 hours of sleep (website: <http://www.healthybr.com/be-nourished/5-2-1-0plus10>). 85210 is adopted from the 5210 curriculum (website: <https://mainehealth.org/lets-go>), and refers to a daily recommendation of at least 8 hours of sleep, 5 or more fruits and vegetables, 2 hours or less of recreational screen time, 1 hour or more of physical activity, and 0 sugary drinks, more water.
4. The Centers for Disease Control and Prevention define food deserts as “areas that lack access to affordable fruits, vegetables, whole grains, and other foods that make up a healthy diet.”