Strengthening the Impact of USDA's Child Nutrition Summer Feeding Programs During and After the COVID-19 Pandemic

Healthy Eating Research

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Introduction

Policies to reduce food insecurity and obesity have resulted in substantial improvements to school- and childcare-based federal nutrition assistance programs (P.L. 111-296).[1,2] However, less attention has been given to nutrition programs operating during summer months.[3,4] Evidence indicates that food insecurity increases[5] and weight gain accelerates during the summer, particularly among certain racial/ethnic populations and children with a body mass index (BMI) in the overweight or obese range.[6–9] Behaviors that impact weight (such as diet, physical activity, and sedentary activity) are less regulated during summer than when children are exposed to a structured day, such as a weekday when school is in session.[10,11]

Prior to the COVID-19 pandemic, nearly 22 million children received free or reduced-priced meals through the United States Department of Agriculture (USDA) National School Lunch Program (NSLP).[12] In contrast, the USDA Summer Food Service Program (SFSP) and Seamless Summer Option (SSO) – collectively referred to as the USDA Child Nutrition summer feeding programs – reached fewer than 2.7 million children in 2019.[13,14] Put another way, only about 14 of every 100 children receiving free and reduced-price lunch during the school year participated in the summer feeding programs.[15] A variety of barriers to participation exist, including transportation and location of meal sites.[3]

To address food insecurity during pandemic-related periods of remote and hybrid learning, utilization of the summer feeding programs, particularly SFSP, has drastically increased (see *COVID-19 Impacts & Responses* section). Many schools operating the NSLP, School Breakfast Program (SBP), or childcare programs, such as the Child and Adult Care Food Program (CACFP), rapidly transitioned to operating via the summer feeding programs in Spring 2020, a move that allowed for greater meal service flexibilities and higher reimbursements to help with the increased costs of serving meals during the COVID-pandemic.[16–18] As a result, the summer feeding programs, particularly SFSP, have become an essential component of the nationwide nutrition safety net, allowing millions of children to continue receiving vital nutrition.[19]

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About the USDA Child Nutrition Summer Feeding Programs

The summer feeding programs include the Summer Food Service Program (SFSP) and the Seamless Summer Option (SSO) of the National School Lunch Program:

- The **Summer Food Service Program (SFSP)** is a federally funded, state-administered program that has been operating since 1968 that reimburses program operators who serve free, nutritious meals and snacks to children and adolescents in income-eligible areas when school is not in session, primarily during the summer. Meal sites are commonly located at schools, community centers, parks, faith-based organizations, summer camps, and other community sites. Children 18 years or younger are generally able to receive up to 2 reimbursable meals each day at most sites.
- The **Seamless Summer Option (SSO)** is available for schools that participate in the USDA National School Lunch (NSLP) and Breakfast (SBP) Programs, allowing streamlined continuation of the same meal service rules and claims procedures used during the regular school year, including nutrition standards.
- Under both programs, children must consume meals and snacks on-site, which is known as the "**congregate feeding**" requirement.

Despite the adeptness and adaptability of schools and childcare centers to transition their meal programs, an estimated 29.3% of households with children experienced food insecurity during the weeks of April 23-July 21, 2020,[20] more than double the 13.6% of households with children in 2019.[21] Moreover, children across the country have been experiencing unstructured summer-like situations since school closures began in mid-March 2020, prompting concerns about how the pandemic and documented food insecurity will impact children's weight and overall health immediately and in the long-term.[22–25] Evidence indicates food insecurity and obesity often coexist, though evidence of association is mixed for children.[26–31]

Given the unprecedented use of the summer feeding programs by school food authorities and other organizations,[32,33] this research brief will (1) explain the meal pattern requirements and select operational differences between the summer feeding programs and the federal meal programs typically utilized during a traditional school year (i.e., NSLP/SBP/CACFP); (2) summarize summer feeding programs' evidence of effectiveness, with a focus on food insecurity and nutrition quality; (3) discuss key summer feeding programs' challenges, adaptations, needs, and opportunities resulting from COVID-19; and (4) identify critical knowledge gaps and opportunities with the greatest likelihood to shape future summer feeding programs' policy and practice.

USDA Summer Feeding Programs' Operational Requirements

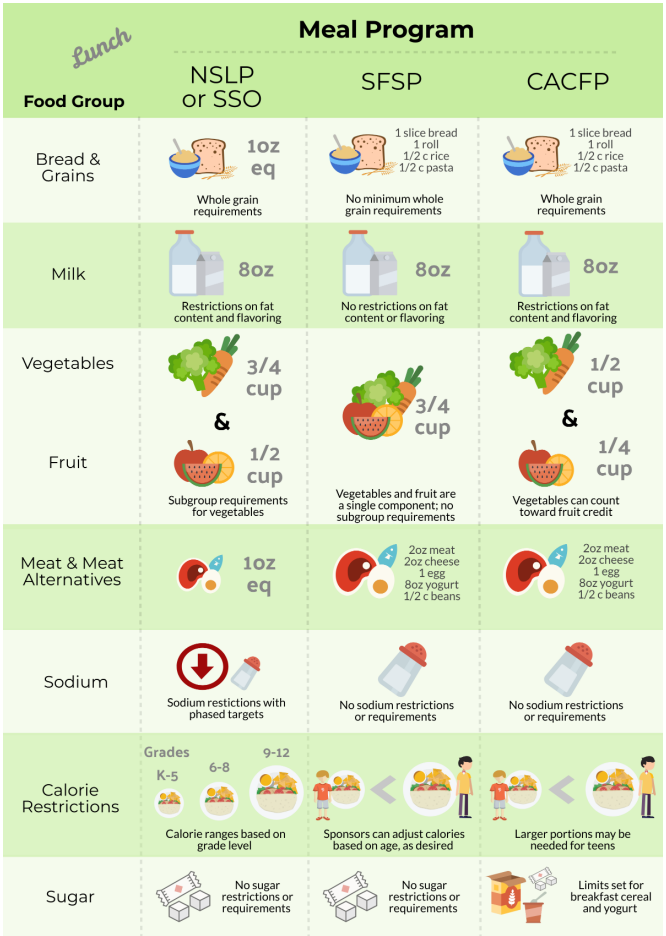
The SFSP is a federally funded, state-administered program that reimburses program operators who serve free, nutritious meals and snacks to children when school is not in session during the summer.[34] The SSO is a similar program, but is only available to schools that participate in the USDA school meal programs (e.g., NSLP, SBP), allowing streamlined continuation of the same meal service rules and claims procedures used during the regular school year.[35] Therefore, the SSO operates using the same updated nutrition standards as the NSLP/SBP; however, the SFSP does not.

For most types of sites, the summer feeding programs can operate in geographic areas or at sites where at least 50% of students are eligible for free and reduced-price meals during the school year. Meal sites are commonly located at community sites, such as schools, community centers, parks, faith-based organizations, and summer camps. Children 18 years or younger are generally able to receive either one or two reimbursable meals or snacks each day at most sites. Program operators are encouraged, but not required, to offer enrichment activities. Pre-pandemic, children were required to consume meals and snacks on-site, which is known as the "congregate feeding" requirement.

USDA Summer Feeding Programs' Meal Pattern Requirements

As a result of the Healthy, Hunger-Free Kids Act of 2010 (HHFKA, P.L. 111-296), meal pattern requirements for NSLP/SSO, SBP, and CACFP were updated to reflect the 2015-2020 *Dietary Guidelines for Americans*. The updated nutrition standards have led to improvements in the nutritional quality of meals served through these programs, as well as improvements to the diet quality of participating children.[1,2,36–38] In contrast, the meal pattern requirements for SFSP have not been updated in recent years and do not align with the 2020-2025 *Dietary Guidelines for Americans*. **Figure 1** illustrates key meal pattern differences between NSLP/SSO, SFSP and CACFP.

Figure 1.
Meal Pattern Differences between Selected USDA Child Nutrition Programs



Sources: NSLP (National School Lunch Program)/SSO (Summer Seamless Option): https://www.fns.usda.gov/nslp/national-school-lunch-program-meal-pattern-chart; SFSP (Summer Food Service Program): https://www.fns.usda.gov/sfsp/meal-patterns; and CACFP (Child and Adult Care Food Program): https://www.fns.usda.gov/cacfp/meals-and-snacks

To strengthen the SFSP's public health impacts, SFSP meal patterns could be updated to mirror selected elements of the NSLP and/or CACFP. Specifically, SFSP could potentially:

- Increase the variety and serving size of fruits and vegetables,
- Limit the frequency that fruit juice can be used to meet fruit or vegetable requirements,
- Add restrictions for fat content and flavoring of milk,
- Limit added sugar content in yogurt and breakfast cereals,
- Limit sodium, and
- Add whole grain requirements.

Certain meal pattern differences exist for very practical reasons; as one example, many SFSP sites do not have the same kitchen equipment available as the USDA school- and childcare-based meal programs. Therefore, nutrition standards, ranges, or targets for SFSP should be established factoring in SFSP sites' operational capacity and ability to comply. Additionally, many SFSP sites do not employ nutrition staff and serve mixed age-groups making it challenging to tailor meals to calorie limits or serving sizes based on student age or grade level as in the NSLP. Nevertheless, there are SFSP sponsors that also operate NSLP/SBP and/or CACFP; therefore, these organizations already have the capacity and experience to serve meals meeting stronger nutrition standards.

USDA Summer Feeding Programs' Effectiveness: A Summary of the Evidence

Despite summer feeding programs' potential for alleviating seasonal food insecurity and improving child health and related outcomes (e.g., summer weight gain, academics, behavior), these programs have historically been under-utilized by eligible program participants and under-researched. Although child diet quality appears to be lower during the summer,[39,40] few studies have examined the direct effects of participation in summer feeding programs. A recent review found only eight peer-reviewed articles and 10 other research documents related to the SFSP.[3] **Table 1** highlights the evidence for effectiveness documented to date.

COVID-19 Impacts & Responses

Since the onset of the COVID-19 pandemic in March 2020, when schools and childcare centers began closing for in-person instruction, many schools, childcare centers, and other program sponsors have been using the summer feeding programs, particularly SFSP, to provide free meals to children.[17,18,49] These organizations are well positioned to provide emergency feeding sites—including school buildings, childcare centers, or other eligible community sites—with the flexibility needed to

Table 1.
Summary of Evidence of SFSP Benefits

Program Benefits	Key Findings
Alleviation of food insecurity	■ Food insecurity for households with children increased more over the summer in states with fewer summer meal sites.[41] ■ State-level economic policies and availability of SFSP sites predicted food insecurity.[42] ■ Availability of the summer feeding programs was associated with food security among households with children.[43]
Improvements in nutrient intake and diet-related outcomes	■ Very few studies have directly examined the impact of the summer feeding programs on child nutrition quality. ■ Two short-term pilot studies reported promising results with respect to increases in nutrition knowledge, choices and behaviors after attending programing at SFSP sites.[44,45]
Improvements in child weight or other health outcomes	■ Little evidence exists for the impact of the summer feeding programs on weight or other health outcomes. ■ Only one study thus far resulted in decreases in body mass index (a summer weight intervention for migrant children at a summer camp using the SFSP to serve meals).[46]
Improvements in academic, behavioral or cognitive outcomes	No known studies have directly examined the association between the summer feeding programs and academic, behavioral, and/or cognitive outcomes. However, a recent National Academies of Sciences, Engineering, and Medicine (NASEM) report, among others, recognizes the importance of summer feeding programs' participation for summer enrichment and limiting summer learning loss or "summer slide."[47,48]

provide safe, nutritious meals while maintaining social distance and mitigating COVID-19 risk to program participants and operators. Nonetheless, complying with program regulatory requirements, such as the congregate feeding requirement, is not entirely possible during a pandemic. Therefore, as part of the first COVID-19 stimulus relief response, Congress (P.L. 116-127) granted the USDA the authority to issue nationwide waivers to support access to meal service and program operations. To date, USDA has extended these waivers through June 30, 2022, to continue supporting access to nutritious meals while also allowing schools, among other program participants, the flexibility needed to maintain appropriate safety measures.[50] USDA is permitting summer feeding sites to use additional waivers, including:[51]

- Allowing parents and guardians to pick up meals to bring home to their kids;
- Temporarily waiving meal time requirements to allow sites to provide multiple-days' worth of meals at once;
- Allowing meals be served in non-congregate settings to support social distancing;
- Allowing meal-pattern waivers when the supply chain is not accessible; and
- Allowing states to serve free meals to children through summer feeding programs in all areas, rather than only in those areas where at least half of students receive free or reduced-price meals.

As a result of these waivers, many summer feeding sites have been using innovative strategies to provide meals to children in need.[52] **Table 2,** which highlights many of these innovations, includes data from surveys conducted by the School Nutrition Association (SNA) and No Kid Hungry (NKH) in May 2020.[53,54] SNA surveyed school nutrition directors[54] and NKH surveyed both school and non-school organizations serving meals to kids during the COVID-19 school and childcare closures to gain insight into how programs are serving meals during these challenging times.[53] Organizations responding to the NKH survey served meals using a variety of funding sources, with 24% and 35% serving at least some of their meals through SSO and SFSP, respectively.[53]

In July of 2020, the number of SFSP sites decreased by approximately 20% and the number of sponsors decreased by approximately 6% compared with July 2019.[59] Despite these declines, nearly 2.5 times more meals were served through SFSP in July 2020.[59] This suggests that the program flexibilities may have been a main driver in the increase in the number of meals served.

Improving SFSP Nutrition Quality During the COVID-19 Pandemic & Beyond

Summer feeding sites have experienced challenges with procurement, finances, and staffing during the COVID-19 pandemic.[51] Despite these challenges, some SFSP sites have been adapting to serve high-quality, nutritious meals.[55,56,58,60] **Table 2** highlights selected examples of innovative approaches for preparing and distributing meals during the COVID-19 pandemic. More research on the nutrient composition of meals served during the COVID-19 pandemic and what students were actually eating is needed, but many of these strategies could inform long-term improvements to SFSP meal pattern guidelines and operations moving forward. In addition, a variety of resources have been compiled to provide summer feeding site operators with recommendations and best practices for implementing these types of meal service innovations during the COVID-19 pandemic.[55,61–66] One promising strategy to increase meal participation and the nutrition quality of meals served is Farm to Summer.[67] Key components of the most successful Farm to Summer programs include: procurement of local foods from farmers, nutrition education, cooking demonstrations or taste tests, and gardening activities. Emerging evidence indicates these engaging, hands-on activities promote healthy eating among program participants and support local farmers.[68]

Farm to Summer Innovations During the COVID-19 Pandemic: Selected Examples[56,60]

- **Sourcing fresh, local produce and using these items in scratch-cooked meals that are packaged with Grab-and-Go and delivery meals.** For example, Natomas Unified School District #1931 in Sacramento, California had a desire to continue farm-to-school efforts despite the pandemic and has been purchasing more local produce directly from farmers since the pandemic began, including items such as cherries that they had not previously served.[60]
- **Integrating online cooking lessons with meal kits.** For example, Brooks County Schools in Georgia began coordinating a Chopped Junior Chefs program during the pandemic. The "secret ingredients," such as local broccoli, blueberries, and watermelon are announced each week and sent home with meals. Families share recipes and photos of what they prepared on Facebook.[56]
- **Developing and disseminating virtual field trips to farms.** For example, Baltimore City Public Schools adapted their programming to offer "FaceTime with a Farmer" sessions that reached over 700 students and distributed 3,600 Plant a Seed kits to students so they could grow herb gardens at home.[60]

Table 2.
USDA Summer Feeding Programs' Meal Service Innovations

Innovation	Utilization Reported in May 2020	Examples
Grab-and-Go Meals The most common method for serving meals during the COVID-19 pandemic appears to be serving meals at sites throughout the community (e.g., schools, community centers, churches) where families can pick up meals for their children to eat off-site.	Approximately 58% of school nutrition directors reported in an SNA survey having sites where families can walk up to pick up meals,[54] which is similar to a survey by NKH that found 50% of organizations serving meals during the COVID-19 school closures offered walk-up distribution.[53] Approximately 80% of school nutrition directors reported operating drive-thru models where families can remain in their vehicles as they pick up meals[54] and 67% of organizations completing a survey by NKH offered drive-thru or curbside distribution.[53]	West Contra Costa Unified School District serves freshly made items, such as a fruit and cheese plate, farmers' market salad, and spaghetti and meatballs through their curbside meal service.[55]
Meal Delivery Many sites are using school buses, vans, and/or volunteers to deliver meals to bus stops, community locations, and/or directly to children's homes.	More than 40% of school nutrition directors and organizations reported delivering meals directly to student homes and approximately 30% delivered meals along bus or mobile routes.[53,54]	Franklin County Technical School in rural Massachusetts purchased heat-at-home containers that allowed them to continue serving scratch meals, such as chicken teriyaki stir-fry, that are delivered to 35 bus stops across 17 towns by seven buses.[56]
Serving Multiple Meals at Once Many sites serve both breakfast and lunch at the same time and some are offering multiple days' worth of meals at once.	Of the more than half of school nutrition directors who reported serving meals fewer than 5 days per week, 98% served multiple days of meals,[54] allowing children to have access to meals on days the program is not distributing them.	Mt. Diablo Unified School District in California prepares scratch-made items, such as empanadas, using predominately commodity items, which has cut their food costs down to 20% of their total budget.[55] Meal distribution takes place three days per week and students receive breakfast and lunch for 2-3 days at each distribution.[57]
Serving Bulk Foods When multiple meals are served at once, bulk items can be served to help meet the meal pattern guidelines for multiple days.	Nearly 16% of school nutrition directors reported serving bulk foods, such as a head of lettuce, gallon of milk, or loaf of bread.[54]	Burke County Public Schools (BCPS), a rural school district in Georgia, provides weekly meal boxes for virtual students that include many bulk items. The boxes include recipes, such as chicken fajitas and smoothies, that use the ingredients provided in the boxes.[58]

Strengthening Impact of the Summer Feeding Programs During and After the COVID-19 Pandemic

Although the disruptions brought on by the COVID-19 pandemic present enormous challenges to our nation's school- and childcare-based federal nutrition assistance programs, the unprecedented use of the summer feeding programs—particularly SFSP—stimulate new research and evaluation opportunities to strengthen and optimize program operations moving forward.

Summer Feeding Programs' Research & Evaluation Opportunities

Table 3 identifies and describes evaluation opportunities with the greatest likelihood to shape summer feeding programs' policy and practice during and after COVID-19. These findings may support evidence-based efforts to enhance the summer feeding programs—particularly SFSP—during the upcoming Child Nutrition Reauthorization process.[32,69,70]

Policy Recommendations

- **Review and update the SFSP nutrition standards and meal requirements**: Congress could consider authorizing and appropriating funds to the USDA to convene an expert National Academics of Science, Engineering and Medicine (NASEM) panel to review and update the nutrition standards and meal requirements for SFSP. To strengthen the nutrition standards of the NSLP, SBP, CACFP, and the WIC Food Packages, Congress authorized and appropriated funds to USDA to convene a panel of experts through the NASEM to review and provide recommendations to update the nutrition standards and meal requirements for these programs.[80–82] Recently, the NASEM put forth a range of recommendations aimed at improving planning, administration, and coordination of summertime programs and services for children and youth; improving availability, access, and equity of summertime programs; and advancing data collection and research.[48] However, this ad hoc NASEM committee did not review and provide recommendations on how to update the SFSP nutrition standards and meal requirements. Therefore, a NASEM report on SFSP nutrition standards, along with other research and evaluation efforts could help better describe the nutritional content of SFSP meals, with special attention to improving food and beverage pattern adherence to the latest 2020-2025 *Dietary Guidelines for Americans*.

- **Technical Assistance**: Congress could consider authorizing and appropriating funds to USDA for developing and disseminating best practices, case studies, technical assistance and support materials aimed at improving the nutritional quality and reach of SFSP, as well as increasing SFSP participation in high-risk, underserved areas.

- **Demonstration Projects, Pilots and Initiatives**: Congress could consider authorizing and appropriating funds for USDA to support demonstration projects, pilots, and initiatives of innovative collaborative approaches across key sectors and settings to bolster SFSP participation and nutritional quality.

Table 3.
Summer Feeding Programs' Research Needs & Opportunities During and After the COVID-19 Pandemic

Examine SFSP Nutritional Quality	Data collection may include direct observation, menu analysis, or participant report. Because SFSP sponsors may operate with limited space, equipment, or staff, descriptions of site characteristics should accompany measures of nutritional content. This type of evaluation may be used to identify best practices or successful approaches to serving SFSP meals that meet or exceed current nutritional standards within different community contexts. In addition, modeling studies examining the impact of stronger nutrition standards on weight outcomes among students living in households characterized as low-income should be prioritized to address accelerated weight gain concerns during the summer months. This type of data could help secure support for equipment grants and support for infrastructure improvements.
Assess SFSP Participants' Diet Quality & Weight Outcomes	Assessments should focus on priority populations including those with high rates of food insecurity, racially and ethnically diverse populations, and students at risk of accelerated summer weight gain.
Examine the Need and Impact of Providing More than Two Meals and/or Snacks per Day When Children are Not in School as well as Impact of Providing Adult Meals	During the COVID-19 pandemic, programs have been able to participate in both the summer feeding programs and CACFP, allowing them to serve more than two meals and/or snacks per day to children.[71] Research should assess how providing additional meals and/or snacks per day to children impacts food security status and diet quality. Some summer feeding site operators have also found ways to fund meals for adults; but, there has been limited research on how adult summer participation impacts child participation or household food security status.

Table 3 (continued).

Summer Feeding Programs' Research Needs & Opportunities During and After the COVID-19 Pandemic

Evaluate COVID-19 Flexibilities with Greatest Potential to Increase Program Participation	Current USDA waivers (e.g., area eligibility, non-congregate feeding, meal times, parent/guardian meal pick-up, among others) could potentially reduce barriers to participation in summer feeding programs. Research and evaluation should prioritize understanding how current USDA waivers could improve summer feeding programs' participation post-pandemic, particularly across various geographic settings and racial/ethnic populations. This could include exploring how to maximize meal service adaptations during the COVID-19 pandemic to enhance the well-being of children, and/or identifying best practices for adding enrichment activities at SFSP sites identified as beneficial to students and caregivers. Further attention should be given to the complementary role of Summer Electronic Benefits Transfer (Summer EBT), particularly learning from the unprecedented use of Pandemic Electronic Benefits Transfer (P-EBT), during the COVID-19 pandemic related school and childcare closures and the summer 2021 P-EBT expansion.[72–75] *Area Eligibility* More work is needed to inform the area eligibility requirements of SFSP after the pandemic; in particular, evaluate the impact of the USDA congressionally authorized COVID-19 related nationwide waiver to extend area eligibility that enables open sites in areas that are not located in "areas in which poor economic conditions exist" as defined by section 13(a)(1)(A) of the Richard B. Russell National School Lunch Act and as referenced in regulation at 7 CFR 225.2, 225.6(c)(2)(i)(G), 225.6(c)(3)(i)(B),225.6(d)(1)(i), 225.14(c)(3), and 225.16(b)(4). This type of evaluation can help inform updated criteria for site eligibility that would help to ensure all children who could benefit have access to the program. One potential option to explore is allowing SFSP sites to operate in areas in which 40% (currently, 50%) of the children have been determined to be eligible for free or reduced-price NSLP/SBP meals. A change like this would better align SFSP area eligibility with other federal programs such as Title I and 21st Century Community Learning Centers. A critical component of this type of evaluation is better understanding meal site placement, particularly with an equity lens.[76] Formative work with children, adolescents, parents, other care providers, and community members will also be useful for considering how other issues, such as gang-related violence or transportation barriers, may influence site selection and utilization by potential participants. *Non-Congregate Feeding* Research is needed to advance our understanding of if and how the congregate feeding requirement impacts SFSP operation and costs, program participation, and the nutritional quality of the meals served. There are disease mitigation reasons to justify a non-congregate feeding requirement during the COVID-19 pandemic; however, a variety of other factors may prevent participation in congregate meal sites, such as fear of children's safety due to gang-related violence in the community. Understanding the impact of the different types of non-congregate meal distribution strategies used during COVID (e.g., Grab-and-go Meals versus Meal Delivery) is another important area to address. While enrichment activities are not required at summer feeding sites, assessments must also account for enrichment and physical activity benefits, among others, outside of meal provision offered at several but not all summer feeding sites operating during non-pandemic times.[10,15,48] In considering the potential for expanding enrichment activities at summer sites, exploring capacity building, technical assistance, and incentive models or competitive grant programs to encourage enrichment programming might be more effective than an enrichment requirement, which could contribute to a decline in the number of sponsors. This work could be informed by better understanding the At-Risk Afterschool Meals component of CACFP, which is a federally funded, state-administered program that offers meal and snack reimbursements to sites providing healthy meals and snacks to children and adolescents in low-income areas while offering "constructive activities that are safe, fun, and filled with opportunities for learning."[77] Eligibility criteria for the At-Risk Afterschool Meals component of CACFP are similar to SFSP, and USDA encourages At-Risk Afterschool Meals sponsors to also participate in SFSP.[78,79] In addition, more attention should be given to better understanding the interaction between the waivers related to area eligibility and non-congregate feeding. Additionally, it is important to determine the number and proportion of non-congregate meal sites that would not have existed without the area eligibility waiver versus location of meal sites in previous summers, prior to the COVID-19 pandemic.

Conclusions

Prior to COVID-19, the SFSP had lower participation and weaker nutrition standards than the NSLP, which the SSO follows. There is limited information regarding the nutritional quality of meals served via SFSP during the pandemic, however, emerging evidence indicates there is potential for modernizing SFSP to strengthen its public health impacts. Many of the USDA waivers and innovative strategies being used by SFSP and SSO sites during the pandemic could be used to strengthen the summer feeding programs after the pandemic. Research to understand the impact of these waivers and innovative strategies employed by meal sites around the country is critical for informing evidence-based policy and practice recommendations for summer feeding programs going forward, particularly regarding program and access barriers. Additional research is needed to examine current SFSP nutrition standards, and necessary modifications to meal pattern guidelines to align them with the latest 2020-2025 *Dietary Guidelines for Americans*.

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About Healthy Eating Research

Healthy Eating Research (HER) is a national program of the Robert Wood Johnson Foundation. Technical assistance and direction are provided by Duke University under the direction of Mary Story PhD, RD, program director, and Megan Lott, MPH, RDN, deputy director. HER supports research to identify, analyze, and evaluate environmental and policy strategies that can promote healthy eating among children and prevent childhood obesity. Special emphasis is given to research projects that benefit children and adolescents and their families, especially among lower-income and racial and ethnic minority population groups that are at highest risk for poor health and well-being and nutrition related health disparities. For more information, visit ***www.healthyeatingresearch.org*** or follow HER on Twitter at ***@HEResearch***.

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