



# COVID-19 Working Paper: Filling the Pandemic Meal Gap: Disruptions to Child Nutrition Programs and Expansion of Free Meal Sites in the Early Months of the Pandemic

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## Abstract

The Coronavirus (COVID-19) pandemic struck the United States abruptly and unexpectedly, forcing the closure of schools and childcare providers nationwide beginning in March 2020. These closures disrupted the provision of meals to children through the largest of the U.S. Department of Agriculture's (USDA) child nutrition programs. In response, USDA issued a series of waivers, as allowed by law, to facilitate the continued provision of meals to children while prioritizing the health and safety of communities. This working paper assesses the extent to which the existing child nutrition infrastructure was able to rapidly adapt to meet the needs of children in the immediate aftermath of the unforeseen crises. It documents disruptions in the provision of meals through the National School Lunch Program (NSLP), School Breakfast Program (SBP), and Child and Adult Care Food Program (CACFP) from March through May 2020, and it examines the extent to which waivers allowing greater flexibility in their implementation and the expansion of free meal sites helped to compensate for these disruptions. This analysis uses data from USDA, Food and Nutrition Service (FNS) on program participation and meals served for Federal fiscal years (FYs) 2009 through 2020 and the number and type of free meal sites operating in 2019 and 2020. Overall, 6.6 billion meals were served through the NSLP, SBP, and CACFP throughout FY 2020, 2.9 billion fewer than in the previous fiscal year. However, the Summer Food Service Program (SFSP)—which serves about 150 million meals in a typical year through free meal sites—served an additional 1.3 billion meals in FY 2020. Reflecting this increase, the number of free meal sites serving children expanded rapidly between March and May 2020, partially compensating for disruptions to the provision of meals through the NSLP, SBP, and CACFP during the 2019–20 school year. Overall, 1.1 billion meals were served through the NSLP, SBP, and CACFP from March through May 2020, 1.8 billion fewer compared to the same period in the prior year. Meals served through the SFSP alone compensated for 31 percent of this gap. In sum, the pandemic meal gap for children might have been even larger had child nutrition programs not rapidly adapted at the onset of the pandemic. Other Federal and nongovernmental food and nutrition assistance programs not considered in this analysis may have also helped to fulfill children's nutrition needs.

**Keywords:** COVID-19, coronavirus, pandemic, child nutrition programs, National School Lunch Program, School Breakfast Program, Child and Adult Care Food Program, Seamless Summer Option, Summer Food Service Program, free meals.

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## Errata

On November 4, 2021, text on page 6 describing the increase in the number of meals served through the Summer Food Service Program from March through May 2020 as compared to the same period in 2019 was revised to reflect the correct change. No figures or tables were impacted.

# FILLING THE PANDEMIC MEAL GAP: DISRUPTIONS TO CHILD NUTRITION PROGRAMS AND EXPANSION OF FREE MEAL SITES IN THE EARLY MONTHS OF THE PANDEMIC

## Summary

### What Is the Issue?

The Coronavirus pandemic unexpectedly forced the closure of schools and childcare providers nationwide beginning in March 2020. These closures disrupted the provision of meals to children through the U.S. Department of Agriculture’s (USDA) largest child nutrition programs—the National School Lunch Program (NSLP), School Breakfast Program (SBP), and Child and Adult Care Food Program (CACFP). Simultaneously, the economic downturn caused by the pandemic led to an increase in food needs. In response, USDA issued a series of waivers for its child nutrition programs to facilitate the continued provision of meals to children while prioritizing the health and safety of communities.

Typically, NSLP, SBP, and CACFP are required to serve meals that meet Federal nutrition standards in group settings and at specific times during the day, among other requirements. USDA waivers suspended these requirements and allowed for “grab and go” meals that could be picked up by children’s parents or guardians, among other changes. Another set of waivers expanded the scope and coverage of free meal sites operating through the Seamless Summer Option (SSO) and Summer Food Service Program (SFSP).

The sudden disruption to the child nutrition programs and subsequent Federal response was unprecedented. This working paper assesses the extent to which the child nutrition infrastructure was able to rapidly adapt to meet the needs of children in the immediate aftermath of the unforeseen crises by examining the extent to which USDA waivers and the expansion of free meal sites helped to compensate for the unexpected disruption to meal provision through the NSLP, SBP, and CACFP from March through May 2020.

### What Did the Study Find?

- At least 28,987 free meal sites were operating in March 2020. The number of operating free meal sites expanded to over 31,347 by May 2020. Comparatively, only 6,254 were reported as operating in May 2019.
- Overall, between March and May 2020, the child nutrition programs served 1.7 billion meals that may have otherwise not been distributed, or roughly 59 percent of what was served over the same period in the previous year.

- Free meal sites operating through the SFSP alone served 564 million of the 1.7 billion meals served from March through May 2020. This was about 457 times greater than the number of meals served through the SFSP over the same period in the previous year.
- Other Federal and nongovernmental food and nutrition assistance programs not considered in this analysis—such as the Pandemic Electronic Benefits Program, the Supplemental Nutrition Assistance Program, or food banks and pantries—may have also helped to fulfill children’s nutrition needs during this period.

## How Was the Study Conducted?

This analysis used data from USDA, Food and Nutrition Service 2009-2019 Program Information Reports (Keydata Reports), 2020 Program Information Report (Keydata Report) available as of January 2021, SFSP sites by type for 2019-2020, 2019 Meals for Kids Site Finder extracted on June 1, 2021, and 2020 Meals for Kids Site Finder extracted on March 23, 2021.

## Introduction

The Coronavirus (COVID-19) pandemic struck the United States abruptly and unexpectedly in the early months of 2020, leading to a sharp downturn in economic conditions and rising hardships for millions of households. Compounding these hardships were disruptions to Federal programs targeting households most vulnerable to economic shocks. Among the disrupted Federal programs were the largest of the Nation’s child nutrition programs—the National School Lunch Program (NSLP), School Breakfast Program (SBP), and Child and Adult Care Food Program (CACFP)—which provide free or subsidized meals to tens of millions of children through schools and childcare providers nationwide. Participation in these programs has been linked to improved food security, nutritional intake, and health outcomes among children, particularly those from low-income households (Ralston et al., 2017).

As schools and childcare providers nationwide began closing in March 2020 in response to the pandemic, children were set to lose access to nearly 3 billion meals,<sup>1</sup> and their associated benefits, through the end of the school year. Simultaneously, rising unemployment contributed to an increase in the prevalence of food insecurity—defined as having limited or uncertain access to nutritious food—which has been associated with numerous negative health and developmental outcomes for children (Ralston et al., 2017; Restrepo et al., 2021). Based on data from the United States Census Bureau’s Household Pulse Survey (HPS), about 10 percent of all households and 13 percent of households with children reported sometimes or often not having enough to eat by the end of April 2020. These percentages were up from 4.1 and 3.9 percent in 2019, respectively.<sup>2</sup>

In response to school and childcare provider closures and to meet rising food needs, the U.S. Department of Agriculture (USDA) announced a series of waivers, as allowed by law,<sup>3</sup> for its child nutrition programs to help facilitate the continued provision of meals to children while prioritizing the health and safety of communities. One set of waivers provided flexibilities that allowed for the provision of meals while accommodating social distancing recommendations. Another set expanded the scope and coverage of free meal sites operating through the Summer Food Service Program (SFSP) and Seamless Summer Option (SSO) (Kinsey et al., 2020). As a result of these waivers, the number of sites offering free meals to children proliferated in the early months of the pandemic.

The sudden disruption to the child nutrition programs and the subsequent Federal response were unprecedented. This working paper assesses the extent to which the child nutrition infrastructure was able to rapidly adapt to meet the needs of children in the immediate aftermath of the unforeseen crises. More specifically, by examining trends in meal provision in the early months of the pandemic, this report gauges the extent to which USDA waivers and the expansion of free meal sites helped to compensate for the unexpected disruption to meal provision through NSLP, SBP, and CACFP and, by extension, helped

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<sup>1</sup> This is the number of meals served across the 3 programs between March and May 2019. From October 2019 through February 2020, prior to school and childcare provider closures, the number of meals served per month through NSLP, SBP, and CACFP were similar to that served over the period October 2018 through February 2019.

<sup>2</sup> The 2019 figures are reported in Coleman-Jensen et al. (2020). The statistics from the HPS are based on a single question assessing a household’s food sufficiency, while those from Coleman-Jensen et al. (2020) are based on a series of questions contained in the Food Security Supplement of the U.S. Census Bureau’s Current Population Survey.

<sup>3</sup> Specifically, the Families First Coronavirus Response Act and the Coronavirus Aid, Relief, and Economic Security Act, both signed into law in March of 2020.

to safeguard the food and nutrition security of children. Implications, as well as other efforts to ensure children’s access to nutritious foods during school and childcare closures, are also discussed.

## **Background on the Child Nutrition Programs and USDA Waivers**

The NSLP and SBP are the largest of the child nutrition programs. In a typical year, these programs serve about 30 and 15 million children each school day, respectively, mostly from August through May.<sup>4</sup> The third largest program is CACFP, which averages a daily attendance of roughly 4.6 million people in a typical year. Although CACFP serves some adults, 96 percent of the program’s meals go to children. Together, these programs provide Federally subsidized, nutritious meals at low or no cost to children across hundreds of thousands of participating schools and childcare providers nationwide. Meals are served through a three-tiered system. Children from households with income below 130 percent of the Federal poverty line (FPL) are eligible for free meals; those from households with income between 130 and 185 percent of the FPL are eligible for reduced-price meals; and those from households with income above 185 percent of the FPL are eligible for full-price meals.

Schools and childcare providers participating in these programs are required to serve meals that meet Federal nutrition standards in group settings and at specific times during the day, among other requirements. In response to the pandemic, USDA issued a series of waivers suspending these requirements and allowing for “grab and go” meals that could be picked up by children’s parents or guardians, among other changes.<sup>5</sup>

Another set of waivers expanded the scope and coverage of SSO and SFSP. Typically, these programs provide free meals to children in areas or sites where at least half of children qualify for free or reduced-price meals through sponsored, qualifying organizations (e.g., camps, community centers, or other places where children gather) when schools are not in session (e.g., student vacations of at least 10 days for SSO and 15 days for SFSP, such as summer break) or during unanticipated school closures between October and April. The waivers lifted these restrictions, allowing for the provision of free meals throughout the year in all areas through schools and childcare providers closed for instruction and/or care due to the pandemic as well as other qualifying locations.

Although SSO and SFSP function similarly, they are subject to different Federal requirements and meal reimbursement rates. The SSO operates as an extension of NSLP and SBP, allowing school districts to continue providing meals to children when schools are not in session—either at schools or a sponsored location—without having to bear additional administrative burdens. As such, meals served through SSO are reimbursed at NSLP and SBP rates. On the other hand, SFSP is a distinct program subject to different nutrition and monitoring requirements. Additionally, meals served through SFSP are reimbursed at a

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<sup>4</sup> While most schools operate under a “traditional” calendar—which includes about two months of summer vacation and shorter holidays during the school year—some operate under a modified “year-round” calendar with a shorter summer vacation and extended holidays throughout the school year.

<sup>5</sup> Specifically, these were the “Meal Pattern Waiver,” “Non-congregate Feeding Waiver,” “MealTimes Waiver,” and “Parent/Guardian Meal Pick-Up Waiver,” among others. A complete list of waivers can be found online at the Child Nutrition COVID-19 Waivers webpage hosted by USDA, Food and Nutrition Service.

higher rate than SSO meals.<sup>6</sup> Beginning in March 2020, childcare providers forced to close but which would otherwise have served meals through CACFP under typical circumstances could continue to do so through that program to children normally enrolled in their care as well as through SSO if sponsored by a school district or through SFSP.

## Data

This working paper used two complementary sets of USDA, Food and Nutrition Service (FNS) data. The first comes from the 2009–2020 Program Information Reports (Keydata Reports).<sup>7</sup> These reports provide an overview of expenditures on and participation in USDA’s food and nutrition assistance programs over the course of each Federal fiscal year (FY), which runs from October 1 through September 30 (e.g., FY 2020 covers the period October 1, 2019, through September 30, 2020). More specifically, the Keydata Reports provide annual and monthly data for meals served (including the number that are free, reduced-price, or full price) through NSLP, SBP, CACFP, and SFSP. In addition, the reports supply data on the number of SFSP participants and sites for July, the program’s peak month in a typical year and the only month for which FNS requires that States report this information. The Keydata Reports are supplemented by information on the number of school sponsored SFSP sites for July 2019 and 2020.

For monthly data on the type and number of free meal sites operating in 2019 and 2020, this analysis used data from the Meals for Kids Site Finder (Site Finder), an online tool developed by USDA to help families find nearby free meal sites.<sup>8</sup> This source includes the names of free meal sites operating through either SSO or SFSP and that of their sponsoring organization, as well as the dates they began and ended their operations. The names of free meal sites and their sponsoring organizations are used to identify which are schools and/or sponsored by a school district.<sup>9</sup> The beginning and end dates are used to calculate the number of sites operating each month.<sup>10</sup>

Three caveats warrant consideration. First, data from the Keydata Reports for the number of SFSP sites operating in July of each year includes those open to all children in the community and those only serving enrolled children, whereas data from the Site Finder includes only sites open to all children (whether SSO or SFSP). Second, although information on the number of free meal sites operating through SFSP in the Keydata Reports is based on program reporting requirements, numbers for operating open free meal sites from the Site Finder are voluntarily reported by States and may not be comprehensive in all months,

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<sup>6</sup> For the 2019–20 school year, the Federal reimbursement rates for free breakfasts and lunches were \$2.20 and \$3.50 for SSO and up to \$2.38 and \$4.15 for SFSP.

<sup>7</sup> This paper uses the annual Keydata Reports available as of January 2021.

<sup>8</sup> This study uses 2019 Site Finder data extracted on June 1, 2021 and 2020 Site Finder data extracted on March 23, 2021.

<sup>9</sup> Schools included any entity with “school” or “academy,” or “elementary,” “middle,” “high,” or some derivation or shorthand thereof (e.g., “elem” or “m.s.”) in its name, including private schools. School districts included any entity with “school district” or “board of education,” or some derivation or shorthand thereof (e.g., “s.d.”) in its name.

<sup>10</sup> A site is counted as operating in a month if it began operating on some day in that month, ended its operations on some day in that month, or if the month falls between the beginning and end dates of the sites operation.

resulting in an undercount of free meal sites.<sup>11</sup> Nevertheless, this data can still inform about trends in the number operating in the early months of the pandemic.

The reliability of trends observed in the Site Finder data were assessed in four ways. First, the number of sites reported in the Site Finder data as operating in July 2020 was compared to the number of SFSP sites reported for July in the FY 2020 Keydata Report. As would be expected if trends observed in the Site Finder data are reliable, the number of sites operating in July as reported in the two data sets was similar (appendix table A1, panel B). Second, the number of sites reported in the Site Finder data was compared to the number of SFSP meals served in the FY 2020 Keydata Report by month. Again, as would be expected if observed trends in the Site Finder data are reliable, the number of sites reported was low in months when low numbers of SFSP meals were served and increased as higher numbers of SFSP meals were served, with sharp increases in both beginning in March 2020 (appendix table A1, panel B). Third, the same comparisons were made using 2019 data from both sources. The same similarities and relationships were observed across the two in 2019 as in 2020 (appendix table A1, panel A). Finally, comparing trends in the number of reported sites in the Site Finder data for 2019 and 2020 showed a sharp, large increase coinciding with the summer months (June and July) in 2019 and a sharp, large increase coinciding with the closure of schools and childcare providers in March 2020, as would be expected (appendix table A1, panels A and B).

Lastly, meals served through sites operating under SSO are reported as being served through NSLP or SBP in the Keydata Reports since SSO operates through the latter programs. However, all States mandated or recommended that schools close for instruction in March 2020, with most mandating closures through the end of the school year. Recent estimates suggest that 90 percent of public schools were closed in April 2020, and 85 percent remained closed in May (Education Week, 2021; Parolin and Lee, 2021). Many childcare providers also began closing in March 2020. While data on the share of free meals distributed through NSLP, SBP, and CACFP from March through April—and the share of free meal sites open to all children that are schools or sponsored by school districts—are used to provide a sense of how many meals were served through SSO, the analysis focused primarily on trends in meals served through SFSP. These caveats notwithstanding, these data sources constitute the best available information on meals served through the child nutrition programs and free meal sites at the national level.

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<sup>11</sup> The Meals for Kids Site Finder is typically not available in March but went live on March 26, 2020 in response to the pandemic. As such, States may not have been ready or able to report a full count of free meal sites on short notice and while the transition to providing free meals was ongoing. Reporting improved over subsequent months, however.

## Methods

This working paper uses annual measures corresponding to fiscal years to examine trends across years and monthly data to examine trends within years. Examining trends across years provides historical context for the pandemic's impact on child nutrition programs in FY 2020 overall, while examining trends within 2020 emphasizes its abruptness and the immediate response to mitigate it. When discussing within-year trends, this paper has focused on the period from March through May 2020, the last month of the academic year in most school districts. This is done for two reasons.

First, focusing the analysis on the period from March through May 2020 provides a clearer understanding of the immediate effect of the pandemic on the routine operations of child nutrition programs and better reflects the ability of the child nutrition infrastructure to rapidly adapt to unforeseen crises. More specifically, this period provides the ability to isolate the initial pandemic response of the child nutrition programs to provide critical meals to children during this unprecedented event. While conditions were ever changing and challenging throughout the pandemic, focusing on this period captures the immediate operational pivot. Second, and relatedly, restricting the analysis to this period helps to avoid added complexity as additional policies and programs were implemented in response to the pandemic and as schools and childcare providers began reopening in August (Parolin and Lee, 2021).<sup>12</sup> Additionally, meal provision through NSLP and SBP largely ceases after May as most schools close for the summer months.

## Findings

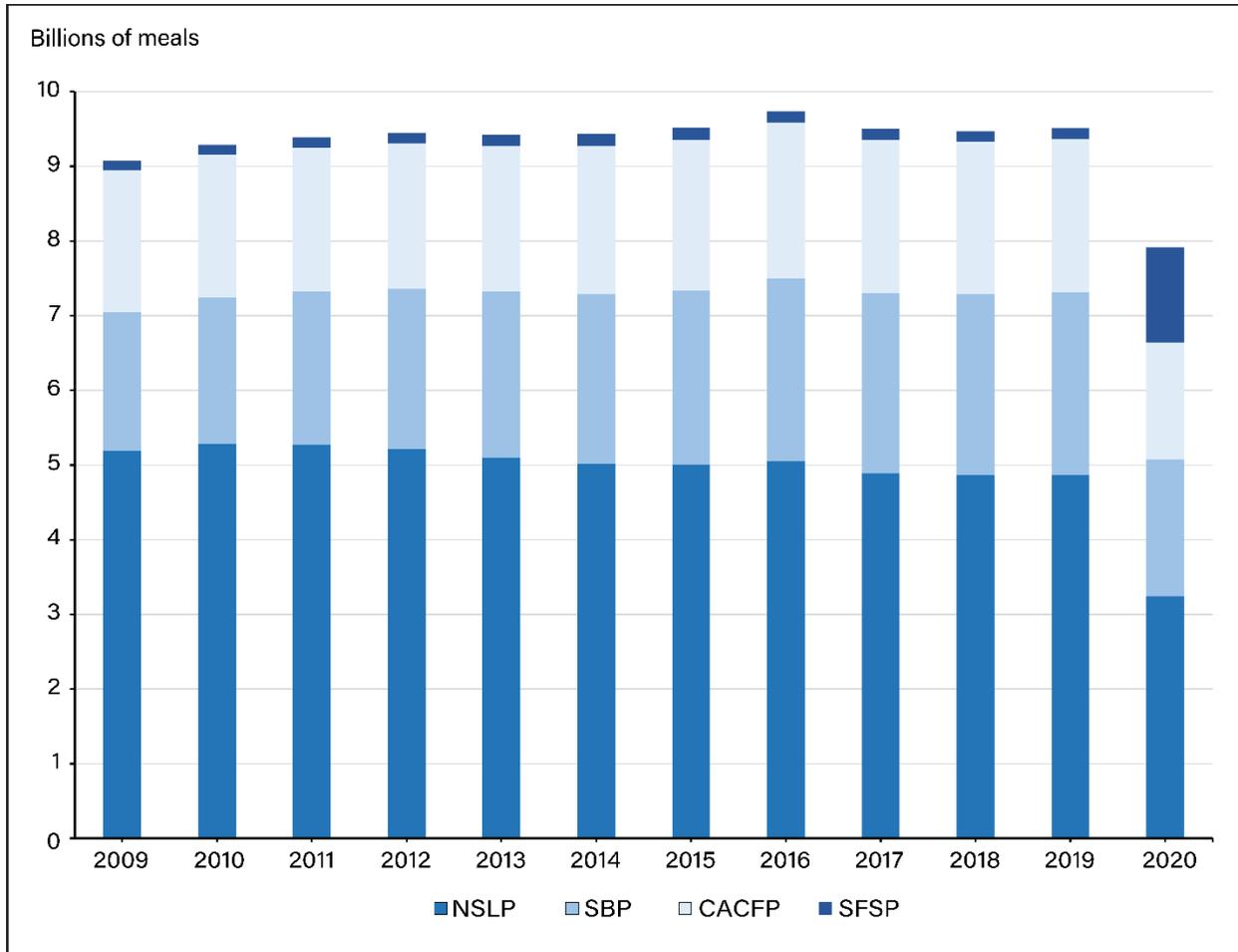
From 2009 through 2019, the 3 largest child nutrition programs and SFSP served an average of 9.5 billion meals annually (figure 1). In each of those years, SFSP accounted for roughly 1.5 percent of meals served. Those dynamics changed in 2020 as schools and childcare providers closed. The number of meals served through SFSP increased by nearly 800 percent, from 142 million in FY 2019 to 1.3 billion in FY 2020, accounting for 16 percent of all meals served that year. Nevertheless, 1.6 billion fewer meals were served overall across all four programs in FY 2020 as compared to the year before, mostly driven by declines in meals served through NSLP.

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<sup>12</sup> These include the issuance of Pandemic Electronic Benefit Transfer benefits (discussed below) and the distribution of food packages through the Farmers to Families Food Box Program, among others.

Figure 1

**Total meals served across the NSLP, SBP, CACFP, and SFSP, fiscal years 2009–20**



Notes: The Federal fiscal years (FYs) begin on October 1 and end on September 30. Meals recorded as being served through the NSLP and SBP in FY 2020 may have been served through the Seamless Summer Option. NSLP=National School Lunch Program; SBP=School Breakfast Program; CACFP=Child and Adult Care Food Program; SFSP=Summer Food Service Program.

Source: USDA, Economic Research Service using data from USDA, Food and Nutrition Service, Program Information Reports (Keydata Reports) available as of January 2021 for Federal fiscal years 2009 through 2020.

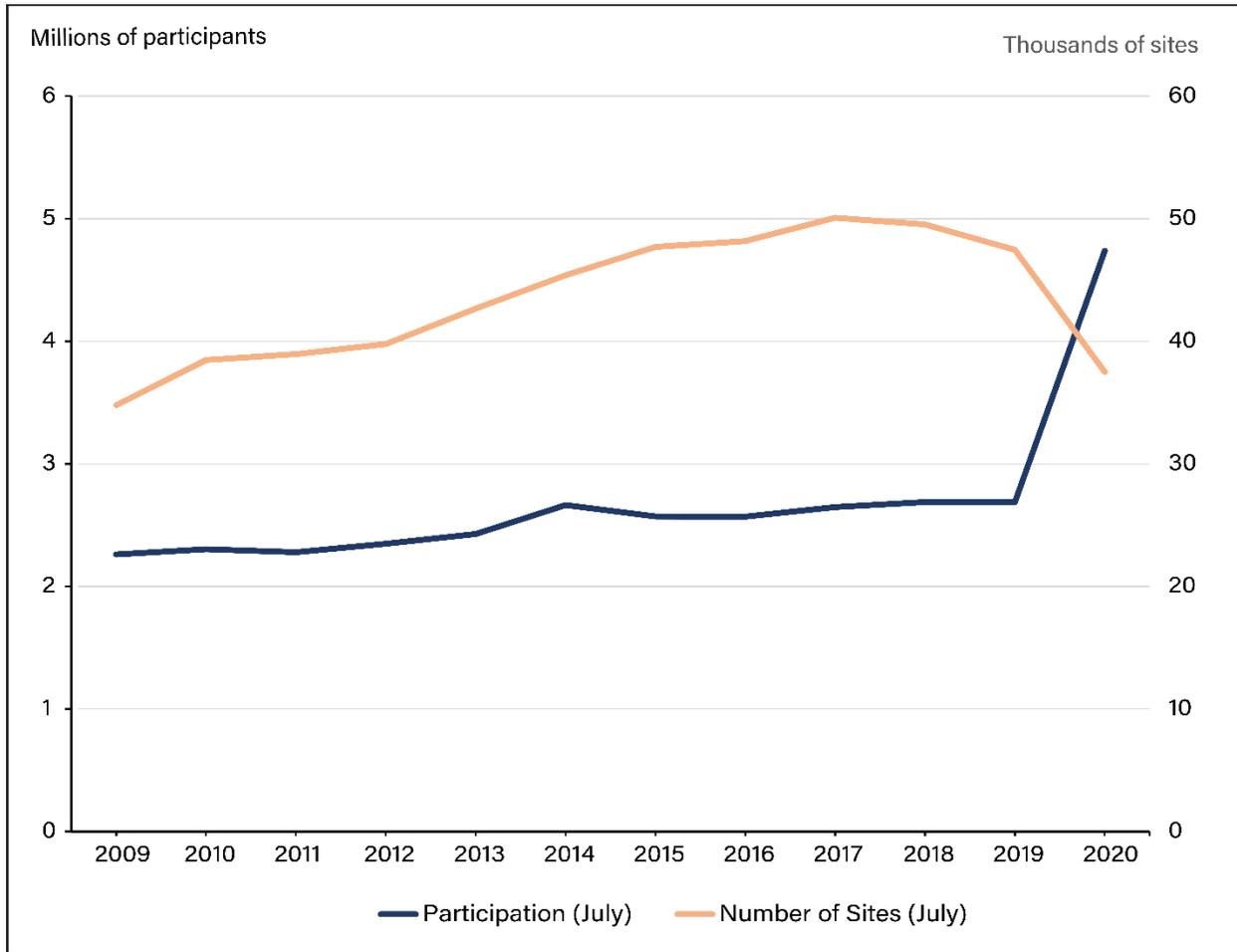
Reflecting the increase in meals served through SFSP, July participation in the program nearly doubled in FY 2020 relative to FY 2019 (figure 2). However, the increase in participation was not matched by an increase in SFSP sites. The number of SFSP free meal sites had been steadily increasing over the past decade, peaking at 50,080 in 2017, before declining to 47,471 by 2019 and 37,498 in 2020. Stated differently, 10,000 fewer sites served about twice the number of children in July 2020.

These figures mask important trends within 2020, however, and the lower number of SFSP sites may reflect a greater share of sites operating through SSO instead.<sup>13</sup> Between March and May 2020, 1.1 billion meals were reported as being served through NSLP, SBP, and CACFP, 86 percent of which were free.

<sup>13</sup> Additionally, school districts delivering meals to students (e.g., along bus routes or at their homes) through the SFSP may not have counted each delivery location as a distinct SFSP free meal site.

Comparatively, 2.9 billion meals were served through the programs over the same period in 2019, though only 73 percent of them were free. The sizeable difference in the share of free meals served across the two periods may suggest high take-up of SSO among schools and some childcare providers between March and May 2020 given the low administrative burden of doing so. As schools and childcare providers began closing for instruction or care, the number of free meal sites open to all children, including schools and locations sponsored by school districts, grew rapidly.

Figure 2  
**Trends in July SFSP participation and sites, fiscal years 2009–20**



Notes: Federal fiscal years begin on October 1 and end on September 30. Number of sites includes those open to all children in the community and those serving only children enrolled at the site. SFSP=Summer Food Service Program.

Source: USDA, Economic Research Service using data from USDA, Food and Nutrition Service, Program Information Reports (Keydata Reports) available as of January 2021 for Federal fiscal years 2009 through 2020.

The number of reported free meal sites open to all children (whether SSO or SFSP) increased from fewer than 1,000 in January and February to at least 28,987 in March and at least 31,347 by May (table 1).<sup>14</sup> Comparatively, fewer than one thousand free meal sites operated from January through April of 2019, and only 6,254 did so in May 2019. Schools and school-district sponsored locations comprised the majority of free meal sites in March 2020, likely reflecting the ability of schools and school districts to quickly transition their existing meal programs to distribute free meals. In that month, schools constituted about 50.2 percent of all sites and school district sponsored locations about 72.6 percent (table 1). Their share declined over time, however, as more locations and sponsoring organizations also began providing free meals and as the school year came to an end. By May, about 45.2 percent and 65.1 percent of reported free meal sites were schools or sponsored by a school district. Nevertheless, these shares were 6.3 percentage points and 20.4 percentage points greater than in May 2019. Similarly, the share of school sponsored SFSP sites was 8.1 percentage points greater in July 2020 compared to the same month in the previous year (table 1). This may suggest a transition to SFSP, perhaps due to its higher meal reimbursement rates.

Table 1

**Number of reporting States and free meal sites reported in the Site Finder data, 2019–20**

Month	Number of		Percent of Free Meal Sites that are		Percent of SFSP sites that were school sponsored
	States reporting	Free Meal sites	Schools	Sponsored by school districts	
<i>Panel A: FY 2019</i>					
January	18	84	58.3	71.4	
February	20	82	54.9	72.0	
March	18	95	63.2	75.8	
April	20	83	61.4	69.9	
May	40	6,245	38.9	44.7	
June	51	49,668	35.4	49.5	
July	51	49,670	32.3	49.2	48.8
<i>Panel B: FY 2020</i>					
January	15	302	76.2	77.2	
February	18	310	77.7	75.8	
March	48	28,987	50.2	72.6	
April	49	30,730	47.9	70.2	
May	51	31,347	45.2	65.1	
June	52	35,243	36.4	52.1	
July	52	35,296	35.1	49.7	56.9

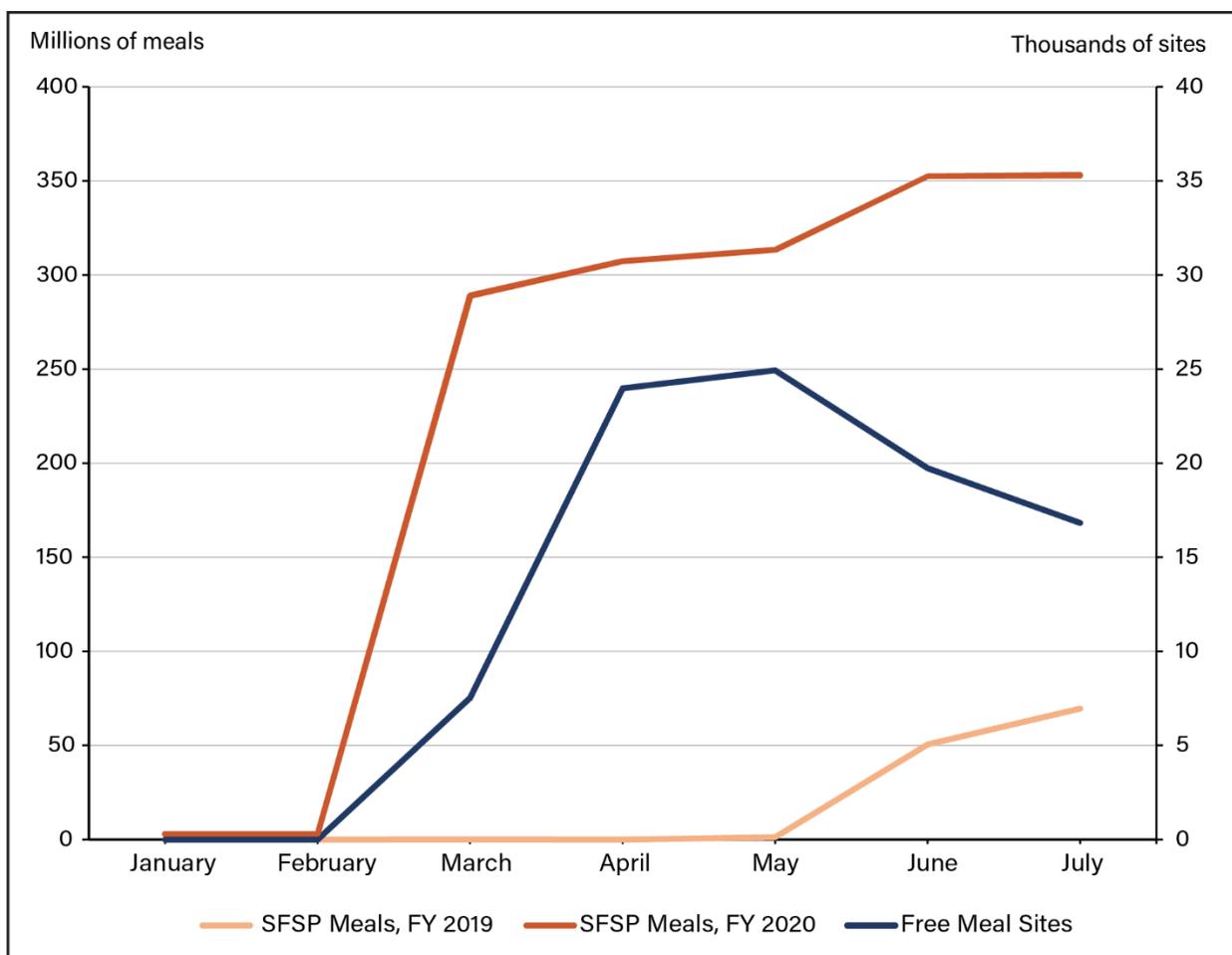
Notes: States include Puerto Rico and Washington, DC. The first two columns present the number of states reporting in each month and the number of free meal sites reported, respectively. Columns 3 and 4 report the percent of free meal sites that are schools and the percent of free meal sites that are sponsored by a school district for each month, respectively. The last column shows the share of school sponsored SFSP sites for the month of July. Panels A and B correspond to data for Federal fiscal years (FYs) 2019 and 2020.

Source: USDA, Economic Research Service using data from USDA Food and Nutrition Service 2020 Meals for Kids Site Finder extracted on March 23, 2021, 2019 Meals for Kids Site Finder extracted on June 1, 2021, and SFSP sites by type.

<sup>14</sup> As mentioned previously, States reported the number of operating free meal sites listed in the Site Finder data on a voluntary basis. The small numbers of free meal sites operating in January and February 2020 may therefore reflect a lack of reporting or underreporting among States. However, comparing the number of free meal sites operating from January through July 2020 with that over the same period for 2019 shows that it is likely that there were fewer than 1,000 free meal sites operating in these months (appendix table A1).

In line with the increase in free meal sites from March through May 2020, and in sharp contrast to the same period in the previous year, a total of 564 million meals were distributed through SFSP in these months (figure 3). As such, the meals served through SFSP alone constituted 31 percent of the additional 1.8 billion meals that would have otherwise been served through schools and childcare providers had their operations not been disrupted during these months.<sup>15</sup> Overall, about 1.7 billion meals were served across the 4 programs between March and May 2020 or roughly 59 percent of what was served over the same months in the previous .

Figure 3  
**Trends in meals served through the SFSP and number of free meal sites**



Notes: The number of free meal sites includes only those open to all children in the community. SFSP=Summer Food Service Program.

Source: USDA, Economic Research Service using data from USDA, Food and Nutrition Service, 2020 Program Information Report (Keydata Reports) available as of January 2021 and the Meals for Kids Site Finder extracted on March 23, 2021.

<sup>15</sup> Trends across FY 2019 and FY 2020 in the provision of NSLP, SBP, and CACFP meals were similar from October through February, suggesting that roughly the same number of meals would have been served from March to May 2020 as in the previous year if not for the disruption caused by the pandemic.

## Discussion

This analysis shows that the child nutrition program infrastructure can mobilize rapidly to meet increases in children’s food needs during an unforeseen crisis through expanded access and coverage. According to the HPS, of the roughly 13 percent of households with children that reported receiving free food in April and May 2020, about 70 percent reported receiving free meals from schools or other locations targeting children. To the extent that the meals helped to buffer children from hunger, they may also have shielded them from the adverse health and developmental outcomes associated with food insecurity. In fact, the food insecurity rate among households with children typically increases in the summer months when most schools are closed, and research conducted prior to the pandemic suggests SSO and SFSP free meal sites are associated with reductions in the likelihood of such households sometimes or often not having enough to eat. Free meal sites have tended to be more prevalent in urban areas, however, leaving many rural communities underserved (Turner and Calvert, 2019). Ongoing research examines the distribution of free meal sites across the United States during the pandemic and whether—and to what extent—their proliferation impacted children’s food insecurity, nutritional intake, and other health outcomes.

Although the meals served benefitted millions of children who may otherwise have gone without food, they did not entirely fill the gap created by disruptions to NSLP, SBP, and CACFP. However, it is important to note that this analysis did not consider other sources of Federal food assistance that also benefitted children in the early months of the pandemic and may have reduced reliance on the child nutrition programs, such as the Pandemic Electronic Benefit Transfer (P-EBT) program and the Supplemental Nutrition Assistance Program (SNAP).<sup>16</sup>

The Pandemic Electronic Benefit Transfer program was launched to reimburse qualifying households for the value of meals forgone because of COVID-19 related school closures with benefits that could be used to purchase groceries. By the end of September 2020, States had issued roughly \$10.7 billion in P-EBT benefits, and early evidence suggests the program may have reduced food hardship among low-income families with children (Bauer et al., 2020).<sup>17</sup> Furthermore, roughly 3 million additional households (corresponding to about 6 million individuals) enrolled in SNAP—which provides monthly benefits that can be used to purchase food items at authorized retailers—between March and May 2020. Monthly benefits for households participating in SNAP were also increased. Such increases have been associated with a reduction in the likelihood of food insecurity (Gregory et al., 2015). The introduction of P-EBT, along with increases in SNAP participation and benefits, translated to \$19.6 billion in benefits being redeemed for groceries from March through May 2020, about \$6.2 billion greater than the amount redeemed over the same period in the previous year (Jones, 2021).

Nongovernmental food assistance through charitable organizations, such as food pantries, may also have provided support.<sup>18</sup> Recent research suggests that reliance on charitable food receipt among adults with

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<sup>16</sup> A detailed description of all the Federal food and nutrition assistance programs that may have been consequential is outside the scope of this working paper. An overview of these programs for FY 2020 can be found in Toossi, Jones, and Hodges (2021). For an overview of these programs in a typical year, see Tiehen (2020).

<sup>17</sup> The roll-out of P-EBT across States was staggered, and many did not begin issuing benefits until the end of May or after. In cases where States could not issue P-EBT benefits to cover missed school meals from March through May during those months, benefits were issued retroactively (Koné Consulting, 2020).

<sup>18</sup> Though primarily nongovernmental, some may be partially supported through government programs, such as The Emergency Food Assistance Program, which provides foods purchased by USDA to food banks and other charitable organizations for distribution to those in need.

incomes under 185 percent of the Federal poverty line was 61 percent higher in June 2020 compared to December 2019 (Ziliak, 2020). In addition, HPS data suggests about 20 percent of households with children who reported receiving free food in April and May 2020 did so from a food pantry or food bank. Future research could consider how the entirety of the food and nutrition assistance safety net, Governmental and nongovernmental, worked to meet food needs during the COVID-19 pandemic.

Additionally, as documented elsewhere, the flexibilities offered under USDA child nutrition program waivers produced a variety of strategies that school districts employed to facilitate the provision of meals, including meal delivery and/or providing multiple days' worth of meals at a time (Kinsey et al., 2020; Jablonski et al., 2020; McLoughlin et al., 2020). In some cases, meals were provided to all members of a community, regardless of age or parental or guardianship status (McLoughlin et al., 2020). In fact, among childless households reporting receipt of free food, about 9 percent reported receiving meals from a school or other location targeting children in April and May 2020.<sup>19</sup> In addition to serving the needs of children, these “community nutrition programs” reveal the versatility of the child nutrition program infrastructure. Examining and comparing the effectiveness of these various approaches is another avenue for future research.

## Limitations

As previously discussed, the Site Finder data are reported on a voluntary basis and may not be comprehensive in all months. As a result, the number of free meal sites operating during the period under consideration in this analysis are likely undercounted. Nevertheless, while the precise number of free meal sites operating cannot be determined, the trends observed in the data are informative about changes to the child nutrition landscape in response to school and childcare provider closures beginning in March 2020. Furthermore, the names of free meal sites and their sponsoring organization as reported in the Site Finder data was used to determine the share operating in schools and/or sponsored by a school district. Although the collection of terms used as identifiers are likely to capture the vast majority of such sites, the method employed is imperfect and may have missed some. Additionally, absent data on meals served through the SSO, this analysis relied on the share of free meal sites operating at schools or sponsored by a school district and the share of free meals served through the NSLP, SBP, and CACFP to draw inferences about the number of SSO meals distributed, with the number of meals distributed through SFSP serving as a lower bound on the total number of meals distributed through free meal sites between March and May of 2020. Finally, although other food and nutrition assistance programs that may have also helped fulfill children's nutrition needs from March through May 2020 were discussed, data limitations precluded their explicit inclusion in the analysis, which focuses on the child nutrition programs.

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<sup>19</sup> Other than meals served to eligible adults (over the age of 60 or living with a disability and enrolled in adult daycare facilities) through the CACFP (less than 5 percent of the program's participants), meals made available to adults through these initiatives were funded through sources other than the USDA child nutrition programs.

## Conclusions

The COVID-19 pandemic forced the closure of schools and childcare providers nationwide beginning in March 2020, thereby disrupting the provision of meals through the largest of USDA's child nutrition programs. In response to these disruptions and to meet rising food needs, USDA issued a series of waivers providing additional flexibilities in the implementation of these programs and expanding the scope and coverage of free meal sites operating through SSO and SFSP. This working paper assesses the extent to which the child nutrition infrastructure was able to rapidly adapt to meet the needs of children in the immediate aftermath of the unforeseen crises. Overall, 1.7 billion meals were served between March and May 2020 that may have otherwise not been, with 564 million of them being served through free meal sites operating under the SFSP alone. The analysis shows that the child nutrition program infrastructure can be rapidly mobilized to meet children's food needs during unforeseen crises. Other Federal and nongovernmental food and nutrition assistance programs not considered in this analysis may have also helped to fulfill children's nutrition needs.

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## Appendix

Table A1

### Comparing the Site Finder and Keydata Report data, 2019–20

Month	Site Finder		Keydata Report	
	Number of		Number of	
	States reporting	Free meal sites	SFSP sites	SFSP meals served
<i>Panel A: FY 2019</i>				
January	18	84		19,098
February	20	82		10,991
March	18	95		41,838
April	20	83		11,859
May	40	6,254		1,181,426
June	51	49,668		50,491,282
July	51	49,670	47,471	69,602,570
<i>Panel B: FY 2020</i>				
January	15	302		14,017
February	18	310		2,785
March	48	28,987		75,276,654
April	49	30,730		239,714,016
May	51	31,347		249,378,286
June	52	35,243		197,245,495
July	52	35,296	37,498	168,215,115

Notes: The first two columns present the number of States (including Puerto Rico and Washington, DC) reporting each month and the number of free meal sites reported. The last two columns report the number of Summer Food Service Program (SFSP) sites and meals served. Panels A and B correspond to data for Federal fiscal years (FYs) 2019 and 2020.

Source: USDA, Economic Research Service using data from USDA, Food and Nutrition Service 2020 Program Information Report (Keydata Reports) available as of January 2021, the 2020 Meals for Kids Site Finder extracted on March 23, 2021, and the 2019 Meals for Kids Site Finder extracted on June 1, 2021.