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REPORT

Evaluation of Demonstration Projects to End Childhood Hunger (EDECH): The Virginia 365 Project

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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

AAP	American Academy of Pediatrics
AAPOR	American Association for Public Opinion Research
AMFAR	American Foundation for AIDS Research
BL	Baseline
BLS	Bureau of Labor Statistics
CACFP	Child and Adult Care Food Program
CATI	Computer-assisted telephone interview
CEP	Community eligibility provision
CI	Confidence interval
CONSORT	Consolidated Standards of Reporting Trials
EBT	Electronic benefits transfer
EDECH	Evaluation of Demonstration Projects to End Childhood Hunger
ERS	Economic Research Service
FASWVA	Feeding America Southwest Virginia
FI-A	Food insecurity among adults
FI-C	Food insecurity among children
FI-HH	Food insecurity among households
FNS	Food and Nutrition Service
FRP	Free or reduced-price
FS-C	Food security among children
FU	Follow-up
FPL	Federal poverty level
FY	Fiscal year
GED	General Education Development
HH	Household
IRB	Institutional Review Board
IT	Information technology
MIS	Management information system
NA	Not applicable
NCEE	National Center for Education Evaluation and Regional Assistance

NSLP	National School Lunch Program
ODC	Other direct cost
OMB	Office of Management and Budget
OOP	Out-of-pocket spending
PIN	Personal identification number
RCT	Randomized controlled trial
SBP	School Breakfast Program
SE	Standard error
SEBTC	Summer Electronic Benefits Transfer for Children
SFSP	Summer Food Service Program
SNAP	Supplemental Nutrition Assistance Program
SNAP-ED	Supplemental Nutrition Assistance Program Education
SSI	Supplemental Security Income
SY	School Year
T	Treatment
TANF	Temporary Assistance for Needy Families
USDA	United States Department of Agriculture
VCE	Virginia Cooperative Extension
VDH	Virginia Department of Health
VDOE	Virginia Department of Education
VDSS	Virginia Department of Social Services
VLFS	Very low food security
VLFS-C	Very low food security among children
WIC	Special Supplemental Nutrition Program for Women, Infants, and Children

CONTENTS

EXHIBITS

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EXECUTIVE SUMMARY

This evaluation report describes the vision, implementation, and impacts on child food insecurity and other outcomes of the Virginia 365 project. The evaluation was carried out under the Childhood Hunger Demonstration grants funded by the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS) in 2015–2018.

The problem: Food insecurity among children

Food security is defined as access by all people at all times to enough food for an active, healthy life (Economic Research Service [ERS] 2017a). When a household does not have enough money or other resources to buy food, food intakes are reduced and eating patterns disrupted, leading to food insecurity and its social, developmental, and nutrition consequences, especially for children (National Research Council and Institute of Medicine 2013; Nord and Parker 2010). National estimates indicate that almost one in five families (18%) with children eligible for free or reduced-price (FRP) school meals in 2016 experienced food insecurity among children (FI-C),[1] and 35% experienced food insecurity among the household as a whole (Coleman-Jensen et al. 2017).

A potential solution: Provide school children with three free meals per school day and food for weekends and school breaks during the school year in low-income areas

The 2010 Child Nutrition reauthorization called for the development of innovative strategies to "reduce the risk of childhood hunger or provide a significant improvement to the food security status of households with children," and an independent evaluation of the effectiveness of these strategies using rigorous experimental designs and methodologies to produce scientifically valid evidence of project impacts on food security (U.S. Congress, P.L. 111-296 2010). USDA awarded an $8.8 million grant to the Virginia Department of Education (VDOE), which administers school nutrition programs, to implement the Virginia 365 project for two school years.

The Virginia 365 project was designed to reduce hunger 365 days a year in households with school children by transforming schools into food hubs. The project addressed this goal by providing a variety of food and nutrition resources to low-income households, ensuring that children from these households had access to three free meals per day at school and additional food on days when school was not in session. The project targeted households with children eligible for FRP meals that attended schools with low academic performance and had at least 50% of children eligible for FRP meals. The 38 schools in the evaluation were located in Southwest Virginia (Southwest) and Richmond and included 30 elementary schools, 6 middle schools, and 2 high schools. The project operated from June 2016 through June 2018; the evaluation period extended from the time the grant was awarded through the end of the first implementation year (February 2015 to the end of the 2016–2017 school year (June 2017).

[1] FI-C in the household occurs when *any* of the children in it have their eating pattern disrupted (ERS 2017).

The evaluation: assessment of project impacts, implementation, and costs

Study design. The evaluation conducted by Mathematica Policy Research used a rigorous randomized controlled trial (RCT) design to estimate the Virginia 365 project's impact on the primary study outcome—food insecurity among children—and other outcomes, including food security among adults and the household as a whole, food spending, and participation in nutrition assistance programs. Conducting the study's RCT evaluation design involved random assignment of 38 demonstration schools to a treatment group that received project benefits or a control group that operated under "business as usual."[2] From the initial evaluation sample, households with children enrolled in treatment schools were included in the treatment group; those with children in control schools were in the control group.

All children enrolled in treatment group schools were provided with a free school breakfast, lunch, and supper during the school day through the School Breakfast Program (SBP), the National School Lunch Program (NSLP), and the Child and Adult Care Food Program (CACFP) At-Risk Afterschool Meals component. In addition, food banks and schools collaborated in delivering school backpack program benefits to children; schools distributed a food backpack for each day of the weekend and school breaks. Some schools were already providing three free meals on school days and food backpacks on weekends to some children. However, the Virginia 365 project was designed to systematically ensure that all children in all treatment schools received these benefits during the school year; that is, the project benefits filled in nutrition assistance gaps that were not provided before the demonstration began. The Virginia 365 project also offered nutrition education classes to the parents and caregivers of children in participating treatment schools. These classes were intended to help them better manage their food shopping budget, improve their ability to feed their family for the entire month, and choose healthier foods by using a curriculum developed by Colorado State University (2016). During summer months, households with children in treatment schools received electronic benefits transfer (EBT) benefits of $60 for each child eligible for FRP meals. This benefit was issued as a new EBT card for all households, using Virginia's EBT system under the Supplemental Nutrition Assistance Program (SNAP). (No SNAP funding was used for the project).[3]

- ***Study outcomes.*** The key study outcome was FI-C, as measured by the 30-day USDA food security survey module. Key secondary outcomes were (1) measures of very low food security among children (VLFS-C) and adult and household food insecurity, (2) household participation in nutrition assistance programs, (3) household food expenditures, and (4) food shopping and family dinners. Data on outcomes were collected through a follow-up survey administered at or near the end of the first school year.

[2] Control schools had flexibility in their school nutrition program operations, and some control schools provided the same kinds of nutrition assistance programs as the treatment schools.

[3] The summer EBT benefit was designed to bridge the potential food insecurity gap during the summer months, when children have limited access to school meals. Data on household participation in the summer EBT program and the impacts of the summer EBT benefits were not part of the evaluation, which focused on the 2016–2017 school year. However, the positive impacts of summer EBT benefits on children's food security among households with children have been demonstrated previously in another large evaluation study conducted in 2011–2013 (Collins et al. 2016).

- ***Data sources.*** Households in the evaluation sample completed two surveys, including the first administered at baseline, prior to the start of the intervention, and the second, follow-up survey administered approximately 12 months after the start of the intervention. A target population of 10,705 households met the project's eligibility criteria; 4,355 eligible households were selected for the evaluation sample. The main analysis sample included 2,636 households that completed the follow-up survey, including 1,393 households in the treatment group and 1,243 households in the control group. Survey data were weighted to be representative of households with children eligible for FRP meals in the demonstration schools. Implementation and cost study data sources included grant documents and materials, ongoing communications with grantee staff, site visits and interviews during the start-up and implementation periods, management information system and administrative data, focus groups with parents and caregivers of school children, and cost forms.
- ***Quantitative and qualitative analytic methods.*** To estimate impacts, outcomes among households assigned to the treatment and control groups were compared, controlling for their baseline characteristics, including baseline values of outcomes, using a regression framework. For both the implementation and cost studies, descriptive tabulations were used to address the key research questions on implementation planning and operations, and the resources needed to implement the Virginia 365 project. Findings from focus groups highlight participants' views and uses of the benefits provided.
- ***Study population.*** At baseline, 35% of households with children in the evaluation sample experienced food insecurity at the household level (FI-HH), matching the national proportion of households with food insecurity that were at or below 185% of the Federal poverty level (FPL) based on the 12-month food security measure (35%; Coleman-Jensen et al. 2017). The percentage of households in the evaluation sample that experienced FI-C and very low food security among children were 22% and 3%, respectively, both higher than the national proportion of families eligible for FRP lunch experiencing FI-C and VLFS-C (18% and 2%, respectively). The average household size among the evaluation sample at baseline was 4.1 members, with an average of 2.3 children. Seventy-one percent of households reported income at or below 130% of the FPL, the threshold used to certify students to receive free school meals; an additional 11% of the households had incomes above 130% but at or below 185% of the FPL—the income range used to certify students to receive reduced-price school meals.[4] The employment rate, defined as any adult in the household employed during the last 30 days, was nearly 70%. Forty-four percent of households did not receive any income from non-wage sources including Social Security, Supplemental Security Income, or child support payments. The majority of households said a child had received a school lunch or breakfast in the last 30 days (84% and 74%, respectively). Nearly half (47%) of respondents said the household had received SNAP benefits in the last 30 days.

[4] Households were eligible for the evaluation sample if the children in the household received FRP meals or attended a school that participated in the community eligibility provision (CEP), in which all school children receive a free school lunch and breakfast. Households with relatively higher incomes may have had children attending a CEP school, or their income information reported in the survey (based on the last 30 days) may have differed from the meal certification status of the children provided in the school records used for sampling.

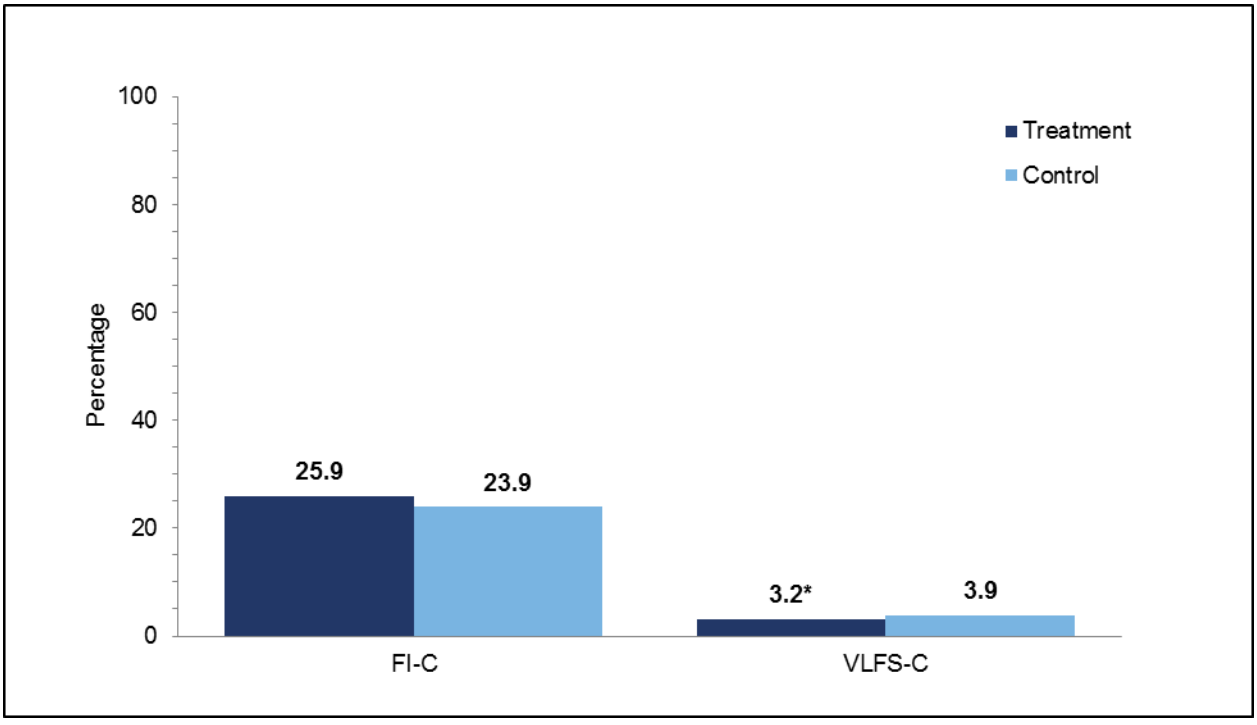
The findings: Impacts of the Virginia 365 project on children and households

Impacts on food security among children

The Virginia 365 project did not reduce FI-C but did reduce the most severe form of child food insecurity—VLFS-C.[5] In both treatment and control groups, about a quarter of households reported FI-C at follow-up (Exhibit ES.1). The project led to a small but statistically significant reduction in rates of VLFS-C. Households in the treatment group were -0.7 percentage points less likely than those in the control group to experience VLFS-C (3.9% versus 3.2%); both groups were above the national average of 2% for FRP households (Exhibit ES.1).

There was no evidence that the Virginia 365 project reduced FI-C for any of the population subgroups examined, but there was suggestive evidence that the effect of the project was not consistent for two subgroups examined. Estimated impacts on rates of FI-C varied by the number of children in the household and respondent race/ethnicity, and the treatment-control differences were statistically significant ($p=0.039$ and $p < 0.001$, respectively). For example, among households in which the respondent was non-Hispanic white or non-Hispanic other race, there were slightly lower rates of FI-C in treatment group households compared to control group households.

Exhibit ES.1. Impact of the Virginia 365 project school year benefits on food insecurity among children



[5] The impacts of the summer EBT benefits were not part of the evaluation, which focused on the 2016–2017 school year.

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Estimates are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: Estimates are regression adjusted to account for households' baseline characteristics. VLFS-C is a subcategory within FI-C. The treatment-control difference for FI-C would have been significant with a two-tailed test.

*Treatment-control difference is statistically significant at a 0.05 level of significance, one-tailed test.

FI-C = food insecurity among children; VLFS-C = very low food security among children.

The study did not provide definitive answers to the question of why the Virginia 365 project did not lead to a reduction in FI-C. The project provided a free school breakfast and lunch to children in treatment schools not already receiving them, as well as a free school supper and food backpacks for weekends and school breaks. As described below, however, the Virginia 365 project had only a small positive impact on children's likelihood of getting a free school breakfast or free school lunch (Exhibit ES.2). A majority of schools, including those serving control households, operated under community eligibility provision (CEP) status, in which all school children receive a free school lunch and free school breakfast. In addition, the target population included households with children eligible for FRP meals, so most children had access to free meals at all schools. As a result, the project increased overall participation by 2 percentage points in both the NSLP and SBP.

Although the project led to larger increases in treatment group households' receipt of CACFP supper and backpack program benefits, participation in these programs among treatment group households was not universal, and some children in households from the control group also had access to supper and backpack programs in control schools. Thus, the increase in supper and backpack program participation affected fewer than half of all treatment households. Given these participation rates, it is possible that there was not enough of a difference in the experiences of treatment and control group households for the project to bring about a reduction in FI-C. This circumstance may have been especially true, given that a household may have had some children receiving project benefits because the children attended treatment schools, but not other children who attended other schools or other members of the household.[6] Thus, the benefits may not have freed up enough household resources to make a difference for other children and household members not receiving the benefits. Although data on family relationships and dynamics were not collected, it is possible that the project led to inequities in access to food between members of the same household when some but not all children in treatment households received project benefits. This differential access may have created problems for such households, such as undermining parent authority and disrupting family dynamics (Fram and Frongillo 2018).

[6] At baseline, 7% of treatment households had a school-aged child that attended a non-treatment school, and an additional 4% of treatment households had a 4-year old child that did not attend prekindergarten at a treatment school.

Impacts on food security among adults and households

Somewhat surprisingly, the rates of adult and household food insecurity were higher among households with children in treatment schools than among those with children in control schools.[7] For example, 36% of households with children in treatment schools experienced food insecurity among adults, compared to 32% of those in control schools. Similarly, 39% of households with children in treatment schools experienced food insecurity, compared to 34% of those in control schools.

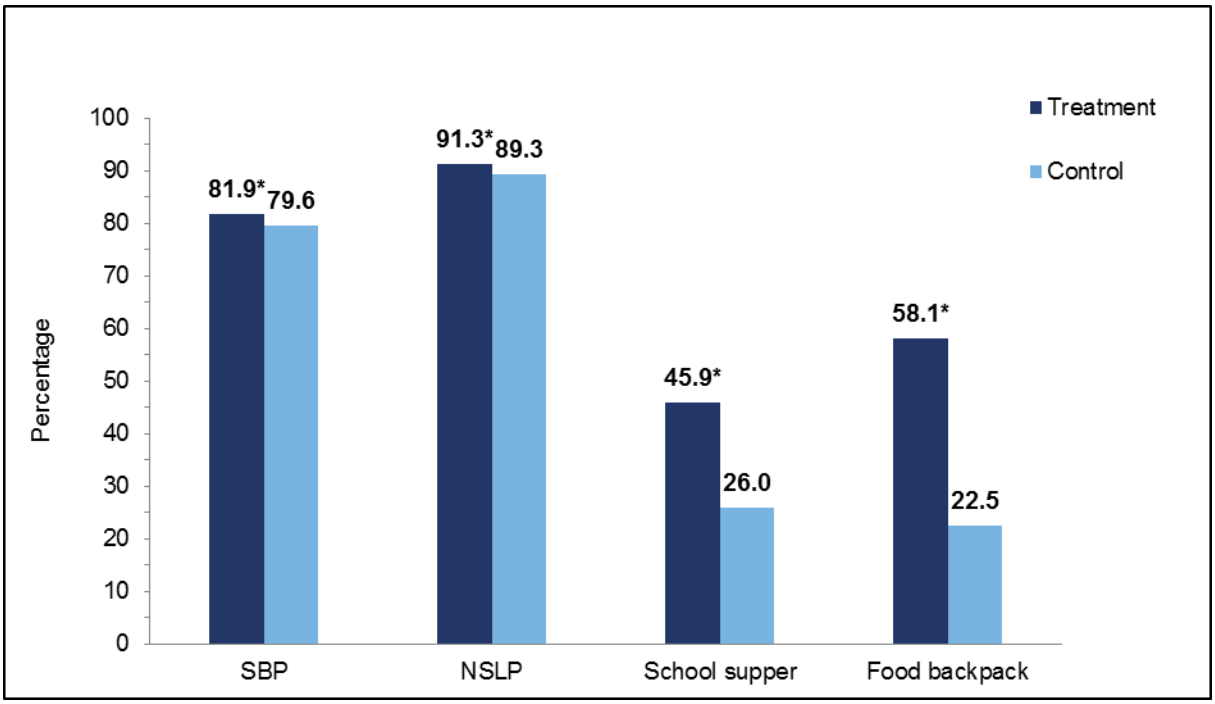
This pattern of results is puzzling, given that the provision of additional food for children would be expected to free up resources for other household members including other children or adults; however, the results indicate that reported food insecurity experiences actually worsened among adults in treatment households. One possible explanation for this finding is that a slightly higher percentage of treatment household survey respondents reported having fair or poor health compared with control group respondents. Food insecurity can be associated with poor health in low-income households and individuals (American Academy of Family Practitioners 2015; Choi et al. 2017; Coleman-Jensen et al. 2013).

Impacts on nutrition program participation

The Virginia 365 project aimed to reduce food insecurity during the school year by providing increased access to school meals and food backpacks on weekends and during school breaks to all children in a treatment school. Given these project components, differences in receipt of child nutrition program benefits would be expected if the intervention was implemented as planned. Indeed, the Virginia 365 project increased children's participation in the supper and backpack programs. Nearly half of treatment households (46%) reported children receiving suppers, compared to 26% of control households (Exhibit ES.2). Fifty-eight percent of treatment households reported children receiving food backpacks, compared to 23% of control households. The vast majority of treatment households (91%) reported children receiving a school lunch, compared to 89% of control households. Results were similar for treatment and control households that reported children had received a school breakfast (82% and 80%, respectively).

[7] Although the one-sided significance tests did not directly assess whether the project led to an increase in rates of food insecurity, the confidence intervals of the estimated impact of the project on rates of food insecurity and VLFS among both adults and households were entirely positive (that is, the confidence intervals did not include zero).

Exhibit ES.2. Reported participation in child nutrition programs at follow-up



Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Estimates are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: Estimates are regression adjusted to account for households' baseline characteristics. SBP and NSLP estimates include participation regardless of free and reduced-price eligibility status.

* Treatment-control difference is statistically significant at a 0.05 level of significance, one-tailed test.

NSLP = National School Lunch Program; SBP = School Breakfast Program.

Impacts on food spending and family dinners

The Virginia 365 project did not impact most household food shopping outcomes that were measured. However, the median monthly food expenditure for treatment households was $289 compared to $300 for control households (p=0.011). The project may have changed the types of meals or foods purchased at restaurants, given a small but statistically significant difference in restaurant expenditures between treatment and control households ($89 per month versus $97 per month, respectively). There was no statistically significant difference between treatment and control households in total monthly out-of-pocket food expenditures at supermarkets, grocery stores, and other types of food markets

The project did not impact family dinner behaviors. There was no statistically significant difference between treatment and control households in the frequency of eating dinner as a family or how often dinner was prepared at home. These findings suggest that the suppers children received at school did not necessarily replace suppers at home.

Implementation and costs of the Virginia 365 project

The evaluation included an analysis of project implementation and costs. The project's major success was integrating universal supper and backpack program benefits into school operations. All treatment schools provided a supper to all children before they left for home each school day. (Before implementation, some schools provided free snacks and/or suppers to some children after school through the CACFP At-Risk Afterschool Meals component or NSLP afterschool program, whereas others did not). For the intervention, food banks delivered food backpacks to schools for distribution to children to provide food on weekends and school breaks. Success was attributed to VDOE's leadership and early and continued collaboration and commitment among all partners (whether in an implementing or advisory role). Based on school-level data, a majority of enrolled treatment school children participated in the school meals and food backpack programs.[8]

Overcoming low participation in the nutrition education component was a primary project challenge. Less than 1% of treatment households participated in a demonstration nutrition education class series. Low participation was due to the project providing fewer nutrition education classes than planned and low attendee turnout for the classes offered. A shortage of staff available to conduct outreach and a lack of effective marketing strategies were the primary impediments to recruitment. Furthermore, engaging potentially interested parents and caregivers was a challenge because the low-income households targeted by the project faced financial and other hardships that took priority over attendance. Project staff believed that parents and caregivers would be more likely to take advantage of the classes if staff could help them see how attending classes would help them learn the practical skills they needed to feed their families healthy meals on a tight budget. Indeed, "Plan, Shop, $ave" was the most popular topic among households that did attend a class.

The total paid cost of the Virginia 365 project for start-up and the first of two school years was $6,905,686.[9] More than three-quarters of the paid costs (77%, or just over $5.3 million) reflect support for school-based benefits to children enrolled in treatment schools, averaging $729 per child in the demonstration's first year. Most project costs (93%) were from the implementation period. They were the costs to entities that collaborated in delivering supper and food backpack program benefits to children at school, including VDOE, school divisions, food banks, and other partners and contractors. School divisions incurred just over two-thirds (67%) of the paid school-based costs, inclusive of $3,052,963 in Federally reimbursed suppers claimed under the CACFP At-Risk Afterschool Meals component. Nutrition education was delivered to a

[8] School-level rates of backpack program participation were measured in Richmond only.

[9] This includes the costs for $3,052,963 in Federal CACFP expenditures to provide suppers, for which school divisions were reimbursed. In addition, the project incurred $294,947 in volunteer labor and donated or in-kind resources (e.g. equipment, storage of backpacks, etc.) for a total of $7,200,633. Treatment schools that served free NSLP and SBP meals to children certified for paid and reduced-price meals were reimbursed from Federal funds at the free reimbursement rate, leading to increased Federal reimbursement costs for children certified for reduced-price and free meals. These costs are not included because this study aimed to assess the costs associated with newly adopted project benefits as a result of project implementation, and the school meal programs were already operational in all treatment schools, with over half of treatment schools already providing universal free meals before the project began. Nearly all of the children who received free school breakfasts or lunches in treatment schools would have received them even if they were in control schools and did not get project benefits.

small share of households and made up 3% of total paid project costs; they were incurred during the first year's implementation period. Costs for the summer EBT benefit, which were paid out of grant funds, amounted to 20% of total paid project costs.

Small but important impacts were observed on VLFS-C; no impacts were observed on FI-C. One set of questions raised by the cost and impact findings involve the trade-offs between universal benefits delivered at the school level and more targeted benefits. The Virginia 365 project primarily included free school-based benefits that were made available to all children in treatment schools. This provision led to relatively high costs and meant that some benefits went to households for which food insecurity may have been less of a concern. A more targeted approach presumably would have lower costs and might deliver benefits to more disadvantaged households. However, targeted benefits might also overtly identify low-income school children and increase stigma.

Conclusion

Using a rigorous random assignment design, this study examined the impact of the Virginia 365 project, which aimed to reduce food insecurity among households with school children by providing children three free meals per day at school, food backpacks on weekends and school breaks, and nutrition education classes to parents and caregivers. The project also addressed the loss of school meals during the summer months by providing EBT benefits during the summer. Overall, the project reduced VLFS-C but had no impact on FI-C. In addition, rates of food insecurity among adults and households were higher among households in the treatment than the control group.

A lack of impact on FI-C may have been due to the design or delivery features of the Virginia 365 project's nutrition assistance. Child participation in SBP and NSLP was relatively high at baseline for both treatment and control households, so intervention services in these groups lacked distinction. For example, the supper and food backpack program benefits may not have been widespread enough to reduce FI-C as measured by the standard household food security survey module. A number of potential explanations for the adult food insecurity results, such as outliers in the data or unusual patterns of responses on individual items of the food security module, were explored but not supported by the data. Future research that addresses the interplay between household- and child-level nutrition benefits and food security measures may indicate ways for schools to optimize the targeting, design, and delivery features of benefits to best serve families most in need, thus reducing children's food insecurity.

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I. THE VIRGINIA 365 PROJECT

This evaluation report describes the vision, implementation, and impacts on child food insecurity and other outcomes of the Virginia 365 project. This project was carried out under the Childhood Hunger Demonstration grants funded by the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS) from 2015 through 2018. The project implementation period spanned summer 2016 through the end of the 2017–2018 school year; the evaluation assessed the early implementation period only, from summer 2016 through the end of the 2016–2017 school year.

The demonstration was designed to reduce food insecurity among school children. It provided benefits primarily at the school level, and some benefits were offered to parents and guardians of school children. Virginia 365 project benefits included:

1. Universal provision of three meals a day at treatment schools (breakfast, lunch, and supper)
2. Universal distribution of food backpacks to provide food on weekends and during school breaks at treatment schools
3. Nutrition education to parents and guardians of treatment school children
4. $60 a month to households during the summer for each child attending a treatment school and eligible for free or reduced-price (FRP) school meals.

The majority of treatment schools already provided a free school breakfast and free school lunch to all school children (11 of 19 treatment schools operated under the Community Eligibility Provision (CEP)). The project consequently delivered free school-based benefits to children in schools that were not already providing those benefits, thus filling in nutrition assistance gaps that were not provided before the demonstration began. The summer EBT program was not a focus of the evaluation, which examined the impact of project benefits that were provided in the first school year.

A. Introduction

Access to adequate healthy food is important to children's nutrition, psychosocial development, and health (National Research Council and Institute of Medicine 2013; Nord 2009). Households in poverty often struggle to meet the food needs of household members. A household's ability to do so—its food security[10]—is a function of available resources (money to buy food and other resources), competing demands for those resources, and the cost of acquiring food (Nord and Coleman-Jensen 2014).

[10] Food security is defined as access by all people at all times to enough food for an active, healthy life (Economic Research Service [ERS) 2017a). Household food insecurity occurs when the food intake of one or more household members is reduced and their eating patterns are disrupted because the household lacks money and other resources for food (ERS 2017). Food insecurity can be measured at the household, adult, and child levels. Food insecurity among children (FI-C) occurs when *any* of the children in the household have their eating patterns disrupted, and food insecurity among adults (FI-A) occurs when *any* of the adults in the household have their eating patterns disrupted because "there wasn't enough money for food."

USDA's FNS administers 15 nutrition assistance programs designed to ensure that low-income Americans do not go hungry and have access to healthful and nutritionally adequate diets (FNS 2016a). Despite high participation in the National School Lunch Program (NSLP),[11] the Supplemental Nutrition Assistance Program (SNAP), and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC),[12] rates of food insecurity among low-income households with children remain a concern. To address this concern, the 2010 Child Nutrition reauthorization called for the development and independent outcome evaluation of innovative strategies to "reduce the risk of childhood hunger or provide a significant improvement to the food security status of households with children," including alternative models of service delivery or benefit levels (FNS 2018a; U.S. Congress, P.L. 111-296 2010). USDA awarded grants to States and Indian Tribal Organizations in February 2015 to develop and implement their strategies for reducing childhood food insecurity. The legislation also provided $40 million to USDA to conduct and rigorously evaluate the Childhood Hunger Demonstration projects. The resulting Evaluation of Demonstration Projects to End Childhood Hunger (EDECH) study independently evaluated the implementation and impacts of four of the grantees' demonstration projects (USDA 2018a). This report, one of four, presents results from the EDECH study for Virginia.

National food insecurity prevalence data on low-income families eligible for free or reduced-price (FRP) school meals are available in 2015 and 2016 for different food security measurement recall periods. In 2016, 18% of low-income families eligible for FRP school meals experienced food insecurity among the children (FI-C), and 35% experienced food insecurity in the household as a whole (FI-HH) based on a 12-month recall period (Coleman-Jensen et al. 2017). In 2015, 10% of low income families experienced FI-C, and 21% experienced FI-HH based on a 30-day recall period (Ralston et al. 2017).

The EDECH study investigated the project's impacts on food insecurity among children—the primary outcome. The EDECH evaluation had six research objectives that are addressed in this report (Exhibit I.1).

[11] Participation in NSLP has remained relatively stable in the past decade; 30.0 million children per day participated in fiscal year (FY) 2017 (FNS 2018b). In FY 2017, 74% of all school lunches were free or reduced-price (FNS 2018b).

[12] In FY 2017, 42.1 million people participated in SNAP (FNS 2018c), and 7.3 million women and children participated in WIC (FNS 2018d). In both programs, total participation decreased slightly compared to the 2011–2014 period.

Exhibit I.1. Overview of the EDECH evaluation design

Study component	Sample	Data sources	Main outcomes
Objective 1. To describe the demonstration project in detail			
Implementation	State agency directors, project staff, and State and local partner organizations	Document review; in-person interviews	Project vision; project components; planning process; stakeholders' roles
Objective 2. To describe the processes involved in the implementation and operation of the demonstration project			
Implementation	State agency directors, project staff, and State and local partner organizations; parents/guardians	In-person interviews; parent/guardian focus groups; administrative data on school meal participation and FRP lunch eligibility; Management Information System (MIS) data on school backpack program and parent nutrition education participation	Project components; implementation processes; project challenges and successes; staff and participants' perceptions and experiences
Objective 3. To determine the impact of the demonstration project on the prevalence of food insecurity			
Impact	Parents/guardians	Baseline and follow-up household surveys; findings from Objectives 1 and 2	Food insecurity among children; adult and household-level food insecurity among households with children
Objective 4. To determine how impacts on food insecurity among children and households with children vary by relevant factors			
Impact	Parents/guardians	Baseline and follow-up household surveys; findings from Objectives 1 and 2	Food insecurity among children by household income, urbanicity, race/ethnicity, and other sociodemographic factors
Objective 5. To determine the impact of the demonstration project on additional household outcomes potentially related to food security			
Impact	Parents/guardians	Baseline and follow-up household surveys; findings from Objectives 1 and 2	Participation in nutrition assistance programs; food shopping; food preparation; and spending patterns
Objective 6. To determine the demonstration's cost and effectiveness			
Cost	Project staff and State and local partner organizations	Document review; in-person interviews; cost workbooks; MIS data	Total project costs; component costs of ongoing operations and how they relate to the impact observed

B. The Virginia 365 Project

The Virginia 365 demonstration project was designed to reduce hunger 365 days a year in households with school children by transforming schools into food hubs. The State, under the leadership of the Offices of the Governor and First Lady, had made it a top priority to bridge the nutritional divide at Virginia schools so all children would have the healthy and nutritious foods they need to live, learn, and grow. The project addressed this goal by providing a variety of food and nutrition resources to low-income households, ensuring that children from these households had access to three free meals per day at school and additional meals on days when school was not in session. Children could receive food backpacks through the school backpack program to cover meals on weekends and breaks; the project also addressed the loss of school meals during

the summer months by providing electronic benefits transfer (EBT) benefits during the summer.[13] Furthermore, the project offered nutrition education classes to families. The secondary goal of the Virginia 365 project was to improve academic performance and health outcomes, including improved achievement and less retention at the same grade level, improved behavior and fewer disciplinary referrals, and better attendance because of fewer headaches and stomach aches due to hunger. The current evaluation did not measure outcomes related to the secondary goal of the project. USDA awarded an $8.8 million grant to the Virginia Department of Education (VDOE), which administers the school nutrition programs, to implement the Virginia 365 project. The project targeted households with children eligible for FRP meals and attending schools with low academic performance and at least 50% of children eligible for FRP meals. The 38 schools in the evaluation are in southwest Virginia and Richmond and included 30 elementary schools, 6 middle schools, and 2 high schools; 19 of these schools were selected to receive project benefits.

During the 2016–2017 school year, participating schools provided a free school breakfast, lunch, and supper to each child during the school day through the School Breakfast Program (SBP), the NSLP, and the Child and Adult Care Food Program (CACFP) At-Risk Afterschool Meals Component. In addition, schools operated a backpack program in which they distributed food backpacks (with two breakfasts and four additional meals) to each child before weekends and school breaks. Some schools were already providing three free meals on school days and food backpacks on weekends to some children. However, the Virginia 365 project was designed to systematically ensure that all children in all treatment schools received these benefits during the school year; that is, the project benefits filled in nutrition assistance gaps that were not provided before the demonstration began. During summer months, households with children in participating schools received enhanced SNAP EBT benefits of $60 for each child eligible for FRP meals. This benefit was issued as a new EBT card for all eligible households. The nutrition education classes the project offered to parents and caregivers of children in participating schools were intended to help them better manage their shopping budget, improve their ability to feed their family for the entire month, and choose healthier foods (Colorado State University 2016).

The Virginia 365 components were mixed regarding what was required of households to receive benefits. The project made free school meals and food backpacks available to all children in implementing schools. Thus, participating children simply received benefits as a result of attending participating schools. Households with children eligible for the monthly $60 summer EBT benefit needed to activate a personal identification number (PIN) on the mailed EBT card to begin using it. Parents and caregivers had the option of signing up for nutrition classes after learning about them, which were marketed through various outreach methods.

C. Evaluation Design

The centerpiece of the evaluation design for estimating the Virginia 365 project's impacts was a randomized controlled trial (RCT). This design used random assignment to ensure that households in the project's treatment and control groups were statistically equivalent at the beginning of project implementation, with the only difference being that households in the treatment group were eligible to receive the benefits provided by Virginia 365 and those in the

[13] Virginia's SNAP EBT system was used to issue Virginia 365 project benefits; no SNAP funding was used.

control group were not. RCTs are considered the gold standard of evaluation design, producing rigorous evidence on project impacts (Rossi et. al 2004). Based on this design, the study evaluated the Virginia 365 project's impacts. The evaluation also examined the project's implementation and costs. Appendix A presents a detailed description of the study design and methods.

Conducting the study's RCT evaluation design involved random assignment of 38 demonstration schools. Each school had an equal chance of being assigned to either of the two groups. Because the groups started from the same point before the project's implementation, any differences in outcomes at the end of the implementation period could be attributed to the impact of the Virginia 365 project.

Conducting the study's RCT involved three steps: (1) identifying eligible schools; (2) randomly assigning schools to the treatment or control group; and (3) measuring outcomes among households with children attending treatment and control schools, and comparing them at the end of the implementation period. The schools eligible for the project were in Southwest Virginia and Richmond. They were disadvantaged, with low academic performance,[14] and had at least 50% of their children eligible for FRP meals. Ultimately, 38 schools were determined eligible and included in the evaluation.[15]

Next, eligible schools were randomly assigned to a treatment group that received project benefits or a control group that did not. In other words, the project conducted random assignment at the school rather than the household level (the latter would have involved individual households randomly assigned to either the treatment or control group). Each school had an equal chance of being assigned to either of the two groups. In conducting random assignment, they were first matched into pairs of schools with similar characteristics, including their geographic location, presence of food backpack program in the school at baseline, percentage of students eligible for free or reduced-price school meals, and baseline proficiency rates in math, reading, and science. Within each pair, one school was randomly assigned to the treatment group and the other to the control group.[16]

[14] Schools were eligible if they had an "accredited with warning" status (that is, standardized test scores were below the minimum rating set by the Virginia Board of Education) or plans for school improvement.

[15] Originally, 40 schools were identified as eligible for the evaluation and randomized, but school consolidations and dropouts resulted in 38 schools participating in the evaluation—20 schools (10 treatment and 10 control) in southwest Virginia and 18 (9 treatment and 9 control) in Richmond.

[16] This process of matching schools into pairs and then assigning one to the treatment group and the other to the control group was used for all 38 schools in the evaluation. However, a different method of assignment was used for different groups of schools. For 16 schools located in southwest Virginia, the grantee conducted the matching and arbitrarily assigned one school in each pair to the treatment group, typically based on which school in the pair was listed first alphabetically. Although arbitrary and not likely to be systematically related to other school or student characteristics, this approach is not technically random assignment. For the remaining 4 schools in Southwest Virginia and all 18 schools in Richmond, the study team grouped the schools into matched pairs and conducted random assignment to select the treatment school in each pair.

Households eligible for the evaluation sample included those with children attending a demonstration school (20 in Southwest Virginia and 18 in Richmond) and eligible for FRP school meals, or enrolled in a school operating under the CEP.[17] A household with multiple children may have had them enrolled in different schools. Ultimately, a household was assigned to the treatment group if it had any FRP-eligible children enrolled in a treatment school or any children enrolled in a treatment school operating under the CEP. Similarly, a household was assigned to a control group if it had any FRP-eligible children enrolled in a control school or any children enrolled in a control school operating under the CEP.[18] The initial evaluation sample included 4,750 households, with 2,487 assigned to the treatment group and 2,263 assigned to the control group (although some of these households were later determined to be ineligible—see Appendix Exhibit A.8 for details).The characteristics of the two groups were similar (see Appendix Exhibit A.1).

The **impact study** measured impacts of receiving project benefits during the school year. The key study outcome was food insecurity among children (FI-C), as measured by the USDA's 30-day survey module. Key secondary outcomes were (1) measures of adult and household food insecurity, (2) household participation in nutrition assistance programs, (3) household food expenditures, and (4) food shopping and family dinners. Information on outcomes was collected through a follow-up telephone survey administered near the end of the 12-month implementation period. Overall, 62% of households in the evaluation sample completed this survey, including 63% of the treatment group and 62% of the control group. To estimate impacts, outcomes among households assigned to the treatment and control groups were compared, controlling for baseline characteristics of households using a multivariate regression framework. Although a simple comparison of mean outcomes between the treatment and control groups would result in an unbiased estimate of project impacts, given the random assignment design, controlling for baseline characteristics improved the statistical power of these estimates.[19] Data on baseline characteristics were obtained from a baseline survey, administered a few months before the beginning of the implementation period. Appendix A presents details of the study approach to sampling, random assignment, and analysis methods; Appendix B includes a description of the data collection methods and data sources used to evaluate the project.

One key aspect of the evaluation design is that the Virginia 365 project benefits differed between the school year and summer. Eligible households received the monthly $60 EBT benefits per eligible child in June, July, and August 2016. Treatment schools then began schoolwide distribution of school meals and food backpacks in August and September 2016. The

[17] Sample weights were created to ensure that households responding to the follow-up survey and included in the impact analysis were representative of all eligible households in the target population. The weights also accounted for random assignment, including the fact that different households had different probabilities of being in the treatment group and receiving project benefits if, for example, they had children enrolled in more than one evaluation school.

[18] If a household had children enrolled in both treatment and control schools, that household was defined as being in the treatment group.

[19] In addition, these baseline characteristics may account for any differences between the treatment and control groups that arose by chance, despite random assignment.

estimated impacts presented in Chapter III are based on food security as measured by the follow-up survey administered in spring 2017 during the 2016–2017 school year. Thus, these estimates reflect only the effects of the project benefits received during the school year (the first of two school years in the implementation period). Because the household food security measure reflects experiences over the previous 30 days, it was not likely to capture any effects of the summer EBT benefits; therefore, the summer EBT benefits were not part of this impact evaluation. However, the positive impacts of summer EBT benefits on children's food security among households with children have been demonstrated previously (Collins et al. 2016).[20]

Another important aspect of the evaluation design is that similarities existed between treatment and control schools in the food assistance provided to children and households during the implementation period. These similarities shed light on the extent to which treatment households received more food assistance than control households as a result of the Virginia 365 project. Control schools, although operating under "business as usual," had flexibility in their school nutrition program operations. Many control schools provided the same kinds of nutrition assistance programs as the treatment schools. Exhibit I.2 shows that all treatment and control schools provided a breakfast and a lunch to low-income children. Treatment and control groups were also similar with respect to school operational characteristics to increase participation. For one, both treatment and control schools used alternative school breakfast models such as "Grab'n'go" and "breakfast after the bell." Secondly, treatment schools provided a lunch and breakfast at no cost to children through the Virginia 365 project, and control schools provided a lunch and breakfast at no cost to children through the CEP. Furthermore, many control schools offered suppers through the CACFP At-Risk Afterschool Meals component and various other forms of assistance. However, an important caveat is that for some programs—notably the CACFP At-Risk Afterschool Meals component and weekend food backpack program—even if control schools offered these programs, they may have used scaled-down versions.[21] In other words, participation in these programs in control schools was likely less robust than in treatment schools because benefits were designated only for children attending afterschool programs.

Exhibit I.2. Treatment and control school nutrition programs and operations during Virginia 365 project school year implementation

	Number of treatment schools (n = 19)	Number of control schools (n = 19)
Participated in the SBP	19	19
Participated in the FFVP	2	11
Participated in the NSLP	19	19
Participated in the NSLP afterschool snack program	1	1
Participated in the CACFP At-Risk Afterschool Meals component	19	11
Participated in a backpack program	19	10
Used alternative school breakfast model[a]	16	17
Offered free breakfast to all children	19	12
Offered free lunch to all children	19	12

[20] In the SEBTC study, demonstration households with children eligible for FRP meals in the treatment group received EBT benefits delivered through a SNAP or a WIC model; not all households were participating in SNAP and/or WIC at the time of the baseline survey, before the intervention began.

[21] Two control schools operated the supper program schoolwide.

Source: Evaluation of Demonstration Projects to End Childhood Hunger, Virginia 365 data from the Virginia Department of Education, the Virginia Department of Health, and demonstration schools, 2016–2017.

[a] Between October and December of 2016, seven control schools participated in the Virginia Breakfast Challenge, a No Kid Hungry Virginia initiative designed to promote and increase SBP participation through the use of alternative breakfast models.

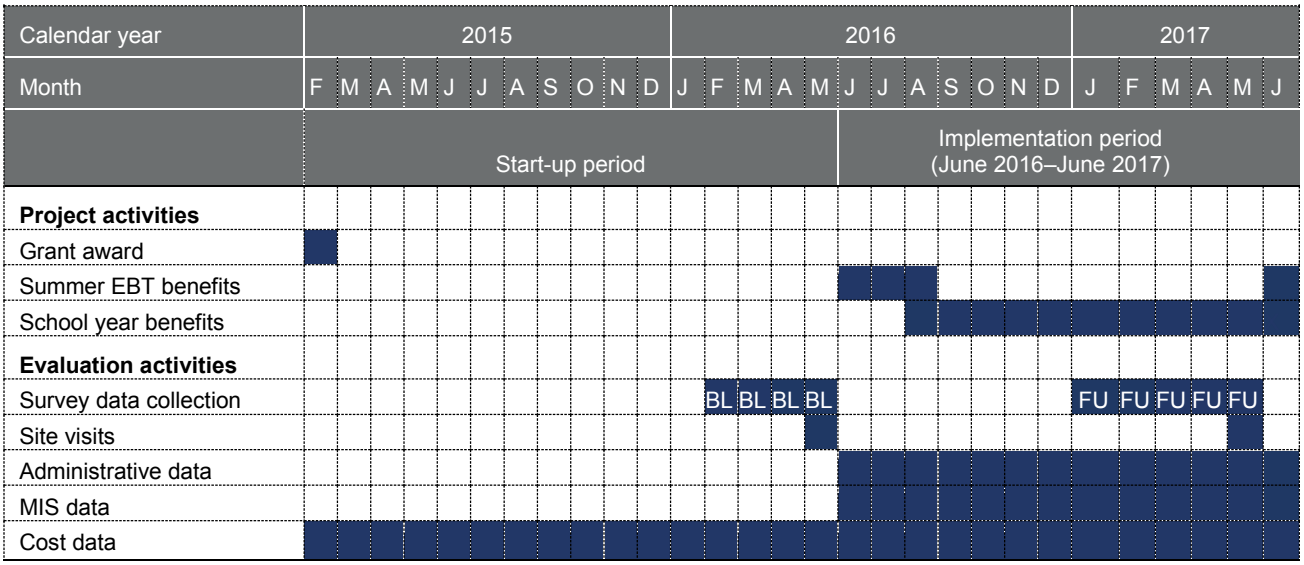
CACFP = Child and Adult Care Food Program; FFVP = Fresh Fruit and Vegetable Program; NSLP = National School Lunch Program; SBP = School Breakfast Program.

The **implementation study** described the design and implementation of the Virginia 365 project benefits to document project activities, challenges, and successes, and was used to help interpret the project impacts. As part of the implementation study, in-person interviews were conducted with State and local agency directors or managers to assess (1) project outreach and recruitment strategies during the start-up and early implementation periods, and (2) service provision during the implementation period. Focus groups with parents and guardians from treatment households were also conducted. These data sources were complemented with administrative and Management Information System (MIS) data to assess the fidelity of project implementation, service take-up rates, and the nature and intensity of services that project participants received.

For the **cost study,** information on Virginia's project costs were collected and analyzed to understand the resources needed to implement the Virginia 365 project**.** Virginia completed standardized cost accounting worksheets. For both the implementation and cost studies, descriptive tabulations were used to address the key questions.

The study activities are shown in Exhibit I.3, which shows Virginia's 12-month implementation period and key evaluation activities. Data collection covered the full period, with the survey periods and site visits coinciding with the beginning and end of the first school year.

Exhibit I.3. Timeline for the Virginia 365 project



Source: Evaluation of Demonstration Projects to End Childhood Hunger.

Note: The demonstration continued for a second year, including summer 2017 and the 2017–2018 school year. The period shown above matches the evaluation period.

BL = baseline survey; EBT = electronic benefits transfer; FU = follow-up survey; MIS = Management Information System.

II. VIRGINIA 365 PROJECT IMPLEMENTATION AND COSTS

This chapter describes the Virginia 365 project's plans, implementation, and costs to document its activities and describe factors that may have influenced its impacts. The chapter includes information on the project's eligibility criteria, the benefits included in each component, child and household awareness of and participation in each component, and project costs. Staff and households' perceptions of the Virginia 365 project's successes, challenges, and lessons are particularly instructive for understanding its impacts on participating households, and for other States or funders seeking to learn from Virginia's experience.

As described in this chapter, the key school-based benefits introduced by the project were the school suppers served before the end of the school day and the weekend school backpack program. To fulfill the first two research objectives—describing the project and the implementation process—the chapter also discusses other components that were part of the Virginia 365 project model, including the free school breakfast and free school lunch and nutrition education components. Treatment schools offered a free breakfast and free lunch to all children in treatment schools as a project benefit; however, the schools had already been operating these programs before the demonstration started, with about half already providing a free breakfast and free lunch to all enrolled children under the CEP. Additionally, parent and caregiver nutrition education classes and summer EBT benefits were primary project benefits.

Data sources are detailed in Appendix B. In brief, the main data sources to support the implementation analyses were (1) two site visits, including interviews with project staff and observations of project activities; (2) two focus groups with project participants (treatment group); (3) quantitative data on service delivery and take-up of each project component; and (4) reviews of grantee documents, including the grant application, quarterly progress reports to FNS, and operational materials (such as letters to households). Cost data derive from detailed, standardized cost accounting worksheets that the grantee completed.

A. The demonstration project

1. Overview of the demonstration area

In 2014, the year the State applied for the Virginia 365 grant, State planners selected schools in Southwest Virginia (Southwest) and the city of Richmond for the demonstration areas because they had high levels of unemployment and poverty relative to the rest of the State. The 2014 unemployment rates in the areas covered by the project were 7.8% in Southwest and 6.2% in Richmond—both higher than rates in the State as a whole (5.2%) at that time (U.S. DOL, BLS 2017a, 2017b). As reported in the grant application, rates of working-age people with a disability in Southwest were among the highest in the State, and 20% of households in the region lived in poverty compared to 11% in the State as a whole. Child poverty rates among Southwest counties and independent cities ranged from 24% to 38%, compared to a nationwide child poverty rate of 20% (ERS 2016). Site visit interviews and focus group discussions noted that drug dependency (methamphetamine and opioid use) was related to unemployment in Southwest, which in turn was related to closures of coal mines, plants, and factories. On average, 26% of Richmond households experienced poverty, and the child poverty rate was 39% (ERS 2016). Project staff interviews noted that Richmond household employment was often part-time and for low wages.

By the time the project began in 2016, the unemployment rate had improved to 5.9% in Southwest's counties and cities (as of May 2016) and 4.3% in Richmond, although both were still higher than the statewide unemployment rate of 3.7%. The economy remained fairly stable during the course of the intervention, with the unemployment rates statewide and in Richmond remaining constant between May 2016 and May 2017, and the unemployment rate dropping to 5.4% in Southwest's counties and cities (U.S. DOL, BLS 2017a, 2017b). Thus, the intervention was delivered to treatment households in Virginia during a period of economic recovery, although that recovery likely did not affect all households equally, and the areas covered by Virginia 365 probably did not benefit from it as much as other areas of Virginia. In 2014, Virginia's SNAP participation rate of 78% of the eligible population participating was higher than the national rate of 70% (Cunnyngham 2017); project staff noted that rates in Southwest communities ranged from 60% to 95%.

2. Nature of benefits and delivery process

Virginia 365 launched in June 2016 in six rural counties and two independent cities in Southwest Virginia, and Richmond in central Virginia. In total, children in 19 schools received project benefits, including 10 schools in Southwest (7 elementary, 2 middle, and 1 high school) and 9 schools in Richmond (7 elementary and 2 middle schools). Schools assigned to the treatment group provided school-based nutrition benefits to children and other benefits to households.

a. School-based benefits during the school year

Treatment schools made a free breakfast, lunch, and supper available to all children on school days. These benefits expanded existing nutrition assistance programs in schools. Although all 19 treatment schools were participating in the SBP and the NSLP before the demonstration, including 11 that already provided universal free breakfasts and lunches under the CEP, the project expanded the provision of a free breakfast and a free supper to all children in the remaining 8 treatment schools. Additionally, some Richmond treatment schools already provided free school snacks and/or suppers through the CACFP At-Risk Afterschool Meals component.[22] The project expanded CACFP to all 19 treatment schools; it also allowed treatment schools to serve supper at the end of the school day instead of after school.[23] Another key school-based benefit was the school backpack program, in which schools distributed foods for meals to cover weekends and school breaks. Churches and nonprofit organizations were already sponsoring backpack programs in nearly all demonstration school divisions,[24] although the program was targeted toward a small group of children that were most in need of weekend meals. Consequently, the project involved changing the nature of expanding the CACFP At-Risk

[22] Data on the number of Richmond treatment schools participating in the CACFP At-Risk Afterschool Meals component were unavailable. Three Southwest treatment schools served suppers schoolwide through the CACFP At-Risk Afterschool Meals component in April and May 2016 in preparation for the implementation year.

[23] FNS approved a waiver for the VDOE to allow treatment schools to serve supper at the end of the school day, as opposed to after the school day ends, as is required under the CACFP At-Risk Afterschool Meals component. The waiver was necessary for schools that were unable to make suppers available to all children after the end of the school day.

[24] Data were unavailable on the number of treatment schools with backpack programs in place before the Virginia 365 project began.

Afterschool Meals component and existing backpack programs to provide benefits to more children. Also, VDOE project staff, schools, and food banks invested much of their time and effort in planning and implementing the universally available supper and backpack programs, as these were the primary components the project introduced into schools.

Suppers. Schools served a free supper to all children at school before they were dismissed at the end of each school day. Across schools, children received a supper between 2:15 and 3:25 p.m. in Southwest and 2:45 and 4:15 p.m. in Richmond. Schools changed the school day schedule to include universal supper service to preserve instructional time and accommodate bus transportation schedules. Some schools extended the length of the school day. In others, supper periods doubled as a homework help period (older children) or were combined with end-of-day pack up (younger children). Some schools did shorten class periods to accommodate the additional supper period, however.

Schools planned and prepared suppers according to Federal CACFP nutrition standards but varied in their approach to delivery. In Richmond, a single vendor prepared all prepackaged suppers with cold entrees and delivered them to schools. The vendor's use of a central menu plan ensured product consistency for all participating schools. Some Southwest school divisions contracted with a vendor to deliver prepared meals; in other Southwest school divisions, school cafeteria staff prepared meals that included cold and hot entrees. Children then picked up the supper in the cafeteria to eat there or took it back to the classroom. In other schools, supper was delivered to children in the classroom to be eaten there. Usually cafeteria staff delivered meals to the classroom, but volunteers, teachers, counselors, and administrative staff also assisted. On average, eating in the classroom or cafeteria lasted 20 to 30 minutes. Supper pickup and delivery took 10 to 20 minutes.

Integrating schoolwide supper service into school operations was a major accomplishment of the project. Schools faced the key challenge of controlling food waste in the supper program—a challenge also common more generally in the SBP and NSLP and in the U.S. generally.[25] Schools attempted to mitigate the food waste by establishing "share tables" that allowed children to discard some types of unwanted food and beverages so other children could take them. Schools changed the menu regularly to try new products, match children's preferences, and reduce redundancy in lunch menus.[26]

Backpack program. Typically, children took food backpacks home on Fridays. Each food backpack included two food packs. Project planners worked with food banks (Feeding America Southwest Virginia, or FASWVA, and FeedMore) to plan four food pack-level menus that were nutritious, appealed to children's preferences, and were within cost parameters. (Appendix Exhibit C.1 shows the name, description, and quantity of food and beverage items contained in each pack.) Each pack included foods that when eaten together would comprise a breakfast, lunch, and supper (that is, meals were not prepackaged). Feedback from families and school staff

[25] School meal waste is reported to be a common problem for SBP and NSLP, with nearly one-third of school meal food being wasted. (USDA 2018b). Research indicates that nearly one pound of food is wasted per person per day, with fruits, vegetables, and dairy products accounting for over half of that waste (Conrad et al. 2018).

[26] One school division reported increasing cold entrees to allow children to take food home more easily.

indicated concerns about children's satisfaction with the item brands and packaging as well as younger children's inability to carry the packs because they were too large and heavy. In response, food banks began including new menu items in late February and early March 2017 that included more favored brands and attractive, kid-friendly packaging, such as microwaveable cups, fruit squeeze pouches, and cereal bowls. Food banks reduced the weight of each 3.25-pound food pack by one-half pound. Further, they replaced re-sealable plastic zipper storage bags (designed to be dropped discreetly into backpacks of young children to prevent stigma) with a generic plastic grocery bag with handles for hand carrying. Ultimately, the burdensome weight and size of the food packs were greater concerns for young children than the risk of stigma. In general, children could choose whether to take the food backpacks home.

Weekly food backpack delivery to schools and distribution to children involved various approaches. Southwest schools generally had enough storage space to receive deliveries during the week; Richmond schools had limited storage space and received deliveries on the day of distribution. Schools typically distributed food backpacks on Friday, although some split distribution to younger children between Thursday and Friday. Most schools distributed the food backpacks to children at the end of the school day, whereas others distributed food backpacks during the middle of the day, such as on the way back to the classroom after recess or during lunch. Teachers, other school staff, and volunteers assisted with distributing food backpacks to younger children. For example, teachers helped children put the sealed food packs in their backpacks in the classroom, and volunteers handed out food packs as children went through a line to collect them. On average, food banks made 3.4 regular Friday deliveries to school per month (Appendix Exhibit C.2). Project staff did not report any accommodations for child absences or snow days on the day of distribution.

When children needed additional food to cover long weekends and extended school breaks,[27] schools would either distribute the additional food packs together with the regular delivery at the end of the school week or distribute the additional packs on some other school day earlier in the week. Schools used this advance distribution to avoid sending home unfeasibly large quantities of food in a single trip. On average, other deliveries for long weekends and extended school breaks included 3.3 food packs (10 meals) per child. Across participating schools, regular Friday food backpack deliveries accounted for 87% of deliveries; other deliveries that covered extended periods accounted for 13% of all deliveries (Appendix Exhibit C.2).

To distribute foods for the approximately 10-day winter break, each Richmond school scheduled pick-up times at outdoor locations and provided households with a 30-pound food box that included fresh vegetables in addition to other standard food pack menu items. Households pre-ordered the boxes and indicated their pick-up time. This distribution effort required the help of about 80 volunteers. In Southwest, schools distributed extra food backpacks to children during the week before winter break, or parents picked up the packs at the school the week before or during break. At one school, a community volunteer used a personal vehicle and delivered to families' homes all of the food backpacks that had not been picked up. In general, food backpack program participation was lower during the winter break than the rest of the year. In Richmond,

[27] Children did not receive food backpacks before forecasted snow days, as originally had been planned in the grant.

for example, only about 450 families picked up a food box relative to more than 4,300 children who were enrolled in Richmond schools and eligible to participate in the backpack program.

b. Other household benefits

Nutrition education. Parents and household caregivers of treatment school children received nutrition education classes taught by Cooperative Extension Family Nutrition Program assistants. The primary aim of the nutrition classes was to provide parents and caregivers with the knowledge and practical skills they needed to feed their families healthy meals on a tight budget. The desired outcomes were improved behavior related to managing resources for food, and acquiring knowledge, attitudes, and skills to foster improved dietary quality and well-being among family members. Classes were taught in treatment schools in Richmond and Southwest school divisions. Two program assistants led classes in Richmond, and seven program assistants led classes in the eight Southwest school divisions.

Program assistants taught classes following an evidence-based SNAP-ED curriculum —*Eating Smart Being Active*—and provided class attendees with incentives such as measuring cups and cutting boards (Colorado State University 2016). The curriculum included a series of eight class topics, described in Appendix Exhibit C.3. In practice, program assistants in Richmond offered an eight-class series, but the Southwest series typically included six or fewer classes (Appendix Exhibit C.4). The goal for nutrition education service delivery was to provide classes on a recurring basis, so that a new series would begin a week after the previous series ended. However, the total number of series offered per school division ranged from zero to three, suggesting that in a given school division, classes were available from 0% to 67% of the school year.[28] Reasons that no classes were offered in a given school division may have been due to program assistant vacancies and insufficient interest from households.

Households generally learned about the nutrition education classes through flyers distributed by principals and the program assistants' social media promotion. Staff scheduled classes after determining that there was sufficient interest from households. Recruiting participants proved to be a challenge, which project staff attributed to factors such as staff vacancies and other capacity issues, ineffective marketing strategies and incentives, and lack of turnout among initially interested parents and caregivers. As an indication of these recruiting challenges, the project had offered 13 class series by the end of the 2016–2017 school year (Appendix Exhibit C.4). Eight series occurred in the fall, and 5 occurred in the spring. Most series (10 of 13) were conducted in Southwest, with 4 of 8 Southwest school divisions offering 2 series, 2 offering 1 series, and 2 offering none.

Summer EBT cards. Households with children in treatment schools were eligible to receive a monthly EBT SNAP benefit of $60 per treatment school child during the summer months. In non-CEP schools, only FRP lunch-eligible children could receive the summer EBT benefit; in CEP schools, all children were eligible could receive it. The summer EBT benefit period was three months (June, July, and August 2016), with funds made available to participants via an

[28] Virginia requires 180 teaching days per year, or roughly 36 weeks. An eight-class series occurs over 8 weeks. Thus, three 8-week series would span 24 weeks, or 67% of 36 weeks.

electronic benefit card. Funds were accessible loaded at the beginning of each month and the expiring on September 30, 2016. This benefit period was designed to bridge the potential food insecurity gap during the summer months, when children have limited access to school meals.[29]

Data on household participation in the summer EBT program were not formally collected as a part of this evaluation because the evaluation focused on the intervention in the first school year (see Chapter I, Exhibit I.3), and the follow-up survey did not capture food security in the summer months. Still, treatment households may have received summer EBT benefits starting in summer 2016, and this experience could have influenced their participation in other food assistance programs reported by the study (for example, households may have applied for SNAP). Summer EBT benefits were captured in the reported project costs (see Chapter II, Section D). Additional details on the summer EBT benefit issuance, outreach, and support provided by VDSS can be found in the site visit reports (Cabili and Jacobson 2016; Cabili and Melia 2017).

3. Grantee organizational structures, partners, and staffing

a. Lead and partner agencies

The **Office of School Nutrition Programs at VDOE** led the administration of the Virginia 365 project. The Richmond-based VDOE grants project manager led the day-to-day project activities, coordinated school and partner collaboration, monitored and supported implementing schools in Richmond and Southwest, and oversaw the regional grant coordinator—the primary point of contact with Southwest schools. VDOE's leadership was essential to the success of Virginia 365 implementation because it fostered the necessary communication, collaboration, and feedback between all of the schools and partners, and provided technical support and resources to schools. For example, the Southwest regional grant coordinator provided CACFP technical assistance to school divisions that were newly implementing the program, and the grants project manager coordinated a VDOE volunteer effort to assist with Richmond food box distribution to households during winter break.

The Virginia 365 project had a very large group of committed and engaged partners throughout the start-up and implementation periods. The **Office of the Governor, led by First Lady Dorothy McAuliffe**, provided political support and attracted positive attention for Virginia 365. During the start-up period, **Share Our Strength**—an advocacy organization dedicated to child nutrition program expansion—contributed to the project design, promoted the project goals, liaised between partner agencies and schools, and provided data and expertise to support benefit implementation. The **Virginia Foundation for Healthy Youth** assisted with the grant application and the start-up period. Share Our Strength and the Virginia Foundation for Healthy Youth served as grant advisors throughout the project implementation phase. The **Southeast United Dairy Industry Association** provided grant funding for school breakfast program equipment.

[29] Although not part of the evaluation period, the project provided summer EBT benefits in 2017 and other project benefits in the 2017–2018 school year. The 2017 summer EBT benefit, which was not funded through the EDECH grant, functioned as a bridge in children's benefits between the two demonstration school years.

Schools and other partners planned and led project operations. **Schools** were the food hubs and operational sites; they served three school meals a day to all children, distributed food backpacks on Fridays and before school breaks, and coordinated with nutrition education program assistants. As the CACFP administering agency, the **Virginia Department of Health (VDH)** provided CACFP training and technical assistance on program requirements and reporting to school nutrition directors. The two regional food banks, **FASWVA** and **FeedMore**, delivered food backpacks to Southwest and Richmond schools, respectively, and managed food orders, storage, and delivery. The food banks also worked with the **Food City** grocery store chain to accept donated food and distribute it to schools. As the nutrition education provider, the **Virginia Cooperative Extension (VCE) Family Nutrition Program** conducted parent nutrition education classes in each school community. **VDSS**, the SNAP administering agency, collaborated with **Xerox,** the EBT vendor, to issue summer EBT cards to households; the former also responded to inquiries.

b. Communication and collaboration between agencies and staff

VDOE, schools, and partners communicated and collaborated extensively during start-up and implementation. Overseeing the large team of schools and partners required frequent and ongoing communication from VDOE, particularly during project planning. VDOE led in-person quarterly meetings with operational partners and stakeholders, which were well represented. The quarterly meetings focused on operational design challenges, such as managing food waste, maintaining instructional time, and increasing food backpack acceptance and reducing weight. The VDOE led monthly webinars with schools and partners throughout the start-up period and the fall of the implementation period; webinars moved to a bimonthly schedule in the spring. Webinars were well attended and covered project updates, operational questions—particularly those related to the suppers—and grant and evaluation requirements. Some schools in Southwest noted the absence of structured opportunities to share their project experiences with each other, citing geographical distance barriers.

VDOE led ongoing contact with schools via phone, email, and in-person visits throughout the implementation period. Other communications between specific groups of partners increased during implementation in response to issues that needed to be addressed. VDOE, schools, food banks, the First Lady's office, and Share Our Strength collaborated for several months in fall and winter 2016 to address issues around children's satisfaction with backpack program food and backpack size and weight. In spring 2017, VDOE and the VCE program manager began planning strategies to increase recruitment for and participation in nutrition education classes; the program manager also collaborated with Richmond school principals to plan nutrition education classes.

B. Client engagement and participation

1. Communication with participants

Most households first learned of the demonstration in January 2016 after receiving notification and consent materials from schools.[30] Schools sent materials home with children or,

[30] Some households may have first heard about the demonstration through three press releases published in local newspapers in March and September 2015. At that time, the project had assigned 8 of 16 Southwest schools to the treatment group.

less commonly, distributed them at community or school events. The materials included (1) a letter from VDOE informing households about the project benefits, eligibility criteria, and the Office of the Governor's commitment to the project; and (2) a study notification and consent letter written in English and Spanish. In March 2016, households may have received project information from other sources that VDOE developed, including a project flyer for optional distribution by schools that was distributed at their discretion, and the project website, which made available newsletters and background resources in addition to descriptions of the benefits. The project used a passive consent process to allow households selected for the baseline survey to opt out of the evaluation (5 of 4,750 households opted out); however, households and their children could receive project benefits even if they opted out of the evaluation.

Households with a child eligible for summer EBT benefits first learned that their children would receive the summer EBT benefit and school year benefits (that is, school meals, the food backpacks, and nutrition education for parents and guardians) through a notification letter from VDSS in June 2016. Other households with children in treatment schools first learned their children would receive school year benefits through a notification letter that schools sent home with children at the start of the 2016–2017 school year.[31] In Richmond, schools had the option of sending children home with a letter reminding households of these benefits; VDOE provided the letter to Richmond schools in February 2017.

From the perspective of treatment households, enrollment into the Virginia 365 project's school-based benefits was automatic. Children in treatment schools did not need to do anything extra to receive school meals and food backpacks on weekends (other than choose to utilize the available benefits) because meal and backpack programs were part of school food service operations. Some households signed up for food backpacks during the winter break; for the most part, however, parents and caregivers did not need to take any additional steps for their children to receive school-based benefits. One focus group parent put it succinctly: "*I didn't have to do nothing!"* To receive nutrition education classes, parents and caregivers needed to be made aware of voluntary nutrition class offerings, show interest, and decide to attend. Initiation of summer EBT benefits required that households receive the notification letter (that is, if the household address was correct and the household opened the letter with the EBT benefit notification and card) and activate the EBT card using the PIN provided. Households could ask questions about the demonstration by calling the VDOE Office of School Nutrition Programs toll-free phone number, about the summer EBT benefit by calling one of two VDSS staff phone numbers, and about the evaluation by calling the study team's toll-free phone number and email address.

2. Project participation

This section describes the extent of program participation among all children and households eligible for Virginia 365 project benefits during the implementation period. School

[31] Some households may have learned about project benefits before the summer or start of the school year. The March and September 2015 press releases mentioned treatment status of seven schools from three school divisions. Of these seven schools, four also mentioned the treatment status in the notification letter sent home with children in January 2016. An additional four schools mentioned the treatment status only in the notification letter.

meal and backpack program benefits were universally available to children in treatment schools regardless of FRP eligibility status. Similarly, nutrition education benefits were available to all parents and caregivers of children enrolled in treatment schools. Data for the program participation analysis were available for all children and households regardless of a child's FRP eligibility status.[32] (By contrast, key outcomes for the impact analysis were available only for the evaluation sample of households with children eligible for FRP meals.) Thus, participation analyses are based on a sample of all children and households in treatment schools. Most project participation analyses were conducted at the student level because school children were the primary project beneficiaries; nutrition education participation analyses were conducted at the household level. Summer EBT benefit household participation data were not a part of the evaluation. Analyses of school meal program participation include estimates of both treatment and control groups; analyses of school backpack program and nutrition education participation include estimates for the treatment group only because management information system (MIS) data were not collected for the control group.

a. School meal program participation

Receipt of a breakfast, lunch, and snack and/or supper was calculated based on meal transactions from a single, common target day—in November 2016 and April 2017—in treatment schools. All meal transactions were free in treatment schools; control school transactions also included reduced-price and paid breakfasts and lunches. By contrast, the impact analysis of participation in Chapter III was based on surveyed households in the evaluation sample, which included only households with any children eligible for FRP meals at baseline. The participation outcome measures used in the impact analysis captured whether any children in the household received an FRP lunch or breakfast, or free supper or snack in the last 30 days, regardless of whether all children in the household were enrolled in a treatment or control school. Administrative data were unavailable for school meal program participation measures comparable to those collected in the survey, such as the percentage of school children who received at least one school meal in the last 30 days. Measurement differences may account for differences in findings between this section and Chapter III.

Only minimal differences appeared between treatment and control schools in receipt of breakfasts and lunches (Exhibit II.1). In both groups, a majority of children received a breakfast and a lunch. In the fall, 62% of children in treatment schools received a breakfast, compared to 64% of children in control schools. The rates were slightly lower in the spring, with 58% of children in treatment schools receiving breakfast and 59% of children in control schools. The rate receipt for lunches was higher. In the fall, 80% of children in treatment schools and 77% of children in control schools received lunch. The rates of receipt for lunch were similar in the spring—77% in treatment schools and 78% in control schools. Both treatment and control schools also had high proportions of children who were eligible for FRP meals based on household income when reassessed in the spring (using the fall eligibility determination). In April 2017, 89% of children in treatment schools and 87% of children in control schools were eligible for FRP meals (see Appendix Exhibit C.5).

[32] Data on student-level FRP eligibility status were unavailable, so in the analysis of program participation, it was not possible to distinguish between those eligible for FRP meals and those not eligible.

Exhibit II.1. Rates of school meals receipt based on a target day[a]

	Treatment schools (n = 19)		Control schools (n = 19)	
	Fall 2016	Spring 2017	Fall 2016	Spring 2017
On a target day[a]				
Breakfasts	62.4	57.5	64.0	59.4
Lunches	79.9	77.2	77.2	78.3
Suppers[b]	77.2	72.9	10.4	11.5
Sample size (number of children)	7,301	7,272	6,977	6,926

Source: Evaluation of Demonstration Projects to End Childhood Hunger, administrative data from demonstration school divisions and school enrollment data from VDOE, SY 2016–2017.

[a] Counts of reimbursable meal transactions were collected from schools on a single, common target day in November 2016 and April 2017. Rates are calculated as the percentage of all children enrolled in demonstration schools.

[b] Supper estimates may be overestimated because some schools that served both CACFP snacks and suppers did not distinguish counts for snacks versus suppers.

SY = school year; VDOE = Virginia Department of Education.

The largest difference between treatment and control schools was in receipt of snacks and suppers. In control schools, about 1 in 10 children received snacks or suppers in the fall (10%) and spring (12%; Exhibit II.1). In treatment schools, a majority (about 7 in 10) of children received a snack or supper. The rate was slightly higher in the fall (77%) compared to the spring (73%). A similar pattern of supper receipt is evident when reviewing monthly averages (that is, when calculating rates based on the total suppers served, number of school days, and enrolled children). On the days that suppers were served, treatment schools served suppers to 74% of children in fall 2016 and 68% of children in spring 2017 (Exhibit II.2). Control schools served suppers to about 7% of children in both fall and spring. Regarding how consistently suppers were served in a month, treatment schools served suppers on more than 90% of school days in both the fall and spring. Control schools served suppers on fewer than 50% of school days. Rates may have differed between Exhibits II.1 and II.2 due to day-to-day variation over the course of a month, and because school data may have failed to exclude counts for snacks for schools that served both snacks and suppers, possibly contributing to higher estimates in Exhibit II.1.

Exhibit II.2. Rates of suppers receipt based on administrative data from a single month

	Treatment schools		Control schools	
	Fall 2016 (n = 19)	Spring 2017 (n = 17)[a]	Fall 2016 (n = 19)	Spring 2017 (n = 19)
Suppers on an average school day, based only on school days when suppers were served[b]	74.3	67.8	7.3	7.3
Percentage of potential school days that supper was served[c]	91.7	93.5	43.2	38.2
Sample size (number of children)	**7,301**	**6,737**	**6,977**	**6,926**

Source: Evaluation of Demonstration Projects to End Childhood Hunger, administrative data from the Virginia Departments of Education and Health, SY 2016–2017. Tabulations were prepared by Mathematica Policy Research.

[a] Two treatment schools are missing the monthly number of suppers served in Spring 2017.

[b] Rates of school meals receipt on an average day were based on data reported by the Virginia Department of Health for each target month.

[c] Estimates were derived by dividing the number of school days that suppers were served by the number of school days that could potentially serve suppers, as shown in school division academic calendars.

SY = school year.

b. School food backpack program participation

Exhibit II.3 provides findings on the levels of children's participation in the Richmond treatment school backpack program overall; by school type, school site, and delivery type; and relative to the timing of changes to the food pack content, weight, and packaging. Participation data were unavailable for Southwest schools and control schools because the grantee was unable to provide the data. On average, more than half of enrolled children in participating Richmond schools received the food backpacks on a given delivery date. However, the percentage of children receiving food backpacks varied substantially by school type. More than two-thirds of elementary school children (68%) received a food backpack on a given delivery date, compared to less than one-fifth of middle school children (14%), though 78% of the children enrolled in Richmond treatment schools were in elementary schools. Children's participation by school site was even more wide ranging, with rates at the nine treatment schools ranging from 9% to 83% of children receiving a food backpack on a given delivery date.

Several factors may have contributed to low participation. Feedback from children across Richmond schools demonstrated that some of them did not take the food backpacks home because they did not want them, parents did not want them, or the food backpacks were too heavy to carry. Older children were more likely than younger children to have the option of taking home food backpacks; therefore, they may have been more prone to be influenced by negative peer attitudes and stigma. One caregiver with two children in a treatment school described how only the younger child took the food backpack because the older child did not think it was cool. One school division reported using a strategy to address stigma in older children; the school moved the food backpack distribution to a location where children were less likely to be seen taking a food backpack.

Exhibit II.3. Children's participation in the school backpack program from November 2016 to June 2017 (Richmond)[a]

	Average number of Richmond children who received food backpacks at each delivery	Number of enrolled Richmond children	Average percentage of Richmond children that received food backpacks at each delivery
Overall	2,457	4,369	56.2
By school type			
Elementary schools	2,330	3,426	68.0
Middle schools	127	943	13.5
By school (range)	42 to 550	274 to 690	8.7 to 83.0[c]
By delivery type[b]			
Regular deliveries	2,438	4,369	55.8
Other deliveries	2,536	4,369	58.0
Before and after contents changed[d]			
Before mid-February 2017	2,646	4,369	60.6
Mid-February 2017 and after	2,321	4,369	53.1

Source: Evaluation of Demonstration Projects to End Childhood Hunger, Virginia 365 backpack program data and Virginia Department of Education school enrollment data, 2016–2017. Tabulations were prepared by Mathematica Policy Research.

Notes: All children in treatment schools were eligible to participate in the backpack program. Data were unavailable for Southwest schools.

[a] Data were unavailable for the first eight weeks of the Richmond school year.

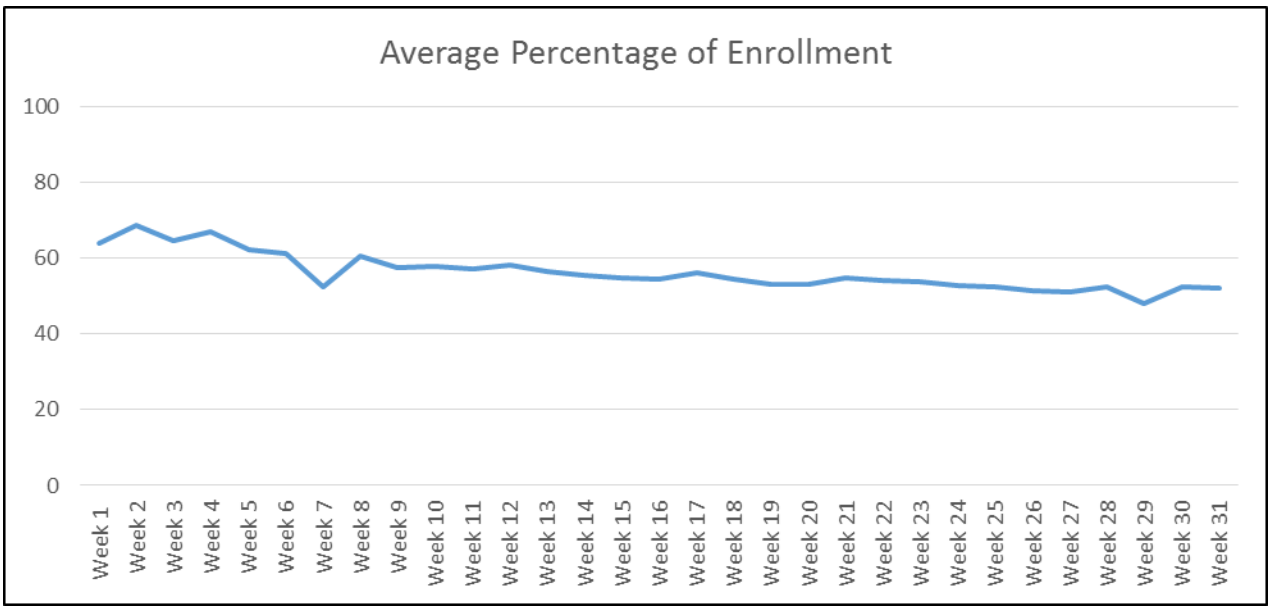
[b] Regular deliveries are defined as Friday deliveries that included two food packs to cover two weekend days. Other delivery occasions included those before long holiday weekends; Thanksgiving, winter break, and spring break; and deliveries to cover the remainder of the week after the last day of school. Data were unavailable for deliveries during winter break.

[c] Percentage estimates are derived from enrollments not presented in the table.

[d] In mid-February 2017, the food banks changed the food pack contents to increase their appeal among children, decreased the weight, and replaced re-sealable plastic zipper storage packs with hand-carry grocery bags.

Project staff observed that participation trends steadily declined after the fall months and then reached a relatively steady state. These observations are supported by Richmond participation data showing what percentage of enrolled children received food backpacks. (Data were unavailable on the number of food backpacks distributed to children in Southwest schools.) Participation in Richmond was highest at the beginning of the school year (Exhibit II.4). Between 64% and 68% of children received food backpacks in an average November delivery, compared to a range of 48% to 52% in an average June delivery. In February 2017, children received food backpacks with new types of foods, pack weights were reduced by 0.5 pounds, and the packs were in hand-carry bags that did not need to fit inside of backpacks. In Richmond, however, these changes did not appear to sustain satisfaction among participating children or re-engage nonparticipating children in the backpack program. Average participation was higher before the change (61%) than after (53%; Exhibit II.3), and the level of participation was relatively flat between January and March (Exhibit II.4). Nonetheless, focus group discussants interviewed at the end of the school year highlighted their children's steady participation and satisfaction with the food provided in the backpack program, noting that the food was kid-friendly and children could prepare it by themselves. One grandmother said, "*I tell [my grandson], 'Don't forget that on Fridays,' you know, cause he really wants it and it's helped me out a whole lot, too…"* A mother said*, "Even with my nine-year old, she'll pop that top off the corn ... put it in a bowl and put it in the microwave. Everything in that bag they can cook on their own."*

Exhibit II.4. Average weekly percentage of enrolled Richmond children that participated in the school backpack program from November 2016 to June 2017



Source: Evaluation of Demonstration Projects to End Childhood Hunger, Virginia 365 backpack program data and Virginia Department of Education school enrollment data, 2016–2017. Estimates were prepared by Mathematica Policy Research.

Notes: All children in treatment schools were eligible to participate in the backpack program, but data were unavailable for Southwest schools. Data were unavailable for the first eight weeks of the Richmond school year.

Data were available in both Richmond and Southwest on the proportion of enrolled children that may have potentially received food backpacks based on the number of food backpacks delivered—in other words, the percentage of children potentially targeted to receive food backpacks. The percentage decreased between January and June of the 2016–2017 school year in Richmond and varied widely in Southwest (see Appendix Exhibit C.6). These findings suggest that the number of children targeted to receive food backpacks tapered off in Richmond schools because of decreased demand, and changed dramatically from one delivery to the next in Southwest schools because of erratic demand. Indeed, in Richmond, participation slowly declined through the end of the school year (Exhibit II.4). In Southwest, however, it is likely that spikes and dips in the proportion of children targeted over time were driven by less intensive monitoring of children's demand, coupled with schools' capacity to store food backpacks for distribution at a later time (giving schools the flexibility to approximate or not specify order quantities).

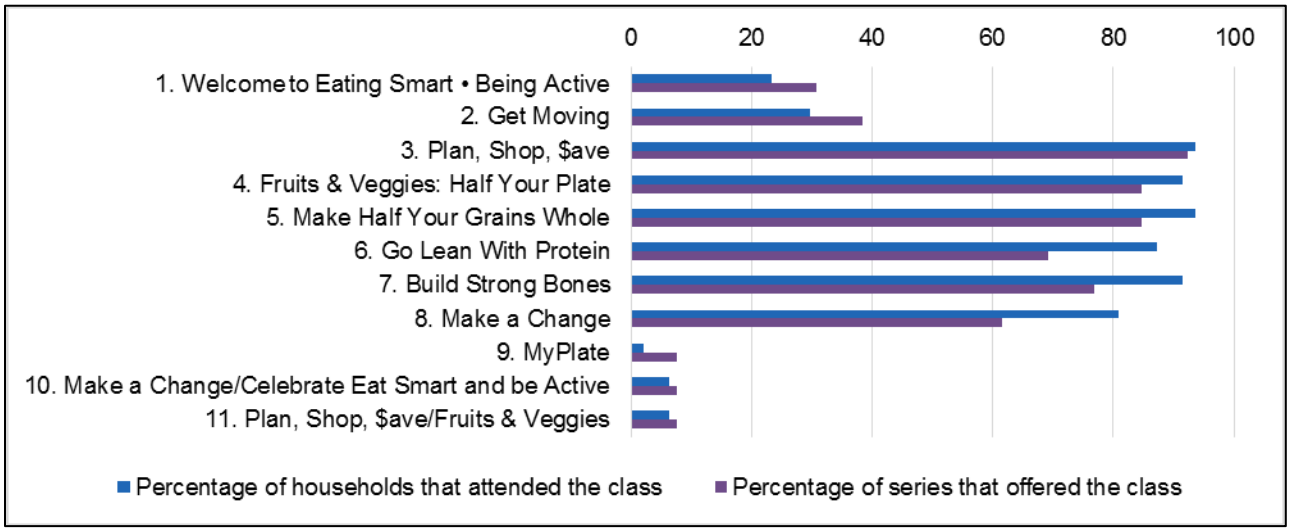
c. Nutrition education outreach and participation

This section describes the nature of the nutrition education provider's outreach to engage households and the proportion of households that attended any nutrition education classes. Nutrition education outreach and participation data were collected throughout the implementation period by the nutrition education provider (see Appendix B.5 for a description of data collection methods).

The nutrition education outreach effort was low; as a result, less than 1% of targeted households attended a nutrition class (Appendix Exhibits C.7 and C.8). Program assistants used a single outreach attempt per nutrition class series to market nearly all (92%) of the series. Most outreach methods involved recruiting households at a community event (39%) or distributing a flyer to treatment school communities (39%). No focus group discussant had heard about or attended a class, although discussants expressed interest. Staff described the lack of tailored marketing as a key barrier to recruitment and uptake. Recruitment efforts appeared more successful, according to one staff member, when "*Parents ... saw the link to nutrition education making them a better parent*." Additional barriers involved issues with staff capacity, such as vacancies and competing demands of work other than Virginia 365.

The 47 households that attended classes from any of the 13 nutrition class series showed sustained commitment, with 89% attending six or more of the eight classes and 23% attending all eight classes. Whether a household attended all or most classes in a series was primarily a function of whether the series offered all or most of the various classes. Exhibit II.5 displays how the percentage of households that attended a class on a particular topic was similar to the percentage of series that offered a class on that topic. "Plan, Shop, $ave" (as provided in Topics 3 and 11) was the only class attended by all households and offered in all 13 series. "Plan, Shop, $ave" focused on how households can stretch food dollars; the availability of this class in every series aligned with the project's stated goal of teaching parents and caregivers how to shop for healthy foods on a tight budget. The two class topics ordered first in the series—"Welcome to Eating Smart Being Active" and "Get Moving"—were offered and attended least, suggesting that some staff chose to exclude them or teach them only if the series generated a sustained turnout. All households in Richmond completed all eight classes in all 3 series conducted in Richmond, whereas Southwest class attendance and availability varied (Appendix Exhibit C.8). Thirteen percent of households in Southwest attended between one and four classes; this low turnout may have prompted staff to conduct some series only partially. Although the child care and transportation vouchers were available upon request, no attendees made use of these (data not shown).

Exhibit II.5. Comparison of nutrition education class attendance and availability in SY 2016–2017



Source: Evaluation of Demonstration Projects to End Childhood Hunger, Virginia 365 nutrition education data, SY 2016–2017. Estimates were prepared by Mathematica Policy Research.

SY = school year.

C. Successes and challenges in the design and implementation of Virginia 365

A major success of the Virginia 365 project was that schools provided children with a free school supper at the end of the school day and food backpacks before weekends and school breaks—the culmination of extensive planning and hard work by the schools, VDOE, partners, and stakeholders. Additionally, the project bridged the school meal nutrition assistance gap during summer months by providing the majority of low-income households with additional summer EBT benefits. Successfully implementing these project components was central to Virginia's model of reducing children's food insecurity 365 days a year and turning schools into food hubs meant to provide children with access to food where they live, learn, and play. Major project challenges included managing supper and backpack program leftovers and waste, and engaging households in nutrition education. Locating FRP-eligible households that were targeted to receive the summer EBT benefit was also a key challenge when schools did not have accurate contact information for households. [33] This section expands on factors that contributed to these successes and challenges, and lessons that might have improved service delivery. Some of the successes and challenges relate to Virginia 365's design (that is, decisions around what to distribute to whom and how); others relate to implementation (the ability to execute those plans).

1. Successes: What worked well and why?

Schools successfully integrated schoolwide supper and backpack programs into their school operations. This success shows how project staff overcame a major operational challenge, and

[33] The successes and challenges associated with implementation of the summer EBT benefits were previously reported (Cabili and Jacobson 2016; Cabili and Melia 2017).

how project staff and participants valued the removal of individual certifications for participating in school nutrition programs.

- **VDOE, schools, and partners perceived the delivery of supper and backpack program benefits as a major operational undertaking and accomplishment.** Project staff reported that the success "*is the fact that we pulled it off*," that the benefit "*has come to fruition*," that staff "*see it implemented and happening*," and that "*we were able to find a way to make it work*." Although some participating schools operated the CACFP At-Risk Afterschool Meals component program or worked with other organizations to operate backpack programs before project implementation, the Virginia 365 project required that schools expand the provision of benefits to all children and, for suppers, make them available to all children before they left for home. Schools reliably administered benefits once instituted. Focus group discussants liked their dependability, expressing relief that their children received the suppers every school day and food backpacks every weekend. One discussant noted, "*With this program, you know the child is going to get it [food], so that makes it totally different from the other things*." The food banks, schools, and community volunteers were critical to the success of backpack program operations. They became project partners at the inception of the planning period and remained committed through the planning period. Schools and project staff continued to make course corrections throughout the year to smooth out operations and improve children's acceptance of the benefits. Meanwhile, VDOE monitored and incorporated feedback to improve implementation. As evidence of their ongoing work, schools did not plan any major modifications to supper and backpack program operations in the second demonstration year (SY 2017–2018).
- **The universality of school-based benefits helped households that did not meet income requirements for other benefits, but struggle to secure enough funds to provide adequate food for their families.** One focus group discussant said, "*Even with the [SNAP] EBT and stuff like that. You have to qualify for that... I don't, but that doesn't mean that like I have all this money… I have bills, too, and I need help, too, and this is something that you don't have to qualify for, you just, you can get it. That's what I like about it*." This inclusive delivery method left discussants feeling that Virginia 365 was a benefit received simply because "*You're here*."

2. Challenges

- **Participating schools experienced the key challenge of reducing and managing supper and backpack program leftovers and waste.** [34] Project staff noted that children did not eat or drink all of the items provided in the supper, perhaps because they were sated after lunch or because of food preferences. Children would take a supper but then only pick at items because they were not hungry or eat only the items they liked the most. Project staff observed, for example, "*They always want the juice*." "*Children will eat the fruit and milk and throw the sandwich out…they are looking for the sugar rush*." Project staff also discussed how stigma and negative peer influence contributed to some older children not taking the food backpacks home on weekends. One school staff member said that at their

[34] School meal waste is reported to be a common problem for SBP and NSLP, with nearly one-third of food being wasted (USDA 2018b). Research indicates that nearly one pound of food is wasted per person per day, with fruits, vegetables, and dairy products accounting for over half of that waste (Conrad et al. 2018).

school "you have a small group of the upper echelon children [5th graders], who want to say "ew, don't eat that" just to be that way." Also, some parents asked that children not bring the food backpacks home because the families did not need the food, whether due to stigma, a lack of need, or other reasons. Schools implemented strategies to at least partially address this challenge. To address waste from suppers, many schools in Southwest used share tables, on which children put food they did not want to eat and other children could then take this food. Some schools in each region saved supper leftovers and served them at supper the following day. Others established a partnership with a local food bank to collect leftover food each week.[35] To reduce the build-up of large quantities of leftover food backpacks from the backpack program, food banks established weekly communication with each school to determine how many food backpacks to deliver that week.

- **The project provided fewer nutrition education classes and experienced lower household participation than planned because of recruitment and outreach challenges.** Project staff attributed recruitment challenges to several factors, although a lack of tested, tailored, and branded marketing strategies ranked as most important. For example, the staff used branding and language that could have been perceived as unfavorable or intimidating (for example, the words "class" or "nutrition education"), as well as incentives and lessons of low value (for example, measuring cup and cutting board giveaways, preparation of only a snack versus a meal). Although the outreach methods used did generate some interest and excitement, they did not produce the desired class turnout. In addition, inadequate staff capacity also may have contributed to recruitment shortages and subsequent lack of awareness among targeted parents and caregivers; some program assistant positions were vacant during the implementation period. Focus group discussants expressed interest in nutrition education, but none had heard about classes through Virginia 365. Finally, although not discussed with staff or in focus groups, some parents who did learn of the classes may have been interested in attending but could not overcome logistical barriers, such as rearranging their schedules or taking time off work. Project staff highlighted the first year of nutrition education implementation as a "learning year" and aimed to improve and increase recruitment in the second year. To this end, they planned to coordinate with school points of contact who were strong advocates of the nutrition education benefit and had time to assist with recruitment; employ motivational marketing strategies to help parents and caregivers link their participation to helping their families; and increase the appeal of nutrition classes by using interactive approaches with the whole family, preparing full meals, and offering valued incentives such as cookware.

3. Recommendations and lessons learned from staff and households

Virginia 365 staff and household parents and caregivers suggested several ways to streamline and improve benefit service delivery. Project staff recommendations and lessons focused on the school supper program, and involved issues of food service staffing and the need for school staff flexibility and buy-in. Focus group discussants recommended that the backpack program provide family-sized portions, recipes, and dietary accommodations.

[35] Share tables, re-serving particular kinds of leftovers during a later meal service, and donating leftover food are FNS-approved CACFP practices for managing supper waste (FNS 2016b).

- **Potential food service staff were reluctant to apply for afternoon shifts.** Interviewed school division staff reported that part-time hours (for example, the 12:00–4:00 p.m. shift) with low pay and no employee benefits deterred applicants for food service positions. The afternoon timing of shifts impeded hiring new staff and adding hours to existing staff schedules because staff wanted and needed to attend to their families and other responsibilities at the end of the day. In some cases, schools dealt with the shortage of applicants by extending the hours of existing staff or hiring volunteers. However, these arrangements were not sustainable. In the case of food service staff, the longer work day was taxing and inconvenient. For example, some food service staff worked morning and afternoon shifts at different schools, which required commuting between schools using public transportation. Also, locating reliable volunteers and managing them without a designated volunteer coordinator was difficult. One recommendation for hiring and retaining employees was to emphasize the need for afternoon shift workers during recruitment.
- **School staff needed to be flexible and adaptable as they operated the supper program.** Even after supper program procedures were established, staff had to be ready to make case-by-case accommodations on atypical days, such as those when children went on field trips or staff were absent. Unplanned staff absences and abrupt vacancies were difficult to accommodate because, as one school staff respondent said, "*We are very thin on labor."* It was resource intensive to locate replacements and, in some cases, for the replacements to perform multiple duties (for example, a principal would need to operate the cash register to count supper transactions).
- **Schools might not have achieved universal buy-in from teachers and principals for the supper program.** The primary concerns among teachers and administrators were lost instructional time and/or the logistical planning and resources required to offset that lost time (such as altering bus schedules). In challenging school environments, suppers served in the classroom were sometimes disruptive because they made messes and teachers lacked janitorial assistance in cleaning up. Similar disruptions when serving breakfasts in the classroom were not perceived as negatively because teachers saw that children liked the breakfasts more than the suppers. In the second year of implementation, VDOE planned to focus on improving the understanding of how important school suppers are to children's academic success. One State respondent said "*Nutrition is as important as education*."
- **It would have helped if the backpack program included family-sized food backpack portions and recipes for new ways to prepare the food, and also accommodated special dietary needs.** Discussants wanted backpack program benefits to feed every child in the household. One discussant talked about sharing between siblings. *"My [four] kids all go to different schools, so I only have one that receives it out of that four… [My younger girl] always wants this out of his bag and [my eldest son] is like, 'I was going to eat that but I guess…' Sometimes I feel like he gives up just because she's younger."* Discussants recommended family-sized cans of vegetables they could use for meal preparation, rather than a single-serve portion. One discussant said, *"The bags are fantastic, I love them. But if they can make the cans bigger, make it enough for the family, not just for that child that's receiving that bag… To a regular size can that way you can make more of a meal."* In Richmond, discussants wanted recipes for preparing some food backpack items in new ways and also wanted to know how to prepare some of the fresh produce items received over winter break. One discussant noted, "*I would love… [for Virginia 365] to send recipes home*

so we'll know how to make things. All I know is how to pop a can open and put it in the microwave and warm it up." Discussants noted that food options were lacking for children with diabetes and food allergies.

D. Cost of implementing Virginia 365

Virginia 365 costs

Labor costs accounted for 9% of the total costs, other direct costs (ODCs) accounted for 2%, and partner or contractor costs accounted for 89%.

School divisions incurred 56% of the total partner costs, but most were in the form of reimbursable CACFP benefits for providing suppers.

The objective of the cost analysis was to describe the resources required to launch and sustain the Virginia 365 project, and estimate the cost of those resources (in dollar terms). Analysis of project costs was based on a detailed listing of all resources that grantee staff and partners used to deliver the Virginia 365 project. Appendix B.5 describes the methods used for the cost study.

The following sections present the costs of implementing Virginia's 365 project. Section D.1 presents total project costs for VDOE and key partners by time period. Total costs include both the administrative costs of implementing the Virginia 365 project and those associated with delivering project benefits to children and households (namely, suppers, [36] food backpacks, parent nutrition education, summer EBT benefits, and planning and design). To reduce reporting burden, indirect cost information was not collected. Exhibit II.6 shows the types of project costs incurred for each implementing agency. Section D.2 presents a breakdown of partner and contractor costs, distinguishing between those that are administrative and the cost of providing direct benefits to households and students. Section D.3 presents grantee and partner costs associated with delivering benefits to children at school. All sections distinguish between start-up costs (those associated with preparations for the provision of project benefits incurred during the project start-up period of February 1, 2015 to June 7, 2016) and implementation costs (those that are ongoing and associated with providing services during the first year of the implementation period from June 8, 2016 to June 16, 2017). All costs reported in these sections include both paid costs and the estimated value of donated or in-kind resources.[37]

[36] The costs of providing NSLP and SBP meals, for which school divisions received Federal reimbursements, are not included. Treatment schools that served free meals to children certified for paid and reduced-price meals were reimbursed from Federal funds at the free reimbursement rate, leading to increased Federal reimbursement costs. For example, children certified for paid meals required an additional $2.86 per lunch and $1.75 per breakfast in Federal reimbursements to school divisions, and children certified for reduced-price meals required an additional $0.40 per lunch and $0.30 per breakfast based on the USDA Federal reimbursement rates to severe need school divisions during the 2016-17 implementation school year (FNS 2018e). These costs are not included because this study aimed to assess the costs associated with newly adopted project benefits as a result of project implementation, and the NSLP and SBP programs were already operational in all treatment schools, with over half of treatment schools already providing universal free meals. Nearly all of the children who received free school breakfasts or lunches in treatment schools would have received them even if they were in control schools and did not get project benefits.

[37] Information on the value of donated or in-kind resources, including donated labor, was requested but not reported consistently. Based on information obtained during site visits, it appears that a modest amount of volunteer labor (an estimated value of approximately $23,000 for school divisions and $1,500 for VDOE) was used during the implementation of this project, but these costs were not reported. As a result, the donated and in-kind costs reported in this section are likely underestimated.

Exhibit II.6. Virginia 365 cost overview

	Grantee	Partners or contractors				
Type of cost	VDOE	School divisions	Food banks	VCE	VDSS and EBT vendor	Other partners[a]
Administrative (labor and ODCs)[b]	X	X	X	X	X	X
School-based benefit	X (Administrative support)	X (CACFP Suppers)[c]	X (Food backpacks)	NA	NA	X (Planning and design)
Household-based benefit	X (Administrative support)	NA	NA	X (Nutrition education classes)	X (Summer EBT benefit)	NA

[a] Other partners include Share Our Strength, No Kid Hungry Virginia, and other community partners and State agencies.

[b] Administrative costs for VDOE were analyzed separately as labor costs and ODCs. Administrative costs for all other partners and contractors were analyzed overall.

[c] Schools divisions also incurred costs for serving free NSLP and SBP meals, for which they were Federally reimbursed, but these costs are not included in this analysis.

CACFP = Child and Adult Care Food Program; EBT = electronic benefits transfer; ODC = other direct costs; VCE = Virginia Cooperative Extension; VDOE = Virginia Department of Education; VDSS = Virginia Department of Social Services.

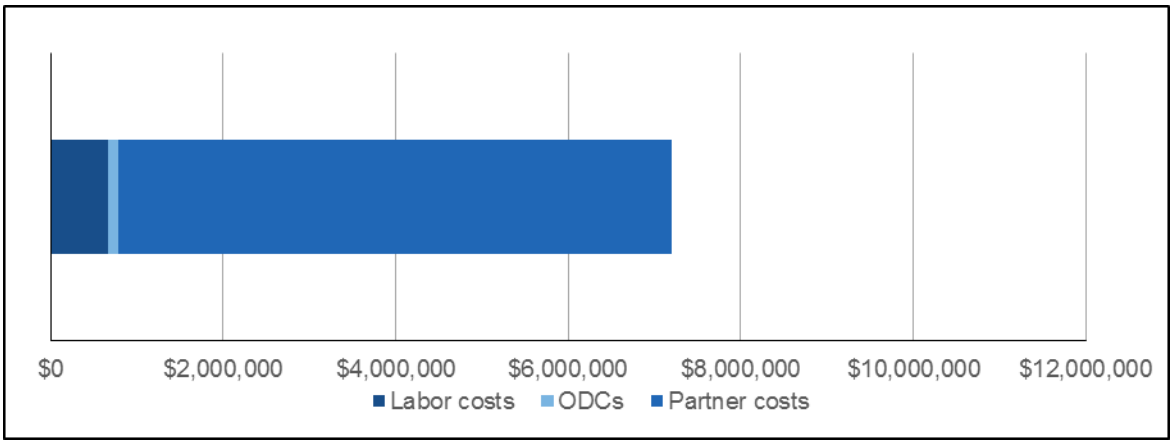
X = included; NA = not applicable.

1. Total and component costs, by time period

The Federal grant award was $8,803,902. Although not part of the grant award, school divisions incurred costs of $3,052,963 in the provision of the CACFP program that were reimbursed from Federal funds as a part of the At-Risk Afterschool Meals component. Between the grant award and reimbursable CACFP supper funds, the project had $11.9 million in available funding. Including the costs of CACFP expenditures, the project's total paid cost equaled $6,905,686 (58% of the total available funding). Excluding the cost of the estimated value of donated or in-kind resources and CACFP expenditures, the project's total paid cost equaled $3,852,723 (44% of the Federal grant award). The difference between the project's funding and expenditures is due mainly to the time period for the evaluation. The project plans to continue its implementation spending for one year beyond the evaluation period (through June 2018).

Including the estimated value of donated or in-kind resources, total cost equaled $7,200,633. Exhibit II.7 shows the total cost per component for the start-up period and implementation in the first school year. Labor costs accounted for $672,974 (9%) of the total costs, whereas other direct costs (ODCs) accounted for $115,940 (2%), and partner or contractor costs (including those incurred by school divisions for Federally reimbursed suppers) accounted for $6,411,718 (89%). Only 5% ($294,947) of partner or contractor costs were donated to the project, most of which (91%) were provided during the implementation period. These donated supports represent 4% of total costs. More detailed cost information is presented in Appendix Exhibit C.9 and Appendix Exhibit C.10.

Exhibit II.7. Total costs, by component



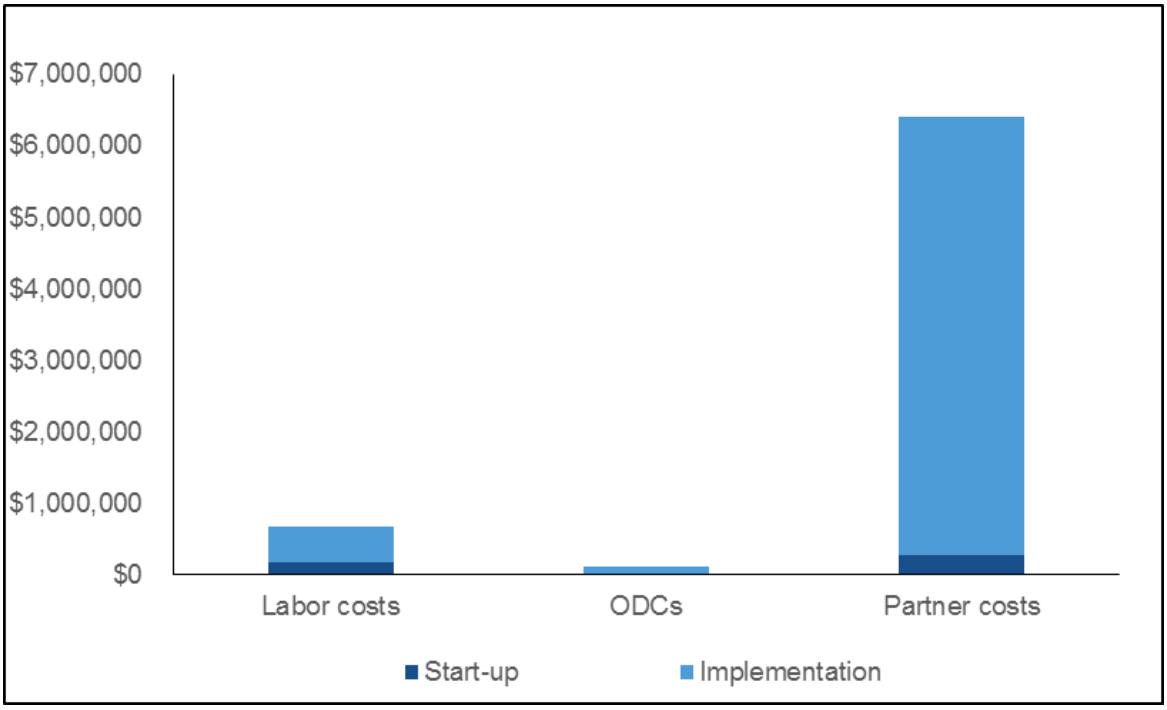
Source: Virginia 365 cost data collection instruments and site visit interviews. Estimates were prepared by Mathematica Policy Research.

Note: The costs displayed exclude those of grantee services in the second school year through June 2018 and those associated with closing out operations. Estimates include both paid costs and the estimated value of donated or in-kind resources. Partner costs include those incurred by school divisions (most in the form of Federally reimbursed CACFP suppers), food banks, VCE, VDSS and the EBT vendor, and other partners.

CACFP = Child and Adult Care Food Program; EBT = electronic benefits transfer; ODC = other direct costs; VCE = Virginia Cooperative Extension; VDSS = Virginia Department of Social Services.

Exhibit II.8 shows the total start-up and implementation costs for each component. Start-up costs accounted for 6% of the total project costs; they included 27% of the total labor costs, 9% of the total ODCs, and 4% of the total partner or contractor costs. Implementation costs accounted for the remaining 94% of project costs.

Exhibit II.8. Total start-up and implementation costs, by component



Source: Virginia 365 cost data collection instruments, MIS data, and site visit interviews. Estimates were prepared by Mathematica Policy Research.

Note: Start-up costs cover February 1, 2015 to June 7, 2016. Implementation costs cover June 8, 2016 to June 16, 2017 for the first school year. The costs displayed exclude those of grantee services in the second school year through June 2018 and those associated with closing out operations. Estimates include both paid costs and the estimated value of donated or in-kind resources. Partner costs include those incurred by school divisions, food banks, VCE, VDSS and the EBT vendor, and other partners.

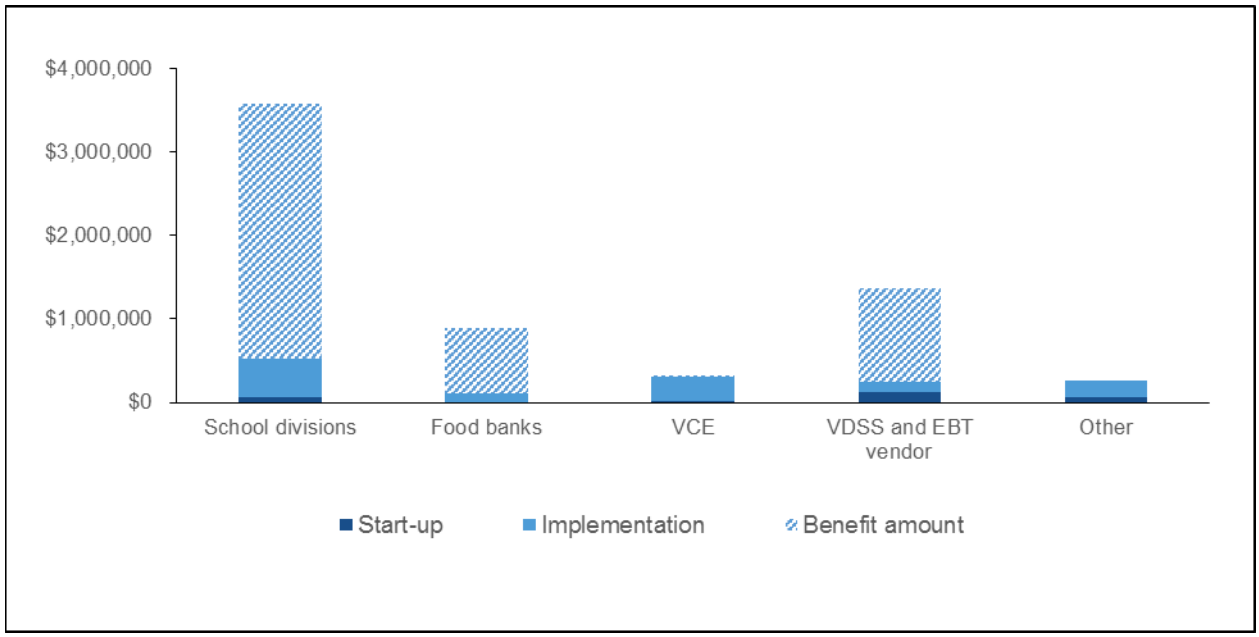
EBT = electronic benefits transfer; MIS = management information system; ODC = other direct costs; VCE = Virginia Cooperative Extension; VDSS = Virginia Department of Social Services.

2. Partner and contractor costs

This section describes the total start-up and implementation costs for each Virginia 365 partner or contractor.

Exhibit II.9 shows the total start-up and implementation costs for each partner or contractor, including implementation period costs of suppers distributed by school divisions, food backpacks distributed by food banks, nutrition classes and incentives provided by VCE, and SNAP benefits placed on summer EBT cards by VDSS and the EBT vendor. School divisions incurred 56% of total partner costs, but most of these costs were in the form of Federally reimbursed suppers. VDSS and the EBT vendor incurred 21% of partner costs, food banks incurred 14%, and VCE and other partners or contractors incurred the remaining 9%.

Exhibit II.9. Total start-up and implementation costs, by partner or contractor



Source: Virginia 365 cost data collection instruments, MIS data, and site visit interviews. Estimates were prepared by Mathematica Policy Research.

Note: Start-up costs cover February 1, 2015 to June 7, 2016. Implementation costs cover June 8, 2016 to June 16, 2017. The grantee provided services through June 2018, so the costs reported here do not include those associated with closing out operations.

Estimates include both paid costs and the estimated value of donated or in-kind resources.

The benefit amount represents the cost of suppers distributed by school divisions, food backpacks delivered by food banks, nutrition classes and incentives provided by VCE, and SNAP benefits placed on summer EBT cards by VDSS and the EBT vendor. Benefit amounts for nutrition classes and incentives provided by VCE were estimated based on program assistant salary rates, the number of class hours, and the cost of class materials and incentives.

EBT = electronic benefits transfer; MIS = management information system; VCE = Virginia Cooperative Extension; VDSS = Virginia Department of Social Services.

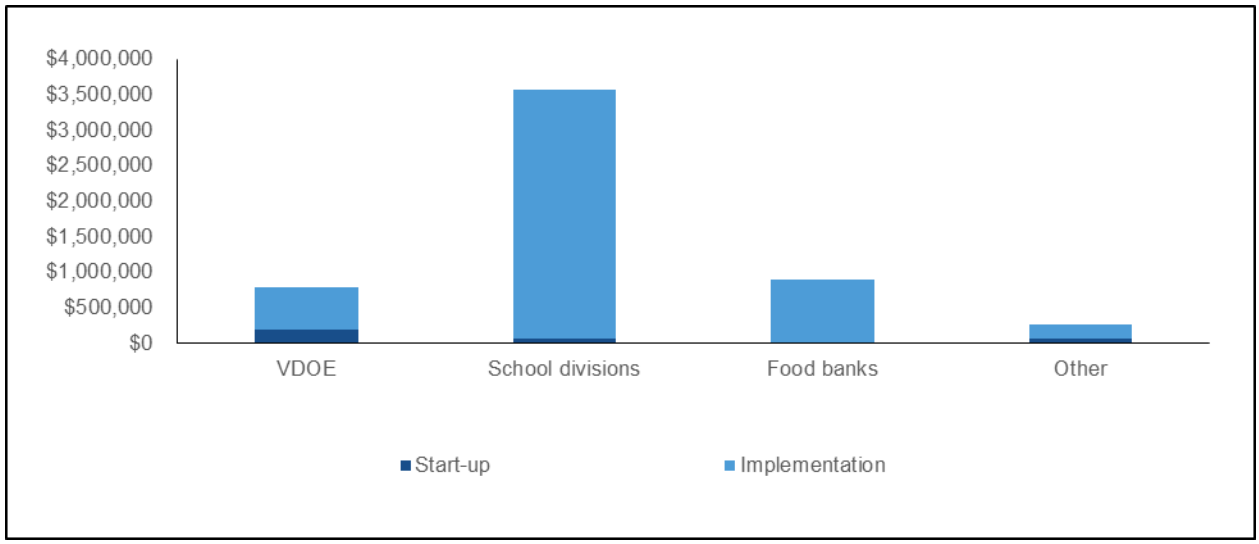
3. Costs of school-based benefits for children

During the evaluation period, the Virginia 365 project supported 7,274 children with school- and household-based benefits. To describe per-child costs, this section limits its focus to those

incurred by entities that collaborated in delivering benefits to children at school (VDOE, school divisions, food banks, and other partners and contractors) and excludes those incurred by partners and contractors delivering benefits to household parents and caregivers (VCE, VDSS, and EBT vendors). Including VDOE costs with school-based benefits for children may overestimate totals because the majority of VDOE costs—although not all—were associated with supporting schools and partners in the planning and delivery of school-based benefits for children.

Exhibit II.10 shows the total start-up and implementation costs for each entity that provided a school-based benefit to children enrolled in treatment schools. Taken together, these entities provided $5,519,451 in school-based support. If the cost of CACFP suppers is included, school divisions incurred 65% of school-based costs. Almost all school-based costs (94%) were incurred during the implementation period.

Exhibit II.10. Total start-up and implementation costs (school-based benefits only)



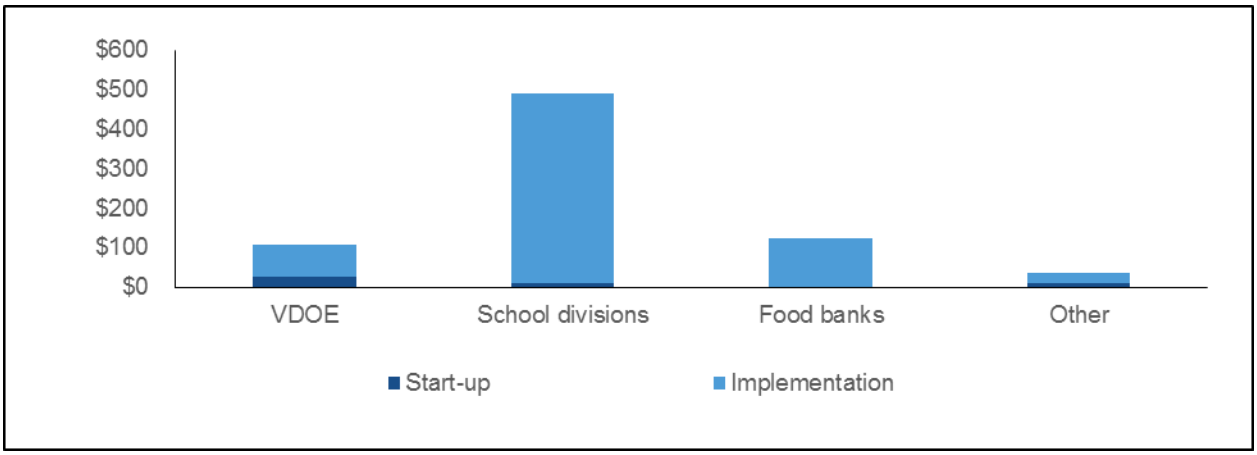
Source: Virginia 365 cost data collection instruments and site visit interviews. Estimates were prepared by Mathematica Policy Research.

Note: School-based benefits include all costs associated with delivering benefits to children at school. Start-up costs cover February 1, 2015 to June 7, 2016. Implementation costs cover June 8, 2016 to June 16, 2017. The grantee provided services through June 2018, so the costs reported here do not include those associated with closing out operations. Estimates include both paid costs and the estimated value of donated or in-kind resources.

VDOE = Virginia Department of Education.

Exhibit II.11 shows similar data representing costs per child. Including start-up and implementation phases, entities providing school-based benefits gave $758 of support per child, which translates to an average of roughly $27 per child per month (assuming 28.5 demonstration months between February 1, 2015 and June 16, 2017). On average, VDOE provided $108 of support per child through the end of the first school year, food banks provided $123, school divisions provided $491, and other partners provided the remaining $36.

Exhibit II.11. Per-child start-up and implementation costs (school-based benefits only)



Source: Virginia 365 cost data collection instruments and site visit interviews. Estimates were prepared by Mathematica Policy Research.

Note: School-based benefits include all costs associated with delivering benefits to children at school. Start-up costs cover February 1, 2015 to June 7, 2016. Implementation costs cover June 8, 2016 to June 16, 2017. The grantee provided services through June 2018, so the costs reported here do not include those associated with closing out operations. Estimates include both paid costs and the estimated value of donated or in-kind resources.

VDOE = Virginia Department of Education.

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III. THE IMPACTS OF THE VIRGINIA 365 PROJECT ON FOOD SECURITY AND OTHER OUTCOMES

This chapter describes the households in the Virginia 365 project and the project's impacts on child food insecurity and other outcomes during the first school year. It first describes the baseline characteristics of households in the evaluation sample. The chapter then presents evidence on how the project affected outcomes for these households during the implementation period, including their SNAP receipt and food spending patterns; indicators of the households' food insecurity; and other outcomes, such as their participation in other nutrition assistance programs. Data sources are detailed in Appendix B. In brief, the baseline and follow-up surveys were the data sources used to support the impact analyses. The survey response rate at both baseline and follow-up was 62% (see Appendix A).

A. Household characteristics at baseline

This section reports the baseline characteristics of consenting households that responded to the baseline survey conducted in the period February–May 2016. Baseline characteristics are presented in Exhibit III.1[38] and are discussed in greater detail below. Estimates were weighted to be representative of the population of households in the Virginia 365 project demonstration areas that met the project's eligibility criteria—households with children eligible for FRP school meals attending a set of schools with low academic performance and more than half of enrolled children eligible for FRP meals. Appendix A presents supplemental exhibits on household characteristics at baseline, including a comparison of these baseline characteristics for the treatment and control groups, showing that the characteristics were similar across these groups for the households that completed the follow-up survey.[39] Appendix B presents further methodological detail about the survey and its administration.

1. Baseline household demographic characteristics and socioeconomic status

Household size was calculated as the number of household members who customarily share food by purchasing and preparing meals together—the SNAP definition. The mean household size was 4.1 members. On average, 2.3 of the household members were children, defined as 18 years old or younger, or still in high school if older than age 18. Twenty-seven percent of households had one child, 37% had two children, and 36% had three or more children. The mean number of children per household enrolled in a demonstration school was 1.9. Households were predominantly non-Hispanic black (46%) and non-Hispanic white (42%) (Briefel et al. 2018).

Median household income (before taxes) in the last 30 days was $1,582. Sixty percent of households had incomes at or below the Federal poverty line (FPL), including 5% that reported no income.[40] Seventy-one percent of households reported income at or below 130% of the FPL—the threshold used to certify children to receive free school meals; an additional 11% had

[38] Analytic sample sizes in exhibits vary according to the questions included in each exhibit. Specifically, the sample sizes in a given exhibit reflects the sample for the highest non-missing survey data element in that exhibit.

[39] Characteristics of households at follow-up are also presented in Appendix A.

[40] The poverty threshold for a family of four in 2016 was $24,563 (U.S. Census Bureau n.d.), or $2,047 per month.

incomes above 130% but at or below 185% of the FPL—the income range used to certify children to receive reduced-price school meals. Eighteen percent of households had incomes above 185% of the FPL.[41] Nearly 70% of households had at least one adult who was employed in the last 30 days. Respondents also reported receipt of various sources of income from non-wage sources. Twenty-two percent of households received Social Security, 18% received Supplemental Security Income (SSI), and 17% received child support payments. Forty-four percent of households did not receive any income from non-wage sources.

2. Baseline participation in nutrition assistance programs

Nearly half (47%) of respondents said the household received SNAP benefits in the last 30 days. Participation was lower for WIC (13%), as was receipt of assistance from a food pantry, emergency kitchen, or community program (11%).[42]

3. Baseline food security status

Reducing FI-C was the key objective of the Virginia 365 project. Nationally, 17% of all households with children in the United Sates experienced food insecurity (FI-HH) in 2016 (Coleman-Jensen et al. 2017). In addition, 8% of households of all income levels with children experienced FI-C, as did 18% of families whose children were income eligible (that is at or below 185% of the FPL) for FRP lunch. A smaller proportion of households experienced very low food security among children (VLFS-C). In the full population, 0.8% of all income level households experienced VLFS-C (2% of families whose children are income eligible for FRP lunch). Exhibit III.1 shows the baseline food security status over the past 30 days of among households, adults, and children in the evaluation sample (Appendix A shows these characteristics separately by treatment status). Before implementation, 35% of households experienced food insecurity. Thirty-two percent of households experienced food insecurity among adults, and 22% experienced FI-C. Rates of VLFS, a subcategory within the food insecure category, were 16%, 15%, and 3%, respectively, among households, adults, and children.

4. Baseline monthly food expenditures

Respondents were asked about their household spending on food in the last 30 days; mean out-of-pocket expenditures per person were calculated based on their responses. On average, households spent a total of $98 per person per month on food, excluding purchases made with SNAP and WIC. Respondents reported spending an average of $74 per person out of pocket on food purchased at supermarkets, grocery stores, or other types of stores, and an average of $26 per person at restaurants.

[41] Households were eligible for the evaluation sample if the children in the household received FRP meals or attended a school that participated in CEP. Households with relatively higher incomes may have had children attending a CEP school, or their income information reported in the survey (based on the last 30 days) may have differed from the meal certification status of the children provided in the school records used for sampling.

[42] Households were asked if any household member received, in the last 30 days, food or meals from food pantries, food banks, local soup kitchens or emergency kitchens, community program, senior center, shelter, Meals on Wheels or other programs delivering meals to the respondent's home, or church.

Exhibit III.1. Household characteristics at baseline

Characteristic	Mean or percentage (SE)
Household size	
Mean number of household members who share food	4.1 (0.03)
Mean number of children in household	2.3 (0.03)
Number of children	
1 child	27.1
2 children	37.0
3 or more children	35.9
Mean number of children in demonstration schools	1.9 (0.02)
Median household income last month ($)[a]	1,582 (22)
Household income	
No income	5.4
At or below poverty line (0–100% of poverty)	60.3
At or below 130% of poverty line	70.6
At or below 185% of poverty line	82.0
Above 185% of poverty line	18.0
Any household adult employed in last 30 days	69.2
Sources of non-wage income	
Reported receiving TANF	10.5
Reported receiving Social Security	21.6
Reported receiving SSI	17.6
Reported receiving veterans' benefits	2.0
Reported receiving unemployment insurance or workers' compensation benefits	2.4
Reported receiving child support payments	16.9
Reported receiving financial support from family and friends	14.6
Reported receiving any other income besides earnings	0.5
Reported none of the above	43.7
Household nutrition benefit program participation[b]	
Reported currently receiving SNAP	47.2
Reported receiving WIC	13.2
Reported receiving food from pantry, emergency kitchen, or community program	11.2
Children's nutrition program participation	
Reported receiving NSLP	83.6
Reported receiving SBP	73.8
Household food security status	
Secure	65.3
Insecure	34.7
VLFS	15.6
Adult food security status	
Secure	68.3
Insecure	31.7
VLFS	15.1
Child food security status	
Secure	78.2
Insecure	21.8
VLFS	2.5
Reported monthly household mean out-of-pocket food expenditures ($)	378 (5)
Reported monthly per-person mean out-of-pocket food expenditures ($)	
Total out-of-pocket expenditures[c]	98 (2)
Food expenditures at supermarkets, grocery stores, and other types of stores[d]	74 (1)

Characteristic	Mean or percentage (SE)
Expenditures at restaurants[e]	26 (1)
Sample size	2,596

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2016 baseline survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration at baseline and were prepared by Mathematica Policy Research.

Note: Estimates are percentages unless otherwise noted. Calculations are based on the respondents to the baseline survey. Missing values were excluded from the calculations. Household income was missing for 8.6% of observations. For all other variables missing values ranged from 0.0 to 4.0% of observations. Program participation questions generally reflected current participation at the time of the interview, defined as "during the last 30 days." Food security was measured using the standard USDA 18-item survey module and a 30-day reference period. VLFS is a subcategory within the food insecure category. Questions about food expenditures were asked about the last 30 days.

[a] Includes all earnings, Social Security, pensions, veterans' benefits, unemployment insurance, workers' compensation benefits, child support, payments from roomers and boarders, TANF, and SSI for all household members.

[b] Calculated for all households as a descriptive variable and not constrained to only those households eligible for a specific program listed.

[c] Sum total of reported out-of-pocket food expenditures at stores and restaurants in the last 30 days. Excludes purchases made with SNAP and WIC. The sum is not equal to the sum of the two means because of missing data. If expenditures at either stores or restaurants are missing, then the total is missing.

[d] Out-of-pocket expenditures on food at supermarkets, grocery stores, and other stores. Excludes purchases made with SNAP and WIC.

[e] Includes carryout, drive through, and all types of restaurants.

SE = standard error of the mean. SNAP = Supplemental Nutrition Assistance Program; SSI = Supplemental Security Income; TANF = Temporary Assistance for Needy Families; USDA = United States Department of Agriculture; VLFS = very low food security; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

B. Impacts on food insecurity during the first school year

The key question of interest in this study is whether the Virginia 365 Project reduced FI-C. This section examines impacts of the school year intervention on the food insecurity of children, adults, and households. To provide context for understanding impacts, this section also presents information about changes in household circumstances (potential triggers of food insecurity) and households' access to help and support in the community (Chilton et al. 2013; Edin et al. 2013; Hoisington 2002).

1. What was the impact of the project on the prevalence of food insecurity?

The school year component of Virginia 365 project did not reduce FI-C. In both treatment and control groups, about a quarter of households reported FI-C. However, as shown in Exhibit III.2, the project led to a small but statistically significant reduction in rates of very low food security among children (VLFS-C). Households in the treatment group were -0.7 percentage points less likely than those in the control group to experience VLFS-C (3.9% versus 3.2%).

Exhibit III.2. Impact of the Virginia 365 project on food insecurity

	Treatment	Control	Difference[a]	95% Confidence Interval	p-value
Children					
Secure	74.1	76.1	-2.0[b]	[-3.9, -0.1]	0.982
Insecure	25.9	23.9	2.0[b]	[0.1, 3.9]	0.982
VLFS	3.2	3.9	-0.7	[-1.3, -0.1]	0.011
Adults					
Secure	64.0	68.4	-4.4[b]	[-6.7, -2.0]	>0.999
Insecure	36.0	31.6	4.4[b]	[2.0, 6.7]	>0.999
VLFS	17.6	14.7	3.0[b]	[1.3, 4.6]	>0.999
Households					
Secure	61.0	65.8	-4.9[b]	[-7.4, -2.3]	>0.999
Insecure	39.0	34.2	4.9[b]	[2.3, 7.4]	>0.999
VLFS	18.0	15.3	2.7[b]	[1.0, 4.5]	0.999
Sample size	1,392	1,242			

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: Food security was measured using the standard USDA 18-item survey module and a 30-day reference period. VLFS is a subcategory within the food insecure category. Households were excluded from the calculations if they were missing values for food security measures. This included 7 missing households for measures child food security, 2 missing households for adult food security, and 5 missing households for household food security. The p-value associated with each impact estimate is from a one-tailed test of statistical significance. Estimates are regression adjusted to account for households' baseline characteristics, including baseline values of outcomes. Regressions controlled for baseline measures of child and adult food insecurity and VLFS; the presence of a single adult in the household versus more than one; ages of children in the household; household income and employment status; respondent age, health status, race/ethnicity, and language preference; baseline participation in SNAP, WIC, school-based meal programs, or food pantry, emergency kitchen, or community program; whether the household was located in an urban versus non-urban area; and indicator variables for the month of follow-up survey response.

[a] Difference column may not match the (Treatment minus Control) calculation exactly due to rounding.

[b] Estimate would have been significant with a two-tailed test.

SNAP = Supplemental Nutrition Assistance Program; USDA = United States Department of Agriculture; VLFS = very low food security; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

The project did not reduce rates of food insecurity by a statistically significant amount among adults or households in the treatment group relative to the control group. In fact, the rates of adult and household food insecurity were higher among households in treatment schools that received project benefits than among those in control schools.[43] For example, 36% of households in treatment schools experienced food insecurity among adults, compared to 32% of those in control schools. Similarly, 39% of households with children in treatment schools experienced food insecurity, compared to 34% of those in control schools.

[43] Although the one-sided significance tests did not directly assess whether the project led to an increase in rates of food insecurity, the confidence intervals of the estimated impact of the project on rates of food insecurity and VLFS among both adults and households were entirely positive (that is, the confidence intervals did not include zero).

2. How did impacts on food insecurity vary by household characteristics?

In general, subgroup analysis revealed a similar conclusion as that for the full sample (Exhibit III.3). There was no evidence that the Virginia 365 project reduced FI-C for any of the subgroups examined. However, there was suggestive evidence that the effect of the project was not consistent across all household subgroups. Estimated impacts on rates of FI-C varied by the number of children in the household. For example, among households with one child, there were higher rates of FI-C in treatment households (24%) than control households (18%). By contrast, among households with more than one child, rates of FI-C in treatment and control households were similar. The difference in estimated impacts across these subgroups was statistically significant (p=0.039). Estimated impacts on rates of FI-C also varied by respondent race/ethnicity. Specifically, among households in which the respondent was non-Hispanic white or non-Hispanic other race, there were slightly lower rates of FI-C in treatment group households (18%) compared to control group households (19%) ($p = 0.141$). Among households in which the survey respondent was Hispanic or non-Hispanic black, there were higher rates of FI-C in treatment households compared to control group households. For example, the estimated rate of FI-C was 31% in the treatment group versus 25% in the control group among households in which the respondent was non-Hispanic black. The difference in the estimated project impact by race/ethnicity was statistically significant ($p < 0.001$).

Exhibit III.3. Impact of the Virginia 365 project on food insecurity among children, by subgroup

Characteristic	Treatment		Control		Difference[a]	p-value	
	Sample size	FI-C	Sample size	FI-C		Differences within categories	Differences between subgroups
Household composition							0.322
Two or more adults	830	22.8	760	19.8	2.9	0.975[b]	
Single adult	550	30.8	473	30.5	0.4	0.568	
Number of children in household							0.039
1 child	328	23.6	364	17.6	6.0	>0.999[b]	
2 children	539	22.6	439	22.6	0.0	0.508	
3 or more	513	31.2	430	30.3	0.9	0.639	
Respondent race/ethnicity							<0.001
Hispanic (all races)	110	45.3	89	43.9	1.4	0.584	
Non-Hispanic black	682	30.7	590	25.3	5.4	>0.999[b]	
Non-Hispanic white or Non-Hispanic other	576	17.9	543	19.1	-1.2	0.141	
Respondent level of education							0.732
Less than high school	276	36.5	233	33.5	3.0	0.819	
High school, GED	461	28.2	398	24.8	3.4	0.922	
Some college or higher	640	20.0	597	19.4	0.6	0.637	
Baseline food security among children[c]							0.082
Secure (FS-C)	856	15.7	754	12.8	2.9	0.998[b]	
Insecure (FI-C)	248	61.7	223	64.4	-2.6	0.229	
Presence of a teenager in the household							0.614
Household has no teens	704	21.5	667	20.3	1.3	0.809	
Household has 1 or more teens	675	31.0	563	28.3	2.7	0.962	
Presence of a preschooler in the household							0.998
Household has no preschoolers	1,011	25.3	929	23.3	1.9	0.955	
Household has 1 or more preschoolers	368	27.9	301	25.9	2.0	0.818	
Urbanicity							0.059
Urban	983	31.1	787	27.4	3.8	0.998[b]	
Non-urban	305	15.0	381	16.0	-1.0	0.282	

Characteristic	Treatment Sample size	Treatment FI-C	Control Sample size	Control FI-C	Difference[a]	p-value Differences within categories	p-value Differences between subgroups
Household income							0.940
No income	73	32.2	60	31.3	0.9	0.550	
Below poverty threshold	794	32.7	646	30.8	1.9	0.851	
101 to 185% of poverty threshold	288	23.9	283	21.4	2.5	0.830	
Above 185% of poverty threshold	193	7.0	222	4.9	2.1	0.800	
Reported SNAP participation in last 30 days							0.371
Participates in SNAP	688	31.4	557	30.5	0.9	0.660	
Does not participate in SNAP	690	21.3	675	18.4	2.9	0.973	
Number of children in household who attend a demonstration school							0.592
Household has 1 child in a demonstration school	412	22.9	423	20.5	2.4	0.912	
Household has more than 1 child in a demonstration school	695	29.0	558	27.8	1.2	0.785	
Elementary school vs. secondary[d]							0.455
Elementary school	1,016	25.2	910	22.9	2.4	0.979[b]	
Secondary school	364	27.7	323	26.8	0.8	0.685	
Random assignment[e]							0.208
VA assigned to treatment	406	18.0	407	18.0	0.1	0.513	
Randomly assigned to treatment	974	29.7	826	26.8	2.9	0.991[b]	
Sample size	1,380		1,233				

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: Food security was measured using the standard USDA 18-item survey module and a 30-day reference period. VLFS is a subcategory within the food insecure category. Households that were missing values for FI-C were excluded from the calculations. Subgroups of households are defined using baseline information whenever available. For households missing baseline information on household composition, number of children in household, respondent level of education, household income, and reported SNAP participation in last 30 days (primarily those that responded to the follow-up survey but not the baseline survey), membership in subgroups defined by each of those characteristics is measured using the follow-up value. This approach prevents loss of the households that completed a follow-up survey but not a baseline survey. The p-value associated with each impact estimate is from a one-tailed test of statistical significance. Estimates are regression adjusted to account for households' baseline characteristics, including baseline values of outcomes. Regressions controlled for baseline measures of child and adult food insecurity and VLFS; the presence of a single adult in the household versus more than one; ages of children in the household; household income and employment status; respondent age, health status, race/ethnicity, and language preference; baseline participation in SNAP, WIC, school-based meal programs, or food pantry, emergency kitchen, or community program; whether the household was located in an urban versus non-urban area; and indicator variables for the month of follow-up survey response. See Appendix Exhibit D.1 to view 95% confidence intervals for each subgroup characteristics.

[a] Difference column may not match the (Treatment minus Control) calculation exactly due to rounding.

[b] Estimate would have been significant with a two-tailed test.

[c] These estimates measure whether the impact of Virginia 365 varies for households that were already experiencing food insecurity among children at baseline vs. those that were not.

[d] Combined elementary and middle schools are counted as elementary schools because a larger proportion of children at these schools are in elementary school grades.

[e] The grantee assigned the first 16 schools—in Southwest Virginia—to treatment and control groups. They paired schools based on having similar characteristics, and then picked one school in each pair to be in the treatment group. They used an approach that involved arbitrarily selected which school in the pair would be in the treatment group, rather than a strictly random approach. In most cases, they selected the first school listed alphabetically. The remaining schools were randomly assigned by Mathematica.

FI-C = food insecurity among children; GED = general educational development; SNAP = Supplemental Nutrition Assistance Program; USDA = United States Department of Agriculture; VLFS = very low food security; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

3. What was the relationship between changes in household circumstances and impacts on food insecurity?

Whether the intervention affected the outcomes of interest and the extent to which it did so may be related to changes occurring in the household, such as changes in household structure or size, or resources or employment. Differences in the extent to which treatment or control group households experienced such changes could have affected food insecurity and the intervention's estimated effects. There were minimal differences between the treatment and control groups in the reported changes in household structure and resources in the six months before the follow-up survey (Exhibit III.4). There were no statistically significant differences between treatment and control households in the percentage reporting a change in household size, the reasons for a change in that size, or the percentage reporting an eviction. Similar percentages of treatment and control households reported a change in employment or pay. However, among households experiencing this type of change, more treatment households reported it as being due to obtaining a job (23%) compared to control households (16%). It is notable that treatment households were more likely to have obtained a job since the baseline survey and yet were also more likely to be food insecure. It is possible that the treatment households that obtained jobs also lost benefits, thus contributing to food insecurity.

Exhibit III.4. Reported household changes in the six months before follow-up

	Treatment	Control	Difference[a]	p-value
Percentage of households with a change in number of people living in household (HH size)	11.5	12.3	-0.8	0.532
Reasons for change in HH size (%)[b]				
Percentage of households with the following:				
Birth, new step, foster, or adopted child	24.9	25.0	-0.1	0.987
Marriage, romantic partner	4.2	3.0	1.3	0.564
Family, boarder, other child, or other adult moved in	28.5	32.3	-3.8	0.461
Family, boarder, other child, or other adult moved out	38.2	29.6	8.6	0.153
Separation or divorce	5.9	4.1	1.8	0.511
Death of HH member	2.9	6.7	-3.7	0.111
HH member incarcerated	1.0	3.9	-2.9	0.095
Sample member moved	4.8	3.0	1.9	0.395
Other[c]	2.1	1.1	1.0	0.485
Percentage of households reporting an eviction	1.6	1.9	-0.3	0.568
Percentage of households with a change in employment or change in pay	25.7	23.2	2.5	0.270
Percentage of households that[b]				
Obtained a job	23.1	15.6	7.6	0.024
Changed jobs	15.1	13.8	1.3	0.606
Had an increase in pay or hours	19.6	23.4	-3.8	0.294
Lost a job	29.6	29.9	-0.4	0.923
Quit a job	3.0	3.8	-0.8	0.571
Had a decrease in pay or hours	20.8	22.2	-1.4	0.679
Seasonal work	2.4	1.5	0.9	0.584
Temporary leave (maternity, workers' compensation, disability)	4.2	5.8	-1.6	0.346
Other[d]	1.2	1.8	-0.6	0.578

	Treatment	Control	Difference[a]	p-value
Of three categories of changes, number reported in the past six months (%)[e]				0.233
None	66.0	68.3	-2.3	
One	29.4	26.2	3.1	
Two	4.6	5.3	-0.7	
Three	0.1	0.2	-0.1	
Sample size	1,386	1,233		

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: Chi-squared tests of independence were conducted to test for significant differences in proportions between the treatment and the control groups for each characteristic.

[a] Difference column may not match the (Treatment minus Control) calculation exactly due to rounding.

[b] Calculated among households that reported a change. Multiple reasons could be reported.

[c] Other reasons include the following: child went to college; different custody arrangements; evicted; personal issues.

[d] Other reasons include the following: change in job location; change in job shift; retirement.

[e] Includes changes in household size; changes in employment or pay; and eviction.

HH = household.

4. Relationship between household coping strategies and food security

Households with better access to resources and supports may be better able to cope with food insecurity and thus less likely to experience food insecurity at follow-up. There were no statistically significant differences between treatment and control households in the percentage reporting access to help from family, friends, or other people in the community at follow-up (Exhibit III.5). Treatment households were less likely than control households to report they could get all the help they needed from family, friends, and other people in the community, and conversely, treatment households were more likely than control households to report they could get no help from these groups. However, treatment-control differences were not statistically significant.

Exhibit III.5. Reported access to help from family, friends, and the local community at follow-up

Percentage of households reporting they could get help, if needed for a problem, from:	Treatment	Control	Difference[a]	p-value
Family living nearby				0.308
All of the help needed	12.8	16.0	-3.3	
Most of the help needed	26.4	26.6	-0.2	
Very little of the help needed	35.3	34.1	1.2	
No help	25.6	23.3	2.3	
Friends				0.052
All of the help needed	3.5	6.5	-3.1	
Most of the help needed	16.8	14.9	1.9	
Very little of the help needed	39.5	40.8	-1.3	
No help	40.2	37.8	2.4	
Other people in the community				0.532
All of the help needed	3.6	4.5	-0.9	
Most of the help needed	13.9	15.7	-1.8	
Very little of the help needed	42.9	41.7	1.2	
No help	39.6	38.1	1.5	
Sample size	1,384	1,234		

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: Chi-squared tests of independence were conducted to test for significant differences in proportions between the treatment and control groups for each overall characteristic.

[a] Difference column may not match the (Treatment minus Control) calculation exactly due to rounding.

C. Impacts on nutrition program participation, food spending, and family dinners during the first school year

The Virginia 365 project aimed to reduce food insecurity by providing increased access to school meals and provision of food backpacks on weekends and during school breaks to all children in a treatment school. The project also provided benefits of $60 a month during the summer for each child in a household attending a treatment school and eligible for FRP school meals. Parents and guardians of school children were also offered nutrition education. Given these elements, differences in receipt of nutrition program benefits, particularly through child nutrition programs, would be expected if the intervention was implemented as planned. This section examines differences in these intermediate outcomes.

1. Did the project affect participation in child nutrition assistance programs?

The Virginia 365 project increased participation in most of the children's nutrition assistance programs examined. Treatment households reported higher percentages of children receiving FRP lunch (86%) and breakfast (79%), by about 5 to 6 percentage points higher than children in the control group (80% and 74%, respectively (Exhibit III.6). The project increased overall participation by 2 percentage points in both the NSLP and SBP. Both treatment and control households had high rates of children receiving meals through the SBP and NSLP, and so a large majority of these children would have received at least two free meals a day at school even without the project.

The largest differences in program participation during the school year —and thus the key project benefits delivered to treatment households—were in the receipt of free suppers and food backpacks at school. Nearly half of treatment households (46%) reported receiving suppers, compared to 26% of control households.[44] Fifty-eight percent of treatment households reported receiving backpacks, compared to 23% of control households. A higher number of treatment households (33%) reported receiving afterschool snacks, compared to 28% of control households. It is possible that some treatment households reported suppers received through the Virginia 365 project as afterschool snacks.

2. Did the project affect participation in household nutrition assistance programs?

There were also significant differences in the receipt of household nutrition benefits (Exhibit III.6). Fewer treatment households reported receiving SNAP benefits compared to the control group (43% versus 45%). More treatment households reported receiving WIC compared to control households (12% vs 10%). Similar percentages of treatment and control group households (13% and 12%, respectively) reported that reported receiving food from a food pantry, emergency kitchen, or community program.

Exhibit III.6. Reported participation in household and child nutrition programs at follow-up

	Treatment	Control	Difference[a]	p-value
Household nutrition benefit program[b]				
Reported currently receiving SNAP (%)	42.7	45.0	-2.3	0.023
Reported receiving WIC (%)	11.5	9.9	1.6	0.029
Reported none of the above nutrition benefits (%)	53.8	52.0	1.8	0.100
Children's nutrition program[b]				
Reported receiving FRP lunch (%)	86.4	80.2	6.2	<0.001
Reported receiving NSLP (%)[c]	91.3	89.3	2.0	0.007
Reported receiving FRP breakfast (%)	78.8	73.6	5.2	<0.001
Reported receiving SBP (%)[c]	81.9	79.6	2.4	0.042
Reported receiving supper (%)	45.9	26.0	19.9	<0.001
Reported receiving backpack program (%)	58.1	22.5	35.6	<0.001
Reported receiving food at after school program where snacks are received (%)	32.8	28.1	4.7	0.013
Reported receiving food at another center, e.g., Head Start or daycare (%)	9.5	10.1	-0.6	0.451
Reported none of the child nutrition benefits listed above[d] (%)	5.0	6.8	-1.8	0.007

[44] This difference in supper participation (46% versus 26%) based on survey data is not the same as the difference in supper participation reported in the Chapter II analysis based on administrative data (73% versus 12% in spring 2017). There are several possible explanations for this difference. First, the Chapter II analysis was based on administrative data provided by school divisions and the VDH, whereas the analysis described here was based on survey data reported by parents. Second, the administrative data was measured as supper participation by a given child on a single day in spring 2017, whereas the survey data covered parents' reports of whether any child in the household received a free supper at any time in the last 30 days. Third, the take-up rates presented in Chapter II are based on the number of reimbursable meal transactions as reported by schools, whereas the survey data are based on respondent recall, and what respondents considered a "meal" may not align with what was counted in the transaction data. Fourth, the administrative data included suppers or snacks received by all children in the school (including those not eligible for FRP meals); the survey data included only free suppers and covered only the evaluation sample of FRP-eligible children. Each of these differences could have contributed to the different supper program participation rates reported in Chapter II (based on administrative data) and Chapter III (based on survey data).

	Treatment	Control	Difference[a]	p-value
Mean number of 8 listed programs that household reported participation in[e]	3.7	3.1	0.6	<0.001
Reported receiving food from food pantry, emergency kitchen, or community program (%)	12.6	11.7	0.9	0.367
Sample size	1,393	1,243		

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: Program participation questions generally reflected current participation at the time of the interview, defined as "during the last 30 days." P-values are based on two-tailed tests of statistical significance. Regressions controlled for baseline measures of household income and employment status; the survey respondent's age, race/ethnicity, health status, and preferred language; household size and presence of a teenager; and household participation in the program being analyzed at follow-up. Regressions also controlled for the month of survey response.

[a] Difference column may not match the (Treatment minus Control) calculation exactly due to rounding.

[b] Calculated for all households as a descriptive variable and not constrained only to those households eligible for a specific program listed. Due to space limitations, the survey did not include a question on elementary school children's participation in the Fresh Fruit and Vegetable Program.

[c] Includes free, reduced-price, and paid meals.

[d] Calculation excludes free meals or snacks at summer food programs due to the timing of data collection.

[e] Calculation excludes emergency or other community food programs.

FRP = free or reduced-price; HH = household; NSLP = National School Lunch Program; SBP = School Breakfast Program; SNAP = Supplemental Nutrition Assistance Program; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

3. What was the project's impact on out-of-pocket food spending?

If the food provided to children through the Virginia 365 project replaced food the households would have otherwise had to purchase themselves, the intervention may have reduced food expenditures for treatment households. Exhibit III.7 presents estimated impacts on food expenditure outcomes.

Exhibit III.7. Reported monthly food expenditures at follow-up

	Treatment	Control	Difference[a] (SE)	p-value
Total out-of-pocket food expenditures[b] ($)				
Household mean	376	382	-6 (6)	0.277
Household median	289	300	-11 (5)	0.042
Per-person mean	98	100	-3 (2)	0.104
Per-person median	83	83	-1 (1)	0.553
Food expenditures at supermarkets, grocery stores, and other types of stores[c] ($)				
Household mean	288	286	2 (4)	0.690
Household median	236	240	-4 (5)	0.439
Per-person mean	75	75	0 (1)	0.954
Per-person median	65	67	-1 (1)	0.270
Expenditures at restaurants[d] ($)				
Household mean	89	97	-8 (3)	0.009
Household median	53	60	-7 (1)	<0.001
Per-person mean	23	26	-3 (1)	<0.001
Per-person median	14	16	-2 (0)	<0.001
Sample size	1,384	1,234		

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: Questions were asked about the last 30 days. P-values are obtained from two-tailed t-tests of statistically significant differences. Regressions controlled for baseline measures of household income and employment status; the survey respondent's age, race/ethnicity, health status, and preferred language; household size and presence of a teenager; and household participation in the program being analyzed at follow-up. Regressions also controlled for the month of survey response.

[a] Difference column may not match the (Treatment minus Control) calculation exactly due to rounding.

[b] Sum total of reported out-of-pocket food expenditures at stores and restaurants in the last 30 days. Excludes purchases made with SNAP and WIC.

[c] Out-of-pocket expenditures on food at supermarkets, grocery stores, and other stores. Excludes purchases made with SNAP and WIC.

[d] Includes carryout, drive through, and all types of restaurants.

SE = standard error; SNAP = Supplemental Nutrition Assistance Program; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

Most differences between treatment and control households in total monthly food expenditures were not statistically significant, with the exception of median household food expenditures. The median total monthly food expenditure was $289 in treatment households compared to $300 in control households (p=0.042). However, differences in mean household food expenditures were not statistically significant ($376 in treatment households and $382 in control households, p = 0.277). Furthermore, differences in food expenditures were not statistically significant when estimates were calculated at the per-person level in a household. Treatment and control households differed in their spending at restaurants. Treatment households spent about $89 per month on average at all types of restaurants, whereas control households spent $97 per month (p = 0.009). Differences between treatment and control households in food expenditures at supermarkets, grocery stores, and other types of food markets were not statistically significant.

4. Did the project have an impact on shopping and food preparation?

Another way in which the Virginia 365 intervention could have affected households is by changing food shopping and eating dinners together as a family. Exhibit III.8 shows that treatment and control households were very similar in their shopping behaviors, with both groups reporting similar frequencies of shopping with a grocery list. This result is not surprising, given the limited scope of the nutrition education component of Virginia 365. There was also no statistically significant difference between treatment and control households in the frequency of eating dinner as a family or how often dinner was prepared at home. This finding suggests that the suppers children received at school did not necessarily replace suppers at home. The latter result, coupled with the small but statistically significant difference in restaurant expenditures shown in Exhibit III.7, suggests that the intervention may have changed the types of meals or foods purchased at restaurants. The intervention also did not affect households' participation in nutrition education classes. Treatment and control households reported attending other classes, lectures, events, or demonstrations at roughly equal rates (16% and 15%, respectively), suggesting that nutrition education was available elsewhere in the community through SNAP-Ed, WIC, and other community offerings.

Exhibit III.8. Reported food shopping and family dinners at follow-up

	Mean or percentage			
	Treatment	Control	Difference[a] (SE)	p-value
Percentage of respondents who reported shopping with a grocery list				0.509
Always	28.9	24.7	4.1	
Most of the time	29.0	29.6	-0.6	
Sometimes	22.1	24.5	-2.4	
Rarely	10.0	11.0	-1.0	
Never	10.0	10.1	-0.1	
Distribution of the number of nights a week family typically sits down together to have dinner as a family (%)				0.590
Every night	40.9	37.3	3.6	
5 or 6 nights	23.3	26.0	-2.7	
3 or 4 nights	26.4	27.5	-1.1	
1 or 2 nights	6.9	7.5	-0.6	
Never	2.5	1.8	0.7	
Mean number of times dinner was prepared at home in last 7 days	5.2	5.1	0.1 (0.12)	0.375
Percentage of survey respondents that reported attending a nutrition education class, lecture, event, or demonstration in past 12 months	15.7	14.6	1.1	0.696
Mean number of nutrition education classes, lectures, events, demonstrations attended in past 12 months among participants[b]	2.9	2.9	0.0 (0.42)	0.996
Sample size	1,393	1,243		

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: For continuous measures, reported p-values are obtained from two-tailed t-tests of statistically significant differences; for binary and categorical measures, p-values are drawn from chi-squared tests of independence.

[a] Difference column may not match the (Treatment minus Control) calculation exactly due to rounding.

[b] Calculated among households that reported attending at least one nutrition education event in the past 12 months.

SE = standard error.

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IV. STUDY FINDINGS AND CONCLUSIONS

This chapter summarizes and discusses study findings from the evaluation of the Virginia 365 project, including an assessment of project implementation (Chapter II) and impacts on food insecurity among children (Chapter III). It first briefly describes the project's goals and design, and then summarizes and discusses the findings from the implementation and impact analyses. The chapter ends with a discussion of study limitations and conclusions.

A. The Virginia 365 project

VDOE received a grant through the 2010 Child Nutrition reauthorization to implement the Virginia 365 project. The project was designed to reduce hunger 365 days a year in households with school children by transforming schools into food hubs. Reducing hunger would benefit the academic performance of school children in high-poverty schools with low academic performance. In 2014, the year the State applied for the Virginia 365 grant, levels of unemployment and poverty in the locations selected for the demonstration—Southwest Virginia and the city of Richmond—were higher than statewide averages. Research has shown that unemployment and poverty are predictors of food insecurity (Nord 2009; Nord and Coleman-Jensen 2014).

The Virginia 365 project provided school children with access to three free meals per day at school as well as food backpacks that provided food for children to use on weekends and during school breaks. The project also provided households with summer EBT benefits[45] and offered nutrition education classes to families. The project targeted households at risk of food insecurity among children—those with children eligible for FRP meals and attending schools with low academic performance and at least 50% of children eligible for FRP meals. The demonstration included 38 schools; 19 received project benefits.

How did the study work?

The study used ***an experimental design***—the most rigorous way of estimating demonstration effects. Demonstration schools were randomly assigned to a treatment group that received project benefits and a control group that operated under "business as usual" with their school nutrition programs.[a] Households with children enrolled in treatment schools were included in the treatment group; those with children in control schools were in the control group. These groups were followed through the project's implementation period, and their outcomes were measured about 12 months later based on survey data. Because households in the treatment and control groups were similar at the beginning of the implementation period due to random assignment, later differences between the two groups in food insecurity among children were attributed to the impact of the project, as were other outcomes.

[a] For 16 schools, the grantee assigned 8 to the treatment group by using an arbitrary, but not strictly random, approach.

The evaluation of the Virginia 365 project examined the characteristics of households receiving benefits and their receipt of project benefits, and assessed project implementation in the first school year. It also examined how benefits from the project—primarily the supper and food backpack benefits provided during the school year—affected key outcomes among households

[45] Virginia's SNAP EBT system was used to issue Virginia 365 project benefits; no SNAP funding was used.

participating in the study. The primary focus was on how school year project benefits affected the households' levels of food insecurity among children.

B. Successes and challenges of the Virginia 365 project implementation

The project accomplished its goal of providing children with access to three meals a day during the school year through successful implementation of universal breakfast, lunch, supper, and food backpack programs. Because some schools were already providing these benefits to some children during the school year, the role of the Virginia 365 project was to fill nutrition assistance gaps that were not provided before the demonstration began. Project staff, parents, and caregivers valued the removal of individual certifications for children to receive free school meals and the dependability of the benefits. A majority of children participated in the school meals and food backpack programs, as measured among all children enrolled in treatment schools.[46]

Implementation costs [a]

Total project costs: $7,200,633

Total partner costs: $6,411,718

School divisions

Supper benefit amount: $3,052,963

Other school division costs: $518,729

Food banks

Food backpack benefit amount: $777,924

Planning and administrative costs: $115,598

Virginia Cooperative Extension (VCE)

Nutrition class benefit amount: $3,236

Other VCE costs: $305,419

Virginia Department of Social Services and EBT Vendor

Summer EBT benefit amount: $1,130,580

Planning and administrative costs: $241,947

[a] Includes paid and donated or in-kind resources for the start-up and implementation periods.

Integrating schoolwide supper and backpack program benefits into school operations was a key operational success. All treatment schools provided suppers to all children before they left for home each school day. (Before implementation, some schools provided free snacks and/or suppers to some children after school through the CACFP At-Risk Afterschool Meals component or NSLP afterschool snack program, whereas others did not.) Food banks delivered food backpacks to schools for distribution to children as part of a backpack program to cover meals on weekends and school breaks. The consensus among project staff was that schoolwide implementation of the supper and food backpack program components was a major undertaking for schools and food banks, which involved hiring staff; arranging for food storage, delivery, distribution, and disposal; fostering buy-in among school staff; increasing children's acceptance of foods; managing food waste; and, for suppers, adopting the CACFP and altering school day schedules and bus routes to accommodate service before school dismissal. One project staff reflected, *"Schools have been phenomenal….I get misty eyed since it has been a commitment from the beginning."* Staff from school divisions, food banks, VDH, and VDOE engaged in intensive planning, and closely monitored implementation to identify areas in need of adaptation and improvement. Success was attributed

[46] School-level rates of backpack program participation were measured in Richmond only.

to VDOE's leadership and early and continued collaboration among all partners (whether in an implementing or advisory role).

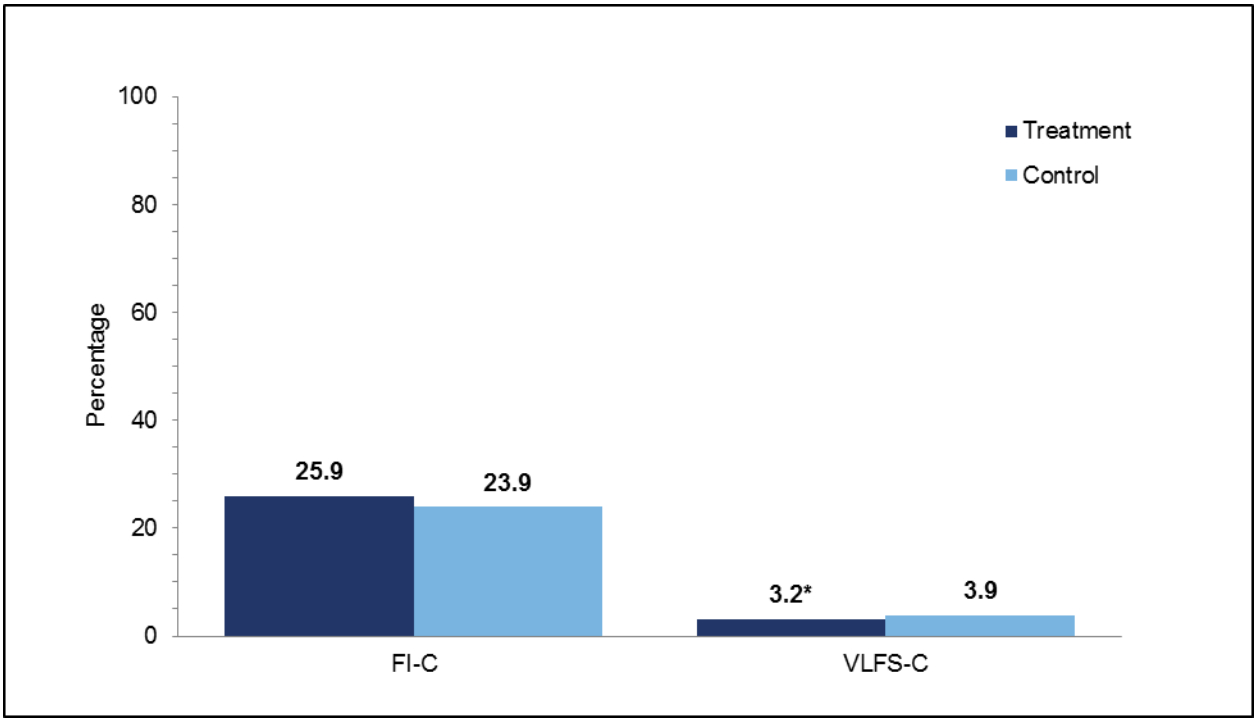
Overcoming low participation in the nutrition education component was a key project challenge. Less than 1% of treatment households participated in a demonstration nutrition education class series. Low participation was due to the project providing fewer nutrition education classes than planned and low attendee turnout. A shortage of staff available to conduct outreach and a lack of effective marketing strategies were the primary impediments to recruitment. Furthermore, engaging potentially interested parents and caregivers was a challenge because the low-income households targeted by the project faced financial and other hardships that took priority over attendance. Project staff believed that parents and caregivers would be more likely to take advantage of the classes if staff could help them see how attending classes would teach them the practical skills they needed to feed their families healthy meals on a tight budget. One staff member illustrated this with an example: "*Let me tell you about vitamin A sources. No one cares. Make a difference in people's lives—that works.*" Project staff discussed how plans to increase outreach in schools and the community would lead to increased awareness of offerings—and ultimately increased attendance—in the second year of the demonstration (SY 2017–2018).

C. Summary of impact results during the first school year

The key objective of the Virginia 365 project was to reduce the rate of FI-C through the provision of a variety of food assistance benefits through children's schools. The project did not reduce the overall rate of FI-C but it did reduce the most severe form, VLFS-C. In particular, there were no statistically significant differences in FI-C rates between treatment and control households, but treatment households had statistically significant lower rates of VLFS-C than control group households (Exhibit IV.1). Although the magnitude of this effect was small in absolute terms (0.7 percentage points), it represented an 18% reduction of the rate of VLFS-C, from 3.9% to 3.2%.

Just over one-fourth (26%) of treatment households were experiencing FI-C at the time of the follow-up survey (see Exhibit IV.1). This rate of food insecurity among children was higher than among evaluation households at the time of the baseline survey approximately 12 months earlier. However, the increase in food insecurity among children experienced by treatment households—from 21% to 26%—was greater than the increase among control households (from 23% to 24%; see Exhibit IV.2). The increased rates of food insecurity among children among demonstration households may have been related to drug use or health problems. Staff interviews discussed how drug use, particularly in Southwest, was a serious risk factor for food insecurity among households in the demonstration area. In both Southwest and Richmond, rates of fentanyl and heroin mortality, prescription opioid overdoses, and neonatal abstinence syndrome discharges increased from 2015 through 2016; Virginia rates of opioid overdose related emergency department visits and new hepatitis C infections increased between 2016 and 2017 (VDH 2018). Furthermore, the CDC identified three Southwest counties among 220 counties nationally as the highest risk of outbreaks of HIV and/or hepatitis C as a result of the opioid epidemic (AMFAR n.d.).

Exhibit IV.1. Impact of the Virginia 365 school year project on food insecurity among children



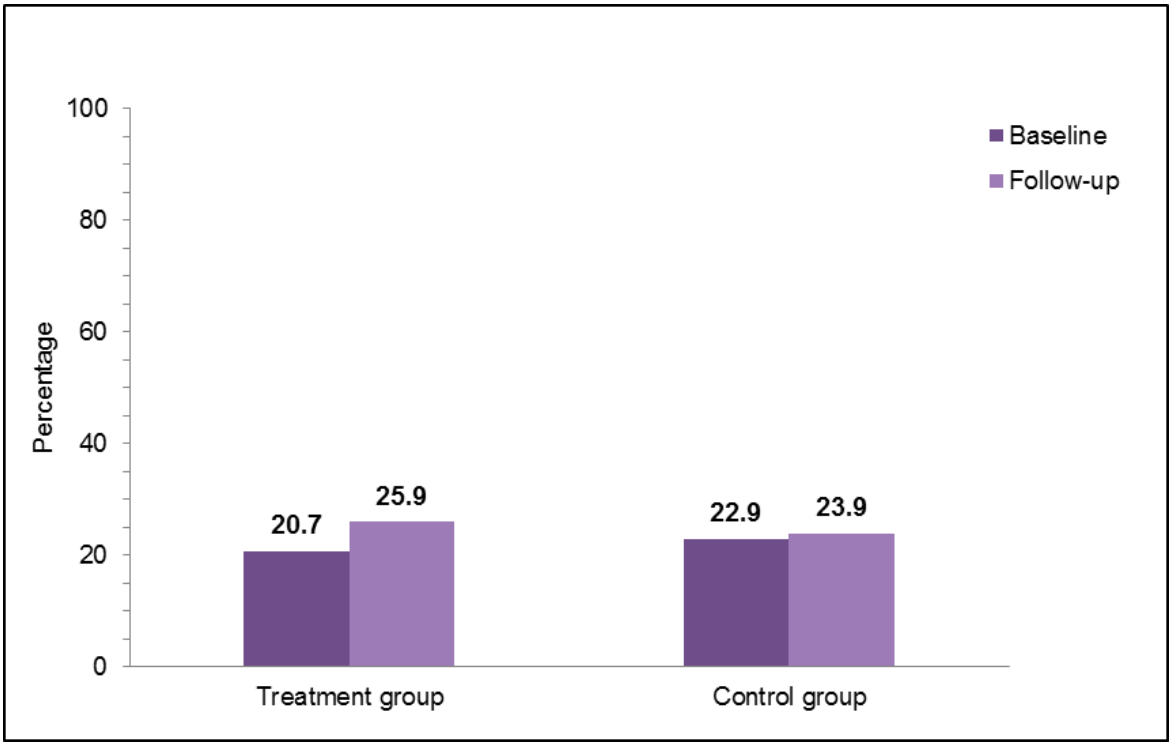
Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Estimates are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: Estimates are regression adjusted to account for households' baseline characteristics. VLFS-C is a subcategory within FI-C. The treatment-control difference for FI-C would have been significant with a two-tailed test.

*Treatment-control difference is statistically significant at a 0.05 level of significance, one-tailed test.

FI-C = food insecurity among children; VLFS-C = very low food security among children.

Exhibit IV.2. Changes from baseline to follow-up in rates of food insecurity among children



Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2016 baseline survey and 2017 follow-up survey. Estimates are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research. Estimates are not regression adjusted.

Note: The samples for this figure include all households that responded to the baseline survey for the baseline estimates and were not missing values for the child food security measure (n=2,586) and all households that responded to the follow-up survey and were not missing values for the child food security measure and did not report having zero children at follow-up (n=2,613). Treatment-control differences are not statistically significantly greater than zero at the 0.05 level, one-tailed test.

The study also examined how the project affected food insecurity among adults and households. Although the benefits were targeted to children in treatment schools, they could have freed up household resources that could then be used to provide additional food for other household members. Somewhat surprisingly, the Virginia 365 project had the opposite effect on food insecurity among adults and households, with rates for both groups higher among treatment than control households by the end of the first demonstration school year.

This basic pattern of results regarding FI-C found for all households was similar across most subgroups of households, although estimated impacts on rates of FI-C varied by the number of children in the household and respondent race/ethnicity. For example, among households in which the respondent was non-Hispanic white or non-Hispanic other race, there were slightly lower rates of FI-C in treatment group households compared to control group households.

The food security findings for adults and households were surprising. The project provided children with expanded access to child nutrition programs, and research suggests that participation in these programs generally reduces food insecurity in households with children

(Ralston et al. 2017). So why did the Virginia 365 project not lead to a reduction in most of the measures of food insecurity being assessed? Also, why were these rates actually higher among the treatment households, in which children had greater access to the child nutrition programs, than in control households? Although the study did not lead to definitive answers to these questions, several possible explanations for the findings are discussed below.

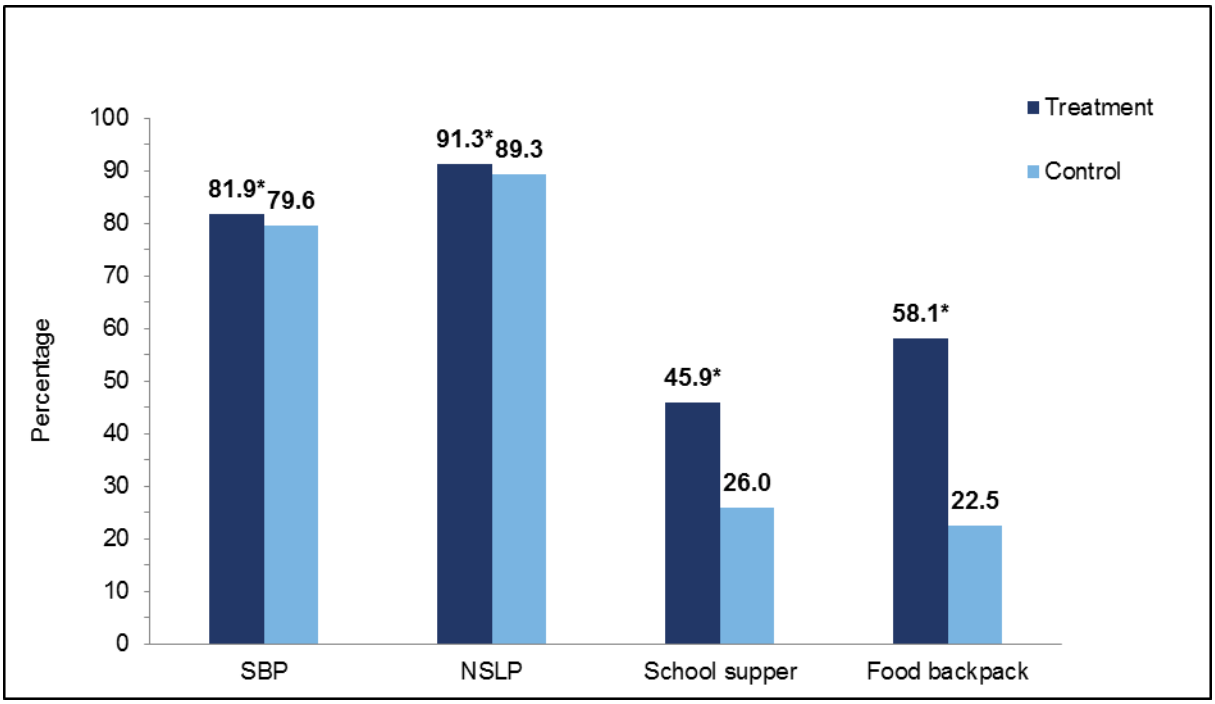
1. Did the Virginia 365 project increase children's access to nutrition programs enough to matter?

One possible explanation for the findings is that the project did not lead to a sufficiently large increase in nutrition assistance for households in the treatment group.[47] In other words, it may have been the case that these households would have had access to these child nutrition programs even without the project and there was not a sufficient treatment-control contrast. If so, one would expect to see relatively high rates of participation in the programs among control group households, and similar or only somewhat higher rates among treatment group households.

The Virginia 365 project had only a small positive impact on children's likelihood of getting a free school breakfast or free school lunch. A majority of schools, including those serving control households, operated under CEP status, in which all school children receive a free school lunch and breakfast. In addition, the target population included households with children eligible for FRP meals, so most children would have had access to free meals at all schools. As a result, SBP and NSLP participation rates were high for both treatment and control households; the project increased overall participation by 2 percentage points in both the NSLP and SBP (Exhibit IV.3).

[47] In addition, more elementary control schools participated in FFVP than elementary treatment schools, so control households were more likely to have a child with access to fruits and vegetables offered in the FFVP. Elementary treatment schools that had previously participated in the FFVP discontinued doing so when they began implementing the Virginia 365 project. The school division determined that elementary school children in the treatment group would not have enough time or appetite for a fourth eating occasion during the school day.

Exhibit IV.3. Participation in child nutrition programs at follow-up



Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Estimates are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: Due to space limitations, the survey did not include a question on elementary school children's participation in the Fresh Fruit and Vegetable Program. Estimates are regression adjusted to account for households' baseline characteristics. SBP and NSLP estimates include free, reduced-price, and paid participation.

*Treatment-control difference is statistically significant at a 0.05 level of significance, one-tailed test.

NSLP = National School Lunch Program; SBP = School Breakfast Program.

The project led to larger increases in treatment group households' receipt of nutrition assistance from the supper and food backpack program. However, participation in these programs among households in the treatment group was not universal, and some children in households from the control group also had access to supper and backpack programs in control schools. Thus, the project led to an increase in participation but that increase affected fewer than half of all treatment households. Specifically, the proportion of households receiving these benefits was 20 percentage points higher in the treatment than the control group for free school suppers (46% versus 26%) and 35 percentage points higher for food backpacks (58% versus 23%). Appendix Exhibit D.2 showed that children's participation in supper and food backpack programs increased from baseline to follow up among control households by non-trivial amounts; children's participation increased by 12% for suppers and 7% for food backpacks. Participation increases among children in treatment households were larger, however, with baseline to follow-up differences of 33% for suppers and 41% for food backpacks (Appendix Exhibit D.3).

Given these participation rates, it is possible that there was not enough of a contrast in the experiences of treatment and control group households for the project to bring about a reduction

in FI-C.[48] A substantial number of control group households had access to the child nutrition programs that constituted the focus of the project. Thus, the benefits of the project may not have been widespread enough to affect food insecurity among most households, although it did lead to a reduction in VLFS-C. Another possibility is that the relatively high rates of NSLP and SBP participation reported at baseline (84% and 74%, respectively) had already improved food insecurity in demonstration schools and households, making it more difficult to observe further reductions in FI-C through the provision of an additional supper meal and backpack program food backpacks for weekends and breaks.[49] Although these explanations might elucidate the lack of strong impacts on food insecurity, they do not explain why rates of food insecurity among adults (and subsequently households)[50] were actually higher in treatment group households.

2. Did the supper and backpack programs work as intended?

The Virginia 365 project was designed to provide children in treatment schools with three free school meals a day throughout the school year, thus reducing the burden on households of feeding these children. Presumably, the idea was that if household resources were scarce for providing meals at home, children's meals would be covered on school days and over weekends and breaks through the backpack program. This circumstance then would result in the household having more resources for food for other children and any adults.

There were two possible reasons why these programs did not work as intended. First, the supper program may not have resulted in children being less likely to eat supper with their families at home. Although a larger proportion of treatment households reported receiving suppers at school, there were no significant differences between treatment and control households in their out-of-pocket total monthly food expenditures or on expenditures at supermarkets, grocery stores, and other types of food markets, or children's likelihood of eating dinner with their families after they got home. For example, the proportion of households that reported sitting down together to have dinner as a family was not different in the treatment versus control group. (Nearly two-thirds of each group reported doing so at least five nights a week; Exhibit III.8.) This finding suggests that the suppers provided at school did not replace children's suppers at home, and that perhaps adults and other children in those households were not getting any additional food as a result of the project. One possible reason that suppers at school did not replace those at home was because the school suppers may have functioned more

[48] To explore the viability of this hypothesized explanation using estimated impacts of the project within each of the matched pairs of schools in the study, impacts on food insecurity measures in each matched pair were compared with impacts on participation in child nutrition programs. The question addressed by this analysis was whether the matched pairs in which there was a large treatment-control difference in participation in child nutrition programs also were most likely to achieve reductions in FI-C (Appendix Exhibits D.5 and D.6). However, based on the pattern of estimates across matched pairs, there was no strong evidence that impacts on food insecurity were larger when there was a larger difference in receipt of school meals or backpack program food packs. This finding could have been because many other factors would affect the estimates in any single matched pair.

[49] A 2017 USDA Economic Research Service (ERS) review found that almost all of 11 studies reviewed demonstrated that participation in or availability of child nutrition programs was significantly associated with lower rates of food insecurity in households with children, after adjusting for selection bias (Ralston et al. 2017).

[50] If any adult or child in a household experiences food insecurity, then that household is categorized as food insecure. An increase in adult food insecurity would translate to an increase in household food insecurity.

as a snack. School divisions served supper to children in treatment schools relatively early in the day (between 2:30–4:00 p.m.), and managing supper food waste and leftovers was a major project challenge, which implies that children were not eating a full supper when it was offered at school. Focus group discussants described how they viewed the supper as a snack: *"They eat lunch so early, that's breakfast time…I like that they have a snack." "The only difference is we are fixing dinner later, instead of [my son] coming in and hounding me with where's my dinner now, we eat a couple hours from now."* These children (and their parents) may not have wished to wait until the next morning for their next meal. [51]

Second, the project provided individual children with school meals and food backpacks, but the concept of food insecurity captures conditions at the household level rather than for individual children. This mismatch between the intervention targeting and evaluation measurement may have resulted in the effects of the project being diluted when measured for the household as a whole. For example, the project may have benefitted one child in a household, but that household still experienced FI-C or VLFS-C if any other children in the household were not getting enough to eat. This situation could even have created unanticipated problems with household dynamics if parents wanted to treat all of their children similarly but one child was receiving food backpacks and free school suppers but others were not (Fram and Frongillo 2018). One caregiver said, "*It would be difficult to feed one child and not the other…When you have multiple children, I don't understand why [benefits are for] just one [child]*." Also, focus group discussants indicated that food backpack portions were not large enough to feed the whole family. For example: *"Not to sound greedy, the bags are fantastic, but if they can make the cans bigger for the whole family. To a regular size, treat [the benefit] as a 'family meal.'"* "*I don't get stamps and I have a family of five. Those two cans still isn't close to the whole one."*

3. Did project benefits create unmet expectations among adults in treatment households?

The Virginia 365 project provided food resources for children in treatment households but had unfavorable effects for at least one of the adults and the household as a whole. This pattern of results is puzzling, given that the provision of additional food for at least some children would be expected to free up resources for other household members including other children or adults. However, results indicate that food insecurity experiences (or perceptions of food insecurity experiences) actually worsened among adults in treatment households using the definition of food insecurity among adults as the outcome (at least one household adult experiencing food insecurity in the prior month).

One possible explanation for this finding is that health concerns were more common in treatment households. A slightly higher percentage of treatment household survey respondents reported having fair or poor health compared with control group respondents. Food insecurity can be associated with poor health in low-income households and individuals (American Academy of Family Practitioners 2015; Choi et al. 2013).

[51] Ideally, children's food consumption (and calories) should be spread across the day; the American Academy of Pediatrics (AAP) recommends that children have three healthy meals and two to three healthy snacks per day (AAP 2015, 2018).

A related possibility is that adults in treatment households expected increased food resources from their involvement in the project but needed to make adjustments when the benefits did not meet their expectations, thus having an adverse effect on the food security of at least some of the adults. Specifically, as noted above, the findings suggest that school suppers did not necessarily replace home suppers, so this source of additional food may not have freed up food resources at home. Also, adults in treatment households may have felt compelled to provide an additional snack after school to other children in the household who were not in a treatment school. As a result, adults in these households may not have gotten additional food as a result of being in the treatment group. Moreover, with more food going to the children but not the adults in the household, adults may have perceived a sense of relative deprivation and been more likely to report certain aspects of food insecurity, such as worrying about food and adults skipping or cutting back on meals (Appendix Exhibit D.4 shows significantly higher affirmative responses for these practices among treatment households compared to control households; see Section C.4).

4. Were the findings affected by outliers or unusual patterns in the data?

Unusual research findings sometimes can be explained by outliers in the data, which could result from data errors or unusual situations in some households or study sites (schools, in the case of the Virginia 365 project). This possibility was assessed by checking on whether the estimated impacts of the project were reasonably consistent across different subgroups of households in different schools (matched pairs). There was no evidence that the findings were due to atypical, extreme observations. To check on this possibility, the impacts of the Virginia 365 project were estimated separately for each of the 19 matched pairs of schools in the sample. This was possible since one school within each matched pair was randomly assigned to the treatment group and the other to the control group. Concerns would have been raised if the estimated impact in a single matched pair of schools was large enough to drive the overall results (for example, a positive overall impact estimate caused by an extremely large positive impact in one matched pair combined with small to moderate negative impacts in the other 18 matched pairs). However, no such pattern of results was observed in the estimated impacts of the 19 matched pairs of schools (Appendix Exhibits D.5 and D.6).

There also were no unusual patterns of responses on individual items of the food security module upon which the food security measures were based (Appendix Exhibit D.4). The items that contributed to adult food insecurity nearly all favored the control group; that is, a larger proportion of treatment than control households reported the presence of that indicator of food insecurity. For example, control households were less likely to report that they cut or skipped meals in the 30 days before the survey. These differences tended to be smaller and were less likely to be statistically significant for the items that suggested more severe food insecurity. Among items that contributed to children's food security, treatment households were more likely than control households to rely on few kinds of low-cost food to feed children, and less likely to report children skipping meals in more than 2 of the last 30 days. For other child measure items, treatment-control differences were not statistically significant. These patterns of estimated project impacts on the individual food security items were consistent with the estimated impacts on overall measures of food insecurity among children, adults, and households.

D. Limitations of the study

As with any study, the analysis of the Virginia 365 project faced challenges and had some limitations. Some issues related to the study design, methods, and generalizability are important to keep in mind when interpreting the results of this study:

- Although this study used an experimental design in which schools were randomly assigned to either receive or not receive project benefits, there was a subset of 16 schools in which the grantee assigned 8 to the treatment group by using an approach that was not random. These schools were paired based on having similar characteristics and then were assigned to either the treatment or control group. In most cases, the first school listed alphabetically was assigned to the treatment group. This process was arbitrary but not strictly random. However, project impacts were estimated separately for this subset of schools as well as the schools that had been randomly assigned; impacts on FI-C did not differ significantly between the two groups.
- The evaluation did not examine the impact of the summer portion of the demonstration project that provided $60 per month per eligible child in treatment schools. It is likely, based on prior evaluations of the Summer EBT, that this project benefit may have demonstrably reduced food insecurity among children (Collins et al. 2016).
- The intervention was not implemented uniformly across schools. All treatment schools operated universal supper and backpack programs, and worked to optimize participation among children. However, schools tailored the delivery of benefits based on school operations and children's preferences. For example, suppers varied with respect to content, timing of service, location in the school, and method of distribution. Similarly, schools varied their distribution of food backpacks with respect to timing, location in the school, and method of distribution.
- Food security among children is a complex problem and some aspects of the interplay between children's food consumption and that of other household members are challenging to capture through survey methods. Additional qualitative data may have helped explain results (or the lack thereof). For example, in-depth interviews with household members may have helped unpack how the additional food from school affected what was served at home, both to the target children and other members of the household.
- Additional information would be useful on how low-resource households in the demonstration changed how they planned and provided meals to their families at home. For example, there was no impact on households' out-of-pocket food spending, but little is known about whether households changed their behaviors with respect to buying different types or quantities of food for home use. Among the small percentage of treatment households that participated in nutrition education classes, the most popular topic was "Plan, Shop, $ave."
- Household survey nonresponse could have led to biased results since 62% of eligible households responded to the follow-up survey. A nonresponse bias analysis to identify differences between sampled and non-sample households showed race to be a characteristic with a statistically significant difference between sampled and non-sampled households, although the magnitude of the difference was small. However, two factors make it less likely

that survey nonresponse led to bias in the estimated impacts of the Virginia 365 project. First, the analysis was conducted with sample weights, designed to address difference between responding and nonresponding households. Second, the survey nonresponse rate was similar in the treatment (63%) and control (62%) groups, so that any nonresponse bias likely affected the two groups equally and so would offset each other in estimates of the project's impacts, which are treatment-control differences.

- The results do not necessarily reflect what the impacts of the project would have been in other communities or if conducted at a different time under different circumstances (for example, before SBP was more widely available). Local community characteristics have been demonstrated as having a relationship with children's food insecurity (Bartfield et.al 2010). The Virginia 365 project was conducted in a specific place and time, and the findings apply specifically to that place and time. It focused on households with children eligible for FRP meals attending a set of schools in Richmond and Southwest Virginia with low academic performance, and more than half of enrolled students eligible for FRP meals.
- National data show that in the last 15 years, food insecurity rates among children (FI-C) were highest in the 2008–2014 period. National rates provide context for larger economic patterns in the country and reference data for comparison to States and localities which may have different economic and social conditions. It is possible that other individual, family, and community factors not measured by the evaluation are contributing factors to the FI-C rates in the Virginia 365 demonstration area.

E. Conclusions

This study examined the impact of the Virginia 365 project, which aimed to reduce food insecurity among children by providing three free meals per day at school and additional food resources on days when school was not in session. Children received food backpacks to cover meals on weekends and school breaks; the project also offered nutrition education classes to families and addressed the loss of school meals during the summer months by providing EBT benefits during the summer. Overall, the project reduced VLFS-C, but had no impact on FI-C. In addition, rates of food insecurity among adults and households were higher among households in the treatment than the control group.

A lack of impacts on FI-C may have been due to the design or delivery features of Virginia 365 project's nutrition assistance. Child participation in SBP and NSLP was relatively high at baseline for both treatment and control households, so intervention services in these groups lacked distinction. For example, the supper and backpack program benefits may not have been widespread enough to reduce FI-C as measured by the standard survey module. A number of potential explanations for the adult food insecurity results, such as outliers in the data or unusual patterns of responses on individual items of the food security module, were explored but not supported by the data. Future research that addresses the interplay between household- and child-level nutrition benefits and food security measures may indicate ways for schools to optimize the targeting, design, and delivery features of benefits to best serve families most in need, thus reducing children's food insecurity.

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APPENDICES

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CONTENTS

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APPENDIX A

STUDY DESIGN AND ANALYTIC METHODS

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A.1. STUDY DESIGN: SAMPLING, RANDOM ASSIGNMENT, AND ANALYSIS

This appendix describes the sampling design, random assignment, and analysis methods for the evaluation of the Virginia 365 project. This design was used to estimate impacts of the project on household food security and other outcomes.

A. Sampling design and random assignment

The target population for the Virginia 365 project included households with children eligible for free or reduced-price (FRP) school meals attending a set of schools with low academic performance[1] and more than half of enrolled students eligible for FRP meals. The estimates from the study reflect the impacts of the project just for this population and as such may not be generalizable to other areas, points in time, or types of households. The set of 38 schools included in the study had been identified and recruited into the study and half of the schools assigned to the treatment group by summer 2015.[2] From within those schools, a list of FRP-eligible students was provided to the study team, and converted to a list of households by matching surnames and addresses across schools, then a sample was selected for inclusion in the study. The baseline survey was then administered and the intervention period began in June 2016.

Initial sampling: The initial sampling frame consisted of 10,705 households with at least one FRP-eligible student in a study school. A random sample of 6,333 households was selected from this frame in fall 2015, and a random subsample of 4,750 was ultimately released to be administered the baseline survey starting in February 2016. This was a stratified random sample, stratified by region (Richmond versus Southwest Virginia) but with no other stratification. The households in this sample were targeted for the baseline survey.

The households in this original sample that were never identified to be ineligible—for example, by not having a child enrolled in a study school as of spring 2016—formed the final evaluation sample. Among the 4,750 households in the original sample, 395 were later determined to be ineligible. The remaining 4,355 households formed the evaluation sample, and were targeted for both the baseline survey and follow-up survey. In other words, households were targeted for the follow-up survey on the basis of being in this evaluation sample, regardless of whether or not they completed the baseline survey.

The analysis sample—households included in most of the analyses presented in this report—included the 2,636 households that completed the follow-up survey. Sample weights were developed to ensure that this analysis sample remained representative of the full target population of eligible households. The sample weights also ensured that differential patterns of survey response did not lead to systematic differences between the households included in the

[1] Schools targeted for the study all had "Accredited with Warning" status in the State's accountability system, based on having low scores on student assessments.

[2] There were originally 40 schools selected into the study. During the study design phase, two of these schools merged into a single school. Later, this merged school dropped out of the study, leaving 38 schools to participate, 18 in Richmond and 20 in Southwest Virginia.

treatment and control groups of the study. See Appendix A.3 for a description of the sample weights.

Random assignment: School-level assignment was used to determine which schools would be treatment schools and participate in the Virginia 365 project and receive project benefits, and which schools would be control schools. In other words, clusters of households (those with children in specific schools) were assigned to either the treatment or control group. The assignment of schools took place in several steps. First, the grantee assigned a set of 16 schools in Southwest Virginia, with 8 schools assigned to the treatment group and 8 schools assigned to the control group. Second, the study team assigned 18 schools in Richmond, with 9 schools assigned to each the treatment and control group. Finally, the study team assigned the last four schools, also located in Southwest Virginia.

The grantee assigned the first group of 16 Southwest Virginia schools in 2014, prior to their submission of the grant application. They first identified a set of potentially eligible schools located in five counties (Buchanan, Grayson, Lee, Scott, and Smyth) and two cities (Bristol and Galax). Each of these schools had more than 50% of students eligible for FRP meals and an accredited with warning status or plans for school improvement. The grantee then matched the schools into pairs of similar schools. The schools were matched on the basis of several characteristics, including county/city (if possible), percentage of FRP-eligible students, grades served, and enrollment of students eligible for school meal programs. By matching schools into pairs with similar characteristics before random assignment, the design reduces the likelihood that differences between the schools assigned to the treatment and control schools will occur by chance. This type of matched pair random assignment design also improves the statistical power of the impact estimates and is recommended by Imai et al. (2009).

Within each matched pair of schools, one was selected arbitrarily to be the treatment school that would receive Virginia 365 benefits, while the other was assigned to the control group and would not receive these benefits. In most but not all cases, the school listed first alphabetically was assigned to the treatment group. This form of assignment to the treatment group was not technically random assignment, but it was arbitrary and not based on the self-selection of schools into the treatment group. Moreover, the initial matching of schools into pairs ensured that the schools assigned to the treatment and control groups were similar in terms of those matching characteristics.

The study team randomly assigned the remaining study schools, including 18 schools in Richmond and 4 additional schools in Southwest Virginia (in Smyth and Tazewell counties). The process for assigning these schools was similar to the process used by the grantee except that random assignment rather than arbitrary assignment was used to determine which schools would be assigned to the treatment group. In particular, the set of eligible schools was again restricted to those with at least 50% eligible for FRP meals and that had accredited with warning status. The schools were then matched into pairs (separately for the Richmond and Southwest Virginia schools). The matching was based on the schools' grades served, percentage of students eligible for FRP meals, and the three-year (ending in 2014) average percentage of students proficient in each of three subjects: reading, math and science. Once the schools were matched into pairs, one

school within each pair was randomly assigned to the treatment group with the other school in the pair assigned to the control group.[3]

Households were assigned to the treatment or control group on the basis of whether or not they had a child enrolled in a treatment or a control school. If a household had children enrolled in more than one study school, they were defined to be in the treatment group if they had at least one child enrolled in a treatment school regardless of whether they had a child enrolled in a control school. This ensured that even households with children in multiple schools were assigned to either the treatment or control group, but not both. The sample weights account for the differential likelihood that households with children in more than one study school would be assigned to the study's treatment group.[4] Ultimately, there were 2,275 eligible households assigned to the treatment group and 2,080 households assigned to the control group. Among these households in the evaluation sample, 1,393 treatment households and 1,243 control households responded to the follow-up survey and were included in the main analysis sample.

Characteristics of evaluation sample households assigned to the treatment and control groups. Random assignment should have ensured that households in treatment and control groups had similar characteristics at baseline. To assess whether this was the case, this section presents baseline characteristics of these groups, using an approach similar to the approach used in the impact analysis. Exhibit A.1 shows that treatment and control households had similar characteristics at baseline, as expected in groups created by random assignment. Treatment and control group households did not differ on household characteristics that were measured. For example, no statistically significant differences between treatment and control households in the six measures of food insecurity examined were found. Exhibit A.2 shows baseline characteristics of treatment and control households among those that completed the follow-up survey (and for whom baseline survey data are also available). Results showed that again, treatment and control group households did not differ on household characteristics that were measured.

Exhibit A.1. Household characteristics at baseline among all sampled households in the Virginia 365 project

Characteristic	Treatment	Control	Difference (SE)[a]	p-value
Household (HH) size				
Mean number of HH members who share food	4.1	4.0	0.0 (0.1)	0.429
Mean number of children in household	2.3	2.3	0.1 (0.1)	0.510
Household composition (%)				
Single adult household	37.0	38.2	-1.2	0.881
Two-adult household	63.0	61.8	1.2	0.881

[3] As noted above, there were originally 20 Richmond schools and all of these schools were randomly assigned. However, after random assignment but before the baseline survey was administered, two schools first merged and then the merged school dropped out of the study. The two schools that had originally been matched to these schools were then matched to each other and re-randomized.

[4] There were three households that had children enrolled in both schools of a matched pair. Since these households were guaranteed to be in the treatment group based on our definitions, they were determined to be ineligible for the study sample and excluded.

Characteristic	Treatment	Control	Difference (SE)[a]	p-value
Respondent age				
Respondent is under 40	61.0	62.1	-1.2	0.895
Respondent is 40 or older	39.1	37.9	1.2	0.895
Health status				
Good or excellent	70.6	73.6	-3.0	0.218
Fair or poor	29.4	26.4	3.0	0.218
Primary language				
English	95.4	93.6	1.8	0.639
Spanish	4.6	6.4	-1.8	0.639
School location				
Non-urban	33.7	31.0	2.7	0.889
Urban	66.3	69.0	-2.7	0.889
Race/ethnicity				0.957
Hispanic, all races	7.8	7.8	0.0^	
Black, non-Hispanic	45.7	46.6	-0.9	
White, non-Hispanic	41.9	41.8	0.1	
Other, non-Hispanic	4.6	3.8	0.8	
Number of children				0.302
Percentage of households with:				
1 child	25.2	29.0	-3.8	
2 children	39.0	35.0	4.0	
3 or more children	35.8	36.0	-0.2	
Age of children (%)				
Less than 5 years	31.0	29.4	1.6	0.791
5 to 11 years	79.1	80.2	-1.1	0.938
12 to 17 years	49.6	47.9	1.7	0.907
18 years (or older if still in school)	6.2	5.2	1.0	0.711
Teenager in house				
House has teenager	49.8	47.2	2.6	0.856
House does not have teenager	50.2	52.8	-2.6	0.856
Mean number of children in demonstration schools	2.0	1.9	0.0 (0.1)	0.403
Number of children in demonstration schools (%)				
1 child	38.9	41.8	-3.0	0.313
More than one child	61.2	58.2	3.0	0.313
Median HH income last month ($)[b]	1,562	1,600	-38 (192)	0.844
Household income[b]				0.812
No income	5.3	5.5	-0.2	
At or below 75% of poverty line	43.3	41.7	1.6	
Above 75% but at or below 100% of poverty line	13.2	11.5	1.7	
Above 100% but at or below 130% of poverty line	10.2	10.5	-0.3	
Above 130% but at or below 185% of poverty line	11.2	11.8	-0.6	
Above 185% of poverty line	16.9	19.0	-2.1	
Any household adult employed in last 30 days (%)	68.3	70.0	-1.7	0.664
Sources of non-wage income				
Reported receiving TANF	11.3	9.6	1.8	0.449
Reported receiving Social Security	23.3	20.0	3.4	0.343

Characteristic	Treatment	Control	Difference (SE)[a]	p-value
Reported receiving SSI or supplemental security income	18.3	16.8	1.5	0.532
Reported receiving veteran's benefits	1.9	2.2	-0.3	0.737
Reported receiving unemployment insurance or worker's compensation benefits	2.5	2.3	0.3	0.800
Reported receiving child support payments	17.8	15.9	1.8	0.472
Reported receiving financial support from family and friends	14.9	14.3	0.6	0.805
Reported receiving any other income besides earnings	0.3	0.7	-0.4	0.162
Reported none of the above	43.6	45.5	-2.0	0.559
HH nutrition benefit program participation (%)[c]				
Reported currently receiving SNAP	48.3	46.1	2.2	0.743
Reported receiving WIC	13.1	13.3	-0.2	0.954
Reported receiving food from pantry, emergency kitchen, or community program	12.7	9.7	3.0	0.089
Reported receiving FRP lunch	83.4	83.9	-0.5	0.947
Reported receiving FRP breakfast	73.8	73.9	-0.1	0.993
Reported receiving any outschool services	46.1	43.2	2.9	0.685
HH food security status (%)				
Insecure	33.4	36.0	-2.6	0.401
VLFS	15.9	15.3	0.6	0.739
Adult food security status (%)				
Insecure	31.0	32.4	-1.4	0.675
VLFS	15.8	14.5	1.3	0.494
Child food security status (%)				
Insecure	20.7	23.0	-2.3	0.374
VLFS	2.3	2.6	-0.3	0.699
Reported monthly HH mean out-of-pocket food expenditures ($)	378	378	0 (33)	0.993
Reported monthly per person mean out-of-pocket food expenditures ($)				
Total out-of-pocket expenditures[d]	97	98	-1 (9)	0.907
Food expenditures at supermarkets, grocery stores, and other types of stores[e]	73	75	-2 (7)	0.815
Expenditures at restaurants[f]	23	23	0 (2)	0.930
Sample size	1,380	1,216		

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2016 baseline survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: For continuous measures, reported p-values are obtained from two-tailed t-tests of statistically significant differences; for binary measures, p-values are from chi-squared tests of independence. Calculations account for weighting and complex sample design.

[a] Difference column may not match the (Treatment minus Control) calculation exactly due to rounding.

[b] Includes all earnings, Social Security, pensions, Veteran's benefits, unemployment insurance, worker' compensation benefits, child support, payments from roomers and borders, TANF, and SSI for all household members.

[c] Calculated for all households as a descriptive variable and not constrained to only those households that are eligible for a specific program listed.

[d] Sum total of reported out-of-pocket food expenditures at stores and restaurants in the last 30 days. Excludes purchases made with SNAP and WIC.

[e] Out-of-pocket expenditures on food at supermarkets, grocery stores, and other stores. Excludes purchases made with SNAP and WIC.

[f] Includes carryout, drive through, and all types of restaurants.

^ Greater than zero but less than 0.05.

FRP = free or reduced price; HH = household; SE = standard error; SNAP = Supplemental Nutrition Assistance Program; SSI= Supplemental Security Income; TANF = Temporary Assistance for Needy Families; VLFS = very low food security; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

Exhibit A.2. Household characteristics at baseline among households with a follow-up survey response

Characteristic	Treatment	Control	Difference (SE)[a]	p-value
Household (HH) size				
Mean number of HH members who share food	4.1	4.0	0.0 (0.1)	0.495
Mean number of children in household	2.3	2.2	0.1 (0.1)	0.441
Household composition (%)				
Single adult household	37.5	37.6	-0.1	0.988
Two-adult household	62.5	62.4	0.1	0.988
Respondent age				
Respondent is under 40	59.7	62.3	-2.5	0.750
Respondent is 40 or older	40.3	37.7	2.5	0.750
Health status				
Good or excellent	69.6	72.8	-3.3	0.253
Fair or poor	30.5	27.2	3.3	0.253
Primary language				
English	95.6	93.0	2.5	0.528
Spanish	4.5	7.0	-2.5	0.528
School location				
Non-urban	32.1	31.4	0.7	0.972
Urban	67.9	68.6	-0.7	0.972
Race/ethnicity				0.913
Hispanic, all races	7.7	8.4	-0.7	
Black, non-Hispanic	47.4	45.7	1.7	
White, non-Hispanic	40.4	42.4	-2.1	
Other, non-Hispanic	4.5	3.5	1.0	
Number of children				0.203
Percentage of households with:				
1 child	24.8	29.3	-4.4	
2 children	39.3	34.8	4.6	
3 or more children	35.8	36.0	-0.1	
Age of children (%)				
Less than 5 years	30.7	29.1	1.6	0.776
5 to 11 years	79.9	80.8	-0.9	0.947
12 to 17 years	49.5	47.0	2.5	0.866
18 years (or older if still in school)	5.9	4.8	1.2	0.557
Teenager in house				
House has teenager	49.1	46.4	2.7	0.843
House does not have teenager	50.9	53.6	-2.7	0.843
Mean number of children in demonstration schools	2.0	1.9	0.1 (0.1)	0.351
Number of children in demonstration schools (%)				
1 child	38.5	42.0	-3.5	0.185

Characteristic	Treatment	Control	Difference (SE)[a]	p-value
More than one child	61.5	58.0	3.5	0.185
Median HH income last month ($)[b]	1,500	1,600	-100 (193)	0.607
Household income[b]				0.714
No income	5.2	5.2	0.0^	
At or below 75% of poverty line	43.9	42.4	1.4	
Above 75% but at or below 100% of poverty line	14.0	11.7	2.3	
Above 100% but at or below 130% of poverty line	10.2	10.3	-0.1	
Above 130% but at or below 185% of poverty line	11.3	12.0	-0.7	
Above 185% of poverty line	15.4	18.4	-3.0	
Any household adult employed in last 30 days (%)	67.0	70.0	-3.0	0.486
Sources of non-wage income				
Reported receiving TANF	12.0	9.7	2.3	0.364
Reported receiving Social Security	25.5	20.9	4.7	0.243
Reported receiving SSI or supplemental security income	19.5	17.3	2.2	0.411
Reported receiving veteran's benefits	2.2	1.7	0.5	0.545
Reported receiving unemployment insurance or worker's compensation benefits	2.6	2.0	0.6	0.576
Reported receiving child support payments	17.6	16.6	1.0	0.677
Reported receiving financial support from family and friends	15.7	14.5	1.2	0.578
Reported receiving any other income besides earnings	0.3	0.7	-0.4	0.141
Reported none of the above	40.7	45.6	-4.9	0.176
HH nutrition benefit program participation (%)[c]				
Reported currently receiving SNAP	49.5	45.6	3.9	0.547
Reported receiving WIC	13.7	13.5	0.2	0.945
Reported receiving food from pantry, emergency kitchen, or community program	13.2	10.3	2.9	0.114
Reported receiving FRP lunch	84.7	84.5	0.2	0.982
Reported receiving FRP breakfast	74.4	74.0	0.4	0.963
Reported receiving any outschool services	46.5	42.8	3.7	0.629
HH food security status (%)				
Insecure	34.6	36.2	-1.5	0.677
VLFS	17.0	15.3	1.6	0.437
Adult food security status (%)				
Insecure	31.9	32.6	-0.7	0.856
VLFS	16.8	14.4	2.4	0.244
Child food security status (%)				
Insecure	21.8	23.2	-1.4	0.621
VLFS	2.4	2.9	-0.5	0.575
Reported monthly HH mean out-of-pocket food expenditures ($)	371	377	-6 (31)	0.843
Reported monthly per person mean out-of-pocket food expenditures ($)				
Total out-of-pocket expenditures[d]	95	97	-2 (8)	0.797

Characteristic	Treatment	Control	Difference (SE)[a]	p-value
Food expenditures at supermarkets, grocery stores, and other types of stores[e]	72	75	-2 (6)	0.712
Expenditures at restaurants[f]	22	23	-1 (2)	0.783
Sample size	1,393	1,243		

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2016 baseline survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: For continuous measures, reported p-values are obtained from two-tailed t-tests of statistically significant differences; for binary measures, p-values are from chi-squared tests of independence. Calculations account for weighting and complex sample design.

[a] Difference column may not match the (Treatment minus Control) calculation exactly due to rounding.

[b] Includes all earnings, Social Security, pensions, Veteran's benefits, unemployment insurance, worker' compensation benefits, child support, payments from roomers and borders, TANF, and SSI for all household members.

[c] Calculated for all households as a descriptive variable and not constrained to only those households that are eligible for a specific program listed.

[d] Sum total of reported out-of-pocket food expenditures at stores and restaurants in the last 30 days. Excludes purchases made with SNAP and WIC.

[e] Out-of-pocket expenditures on food at supermarkets, grocery stores, and other stores. Excludes purchases made with SNAP and WIC.

[f] Includes carryout, drive through, and all types of restaurants.

^ Greater than zero but less than 0.05.

FRP = free or reduced price; HH = household; SE = standard error; SNAP = Supplemental Nutrition Assistance Program; SSI= Supplemental Security Income; TANF = Temporary Assistance for Needy Families; VLFS = very low food security; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

Household and respondent characteristics at the time of the follow-up survey were examined to provide contextual information for interpreting impact analysis results. The characteristics of households in the treatment and control groups were similar at follow-up (Exhibit A.3).

Exhibit A.3. Household characteristics at follow-up

Characteristic	Treatment	Control	Difference (SE)	p-value
Household (HH) size				
Mean number of HH members who share food	4.1	4.1	0.0 (0.1)	0.899
Mean number of HH members	4.1	4.1	0.0 (0.1)	0.862
HHs that have more members than just those who share food (%)	1.5	0.8	0.7	0.271
Number of children				
Percentage of households with:				0.444
1 child	24.8	28.4	-3.7	
2 children	37.5	34.4	3.1	
3 or more children	37.3	36.6	0.7	
Mean number of children in household	2.3	2.3	0.0 (0.1)	0.629
Age of children				
Less than 5 years	25.9	24.1	1.9	0.665
5 to 11 years	74.8	75.2	-0.3	0.981
12 to 17 years	54.5	53.3	1.2	0.930
18 years (or older if still in school)	10.3	9.7	0.6	0.862
Any household adult employed in last 30 days (%)	67.3	69.8	-2.5	0.495
Last month household income[a]				
Median ($)	1,600	1,750	-150 (189)	0.432
Mean ($)	2,230	2,427	-197 (261)	0.455
Percentage of households				0.523
No income	4.3	3.3	1.0	
At or below 75% of poverty line	42.1	40.9	1.2	
Above 75% but at or below 100% of poverty line	15.0	12.8	2.2	
Above 100% but at or below 130% of poverty line	11.5	10.2	1.3	
Above 130% but at or below 185% of poverty line	11.9	13.1	-1.2	
Above 185% of poverty line	15.2	19.7	-4.5	
Sources of income (%)				
Reported receiving TANF	10.2	8.8	1.4	0.569
Reported receiving Social Security	24.3	22.5	1.9	0.651
Reported receiving SSI or supplemental security income	17.8	17.2	0.6	0.785
Reported receiving veteran's benefits	2.3	2.4	-0.1	0.897
Reported receiving unemployment insurance or worker's compensation benefits	1.9	2.1	-0.1	0.851
Reported receiving child support payments	17.1	16.5	0.6	0.831
Reported receiving financial support from family and friends	14.0	12.7	1.3	0.407
Reported receiving any other income besides earnings	0.4	0.5	-0.1	0.656
Reported none of the above	44.3	47.6	-3.3	0.242
Sample size	1,393	1,243		

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: For continuous measures, reported p-values are obtained from two-tailed t-tests of statistically significant differences; for binary measures, p-values are from chi-squared tests of independence. Calculations account for weighting and complex sample design.

[a] Includes all earnings, Social Security, pensions, Veteran's benefits, unemployment insurance, worker' compensation benefits, child support, payments from roomers and borders, TANF, and SSI for all household members.

HH = household; SE = standard error; SSI= Supplemental Security Income; TANF = Temporary Assistance for Needy Families.

Respondent characteristics were also similar in the treatment and control groups at follow-up (Exhibit A.4).

Exhibit A.4. Demographics of respondents at follow-up

Characteristic	Treatment	Control	Difference	p-value
Gender				0.903
Male	13.0	12.1	0.6	
Female	87.3	87.9	-0.6	
Age				0.881
Under 20 years	0.1	0.1	0.0^	
20 to 29 years	14.3	15.2	-0.9	
30 to 39 years	43.5	44.5	-1.0	
40 to 49 years	24.3	23.9	0.5	
50 to 59 years	11.1	10.9	0.2	
60 years or older	6.7	5.5	1.3	
Race/Ethnicity				0.926
Hispanic, all races	6.9	7.8	-0.8	
Black, non-Hispanic	47.0	47.0	-0.1	
White, non-Hispanic	41.0	41.2	-0.1	
Other, non-Hispanic	5.1	4.1	1.0	
Level of education				0.784
Less than high school	21.2	20.6	0.5	
High school graduate (or GED)	33.1	30.4	2.7	
Some college (including 2 year degree)	33.1	34.5	-1.4	
Four year college degree or higher	12.7	14.5	-1.8	
Marital status				0.820
Married	37.9	38.5	-0.6	
Living with partner	5.9	7.5	-1.6	
Separated or divorced	19.3	17.8	1.5	
Widowed	2.6	2.6	0.0^	
Never married	34.3	33.6	0.7	
Reported health status				0.239
Excellent	14.2	15.7	-1.5	
Very good	23.7	26.0	-2.3	
Good	32.9	34.4	-1.5	
Fair	22.8	19.3	3.5	
Poor	6.4	4.7	1.7	
Sample size	1,387	1,234		

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: Chi-squared tests of independence were conducted to test for significant differences in proportions between the treatment and the control groups for each characteristic. Calculations account for weighting and complex sample design.

^ Greater than zero but less than 0.05.

GED = general educational development.

Exhibit A.5. Household characteristics at baseline and follow-up

Characteristic	Mean (SE) or percentage	
	Baseline	Follow-Up
Household size		
Mean number of household members who share food	4.1 (0.03)	4.1 (0.03)
Mean number of children in household	2.3 (0.04)	2.3 (0.04)
Median household income last month ($)[a]	1,582 (22)	1,668 (91)
Any household adult employed in last 30 days	69.2	68.6
Household nutrition benefit program participation[b]		
Reported currently receiving SNAP[c]	47.2	45.3
Reported receiving WIC	13.2	10.8
Reported receiving food from food pantry, emergency kitchen, or other community program	11.2	13.0
Reported receiving FRP lunch	83.6	83.5
Reported receiving FRP breakfast	73.8	76.3
Adult food security status		
Insecure	31.7	34.2
VLFS	15.1	16.7
Child food security status		
Insecure	21.8	24.9
VLFS	2.5	3.7
Reported monthly out-of-pocket per-person mean food expenditures ($)		
Total out-of-pocket expenditures[d]	98 (4)	97 (4)
Food expenditures at supermarkets, grocery stores, and other types of stores[e]	74 (3)	74 (3)
Expenditures at restaurants[f]	26 (1)	24 (1)
Sample size	2,596	2,636

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2015–2016 baseline survey and 2017 follow-up survey. Tabulations prepared by Mathematica Policy Research.

Note: Estimates are percentages unless otherwise noted. Tabulations are weighted to be representative of all eligible households in the Virginia 365 demonstration, based on the baseline weights. Calculations are based on the full evaluation sample, including households ultimately assigned to the treatment group and the control group. Program participation questions generally reflected current participation at the time of the interview, defined as "during the last 30 days." Food security was measured using the standard USDA 18-item survey module and a 30-day reference period. VLFS is a subcategory within the food insecure category. Questions about food expenditures asked about the last 30 days.

[a] Includes all earnings, Social Security, pensions, veteran's benefits, unemployment insurance, workers' compensation benefits, child support, payments from roomers and borders, TANF, and SSI for all household members but does not include SNAP or WIC.

[b] Calculated for all households as a descriptive variable and not constrained to only those households eligible for a specific program listed.

[c] Based on SNAP administrative records.

[d] Sum total of reported out-of-pocket food expenditures at stores and restaurants in the last 30 days. Excludes purchases made with SNAP and WIC. The sum is not equal to the sum of the two means because of missing data. If expenditures at either stores or restaurants are missing, then the total is missing.

[e] Out-of-pocket expenditures on food at supermarkets, grocery stores, and other stores. Excludes purchases made with SNAP and WIC.

[f] Includes carryout, drive through, and all types of restaurants.

FRP = free or reduced price; SE = standard error; SNAP = Supplemental Nutrition Assistance Program; SSI= Supplemental Security Income; TANF = Temporary Assistance for Needy Families; USDA = United States Department of Agriculture; VLFS = very low food security; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

B. Analysis approach

Descriptive analysis. This study included several descriptive analyses to provide an overview of the baseline characteristics of the sample, summarize key implementation outcomes, and describe project costs. These analyses used baseline survey, MIS, cost, and administrative data, and the descriptive analyses employed varied by characteristic. For continuous variables, such as income or food expenditures, means or medians were calculated. For categorical characteristics such as education level or households' participation in SNAP, proportions or frequency distributions were calculated. In all of these analyses, appropriate statistical tests were used (t-tests for comparing means and chi-square tests for comparing frequency distributions and proportions) to identify statistically significant treatment-control differences. In addition, the study's sampling weights were applied to the calculations, and the estimation of standard errors accounted for these weights as well as the clustering and stratification of households in the sampling and random assignment design.

Impact analysis. The approach to estimating project impacts compared outcomes among households assigned to the treatment group and those assigned to the control group. Because the study's primary outcome (food insecurity among children) is a binary variable, a logistic regression model was used to estimate project impacts. To test whether the results were sensitive to the modeling approach, a linear probability model was also estimated as an alternative approach (see Exhibit A.6 for results). The basic form of the model being estimated (whether through a logistic or linear regression) was:

$$(1) \qquad y_{hsp} = \alpha_p + \delta T_{sp} + \beta \chi_{hsp} + \varepsilon_{hsp}$$

where y_{hsp} is the outcome of interest (such as food insecurity among children) for household h in school s and matched pair of schools p; α_p is the regression intercept that varies by matched pair (a matched pair fixed effect); T_{sp} is a binary indicator for whether the household's school was assigned to the treatment or control group (set equal to 1 for treatment households and 0 for control households); χ_{hsp} represents a set or vector of household characteristics; β is a vector of regression coefficients for those characteristics; and ε_{hsp} is the regression's residual. The parameters of interest is δ, which represents the impact of the project—the benefits provided by Virginia 365 over and above what was available in control schools—on the outcome.

To ease interpretation of the impacts estimated using logistic models, tables of impact estimates present a mean impact rather than logit coefficients or odds ratios. The mean impact was calculated by using the coefficients estimated in the logistic model to predict probabilities of the outcome (for example, child food insecurity) for every sample member under two scenarios: first, as if each sample member had been in the control group, and then as if each had been in the treatment group. Each sample member then received a calculated difference in predicted probabilities under the two scenarios, and the mean impact was calculated as the average of those differences, accounting for respondent weights. In each table of estimated impacts, the control mean or proportion is the weighted value in the control group within analysis sample; the treatment mean or proportion is the sum of the control group value plus the mean impact. For continuous outcomes, tables present the impact estimate calculated directly from the linear regression model, but the calculation of the control mean and treatment mean is otherwise the same as described here.

Under well-implemented RCT designs that identify equivalent treatment and control groups at baseline, it may not be necessary to include covariates in the regression model to produce unbiased impact estimates. However, controlling for the characteristics of sample respondents can help to improve the precision of the impact estimates if those characteristics are associated

Exhibit A.6 Alternative estimates of the impact of the Virginia 365 project on child food insecurity

	Treatment	Control	Difference	p-value	Sample size
Main impact model					2,613
Secure	74.1	76.1	-2.0	0.982	
Insecure	25.9	23.9	2.0	0.982	
VLFS-C	3.2	3.9	-0.7	0.011	
Matched pair indicators as only covariates					2,613
Secure	74.1	76.1	-2.0	0.923	
Insecure	25.9	23.9	2.0	0.923	
VLFS-C	3.4	3.9	-0.6	0.049	
Listwise deletion sample[a]					1,845
Secure	75.3	76.1	-0.8	0.796	
Insecure	24.7	23.9	0.8	0.796	
VLFS-C	3.1	3.9	-0.8	0.041	
Linear probability model					2,613
Secure	74.1	76.1	-2.0	0.981	
Insecure	25.9	23.9	2.0	0.981	
VLFS-C	3.2	3.9	-0.8	0.004	

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Notes: Food security was measured using the standard USDA 18-item survey module and a 30-day reference period. VLFS is a subcategory within the food insecure category. The p-value associated with each impact estimate is from a one-tailed test of statistical significance. The number in the difference column may not exactly equal the treatment percentage minus the control percentage due to rounding.

[a] The listwise deletion sample excludes observations from any household with a missing value for any model covariate (such as those that failed to complete the baseline survey). As with all of the models, households with a missing value for the dependent variables are also excluded (such as those that failed to complete the follow-up survey).

VLFS-C = Very low food security among children.

with the outcome of interest, in this case (primarily) food insecurity among children, or if these factors are related to sample attrition. The model used to estimate impacts of the Virginia 365 project included a set of covariates, including the baseline level of the outcome measure (that is, baseline food insecurity among children). Other baseline covariates in the model included food insecurity among adults and very low food security among children and adults; the presence of a single adult in the household versus more than one; ages of children in the household; household income and employment status; respondent age, health status, race/ethnicity, and language preference; baseline participation in SNAP, WIC, school-based meal programs, or food pantries/kitchens/community food programs; whether the household was located in an urban vs. non-urban area; and indicator variables for the month of follow-up survey response. Each estimated model used a consistent set of covariates, regardless of the outcome being examined in that model. This meant that some models included covariates that may have been less directly related to the dependent variable than other covariates (for example, the FI-C model included baseline measures of both FI-A and FI-C). This was done to ensure that any differences between the study's treatment and control groups—even those arising by chance—were accounted for when estimating project impacts.

To address the fact that not all households in the evaluation sample had valid values of all variables included in the analysis, the following steps were used. First, households were dropped from the analysis of impacts on a particular outcome if they had missing data for that outcome. However, those households were included in the analysis if they had valid data for that outcome, regardless of whether they had valid data for other outcomes or for the covariates included in the model. This ensured that it was possible to compare true outcome values among households in the treatment and control groups for as many households as possible, thus minimizing the risk that missing data would create differences in the underlying (baseline) characteristics between the two groups, leading to bias in estimated impacts. One implication of this approach was the models that examined project impacts may have been based on different sample sizes for different outcomes, depending on patterns of missing data.

The second aspect of the strategy for addressing missing data involved households with valid outcome data but missing baseline data on a given model covariate (e.g., because they failed to complete the baseline survey or an item on that survey). In these cases, that household was included in the analysis with an imputed value of the variable. When possible, information from another data source was used to fill in missing values before addressing the remaining missing values as described below. In practice this was only feasible for the respondent language preference and ethnicity variables. For the remaining baseline covariates, missing data was imputed using an approach known as "dummy variable adjustment" (Puma et al. 2009).

The dummy variable adjustment approach involves two steps. The first step is to impute the missing values with valid values. A simple imputation is used, with all missing values for a given variable imputed with a single value. In this case, the missing values for baseline covariates were

replaced with a value of zero.[5] The second step is to create and include in the impact regression a set of missing "flag" indicator variables to identify observations with missing data on baseline covariates. In particular, when a household was missing the value of a covariate, that value was changed to zero so that the household could be included in the impact analysis. In order to account for the fact that the true value of that covariate for households with missing values was not zero, the model also included a binary missing value indicator variable. In principle, each covariate with missing values would have an indicator variable that could be included in the model, equal to one for a given household if the original value of the covariate was missing (and it had been imputed), and equal to zero otherwise. In practice, covariates capturing similar household characteristics were often missing for the same households. Thus, if a separate missing value indicator had been created for each covariate and all were included in the model, there would have been a severe problem with multicollinearity. As a result, single missing value indicator variables for related covariates were created and included in the model. This approach was implemented by defining three missing flags. The most common reason for missing data on baseline covariates was that the household did not complete a baseline survey. In that case, a set of covariates would be missing. One of the missing value flags indicates when a household did not complete the baseline survey. In addition, a missing value flag for cases that had missing data on the race of the respondent as well as missing data on baseline measures of monthly income was included. After accounting for households with missing baseline data with these missing value flags, no baseline variable was missing for more than 3% of remaining households. Exhibit A.7 presents the number and percentage of households with missing data for each covariate. The two columns on the left report the number and percentage of households with missing data out of the full follow-up respondent sample of 2,636 households. The two right columns report the number and percentage of follow-up survey respondents that had missing data after excluding 534 households that did not respond to the baseline survey.

Exhibit A.7. Number and percentage of households with imputed baseline covariates

	Total missing among follow-up survey completers		Missing due to item nonresponse, after excluding baseline survey nonrespondents	
Covariate	Number Missing	Percentage missing	Number Missing	Percentage missing
Household (HH) size	534	20.3	0	0.0
Number of children in household	534	20.3	0	0.0
Single adult household	543	20.6	9	0.3
Respondent age 40 or older	579	22.0	45	1.7
Median HH income last month ($)	696	26.4	162	6.2

[5] Under the dummy variable adjustment approach recommended by Puma et al. (2009), the key is that missing values for a given variable are replaced (imputed) with a constant. The specific constant that is used (e.g., zero, the mean of valid values, or some other value) does not matter. This is because of the inclusion of the missing value dummy variable in the regression, since the coefficient on that dummy variable will adjust to account for differences in the constant that is used for imputation.

Covariate	Total missing among follow-up survey completers		Missing due to item nonresponse, after excluding baseline survey nonrespondents	
	Number Missing	Percentage missing	Number Missing	Percentage missing
Any household adult employed in last 30 days (%)	548	20.8	14	0.5
Health status	554	21.0	20	0.8
Primary language	534	20.3	0	0.0
School location	0	0.0	0	0.0
Race/ethnicity	590	22.4	56	2.1
Ages of children in household				
Less than 5 years	534	20.3	0	0.0
5 to 11	534	20.3	0	0.0
12 to 17	534	20.3	0	0.0
18 (or older if still in school)	534	20.3	0	0.0
Teenager in house at follow-up	4	0.2	0	0.0
Number of children in demonstration schools	534	20.3	0	0.0
HH nutrition benefit program participation (%)				
Reported currently receiving SNAP	546	20.7	12	0.5
Reported receiving WIC	541	20.5	7	0.3
Reported receiving food from pantry, emergency kitchen, or community program	543	20.6	9	0.3
Reported receiving NSLP	535	20.3	1	0.0
Reported receiving SBP	543	20.6	9	0.3
Reported receiving FRP lunch	536	20.3	2	0.1
Reported receiving FRP breakfast	537	20.4	3	0.1
Reported receiving any outschool services	551	20.9	17	0.7
Reported receiving food through school backpack program in the past 30 days	540	20.5	6	0.2
Reported receiving food at after school program where snacks are received	545	20.7	11	0.4
Reported receiving free supper at school	548	20.8	14	0.5
Reported receiving food at another center	535	20.3	1	0.0
Household did not report receiving any of 5 child nutrition program benefits	536	20.3	2	0.1
Number of nutrition programs received (excludes food pantries)	582	22.1	48	1.8
Household did not report receiving any household nutrition benefits	546	20.7	12	0.5
Reported monthly per person mean out-of-pocket food expenditures ($)				
Total out of pocket food expenditures	607	23.0	73	2.8
Total per person household food expenditures	607	23.0	73	2.8
Total grocery store food expenditures	584	22.2	50	1.9
Total per person grocery store food expenditures	584	22.2	50	1.9
Total restaurant food expenditures	573	21.7	39	1.5

Covariate	Total missing among follow-up survey completers		Missing due to item nonresponse, after excluding baseline survey nonrespondents	
	Number Missing	Percentage missing	Number Missing	Percentage missing
Total per person restaurant food expenditures	573	21.7	39	1.5
HH food security status				
Insecure	541	20.5	7	0.3
VLFS	543	20.6	9	0.3
Adult food security status				
Insecure	539	20.5	5	0.2
VLFS	539	20.5	5	0.2
Child food security status				
Insecure	542	20.6	8	0.3
VLFS	542	20.6	8	0.3

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Tabulations were prepared by Mathematica Policy Research.

FRP = free or reduced price; HH = household; SBP = school breakfast program; SNAP = Supplemental Nutrition Assistance Program; VLFS = very low food security; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

In addition to the main analysis models that used imputation to address missing data, sensitivity analyses were conducted using two alternative approaches. One approach excluded all covariates from the analysis model except for the matched pair fixed effects. A second approach included all covariates but removed from the analysis sample any observation with a missing value on any model covariate, referred to as listwise deletion. This second approach basically amounts to estimating impacts among only those households that completed both the baseline and follow-up surveys, since households that failed to complete the baseline survey would be excluded because they have missing values for model covariates and those that failed to complete the follow-up survey would be excluded because they have missing values for the dependent variable (food security measures). The results of these sensitivity analyses are presented in Exhibit A.6, and the estimated impacts on food insecurity among children obtained from each approach are similar. Both alternative models showed similar sized differences on food insecurity among children and neither estimate was statistically significant. The analysis excluding observations with missing data showed a slightly larger difference in rates of very low food security.

The analysis used respondent weights that correspond to the survey's sampling design and adjust for survey nonresponse, as shown in Appendix A.4. Standard errors were calculated that used appropriate adjustments for these weighting factors and accounted for heteroskedasticity in the sample (that is, did not assume that the amount of variance in the data was the same across subpopulations of survey respondents). Since random assignment was conducted at the school level, the standard errors for model 1 were adjusted for clustering. In other words, clusters of households (schools) were randomized, so if the characteristics of the households in one school differed from those in another, the outcome of a single random assignment—a single flip of a coin—could have a larger influence on the model estimates than if all households were randomly assigned separately. The calculation of the standard errors took into account this feature of the

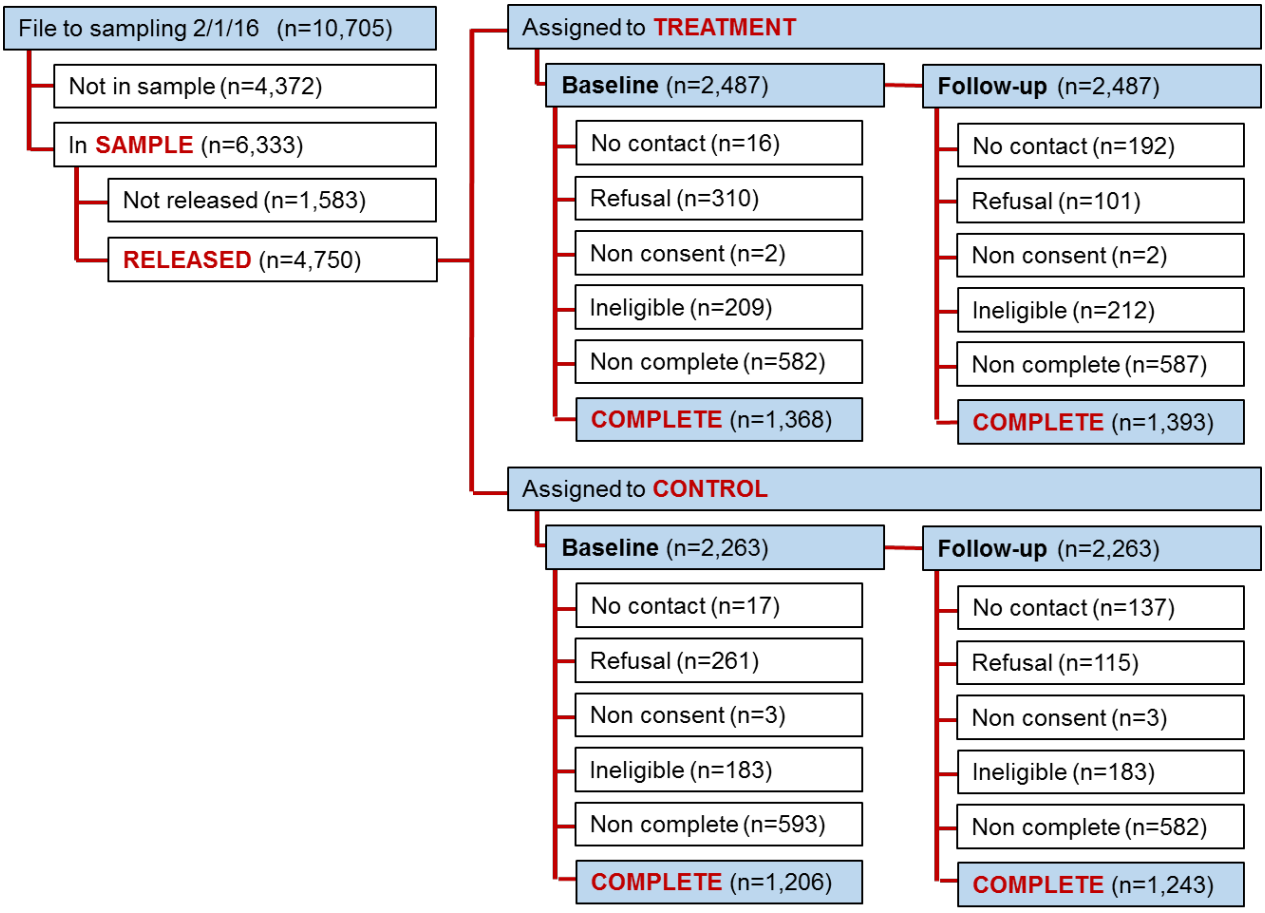
design. Because the study focused on a primary outcome that was specified in advance (food insecurity among children), it was not necessary to perform a multiple-comparisons adjustment for the principal (confirmatory) impact estimates.

For this primary outcome (and for other food insecurity outcomes), one-way hypothesis tests were conducted, where the null hypothesis was that the rate of food insecurity among children in the treatment group was less than or equal to the rate of food insecurity among children in the control group. The alternative hypothesis was that the rate of food insecurity among children was higher in the treatment group. One-way significance tests were conducted for this outcome because of the assumption that providing extra resources to a household would only lead to a reduction in food insecurity (if it had any effect at all), and would not be expected to lead to an increase in food insecurity. For all other outcomes, two-way hypothesis tests were conducted. A $p<0.05$ standard of statistical significance was used in all tests.

A.2 CONSORT FLOW DIAGRAM AND RESPONSE RATES

The Consolidated Standards of Reporting Trials (CONSORT) Flow Diagram (Exhibit A.8) shows the derivation of the sample, from the initial sample frame, random sample of eligible households, through random assignment, and follow-up (Schulz et al. 2010).

Exhibit A.8. CONSORT diagram for the Virginia 365 project evaluation



Note: Baseline counts for ineligible cases were updated based on respondent information provided during the follow-up survey data collection.

Exhibit A.9 shows the follow-up response rates among Virginia households overall, as well as by treatment status. The follow-up response rate for all participants was 62%, and response rates for the treatment and control groups were similar to this overall rate. Response rates were based on standard definitions by the American Association for Public Opinion Research (AAPOR 2016). To calculate AAPOR response rate 4, the numerator contains the number of completes, which includes partial interviews[6]; the denominator includes the number of completes, partials, and eligible noncompletes.[7]

Exhibit A.9. Final follow-up survey response rates by treatment status

Demonstration project	Total number of cases in evaluation sample	Response rate of all cases (%)	Number of treatment cases	Response rate of treatment group (%)	Number of control cases	Response rate of control group (%)
Virginia	4,355	62.2	2,275	62.8	2,080	61.5

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Response rates were calculated by Mathematica Policy Research using AAPOR response rate 4 (AAPOR 2016).

Note: See CONSORT Flow Diagrams in Appendix A, Exhibit A.8 for additional details.

AAPOR = American Association for Public Opinion Research.

[6] Partial interviews are those that the respondent completed through at least the Food Security questions (Section E in the follow-up survey) before breaking off the interview.

[7] The number of eligible noncompletes in the denominator was calculated as the sum of the number of noncompletes known to be eligible and a proportion of noncompletes with unknown eligibility that was estimated to be eligible. The proportion was based on the observed eligibility rate among those sample members with known eligibility status. In calculating the response rate, we applied the estimated eligibility rate (90.5% overall, 90.7% in the treatment group, and 90.1% in the control group) to the cases with unknown eligibility in order to estimate the number of eligible cases to be used in the response rate calculation.

A.3. SAMPLE WEIGHTS FOR THE FOLLOW-UP ANALYSIS

This appendix describes the creation of sample weights for the analysis of follow-up data in the Virginia 365 project. One set of weights was created for the sample of households that completed the baseline survey (n=2,596). A separate set of weights was created for those that completed the follow-up survey (n=2,636). The focus of this appendix and most of the analysis in this report is the follow-up survey; details about the baseline survey are available in the interim report (Briefel et al. 2018).

A. General features of the sample weights

Sample weights are applied to an analysis sample in order to make the data for that sample representative of the eligible population. In the case of EDECH, the population being generalized to includes the households potentially eligible for the demonstration services being offered as part of EDECH, which is a subset of the 10,705 households in the sampling frame. A randomized experimental design was used, so weights were created that make both the group of treatment households in the analysis sample and the group of control households in that sample representative of the broader household population.

If the sample included all households in the population, one can think of weights being equal to 1 for all sample households. In reality, the sample did not include all households in the population, so the sample weights were constructed to account for four key aspects of the study design and data collection—initial sampling, random assignment, eligibility determination, follow-up survey nonresponse.

The population of interest in Virginia 365 included the households of all students receiving FRP meals (or attending community eligibility provision schools) in schools with low academic performance and at least 50% of children eligible for FRP meals. In Virginia 365, clustered and blocked (stratified) random assignment of households was conducted, with schools grouped into matched pairs, then one school in the pair was randomly assigned to the treatment group and the other to the control group. After a sample of these households was selected, the households were assigned to the treatment or control group based on which school(s) their child(ren) attended, and then a baseline survey was conducted among them. The population contained 10,705 households, of which 6,333 were sampled and 4,750 were randomly assigned and released to be administered the follow-up survey (see Exhibit A.8). Only those households that completed a baseline survey were then included in the baseline evaluation sample, but a follow-up survey was attempted for all households that were randomly assigned, regardless of whether they completed the baseline survey.[8] The only exception to this were those determined to be ineligible during baseline data collection or known to be ineligible on the basis of aging out of project schools between the administration of the baseline and follow-up surveys.

[8] In addition, follow-up surveys were not attempted among households that—during the administration of the baseline survey—refused to provide their consent to participate in any part of the study. However, these households were still considered part of the eligible population and defined as non-respondents to the follow-up survey.

Initial sampling (adjustment 1). Ultimately, the sample for which data were collected should be representative of the broader population of eligible households. From this population, a stratified random sample was selected where regions (Richmond versus Southwest Virginia) made up the strata and, within strata, each household in the eligible population had an equal probability of selection. In practice, however, even if the same sampling ratio was used within each stratum, the actual proportion of households selected into the sample may differ from stratum to stratum due to rounding.

The initial sampling weight was constructed by taking the inverse of the probability of selection to ensure that the weighted size of the sample was equal to the population size. This initial sampling was identical in the creation of baseline weights and follow-up weights, and the probability of selection into the sample depended on stratum.

$$p_{ij}^{s} = Prob\left\{HH\ i\ in\ stratum\ j\ selected\ and\ released\ into\ sample\right\} = \frac{n_j^s}{N_j}$$

The numerator represents the number of households in stratum (region) j selected and released into the sample. The denominator represents the total number of households from that stratum in the population.

The weight for household i in stratum j that accounts for selection into the sample is:

$$W_{ij}^{s} = \frac{1}{p_{ij}^{s}}$$

Random assignment (adjustment 2). Randomly assigning households selected into the sample groups can be thought of as another stage of randomly selecting samples. In other words, the treatment group is a subsample of the full randomly selected sample, and so is the control group. If every household had exactly the same probability of being selected into the treatment group, there would be no need to adjust the weights for random assignment. In Virginia 365, however, clustered and blocked (stratified) random assignment was conducted, with households clustered into schools and schools grouped into matched pairs before one school (and the cluster of households with children in that school) in the pair was randomly assigned to the treatment group and the other to the control group. In one sense, the a priori probability of each household being assigned to the treatment group was 0.50 since each was part of a matched pair of districts and each district had an equal likelihood of being randomly assigned to the treatment group. In practice, however, among the households in a matched pair the a posteriori probability of being assigned to the treatment group for a given household was typically not 0.50 unless there was an equal number of sampled households in each of the two schools in a given matched pair.

Ultimately, the weights were applied separately to the treatment group and control group and the weighted samples within each of these groups generalize to the eligible population. For households that ended up in the treatment group, the weight from initial sampling (described above) was divided by the probability of being assigned to the treatment group. For households in the control group, the weight was divided by the probability of being assigned to the control group (or one minus the probability of being assigned to the treatment group).

As stated above, in Virginia 365, a clustered and blocked randomization approach was used within each region. Households were first grouped into clusters based on school. The schools were then grouped into blocks of two—these "matched pairs" of schools were matched on the basis of having similar characteristics. Each matched pair was then randomized separately, with the households in one of the two schools randomly assigned to the treatment group and the households in the other school going into the control group. Because school was used as a blocking variable, there were some households with one child in a control school and another child in a treatment school; these households were assigned to the treatment group because the household received the project benefits on the basis of having one child in a treatment school. The probability of being assigned to the treatment group was first calculated by matched pair. For a given matched pair k, the probability of a household in that matched pair being assigned to the treatment group is:

$$p_k^T = \text{Prob}\left\{household\ in\ pair\ k\ assigned\ to\ T\ group\right\} = \frac{\sum_{i \in sch_k^T} W_{ij}^S}{\sum_{\left(i \in sch_k^T + sch_k^C\right)} W_{ij}^S}$$

Where sch_k^T denotes the treatment school in matched pair k and sch_k^C denotes the control school in matched pair k. Note that if a household had multiple children in different schools that were assigned to different matched pairs, the household would contribute to more than one matched pair's probability calculation. The probability of being assigned to the control group is equal to 1 minus the probability of being assigned to the treatment group.

As stated above, the calculation for the random assignment adjustment for a given household depends on whether the household was assigned to the treatment or control group, and how many different schools the household has children attending. For treatment households with all children attending the same school in matched pair k, the adjustment for household i is equal to:

$$ra\_adj_{i,k}^T = \frac{1}{p_k^T}$$

Analogously, for control households with all children attending the same school, it is:

$$ra\_adj_{i,k}^C = \frac{1}{p_k^C}$$

For households that had children attending two different schools in different matched pairs, the calculations accounted for the probabilities for each matched pair. Thus, for households with one child attending school in matched pair k_1 and a second child attending school in matched pair k_2, with at least one of these schools being assigned to the treatment group (which made these treatment households), the adjustment is equal to:

$$ra\_adj^{T}_{i,k_1,k_2} = \frac{1}{p^{T}_{k1} + p^{T}_{k2} - \left(p^{T}_{k1} * p^{T}_{k2}\right)}$$

The denominator represents the probability that a household in matched pair k_1 is in the treatment group *or* a household in matched pair k_2 is in the treatment group. For households with children attending two different schools in different matched pairs, neither of which was a treatment school (which made these control households), the adjustment is slightly different:

$$ra\_adj^{C}_{i,k_1,k_2} = \frac{1}{\left(p^{C}_{k1} * p^{C}_{k2}\right)}$$

The denominator here represents the probability that a household in matched pair k_1 is in the control group *and* a household in matched pair k_2 is in the control group (and is the complement of the previous denominator).

The same logic was used to calculate the adjustment for treatment households that had children attending three different schools (at least one of which was a treatment school).[9] Using the laws of probability, the adjustment becomes:

$$ra\_adj^{T}_{i,k_1,k_2,k_3} = \frac{1}{p^{T}_{k1} + p^{T}_{k2} + p^{T}_{k3} - \left(p^{T}_{k1} * p^{T}_{k2}\right) - \left(p^{T}_{k1} * p^{T}_{k3}\right) - \left(p^{T}_{k2} * p^{T}_{k3}\right) + \left(p^{T}_{k1} * p^{T}_{k2} * p^{T}_{k3}\right)}$$

As such, the fact that households with children in multiple schools have a higher probability of being assigned to the treatment group was controlled for.[10]

After dividing the weight from the previous adjustment by the probability of assignment to the actual group the household was assigned to, one further adjustment was made. Without this adjustment, the weighted sum of the treatment group sample would be approximately equal to the total population size and the weighted sum of the control group sample would also be approximately equal to the total population size, depending on how the sampling weights were distributed across the randomization groups. Thus, the weighted sum of the full sample would be approximately equal to two times the population size. To re-size the weights, all weights were

[9] No households have children attending four or more different schools, and the three households that have children attending three schools are all treatment households.

[10] There were three households that had children attending two different schools in the same matched pair. In these cases, the households had a probability of being in the treatment group equal to 1 because one school in each matched pair is guaranteed to be a treatment school. These households were defined to be ineligible and dropped in the impact analysis.

multiplied by 0.5, or whatever was needed to get each randomization group's weight to add up to half the count of the eligible population. This adjustment for random assignment was identical in the creation of baseline weights and follow-up weights.

So the weight for treatment group household i in district j and pair k that accounts for initial selection and random assignment is:

$$W_i^{s,T} = \frac{1}{p_{ij}^S} * \frac{1}{ra\_adj_{i,k}^T} * 0.5 = \frac{0.5}{\left(p_{ij}^S * ra\_adj_{i,k}^T\right)}$$

And for control group households it is:

$$W_i^{s,C} = \frac{1}{p_{ij}^S} * \frac{1}{ra\_adj_{i,k}^C} * 0.5 = \frac{0.5}{\left(p_{ij}^S * ra\_adj_{i,k}^C\right)}$$

Eligibility determination (adjustment 3). The sample ultimately used for analysis differed from the sample initially selected for analysis because the analysis sample did not include households found to be ineligible (discussed in this step) as well as those that did not respond to the follow-up survey (discussed in adjustment 4).[11] A household's eligibility was determined on the basis of their characteristics at baseline. Once households were determined to be eligible at baseline, there was no attempt to determine their ongoing eligibility status over time during the follow-up period as their household characteristics changed.[12] Prior to selecting the sample, any eligibility information obtained was taken into account so that known ineligible households were excluded from the sample frame. However, some households were deemed ineligible after they were selected to be in the sample (due to updated information from administrative records or from survey responses). There were also households in the sample that had an unknown eligibility status, which could have been due to the household not agreeing to complete the

[11] These last two adjustments to the weights were different for the two different surveys (baseline and follow-up), since the analysis sample of households with non-missing data presumably differs for each one. Separate weights were created for analysis of follow-up versus baseline survey data.

[12] However, it was possible that at some time during the follow-up period new information was received about the household's baseline eligibility. The data collection did not set out to obtain updated information on baseline eligibility throughout the follow-up period. However, there was one case of a household determined to have duplicate records in the data files in Virginia 365. In this case, one of the records was defined as baseline ineligible and the other record was retained, so that each household would be represented only once in the analysis file. In addition, there were a small number of households in which the child aged out of demonstration eligibility between the baseline and follow-up surveys. Since the administrative records provided complete information to identify any such households (meaning no information from survey responses was needed) these households were excluded from calculation of the eligibility rate that was applied to households with unknown eligibility. That is, any household falling into this category would have been identified using the administrative records, and would have known eligibility.

survey or to an inability to contact the household. These households with unknown eligibility status likely included some ineligible households, and this possibility was accounted for with an adjustment to the weights, giving more weight to sample members from groups with low rates of eligibility determination and less weight to those from groups with high rates of eligibility determination.

To perform this adjustment, at least some information on the characteristics of the full population of households was needed to provide some information about which sorts of households had higher versus lower eligibility determination rates. The challenge was that there was limited information available on the full population, though some household-level demographic information such as household size, language, income, and race was available. In addition to these first order variables, interaction terms were considered for inclusion in the model predicting eligibility determination status (using Chi-square Automatic Interaction Detector[13]).

The adjustment for eligibility determination was set to the inverse of the probability of having a known eligibility status for the survey $\left(p_i^e\right)$, which was obtained from a stepwise regression model. For example, if language was found to be a significant predictor of having a known eligibility status from the stepwise logistic regression, then an English-speaking household would have a different probability of having a known eligibility status (and thus a different eligibility determination adjustment) than a non-English-speaking household. This adjustment was applied to the respondents, eligible nonrespondents, and ineligible households, and the weight was set to 0 for the nonrespondents with undetermined eligibility. After this adjustment, the weights approximately added up to the sample frame, which included some ineligible households. However, after dropping the undetermined and ineligible households, the weights added up to the best estimate of the eligible population.

The process used to make this third adjustment was the same for the baseline weights and follow-up weights. However, the actual baseline eligibility statuses of households may have been different in the two cases. In other words, information on the eligibility statuses of households was updated between the time of baseline data collection when baseline weights were created and the time of follow-up data collection when the follow-up weights were created.

This eligibility determination adjustment was applied to the weight adjusted for initial sampling and random assignment (described above). The weight that includes adjustments for sampling, random assignment, and eligibility determination is:

[13] For more information about this procedure, see: http://www.statisticssolutions.com/non-parametric-analysis-chaid/.

$$W_i^{s,T,e} = \frac{1}{p_{ij}^S} * \frac{1}{ra\_adj_{i,k}^T} * 0.5 * \frac{1}{p_i^e} = \frac{0.5}{\left(p_{ij}^S * ra\_adj_{i,k}^T * p_i^e\right)}$$

$$W_i^{s,C,e} = \frac{1}{p_{ij}^S} * \frac{1}{ra\_adj_{i,k}^C} * 0.5 * \frac{1}{p_i^e} = \frac{0.5}{\left(p_{ij}^S * ra\_adj_{i,k}^C * p_i^e\right)}$$

Follow-up survey nonresponse (adjustment 4). Not all eligible households selected to be in the sample completed the follow-up survey. A nonresponse adjustment to the eligibility-adjusted weights in the previous step accounted for this by giving more weight to responding sample members from groups with low response rates and less weight to those from groups with high response rates. Similar to the eligibility determination adjustment, some information about both responding and nonresponding households was needed so that the sorts of households with higher and lower response rates could be determined. The actual adjustment to the weights was the inverse of a household's probability of responding to the survey—more specifically, the probability that a household with that set of characteristics responded to the follow-up survey $\left(p_i^{r2}\right)$, where the probability was again determined by a stepwise logistic regression model. In this model, the goal was to look for variables significantly associated with response. This adjustment was applied to the eligibility-adjusted sampling weights from the previous step for all respondents to the follow-up survey, and the weight was set to 0 for the eligible nonrespondents, who were then dropped from analysis.

As with the third adjustment, the process used to make this fourth adjustment was the same for the baseline and follow-up weights. Again, however, the actual adjustment for specific households may have differed because there could have been differences in households' response status on the baseline and follow-up surveys. Some baseline survey respondents were follow-up survey nonrespondents, and vice versa.

The weight that combines the adjustments for initial sampling, random assignment, eligibility determination, and follow-up survey nonresponse is:

$$W_i^{s,T,e,r} = \frac{0.5}{\left(p_{ij}^S * ra\_adj_{i,k}^T * p_i^e\right)} * \frac{1}{p_i^{r2}} * \frac{0.5}{\left(p_{ij}^S * ra\_adj_{i,k}^T * p_i^e * p_i^{r2}\right)}$$

$$W_i^{s,C,e,r} = \frac{0.5}{\left(p_{ij}^S * ra\_adj_{i,k}^C * p_i^e\right)} * \frac{1}{p_i^{r2}} * \frac{0.5}{\left(p_{ij}^S * ra\_adj_{i,k}^C * p_i^e * p_i^{r2}\right)}$$

As with the baseline weight, a final adjustment was applied to the baseline weight that involved multiplying each weight in the treatment group by the ratio of the target sum (of half of all eligible households in the population) divided by the sum of the current weights. An analogous procedure was used for the control group.

After applying and combining all weighting adjustments for a given set of weights, the weight distribution and associated design effect were examined to determine whether weight trimming was necessary to mitigate the impact of weighting on the variance of estimates, and to avoid the risk of any one household having undue influence on estimates due to a very high weight. No trimming was necessary for the baseline weights or the follow-up weights in Virginia 365. At the end of the weighting process, each household that completed a follow-up survey has a positive weight, and the sum of the weights should equal the estimate of the full population of eligible households.

A.4. NONRESPONSE BIAS ANALYSIS FOR THE FOLLOW-UP SURVEY

From the full sample frame of 10,705 households initially identified for the Virginia 365 project, 4,370 were initially selected for the evaluation sample and assigned to either the treatment group or control group. These households were contacted for the follow-up survey. Sixty-two percent of the eligible households within this group responded to the follow-up survey (n=2,636), and a nonresponse bias analysis was conducted to analyze any differences between sampled and non-sample households and also between households responding and those not responding to the follow-up survey.

Data on household characteristics was drawn from the sample frame, the one data source with data for all households in the evaluation sample. There were four demographic characteristics available for the entire frame: region (Richmond versus Southwest Virginia), ethnicity, language, and race. Of these four, only race showed a significant difference between sampled and non-sampled households even though the magnitude of the difference is quite small (less than 1 percentage point) (Exhibit A.10).

When turning to the comparison of the characteristics of eligible respondents and nonrespondents, the differences were statistically significant for all four characteristics. The largest difference in magnitude was for language, which was less likely to be unknown for responding households than nonresponding households (33.3 vs. 39.9%). Almost identical patterns were found for unknown ethnicity and unknown race. Also, a higher proportion of responding households than nonresponding households lived in Richmond (61.3 vs. 56.1%).

However, the differences were negligible when the fully weighted 2,636 responding households were compared to the frame of 10,705 households. The proportions for all four characteristics are all within two percentage points of each other, with the largest difference seen in the proportion of households with an unknown race (32.2% of respondents vs. 34.1% in the frame).

Exhibit A.10. Characteristics of the sample in the Virginia 365 project

	Unweighted			*Sampling Adjustment*		*Final Weight*
Characteristic	Frame (n=10,705)	Not Sampled (n=5,955)	Sampled (n=4,750)	Eligible Respondents[a] (n=2,636)	Nonrespondents (n=1,722)	Eligible Respondents (n=2,636)
Region (%)					*	
Richmond	58.9	58.9	58.9	61.3	56.1	59.3
Southwest VA	41.1	41.1	41.1	38.7	43.9	40.7
Hispanic (%)					*	
No	58.0	57.6	58.4	61.5	55.0	59.5
Yes	5.7	5.8	5.5	5.4	5.5	5.1
Unknown	36.4	36.6	36.1	33.2	39.5	35.4
Language (%)					*	
English	59.9	59.6	60.2	63.2	56.5	61.1
Spanish	3.5	3.6	3.4	3.5	3.6	3.2
Unknown	36.6	36.8	36.4	33.3	39.9	35.6
Race (%)			*		*	
White	15.5	15.6	15.3	15.9	15.2	16.1
Black	48.8	48.7	49.0	51.6	45.6	49.8
Other	1.6	1.3	2.0	1.7	2.4	1.9
Unknown	34.1	34.4	33.7	30.8	36.9	32.2

Source: Household sample files provided by the Virginia Department of Education, 2015–2016. Tabulations were prepared by Mathematica Policy Research.

[a] There were 392 sampled households that were identified as ineligible, which were dropped from the analysis; however, a certain proportion of the nonrespondents included in this analysis were assumed to be ineligible.

* Difference between groups is statistically significant at the 0.05 level. Significance was tested for two sets of groups, sampled versus not sampled households (unweighted) and eligible respondents versus nonrespondents (sample weighted).

APPENDIX B

DATA COLLECTION AND ANALYSIS METHODS

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B.1. SURVEY DATA COLLECTION METHODS

Evaluation sample members were contacted to complete two computer-assisted telephone interviews (CATI). The first survey was administered at baseline, prior to the start of the intervention. The second, follow-up survey was administered approximately 12 months after the start of the intervention. During the follow-up data collection, field locators visited the demonstration area to find non-respondents. The following sections describe the instruments, obtaining Office of Management and Budget (OMB) clearance and institutional review board (IRB) approval, data collector training, and survey data collection.

A. Survey contents

The purpose of the baseline survey was to describe the household characteristics of the eligible target populations before the start of each intervention. The purpose of the follow-up survey was to measure experiences and outcomes among study households to allow for the estimation of the impacts of the intervention as well as mediating factors among both treatment and control households after the intervention was implemented. The surveys used at baseline and follow-up contain items used in other surveys, including national studies and studies of low-income populations, along with items developed specifically for this evaluation.

Child and household food security was measured with USDA's standard 18-item U.S. Household Food Security Survey Module, used to monitor food security in large-scale population studies such as the Current Population Survey and the National Health and Nutrition Examination Survey (NHANES) and used to assess food security in research studies (ERS 2017a, b). The USDA 18-item food security survey module includes 10 questions about the whole household and adults, and 8 questions about children (ERS 2017c). A 30-day reference period was used to measure food security because it has less recall bias than a 12-month period; it can be measured contemporaneously with household income, food expenditures, and program participation; and the findings can be compared to other studies that also used a 30-day food security measure (e.g., Collins et al. 2016; Mabli et al. 2013; Nord and Prell 2011). In addition, the 12-month food security measure would cover a period that includes the baseline period before treatment households had the opportunity to receive project benefits.

The standard procedures for scoring item responses were used to classify households, adults, and children as experiencing food security, food insecurity, or very low food security (ERS 2017c). The EDECH study used the adult/child cross-classification method, which eliminates a misclassification that affects a small percentage of cases, and is consistent with the underlying statistical theory that if either any adult or any child in the household is food insecure, then the household is as well (Nord and Coleman-Jensen 2014). Food security outcomes were not imputed.[1]

[1] Food security measures were missing for 0.4% or less of households across categories and survey rounds because of item nonresponse. Among survey respondents at baseline, child food security constructs were missing for 10 households, adult constructs for 5 households, and household constructs for 8 households (11 for VLFS-HH). Among survey respondents at follow-up, child food security constructs were missing for 7 households, adult constructs for 2 households, and household constructs for 5 households (8 for VLFS-HH).

Other relevant survey questions were adapted from the Summer Electronic Benefits Transfer for Children (SEBTC) evaluation and the SNAP Food Security Study (Collins et al. 2016; Mabli et al. 2013) to measure food expenditures and program participation—critical intermediate outcomes in the causal chain leading to improved food security. Feedback from eight pretest participants and FNS and Economic Research Service reviewers informed revisions to the questionnaires. Exhibit B.1 presents a high-level overview of topics included in the surveys; the baseline and follow-up instruments are in Appendix B.2 and B.3, respectively.

Exhibit B.1. Key topics included in the EDECH household surveys

Survey modules (topics)	Baseline questionnaire	Follow-up questionnaire
Food security (last 30 days)		
Food security (among children, adults, and households)	X	X
Food insecurity and very low food security (among children, adults, and households)	X	X
Sociodemographic characteristics		
Household size and composition	X	Q
Ages of children (presence of teenager)	X	Q
Employment of adult household members (last 30 days)	X	Q
Household income (last calendar year, last month) and sources of income	X	X
Respondent demographics and self-reported health status	X	X
Nutrition assistance program participation and supports		
Participation in nutrition assistance programs (SNAP, WIC, SBP, NSLP) and other programs (free school suppers, school food backpacks, and after school and child care programs)	X	X
Length of time on SNAP	X	X
Amount of SNAP benefit	X	X
Use of food banks, soup kitchens, or community or senior programs	X	X
Family, friend, and community support	X	X
Participation in EDECH services		X
Food expenditures and food access (last 30 days)		
Food expenditures including out-of-pocket food costs	X	X
Food behavior		
Number of family dinners per week	X	X
Prepare dinner/supper at home (past 7 days)	X	X
Shop with a grocery list	X	X
Nutrition education (past 12 months)	X	X
Children's diet quality		
School breakfast eating	X	X
Frequency of fast food consumption of household	X	X

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2016 baseline survey and 2017 follow-up survey.

Note: "X" indicates that the topic was included in the survey. "Q" indicates that survey questions were included that asked about households' change in status since baseline.

EDECH = Evaluation of Demonstration Projects to End Childhood Hunger; NSLP = National School Lunch Program; SBP = School Breakfast Program; SFSP = Summer Food Service Program; SNAP = Supplemental Nutrition Assistance Program; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

B. OMB clearance and IRB approval

OMB clearance was obtained on August 20, 2015 (FNS 2015). The New England IRB approved the evaluation activities and instruments on June 12, 2015.

C. Telephone interviewer and field locator training

Prior to each round of survey data collection, telephone interviewers completed 16 hours of general and project-specific training. The 8-hour general training ensured that interviewers were well-versed in establishing rapport, maintaining participant confidentiality, minimizing nonresponse, and administering the CATI. The 8-hour project-specific training covered the study background, data collection procedures and goals, refusal aversion techniques, and data security. Interviewers passed a certification test before they began to collect data.

During the follow-up data collection, field locators completed a 4-hour locating training that highlighted key aspects of the study, locating procedures and goals, and data security. Locators passed a certification test before they began to search for households in the demonstration area.

D. Survey data collection

Before baseline data collection, the grantee submitted files containing eligible households and contact information. The evaluation sample was then selected, as described in greater detail in Appendix A.1. Evaluation sample members' contact information was then submitted to a commercial locating database before data collection began. The purpose of this submission was twofold: (1) to obtain additional telephone numbers for households, and (2) to triangulate the telephone numbers already available on the sampling frames. Telephone numbers found in more than one source (for example, the sampling frame and one or both of the databases) were prioritized for dialing. Before the follow-up data collection, the grantee provided updated contact information for households, and contact information was again submitted to a commercial locating database.

The baseline and follow-up CATI surveys were administered in both English and Spanish. Approximately 5% of respondents in Virginia completed the follow-up survey in Spanish. The target respondents were parents/guardians in eligible households. Exhibit B.2 presents the field periods for each round of data collection.

Exhibit B.2. Survey data collection periods

Round	Survey start	Survey end
Baseline	February 2016	May 2016
Follow-up	January 2017	June 2017

Interviewers attempted to contact a total of 4,750 households for the baseline survey. Households received an advance letter describing the evaluation and the purpose of the interview, and inviting sample members to call a toll-free number to complete the survey. Shortly after the letters were mailed, outbound calls were placed to households. Household interviews were attempted multiple times at different times of the day, from the morning to the evening, and across all days of the week to maximize the chances of speaking with a sample member. Participating households were mailed a $30 gift card as a thank-you payment for their participation.

Response rates were monitored daily and follow-up strategies were adapted to address local considerations to maximize participation. Households received mail, email (if an email address was available), and postcard reminders throughout the field period. Reminder flyers were distributed to non-responding households through schools as a means to augment the other communications. Sample members who refused to participate received an additional refusal conversion letter.

Despite using a commercial locating database prior to data collection, many households had outdated contact information. Updated contact information was requested from grantees during data collection so that new telephone numbers and addresses could be attempted. Additional in-house locating, including Internet searches and more in-depth searches in the commercial locating database, were also performed.

A total of 4,354 households were contacted for the follow-up survey. The follow-up sample excluded households that were found during baseline data collection to be ineligible (including duplicates of other households in the sample), households that opted out of participation in the evaluation, and households that "aged out" of the demonstration.[2] Procedures used at baseline were repeated for the follow-up data collection. In addition, non-responding households received text messages requesting their participation, and field locators attempted to locate and persuade non-respondents to complete the interview. Participating households received a $30 gift card.

[2] Households would have "aged out" of the demonstration if they included only children in treatment schools who were in the top grade of the school (or in that grade in the control school of the same matched pair). Although these households would have been eligible for summer EBT benefits in the summer of 2016, they would not have included any children who were able to receive any of the school-based benefits during the 2016-2017 school year because the children originally in the treatment schools would have moved on to other schools.

B.2. BASELINE SURVEY INSTRUMENT

The final baseline questionnaire for households is shown in Appendix B.2.

OMB Clearance Number: 0584-0603
Expiration Date: 08/31/2018

Evaluation of Demonstration Projects to End Childhood Hunger

Baseline Questionnaire for Households

A. Introduction

ALL
IF DEMONSTRATION NE CHICKASAW NATION FILL1=two parts - an interview that will take about 30 minutes today, and a second interview about 12 months later. AND FILL2=interview IF DEMONSTRATION=CHICKASAW NATION FILL1=three parts - an interview that will take about 30 minutes today, a second interview about 12 months from now, and a third interview about 18 months from now. The second and third interviews will also each take about 30 minutes. AND FILL2=interviews

BA1. For quality assurance purposes, this call may be monitored or recorded.

The study has [two parts - an interview that will take about 30 minutes today, and a second interview about 12 months later/three parts - an interview that will take about 30 minutes today, a second interview about 12 months from now, and a third interview about 18 months from now. The second and third interviews will also each take about 30 minutes.] As a way of saying thank you, you will get $30 for completing the interview today and a similar amount for the future [interview/interviews]. We will send you a prepaid gift card after you complete each interview.

The interviews have questions about your children's food choices as well as general questions about you and your household. Your answers will help the government make its child nutrition programs better.

Your participation in this interview is voluntary and you may stop at any time. You may also refuse to answer any question. Your benefits will not be affected by any answers to questions or if you choose not to participate.

All the information you give us will be kept private to the extent allowed by law. There is a small risk of the loss of confidentiality of your data, but procedures are in place to minimize this risk. Your name will not be attached to any of your answers. Your information will be used only in combination with information from other households for research purposes.

Do you have any questions about the interview before I begin?

YES	1	GO TO FAQ
NO	0	GO TO BB1
DON'T KNOW	d	
REFUSED	r	

B. Household Size and Composition

ALL

The first few questions are about the people you live with.

BB1. Including yourself, how many people live in your household? Don't forget to include non-relatives who live in your household and, of course, babies, small children and foster children. Also include people who usually live in your household but may have been away within the last 30 days for reasons such as: vacation, traveling for work, or in the hospital. Do not include children living away at school or anyone who is now incarcerated

PROBE IF NEEDED: By temporarily away we mean away within the last 30 days

|___|___| NUMBER OF PEOPLE
(1-20)

DON'T KNOW	d	Status refusal, Exit
REFUSED	r	Status refusal, Exit

IF BB1=1

BB1a. Just to confirm, you are the only person living in the household. There are no children, non-relatives, or people who usually live there but are currently away?

YES	1	Status ineligible, Exit
NO, CORRECT NUMBER	0	Repeat BB1
DON'T KNOW	d	Repeat BB1
REFUSED	r	Status refusal, Exit

[IF BB1 >1] AND [DEMONSTRATION = KENTUCKY

BB1b. In which county do you currently live?

[List of eligible counties]

OTHER	99	Status ineligible, Exit
DON'T KNOW	d	Status refusal, Exit
REFUSED	r	Status refusal, Exit

[IF BB1 > 1] AND [DEMONSTRATION = NEVADA]

BB1c. What is your current ZIP Code?

[List of eligible ZIP Codes]

OTHER	13	Status ineligible, Exit
DON'T KNOW	d	Status refusal, Exit
REFUSED	r	Status refusal, Exit

IF [DEMONSTRATION] = KENTUCKY OR NEVADA

BB1d. Are you or others in your household currently receiving Supplemental Nutrition Assistance Program (SNAP)?

PROBE IF NEEDED: SNAP is the program formerly known as 'Food Stamps.'

YES	1	
NO	0	GO TO BB1e
DON'T KNOW	d	GO TO BB1e
REFUSED	r	Status refusal, Exit

IF [DEMONSTRATION = KENTUCKY OR NEVADA] AND [BB1D = 0 OR DK]

BB1e. PROBE: In the past three months, have you or others in your household received SNAP benefits?

YES	1	Status ineligible, Exit
NO	0	
DON'T KNOW	d	
REFUSED	r	Status refusal, Exit

IF BB1 > 1

BB2. Do all the people who live with you share the food that is bought for the household?

YES	1	GO TO BB3
NO	0	GO TO BB2a
DON'T KNOW	d	GO TO BB2a
REFUSED	r	GO TO BB2a

BB2 = 0, D, OR R

BB2a. Including yourself, how many people in your household share the food that is bought for the household?

|___|___| NUMBER OF PEOPLE
(1-20)

DON'T KNOW	d	GO TO BB3
REFUSED	r	GO TO BB3

HARD CHECK: [IF BB2a > BB1]; **The number of people in your household who share food is greater than the total number of people in your household. Did I make a mistake?**

[IF BB1 > 1] OR [IF BB2A > 1]

[IF BB2 = 1 FILL= NUMBER FROM BB1], OTHERWISE FILL=NUMBER FROM BB2a

BB3. How many of those [NUMBER FROM BB1 OR BB2a] people in your household are children age 18 or younger or over 18 but still in high school?

|__|__| NUMBER OF PEOPLE
(0-20)

DON'T KNOW ..... d Go to BB3a

REFUSED ..... r Go to BB3a

HARD CHECK: [IF BB3 > BB1]; **The number of children living in your household is greater than or equal to the total number of people in your household. Did I make a mistake?**

HARD CHECK: [IF BB3 > BB2a]; **The number of children living in your household is greater than the total number of people sharing food in your household. Did I make a mistake?**

PROGRAMMER BOX BB3
IF BB3 GTE 1 AND DEMONSTRATION=KENTUCKY OR NEVADA, GO TO BB3B. ELSE IF BB3=D OR R GO TO BB3A. ELSE GO TO BB4.

BB3 = 0, D, OR R

BB3a. Is there at least one child living in your household?

YES ..... 1 REPEAT BB3

NO ..... 0 Status ineligible, Go to BB6

DON'T KNOW ..... d Status refusal, Exit

REFUSED ..... r Status refusal, Exit

IF DEMONSTRATION = KENTUCKY OR NEVADA

IF DEMONSTRATION = KENTUCKY FILL1= "was born after" AND FILL2 = "March 31, 2000"

IF DEMONSTRATION = NEVADA FILL1 = "will be under age 5 as of" AND FILL2 = "April 1, 2016"

BB3b. Is there at least one child living in your household who [was born after/will be under age 5 as of] [March 31, 2000/April 1, 2016]?*

YES 1

NO ..... 0 Status ineligible, Go to BB9

DON'T KNOW ..... d Status refusal, Go to BB9a

REFUSED ..... r Status refusal, Go to BB9a

*Represents the wording used to field the question; revised from the OMB version to coincide with eligibility age cut-offs and the intervention dates for the projects.

BB4. [I'd like to make a list of the first names or initials of the children in your household. This will help me with asking some questions later.] What is the name of the [first/next] child?

IF NEEDED: You can give me the child's initials or some other way to refer to the child.

_____
NAME

DON'T KNOW ..... d

REFUSED ..... r

BB3 > 0
FILL [ANSWER FROM BB4] IF BB4 = D OR R FILL "this child"

BB4a. What is [ANSWER FROM BB4/this child]'s date of birth?

PROGRAMMER: COLLECT DATE WITH SEPARATE FIELDS

|__|__| / |__|__| / |__|__|__|__|
MONTH DAY YEAR
(1-12) (1-31) (1996-2016)

DON'T KNOW ..... d

REFUSED ..... r

BB4A = D OR R
FILL [ANSWER FROM BB4] IF BB4 = D OR R FILL "this child"

BB4b. How old is [ANSWER FROM BB4/this child]? This information will help me with asking some questions later.

|__|__| AGE OF CHILD

(0-52)

BB4B = 0-52

BB4c. Is that weeks, months, or years?

WEEKS 1

MONTHS 2

YEARS 3

DON'T KNOW ..... d

REFUSED ..... r

SOFT CHECK: [IF BB4b > 18 AND BB4c = 3]; **The age is [ANSWER FROM BB4b] years old?**

BB3 > 0
FILL [ANSWER FROM BB4] IF BB4 = D OR R FILL "this child"
BB3 GTE 1 AND AGE GTE 3 YEARS AND DEMONSTRATION = CHICKASAW NATION OR VIRGINIA
FILL NAME1 FROM BB4

BB4d. Is [ANSWER FROM BB4/this child] a boy or girl?

INTERVIEWER: ASK IF RESPONDENT HAS NOT ALREADY MENTIONED CHILD'S SEX.

CODE ONE ONLY

BOY 1
GIRL 2
DON'T KNOW ..... d
REFUSED ..... r

[IF BB3 > 0] AND [IF DEMONSTRATION = CHICKASAW NATION OR VIRGINIA] AND [[IF BB4A [YEAR] < 2013] OR [IF BB4B > 3 AND BB4C = 3] OR [IF BB4B > 36 AND BB4C = 2]]
FILL [ANSWER FROM BB4] IF BB4 = D OR R FILL "this child"

BB4e. Is [ANSWER FROM BB4/this child] in grades pre-K through 12 in your local school system?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

[IF BB4E = 1] AND [IF DEMONSTRATION = CHICKASAW NATION OR VIRGINIA]

BB4f. What school does [ANSWER FROM BB4/this child] attend?

[List of schools + "other" option; "other" option routes respondent to BB9]

DON'T KNOW ..... d
REFUSED ..... r

[IF BB4E = 1] AND [IF DEMONSTRATION = CHICKASAW NATION]

BB4g. On school days during the last 30 days, did [ANSWER FROM BB4/this child] get free lunches at school?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

[IF BB4E = 1] AND [IF DEMONSTRATION = VIRGINIA]

BB4h. On school days during the last 30 days, did [ANSWER FROM BB4/this child] get free or reduced price lunches at school?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

[IF BB1A = 1] OR
[IF BB3A = 0]

BB6. I apologize, this survey is for individuals with at least one child under the age of 18 in the house.

Go to END

[IF BB1 = R OR DK] or
[IF BB1a = R] or
[IF BB3a = R OR DK]

BB6a. I apologize, this survey is for individuals with at least one child under the age of 18 in the house.

Status refusal. Go to END

IF BB1B = 99

BB7. I apologize, only certain counties are eligible for participation.

Status ineligible. Go to END

IF BB1B = R OR DK

BB7a. I apologize, only certain counties are eligible for participation.

Status refusal. Go to END

IF BB1C = 13

BB8. I apologize, only certain zip codes are eligible for participation.

Status ineligible. Go to END

IF BB1C = R OR DK

BB8a. I apologize, only certain zip codes are eligible for participation.

Status refusal. Go to END

[IF BB3B = 0] OR
IF [BB1E = 1 OR DK] OR
IF [[DEMONSTRATION = CHICKASAW NATION OR VIRGINIA]] AND NO CHILDREN ATTEND AN ELIGIBLE SCHOOL IN BB4F]

BB9. I apologize, you do not meet the eligibility criteria for this study at this time. We may try to contact you again in the future.

Status ineligible. Go to END

[IF BB3B = R OR DK] OR
IF [BB1E = R] OR

BB9a. I apologize, you do not meet the eligibility criteria for this study at this time. We may try to contact you again in the future.

Status refusal. Go to END

C. Children's Program Participation

For the next series of questions we'll be asking about meals and snacks the children in your household may have had during the last 30 days, that is, since [MONTH] [DAY].

AT LEAST ONE CHILD GTE AGE 3 YEARS

BC1. On school days during the last 30 days, how many children in your household usually ate breakfast at school?

|___|___| NUMBER OF CHILDREN
(0-20)

DON'T KNOW ..... d

REFUSED ..... r

IF BC1 = 1-20, D, R

BC1a. On school days during the last 30 days, how many children in your household got free or reduced-price breakfasts at school?

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW ..... d

REFUSED ..... r

AT LEAST ONE CHILD GTE AGE 3 YEARS

BC1b. On school days during the last 30 days, how many children in your household usually ate a school lunch?

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW ..... d

REFUSED ..... r

IF BC1B = 1-20, D, R

BC1c. On school days during the last 30 days, how many children in your household got free or reduced-price lunches at school?

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW ..... d

REFUSED ..... r

AT LEAST ONE CHILD GTE AGE 3 YEARS

BC1d. During the last 30 days, how many children in your household got free supper meals at an after school program held in their school building?

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW ..... d

REFUSED ..... r

AT LEAST ONE CHILD GTE AGE 3 YEARS

BC1e. During the last 30 days, how many children in your household participated in any other after school program where meals or snacks are served?

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW ..... d

REFUSED ..... r

ALL [Asked only for period when the last 30 day period included summer.]

BC1f. During the last 30 days, how many children in your household received free meals or snacks at places such as summer school, a community center, day camp or park?

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW ..... d

REFUSED ..... r

AT LEAST ONE CHILD LTE AGE 5 YEARS

BC1g. During the last 30 days, how many children in your household received meals or snacks at a daycare center, family or group daycare home, or Head Start center?

IF NEEDED: Please include children who received meals or snacks whether the meals or snacks were free, reduced-price, or paid. Please also include meals and snacks that were included in any payment you made to the center or home.

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW ..... d

REFUSED ..... r

AT LEAST ONE CHILD GTE AGE 3 YEARS

BC2. During the last 30 days, how many children in your household got food through a school backpack food program for children?

PROBE IF NEEDED: The Backpack Food Program provides food for children to take home from school over weekends and holidays.

|__|__| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW ..... d

REFUSED ..... r

[IF BC2 > 0] AND [IF DEMONSTRATION = VIRGINIA]

If BC2 = 1: "child"
IF BC2 > 1: "children"

BC2a. During the most recently completed school year, that is, school year 2014-2015, how often did your [child/children] usually take home a food backpack from school? Would you say…

Less often than once per month, ... 1

Once per month, ... 2

Two or three times per month, or 3

Every week? 4

DON'T KNOW ..... d

REFUSED ..... r

IF DEMONSTRATION = CHICKASAW NATION

BC3. How many children in your household received Summer EBT for Children benefits this past summer, that is, summer 2015?

|__|__| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW ..... d

REFUSED ..... r

D. Food Purchase Behavior

These next questions are about where you shop for food for your household.

IF DEMONSTRATION = CHICKASAW NATION OR KENTUCKY

BD1. During the past 30 days, about how many times did you or someone in your household shop for food?

|___|___| NUMBER OF TIMES
(0-30)

DON'T KNOW ..... d

REFUSED ..... r

IF DEMONSTRATION = CHICKASAW NATION OR KENTUCKY

BD2. During the past 30 days, at what kind of store did you buy most of your groceries?

INTERVIEWER: READ ONLY IF NECESSARY

INTERVIEWER: CODE "ALDI" AS A SUPERMARKET/GROCERY STORE

CODE ONE ONLY

SUPERMARKETS/GROCERY STORES 1

DISCOUNT STORES SUCH AS WAL-MART, TARGET, OR KMART 2

WAREHOUSE CLUBS, SUCH AS PRICE CLUB, COSTCO, PACE, SAM'S CLUB, OR BJ'S 3

CONVENIENCE STORES SUCH AS 7-11, QUICK CHECK, QUICK STOP 4

GAS STATIONS, SUCH AS SHELL, FLYING J, EXXON, MARATHON OR AMACO 5

ETHNIC FOOD STORES SUCH AS BODEGAS, ASIAN FOOD MARKETS, OR CARIBBEAN MARKETS 6

FARMERS' MARKETS 7

DOLLAR STORES 8

SURPLUS/CLOSE-OUT RETAILERS SUCH AS BIG LOTS 9

OTHER (SPECIFY) 99

_____

DON'T KNOW ..... d

REFUSED ..... r

IF DEMONSTRATION = KENTUCKY

BD3. What is the <u>main</u> reason you shop at that store?

CODE ONE ONLY

LOW PRICES....1
SALES....2
QUALITY OF FOOD....3
VARIETY OF FOODS (GENERAL)....4
VARIETY OF SPECIAL FOODS (SUCH AS GLUTEN FREE)....5
CLOSE TO HOME/CONVENIENT....6
EASY TO GET TO....7
PRODUCE SELECTION....8
MEAT DEPARTMENT....9
LOYALTY/FREQUENT SHOPPER PROGRAM....10
OTHER (SPECIFY)....99

_____

DON'T KNOW....d
REFUSED....r

IF DEMONSTRATION = KENTUCKY

BD4. How do you usually get to the store where you bought most of your groceries in the past 30 days?

CODE ALL THAT APPLY

DRIVE OWN CAR.....1
DRIVE SOMEONE ELSE'S CAR.....2
SOMEONE ELSE DRIVES ME.....3
WALK.....4
BUS, SUBWAY, OR OTHER PUBLIC TRANSIT.....5
TAXI OR OTHER PAID DRIVER.....6
RIDE BICYCLE.....7
OTHER (SPECIFY).....99

_____

DON'T KNOW.....d
REFUSED.....r

IF DEMONSTRATION = KENTUCKY

BD4a. About how many minutes does it take to go one way from home to that store?

INTERVIEWER: ENTER MIDPOINT IF RANGE IS GIVEN

|___|___|___| NUMBER OF MINUTES ONE WAY
(0-120)

DON'T KNOW.....d
REFUSED.....r

SOFT CHECK: IF BD4a > 60; **I just want to make sure I recorded your answer correctly. Did you say [ANSWER FROM BD4a]?**

DEMONSTRATION=CHICKASAW NATION OR KENTUCKY

BD4b. And approximately how many miles away is that store from your home – one way?

INTERVIEWER: ENTER MIDPOINT IF RANGE IS GIVEN; IF LESS THAN ONE MILE ENTER "0"

|___|___| NUMBER OF MILES ONE WAY
(0-99)

DON'T KNOW.....d
REFUSED.....r

SOFT CHECK: IF BD4b > 30; **I just want to make sure I recorded your answer correctly. Did you say [ANSWER FROM BD4b]?**

ALL

BD5. How many nights a week does your family typically sit down together to have dinner as a family?

CODE ONE ONLY

EVERY NIGHT 1
5 OR 6 NIGHTS 2
3 OR 4 NIGHTS 3
1 OR 2 NIGHTS 4
NEVER 5
DON'T KNOW ..... d
REFUSED ..... r

IF DEMONSTRATION = NEVADA OR VIRGINIA

BD6. During the past 7 days, how many times did you or someone else in your family prepare food for dinner or supper at home? Include times spent putting the ingredients together for dinner or supper, but do not include heating up leftovers.

|___| NUMBER (0-7)
DON'T KNOW ..... d
REFUSED ..... r

IF DEMONSTRATION = NEVADA OR VIRGINIA

BD7. How often do you shop with a grocery list? Would you say…

CODE ONE ONLY

Never, ... 1
Rarely, ... 2
Sometimes, ... 3
Most of the time, or 4
Always? 5
DON'T KNOW ..... d
REFUSED ..... r

IF DEMONSTRATION = NEVADA OR VIRGINIA

BD8. In the past 12 months, about how many classes, lectures, events, or demonstrations about how to shop for or prepare nutritious food and meals did you or another adult in your household attend?

|___|___| SESSIONS
(0-24)

DON'T KNOW ..... d

REFUSED ..... r

E. Food Security

PROGRAMMER:

SELECT APPROPRIATE FILLS DEPENDING ON NUMBER OF ADULTS AND CHILDREN IN THE HOUSEHOLD. DEFAULT TO MULTIPLE ADULTS AND MULTIPLE CHILDREN IN HOUSEHOLD.

ALL

FILL [MONTH] [DAY]

BE1. Now I'm going to read you several statements that people have made about their food situation. For these statements, please tell me whether the statement was often true, sometimes true, or never true for your household in the last 30 days, that is, since [MONTH] [DAY].

The first statement is "We worried whether our food would run out before we got money to buy more." Was that often true, sometimes true, or never true for your household in the last 30 days?

CODE ONE ONLY

OFTEN TRUE 1
SOMETIMES TRUE 2
NEVER TRUE 3
DON'T KNOW ..... d
REFUSED ..... r

ALL

BE2. "The food that we bought just didn't last, and we didn't have money to get more." Was that often, sometimes, or never true for your household in the last 30 days?

CODE ONE ONLY

OFTEN TRUE 1
SOMETIMES TRUE 2
NEVER TRUE 3
DON'T KNOW ..... d
REFUSED ..... r

ALL

BE3. "We couldn't afford to eat balanced meals." Was that often, sometimes, or never true for your household in the last 30 days?

CODE ONE ONLY

OFTEN TRUE 1
SOMETIMES TRUE 2
NEVER TRUE 3
DON'T KNOW ..... d
REFUSED ..... r

PROGRAMMER BOX BE3

IF BE1=1 OR 2 OR BE2=1 OR 2 OR BE3=1 OR 2, GO TO BE4;
OTHERWISE, SKIP TO BE9.

[IF BE1 = 1 OR 2] OR [IF BE2 = 1 OR 2] OR [IF BE3 = 1 OR 2]

IF [BB1 – BB3] > 1: "or other adults in your household"
FILL [MONTH] [DAY]

BE4. In the last 30 days, that is, since [MONTH] [DAY], did you [or other adults in your household] ever cut the size of your meals or skip meals because there wasn't enough money for food?

YES 1
NO ..... 0 GO TO BE5
DON'T KNOW ..... d GO TO BE5
REFUSED ..... r GO TO BE5

IF BE4 = 1

BE4a. In the last 30 days, how many days did this happen?

|___|___| NUMBER OF DAYS (1-30) GO TO BE5
DON'T KNOW ..... d
REFUSED ..... r GO TO BE5

IF BE4A = D

BE4b. Do you think it was one or two days, or more than two days?

CODE ONE ONLY

ONE OR TWO DAYS 1
MORE THAN TWO DAYS 2
DON'T KNOW ..... d
REFUSED ..... r

BE1=1 OR 2 OR BE2=1 OR 2 OR BE3=1 OR 2

BE5. In the last 30 days, did you ever eat less than you felt you should because there wasn't enough money for food?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

[IF BE1 = 1 OR 2] OR [IF BE2 = 1 OR 2] OR [IF BE3 = 1 OR 2]

BE6. In the last 30 days, were you ever hungry but didn't eat because there wasn't enough money for food?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

[IF BE1 = 1 OR 2] OR [IF BE2 = 1 OR 2] OR [IF BE3 = 1 OR 2]

BE7. In the last 30 days, did you lose weight because there wasn't enough money for food?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

PROGRAMMER BOX BE7

IF BE4=1 OR BE5=1 OR BE6=1 OR BE7=1, GO TO BE8;
OTHERWISE, SKIP TO BE9.

[IF BE4 = 1] OR [IF BE5 = 1] OR [IF BE6 = 1] OR [IF BE7 = 1]

IF [BB1 – BB3] > 1: "or other adults in your household"

BE8. In the last 30 days, did you [or other adults in your household] ever not eat for a whole day because there wasn't enough money for food?

YES	1	
NO	0	GO TO BE9
DON'T KNOW	d	GO TO BE9
REFUSED	r	GO TO BE9

IF BE8 = 1

BE8a. In the last 30 days, how many days did this happen?

|___|___| NUMBER OF DAYS (1-30)		GO TO BE9
DON'T KNOW	d	
REFUSED	r	GO TO BE9

IF BE8a = D

BE8b. Do you think it was one or two days, or more than two days?

CODE ONE ONLY

ONE OR TWO DAYS	1
MORE THAN TWO DAYS	2
DON'T KNOW	d
REFUSED	r

ALL
IF BB3 = 1; FILL 1 “your child” IF BB3 > 1; FILL 1“children living in your household” IF BB1= 2 AND BB3 = 1; FILL 2 “I relied on only a few kinds of low-cost food to feed my child because I was running out of money to buy food.” [IF [BB1 – BB3] = 1] AND [BB3>1]; FILL 2 “I relied on only a few kinds of low-cost food to feed my children because I was running out of money to buy food.” [IF [BB1 – BB3] > 1] AND [BB3 = 1]; FILL 2 “We relied on only a few kinds of low-cost food to feed our child because we were running out of money to buy food.” [IF [BB1 – BB3] > 1] AND [BB3 > 1]; FILL 2 “We relied on only a few kinds of low-cost food to feed our children because we were running out of money to buy food”

BE9. Now I’m going to read you several statements that people have made about the food situation of their children. For these statements, please tell me whether the statement was often true, sometimes true, or never true in the last 30 days for [your child/children living in your household].

[“I relied on only a few kinds of low-cost food to feed my child because I was running out of money to buy food.”/

“I relied on only a few kinds of low-cost food to feed my children because I was running out of money to buy food.”/

“We relied on only a few kinds of low-cost food to feed our child because we were running out of money to buy food.”/

“We relied on only a few kinds of low-cost food to feed our children because we were running out of money to buy food.”]

Was that often, sometimes, or never true for your household in the last 30 days?

OFTEN TRUE 1

SOMETIMES TRUE 2

NEVER TRUE 3

DON’T KNOW ..... d

REFUSED ..... r

ALL
IF BB1= 2 AND BB3 = 1; FILL 1 “I couldn’t feed my child a balanced meal, because I couldn’t afford that.” [IF [BB1 – BB3] = 1] AND [BB3>1]; FILL 1 “I couldn’t feed my children a balanced meal, because I couldn’t afford that.” [IF [BB1 – BB3] > 1] AND [BB3 = 1]; FILL 1 “We couldn’t feed our child a balanced meal, because we couldn’t afford that.” [IF [BB1 – BB3] > 1] AND [BB3 > 1]; FILL 1 “We couldn’t feed our children a balanced meal, because we couldn’t afford that.”

BE10. [“I couldn’t feed my child a balanced meal, because I couldn’t afford that.”/
“I couldn’t feed my children a balanced meal, because I couldn’t afford that.”/
“We couldn’t feed our child a balanced meal, because we couldn’t afford that.”/
“We couldn’t feed our children a balanced meal, because we couldn’t afford that.”]

Was that often, sometimes, or never true for your household in the last 30 days?

OFTEN TRUE 1
SOMETIMES TRUE 2
NEVER TRUE 3
DON’T KNOW ..... d
REFUSED ..... r

ALL
IF BB1= 2 AND BB3 = 1; FILL 1 “My child was not eating enough because I just couldn’t afford enough food.” [IF [BB1 – BB3] = 1] AND [BB3>1]; FILL 1 “My children were not eating enough because I just couldn’t afford enough food.” [IF [BB1 – BB3] > 1] AND [BB3 = 1]; FILL 1 “Our child was not eating enough because we just couldn’t afford enough food” [IF [BB1 – BB3] > 1] AND [BB3 > 1]; FILL 1 “Our children were not eating enough because we just couldn’t afford enough food.”

BE11. [“My child was not eating enough because I just couldn’t afford enough food.”/
“My children were not eating enough because I just couldn’t afford enough food.”/
“Our child was not eating enough because we just couldn’t afford enough food.”/
“Our children were not eating enough because we just couldn’t afford enough food.”]

Was that often, sometimes, or never true for your household in the last 30 days?

OFTEN TRUE 1
SOMETIMES TRUE 2
NEVER TRUE 3
DON’T KNOW ..... d
REFUSED ..... r

PROGRAMMER BOX BE11

IF BE9=1 OR 2 OR BE10=1 OR 2 OR BE11=1 OR 2, GO TO BE12; OTHERWISE, SKIP TO BF1.

[IF BE9 = 1 OR 2] OR [IF BE10 = 1 OR 2] OR [IF BE11 = 1 OR 2]

FILL 1 [MONTH] [DAY]
IF BB3 = 1; FILL 2 "your child's"
IF BB3>1; FILL 2 "any of your children's"

BE12. In the last 30 days, that is, since [MONTH] [DAY], did you ever cut the size of [your child's/any of your children's] meals because there wasn't enough money for food?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

[IF BE9 = 1 OR 2] OR [IF BE10 = 1 OR 2] OR [IF BE11 = 1 OR 2]

IF BB3 = 1; FILL "your child"
IF BB3>1; FILL "any of your children"

BE13. In the last 30 days, did [your child/any of your children] ever skip meals because there wasn't enough money for food?

YES 1
NO ..... 0 GO TO BE14
DON'T KNOW ..... d GO TO BE14
REFUSED ..... r GO TO BE14

BE13 = 1

BE13a. In the last 30 days, how many days did this happen?

|___|___| NUMBER OF DAYS (1-30) GO TO BE14
DON'T KNOW ..... d GO TO BE13b
REFUSED ..... r GO TO BE14

BE13a = D

BE13b. Do you think it was one or two days, or more than two days?

CODE ONE ONLY

ONE OR TWO DAYS 1
MORE THAN TWO DAYS 2
DON'T KNOW ..... d
REFUSED ..... r

[IF BE9 = 1 OR 2] OR [IF BE10 = 1 OR 2] OR [IF BE11 = 1 OR 2]

IF BB3 = 1; FILL "was your child"
IF BB3>1; FILL "were your children"

BE14. In the last 30 days, [was your child/were your children] ever hungry but you just couldn't afford more food?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

[IF BE9 = 1 OR 2] OR [IF BE10 = 1 OR 2] OR [IF BE11 = 1 OR 2]

IF BB3 = 1; FILL "your child"
IF BB3>1; FILL "any of your children"

BE15. In the last 30 days, did [your child/any of your children] ever not eat for a whole day because there wasn't enough money for food?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

F. Food Expenditures

ALL

Now, I'd like to ask some questions about shopping for food and eating at restaurants. These questions are about out-of-pocket spending on food. Later on I will ask you about purchases made with government benefits like SNAP, WIC, or FDPIR.

ALL
FILL DATE = [DATE] [MONTH]

BF1. First I'll ask you about money spent on food at supermarkets and other stores. Then we will talk about money spent at fast food restaurants and other restaurants.

Excluding any government benefits like SNAP or WIC, since [DATE] [MONTH] how much money did your family spend out of pocket at <u>supermarkets, grocery stores, and other stores</u>? Please do not include fast food restaurants and other types of restaurants.

PROBE: This includes stores such as Wal-Mart, Target, and Kmart, convenience stores like 7-11 or Mini Mart, stores like Costco or Sam's Club, dollar stores, bakeries, meat markets, vegetable stands, or farmer's markets.

PROBE: Please include the total amount spent in the past 30 days, since [DATE] [MONTH].

|___|___|___|___| MONEY SPENT ($0-$9,999)

DON'T KNOW ..... d GO TO BF4

REFUSED ..... r GO TO BF4

IF BF1 = $1-$9,999
FILL AMOUNT FROM BF1

BF2. Was any of this $[AMOUNT FROM BF1] spent on <u>nonfood items</u> such as cleaning or paper products, pet food, cigarettes or alcoholic beverages?

YES ..... 1 GO TO BF3

NO ..... 0 GO TO BF4

DON'T KNOW ..... d GO TO BF4

REFUSED ..... r GO TO BF4

IF BF2 = 1

FILL AMOUNT FROM BF1

BF3. About how much of the $[AMOUNT FROM BF1] was spent on nonfood items?

|___|___|___|___| MONEY SPENT ($0-$9,999)

DON'T KNOW ..... d GO TO BF4

REFUSED ..... r GO TO BF4

HARD CHECK: IF [BF1 = $0-9,999] AND IF [BF3 > BF1]; **The amount spent on nonfood items is greater than the total amount spent at supermarkets, grocery stores, and other stores. Did I make a mistake?**

ALL

BF4. During the last 30 days, how many times did your family eat food from a fast food restaurant or other kinds of restaurants? Include restaurant meals at home, at fast food or other restaurants, carryout, or drive thru.

PROBE IF NEEDED: Please include the total number of visits in the past 30 days, since [DATE] [MONTH].

PROBE IF NEEDED: Such as food you get at McDonald's, KFC, Panda Express, Taco Bell, Pizza Hut, food trucks, Applebee's, Chili's, TGI Fridays, etc.

|___|___| TIMES (0-99)

DON'T KNOW ..... d GO TO BG1

REFUSED ..... r GO TO BG1

BF4 = 1-99

BF5. About how much money did your family spend on food at all types of restaurants including fast food restaurants during the last 30 days?

PROBE: Please include the total amount spent in the past 30 days, since [DATE] [MONTH].

|___|___|___|___| MONEY SPENT ($0-$9,999)

DON'T KNOW ..... d GO TO BG1

REFUSED ..... r GO TO BG1

G. Other Program Participation

ALL

Next, I'm going to read the names of some programs that provide food or meals or other services to individuals or households.

ALL

FILL DATE = [DATE] [MONTH]

BG1. In the last 30 days, that is, since [DATE] [MONTH], did you or anyone in your household receive food or benefits from the Women, Infants and Children program called WIC?

YES	1	GO TO BG1A
NO	0	GO TO BG2
DON'T KNOW	d	GO TO BG2
REFUSED	r	GO TO BG2

BG1 = 1

BG1a. How many women, infants, or children in the household got WIC foods or benefits?

|___|___| NUMBER OF WOMEN, INFANTS, OR CHILDREN
(1-20)

DON'T KNOW	d	GO TO BG2
REFUSED	r	GO TO BG2

BG1A=1-20

BG1b. Of those, how many were infants or children up to age 5?

|___|___| NUMBER OF INFANTS OR CHILDREN
(0-20)

DON'T KNOW	d
REFUSED	r

ALL

BG2. In the last 30 days did you or anyone in your household receive food or meals from food pantries, food banks, local soup kitchens or emergency kitchens, community program, senior center, shelter, Meals on Wheels (or other programs delivering meals to your home), or church?

YES	1
NO	0
DON'T KNOW	d
REFUSED	r

DEMONSTRATION = CHICKASAW NATION

BG3. Do you or others in your household currently receive monthly commodity foods as part of the Food Distribution Program on Indian Reservations, also called FDPIR, *fi-dipper, or fid-purr*?

YES 1

NO 0

DON'T KNOW ..... d

REFUSED ..... r

H. SNAP Enrollment

ALL

BH1. In the last 12 months, has your household ever been enrolled in the Supplemental Nutrition Assistance Program (SNAP)?

YES	1	
NO	0	GO TO BH2a
DON'T KNOW	d	GO TO BH2a
REFUSED	r	GO TO BH2a

BH1=1

BH1a. In the last 12 months, how long did your household receive the Supplemental Nutrition Assistance Program (SNAP)? If your household received SNAP, stopped receiving it, and then started again, please include all of that time.

|___|___|___|___| AMOUNT OF TIME

(0-365)

DON'T KNOW	d	GO TO BH2a
REFUSED	r	GO TO BH2a

BH1A = 1-365

BH1b. Is that days, weeks, or months?

DAYS	1	
WEEKS	2	
MONTHS	3	
DON'T KNOW	d	GO TO BH2a
REFUSED	r	GO TO BH2a

ALL

BH2a. In total, how long have you and your household ever received the Supplemental Nutrition Assistance Program (SNAP)?

IF NEEDED: Please include <u>all</u> of the time your household has received SNAP, even if your household has started and stopped receiving benefits more than once.

|___|___|___| AMOUNT OF TIME

(0-365)

DON'T KNOW	d	GO TO BH3
REFUSED	r	GO TO BH3

IF BH2A = 1-365

BH2b. Is that days, weeks, months, or years?

CODE ONE ONLY

DAYS	1	
WEEKS	2	
MONTHS	3	
YEARS	4	
DON'T KNOW	d	GO TO BH3
REFUSED	r	GO TO BH3

[BB1D=1 OR BH1=1] AND [DEMONSTRATION = CHICKASAW NATION, KENTUCKY, OR VIRGINIA]

BH3. Are you or others in your household currently receiving SNAP?

YES	1	
NO	0	GO TO BI1
DON'T KNOW	d	GO TO BI1
REFUSED	r	GO TO BI1

BB1D=1 OR [BB1E=0 OR DK] OR BH3=1 AND [DEMONSTRATION = KENTUCKY]

BH4. What is the amount of the SNAP your household receives per month?

|___|___|___|___| DOLLAR AMOUNT
($1 - $9999)

DON'T KNOW	d	GO TO BI1
REFUSED	r	GO TO BI1

BB1D=1 OR [BB1E=0 OR DK] OR BH3=1 AND [DEMONSTRATION = KENTUCKY]

BH5. In the last 12 months, did the amount of the benefit increase, decrease, or stay the same?

CODE ONE ONLY

INCREASED	1	
DECREASED	2	
BOTH INCREASED AND DECREASED	3	
STAYED SAME	4	
DON'T KNOW	d	GO TO BI1
REFUSED	r	GO TO BI1

BB1D=1 OR [BB1E=0 OR DK] OR BH3=1 AND [DEMONSTRATION = KENTUCKY]

BH6. How many weeks do your SNAP benefits usually last?

INTERVIEWER: CODE ANY ANSWER GREATER THAN 8 WEEKS AS 8

|___| NUMBER OF WEEKS
(0-8)

DON'T KNOW ..... d GO TO BI1

REFUSED ..... r GO TO BI1

I. Household Resources

ALL
FILL [DATE] [MONTH]

BI1. The next questions are about working or jobs. Were you or any other adult in your household working for pay in the last 30 days that is, since [DATE] [MONTH]?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

DEMONSTRATION=KENTUCKY AND BI1 = 1, D, R

BI2. And what was your household's total <u>earnings</u> before taxes last month? Please include earnings from wages and salaries from a job or self-employment, or income from a rental property. Do not include income from Social Security, pensions, child support, or cash welfare benefits, or the value of SNAP benefits or food stamps, WIC, Medicaid, or public housing.

$ |___|___|___|___|___| DOLLAR AMOUNT ($0 – 99,999)

DON'T KNOW ..... d GO TO BI2a
REFUSED ..... r GO TO BI2a

BI2 = D OR R

BI2a. Some people find it easier to select earnings from a range. Please stop me when I reach your household's total earnings for <u>last month</u>. Was it…

CODE ONE ONLY

Less than $500, ... 1
$500 to less than $1,000, ... 2
$1,000 to less than $1,500, ... 3
$1,500 to less than $2,000, ... 4
$2,000 to less than $2,500, ... 5
$2,500 to less than $3,000, or 6
$3,000 or more? 7
DON'T KNOW ..... d GO TO BI3
REFUSED ..... r GO TO BI3

ALL

FILL [LAST MONTH]

BI3. What was your household's total <u>income</u> last month, during [LAST MONTH] before taxes? Please include all types of income received by all household members last month, including all earnings, Social Security, pensions, Veteran's Benefits, Unemployment Insurance, worker's compensation benefits, child support, payments from roomers or boarders, and cash welfare benefits such as TANF (*TAH-nif*) and SSI. Do not include the value of SNAP benefits or food stamps, WIC, Medicaid, or public housing.

|___|___|___|___|___| DOLLAR AMOUNT ($0 – 99,999)

NO INCOME	0	GO TO BI4
GAVE ANSWER	1	GO TO BI4
DON'T KNOW	d	GO TO BI3B
REFUSED	r	GO TO BI3B

BI3 = D OR R

BI3b. Some people find it easier to select an income range. Please stop me when I reach your household's total income for <u>last month</u>. Was it…

CODE ONE ONLY

Less than $500,	1
$500 to less than $1,000,	2
$1,000 to less than $1,500,	3
$1,500 to less than $2,000,	4
$2,000 to less than $2,500,	5
$2,500 to less than $3,000, or	6
$3,000 or more?	7
DON'T KNOW	d
REFUSED	r

ALL

BI4. And, what was your household's total income last year before taxes?

PROBE IF NEEDED: **Please include all types of income received by all household members last year, including all earnings, Social Security, pensions, Veteran's Benefits, Unemployment Insurance, worker's compensation benefits, child support, payments from roomers or boarders and cash welfare benefits such as TANF (*TAH-nif*) and SSI. Do not include the value of SNAP benefits or food stamps, WIC, Medicaid, or public housing.**

INTERVIEWER: "LAST YEAR," MEANING 2015.

|___|___|___|___|___| DOLLAR AMOUNT ($0 – 150,000)

DON'T KNOW ..... d GO TO BI4A

REFUSED ..... r GO TO BI4A

BI4 = D OR R

BI4a. Some people find it easier to select an income range. Please stop me when I reach your household's total income for last year. Was it…

CODE ONE ONLY

Less than $10,000, ... 1 GO TO BI5

$10,000 to less than $20,000, ... 2 GO TO BI5

$20,000 to less than $35,000, ... 3 GO TO BI5

$35,000 to less than $50,000, ... 4 GO TO BI5

$50,000 to less than $75,000, ... 5 GO TO BI5

$75,000 to less than $100,000, ... 6 GO TO BI5

$100,000 to less than $150,000, or ..... 7 GO TO BI5

$150,000 or more? ..... 8 GO TO BI5

DON'T KNOW ..... d GO TO BI5

REFUSED ..... r GO TO BI5

ALL
FILL [MONTH] [DAY]

BI5. The next questions are about sources of income. The answers to these and all other questions on this survey will be kept private and will never be associated with your name. During the last 30 days, that is, since [MONTH] [DAY], did you or anyone in your household receive…

CODE ONE PER ROW

	YES	NO	DON'T KNOW	REFUSED
a. TANF, Temporary Assistance to Needy Families or other welfare such as General Assistance?	1	0	d	r
b. Social Security from the government for retirement, disability, or survivors' benefits, or other retirement benefits such as a government or private pension or annuity?	1	0	d	r
c. SSI or Supplemental Security Income from the federal, state, or local government?	1	0	d	r
d. Veteran's Benefits?	1	0	d	r
e. Unemployment Insurance or worker's compensation benefits?	1	0	d	r
f. Child support payments or payments from roomers or boarders?	1	0	d	r
g. Financial support from friends or family?	1	0	d	r
h. Any other income besides earnings?	1	0	d	r

BI5H = 1

BI5H_Specify. What is that other income?

_____
DESCRIPTION

DON'T KNOW .....d

REFUSED .....r

[BI6 on household limitations deleted per OMB on August 10, 2015.]

ALL

BI7. Now I'd like to ask you about how much help you would expect to get from different sources if your household had a problem with which you needed help, for example, sickness or moving. After I read each source, please tell me if you would expect to get all of the help needed, most of the help needed, very little of the help needed, or no help?

INTERVIEWER: REPEAT ANSWER CHOICES AS NEEDED.

CODE ONE PER ROW

		ALL OF THE HELP NEEDED	MOST OF THE HELP NEEDED	VERY LITTLE OF THE HELP NEEDED	NO HELP	DON'T KNOW	REFUSED
a.	Family living nearby?	1	2	3	4	d	r
b.	Friends?	1	2	3	4	d	r
c.	Other people in the community besides family and friends, such as a social service agency or a church?	1	2	3	4	d	r

J. Trigger Events

The next few questions are about changes that may have occurred in your household in the past 6 months.

ALL

BJ1. Has there been a change in the number of people living in your household over the past 6 months?

YES	1	
NO	0	GO TO BJ2
DON'T KNOW	d	GO TO BJ2
REFUSED	r	GO TO BJ2

BJ1 = 1

BJ1a. What caused that change?

CODE ALL THAT APPLY

BIRTH OF CHILD	1
NEW STEP, FOSTER OR ADOPTED CHILD	2
MARRIAGE/ROMANTIC PARTNER	3
SEPARATION OR DIVORCE	4
DEATH OF HOUSEHOLD MEMBER	5
FAMILY/BOARDER/OTHER ADULT MOVED IN	6
FAMILY/BOARDER/OTHER ADULT MOVED OUT	7
HOUSEHOLD MEMBER INCARCERATED	8
OTHER (SPECIFY)	99
_____	
DON'T KNOW	d
REFUSED	r

ALL

BJ2. At any time in the past 6 months was your household evicted from your house or apartment?

YES	1
NO	0
DON'T KNOW	d
REFUSED	r

ALL

BJ3. Have you or anyone in your household had a change in employment or a change in pay or hours worked from a job in the past 6 months?

YES	1	
NO	0	GO TO BK1
DON'T KNOW	d	GO TO BK1
REFUSED	r	GO TO BK1

BJ3=1

BJ3a. What was that change in employment or a change in pay or hours worked from a job that you or someone in your household experienced in the past 6 months?

CODE ALL THAT APPLY

OBTAINED A JOB	1
LOST JOB	2
INCREASE IN PAY OR HOURS	3
DECREASE IN PAY OR HOURS	4
OTHER (SPECIFY)	99

_____

DON'T KNOW	d
REFUSED	r

K. Respondent Demographics and Health Status

ALL

BK1. Now, I have a few questions about you.

[RECORD GENDER FROM OBSERVATION.]

[PROBE ONLY IF NECESSARY: Because it is sometimes difficult to determine over the phone, I am asked to confirm with everyone…Are you male or female?]

INTERVIEWER: CODE DON'T KNOW IF RESPONDENT DOES NOT WANT TO IDENTIFY AS MALE OR FEMALE

MALE 1
FEMALE 2
DON'T KNOW ..... d
REFUSED ..... r

ALL

BK2. What is your relationship to the children living in the household?

INTERVIEWER: READ ONLY IF NECESSARY

CODE ALL THAT APPLY

BIOLOGICAL/ADOPTIVE PARENT 1
STEP-PARENT 2
GRANDPARENT 3
GREAT GRANDPARENT 4
SIBLING/STEPSIBLING 5
OTHER RELATIVE OR IN LAW 6
FOSTER PARENT 7
OTHER NON-RELATIVE 8
PARENT'S PARTNER 9
DON'T KNOW ..... d
REFUSED ..... r

ALL

BK3. Are you of Hispanic or Latino origin?

HISPANIC OR LATINO 1
NOT HISPANIC OR LATINO 0
DON'T KNOW ..... d
REFUSED ..... r

ALL

BK4. I am going to read a list of five race categories. Please choose one or more races that you consider yourself to be. American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or other Pacific Islander; White?

CODE ALL THAT APPLY

AMERICAN INDIAN OR ALASKA NATIVE 1
ASIAN 2
BLACK OR AFRICAN AMERICAN 3
NATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER 4
WHITE 5
DON'T KNOW ..... d
REFUSED ..... r

ALL

BK5. What is your current marital status? Are you now married, divorced, separated, widowed, never married, or living with a partner?

CODE ONE ONLY

MARRIED 1
SEPARATED OR DIVORCED 2
WIDOWED 3
NEVER MARRIED 4
LIVING WITH PARTNER 5
DON'T KNOW ..... d
REFUSED ..... r

ALL

BK6. What is your date of birth?

PROGRAMMER: COLLECT DATE WITH SEPARATE FIELDS

|__|__| / |__|__| / |__|__|__|__|
MONTH DAY YEAR
(1-12) (1-31) (1916-2001)

DON'T KNOW ..... d
REFUSED ..... r

BK6 = D OR R

BK6a. I can record your age instead if you would like. How many years old are you?

|___|___| YEARS

(18-99)

DON'T KNOW ..... d

REFUSED ..... r

ALL

BK7. What is the highest grade or level of school you have completed or the highest degree you have received?

[ENTER HIGHEST LEVEL OF SCHOOL.]

NEVER ATTENDED/KINDERGARTEN ONLY 0

1ST GRADE 1

2ND GRADE 2

3RD GRADE 3

4TH GRADE 4

5TH GRADE 5

6TH GRADE 6

7TH GRADE 7

8TH GRADE 8

9TH GRADE 9

10TH GRADE 10

11TH GRADE 11

12TH GRADE, NO DIPLOMA 12

HIGH SCHOOL GRADUATE 13

GED OR EQUIVALENT 14

SOME COLLEGE, NO DEGREE 15

ASSOCIATE DEGREE: OCCUPATIONAL, TECHNICAL, OR VOCATIONAL PROGRAM 16

ASSOCIATE DEGREE: ACADEMIC PROGRAM 17

BACHELOR'S DEGREE (EXAMPLE: BA, AB, BS, BBA) 18

MASTER'S DEGREE (EXAMPLE: MA, MS, MEng, MEd, MBA) 19

PROFESSIONAL SCHOOL DEGREE (EXAMPLE: MD, DDS, DVM, JD) 20

DOCTORAL DEGREE (EXAMPLE: PhD, EdD) 21

DON'T KNOW ..... d

REFUSED ..... r

ALL

BK8. In general, would you say your health is excellent, very good, good, fair or poor?

CODE ONE ONLY

EXCELLENT 1
VERY GOOD 2
GOOD 3
FAIR 4
POOR 5
DON'T KNOW ..... d
REFUSED ..... r

L. Closing Information

ALL

BL1. Thank you very much for your time. You have really helped us with this study. I'd like to confirm your address so we can send you a $30 gift card within the next few weeks.

According to our records we have…

[FILL NAME FROM SAMPLE FRAME OR SCREENER]

[FILL STREET ADDRESS FROM SAMPLE FRAME]

[FILL CITY, STATE, ZIP CODE FROM SAMPLE FRAME]

[IF SECOND FOLLOW-UP FILL EMAIL ADDRESS]

[IF SECOND FOLLOW-UP FILL PHONE NUMBER]

CONTACT INFORMATION IS CORRECT ..... 1 GO TO BL2

CONTACT INFORMATION NEEDS UPDATING 0

UPDATE: NAME

UPDATE: STREET ADDRESS:

_____

STREET 1

_____

STREET 2

_____

STREET 3

_____

CITY

_____

STATE

_____

ZIP

|___|___|___| - |___|___|___| - |___|___|___| - |___|___|___|___|

_____

EMAIL

DON'T KNOW ..... d

REFUSED ..... r

ALL

BL2. [We would also like to do a second telephone interview 12 months from now to see how you are doing. You will get another prepaid card for participating in that interview.]

In case we can't reach you at this number, is there another number we should try?

CODE ONE ONLY

YES	1	
NO ADDITIONAL PHONE AVAILABLE	2	GO TO BL2C
REFUSED TO GIVE PHONE NUMBER	3	GO TO BL2C
REFUSED TO PARTICIPATE IN SECOND INTERVIEW	9	STATUS REFUSAL, GO TO END
DON'T KNOW	d	GO TO BL2C
REFUSED	r	GO TO BL2C

BL2 = 1

BL2a. What is the telephone number we should try?

|___|___|___| - |___|___|___| - |___|___|___| - |___|___|___|___|

DON'T KNOW	d	GO TO BL2C
REFUSED	r	GO TO BL2C

IF BL2A = ANSWERED

BL2b. What type of phone number is this?

CODE ONE ONLY

HOME PHONE	1
OFFICE PHONE	2
HOME AND OFFICE PHONE	3
CELL PHONE	4
PAGER	5
COMPUTER/FAX LINE	6
OTHER	7
DON'T KNOW	d
REFUSED	r

[IF BL2B = 2] AND [DEMONSTRATION = KENTUCKY, NEVADA, OR VIRGINIA]

BL2c. May we send text messages to your cell phone regarding the second interview?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

[BL2 =1, 2, 3, D OR R] OR [BL2A = D OR R]

BL2d. Do you have an email address where we can try to reach you?

YES 1
NO ..... 0 GO TO BL3
DON'T KNOW ..... d GO TO BL3
REFUSED ..... r GO TO BL3

BL2D = 1

BL2e. What is the email address where we can reach you?

_____
EMAIL ADDRESS
DON'T KNOW ..... d
REFUSED ..... r

BL2E = ANSWERED

BL2f. What type of email address is this? Is this a home email, office email, or something else?

CODE ONE ONLY

HOME EMAIL 1
OFFICE EMAIL 2
HOME AND OFFICE EMAIL 3
OTHER 4

ALL

BL3. In case we have trouble reaching you in 12 months, please give me the names and telephone numbers of two relatives or friends who would know where you could be reached. These should be relatives or friends not currently living in your household. Let's start with one friend or relative. What is his or her name?

[BE SURE TO VERIFY SPELLING]

_____
FIRST NAME

_____
LAST NAME

DON'T KNOW ..... d GO TO END

REFUSED ..... r GO TO END

IF BL3 FIRST NAME = ANSWERED OR
IF BL3 LAST NAME = ANSWERED

BL3a. What is the telephone number we should try?

|___|___|___| - |___|___|___| - |___|___|___| - |___|___|___|___|

DON'T KNOW ..... d

REFUSED ..... r

IF BL3 FIRST NAME = ANSWERED OR
IF BL3 LAST NAME = ANSWERED

FILL = FIRST NAME FROM BL3
IF BL3 = D, FILL "this person"

BL3b. And what is [FIRST NAME FROM BL3/this person]'s relationship to you?

_____
RELATIONSHIP

DON'T KNOW ..... d

REFUSED ..... r

BL2 = 1, 2, 3, OR BL3A PHONE NUMBER ANSWERED

BL4. How about a second friend or relative? What is his or her name?

[BE SURE TO VERIFY SPELLING]

_____
FIRST NAME

_____
LAST NAME

DON'T KNOW .....d

REFUSED .....r GO TO END

BL4 FIRST NAME = ANSWERED
BL4 LAST NAME = ANSWERED

BL4a. What is this person's telephone number, beginning with the area code?

|___|___|___| - |___|___|___| - |___|___|___| - |___|___|___|___|

DON'T KNOW .....d

REFUSED .....r

BL4 FIRST NAME = ANSWERED
BL4 LAST NAME = ANSWERED

FILL= FIRST NAME FROM BL4
IF BL4 = D, FILL "this person"

BL4b. And what is [FIRST NAME FROM BL4/this person]'s relationship to you?

_____
RELATIONSHIP

DON'T KNOW .....d

REFUSED .....r

ALL

IF BL2 NE 9: We look forward to speaking with you again in 12 months.

END. Thank you again for your help and have a good day/evening. [We look forward to speaking with you again in 12 months.]

B.3. FOLLOW-UP SURVEY INSTRUMENT

The final follow-up questionnaire for households is shown in Appendix B.3.

OMB Clearance Number: 0584-0603
Expiration Date: 08/31/2018

Evaluation of Demonstration Projects to End Childhood Hunger

Follow-Up Questionnaire for Households

A. Introduction

DEMONSTRATION = CHICKASAW NATION AND BASELINE NON-RESPONDENT
IF FIELD LOCATOR PRESENT, FILL= ”give” ELSE FILL= “send”

SampMembA.

For quality assurance purposes, this call may be monitored or recorded.

The interview will take approximately 30 minutes. It has questions about your children’s food choices as well as general questions about you and your household. Your answers will help the government make its child nutrition programs better. As a way of saying thank you, we will [send/give] you $30 for helping us. We will also follow up 6 months from now for a final interview that will also take approximately 30 minutes to complete. Will give you another prepaid card at that time for helping us.

Your participation in this interview is voluntary and you may stop at any time. You may also refuse to answer any question. Your benefits will not be affected by any answers to questions or if you choose not to participate.

All the information you give us will be kept private to the extent allowed by law. There is a small risk of the loss of confidentiality of your data, but procedures are in place to minimize this risk. Your name will not be attached to any of your answers. Your information will be used only in combination with information from other households for research purposes.

Do you have any questions about the interview before I begin?

	CODE ONE ONLY	
YES	1	GO TO FAQ
NO	0	GO TO TB2
DON’T KNOW	d	
REFUSED	r	

CASES NOT ROUTED TO SAMPMEMBA
IF FIELD LOCATOR PRESENT, FILL1 = “give” ELSE, FILL1 = “send” IF DEMONSTRATION=CHICKASAW NATION FILL2= “We will also follow up 6 months from now for a final interview that will also take approximately 30 minutes to complete. Will give you another prepaid card at that time for helping us.”

SampMembB.

For quality assurance purposes, this call may be monitored or recorded.

The interview will take approximately 30 minutes. It has questions about your children’s food choices as well as general questions about you and your household. As a way of saying thank you, we will [give/send] you $30 for helping us. [We will also follow up 6 months from now for a final interview that will also take approximately 30 minutes to complete. We will give you another prepaid card at that time for helping us.]

Do you have any questions before I begin?

CODE ONE ONLY

YES	1	GO TO FAQ
NO	0	GO TO TB1
DON’T KNOW	d	
REFUSED	r	

B. Household Size and Composition

BASELINE RESPONDENT

FILL HHNUMB FROM BASELINE SURVEY

TB1. Let's start by updating our information from last year. According to my records from our last interview, there were [HHNUMB] people in your household that share their food together. Is that still correct?

YES	1	GO TO TB4
NO	0	GO TO TB2
DON'T KNOW	d	GO TO TB2
REFUSED	r	GO TO TB2

BASELINE NON-RESPONDENT OR [TB1=0, D, OR R]

TB2. Including yourself, how many people live in your household? Don't forget to include non-relatives who live in your household and, of course, babies, small children and foster children. Also include people who usually live in your household but may have been away within the last 30 days for reasons such as: vacation, traveling for work, or in the hospital. Do not include children living away at school or anyone who is now incarcerated.

PROBE: By temporarily away we mean away within the last 30 days.

|___|___| NUMBER OF PEOPLE
(1-20)

DON'T KNOW	d	GO TO TB9A
REFUSED	r	GO TO TB9A

TB2=1

TB2a. Just to confirm, you are the only person living in the household. There are no children, non-relatives, or people who usually live there but are currently away?

YES	1	GO TO TB9
NO	0	REPEAT TB2
DON'T KNOW	d	REPEAT TB2
REFUSED	r	GO TO TB9A

TB2 GT 1

TB3. Do all the people who live with you share the food that is bought for the household?

YES	1	GO TO BOX TB3
NO	0	GO TO TB3A
DON'T KNOW	d	GO TO TB3A
REFUSED	r	GO TO TB3A

PROGRAMMER BOX TB3

IF TB3=1 AND BASELINE RESPONDENT, GO TO TB4. IF TB3=1 AND BASELINE NON-RESPONDENT, GO TO TB5.

TB3 NE 1

TB3a. Including yourself, how many people in your household share the food that is bought for the household?

|___|___| NUMBER OF PEOPLE
(1-20)

DON'T KNOW	d
REFUSED	r

HARD CHECK: IF TB3A GT TB2; **The number of people in your household who share food is greater than the total number of people in your household. Did I make a mistake?**

PROGRAMMER BOX TB3A

IF BASELINE NON-RESPONDENT, GO TO TB5. OTHERWISE, GO TO TB4.

(TB1=1 OR TB2>1) AND BASELINE RESPONDENT

IF TB4a_DOB1 = ANSWERED, FILL1 = "date of birth"
ELSE, FILL1 = "age"
IF TB4_1 = ANSWERED AND NE D OR R, FILL2 = [NAME1]
ELSE, FILL2 = "a child"
IF TB4a_DOB1 = ANSWERED, FILL3 = "a date of birth [DOB1]"
ELSE, FILL3 = "an age of [AGE1]
IF TB4_1 = ANSWERED AND NE D OR R, FILL4 = [NAME1]
ELSE, FILL4 = "this child"
For first child in HH, fill: We would now like to confirm… still live in your household?
For additional children in HH, fill: Now I'd like to ask about the next child…still live in your household?

TB4. FIRST CHILD: **We would now like to confirm the information we collected 12 months ago regarding the children living in your household. I am going to read you the name or initials for each child that we have from last year's interview. I will also read each child's [date of birth/age] and gender. I would like for you to confirm whether the child still lives in your household and if his or her information is correct. I have [[NAME1]/a child] with [a date of birth of [DOB1]/an age of [AGE1] and [GENDER1]. Does ([NAME1]/this child) still live in your household?**

ADDITIONAL CHILD: **Now I'd like to ask about the next child we learned about in last year's interview. I have [[NAME2]/this child] with [a date of birth of [DOB2]/an age of [AGE2]] and [GENDER2]. Does [[NAME2]/this child] still live in your household?**

INTERVIEWER: IF CHILD IS DECEASED: **I'm very sorry for your loss.** CODE "3."

CODE ONE ONLY

CHILD STILL LIVES IN HOUSEHOLD	1	GO TO BOX TB4
CHILD INFORMATION IS INCORRECT	2	GO TO BOX TB4
CHILD NO LONGER LIVES IN HOUSEHOLD OR IS DECEASED	3	GO TO BOX TB4
DON'T KNOW	d	GO TO BOX TB4
REFUSED	r	GO TO BOX TB4

PROGRAMMER BOX TB4

IF TB4=1 AND DOB1=.M AND AGE1=.M, GO TO TB4B.
ELSE IF TB4=1 AND GENDER1=.M, GO TO TB4C.
ELSE IF TB4=1 AND DEMONSTRATION = CHICKASAW NATION OR VIRGINIA, GO TO TB4_1.
ELSE IF TB4=2, GO TO TB4A.
ELSE, GO TO TB4D.

TB4=2
IF TB4_1 = ANSWERED AND NE D OR R, FILL = [NAME1] ELSE, FILL = “this child”

TB4a. What is ([NAME1]/this child)’s date of birth?

PROGRAMMER: COLLECT DATE WITH SEPARATE FIELDS

|___|___| / |___|___| / |___|___|___|___|
MONTH DAY YEAR
(1-12) (1-31) (1996-2016) GO TO TB4C

DON’T KNOW ..... d GO TO TB4B

REFUSED ..... r GO TO TB4B

(TB4=1 AND DOB1=.M AND AGE1=.M) OR TB4A=D OR R
IF TB4A=D OR R FILL1=Some people find it easier to select an age group. IF TB4_1 = ANSWERED AND NE D OR R, FILL2 = [NAME1] ELSE, FILL2 = “this child”

TB4b. [Some people find it easier to select an age group.] Please stop me when I reach ([NAME1]/this child)’s age group. Is it…

CODE ONE ONLY

Under 2 years old, ... 1 GO TO TB4C

Age 2 to 5 years, ... 2 GO TO TB4C

Age 6 to 11 years, ... 3 GO TO TB4C

Age 12 to 17 years, or ..... 4 GO TO TB4C

Age 18 or older and still in school? ..... 5 GO TO TB4C

DON’T KNOW ..... d GO TO TB4C

REFUSED ..... r GO TO TB4C

(TB4=1 AND GENDER1=.M) OR TB4A=ANSWERED OR TB4B = ANSWERED
IF TB4_1 = ANSWERED AND NE D OR R, FILL = [NAME1] ELSE, FILL = "this child"

TB4c. Is ([NAME1]/this child) a boy or girl?

INTERVIEWER: ASK IF RESPONDENT HAS NOT ALREADY MENTIONED CHILD'S SEX.

CODE ONE ONLY

BOY 1
GIRL 2
DON'T KNOW ..... d
REFUSED ..... r

(DEMONSTRATION=CHICKASAW NATION OR VIRGINIA) AND ((BASELINE DOB YEAR <2015) OR (TB4A YEAR <2015) OR (TB4B=2, 3, 4, OR 5))
IF TB4_1 = ANSWERED AND NE D OR R, FILL = [NAME1] ELSE, FILL = "THIS CHILD"

TB4_1. Is ([NAME1]/this child) in grades pre-K through 12 in your local school system?

YES ..... 1 GO TO TB4_2
NO 0
DON'T KNOW ..... d
REFUSED ..... r

TB4_1=1
IF TB4_1 = ANSWERED AND NE D OR R, FILL = [NAME1] ELSE, FILL = "THIS CHILD"

TB4_2. What school does ([NAME1]/this child) attend?

[List of schools + "other" option]

DON'T KNOW ..... d
REFUSED ..... r

PROGRAMMER BOX TB4_4

IF [(TB1=1 OR TB2>1)] AND [NUMCHILDBL > 1], LOOP OVER TB4 THROUGH TB4_2 FOR ALL CHILDREN ON BASELINE HOUSEHOLD ROSTER THEN GO TO TB4H.

BASELINE RESPONDENT

TB4h. Are there any other children, age 18 or younger, or over 18 but still in high school, in your household that I have not asked about yet?

YES	1	GO TO TB4I
NO	0	GO TO SECTION TC
DON'T KNOW	d	GO TO SECTION TC
REFUSED	r	GO TO SECTION TC

TB4H=1

TB4i. How many additional children age 18 or younger, or over 18 but still in high school, are in your household that I have not asked about yet?

|__|__| NUMBER OF CHILDREN
(1-20)

DON'T KNOW ..... d

REFUSED ..... r

PROGRAMMER BOX TB4I

IF TB4I = 1-20, GO TO TB7. IF D OR R, GO TO SECTION TC.

BASELINE NON-RESPONDENT

TB5. How many children are currently living in your household that were age 18 or younger or over 18 but were still in high school during the most recently completed school year?

|___|___| NUMBER OF CHILDREN
(0-20) GO TO SECTION B PROGRAMMER BOX

DON'T KNOW ..... d

REFUSED ..... r

HARD CHECK: IF TB5 GT TB2; **The number of children living in your household is greater than the total number of people living in your household. Did I make a mistake?**

HARD CHECK: IF TB5 GT TB3a; **The number of children living in your household is greater than the total number of people sharing food in your household. Did I make a mistake?**

TB5=0 OR D OR R

TB6. Is there at least one child living in your household?

YES	1	REPEAT TB5
NO	0	GO TO SECTION B PROGRAMMER BOX
DON'T KNOW	d	GO TO SECTION B PROGRAMMER BOX
REFUSED	r	GO TO SECTION B PROGRAMMER BOX

(TB4I GTE 1) OR (TB5 GTE 1)
IF TB4I=1 TO 20: For the children we haven't discussed already, IF TB4I GT 1 OR TB5 GT 1: first For additional children, fill: What is the name of the next child?

TB7. [For the children we haven't discussed already,] I'd like to make a list of the first names or initials of the children in your household. This will help me with asking some questions later. What is the name of the [first] child?

ADDITIONAL CHILD: **What is the name of the next child?**

IF NEEDED: You can give me the child's initials or some other way to refer to the child.

_____ (STRING 25)
NAME

DON'T KNOW ..... d

REFUSED ..... r

(TB4I GTE 1) OR (TB5 GTE 1)
IF TB7 = ANSWERED AND NE D OR R, FILL = ANSWER FROM TB7 ELSE, FILL = "THIS CHILD"

TB7a. What is ([ANSWER FROM TB7]/this child)'s date of birth?

PROGRAMMER: COLLECT DATE WITH SEPARATE FIELDS

|__|__| / |__|__| / |__|__|__|__|
MONTH DAY YEAR
(1-12) (1-31) (1996-2016) GO TO TB7C

DON'T KNOW ..... d GO TO TB7B

REFUSED ..... r GO TO TB7B

TB7A=D OR R
IF TB7 = ANSWERED AND NE D OR R, FILL = ANSWER FROM TB7 ELSE, FILL = "THIS CHILD"

TB7b. Some people find it easier to select an age group. This information will help me with asking some questions later. Please stop me when I reach ([ANSWER FROM TB7]/this child)'s age group. Is it…

CODE ONE ONLY

Under 2 years old,	1	GO TO TB7C
Age 2 to 5 years,	2	GO TO TB7C
Age 6 to 11 years,	3	GO TO TB7C
Age 12 to 17 years, or	4	GO TO TB7C
Age 18 or older and still in school?	5	GO TO TB7C
DON'T KNOW	d	GO TO TB7C
REFUSED	r	GO TO TB7C

(TB4I GTE 1) OR (TB5 GTE 1) OR (TB7B = RESPONSE OR D OR R)
IF TB7 = ANSWERED AND NE D OR R, FILL = ANSWER FROM TB7 ELSE, FILL = "THIS CHILD"

TB7c. Is ([ANSWER FROM TB7]/this child) a boy or girl?

INTERVIEWER: ASK IF RESPONDENT HAS NOT ALREADY MENTIONED CHILD'S SEX.

CODE ONE ONLY

BOY	1
GIRL	2
DON'T KNOW	d
REFUSED	r

(TB4I GTE 1) OR (TB5 GTE 1) AND [TB7A GTE 3 YEARS OR TB7B = 2,3,4, OR 5] AND DEMONSTRATION=CHICKASAW NATION OR VIRGINIA
IF TB7 = ANSWERED AND NE D OR R, FILL = ANSWER FROM TB7 ELSE, FILL = "THIS CHILD"

TB7d. Is ([ANSWER FROM TB7]/this child) in grades pre-K through 12 in your local school system?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

TB7D=1 AND [DEMONSTRATION=CHICKASAW NATION OR VIRGINIA]
IF TB7 = ANSWERED AND NE D OR R, FILL = ANSWER FROM TB7 ELSE, FILL = "THIS CHILD"

TB7e. What school does ([ANSWER FROM TB7]/this child) attend?

[List of schools + "other" option]

DON'T KNOW ..... d
REFUSED ..... r

PROGRAMMER BOX TB8G

IF TB4I GT1 OR TB5 GT 1, LOOP OVER TB8 THROUGH TB8G FOR ALL CHILDREN IN TB4I OR TB5.

PROGRAMMER BOX SECTION B:

CREATE PROGRAMMED VARIABLES FOR NUMBER OF CHILDREN IN HOUSEHOLD (NUMCHILDFU1), TOTAL HOUSEHOLD SIZE (HHNUMBFU1), A FLAG FOR CHICKASAW NATION CHILDREN AGE 2 YEARS OR OLDER (CNAGEFLAGFU1), AND NUMBER OF CHILDREN IN CHICKASAW NATION HOUSEHOLDS AGE 2 YEARS OR OLDER (TOTCNAgeFU1).

IF (TB5=0) OR (TB6=0, D, OR R) THEN NUMCHILDFU1=0. IF (TB5=D OR R) AND (TB6=0, D, OR R) THEN NUMCHILDFU1=0.

IF NUMCHILDFU1=0 GO TO SECTION D. ELSE GO TO TC1.

IF [TB2 = DK OR R] OR [TB2A = R]

TB9a. I apologize, this survey is for individuals with at least one child under the age of 18 in the house.

Status refusal. Go to END.

C. Children's Program Participation

For the next series of questions we'll be asking about meals and snacks the children in your household may have had during the last 30 days, that is, since [DATE OF INTERVIEW-30].

[KIDSGTE3FU1] GTE 1

TC1. On school days during the last 30 days, how many children in your household usually ate breakfast at school?

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW ..... d GO TO TC1A

REFUSED ..... r GO TO TC1A

TC1 NE 0

TC1a. On school days during the last 30 days, how many children in your household got free or reduced-price breakfasts at school?

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW ..... d

REFUSED ..... r

[KIDSGTE3FU1] GTE 1

TC1b. On school days during the last 30 days, how many children in your household usually ate a school lunch?

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW ..... d GO TO TC1C

REFUSED ..... r GO TO TC1C

TC1B NE 0

TC1c. On school days during the last 30 days, how many children in your household got free or reduced-price lunches at school?

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW ..... d

REFUSED ..... r

[KIDSGTE3FU1] GTE 1

IF DEMONSTRATION=VIRGINIA FILL "in school or"

TC1d. During the last 30 days, how many children in your household got free supper meals [in school or] at an after school program held in their school building?

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW .....d

REFUSED .....r

[KIDSGTE3FU1] GTE 1

TC1e. During the last 30 days, how many children in your household participated in any other after school program where meals or snacks are served?

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW .....d

REFUSED .....r

DEMONSTRATION= KENTUCKY [Asked only for period when the last 30-day period included summer.]

TC1f. During the last 30 days, how many children in your household received free meals or snacks at places such as summer school, a community center, day camp or park?

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW .....d

REFUSED .....r

[KIDSLTE5FU1] GTE1

TC1g. During the last 30 days, how many children in your household received meals or snacks at a daycare center, family or group daycare home, or Head Start center?

IF NEEDED: Please include children who received meals or snacks whether the meals or snacks were free, reduced-price, or paid. Please also include meals and snacks that were included in any payment you made to the center or home.

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW .....d

REFUSED .....r

[KIDSGTE3FU1] GTE1

TC2. During the last 30 days, how many children in your household got food through a school backpack food program for children?

PROBE IF NEEDED: The Backpack Food Program provides food for children to take home from school over weekends and holidays.

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW ..... d

REFUSED ..... r

TC2 GTE 1 AND DEMONSTRATION=VIRGINIA

TC2=1: child
TC2 GT 1: children

TC2a. During the most recently completed school year, that is, school year 2015-2016, how often did your [child/children] usually take home a food backpack from school? Would you say…

Less often than once per month, ... 1

Once per month, ... 2

Two or three times per month, or 3

Every week? 4

DON'T KNOW ..... d

REFUSED ..... r

DEMONSTRATION=CHICKASAW NATION AND KIDSGTE3FU1 GTE1

TC3. How many children in your household received Summer EBT for Children benefits this past summer, that is, summer 2016?

|___|___| NUMBER OF CHILDREN
(0- 20)

DON'T KNOW ..... d

REFUSED ..... r

D. Food Purchase Behavior and Other Food Behavior

These next questions are about where you shop for food for your household.

DEMONSTRATION = CHICKASAW NATION OR KENTUCKY

TD1. During the past 30 days, about how many times did you or someone in your household shop for food?

|___|___| NUMBER OF TIMES
(0-30)

DON'T KNOW ..... d

REFUSED ..... r

DEMONSTRATION = CHICKASAW NATION OR KENTUCKY

TD2. During the past 30 days, at what kind of store did you buy most of your groceries?

INTERVIEWER: READ ONLY IF NECESSARY

INTERVIEWER: CODE "ALDI" AS A SUPERMARKET/GROCERY STORE

CODE ONE ONLY

SUPERMARKETS/GROCERY STORES SUCH AS ALDI OR SAVE-A-LOT 1

DISCOUNT STORES SUCH AS WAL-MART, TARGET, OR KMART 2

WAREHOUSE CLUBS, SUCH AS PRICE CLUB, COSTCO, PACE, SAM'S CLUB, OR BJ'S 3

CONVENIENCE STORES SUCH AS 7-11, QUICK CHECK, QUICK STOP 4

GAS STATIONS, SUCH AS SHELL, FLYING J, EXXON, MARATHON, OR AMACO 5

ETHNIC FOOD STORES SUCH AS BODEGAS, ASIAN FOOD MARKETS, OR CARIBBEAN MARKETS 6

FARMERS' MARKETS 7

DOLLAR STORES 8

SURPLUS/CLOSE-OUT RETAILERS SUCH AS BIG LOTS 9

OTHER (SPECIFY) 99

DON'T KNOW ..... d

REFUSED ..... r

TD2 = 99

TD2_Specify. INTERVIEWER: SPECIFY OTHER KIND OF STORE.

_____ (STRING 100)
DESCRIPTION

DON'T KNOW ..... d

REFUSED ..... r

DEMONSTRATION = KENTUCKY

TD3. What is the <u>main</u> reason you shop at that store?

CODE ONE ONLY

LOW PRICES 1

SALES 2

QUALITY OF FOOD 3

VARIETY OF FOODS (GENERAL) 4

VARIETY OF SPECIAL FOODS (SUCH AS GLUTEN FREE) 5

CLOSE TO HOME/CONVENIENT 6

EASY TO GET TO 7

PRODUCE SELECTION 8

MEAT DEPARTMENT 9

LOYALTY/FREQUENT SHOPPER PROGRAM 10

ONLY STORE IN AREA 11

AVAILABILITY OF FOOD AND NON-FOOD ITEMS IN SAME STORE 12

GAS OR OTHER DISCOUNTS 13

OTHER (SPECIFY) 99

DON'T KNOW ..... d

REFUSED ..... r

TD3 = 99

TD3_Specify. INTERVIEWER: SPECIFY OTHER REASON.

_____ (STRING 100)
DESCRIPTION

DON'T KNOW ..... d

REFUSED ..... r

DEMONSTRATION = KENTUCKY

TD4. How do you usually get to the store where you bought most of your groceries in the past 30 days?

CODE ALL THAT APPLY

DRIVE OWN CAR....1
DRIVE SOMEONE ELSE'S CAR....2
SOMEONE ELSE DRIVES ME....3
WALK....4
BUS, SUBWAY, OR OTHER PUBLIC TRANSIT....5
TAXI OR OTHER PAID DRIVER....6
RIDE BICYCLE....7
OTHER (SPECIFY)....8
DON'T KNOW....d
REFUSED....r

TD4 = 8

TD4_Other. INTERVIEWER: SPECIFY OTHER WAY.

_____ (STRING 100)
DESCRIPTION
DON'T KNOW....d
REFUSED....r

DEMONSTRATION = KENTUCKY

TD4a. About how many minutes does it take to go one way from home to that store?

INTERVIEWER: ENTER MIDPOINT IF RANGE IS GIVEN

|__|__|__| NUMBER OF MINUTES ONE WAY
(0-120)

DON'T KNOW....d
REFUSED....r

SOFT CHECK: IF GT 60; **I just want to make sure I recorded your answer correctly. Did you say [ANSWER FROM TD4A]?**

DEMONSTRATION=CHICKASAW NATION OR KENTUCKY

TD4b. And approximately how many miles away is that store from your home – one way?

INTERVIEWER: ENTER MIDPOINT IF RANGE IS GIVEN; IF LESS THAN ONE MILE ENTER "0"

|__|__| NUMBER OF MILES ONE WAY
(0-99)

DON'T KNOW ..... d

REFUSED ..... r

SOFT CHECK: IF GT 30; **I just want to make sure I recorded your answer correctly. Did you say [ANSWER FROM TD4B]?**

ALL

TD5. How many nights a week does your family typically sit down together to have dinner as a family?

CODE ONE ONLY

EVERY NIGHT 1

5 OR 6 NIGHTS 2

3 OR 4 NIGHTS 3

1 OR 2 NIGHTS 4

NEVER 5

DON'T KNOW ..... d

REFUSED ..... r

DEMONSTRATION = NEVADA OR VIRGINIA

TD6. During the past 7 days, how many times did you or someone else in your family prepare food for dinner or supper at home? Include times spent putting the ingredients together for dinner or supper, but do not include heating up leftovers.

|___| NUMBER (0-7)

NEVER 0

DON'T KNOW ..... d

REFUSED ..... r

DEMONSTRATION = NEVADA OR VIRGINIA

TD7. How often do you shop with a grocery list? Would you say…

CODE ONE ONLY

Never, ... 1

Rarely, ... 2

Sometimes, ... 3

Most of the time, or 4

Always? 5

DON'T KNOW ..... d

REFUSED ..... r

DEMONSTRATION=NEVADA OR VIRGINIA

TD8. In the past 12 months, about how many classes, lectures, or demonstrations about how to shop for or prepare nutritious food and meals did you or another adult in your household attend?

|___|___| SESSIONS
(0-24)

DON'T KNOW ..... d

REFUSED ..... r

E. Food Security

PROGRAMMER BOX SECTION E

SELECT APPROPRIATE FILLS DEPENDING ON NUMBER OF ADULTS [ADULTSFU1] AND CHILDREN IN THE HOUSEHOLD [NUMCHILDFU1]. DEFAULT TO MULTIPLE ADULTS AND MULTIPLE CHILDREN IN HOUSEHOLD.

ALL

FILL DATE = [DATE OF INTERVIEW-30]

TE1. Now I'm going to read you several statements that people have made about their food situation. For these statements, please tell me whether the statement was often true, sometimes true, or never true for your household in the last 30 days, that is, since [DATE OF INTERVIEW-30].

The first statement is "We worried whether our food would run out before we got money to buy more." Was that often true, sometimes true, or never true for your household in the last 30 days?

CODE ONE ONLY

OFTEN TRUE 1
SOMETIMES TRUE 2
NEVER TRUE 3
DON'T KNOW ..... d
REFUSED ..... r

ALL

TE2. "The food that we bought just didn't last, and we didn't have money to get more." Was that often, sometimes, or never true for your household in the last 30 days?

CODE ONE ONLY

OFTEN TRUE 1
SOMETIMES TRUE 2
NEVER TRUE 3
DON'T KNOW ..... d
REFUSED ..... r

ALL

TE3. "We couldn't afford to eat balanced meals." Was that often, sometimes, or never true for your household in the last 30 days?

CODE ONE ONLY

OFTEN TRUE	1	
SOMETIMES TRUE	2	
NEVER TRUE	3	
DON'T KNOW	d	
REFUSED	r	

PROGRAMMER BOX TE3
IF TE1=1 OR 2 OR TE2=1 OR 2 OR TE3=1 OR 2, GO TO TE4;
OTHERWISE, SKIP TO TE9.

TE1=1 OR 2 OR TE2=1 OR 2 OR TE3=1 OR 2

IF [ADULTSFU1] > 1: "or other adults in your household"
FILL DATE = [DATE OF INTERVIEW -30]

TE4. In the last 30 days, that is, since [DATE OF INTERVIEW-30], did you [or other adults in your household] ever cut the size of your meals or skip meals because there wasn't enough money for food?

YES	1	GO TO TE4A
NO	0	GO TO TE5
DON'T KNOW	d	GO TO TE5
REFUSED	r	GO TO TE5

TE4=1

TE4a. In the last 30 days, how many days did this happen?

|___|___| NUMBER OF DAYS (1-30)		GO TO TE5
DON'T KNOW	d	GO TO TE4B
REFUSED	r	GO TO TE5

TE4A=D

TE4b. Do you think it was one or two days, or more than two days?

CODE ONE ONLY

ONE OR TWO DAYS 1
MORE THAN TWO DAYS 2
DON'T KNOW ..... d
REFUSED ..... r

TE1=1 OR 2 OR TE2=1 OR 2 OR TE3=1 OR 2

TE5. In the last 30 days, did you ever eat less than you felt you should because there wasn't enough money for food?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

TE1=1 OR 2 OR TE2=1 OR 2 OR TE3=1 OR 2

TE6. In the last 30 days, were you ever hungry but didn't eat because there wasn't enough money for food?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

TE1=1 OR 2 OR TE2=1 OR 2 OR TE3=1 OR 2

TE7. In the last 30 days, did you lose weight because there wasn't enough money for food?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

PROGRAMMER BOX TE7

IF TE4=1 OR TE5=1 OR TE6=1 OR TE7=1, GO TO TE8; OTHERWISE, SKIP TO TE9.

TE4=1 OR TE5=1 OR TE6=1 OR TE7=1

IF [ADULTSFU1] > 1: "OR OTHER ADULTS IN YOUR HOUSEHOLD"

TE8. In the last 30 days, did you [or other adults in your household] ever not eat for a whole day because there wasn't enough money for food?

YES	1	GO TO TE8A
NO	0	GO TO BOX TE8B
DON'T KNOW	d	GO TO PROG BOX TE8B
REFUSED	r	GO TO PROG BOX TE8B

TE8=1

TE8a. In the last 30 days, how many days did this happen?

|___|___| NUMBER OF DAYS (1-30) — GO TO PROG BOX TE8B

DON'T KNOW	d	GO TO TE8B
REFUSED	r	GO TO PROG BOX TE8B

TE8A=D

TE8b. Do you think it was one or two days, or more than two days?

CODE ONE ONLY

ONE OR TWO DAYS.....1
MORE THAN TWO DAYS 2
DON'T KNOW .....d
REFUSED .....r

PROGRAMMER BOX TE8B
IF NUMCHILDFU1= 0 SKIP TO TF1. OTHERWISE, GO TO TE9.

[NUMCHILDFU1] GT 0
IF [ADULTSFU1] = 1 AND [NUMCHILDFU1] = 1, FILL = "I RELIED ON ONLY A FEW KINDS OF LOW-COST FOOD TO FEED MY CHILD BECAUSE I WAS RUNNING OUT OF MONEY TO BUY FOOD." IF [ADULTSFU1] = 1 AND [NUMCHILDFU1] >1, FILL = "I RELIED ON ONLY A FEW KINDS OF LOW-COST FOOD TO FEED MY CHILDREN BECAUSE I WAS RUNNING OUT OF MONEY TO BUY FOOD." IF [ADULTSFU1]>1 AND [NUMCHILDFU1] =1, FILL = "WE RELIED ON ONLY A FEW KINDS OF LOW-COST FOOD TO FEED OUR CHILD BECAUSE WE WERE RUNNING OUT OF MONEY TO BUY FOOD" IF [ADULTSFU1]>1 AND [NUMCHILDFU1]>1, FILL = "WE RELIED ON ONLY A FEW KINDS OF LOW-COST FOOD TO FEED OUR CHILDREN BECAUSE WE WERE RUNNING OUT OF MONEY TO BUY FOOD."

TE9. Now I'm going to read you several statements that people have made about the food situation of their children. For these statements, please tell me whether the statement was often true, sometimes true, or never true in the last 30 days for [your child/children living in the household who are under 18 years old or 18 or older but still in high school].

[IF SINGLE ADULT AND SINGLE CHILD:

"I relied on only a few kinds of low-cost food to feed my child because I was running out of money to buy food."

IF SINGLE ADULT AND MULTIPLE CHILDREN:

"I relied on only a few kinds of low-cost food to feed my children because I was running out of money to buy food."

IF MULTIPLE ADULTS AND SINGLE CHILD:

"We relied on only a few kinds of low-cost food to feed our child because we were running out of money to buy food."

IF MULTIPLE ADULTS AND MULTIPLE CHILDREN:

"We relied on only a few kinds of low-cost food to feed our children because we were running out of money to buy food."]

SHOW FOR ALL:

Was that often, sometimes, or never true for your household in the last 30 days**?**

OFTEN TRUE 1

SOMETIMES TRUE 2

NEVER TRUE 3

DON'T KNOW ..... d

REFUSED ..... r

[NUMCHILDFU1] GT 0
IF [ADULTSFU1] = 1 AND [NUMCHILDFU1] = 1, FILL = "I COULDN'T FEED MY CHILD A BALANCED MEAL, BECAUSE I COULDN'T AFFORD THAT."
IF [ADULTSFU1] = 1 AND [NUMCHILDFU1] >1, FILL = "I COULDN'T FEED MY CHILDREN A BALANCED MEAL, BECAUSE I COULDN'T AFFORD THAT."
IF [ADULTSFU1]>1 AND [NUMCHILDFU1] =1, FILL = "WE COULDN'T FEED OUR CHILD A BALANCED MEAL, BECAUSE WE COULDN'T AFFORD THAT."
IF [ADULTSFU1]>1 AND [NUMCHILDFU1]>1, FILL = "WE COULDN'T FEED OUR CHILDREN A BALANCED MEAL, BECAUSE WE COULDN'T AFFORD THAT."

TE10. IF SINGLE ADULT AND SINGLE CHILD:

"I couldn't feed my child a balanced meal, because I couldn't afford that."

IF SINGLE ADULT AND MULTIPLE CHILDREN:

"I couldn't feed my children a balanced meal, because I couldn't afford that."

IF MULTIPLE ADULTS AND SINGLE CHILD:

"We couldn't feed our child a balanced meal, because we couldn't afford that."

IF MULTIPLE ADULTS AND MULTIPLE CHILDREN:

"We couldn't feed our children a balanced meal, because we couldn't afford that."

SHOW FOR ALL:

Was that often, sometimes, or never true for your household in the last 30 days?

OFTEN TRUE 1

SOMETIMES TRUE 2

NEVER TRUE 3

DON'T KNOW ..... d

REFUSED ..... r

[NUMCHILDFU1] GT 0
IF [ADULTSFU1] = 1 AND [NUMCHILDFU1] = 1, FILL = "MY CHILD WAS NOT EATING ENOUGH BECAUSE I JUST COULDN'T AFFORD ENOUGH FOOD." IF [ADULTSFU1] = 1 AND [NUMCHILDFU1] >1, FILL = "MY CHILDREN WERE NOT EATING ENOUGH BECAUSE I JUST COULDN'T AFFORD ENOUGH FOOD." IF [ADULTSFU1]>1 AND [NUMCHILDFU1] =1, FILL = "OUR CHILD WAS NOT EATING ENOUGH BECAUSE WE JUST COULDN'T AFFORD ENOUGH FOOD." IF [ADULTSFU1]>1 AND [NUMCHILDFU1]>1, FILL = "OUR CHILDREN WERE NOT EATING ENOUGH BECAUSE WE JUST COULDN'T AFFORD ENOUGH FOOD"

TE11. IF SINGLE ADULT AND SINGLE CHILD:

"My child was not eating enough because I just couldn't afford enough food."

IF SINGLE ADULT AND MULTIPLE CHILDREN:

"My children were not eating enough because I just couldn't afford enough food."

IF MULTIPLE ADULTS AND SINGLE CHILD:

"Our child was not eating enough because we just couldn't afford enough food."

IF MULTIPLE ADULTS AND MULTIPLE CHILDREN:

"Our children were not eating enough because we just couldn't afford enough food."

SHOW FOR ALL:

Was that often, sometimes, or never true for your household in the last 30 days?

OFTEN TRUE 1
SOMETIMES TRUE 2
NEVER TRUE 3
DON'T KNOW .....d
REFUSED .....r

PROGRAMMER BOX TE11

IF [TE9=1 OR 2 OR TE10=1 OR 2 OR TE11=1 OR 2] AND [NUMCHILDFU1] GT 0, GO TO TE12; OTHERWISE, SKIP TO TF1.

[NUMCHILDFU1] GT 0 AND (TE9=1 OR 2 OR TE10=1 OR 2 OR TE11=1 OR 2)

IF [NUMCHILDFU1] = 1, FILL = "your child's"
IF [NUMCHILDFU1] > 1, FILL = "any of your children's"
FILL DATE = [DATE OF INTERVIEW-30]

TE12. In the last 30 days, that is, since [DATE OF INTERVIEW-30], did you ever cut the size of [your child's/any of your children's] meals because there wasn't enough money for food?

YES	1	
NO	0	
DON'T KNOW	d	
REFUSED	r	

[NUMCHILDFU1] GT 0 AND (TE9=1 OR 2 OR TE10=1 OR 2 OR TE11=1 OR 2)

IF [NUMCHILDFU1] = 1, FILL = "your child"
IF [NUMCHILDFU1] > 1, FILL = "any of your children"

TE13. In the last 30 days, did [your child/any of your children] ever skip meals because there wasn't enough money for food?

YES	1	GO TO TE13A
NO	2	GO TO TE14
DON'T KNOW	d	GO TO TE14
REFUSED	r	GO TO TE14

[NUMCHILDFU1] GT 0 AND TE13=1

TE13a. In the last 30 days, how many days did this happen?

|___|___| NUMBER OF DAYS (1-30)		GO TO TE14
DON'T KNOW	d	GO TO TE13B
REFUSED	r	GO TO TE14

[NUMCHILDFU1] GT 0 AND TE13A=D

TE13b. Do you think it was one or two days, or more than two days?

CODE ONE ONLY

ONE OR TWO DAYS 1
MORE THAN TWO DAYS 2
DON'T KNOW ..... d
REFUSED ..... r

[NUMCHILDFU1] GT 0 AND (TE9=1 OR 2 OR TE10=1 OR 2 OR TE11=1 OR 2)

IF [NUMCHILDFU1] = 1, FILL = "was your child"
IF [NUMCHILDFU1] > 1, FILL = "were your children"

TE14. In the last 30 days, [was your child/were your children] ever hungry but you just couldn't afford more food?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

[NUMCHILDFU1] GT 0 AND (TE9=1 OR 2 OR TE10=1 OR 2 OR TE11=1 OR 2)

IF [NUMCHILDFU1] = 1, FILL = "your child"
IF [NUMCHILDFU1] > 1, FILL = "any of your children"

TE15. In the last 30 days, did [your child/any of your children] ever not eat for a whole day because there wasn't enough money for food?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

F. Food Expenditures

Now, I'd like to ask some questions about shopping for food and eating at restaurants. These questions are about out-of-pocket spending on food. Later on I will ask you about purchases made with government benefits like SNAP, WIC, or FDPIR.

ALL
FILL DATE = [DATE OF INTERVIEW-30]

TF1. First I'll ask you about money spent on food at supermarkets and other stores. Then we will talk about money spent at fast food restaurants and other restaurants.

Excluding any government benefits like SNAP or WIC, since [DATE OF INTERVIEW–30] how much money did your family spend out of pocket at <u>supermarkets, grocery stores, and other stores</u>? Please do not include fast food restaurants and other types of restaurants.

PROBE: This includes stores such as Wal-Mart, Target, and Kmart, convenience stores like 7-11 or Mini Mart, stores like Costco or Sam's Club, dollar stores, bakeries, meat markets, vegetable stands, or farmer's markets.

PROBE: Please include the total amount spent in the past 30 days, since [DATE OF INTERVIEW–30].

INTERVIEWER: RECORD "0" IF NO MONEY WAS SPENT

$ |___|___|___|___| MONEY SPENT ($0-$9,999)

DON'T KNOW ..... d GO TO TF4

REFUSED ..... r GO TO TF4

TF1=1 TO 9,999
FILL1=AMOUNT FROM TF1

TF2. Was any of this $[AMOUNT FROM TF1] spent on <u>nonfood items</u> such as cleaning or paper products, pet food, cigarettes, or alcoholic beverages?

YES	1	GO TO TF3
NO	0	GO TO TF4
DON'T KNOW	d	GO TO TF4
REFUSED	r	GO TO TF4

TF2=1
FILL=AMOUNT FROM TF1

TF3. About how much of the $[AMOUNT FROM TF1] was spent on nonfood items?

INTERVIEWER: RECORD "0" IF NO MONEY WAS SPENT

$ |__|__|__|__| MONEY SPENT ($0-$9,999)		GO TO TF4
DON'T KNOW	d	GO TO TF4
REFUSED	r	GO TO TF4

HARD CHECK: IF [TF1 = $0-9,999] AND [TF3>TF1]; **The amount spent on nonfood items is greater than the total amount spent at supermarkets, grocery stores, or other stores. Did I make a mistake?**

ALL

TF4. During the last 30 days, how many times did your family <u>eat food from a fast food restaurant or other kinds of restaurants</u>? Include restaurant meals at home, at fast food or other restaurants, carryout, or drive thru.

PROBE IF NEEDED: Please include the total number of visits in the past 30 days, since [DATE OF INTERVIEW–30].

PROBE IF NEEDED: Such as food you get at McDonald's, KFC, Panda Express, Taco Bell, Pizza Hut, food trucks, Applebee's, Chili's, TGI Fridays, etc.

|__|__| TIMES (0-99)

DON'T KNOW ..... d GO TO SECTION TG

REFUSED ..... r GO TO SECTION TG

TF4 = 1-99

TF5. About how much money did your family spend on <u>food at all types of restaurants</u> including fast food restaurants during the last 30 days?

PROBE: Please include the total amount spent in the past 30 days, since [DATE OF INTERVIEW–30].

INTERVIEWER: RECORD "0" IF NO MONEY WAS SPENT

$ |__|__|__|__| MONEY SPENT ($0-$9,999)

DON'T KNOW ..... d

REFUSED ..... r

G. Other Program Participation

Next, I'm going to read the names of some programs that provide food or meals or other services to individuals or households.

ALL

FILL DATE = [DATE OF INTERVIEW-30]

TG1. In the last 30 days, that is, since [DATE OF INTERVIEW-30], did you or anyone in your household receive food or benefits from the Women, Infants and Children program called WIC?

YES	1	GO TO TG1A
NO	0	GO TO TG2
DON'T KNOW	d	GO TO TG2
REFUSED	r	GO TO TG2

TG1=1

TG1a. How many women, infants, or children in the household got WIC foods or benefits?

|___|___| NUMBER OF WOMEN, INFANTS, OR CHILDREN
(1-20)

DON'T KNOW	d	GO TO TG2
REFUSED	r	GO TO TG2

[NUMCHILDFU1] GT 0 AND TG1A=1-20 AND [KIDSLTE5FU1]>0

TG1b. Of those, how many were infants or children up to age 5?

|___|___| NUMBER OF INFANTS OR CHILDREN
(0-20)

DON'T KNOW	d
REFUSED	r

ALL

TG2. In the last 30 days did you or anyone in your household receive food or meals from food pantries, food banks, local soup kitchens or emergency kitchens, community program, senior center, shelter, Meals on Wheels (or other programs delivering meals to your home), or church?

YES	1
NO	0
DON'T KNOW	d
REFUSED	r

DEMONSTRATION=CHICKASAW NATION

TG3. Do you or others in your household currently receive monthly commodity foods as part of the Food Distribution Program on Indian Reservations, also called FDPIR, *fi-dipper, or fid-purr*?

YES 1
NO 0
DON'T KNOW ..... d
REFUSED ..... r

DEMONSTRATION=CHICKASAW NATION AND TREATMENT GROUP=T

TG4. How often did you try the recipes included with each Packed Promise food delivery?

Every time or nearly every time, ...	1	GO TO TG4A
Sometimes, or	2	GO TO TG4A
None of the time or nearly none of the time?	3	GO TO TG4A
DID NOT ORDER/RECEIVE A FOOD DELIVERY (VOLUNTEERED)	4	GO TO TH1
DON'T KNOW	d	GO TO TG4A
REFUSED	r	GO TO TG4A

TG4=1, 2, 3, D, OR R

TG4a. About how much of the Packed Promise food delivery does your household eat each time you receive it? Would you say…

CODE ONE ONLY

All or most of the items, ...	1	GO TO TH1
Some of the items, or	2	
None or nearly none of the items?	3	
DON'T KNOW	d	GO TO TH1
REFUSED	r	GO TO TH1

TG4A=2 OR 3

TG4b. What does your household do with the items that aren't used in the month they are delivered? Does your household…

CODE ALL THAT APPLY

Save the items for another time, ... 1
Give the items to family or friends, or 2
Throw the items away? 3
DON'T KNOW ..... d
REFUSED ..... r

H. SNAP Enrollment

ALL

TH1. In the last 12 months, has your household ever been enrolled in the Supplemental Nutrition Assistance Program (SNAP)?

PROBE IF NEEDED: SNAP is the program formerly known as 'Food Stamps.'

YES	1	GO TO TH1A
NO	0	GO TO TH2
DON'T KNOW	d	GO TO TH2
REFUSED	r	GO TO TH2

TH1=1

TH1a. In the last 12 months, how long did your household receive the Supplemental Nutrition Assistance Program (SNAP)? If your household received SNAP, stopped receiving it, and then started again, please include all of that time.

|___|___|___| AMOUNT OF TIME

(1-365)

DON'T KNOW	d	GO TO TH2
REFUSED	r	GO TO TH2

IF TH1A = 1-365

TH1b. Is that days, weeks, or months?

DAYS	1
WEEKS	2
MONTHS	3
DON'T KNOW	d
REFUSED	r

ALL

TH2. In total, how long have you and your household ever received the Supplemental Nutrition Assistance Program (SNAP)?

IF NEEDED: Please include <u>all</u> of the time your household has received SNAP, even if your household has started and stopped receiving benefits more than once.

INTERVIEWER: RECORD "0" IF NEVER ON SNAP

|___|___|___| AMOUNT OF TIME

(0-365)

DON'T KNOW ..... d

REFUSED ..... r

IF TH2 = 1-365

TH2a. Is that days, weeks, months, or years?

DAYS 1

WEEKS 2

MONTHS 3

YEARS 4

DON'T KNOW ..... d

REFUSED ..... r

TH1=1

TH3. Are you or others in your household currently receiving SNAP?

YES	1	GO TO TH4
NO	0	GO TO TI1
DON'T KNOW	d	GO TO TI1
REFUSED	r	GO TO TI1

TH3=1

TH4. What is the amount of the SNAP your household receives per month?

$ |___|___|___|___| DOLLAR AMOUNT
($1 - $9999)

DON'T KNOW	d	GO TO TI1
REFUSED	r	GO TO TI1

TH3=1

TH5. In the last 12 months, did the amount of the benefit increase, decrease, or stay the same?

CODE ONE ONLY

INCREASED	1	
DECREASED	2	
BOTH INCREASED AND DECREASED	3	
STAYED SAME	4	
DON'T KNOW	d	GO TO TI1
REFUSED	r	GO TO TI1

TH3=1

TH6. How many weeks do your SNAP benefits usually last?

INTERVIEWER: CODE ANY ANSWER GREATER THAN 8 WEEKS AS 8

|___| NUMBER OF WEEKS
(0-8)

DON'T KNOW	d	GO TO TI1
REFUSED	r	GO TO TI1

I. Children's Food Consumption (Chickasaw Nation only)

PROGRAMMER BOX SECTION I

IF DEMONSTRATION=KENTUCKY, NEVADA, OR VIRGINIA, GO TO TJ1. IF TOTCNAGEFU1 = 0 GO TO TJ1.

ELSE IF DEMONSTRATION = CHICKASAW NATION AND TOTCNAGEFU1 GTE 1, USE RANDOM SELECTION TO CHOOSE FOCAL CHILD FROM AMONG ROSTERED CHILDREN WITH CNAGEFLAGFU1=1.

J. Household Resources

ALL

FILL DATE = [DATE OF INTERVIEW-30]

TJ1. The next questions are about working or jobs. Were you or any other adult in your household working for pay in the last 30 days, that is, since [DATE OF INTERVIEW-30]?

YES 1

NO 0

DON'T KNOW ..... d

REFUSED ..... r

DEMONSTRATION=KENTUCKY AND TJ1 NE 0

TJ2. And what was your household's total <u>earnings</u> before taxes last month? Please include earnings from wages and salaries from a job or self-employment, or income from a rental property. Do not include income from Social Security, pensions, child support, or cash welfare benefits, or the value of SNAP benefits or food stamps, WIC, Medicaid, or public housing.

$ |___|___|___|___|___| DOLLAR AMOUNT ($0 – 99,999)

DON'T KNOW ..... d GO TO TJ2B

REFUSED ..... r GO TO TJ2B

TJ2=D OR R

TJ2b. Some people find it easier to select earnings from a range. Please stop me when I reach your household's total earnings for <u>last month</u>. Was it…

CODE ONE ONLY

Less than $500, ... 1

$500 to less than $1,000, ... 2

$1,000 to less than $1,500, ... 3

$1,500 to less than $2,000, ... 4

$2,000 to less than $2,500, ... 5

$2,500 to less than $3,000, or 6

$3,000 or more? 7

DON'T KNOW ..... d

REFUSED ..... r

ALL

FILL [LAST MONTH]

TJ3. What was your household's total income last month, during [LAST MONTH] before taxes? Please include all types of income received by all household members last month, including all earnings, Social Security, pensions, Veteran's Benefits, Unemployment Insurance, worker's compensation benefits, child support, payments from roomers or boarders, and cash welfare benefits such as TANF (*TAH-nif*) and SSI. Do not include the value of SNAP benefits or food stamps, WIC, Medicaid, or public housing.

$ |__|__|__|__|__| DOLLAR AMOUNT ($0 – 99,999)

DON'T KNOW ..... d GO TO TJ3B

REFUSED ..... r GO TO TJ3B

TJ3=D OR R

TJ3b. Some people find it easier to select an income range. Please stop me when I reach your household's total income for last month. Was it…

CODE ONE ONLY

Less than $500, ... 1

$500 to less than $1,000, ... 2

$1,000 to less than $1,500, ... 3

$1,500 to less than $2,000, ... 4

$2,000 to less than $2,500, ... 5

$2,500 to less than $3,000, or 6

$3,000 or more? 7

DON'T KNOW ..... d

REFUSED ..... r

ALL

TJ4. And, what was your household's total income last year before taxes?

PROBE IF NEEDED: **Please include all types of income received by all household members last year, including all earnings, Social Security, pensions, Veteran's Benefits, Unemployment Insurance, worker's compensation benefits, child support, payments from roomers or boarders, and cash welfare benefits such as TANF (*TAH-nif*) and SSI. Do not include the value of SNAP benefits or food stamps, WIC, Medicaid, or public housing.**

INTERVIEWER: "LAST YEAR," MEANING 2016.

$ |__|__|__|,|__|__|__| DOLLAR AMOUNT ($0 – 150,000)

DON'T KNOW ..... d GO TO TJ4a

REFUSED ..... r GO TO TJ4a

TJ4=D OR R

TJ4A. Some people find it easier to select an income range. Please stop me when I reach your household's total income for last year. Was it…

CODE ONE ONLY

Less than $10,000, ... 1
$10,000 to less than $20,000, ... 2
$20,000 to less than $35,000, ... 3
$35,000 to less than $50,000, ... 4
$50,000 to less than $75,000, ... 5
$75,000 to less than $100,000, ... 6
$100,000 to less than $150,000, or 7
$150,000 or more? 8
DON'T KNOW ..... d
REFUSED ..... r

ALL

FILL DATE = [DATE OF INTERVIEW-30]

TJ5. The next questions are about sources of income. The answers to these and all other questions on this survey will be kept private and will never be associated with your name. During the last 30 days, that is, since [DATE OF INTERVIEW-30], did you or anyone in your household receive…

CODE ONE PER ROW

	YES	NO	DON'T KNOW	REFUSED
a. TANF or Temporary Assistance to Needy Families, or other welfare such as General Assistance?	1	0	d	r
b. Social Security from the government for retirement, disability, or survivors' benefits, or other retirement benefits such as a government or private pension or annuity?	1	0	d	r
c. SSI or Supplemental Security Income from the federal, state, or local government?	1	0	d	r
d. Veteran's Benefits?	1	0	d	r
e. Unemployment Insurance or worker's compensation benefits?	1	0	d	r
f. Child support payments or payments from roomers or boarders?	1	0	d	r
g. Financial support from friends or family?	1	0	d	r
h. Any other income besides earnings?	1	0	d	r

TJ5H=1

TJ5h_Specify. What is that other income?

_____ (STRING 50)
DESCRIPTION

DON'T KNOW .....d

REFUSED .....r

[TJ6 on household limitations deleted per OMB on August 10, 2015.]

ALL

TJ7. Now I'd like to ask you about how much help you would expect to get from different sources if your household had a problem with which you needed help, for example, sickness or moving. After I read each source, please tell me if you would expect to get all of the help needed, most of the help needed, very little of the help needed, or no help?

INTERVIEWER: REPEAT ANSWER CHOICES AS NEEDED.

CODE ONE PER ROW

		ALL OF THE HELP NEEDED	MOST OF THE HELP NEEDED	VERY LITTLE OF THE HELP NEEDED	NO HELP	DON'T KNOW	REFUSED
a.	Family living nearby?	1	2	3	4	d	r
b.	Friends?	1	2	3	4	d	r
c.	Other people in the community besides family and friends, such as a social service agency or a church?	1	2	3	4	d	r

K. Trigger Events

The next few questions are about changes that may have occurred in your household in the past 6 months.

ALL

TK1. Has there been a change in the number of people living in your household over the past 6 months?

YES	1	GO TO TK2
NO	0	GO TO TK3
DON'T KNOW	d	GO TO TK3
REFUSED	r	GO TO TK3

TK1=1

TK2. What caused that change?

CODE ALL THAT APPLY

BIRTH OF CHILD	1
NEW STEP, FOSTER OR ADOPTED CHILD	2
MARRIAGE/ROMANTIC PARTNER	3
SEPARATION OR DIVORCE	4
DEATH OF HOUSEHOLD MEMBER	5
FAMILY, BOARDER, OR OTHER ADULT MOVED IN	6
FAMILY, BOARDER, OR OTHER ADULT MOVED OUT	7
HOUSEHOLD MEMBER INCARCERATED	8
SAMPLE MEMBER MOVED	9
OTHER (SPECIFY)	10
DON'T KNOW	d
REFUSED	r

TK2 = 10

TK2_Specify. INTERVIEWER: SPECIFY OTHER CHANGE.

_____ (STRING 50)
DESCRIPTION

DON'T KNOW ..... d

REFUSED ..... r

ALL

TK3. At any time in the past 6 months was your household evicted from your house or apartment?

YES 1

NO 0

DON'T KNOW ..... d

REFUSED ..... r

ALL

TK4. Have you or anyone in your household had a change in employment or a change in pay or hours worked from a job in the past 6 months?

YES	1	GO TO TK4A
NO	0	GO TO TL1
DON'T KNOW	d	GO TO TL1
REFUSED	r	GO TO TL1

TK4=1

TK4a. What was that change in employment or a change in pay or hours worked from a job that you or someone in your household experienced in the past 6 months?

CODE ALL THAT APPLY

OBTAINED A JOB 1
LOST JOB 2
INCREASE IN PAY OR HOURS 3
DECREASE IN PAY OR HOURS 4
QUIT A JOB 5
CHANGED JOBS 6
TEMPORARY LEAVE (MATERNITY, DISABILITY, OR WORKMAN'S COMPENSATION) 7
SEASONAL WORK 8
OTHER 9
DON'T KNOW ..... d
REFUSED ..... r

TK4A = 9

TK4a_Specify. INTERVIEWER: SPECIFY OTHER CHANGE.

_____ (STRING 50)
DESCRIPTION

DON'T KNOW ..... d
REFUSED ..... r

L. Respondent Demographics and Health Status

ALL

TL1. Now, I have a few questions about you.

[RECORD GENDER FROM OBSERVATION.]

[PROBE ONLY IF NECESSARY: Because it is sometimes difficult to determine over the phone, I am asked to confirm with everyone…Are you male or female?]

INTERVIEWER: CODE DON'T KNOW IF RESPONDENT DOES NOT WANT TO IDENTIFY AS MALE OR FEMALE

MALE 1
FEMALE 2
DON'T KNOW ..... d
REFUSED ..... r

IF [NUMCHILDFU1] GT 0

TL2. What is your relationship to the children living in the household?

INTERVIEWER: READ ONLY IF NECESSARY

CODE ALL THAT APPLY

BIOLOGICAL/ADOPTIVE PARENT 1
STEP-PARENT 2
GRANDPARENT 3
GREAT GRANDPARENT 4
SIBLING/STEPSIBLING 5
OTHER RELATIVE OR IN LAW 6
FOSTER PARENT 7
OTHER NON-RELATIVE 8
PARENT'S PARTNER 9
DON'T KNOW ..... d
REFUSED ..... r

ALL

TL3. Are you of Hispanic or Latino origin?

HISPANIC OR LATINO 1
NOT HISPANIC OR LATINO 0
DON'T KNOW ..... d
REFUSED ..... r

ALL

TL4. I am going to read a list of five race categories. Please choose one or more races that you consider yourself to be. American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or other Pacific Islander; White?

CODE ALL THAT APPLY

AMERICAN INDIAN OR ALASKA NATIVE 1
ASIAN 2
BLACK OR AFRICAN AMERICAN 3
NATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER 4
WHITE 5
DON'T KNOW ..... d
REFUSED ..... r

ALL

TL5. What is your current marital status? Are you now married, divorced, separated, widowed, never married, or living with a partner?

CODE ONE ONLY

MARRIED 1
SEPARATED OR DIVORCED 2
WIDOWED 3
NEVER MARRIED 4
LIVING WITH PARTNER 5
DON'T KNOW ..... d
REFUSED ..... r

ALL

TL6. What is your date of birth?

PROGRAMMER: COLLECT DATE WITH SEPARATE FIELDS

|__|__| / |__|__| / |__|__|__|__|
MONTH DAY YEAR
(1-12) (1-31) (1916-2001)

DON'T KNOW ..... d GO TO TL6A

REFUSED ..... r GO TO TL6A

TL6 = D OR R

TL6a. I can record your age instead if you would like. How many years old are you?

|__|__| YEARS

(18-99)

DON'T KNOW ..... d

REFUSED ..... r

ALL

TL7. What is the highest grade or level of school you have completed or the highest degree you have received?

[ENTER HIGHEST LEVEL OF SCHOOL.]

NEVER ATTENDED/KINDERGARTEN ONLY....0
1ST GRADE....1
2ND GRADE....2
3RD GRADE....3
4TH GRADE....4
5TH GRADE....5
6TH GRADE....6
7TH GRADE....7
8TH GRADE....8
9TH GRADE....9
10TH GRADE....10
11TH GRADE....11
12TH GRADE, NO DIPLOMA....12
HIGH SCHOOL GRADUATE....13
GED OR EQUIVALENT....14
SOME COLLEGE, NO DEGREE....15
ASSOCIATE DEGREE: OCCUPATIONAL, TECHNICAL, OR VOCATIONAL PROGRAM....16
ASSOCIATE DEGREE: ACADEMIC PROGRAM....17
BACHELOR'S DEGREE (EXAMPLE: BA, AB, BS, BBA)....18
MASTER'S DEGREE (EXAMPLE: MA, MS, MEng, MEd, MBA)....19
PROFESSIONAL SCHOOL DEGREE (EXAMPLE: MD, DDS, DVM, JD)....20
DOCTORAL DEGREE (EXAMPLE: PhD, EdD)....21
DON'T KNOW....d
REFUSED....r

ALL

TL8. In general, would say your health is excellent, very good, good, fair or poor?

CODE ONE ONLY

EXCELLENT 1
VERY GOOD 2
GOOD 3
FAIR 4
POOR 5
DON'T KNOW ..... d
REFUSED ..... r

M. Closing Information

DEMONSTRATION=ALL AND TREATMENT GROUP=T, T1, OR T2
FILL1=DEMONSTRATION PROJECT NAME

TM1. Thank you very much for your time. You have really helped us with this study. We are also conducting in-person interviews to learn more about some families' experiences with [DEMONSTRATION PROJECT] and your household's access to healthy food. Those who are selected for the in-person interview will get $50 in addition to the gift card for this telephone interview. If you agree to take part, one of my colleagues may contact you in the next few weeks with more information and to schedule an interview.

Are you willing to be contacted about taking part in an in-person interview? You can change your mind about participating at a later time.

YES 1

NO 0

DON'T KNOW ..... d

REFUSED ..... r

ALL

TM2. Thank you very much for your time. You have really helped us with this study. I'd like to confirm your address so we can send you a $30 gift card within the next few weeks.

Field: [To thank you for completing the survey, your field interviewer will give you a $30 gift card. We would just like to confirm your contact information.]

[ASK ALL:] According to our records we have…

[FILL FIRSTNAME LASTNAME FROM SMS]

[FILL STREET ADDRESS FROM SMS]

[FILL CITY, STATE, ZIP CODE FROM SMS]

[IF DEMONSTRATION=CHICKASAW NATION FILL EMAIL ADDRESS FROM SMS]

[IF DEMONSTRATION=CHICKASAW NATION FILL PHONE NUMBER FROM SMS]

CONTACT INFORMATION IS CORRECT .....1 GO TO TM3

CONTACT INFORMATION NEEDS UPDATING 0

UPDATE: NAME

UPDATE: STREET ADDRESS:

_____
STREET 1

_____
STREET 2

_____
STREET 3

_____
CITY

_____
STATE

_____
ZIP

|___|___|___| - |___|___|___| - |___|___|___|___|
PHONE

_____
EMAIL

DON'T KNOW .....d

REFUSED .....r

DEMONSTRATION=CHICKASAW NATION

IF FIRST TIME THROUGH LOOP: INCLUDE FILL 1: "WE WOULD ALSO LIKE TO DO A THIRD TELEPHONE SURVEY SIX MONTHS FROM NOW TO SEE HOW YOU ARE DOING. YOU WILL GET ANOTHER PREPAID CARD FOR PARTICIPATING IN THAT INTERVIEW."

AFTER FIRST TIME THROUGH LOOP, DO NOT INCLUDE FILL1

TM3. [We would also like to do a third telephone survey six months from now to see how you are doing. You will get another prepaid card for participating in that interview.]

In case we can't reach you at this number, is there another number we should try?

|___|___|___| - |___|___|___| - |___|___|___|___|

YES	1	GO TO TM3.1
NO ADDITIONAL PHONE AVAILABLE	2	GO TO TM3B
REFUSED TO GIVE PHONE NUMBER	3	GO TO TM3B
REFUSED TO PARTICIPATE IN THIRD INTERVIEW	9	GO TO END
DON'T KNOW	d	GO TO END
REFUSED	r	GO TO END

TM3 = 1

TM3.1 What is the telephone number we should try?

|___|___|___| - |___|___|___| - |___|___|___| - |___|___|___|___|

DON'T KNOW	d
REFUSED	r

TM3.1 PHONE NUMBER PROVIDED

TM3a. What type of phone number is this?

SELECT CODING TYPE

HOME PHONE.....1
OFFICE PHONE.....2
HOME AND OFFICE PHONE.....3
CELL PHONE.....4
PAGER.....5
COMPUTER/FAX LINE.....6
OTHER.....7
DON'T KNOW.....d
REFUSED.....r

PROGRAMMER BOX

IF TM3 = ANSWERED LOOP OVER TM3 THROUGH TM3A UNTIL TM3 DOES NOT EQUAL 1. MAX 3 LOOPS.

TM3=1, 2, 3, OR PHONE NUMBER PROVIDED

TM3b. What is the email address where we can reach you?

_____ (STRING 100)
EMAIL ADDRESS

NO EMAIL ADDRESS AVAILABLE.....0
DON'T KNOW.....d
REFUSED.....r

TM3=1, 2, 3, OR PHONE NUMBER PROVIDED

TM4. In case we have trouble reaching you in 6 months, please give me the names and telephone numbers of two relatives or friends who would know where you could be reached. These should be friends or relatives not currently living in your household. Let's start with one friend or relative. What is his or her name?

[BE SURE TO VERIFY SPELLING]

_____ (STRING 25) GO TO TM4A
FIRST NAME

_____ (STRING 25)
LAST NAME

DON'T KNOW ..... d GO TO TM4A

REFUSED ..... r GO TO END

TM4 NE R

TM4a. What is this person's telephone number, beginning with the area code?

|___|___|___| - |___|___|___| - |___|___|___|___|

(VOL) GAVE INTERNATIONAL PHONE NUMBER 2

DON'T KNOW ..... d

REFUSED ..... r

TM4A NE 2, D, OR R

FILL= TM4 FIRST NAME

TM4b. And what is [FIRST NAME]'s relationship to you?

_____ (STRING 25)
RELATIONSHIP

DON'T KNOW ..... d

REFUSED ..... r

TM3=1, 2, 3, OR PHONE NUMBER PROVIDED

TM5. How about a second friend or relative? What is his or her name?

[BE SURE TO VERIFY SPELLING]

_____ (STRING 25) GO TO TM5A
FIRST NAME

_____ (STRING 25)
LAST NAME

DON'T KNOW ..... d GO TO TM5A

REFUSED ..... r GO TO END

TM5 NE R

TM5a. What is this person's telephone number, beginning with the area code?

|___|___|___| - |___|___|___| - |___|___|___|___|

(VOL) GAVE INTERNATIONAL PHONE NUMBER 2

DON'T KNOW ..... d

REFUSED ..... r

TM5 NE 2, D, OR R

FILL= TM5 FIRST NAME

TM5b. And what is [FIRST NAME]'s relationship to you?

_____ (STRING 25)
RELATIONSHIP

DON'T KNOW ..... d

REFUSED ..... r

ALL

IF DEMONSTRATION=CHICKASAW NATION AND TM3 NE 9: **We look forward to speaking with you again in six months.**

END. Thank you again for your help and have a good day/evening. [We look forward to speaking with you again in six months.]

B.4. QUALITATIVE DATA COLLECTION METHODS

Several qualitative data collection methods were used to describe the Virginia 365 project and how it was implemented. The main sources of information to support the implementation analyses were: (1) site visits, including interviews with project staff and observations of project activities; (2) focus groups with parents and caregivers of treatment school children; (3) data on service delivery and take-up on food backpack program and nutrition education provision (management information system (MIS) data); and (4) reviews of grantee documents including the grant application, quarterly progress reports to FNS, and operational materials (such as meeting agendas, school implementation plans, letters to households, and the project's informational website and informational flyers). Exhibit B.3 identifies the objectives that each of the data sources helped to address. The remainder of this section describes the data collection methods for the site visit interviews and focus groups. Section B.5, on quantitative data, describes the administrative and MIS data collection methods.

Exhibit B.3. Implementation analysis objectives and data sources

	Data sources				
	Site visits				
Objectives	Staff interviews	Observations	Participant focus groups	Project documents	MIS data
Project vision/description					
Intervention components	X	X		X	
Logic model	X			X	
Target population	X	X	X	X	
Partners	X			X	
Implementation processes					
Outreach/enrollment/retention	X		X	X	X
Service structure and provision	X	X	X	X	X
Staffing structure	X	X		X	
Role of partners	X	X		X	
Challenges	X	X	X		X
Perceptions	X		X		
Interpretation of project impacts					
Participant characteristics	X		X	X	
Influence of project design	X		X		
Influence of implementation	X		X		X

Source: Evaluation of Demonstration Projects to End Childhood Hunger.

A. Interviews with project staff

Two site visits were conducted in Virginia. The first visit occurred at the end of the planning period to coincide with the initial efforts to launch the intervention to (1) document planning processes, (2) describe the selected intervention model and vision, and (3) understand the project's cost components. The first site visit took place over four days, May 3-6, 2016, and included 17 semi-structured interviews with 27 key project staff in Richmond, Virginia and the

southwest region. Interview topics included the vision or logic model for the project, planned project design and staffing structure, implementation plans and timelines, changes to information technology systems or data infrastructure, staff hiring and training, community context, and the planning process itself.

The second site visit occurred 12 months into full project operations, May 1-5, 2017. It included 16 semi-structured interviews with 23 key project staff in Richmond and the southwest region and one observation of supper and food backpack program operations in a Richmond school. The goal of the second site visit was to describe operations at a steady-state level. The semi-structured interviews covered the same topics as the first site visit but with a focus on activities and experiences during the implementation period. The interviews probed about leadership and partner roles, staffing structures, recruitment and engagement strategies, specific services offered and received, deviations from plans, and interviewees' perceptions of challenges and successes.

Interviewees included staff from the Virginia Departments of Education and Health, local school divisions, food banks, and other partners. State interviewees included the grant project managers, the school nutrition directors and coordinators, and program directors, supervisors, and consultants. Local school division interviewees included school nutrition directors and school administrators. Community partner interviewees included executive staff, agency directors, program managers, project managers, and project associates. The semi-structured interviews were scheduled for up to 60 minutes. Two members of the research team conducted the visits. Site visitors completed a training before the first visit, with a refresher training before the second visit, to ensure they understood the data collection goals and tools, could capture the necessary data, and could lead interviews with appropriate cultural sensitivity.

Regular telephone calls with project staff were conducted during the planning and implementation phases to supplement the staff interviews. The purpose of the calls was to obtain regular updates on both accomplishments and challenges encountered and how they were addressed. The calls were also an opportunity to provide Virginia with ongoing evaluation technical assistance to support and monitor all data collection activities (including survey outreach and consent activities and administrative and MIS data collection). The same members of the evaluation team conducted both the telephone calls and the site visits.

B. Focus groups with project participants

In addition to interviews with key project staff, the second site visit included focus groups with a total of nine Virginia 365 participants. Two 90-minute focus groups were conducted with the parents or guardians of children in treatment schools. One focus group was conducted in Richmond and the other was conducted in Lee County in the southwest region. Participants were recruited from the pool of households that completed the follow-up survey, confirmed they had a child who attended a treatment school, indicated they would be willing to be contacted for an interview, and resided in zip codes near the focus group location. They provided a firsthand account of benefits offered and received and their experiences with and impressions of those benefits and the staff delivering them. Although the participants were not intended to be representative of the entire treatment group, their experiences complemented data collected from project staff to provide a holistic view of project implementation and help interpret project

impacts. Guided by a semi-structured protocol, discussions covered how participants learned of the project, their motivation to participate, the services they received, their experiences interacting with project staff and the project website, their perceptions on the usefulness of the project for feeding their children, thoughts on the project's successes and challenges, and their suggestions for project improvement.

Focus groups were held in the evenings at community centers. Attendees provided active consent before participating in the discussion and received a $50 gift card afterward. The telephone interviewers who administered the household surveys were trained to recruit focus group participants. The site visitors were trained to lead the focus group discussions and take detailed notes.

B.5. QUANTITATIVE DATA COLLECTION AND ANALYSIS METHODS

The implementation analyses drew from several quantitative data sources, grouped as follows: (1) administrative data from VDOE, Virginia school divisions, and VDH; (2) MIS data on the food bank backpack program from the Feeding America Southwest Virginia and Feedmore, and nutrition education offerings from the Virginia Cooperative Extension (VCE); and (3) records of costs incurred.

A. Administrative data

Administrative records were collected to descriptively compare all children from treatment and control schools (as opposed to just children from households in the surveyed evaluation sample). VDOE provided data used to compare the percentage of all FRP-eligible children in treatment and control schools at baseline and during implementation. Specifically, the data file included the number of children eligible for FRP lunches in April 2016 and April 2017 for each school, and the number of children enrolled in each school in those same months.

School divisions provided data used to compare program participation rates in the SBP, NSLP, and CACFP At-Risk Afterschool Meals component (or "supper" program) in the fall and spring of the implementation year. Each school division provided school-level counts of reimbursable meal transactions and/or child-level transaction data. School divisions provided data at two common points in time, or "target" days—November 15, 2016 and April 11, 2017. When school divisions did not provide school-level counts of breakfast or lunch transactions, student-level meal transaction data were aggregated to derive school-level counts. VDOE school enrollment data from December 2016 and April 2017 were used to calculate the proportion of school children that took a reimbursable meal on the target day. (November 2016 enrollment data were unavailable.) VDH provided additional data used to compare supper program participation rates in the fall and spring of the implementation year. The data included school-level counts of suppers claimed for Federal reimbursement in November 2016 and April 2017, and the number of operational days that suppers were offered during those months. Counts of academic calendar days that showed the number of school days in session were collected from VDOE; these counts were used to estimate the proportion of academic calendar days that suppers were offered.

Data from various sources were screened and cleaned at different stages. Test data were collected in advance of final data files to screen for completeness and quality, and assess which data elements the grantee would be able to provide. The files also served as a basis for providing the grantee with feedback to improve the quality of the final data file deliveries for the evaluation. Data file processing involved standardizing data from the school divisions' various file formats and verifying that missing values indicated zeros (that is, nonparticipation).

B. MIS data

MIS data were used to describe participation in the school food backpack program among all children in treatment schools and the characteristics of food backpack program menu items. Each food bank (Feeding America Southwest Virginia and Feedmore) provided a food backpack program file with data on deliveries to schools. For each delivery date and school, the Feeding America Southwest Virginia data file included the number of food packs delivered. The

Feedmore data file included the number of Richmond school children targeted to receive food packs and the number of children who actually received the food packs after the schools' distributions. Delivery dates with valid data spanned November 2016 to June 2017 in Richmond and the full school year in Southwest (August 2016 to May 2017). VDOE school enrollment data were used to calculate the proportion of school children participating in the food backpack program (Richmond) and targeted for participation (in Southwest Virginia and Richmond). The food banks provided food backpack program menu data at the food pack level. For each food pack, data were included on the item name, description, quantity, weight, and volume. The food banks provided menus for 12 food packs, including four menus used through mid-February 2017, four menus used from mid-February through the end of the 2016–2017 school year, and four menus with gluten-free options used throughout the school year.

MIS data were also used to describe participation in and characteristics of nutrition education classes among all parents or caregivers in households with children in treatment schools. VCE provided two files—one with data on class characteristics and one with data on household participation:

- Characteristics data were at the class series level and included the number and type of outreach strategies, series start and end dates, series location, the number of classes offered per series, names of class topics, class durations, and the number of classes per series for which child care and transportation vouchers were made available.
- Participation data were at the household level and included household member names, how the household learned about the series, series start date and location, and—for each class offered in the series—the class name, attendance, and use of child care and transportation vouchers.

Test data were screened for completeness and quality. They were also used to assess which data elements the food banks and VCE would be able to provide, and served as a basis for providing feedback about data file completeness and quality. Final data cleaning involved standardizing data from the two food banks and replacing personally identifiable household member information with numeric identifiers in the nutrition education household participation file.

C. Cost data

The resource cost method was used to collect and analyze the costs of the project. The resource cost method identifies a set of resources used for the project, collects data on the costs of each resource, and then calculates (or "builds up") an estimate of the total cost (Ohls and Rosenberg 1999; Ponza et al. 1996). For this study, data on labor costs, other direct costs, and partner or contractor costs were collected, and CACFP and summer EBT reports were obtained to assess the cost of services under the Virginia 365 project. Exhibit B.4 provides a detailed description of each resource category.

Exhibit B.4. Description of resource categories and collected costs

Resource	Collected costs
Labor	Wages and value of fringe benefits for staff that contributed to the intervention. Information on the value of volunteer or donated labor was requested, but not reported consistently across agencies and organizations. Based on information obtained during site visits, it appears that a modest amount of volunteer labor (estimated value of approximately $23,000 for school divisions and $1,500 for VDOE) was used during the implementation of this project but these costs were not reported. As a result, the donated and in-kind costs reported are likely underestimated.
Other direct costs[a]	Other direct costs include any costs that are not considered direct material costs or direct labor costs. Other direct costs (ODCs) include items such as travel, printing, postage, shipping, and computer equipment.
Partner or contractor costs	Partner and contractor costs associated with the intervention. Partners and contractors whose costs accounted for 10% or more of the project's total cost were asked to provide detailed labor costs and ODCs by completing individual cost workbooks. Costs for partners and contractors whose costs accounted for less than 10% of the project's total cost were reported as a line item on the grantee's cost forms.
Summer EBT benefits	The Virginia 365 project provided households with summer EBT benefits during the summer of 2016. FNS reported the EBT benefit amount, and the Virginia Department of Social Services' administrative costs were reported in the cost forms.
CACFP funds	As part of the Virginia 365 project, school divisions provided CACFP suppers to children enrolled in treatment schools. The cost of the suppers was obtained from the Virginia Department of Health's CACFP administrative data. Schools were reimbursed for these costs at a later date.

Source: Evaluation of Demonstration Projects to End Childhood Hunger.

[a] Data on indirect costs were not collected because they were not always tracked, and requesting information on the costs for space, utilities, et cetera would have been both overly burdensome and unlikely to be substantially affected by the intervention.

CACFP = Child and Adult Care Food Program; EBT = electronic benefits transfer; ODC = other direct cost; VDOE = Virginia Department of Education.

Data on labor costs, other direct costs, and partner or contractor costs were submitted using customized Excel workbooks that were designed to be minimally burdensome on staff. The Virginia 365 project designated a cost data liaison, who coordinated completion of the workbooks at the State agency level and provided workbooks (or selected worksheets) to partners and contractors that participated in the demonstration.

As the workbooks were distributed, a webinar was held to train the grantee's cost data liaison on how to complete the forms. The cost study team was available to respond to questions throughout the study period. In addition, all cost forms were reviewed by Mathematica project liaisons, who alerted the cost team to any missing information, issues, or questions on the forms. The cost team worked with the project liaisons to communicate questions back to the grantee cost data contact.

Since the Virginia 365 project utilized donated and in-kind resources to sustain their projects, data on the monetary value of volunteer labor, donated commodities, and services provided at no cost were also requested. All cost estimates reported in the text include both paid costs and the estimated value of donated or in-kind costs. The analysis and report also differentiates between start-up costs (costs associated with preparations for the provision of project benefits that were incurred during the project start-up period of February 1, 2015 to

June 7, 2016) and implementation costs (the ongoing costs associated with providing services during the implementation period of June 8, 2016 to June 16, 2017).

During the analysis, the evaluation team assigned partners or contractors to specific descriptive categories, including (1) school divisions; (2) food banks; (3) Virginia Cooperative Extension; (4) Virginia Department of Social Services and the EBT vendor; (5) and other partners. These categories were defined by Mathematica's project liaison, who manually reviewed and assigned each reported cost to one of the above groups.

Component costs were estimated by summing the cost of resources used for each component. Once component costs were estimated, these costs were summed across components to estimate the total cost of the intervention. Finally, the cost per child enrolled in treatment schools was estimated by removing household-level benefits from total costs and dividing the remaining school-based benefit costs by the total number of consenting treatment children (n = 7,274).

APPENDIX C

SUPPLEMENTAL EXHIBITS ON PROJECT IMPLEMENTATION AND COSTS

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Exhibit C.1 Food pack items in the school backpack program

Food or beverage item[a]	Quantity	Items before menu change	Items after menu change	Gluten-free alternatives
Entrée	2	Chili with beans, beef stew, pork and beans, beans and franks, lasagna, macaroni and cheese, generic spagettios with beef, and generic spagettios without beef	Beef ravioli, rice with chicken and vegetables, Mini ABCs & 123s with meatballs™	Chunk light tuna in water, chili with beans
Vegetable	2	Corn, carrots, green beans,	Corn, green beans, carrots, mixed vegetables	
Fruit	1	Applesauce (plain, berry, strawberry, and cinnamon)	Strawberry applesauce, banana applesauce, strawberry yogurt	
Cereal	1	Frosted flakes™, honey nut toasted oats, bite-sized frosted shredded wheat	Crisp rice, honey nut toasted oats, frosted flakes	Cheerios™
Milk	1	Shelf-stable low-fat milk	Shelf-stable low-fat milk	

Source: Evaluation of Demonstration Projects to End Childhood Hunger, Virginia 365 backpack program data, SY 2016–2017. Tabulations were prepared by Mathematica Policy Research.

Note: Food banks began including new menu items in late February and early March 2017 with more favored brands by children and attractive, kid-friendly packaging to increase children's satisfaction with menu items. The menu change also reduced the weight of the food backpack by one pound because younger children found them to be too heavy.

[a] Items listed are as categorized by food banks.

SY = school year.

Exhibit C.2. Number and characteristics of food pack deliveries to schools, SY 2016-2017

	All	Southwest Virginia	Richmond[a]
Percentage of Food Pack Deliveries, by Type[b]			
Regular deliveries	87.2	91.2	82.4
Other deliveries	12.8	8.8	17.6
Average number of regular deliveries per school per month	3.4	3.5	3.2
Average number of food packs per child in regular deliveries	2.0	2.0	2.0
Average number of food packs per child in other deliveries	3.3	2.4	3.8

Source: Evaluation of Demonstration Projects to End Childhood Hunger, Virginia 365 backpack program data, SY 2016–2017. Tabulations were prepared by Mathematica Policy Research.

[a] Richmond delivery data were unavailable for the first six weeks of the Richmond school year.

[b] Regular deliveries are Friday deliveries that include 2 food packs to cover 2 weekend days. Other delivery occasions include long holiday weekends; deliveries leading up to Thanksgiving, winter break, and spring breaks; and deliveries to cover the remainder of the week after the last day of school. Data were unavailable for deliveries during winter break.

SY = school year.

Exhibit C.3 Nutrition education curriculum class topics

Eating Smart Being Active Class Topic	Description
1. Welcome to Eating Smart • Being Active	Overview of lesson series; relationship building between educator and participants
2. Get Moving!	Physical activity is part of a healthy lifestyle
3. Plan, Shop, $ave	How to stretch your food dollars
4. Fruits & Veggies: Half Your Plate	How to increase amount and variety of fruits and vegetables
5. Make Half Your Grains Whole	Identify whole grain foods and why whole grains are beneficial
6. Build Strong Bones	Calcium rich foods and weight bearing activity help build strong bones
7. Go Lean with Protein	Choosing lean sources of protein and how to keep food safe
8. Make a Change	Choosing foods low in fat, sugar, and salt

Source: Colorado State University, 2016.

Exhibit C.4. Number and characteristics of nutrition education classes offered in SY 2016-2017

	All		Southwest Virginia		Richmond	
Outcome	Number	Percentage	Number	Percentage	Number	Percentage
Number of Class Series Offered[a]	13		10		3	
By Number of Classes Offered Per Series						
2 classes	2	15.4	2	20.0	0	0.0
3 classes	1	7.7	1	10.0	0	0.0
4 classes	1	7.7	1	10.0	0	0.0
6 classes	5	38.5	5	50.0	0	0.0
8 classes	4	30.8	1	10.0	3	100.0
Average Number of Classes Offered Per Series Per School Site	9.8		7.9		16.0	
By Series Start Date						
Fall 2016	8	61.5	7	70.0	1	33.3
Spring 2017	5	38.5	3	30.0	2	66.7
By Southwest School Division						
Division 1	NA	NA	2	20.0	NA	NA
Division 2	NA	NA	2	20.0	NA	NA
Division 3	NA	NA	2	20.0	NA	NA
Division 4	NA	NA	0	0	NA	NA
Division 5	NA	NA	2	20.0	NA	NA
Division 6	NA	NA	1	10.0	NA	NA
Division 7	NA	NA	1	10.0	NA	NA
Division 8	NA	NA	0	0	NA	NA
By Topic Offered[b]						
1 Welcome to Eating Smart • Being Active	4	30.8	1	10.0	3	100.0
2. Get Moving	5	38.5	2	20.0	3	100.0
3. Plan, Shop, $ave	12	92.3	9	90.0	3	100.0
4. Fruits & Veggies: Half Your Plate	11	84.6	8	80.0	3	100.0
5. Make Half Your Grains Whole	11	84.6	8	80.0	3	100.0
6. Go Lean With Protein	9	69.2	6	60.0	3	100.0
7. Build Strong Bones	10	76.9	7	70.0	3	100.0
8. Make a Change	8	61.5	5	50.0	3	100.0
9. MyPlate[c]	1	7.7	1	10.0	NA	NA
10. Make a Change/Celebrate Eat Smart and be Active[c]	1	7.7	1	10.0	NA	NA
11. Plan, Shop, $ave/Fruits & Veggies[c]	1	7.7	1	10.0	NA	NA

Source: Evaluation of Demonstration Projects to End Childhood Hunger, Virginia 365 nutrition education data, SY 2016–2017. Tabulations were prepared by Mathematica Policy Research.

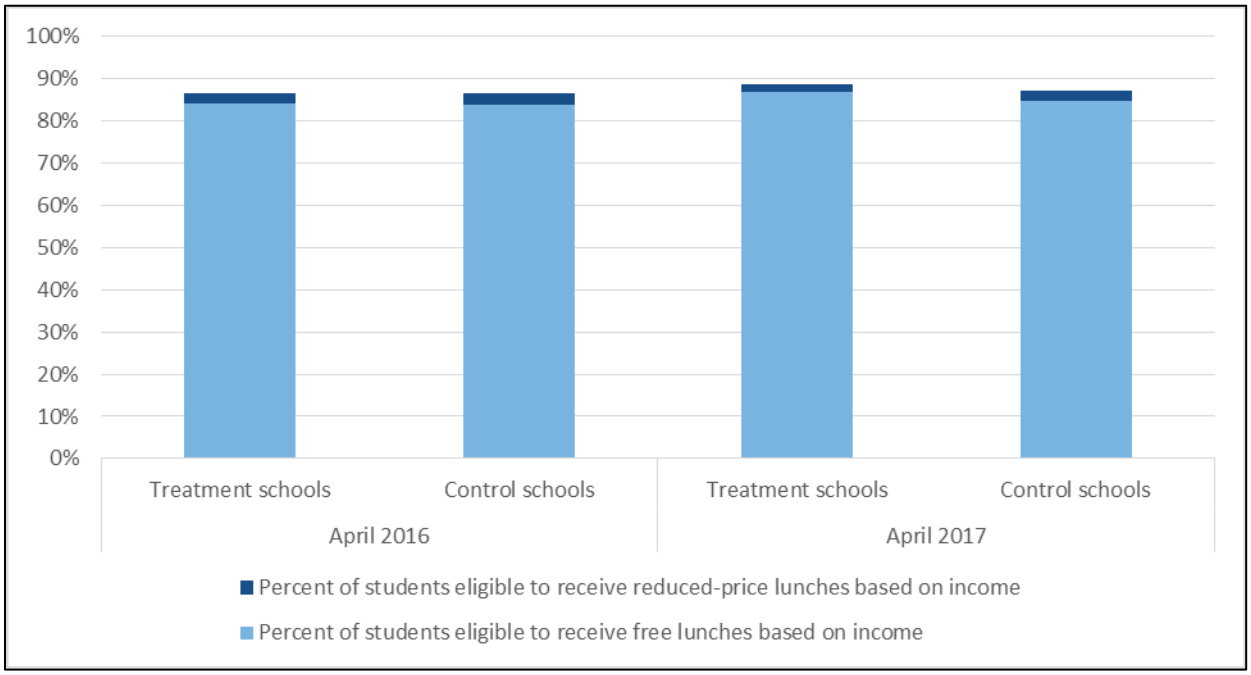
[a] One nutrition class series was not attended by any household.

[b] Nutrition class series offered multiple topics and therefore the sum number of series exceeds the total number of class series offered.

[c] Nutrition education providers combined or tailored nutrition classes to participants. The class that is shown is not part of the formal Eating Smart, Being Active curriculum.

NA = not applicable; SY = school year.

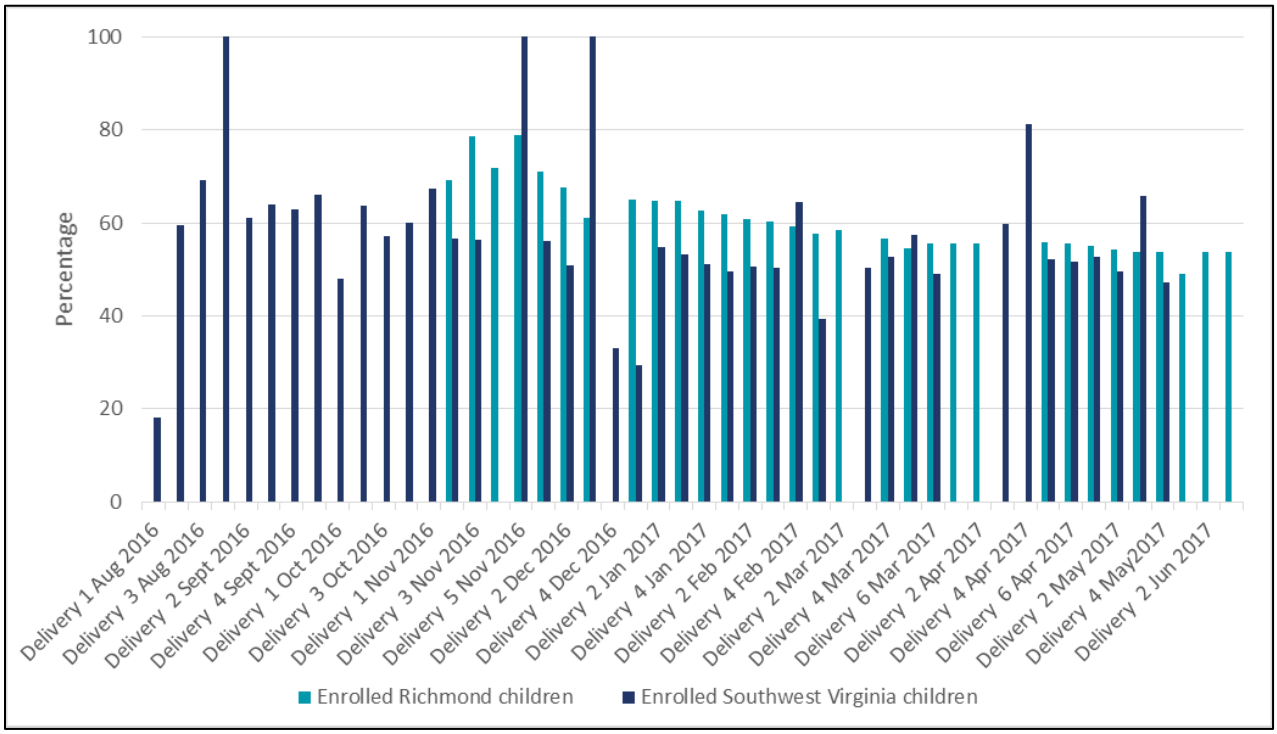
Exhibit C.5. Children's eligibility for free or reduced-price meals in April 2016 and April 2017



Source: Evaluation of Demonstration Projects to End Childhood Hunger, administrative data from the Virginia Department of Education, SY 2016-2017. Estimates were prepared by Mathematica Policy Research.

SY = school year.

Exhibit C.6. Percentage of enrolled children targeted to receive food packs in the school backpack program in SY 2016-2017, by delivery date



Source: Evaluation of Demonstration Projects to End Childhood Hunger, Virginia 365 backpack program data and Virginia Department of Education school enrollment data, SY 2016–2017. Estimates were prepared by Mathematica Policy Research.

Notes: Data were unavailable for the first eight weeks of the Richmond school year. All children in treatment schools were eligible to participate in the backpack program. However, not all children were targeted to receive food backpacks on each delivery date in order to align the number of delivered food backpacks with student demand.

SY = school year.

Exhibit C.7. Extent of nutrition education outreach provided to households in SY 2016-2017

	All		Southwest Virginia		Richmond	
Outcome	Number	Percentage	Number	Percentage	Number	Percentage
Number of outreach contacts per nutrition class series						
1	12	92.3	9	90.0	3	100.0
2	0	0.0	0	0.0	0	0.0
3	1	7.7	1	10.0	0	0.0
Mode of first outreach contact						
Community Event	5	38.5	3	30.0	2	66.7
Flyer	5	38.5	4	40.0	1	33.3
Exhibit at Open House	1	7.7	1	10.0	0	0.0
Family Night	1	7.7	1	10.0	0	0.0
Kickoff Event	1	7.7	1	10.0	0	0.0

Source: Evaluation of Demonstration Projects to End Childhood Hunger, Virginia 365 nutrition education data, SY 2016–2017. Tabulations were prepared by Mathematica Policy Research.

Note: Estimates include one nutrition class series that was not attended by any household.

SY = school year.

Exhibit C.8. Household participation in nutrition classes in SY 2016-2017

	All		Southwest Virginia		Richmond	
Outcome	Number	Percentage	Number	Percentage	Number	Percentage
Total Number of Households that Attended at Least One Nutrition Class	47	<1	40	<1	7	<1
By Number of classes Attended						
1	1	2.1	1	2.5	0	0.0
2	2	4.3	2	5.0	0	0.0
3	1	2.1	1	2.5	0	0.0
4	1	2.1	1	2.5	0	0.0
5	0	0.0	0	0.0	0	0.0
6	31	66.0	31	77.5	0	0.0
7	0	0.0	0	0.0	0	0.0
8	11	23.4	4	10.0	7	100.0
Attendance by Topic[a]						
1. Welcome to Eating Smart • Being Active	11	23.4	4	10.0	7	100.0
2. Get Moving	14	29.8	7	17.5	7	100.0
3. Plan, Shop, $ave	44	93.6	37	92.5	7	100.0
4. Fruits & Veggies: Half Your Plate	43	91.5	36	90.0	7	100.0
5. Make Half Your Grains Whole	44	93.6	37	92.5	7	100.0
6. Go Lean With Protein	41	87.2	34	85.0	7	100.0
7. Build Strong Bones	43	91.5	36	90.0	7	100.0
8. Make a Change	38	80.9	31	77.5	7	100.0
9. MyPlate[b]	1	2.1	1	2.5	NA	NA
10. Make a Change/Celebrate Eat Smart and be Active[b]	3	6.4	3	7.5	NA	NA
11. Plan, Shop, Save/Fruits & Veggies[b]	3	6.4	3	7.5	NA	NA

Source: Evaluation of Demonstration Projects to End Childhood Hunger, Virginia 365 nutrition education data, SY 2016–2017. Tabulations were prepared by Mathematica Policy Research.

[a] Most households attended nutrition classes on multiple topics. Therefore, the sum number of households may be greater than the total number of households that attended at least one nutrition class. Percentages by topic are based on households that attended at least one class.

[b] Nutrition education providers combined or tailored nutrition classes to participants. The class that is shown is not part of the formal Eating Smart, Being Active curriculum (Colorado State University 2016).

NA = not applicable; SY = school year.

Exhibit C.9. Virginia 365 project costs

Component	Start-up Costs	Implementation Costs for SY 2016-2017	Total Costs
Paid labor costs (wages plus fringe)			
Virginia Department of Education	$183,918	$489,056	$672,974
Paid nonlabor resources			
Virginia Department of Education	$10,040	$105,900	$115,940
Paid partner or contractor costs			
School division non-CACFP benefit costs	$70,000	$448,729	$518,729
School division CACFP benefit costs (for school suppers)	$0	$0	$0
Food bank non-benefit costs	$0	$105,398	$105,398
Food bank benefit costs	$0	$777,925	$777,925
Virginia Cooperative Extension non-benefit costs	$0	$233,264	$233,264
Virginia Cooperative Extension benefit costs	$0	$3,236	$3,236
VDSS and EBT vendor non-benefit costs	$116,377	$117,800	$234,177
VDSS and EBT vendor benefit costs	$0	$1,130,580	$1,130,580
Other partner	$60,500	$0	$60,500
Total paid partner or contractor costs	$246,877	$2,816,931	$3,063,808
Total paid costs	**$440,835**	**$3,411,888**	**$3,852,723**
Total paid costs, excluding Virginia Cooperative Extension and VDSS and EBT vendor	**$324,458**	**$1,927,008**	**$2,251,466**
Volunteer labor costs (wages plus fringe)			
Virginia Department of Education	$0	$0	$0
Donated or in-kind nonlabor resources			
Virginia Department of Education	$0	$0	$0
Donated or in-kind partner or contractor costs			
School division non-CACFP benefit costs	$0	$0	$0
School division CACFP benefit costs	$0	$3,052,963	$3,052,963
Food bank non-benefit costs	$0	$10,200	$10,200
Food bank benefit costs	$0	$0	$0
Virginia Cooperative Extension non-benefit costs	$22,159	$49,995	$72,155
Virginia Cooperative Extension benefit costs	$0	$0	$0
VDSS and EBT vendor non-benefit costs	$1,440	$6,330	$7,770
VDSS and EBT vendor benefit costs	$0	$0	$0
Other partner	$1,774	$203,048	$204,822
Total value of donated or in-kind resources	**$25,373**	**$3,322,536**	**$3,347,910**
Total value of donated or in-kind resources, excluding Virginia Cooperative Extension and VDSS and EBT vendor	**$1,774**	**$3,266,211**	**$3,267,985**
Total cost (paid plus donated/in-kind resources)	**$466,208**	**$6,734,424**	**$7,200,633**
Total cost (paid plus donated/in-kind resources), excluding Virginia Cooperative Extension and VDSS and EBT vendor	**$326,232**	**$5,193,219**	**$5,519,451**

Source: Evaluation of Demonstration Projects to End Childhood Hunger, Virginia 365 cost data collection instruments, MIS data, and site visit interviews, 2016–2017. Tabulations were prepared by Mathematica Policy Research.

Notes: Start-up costs cover February 1, 2015 to June 7, 2016. Implementation costs cover June 8, 2016 to June 16, 2017. The grantee provided services through June 2018, so the costs reported here do not include costs for closing out operations. Costs per child can be calculated by dividing the costs excluding Virginia Cooperative Extension and VDSS and EBT vendor by the total number of children enrolled in treatment schools (n=7,274).

CACFP = Child and Adult Care Food Program; EBT = electronic benefits transfer; VDSS = Virginia Department of Social Services.

Exhibit C.10. Virginia 365 project costs, by group

Group	Start-up costs	Implementation costs	Total Costs
Paid labor resources, nonlabor resources, and partner or contractor costs			
Virginia Department of Education	$193,958	$594,956	$788,914
School division non-CACFP benefit costs	$70,000	$448,729	$518,729
School division CACFP benefit costs	$0	$0	$0
Food banks non-benefit costs	$0	$105,398	$105,398
Food banks benefit costs	$0	$777,925	$777,925
Virginia Cooperative Extension non-benefit costs	$0	$233,264	$233,264
Virginia Cooperative Extension benefit costs	$0	$3,236	$3,236
VDSS and EBT vendor non-benefit costs	$116,377	$117,800	$234,177
VDSS and EBT vendor benefit costs	$0	$1,130,580	$1,130,580
Other partner	$60,500	$0	$60,500
Total paid costs	**$440,835**	**$3,411,888**	**$3,852,723**
Total paid costs, excluding Virginia Cooperative Extension and VDSS and EBT vendor	**$324,458**	**$1,927,008**	**$2,251,466**
Donated or in-kind labor resources, nonlabor resources, and partner or contractor costs			
Virginia Department of Education	$0	$0	$0
School division non-CACFP benefit costs	$0	$0	$0
School division CACFP benefit costs	$0	$3,052,963	$3,052,963
Food banks non-benefit costs	$0	$10,200	$10,200
Food banks benefit costs	$0	$0	$0
Virginia Cooperative Extension non-benefit costs	$22,159	$49,995	$72,155
Virginia Cooperative Extension benefit costs	$0	$0	$0
VDSS and EBT vendor non-benefit costs	$1,440	$6,330	$7,770
VDSS and EBT vendor benefit costs	$0	$0	$0
Other partner	$1,774	$203,048	$204,822
Total value of donated or in-kind resources	**$25,373**	**$3,322,536**	**$3,347,910**
Total value of donated or in-kind resources, excluding Virginia Cooperative Extension and VDSS and EBT vendor	**$1,774**	**$3,266,211**	**$3,267,985**
Total cost (paid plus donated/in-kind resources)	**$466,208**	**$6,734,424**	**$7,200,633**
Total cost (paid plus donated/in-kind resources), excluding Virginia Cooperative Extension and VDSS and EBT vendor	**$326,232**	**$5,193,219**	**$5,519,451**

Source: Evaluation of Demonstration Projects to End Childhood Hunger, Virginia 365 cost data collection instruments, MIS data, and site visit interviews, 2016–2017. Tabulations were prepared by Mathematica Policy Research.

Notes: Start-up costs cover February 1, 2015 to June 7, 2016. Implementation costs cover June 8, 2016 to June 16, 2017. The grantee provided services through June 2018, so the costs reported here do not include costs for closing out operations. Costs per child can be calculated by dividing the costs excluding Virginia Cooperative Extension and VDSS and EBT vendor by the total number of children enrolled in treatment schools (n=7,274).

CACFP = Child and Adult Care Food Program; EBT = electronic benefits transfer; VDSS = Virginia Department of Social Services.

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APPENDIX D

SUPPLEMENTAL ANALYSIS

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D.1. SUPPLEMENTAL ANALYSIS

Appendix D contains supplemental exhibits on additional analysis conducted to better understand results described in Chapters III and IV. Exhibit D.1 shows Virginia 365 impacts on FI-C by subgroup, inclusive of 95% confidence interval data. Exhibits D.2 and D.3 show changes from baseline to follow-up in child nutrition program participation among children in control and treatment households, respectively. Exhibit D.4 shows differences between the treatment and control group on individual items from the food security module. Exhibit D.5 compares food security outcomes, by matched school pairs. Exhibit D.6 compares child nutrition program participation, by matched school pairs.

Exhibit D.1. Impact of the Virginia 365 project on food insecurity among children, by subgroup

	Treatment		Control		Difference[a]	95% Confidence interval	p-value	
Characteristic	Sample size	FI-C	Sample size	FI-C			Differences within categories	Differences between subgroups
Household composition								0.322
Two or more adults	830	22.8	760	19.8	2.9	[0.0, 5.8]	0.975[b]	
Single adult	550	30.8	473	30.5	0.4	[-3.9, 4.6]	0.568	
Number of children in household								0.039
1 child	328	23.6	364	17.6	6.0	[2.5, 9.5]	>0.999[b]	
2 children	539	22.6	439	22.6	0.0	[-3.7, 3.8]	0.508	
3 or more	513	31.2	430	30.3	0.9	[-4.0, 5.8]	0.639	
Respondent race/ethnicity								<0.001
Hispanic (all races)	110	45.3	89	43.9	1.4	[-11.3, 14.1]	0.584	
Non-Hispanic black	682	30.7	590	25.3	5.4	[2.8, 8.0]	>0.999[b]	
Non-Hispanic white or Non-Hispanic other	576	17.9	543	19.1	-1.2	[-3.5, 1.0]	0.141	
Respondent level of education								0.732
Less than high school	276	36.5	233	33.5	3.0	[-3.5, 9.5]	0.819	
High school, GED	461	28.2	398	24.8	3.4	[-1.2, 8.1]	0.922	
Some college or higher	640	20.0	597	19.4	0.6	[-2.5, 3.7]	0.637	
Baseline food security among children[c]								0.082
Secure (FS-C)	856	15.7	754	12.8	2.9	[0.9, 4.9]	0.998[b]	
Insecure (FI-C)	248	61.7	223	64.4	-2.6	[-9.5, 4.3]	0.229	
Presence of a teenager in the household								0.614
Household has no teens	704	21.5	667	20.3	1.3	[-1.6, 4.0]	0.809	
Household has 1 or more teens	675	31.0	563	28.3	2.7	[-0.2, 5.7]	0.962	
Presence of a preschooler in the household								0.998
Household has no preschoolers	1,011	25.3	929	23.3	1.9	[-0.3, 4.1]	0.955	
Household has 1 or more preschoolers	368	27.9	301	25.9	2.0	[-2.4, 6.4]	0.818	
Urbanicity								0.059
Urban	983	31.1	787	27.4	3.8	[1.3, 6.2]	0.998[b]	
Non-urban	305	15.0	381	16.0	-1.0	[-4.4, 2.4]	0.282	

Characteristic	Treatment Sample size	Treatment FI-C	Control Sample size	Control FI-C	Difference[a]	95% Confidence interval	p-value Differences within categories	p-value Differences between subgroups
Household income								0.940
No income	73	32.2	60	31.3	0.9	[-13.3, 15.1]	0.550	
Below poverty threshold	794	32.7	646	30.8	1.9	[-1.7, 5.5]	0.851	
101 to 185% of poverty threshold	288	23.9	283	21.4	2.5	[-2.6, 7.6]	0.830	
Above 185% of poverty threshold	193	7.0	222	4.9	2.1	[-2.7, 6.8]	0.800	
Reported SNAP participation in last 30 days								0.371
Participates in SNAP	688	31.4	557	30.5	0.9	[-3.3, 5.1]	0.660	
Does not participate in SNAP	690	21.3	675	18.4	2.9	[-0.0, 5.8]	0.973	
Number of children in household who attend a demonstration school								0.592
Household has 1 child in a demonstration school	412	22.9	423	20.5	2.4	[-1.2, 6.0]	0.912	
Household has more than 1 child in a demonstration school	695	29.0	558	27.8	1.2	[-1.8, 4.1]	0.785	
Elementary school vs. secondary[d]								0.455
Elementary school	1,016	25.2	910	22.9	2.4	[0.1, 4.7]	0.979[b]	
Secondary school	364	27.7	323	26.8	0.8	[-2.6, 4.2]	0.685	
Random assignment[e]								0.208
VA assigned to treatment	406	18.0	407	18.0	0.1	[-2.6, 2.7]	0.513	
Randomly assigned to treatment	974	29.7	826	26.8	2.9	[0.5, 5.3]	0.991[b]	
Sample size	1,380		1,233					

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: Food security was measured using the standard USDA 18-item survey module and a 30-day reference period. VLFS is a subcategory within the food insecure category. Households that were missing values for FI-C were excluded from the calculations. Subgroups of households are defined using baseline information whenever available. For households missing baseline information on household composition, number of children in household, respondent level of education, household income, and reported SNAP participation in last 30 days (primarily those that responded to the follow-up survey but not the baseline survey), membership in subgroups defined by each of those characteristics is measured using the follow-up value. This approach prevents loss of the households that completed a follow-up survey but not a baseline survey. The p-value associated with each impact estimate is from a one-tailed test of statistical significance. Estimates are regression adjusted to account for households' baseline characteristics, including baseline values of outcomes. Regressions controlled for baseline measures of child and adult food insecurity and VLFS; the presence of a single adult in the household versus more than one; ages of children in the household; household income and employment status; respondent age,

health status, race/ethnicity, and language preference; baseline participation in SNAP, WIC, school-based meal programs, or food pantry, emergency kitchen, or community program; whether the household was located in an urban versus non-urban area; and indicator variables for the month of follow-up survey response.

[a] Difference column may not match the (Treatment minus Control) calculation exactly due to rounding.

[b] Estimate would have been significant with a two-tailed test.

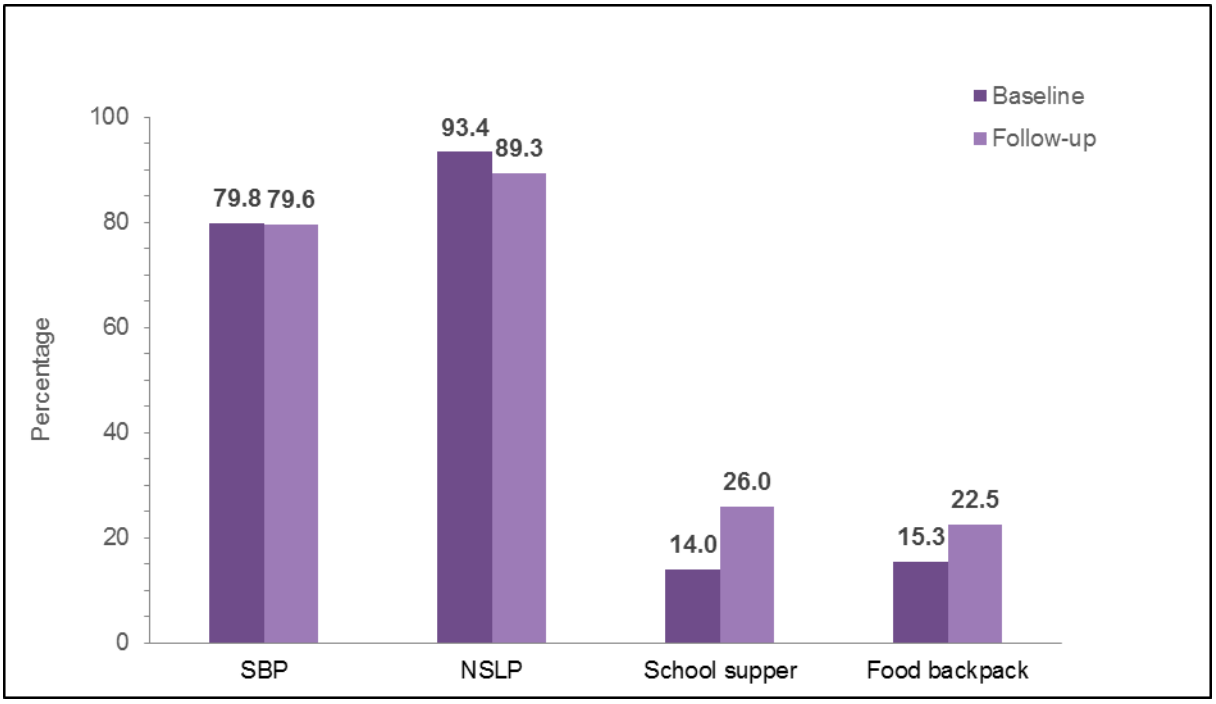
[c] These estimates measure whether the impact of Virginia 365 varies for households that were already experiencing food insecurity among children at baseline vs. those that were not

[d] Combined elementary and middle schools are counted as elementary schools because a larger proportion of children at these schools are in elementary school grades.

[e] The grantee assigned the first 16 schools—in Southwest Virginia—to treatment and control groups. They paired schools based on having similar characteristics, and then picked one school in each pair to be in the T group. They used an approach that involved arbitrarily selected which school in the pair would be in the treatment group, rather than a strictly random approach. In most cases, they selected the first school listed alphabetically. The remaining schools were randomly assigned by Mathematica.

FI-C = food insecurity among children; GED = general educational development; SNAP = Supplemental Nutrition Assistance Program; USDA = United States Department of Agriculture; VLFS = very low food security; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

Exhibit D.2. Changes from baseline to follow-up in child nutrition program participation among children in control households

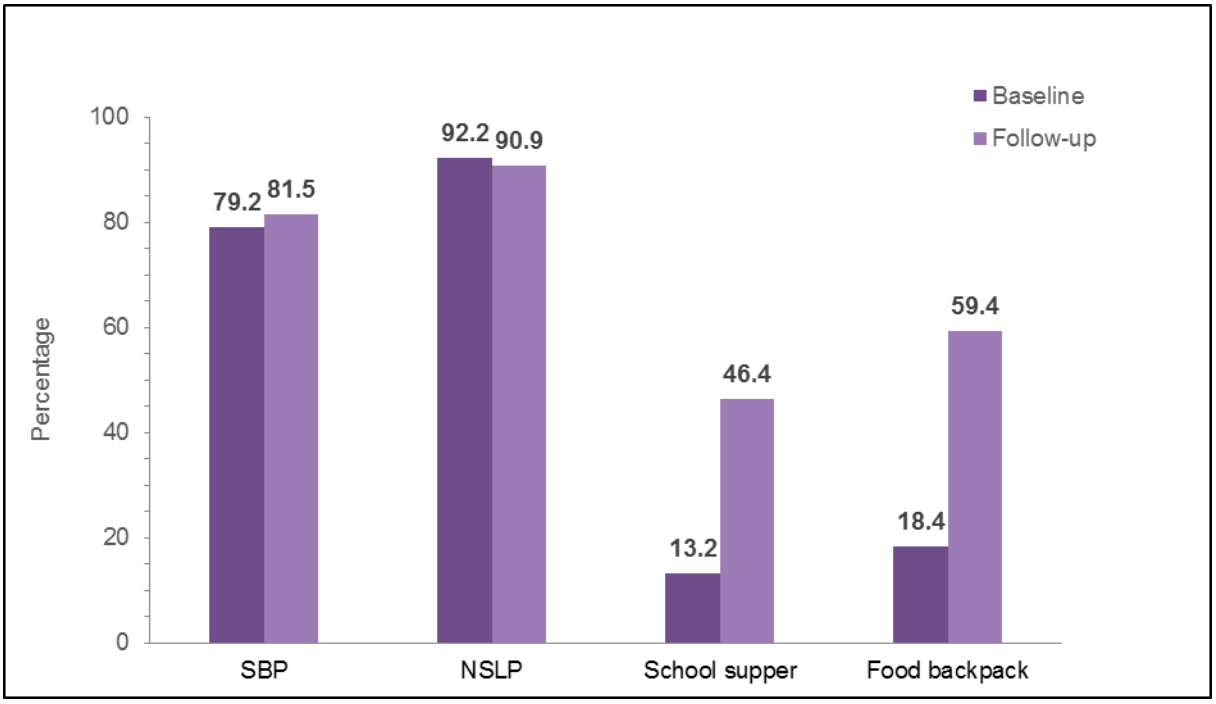


Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2016 baseline survey and 2017 follow-up survey. Estimates are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research. Estimates are not regression adjusted.

Note: The samples for this exhibit include all control households that responded to the baseline survey for the baseline estimates (n=1,216) and all control households that responded to the follow-up survey for the follow-up estimates (n=1,243).

NSLP = National School Lunch Program; SBP = School Breakfast Program.

Exhibit D.3. Changes from baseline to follow-up in child nutrition program participation among children in treatment households



Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2016 baseline survey and 2017 follow-up survey. Estimates are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research. Estimates are not regression adjusted.

Note: The samples for this exhibit include all treatment households that responded to the baseline survey for the baseline estimates (n=1,380) and all treatment households that responded to the follow-up survey for the follow-up estimates (n=1,393).

NSLP = National School Lunch Program; SBP = School Breakfast Program.

Exhibit D.4. Differences on individual items of the 30-day food security module

		Percentage with an affirmative response			
		Treatment	Control	Difference[a]	p-value
Items measuring household and adult(s)' food security					
1	Worried food would run out before (I/we) got money to buy more (often true or sometimes true)	51.3	45.6	5.7	0.017
2	Food bought didn't last and (I/we) didn't have money to get more (often true or sometimes true)	40.5	36.2	4.3	0.043
3	Couldn't afford to eat balanced meals (often true or sometimes true)	36.3	32.5	3.8	0.017
4	Adult(s) cut size of meals or skipped meals	24.8	19.6	5.2	0.002
4a	Adult(s) cut size of meals or skipped meals in more than 2 of the last 30 days	19.1	14.6	4.4	<0.001
5	Respondent ate less than felt he/she should	27.6	23.8	3.8	0.020
6	Respondent hungry but didn't eat because couldn't afford	16.3	13.8	2.4	0.104
7	Respondent lost weight	10.5	8.2	2.3	0.042
8	Adult(s) did not eat for whole day	7.7	6.6	1.1	0.338
8a	Adult(s) did not eat for whole day in more than 2 of the last 30 days	4.9	4.3	0.6	0.449
Items measuring children's food security					
9	Relied on few kinds of low-cost food to feed child(ren) (often true or sometimes true)	38.6	34.8	3.8	0.048
10	Couldn't feed child(ren) balanced meals (often true or sometimes true)	26.9	24.6	2.3	0.135
11	Child(ren) were not eating enough (often true or sometimes true)	12.2	12.2	0.1	0.970
12	Cut size of child(ren)'s meals	8.1	8.7	-0.6	0.668
13	Child(ren) skipped meals	1.9	3.0	-1.1	0.055
13a	Child(ren) skipped meals in more than 2 of the last 30 days	1.2	2.0	-0.8	0.023
14	Child(ren) were hungry	5.1	4.7	0.3	0.663
15	Child(ren) did not eat for whole day	0.8	0.9	-0.1	0.744
Sample size		1,393	1,243		

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: Food security items are from the standard USDA 18-item survey module and use a 30-day reference period. Food security is classified using items to measure household, adult, and children's food security using 3, 7, and 8 items, respectively. Items 4 through 8 are preceded by "You or other adults in your household" depending on whether there is one adult (the respondent) in the household or more than one adult. The wording for items 11 through 15 is based on the number of adults and children in the household. Item numbers align with the follow-up instrument in Appendix B.3.

Regressions controlled for baseline measures of child and adult food insecurity; the presence of a single adult in the household versus more than one; ages of children in the household; household income and employment status; and respondent age.

[a] Difference column may not match the (Treatment minus Control) calculation exactly due to rounding.

USDA = United States Department of Agriculture.

Exhibit D.5. Impact of the Virginia 365 project on food insecurity, by matched school pairs

Matched school pair	Treatment FI-C	Control FI-C	Difference FI-C	Treatment FI-A	Control FI-A	Difference FI-A	Treatment VLFS-C	Control VLFS-C	Difference VLFS-C	Treatment sample size (min-max)	Control sample size (min-max)
1 (ES)	9.0	18.4	-9.5	26.2	21.8	4.4	1.8	2.6	-0.8	50-51	76-78
2 (ES)	16.5	6.5	10.0	30.9	13.0	17.8	0.0	0.0	0.0	21-21	46-46
3 (ES)	12.9	11.3	1.5	28.3	20.6	7.7	0.0	0.0	0.0	55-55	37-38
4 (ES)	18.2	25.1	-6.8	39.6	42.1	-2.5	0.0	0.0	0.0	18-18	16-16
5 (ES)	17.2	15.4	1.9	24.5	26.2	-1.6	0.0	1.5	-1.5	37-38	65-65
6 (ES)	19.0	14.1	4.8	27.9	28.1	-1.8	2.1	3.1	-1.0	95-103	64-64
7 (ES)	31.6	21.1	10.5	35.8	29.0	6.9	0.0	2.6	-2.6	30-30	38-38
8 (SS)	37.5	29.2	8.3	33.4	30.8	2.6	3.9	7.7	-3.8	92-92	65-65
9 (ES)	31.4	31.0	0.4	51.0	35.5	15.5	7.6	5.3	2.3	56-56	76-76
10 (ES)	33.8	25.9	7.9	43.3	35.2	8.1	4.4	2.3	2.1	120-121	84-84
11 (ES)	23.8	13.9	9.9	32.1	24.2	7.9	4.1	3.3	0.8	74-74	60-60
12 (ES)	36.9	32.2	4.6	45.0	45.6	-0.6	6.4	8.5	-2.0	109-111	104-104
13 (ES)	29.5	34.4	-4.9	44.0	43.1	1.0	3.9	4.6	-0.7	123-126	86-87
14 (ES)	31.9	23.0	8.9	36.0	24.6	11.4	1.6	3.8	-2.2	74-74	76-79
15 (ES)	27.5	29.4	-1.9	41.2	34.5	6.7	2.4	3.5	-1.0	88-88	57-57
16 (SS)	28.2	26.9	1.3	31.4	38.7	-7.2	6.1	5.1	1.1	123-125	133-135
17 (SS)	36.0	27.2	8.8	40.3	34.9	5.4	3.7	3.8	-0.2	83-85	73-73
18 (SS)	17.4	23.1	-5.6	29.0	25.0	4.0	0.8	3.9	-3.1	66-66	52-52
19 (ES)	21.1	16.0	5.1	39.0	16.0	23.0	1.6	0.0	1.6	58-58	25-25

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: Food security was measured using the standard USDA 18-item survey module and a 30-day reference period. Food security regression models controlled for baseline measures of child and adult food insecurity; the presence of a single adult in the household versus more than one; ages of children in the household; household income and employment status; respondent age, health status, race/ethnicity, and language preference; baseline participation in SNAP, WIC, school-based meal programs, or food pantries; whether the household was located in an urban versus non-urban area; and month of follow-up survey response. The regression model to calculate matched-pair-specific impacts on VLFS-C excludes matched pairs in which one or both of the schools had zero households with VLFS-C; for these matched pairs (2, 3, 4, 5, and 7), the weighted, non-regression-adjusted proportion of households with VLFS-C is presented. For all other matched pairs, the proportion of treatment and control groups with VLFS-C is calculated using a regression model that adjusts for the covariates listed above. Weighted, non-regression-adjusted proportions were also used when estimating rates of FI-C, FI-A, and VLFS-C in matched pairs 6 and 8, because the regression-based predicted probabilities could not be estimated.

ES = elementary school (includes combined elementary and middle schools); FI-A = food insecurity among adults; FI-C = food insecurity among children; SNAP = Supplemental Nutrition Assistance Program; SS = secondary school (includes middle and high schools); USDA = United States Department of Agriculture; VLFS-C = very low food security among children; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

Exhibit D.6. Differences in nutrition program participation, by matched school pairs

Matched school pair	Reported receiving FRP lunch	Reported receiving NSLP (including FRP and paid)	Reported receiving FRP breakfast	Reported receiving SBP (including FRP and paid)	Reported receiving school supper	Reported receiving backpack program	Treatment sample size (min-max)	Control sample size (min-max)
1 (ES)	14.5	5.5	8.3	1.2	41.5	50.0	51-51	77-78
2 (ES)	29.1	8.7	21.0	6.1	47.9	66.9	21-21	45-46
3 (ES)	-6.3	-4.4	-7.1	-5.2	6.4	49.1	56-56	38-38
4 (ES)	-11.0	-5.5	5.3	16.7	50.4	67.4	18-18	16-16
5 (ES)	38.5	16.2	32.2	8.5	31.1	53.1	38-38	64-65
6 (ES)	14.4	-0.1	-2.7	-22.2	38.6	49.6	102-103	64-64
7 (ES)	-2.4	-1.4	5.7	9.2	50.0	30.3	30-30	38-38
8 (SS)	29.3	4.9	29.3	23.2	26.9	35.6	92-92	65-65
9 (ES)	-0.5	-3.4	7.2	4.4	20.8	55.6	56-56	75-76
10 (ES)	3.1	1.4	5.2	4.3	1.4	22.6	119-121	84-84
11 (ES)	-2.7	0.9	-8.3	-7.8	24.6	58.0	74-74	60-60
12 (ES)	0.7	3.3	-4.3	-2.6	16.6	44.0	111-111	103-104
13 (ES)	-2.3	-2.2	-1.7	-0.9	11.3	38.1	125-126	87-87
14 (ES)	1.7	2.6	-2.8	-0.9	11.6	35.6	74-74	79-79
15 (ES)	-4.7	-5.8	5.3	4.3	-0.9	7.9	88-88	57-57
16 (SS)	5.1	5.2	3.3	3.7	5.1	19.7	125-125	135-135
17 (SS)	2.4	6.6	3.5	3.9	22.0	26.7	84-85	73-73
18 (SS)	3.8	-10.6	0.3	-5.0	21.6	8.7	66-66	53-53
19 (ES)	0.4	4.7	14.6	17.6	31.1	19.3	58-58	25-25

Source: Evaluation of Demonstration Projects to End Childhood Hunger, 2017 follow-up survey. Tabulations are weighted to be representative of all eligible households in the Virginia demonstration and were prepared by Mathematica Policy Research.

Note: Program participation questions generally reflected current participation at the time of the interview, defined as "during the last 30 days." Program participation regression models controlled for baseline measures of household income and employment status; the survey respondent's age, race/ethnicity, health status, and preferred language; household size and presence of a teenager; household participation in the program being analyzed at follow-up; and month of follow-up survey response. The regression model to calculate matched-pair-specific impacts on participation in NSLP excluded matched pair number two because all households in that matched pair participated in NSLP; for this matched pair, the difference between treatment and control groups' weighted, non-regression-adjusted NSLP participation rate is presented. For all other matched pairs, the difference between the proportion of treatment and control groups participating in NSLP is calculated using a regression model that adjusts for the covariates listed above.

ES = elementary school (includes combined elementary and middle schools); FRP = free or reduced-price; NSLP = National School Lunch Program; SBP = School Breakfast Program; SS = secondary school (includes middle and high schools); USDA = United States Department of Agriculture.

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APPENDIX E

APPENDIX REFERENCES

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