# Impact of the Summer Electronic Benefits Transfer for Children (SEBTC) Demonstration on Children's Nutritional Status

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# **Introduction and Policy Context**

Children's development, health, and well-being depend on access to a safe and secure source of food. In 2012, 7.8 million households with children were food insecure in the U.S.<sup>4</sup> (one in five such households) and nearly half of these, 3.9 million, included children who were food insecure at some time during the year (Coleman-Jensen et al., 2013). Nearly 8.3 million children lived in households with food-insecure children, and 1.0 million children lived in households with very low food security among children (VLFS-C).

When school is in session, the Food and Nutrition Service (FNS) of the U.S. Department of Agriculture (USDA) funds free and reduced-price breakfasts (the School Breakfast Program, SBP) and lunches (the National School Lunch Program, NSLP). To address food needs in the summer, when school is out of session and these programs are not operational (or operate on a much reduced scale), the Summer Food Service Program (SFSP) provides meals and snacks to children in low-income areas where at least half of the children come from families with incomes eligible to receive the NSLP or SBP during the school year. The SFSP enriches the lives of millions of low-income children in communities across the U.S., however, it reaches far fewer children than the school programs (Gordon and Briefel, 2003; FNS, 2013; Food Research and Action Center, 2013). Many communities also provide other types of food assistance and children's programs during the summer months to meet the nutrition needs of low-income children. However, locations and resources are limited, so there are still gaps in low-income children's access to food during the summer in many communities.

As part of its efforts to end child hunger, FNS is studying alternative approaches to providing food assistance to children in the summer months. The 2010 Agriculture Appropriations Act (P.L. 111-80) authorized and provided funding for USDA to implement and rigorously evaluate the Summer Food for Children Demonstrations, one component of which is the Summer Electronic Benefits Transfer for Children (SEBTC). FNS contracted with a team composed of Abt

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<sup>&</sup>lt;sup>4</sup> Food-insecure households are those with low or very low food security among adults or children or both.

<sup>&</sup>lt;sup>5</sup> The NSLP and SBP provide subsidized meals to children in school. Children from low-income families obtain these meals free or at a reduced price (FRP). Children living in households with incomes at or below 130% of the poverty level are eligible to receive meals for free; those with incomes between 130 and 185% of poverty level are eligible for reduced-price. SFSP meals are available free to any child at an open site and at an enrolled site where at least half are eligible for FRP school meals.

Associates, Mathematica Policy Research, and Maximus to study how the demonstration program has unfolded over time and its impact on program participants.

#### **Overview of SEBTC Demonstration**

The SEBTC benefit was provided to households with children from pre-kindergarten through 12th grade who were certified for FRP school meals in the demonstration school food authorities (SFAs).<sup>6</sup> The amount of the benefit—an approximately \$60 value per month per eligible child in the household—is comparable to the cost of free lunches plus breakfasts under the NSLP and SBP.<sup>7</sup> Benefits—provided monthly on an EBT card and prorated for partial months—were administered by grantees in the summer for the period when schools were not in session.<sup>8</sup>

The benefit is administered using either the State's existing EBT system for WIC or the EBT system for SNAP. Grantees worked with their existing EBT vendors, which made modifications to the State's WIC or SNAP EBT systems. In WIC-model sites, participants could only purchase specific quantities of specific foods based on the existing WIC food packages, and only at WIC-authorized retailers in the State where they were issued. The WIC SEBTC package was specified by FNS based on existing WIC foods prescriptions and includes milk, juice, cheese, cereal, eggs, whole wheat bread, beans, peanut butter, and canned fish. It also included a \$16 voucher for fresh fruits and vegetables (see Appendix A).

In contrast, in SNAP-model sites, participants could purchase any food which could be purchased under SNAP. Grantees used their SNAP systems for SEBTC implemented either a model where SEBTC benefits were automatically loaded onto the SNAP cards of current SNAP recipients (and non-SNAP recipients received a standard SNAP card that only included SEBTC benefits), or a model where SEBTC households got SEBTC on a separate EBT card even if they also had a SNAP card.

**2012 Grantees.** Summer 2012 was the full implementation year of SEBTC, following a proof-of-concept year in 2011. In 2012, 10 grantees participated in the SEBTC demonstration, which was implemented in 14 sites (four grantees operated two sites). Together, 10 grantees offered the benefit to over 65,000 eligible children. The grantees included Cherokee Nation, Chickasaw Nation, Connecticut (two sites), Delaware, Michigan (two sites), Missouri (two sites), Nevada, Oregon (two sites), Texas, and Washington. Lead agencies were most often the State agency responsible for SNAP or for the National School Lunch and School Breakfast Programs. Each had a variety of partners, and included other State agencies as well as EBT vendors, SFAs, community organizations, and private contractors to help with planning and management.

<sup>&</sup>lt;sup>6</sup> SFAs are responsible for the provision of school meals and can include one or more schools or districts.

<sup>&</sup>lt;sup>7</sup> In 2012, the nationally estimated dollar value of the WIC food package was \$53. The actual average value of the WIC food packages, using average prices of the food package items from the sites' 2012 EBT data, ranged from \$53.39 to \$74.91, depending on the site.

<sup>&</sup>lt;sup>8</sup> More information on these evaluations and projects can be found on the FNS website at <a href="http://www.fns.usda.gov/ora/menu/DemoProjects/SummerFood/SEBTC.htm">http://www.fns.usda.gov/ora/menu/DemoProjects/SummerFood/SEBTC.htm</a>.

Sites varied widely on several dimensions including geographic size, degree of urbanicity, number of participating SFAs, and racial and ethnic composition of the participating population.

#### **SEBTC Evaluation**

The evaluation has five broad objectives:

- 1. To assess the feasibility of implementing the different models of SEBTC benefit delivery
- 2. To examine the implementation of SEBTC, including approaches used, and the challenges and lessons learned during the demonstrations
- 3. To describe receipt and use of SEBTC benefits
- 4. To examine the impact of SEBTC benefits on children and their families' food security, food expenditures, use of other nutrition programs, and children's nutritional status
- 5. To determine and document the total and component costs of implementing and operating the demonstrations

For the impact analysis, the evaluation uses a random assignment design, assigning households to either receive the benefit (i.e., the treatment group) or be part of the comparison group (i.e., the control group), to provide the most credible and rigorous estimates of the impact of the demonstrations. Households were interviewed in the spring, before the school year ended, and again in the summer. Survey questions related to, among other topics, food security, household food expenditures, nutrition assistance program participation, and whether and how frequently children ate certain foods and beverages. To supplement the impact study, the evaluation includes an implementation and cost study. The evaluation also includes a detailed analysis of SEBTC transaction data, which describes patterns of household receipt and use of the summer benefits.

This paper focuses on objective #4 and children's nutrition outcomes. Specifically, it addresses the research questions: What is the impact of SEBTC on the nutritional status of children? Does this vary by demonstration model and household poverty status? Other findings, including the primary outcome, very low food security among children (VLFS-C), are available in the full year 2 report available on the FNS/USDA website (Collins et al., 2013).

#### Methods

The impact findings are based on responses to the summer survey. The telephone survey took approximately 30 minutes to complete with a household respondent knowledgeable about

<sup>&</sup>lt;sup>9</sup> As is common with this type of research design, SEBTC involved random assignment within 14 purposively selected sites. Findings should not be extrapolated to the nation as a whole since the selected sites are not representative of the country.

household food security, food expenditures, and the eating practices and food consumption of children living in the household. One SEBTC-eligible child per household was randomly selected to be the focus of the food consumption questions. Overall, the summer survey achieved an 80.3% weighted response rate. Across all sites, the summer response rate among households in the treatment group was 83.0%, compared to 77.5% in the control group. Respondents were sent a \$25 gift card for participation in the summer survey.

The evaluation used dietary factors or indicators drawn from food frequency questions used in the 2009-2010 National Health and Nutrition Examination Survey (NHANES) as proxies for nutritional status. <sup>10</sup> The household survey included questions about children's intake of foods shown to be associated with nutritional risk among school-age children and to reliably assess consumption of dietary factors addressed in the *Dietary Guidelines for Americans* (Newby, 2007; Briefel et al., 2008; Reedy and Krebs-Smith, 2010; Taveras et al., 2010).

Specifically, the evaluation estimated the impact of SEBTC on seven dietary indicators of nutritional status:<sup>11</sup>

- 1. Servings per day of fruits and vegetables
- 2. Servings per day of fruits and vegetables, excluding fried potatoes
- 3. Servings per day of whole grains from cereals, whole-grain breads and tortillas, whole grain rice, and popcorn
- 4. Servings per day of dairy products from milk, cheese, and foods containing milk products (e.g., pizza, ice cream)
- 5. Whether the child usually drank nonfat or low-fat milk during the last 30 days
- 6. Teaspoons per day of added sugars from all foods and beverages
- 7. Teaspoons per day of added sugars from sugar-sweetened beverages

In the summer survey, respondents were asked to report how often children ate these food items over the last 30 days. Scoring procedures developed by the National Cancer Institute (NCI) were used to convert the respondents' reports of their children's consumption of specific

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<sup>&</sup>lt;sup>10</sup> The 2009-2010 NHANES Multifactor Diet Screener was used to assess the intake of specific dietary factors included in the 2010 *Dietary Guidelines for Americans* (NCI, 2012). The scoring algorithms used for the analysis can be found at: http://riskfactor.cancer.gov/studies/nhanes/dietscreen/scoring.html.

Daily servings of fruits and vegetables and dairy are measured in cup equivalents and in ounce equivalents for whole grains, as defined by the 2010 *Dietary Guidelines for Americans*. One fruit and vegetable serving is 1 cup raw or cooked fruit or vegetables, vegetable juice, or fruit juice; 2 cups leafy green vegetables; or 1/2 cup dried fruit. One dairy serving is 1 cup milk, fortified soy beverage, or yogurt; 1½ ounces natural cheese; or 2 ounces of processed cheese. Ice cream and pizza contribute to the dairy and calcium scores. Whole grain servings are measured in ounce equivalents. One whole grain serving is 1 one-ounce slice bread; 1 ounce uncooked pasta or rice; 1/2 cup cooked rice; pasta; or cereal; 1 6-inch diameter tortilla; 1 5-inch diameter pancake; or 1 ounce ready-to-eat cereal. Teaspoons of added sugars are derived from reported frequencies of consuming sugar-sweetened beverages (soda, fruit-flavored drinks, and sugar or honey added to coffee or tea); cookies/cakes/pies; doughnuts; ice cream; candy; and cereals.

items into daily servings of fruits and vegetables, whole grains, and dairy items; and teaspoons of added sugars per day. The coding algorithms use the MyPyramid cup equivalents, ounce equivalents, and servings defined in the 2010 *Dietary Guidelines for Americans* (USDA and HHS, 2010).

# Households in the Study

Households that took part in the 2012 SEBTC demonstration were relatively disadvantaged, compared to the national population of households with children under 18. Reported mean household monthly income was \$1,663, with 3% reporting no income in the previous 30 days. More than seven of 10 households had monthly incomes below the federal poverty line, substantially greater than the 18% of families with related children under 18 being under the poverty level nationally in 2011 (U.S. Census Bureau, 2012). Seventy-one percent of households reported at least one employed adult.

As other evidence of disadvantage relative to the national population, nearly two-thirds of the households (61%) reported receiving SNAP benefits in the spring, prior to when SEBTC began and over one-fifth (21%) reported receiving WIC. Nineteen percent reported using food pantries, kitchens, or other emergency food services at baseline prior to when SEBTC began. During the summer, only 12% of households (estimates using the control group only) reported that their children received any source of federal nutrition program for children during the summer, including the school lunch program, school breakfast program, SFSP, or the summer backpack program.

# Other Impacts of SEBTC Provide Context for Interpreting Children's Nutrition Outcomes

As background to interpreting the nutrition outcomes for children, we summarize the main 2012 findings for VLFS-C, benefit redemption, and household food expenditures. Among the group taking part in the demonstration, SEBTC significantly reduced VLFS-C in the summer of 2012 by 3.1 percentage points, from 9.5% of children in the control group, which did not receive SEBTC, to 6.4% of children in the treatment group, which did receive the benefit.

Considering all households assigned to receive the SEBTC benefit (both those who used it at least once and those who did not use it all), households redeemed an average of 77% of benefits issued for the summer. For the households that *participated* at all, i.e., made at least one SEBTC purchase, the mean amount *redeemed* was 86% of benefits issued. There was a difference in the amount of benefits redeemed between the sites depending on their approach (SNAP or WIC). The SNAP sites had the highest mean redemption rates among participating households, ranging from 91% to 98%. The WIC-model States had substantially lower mean redemption rates, ranging from 50% to 67%. In terms of SEBTC WIC foods, participating households redeemed higher proportions of milk, cheese, eggs, and juice (between 79% and 82% of these items were redeemed) and relatively lower levels of whole grains, beans or peanut butter, and fish (between 61% and 69% redeemed.)

The study also showed that SEBTC caused increases in total food expenditures (including the SEBTC benefit) by \$48 per household per month (Exhibit 1). This increase is the net result of redemption of the SEBTC benefit of \$91, less a smaller decline in out-of-pocket household food expenditures (\$43). Thus each dollar of SEBTC benefit redeemed led to a 53 cent increase in total household food expenditures. This net increase in food expenditure is considerably higher than standard estimates that a dollar of SNAP benefits leads to an increase in food expenditures of about 30 cents (Hanson, 2010).

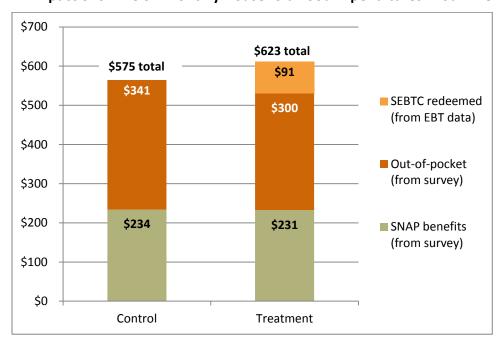


Exhibit 1. Impact of SEBTC on Monthly Household Food Expenditures in Summer 2012

Source: SEBTC, Summer Survey and SEBTC redemption data, 2012 (n=25,767).

Note: Numbers may not add due to rounding.

Out-of-pocket food expenditures and SNAP benefits were similar across SNAP-model and WIC-model sites; however, SEBTC benefits redeemed were almost \$27 lower in WIC-model sites than in SNAP-model sites. In addition, the overall increase in food expenditure is significantly smaller in WIC-model sites (\$33 vs. \$58).

# Impact on Children's Nutrition Status: Results and Discussion

In 2012, SEBTC improved most of the measured dietary indicators of children's nutritional status. While neither group's mean intake met the recommended 5 or more servings of fruits and vegetables per day (USDA and HHS, 2010), children receiving SEBTC benefits consumed 3.2 daily servings of fruits and vegetables per day versus 2.9 daily servings consumed by control children (Exhibit 2). SEBTC improved children's mean fruit and vegetable intake by one-third of a daily serving (0.36 cup equivalents; when using either measures that include or exclude fried potatoes). This impact, roughly equivalent to a third of a cup of raw fruit or two-thirds of a cup of salad greens for example, is on par with the Fresh Fruit and Vegetable Program intervention,

which improved treatment children's daily consumption of fruits and vegetables by one-third of a cup (Bartlett et al., 2013). 12

Exhibit 2. Impact of SEBTC on Children's Food Consumption in Summer 2012

Outcome	Sample Size	Control Group Consumption	Treatment Group Consumption	Impact on Food Consumption (T/C Difference)	SE	p-Value	% Change
Fruits and vegetables (servings per day) <sup>a</sup>	25,956	2.85	3.21	0.36***	0.03	<.0001	12.6%
Fruits and vegetables, without fried potatoes (servings per day) <sup>a</sup>	25,976	2.73	3.08	0.36***	0.03	<.0001	13.2%
Whole grains (servings per day) <sup>b</sup>	26,220	1.69	2.19	0.50***	0.05	<.0001	29.6%
Dairy products (servings per day) <sup>a</sup>	26,283	2.27	2.49	0.22***	0.02	<.0001	9.7%
Usually drank nonfat or low-fat milk (%) <sup>c</sup>	25,794	14.57	14.11	-0.46	0.70	0.5119	-3.2%
Added sugars (teaspoons per day) <sup>d</sup>	25,806	18.41	18.21	-0.20	0.18	0.2646	-1.1%
Added sugars excluding cereals (teaspoons per day) <sup>d</sup>	25996	17.27	16.77	-0.50***	0.16	0.0014	-2.9%
Sugar-sweetened beverages (teaspoons per day) <sup>d</sup>	26,321	8.36	7.73	-0.63***	0.17	0.0002	-7.5%

Source: SEBTC, Summer Survey, 2012.

<sup>&</sup>quot;% Change" is impact as a percent of control group level.

<sup>&</sup>lt;sup>a</sup> Daily servings of fruits and vegetables and dairy are measured in cup equivalents and in ounce equivalents for whole grains, as defined by the 2010 *Dietary Guidelines for Americans*. One fruit and vegetable serving is 1 cup raw or cooked fruit or vegetables, vegetable juice, or fruit juice; 2 cups leafy green vegetables; or 1/2 cup dried fruit. One dairy serving is 1 cup milk, fortified soy beverage, or yogurt; 1½ ounces natural cheese; or 2 ounces of processed cheese.

<sup>&</sup>lt;sup>b</sup> Whole grain servings are measured in ounce equivalents. One whole grain serving is 1 one-ounce slice bread; 1 ounce uncooked pasta or rice; 1/2 cup cooked rice; pasta; or cereal; 1 6-inch diameter tortilla; 1 5-inch diameter pancake; or 1 ounce ready-to-eat cereal.

<sup>&</sup>lt;sup>c</sup> Respondents who reported that their child consumed more than one type of milk were included if any the milk types reported were nonfat and low-fat. Those reporting only whole milk and/or 2% milk were not considered to usually consume nonfat or low-fat milk

<sup>&</sup>lt;sup>d</sup> Teaspoons of added sugars are derived from reported frequencies of consuming sugar-sweetened beverages (soda, fruit-flavored drinks, and sugar or honey added to coffee or tea); cookies/cakes/pies; doughnuts; ice cream; candy; and cereals.

<sup>&</sup>lt;sup>12</sup> Previous studies of school interventions aimed at intake of daily servings of fruits and vegetables have documented increases of 0 to 1.35 servings per day (Baranowski et al., 2000, French et al., 2003, and Reynolds et al., 2000).

Greater intake of nonfat or low-fat milk, fruits, vegetables (non-fried) and whole grains are associated with a more healthful diet (USDA and HHS, 2010). Cookies, cake, pie, doughnuts, brownies, and sugar-sweetened drinks are major sources of children's discretionary calories and are indicative of a less healthful diet (Malik et al., 2006; Pereira, 2006; Vartanian et al., 2007; Reedy and Krebs-Smith, 2010).

Children receiving SEBTC benefits consumed 2.2 servings of whole grains per day, which was a half of a daily serving more than the control group. This improvement, roughly equivalent to one-half slice of whole wheat bread or one-fourth of a cup of cooked brown rice for example, makes a substantial contribution towards the recommended 2.5 to 3.5 servings of whole grains per day. Treatment children consumed 2.5 servings of dairy products per day, nearly one-fourth of a daily serving (0.22 cup equivalents) more than control children and contributing to the higher end of the daily recommendation to consume 2 to 3 cup equivalents of dairy per day. However, a high proportion of children (85 to 86%) were not meeting the dietary guidelines recommendation to consume nonfat or low-fat milk and milk products. Usual consumption of nonfat or low-fat milk did not vary according to experimental groups; between 14 and 15% of children usually drank nonfat or low-fat milk.

The SEBTC intervention had no impact on total daily consumption of added sugars from foods and beverages. <sup>13</sup> When sugary cereals were excluded, treatment children's consumption of added sugars was lower than control children's consumption (1.4 versus 1.1 teaspoons per day), consistent with SEBTC children's consumption of sugar-sweetened cereals being higher than the control group. SEBTC lowered added sugars consumption from sugar-sweetened beverages by about 8%; SEBTC children consumed two-thirds of a teaspoon (approximately 10 calories) less added sugar per day than the control group.

The study assessed differences in impacts by the WIC and SNAP models. While there were no differential impacts on VLFS-C, impacts are consistently larger (towards more healthful food consumption) for children in sites using the WIC model than for those using the SNAP model, although in most cases there are statistically significant impacts for both sets of children in both types of sites (Exhibit 3). Impacts were twice as large for fruit and vegetable intake, four times as large for whole grains, and three times as large for dairy. For each of these outcomes, there is improvement for both the SNAP and the WIC models. For nonfat or low-fat milk, there is no pooled impact and no differential impact.

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<sup>&</sup>lt;sup>13</sup> The treatment and control groups consumed 18 teaspoons (270 calories) from added sugars per day.

Exhibit 3. Impact of SEBTC-WIC and SEBTC-SNAP on Children's Food Consumption in Summer 2012

	Control	Treatment	Difference	SE	p-value	% Change		
Fruits and vegetables (servings	per day) <sup>a</sup> (n=25	5,956)						
SNAP model	2.88	3.12	0.25***	0.03	<.0001	8.7%		
WIC model	2.82	3.33	0.51***	0.06	<.0001	18.1%		
Difference	-0.06	0.20	0.26***	0.07	0.0001	433.3%		
Fruits and vegetables without fried potatoes (servings per day) <sup>a</sup> (n=25,976)								
SNAP model	2.76	3.00	0.25***	0.03	<.0001	9.1%		
WIC model	2.69	3.19	0.51***	0.06	<.0001	19.0%		
Difference	-0.07	0.19	0.26***	0.07	<.0001	371.4%		
Whole Grains (servings per day) <sup>b</sup> (n=26,220)								
SNAP model	1.70	1.90	0.20***	0.06	0.0003	11.8%		
WIC model	1.69	2.57	0.89***	0.10	<.0001	52.7%		
Difference	-0.01	0.67	0.68***	0.11	<.0001	6800.0%		
Dairy Products (servings per day) <sup>a</sup> (n=26,283)								
SNAP model	2.27	2.38	0.11***	0.03	<.0001	4.8%		
WIC model	2.27	2.64	0.37***	0.05	<.0001	16.3%		
Difference	0.00	0.26	0.26***	0.05	<.0001	2600.0%		
Usually drank nonfat or low-fat milk (%) (n=25,794)								
SNAP model	17.66	17.76	0.09	0.92	0.9179	0.5%		
WIC model	10.36	9.26	-1.10	1.17	0.3464	-10.6%		
Difference	-7.30	-8.50	-1.19	1.50	0.4266	16.3%		
Added sugars (teaspoons per day) <sup>d</sup> (n=25,806)								
SNAP model	17.90	18.11	0.21	0.22	0.3415	1.2%		
WIC model	19.08	18.35	-0.73**	0.31	0.017	-3.8%		
Difference	1.18	0.24	-0.94**	0.38	0.013	-79.7%		
Added sugars excluding cereals (teaspoons per day) <sup>d</sup>								
SNAP model	16.69	16.74	0.05	0.19	0.8087	0.3%		
WIC model	18.04	16.82	-1.22	0.27	<.0001	-6.8%		
Difference	1.35	0.08	-1.27	0.33	0.0001	94.1%		
Sugar-sweetened beverages (teaspoons per day) <sup>d</sup> (n=26,321)								
SNAP model	7.60	7.48	-0.11	0.21	0.5808	-1.4%		
WIC model	9.37	8.05	-1.32***	0.30	<.0001	-14.1%		
Difference	1.77	0.56	-1.21***	0.36	0.0009	-68.4%		

Source: SEBTC, Summer Survey, 2012.

The p-values are based on a test of the difference between treatment group households and control group households. The null hypothesis being tested is that the treatment-control difference is zero (either the treatment-control difference in food consumption within a subgroup or a subgroup difference in the treatment-control difference in prevalence rates). \*p<.10 \*\*p<.05 \*\*\*p<.01

<sup>&</sup>quot;% Change" is impact as a percent of control group level.

<sup>&</sup>lt;sup>a</sup> Daily servings of fruits and vegetables and dairy are measured in cup equivalents and in ounce equivalents for whole grains, as defined by the 2010 *Dietary Guidelines for Americans*. One fruit and vegetable serving is 1 cup raw or cooked fruit or vegetables, vegetable juice, or fruit juice; 2 cups leafy green vegetables; or 1/2 cup dried fruit. One dairy serving is 1 cup milk, fortified soy beverage, or yogurt; 1½ ounces natural cheese; or 2 ounces of processed cheese.

<sup>&</sup>lt;sup>b</sup> Whole grain servings are measured in ounce equivalents. One whole grain serving is 1 one-ounce slice bread; 1 ounce uncooked pasta or rice; 1/2 cup cooked rice; pasta; or cereal; 1 6-inch diameter tortilla; 1 5-inch diameter pancake; or 1 ounce ready-to-eat cereal.

<sup>&</sup>lt;sup>c</sup> Respondents who reported that their child consumed more than one type of milk were included if any the milk types reported were nonfat and low-fat. Those reporting only whole milk and/or 2% milk were not considered to usually consume nonfat or low-fat milk.

<sup>&</sup>lt;sup>d</sup> Teaspoons of added sugars are derived from reported frequencies of consuming sugar-sweetened beverages (soda, fruit-flavored drinks, and sugar or honey added to coffee or tea); cookies/cakes/pies; doughnuts; ice cream; candy; and cereals.

Finally, for total daily added sugars, there is no pooled impact, but there is a differential impact: added sugars are lower in the WIC model, but not in the SNAP model. There is no pooled impact and no differential impact if cereals are excluded from the added sugars estimate. There is a pooled impact for added sugars from sugar-sweetened beverages; however, there is no impact for the SNAP model, but an improvement for the WIC model.

The evaluation also assessed whether there were differences in nutritional status by poverty status and found no differential impacts on nutritional outcomes (Collins et al., 2013).

### **Summary**

Food expenditures increased (by less than the full amount of the SEBTC benefit, but by more than would have been expected from the SNAP literature). Based on responses to the summer survey, children in households with SEBTC ate more fruits and vegetables, whole grains, and dairy foods; while consuming less added sugars from sugar-sweetened beverages. There was no impact on consumption of overall added sugars or nonfat/low-fat milk. SEBTC clearly improves some important aspects of children's diet quality (i.e., consumption of non-fried fruits and vegetables and whole grains). If maintained over time, these changes would be expected to lead to improved nutritional status. Positive impacts are present for SNAP model sites, but impacts are much larger for WIC model sites. Sites chose their delivery model, so these differential SNAP-model/WIC-model impacts need to be interpreted with care because differential impacts could be due to other site-related factors. With that important caveat, these much larger nutritional impacts provide support for the SEBTC WIC model if improving children's diet quality and nutrition status is a major goal.

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Appendix A. SEBTC Food Package in Sites Implementing the WIC Model

	Substitutes or	WIC Package					
	Food	for 1-4 Year Olds		\$60 SEBTC Package			
WIC Food Group	Subgroups	Quantity	Unit	Quantity	Unit		
Juice (100%)		128	Oz	64	Oz		
Milk, low fat/nonfat		13	Qt	12	Qt		
	Cheese	1	Lb	1	Lb		
Cereal, all		36	Oz	36	Oz		
Eggs		1	Doz	1	Doz		
Cash Value Voucher		6	\$	16	\$		
Bread, whole wheat		2	Lb	3	Lb		
Beans, dry		0.33	Lb	0.50	Lb		
	Bean, canned	21	Oz	32	Oz		
	Peanut Butter	6	Oz	18	Oz		
	Substitutes or	FY 2011 Food Pa	ckage Cost in	FY 2012 SEBTC \$60 Food			
WIC Food Group	Food Subgroups	Dollars (\$) Package Cost in		in Dollars (\$)			
Juice (100%)	7.47			2.37			
Milk, low fat/nonfat		12.14			9.60		
	Cheese	4.53		3.83			
Cereal, all		7.77			20		
Eggs	1.55			1.47			
Cash Value Voucher		6.00			16.00		
Bread, whole wheat		4.43			5.40		
Beans, dry		0.5	0.67				
	Bean, canned	1.5	2	1.80			
	Peanut Butter	0.8	7	2.72			
Canned fish, all		0.0	0	2.93			
		\$46.	81	\$53.00			

Source: Provided by the USDA, FNS for FY2011 in December 2010, and revised for FY2012 in January 2013.

Note: Cash voucher is for fruits and vegetables. Totals may not equal the sum of the individual items due to rounding of the cost of individual items.