Securing a Stop to the Summer Setback: Policy Considerations in the Future Expansion of the Summer Electronic Benefit Transfer for Children
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ABSTRACT
The Summer Electronic Benefits Transfer for Children (SEBTC) has been proposed as a solution to address the problem of child food security during the summer. Initial SEBTC findings from a demonstration project show promise and the federal government has approved substantial funding for its continuation. This report reviews empirical assessments of SEBTC and Electronic Benefits Transfer research, and presents policy considerations in the program’s future expansion.

Key Words: childhood obesity, dietary quality, children, USDA child meal programs, USDA electronic benefits programs, food insecurity (J Nutr Educ Behav. 2017;49:692-699.)

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INTRODUCTION
Federal child meal programs were established nearly 75 years ago to offset the problem of food insecurity among children living in limited resource households.1 During the school year, these include the US Department of Agriculture (USDA) National School Lunch Program (NSLP) and the School Breakfast Program, and when school is out of session, the Summer Food Service Program (SFSP). In terms of use, the SFSP has been relatively unsuccessful compared with the NSLP and School Breakfast Program. Not surprising and of concern, child food insecurity increases during the summer in places where fewer SFSP meals are provided.2

The 111th Congress responded to the problem by authorizing funding through Public Law 111-80, the 2010 Agriculture Appropriations Act, for the USDA Food and Nutrition Service (FNS) to conduct and evaluate strategies to improve food security of children during the summer.3 The Summer Electronic Benefit Transfer for Children (SEBTC) was 1 such approach. Similar to the well-established Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), SEBTC relies on electronic benefit transfer (EBT) technology to provide eligible participants with additional resources via a payment card to purchase authorized food items at participating retailers during the specific time frame of summer. Importantly, the SEBTC and SFSP (which provides meals and snacks for children at SFSP sites) are designed to act in concert, such that participation in SEBTC does not preclude participation in the SFSP.4

Initial findings from the SEBTC demonstration project show promise and the federal government has recommended and taken action toward its future expansion. Development and implementation of sound policy will be necessary for optimization of the SEBTC program. To achieve this goal, referencing the relevant EBT research will be critical. Considerations such as the amount and distribution frequency of benefits should be made.

The objective of this report is to provide research-informed policy considerations in the future expansion of the SEBTC that would lead to optimization of the program and ultimately establish the project as a permanent federal food assistance program by
1. Discussing underuse of the USDA SFSP and the potential of the SEBTC to address summer food insecurity among underserved children;
2. Reviewing empirical assessments of the SEBTC demonstration project and pertinent peer-reviewed EBT literature; and
3. Presenting policy considerations in the future expansion of the SEBTC.

DISCUSSION
Underuse of the USDA SFSP
The USDA aims to provide access to healthy, nutritious meals to children during the summer months through its SFSP.5 Although there has been a consistent increase in SFSP participation over the past decade, only a small
percentage of free or reduced-cost school lunch participants receive lunch over the summer (16.2% in 2014 and an even smaller percentage [15.8%] in 2015). There are stark differences in participation rates between states; the number of SFSP participants per 100 NSLP participants ranged from 6.4 (Oklahoma) to 51.9 (District of Columbia). In addition, there is great variation in SFSP participation by type of residential area, i.e., urban vs suburban vs rural. Slightly less than one third of all SFSP sites are located in rural areas, and even at well-established sites, fewer rural children participate in the SFSP compared with urban ones. Barriers to site establishment and participation in rural areas include difficulty meeting the income requirement owing to the geographical concentration of children in school districts and availability of transportation to sites.

Summer Electronic Benefit Transfer for Children: A Potential Solution to Addressing the Problem of Summer Food Insecurity

The SEBTC was 1 of 5 pilot programs conducted by the USDA FNS to address the underuse and inequitable reach of the SFSP. Table 1 provides an overview of the research design for the SEBTC demonstration project. Households were considered eligible for the SEBTC study if at least 1 child in prekindergarten through 12th grade in a participating site area was eligible for free or reduced-cost school meals. Households were randomized to 1 of 2 monetary allotments per eligible child in the household per month when school was not in session; for partial summer months, a prorated amount was provided. The ability to randomize participants was a unique feature of this pilot program compared with an evaluation of other food assistance programs for which the statutory right to benefits applies.

In summers, 2011 and 2012, households were provided either $60 or $0, and in summers, 2013 and 2014, households were provided either $60 or $30. Money was delivered through EBT technology with the grantee given the option to follow either SNAP or WIC food purchasing rules (Table 1). Households receiving SEBTC benefits following SNAP rules could use the additional money to purchase any SNAP-eligible foods. Households receiving SEBTC benefits following WIC rules could use the money to purchase approved foods. Because the WIC-approved food package is intended to feed preschool-aged children, grantees who chose to follow WIC program rules collaborated with the FNS to develop age- and culturally appropriate WIC SEBTC packages.

The overall participation rate, defined as having redeemed additional SEBTC benefits at least once during the summer, among households receiving $30 or $60 was approximately 90%. When comparing the $60 and $30 benefits with no benefit, both significantly improved child food insecurity and the proportion of very low food security ($ < .01) as defined by the USDA Household Food Security Survey Module. The prevalence of child food insecurity was lower in households that received the $60 SEBTC benefits, compared with households that received the $30 SEBTC benefits ($ < .01), and there was a marginally significant decline in very low food security ($ < .10). When the researchers examined the aggregate impact of any monetary SEBTC benefit ($30 or $60) on nutritional outcomes, consumption of fruits and vegetables, whole grains, and dairy products increased significantly ($ < .01). There was no significant impact on overall added sugars, but added sugars from sugar-sweetened beverages decreased significantly ($ < .01). In terms of nutritional impacts, the most significant outcomes were seen when comparing the $60 benefit with no benefit; however, some significant differences were demonstrated when comparing the $60 benefit to the $30 benefit with regard to fruit and vegetable and dairy consumption.

IMPLICATIONS FOR RESEARCH AND PRACTICE

Initial findings from the SEBTC demonstration project show promise, including successful engagement of participants, improvements in food security, and diet quality. Consequently, the federal government has recommended its future expansion. Specifically, the Stop Child Hunger Act of 2015 (HR 2715) was introduced into the House on June 10, 2015, which proposed a single $150 distribution of benefits (per child per household) during the summer. The latest action of this bill occurred on November 16, 2015, when it was referred to the Subcommittee on Early Childhood, Elementary, and Secondary Education. On January 27, 2016, President Barack Obama proposed $12 billion over 10 years in the 2017 budget for child meal–eligible families to receive $45/child through EBT each month when school is out of session. On April 12, 2016, the House Appropriations Committee approved the financial year 2017 Agricultural Appropriations Bill, designating $21 million for the continuation of the SEBTC demonstration project.

Based on current findings and recent legislative activity, there is evident need and political drive to continue the SEBTC project and ultimately establish it as a permanent federal food assistance program. In this report, results from the SEBTC demonstration project were considered in reference to other relevant EBT literature to provide recommendations to ensure that the program is implemented optimally to achieve its intended goal of improved child health and food security during the summer. The researchers make 2 recommendations.

First, a benefit amount of at least $60/mo is recommended. Sixty dollars was determined to be comparable to the food cost portion of free school lunch and breakfast. In 2013, the second level of benefit, which was $30, was added to the evaluation plan. This level of benefits was tested because SEBTC was considered a supplement, rather than a replacement, to the existing SFSP. Although positive findings were demonstrated at both levels of benefit, the $60 benefit improved food security and diet quality at a level that was significant compared with the $30 benefit. There was also some evidence, although not significant, that SEBTC participation may negatively affect SFSP participation, which calls into question the supplemental, as opposed to replacement, nature of the SEBTC.

Second, a cost–benefit analysis of single vs bimonthly SEBTC benefits...
is recommended. In the 2011–2014 SEBTC demonstration project, participants received benefits once per month for the summer. In all recent federal actions, a single (HR 2715) distribution or monthly distribution (current SEBTC method; President Obama’s 2017 budget proposal) has been proposed. However, a monthly distribution benefit cycle may result in negative impacts on diet and health. More specifically, whereas the permanent income hypothesis posits that individuals or households smooth their expenditures throughout the month and do not concentrate expenditures and consumption around times of income receipt,\textsuperscript{19-22,35} research emerged indicating that this may not be the case, especially among low-income households. The first of the month effect is a phenomenon that has been recognized as the cyclical pattern of expenditure and consumption based on the timing of government benefits.\textsuperscript{23} Twelve studies were identified that examined the impact of disbursement of SNAP benefits through EBTs on diet quality\textsuperscript{22-30} (n = 9), behavioral outcomes\textsuperscript{31,32} (n = 2), and the incidence of hypoglycemia\textsuperscript{33} (n = 1) (Table 2). A majority (n = 10) of the studies explored outcomes in adult populations; however, the 2 behavioral outcome studies examined disciplinary incidents among children in schools. All of the studies were observational and cross-sectional in nature.

Overall, low-income households use various expenditure strategies and spend money on and consume food cyclically depending on when they receive government benefits.\textsuperscript{20,23,30,34} The various expenditure strategies are employed as a response to several constraints, including transportation, food storage, and liquidity.\textsuperscript{20,37} These limitations result in the use of different retail channels, i.e., grocery vs convenience store, at different times of the month, which is concerning owing to food access, food quality, and price inequality at these smaller food retail venues, which are ubiquitous in underserved communities.\textsuperscript{35-38} Some of these concerns were confirmed in this review of literature, in that it was consistently demonstrated that the current food benefit cycle (single, monthly distribution) results in an overall decline in diet quality, nutrient intake, and food energy intake, as well as increased hypoglycemia emergency room visits, at the end of the month.\textsuperscript{20,24-30,33} In addition, the timing of benefit transfer negatively affected child behavior in school.\textsuperscript{31,32}

In a 2004 article, Shapiro\textsuperscript{4} presented results from a cost–benefit analysis of a twice-monthly vs once-monthly issuance scheme. The main finding was that the additional costs incurred for authorizing and delivering benefits twice vs once monthly would outweigh the potential nutrition advantages.\textsuperscript{4} However, an updated cost–benefit analysis is warranted given advances in systems and technology that may ameliorate some of the administrative costs. More recently, Gorczycki\textsuperscript{39} conducted in-depth interviews with 31 SNAP stakeholders (recipients, food pantry managers, and retail managers) along with a review of literature to examine the costs and benefits of a bimonthly dispersion of benefits. Over half of the participants (58%) stated that a change in frequency of benefit

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<th>Study Design Characteristic</th>
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<td>Year 1: 2011 $60 vs $0</td>
<td>5: Connecticut, Michigan, Missouri, Oregon, and Texas</td>
<td>3 SNAP</td>
<td>12,500 children</td>
<td>9,700</td>
<td>Implementation; SEBTC Use; Impact</td>
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<td>Year 2: 2012 $60 vs $0</td>
<td>10: Cherokee Nation, Chickasaw Nation, Connecticut, Delaware, Michigan, Missouri, Nevada, Oregon, Texas, and Washington</td>
<td>8 SNAP</td>
<td>67,000 children</td>
<td>42,000</td>
<td>Implementation; SEBTC Use; Impact</td>
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<td>Year 3: 2013 $60 vs $30</td>
<td>4: Chickasaw Nation, Delaware, Michigan, Oregon</td>
<td>4 SNAP</td>
<td>100,000 children</td>
<td>23,000</td>
<td>SEBTC Use; Impact</td>
</tr>
<tr>
<td>Year 4: 2014 $60 vs $30</td>
<td>3: Cherokee Nation, Oregon, and Michigan</td>
<td>2 SNAP</td>
<td>20,000 children</td>
<td>10,300</td>
<td>Implementation; SEBTC Use</td>
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SNAP indicates Supplemental Nutrition Assistance Program; WIC, Special Supplemental Nutrition Program for Women, Infants, and Children.

\textsuperscript{a}Source: Collins et al, 2016.\textsuperscript{11} Notes: In 2013, grantees also provided benefits to all households in all of the sites that receive SEBTC benefits in 2012 and remained eligible. These households did not participate in the SEBTC evaluation, which are included in the total. Households were randomized to 1 of 2 monetary allotments per eligible child in the household per month when schools were not in session; for partial summer months, a prorated amount was provided.
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<th>Data and Measured Outcomes</th>
<th>Key Findings</th>
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| Burke, 2005       | To examine energy and nutrient intake over the course of the SNAP benefit cycle | • n = 62  
• Adult females  
• Southeast Louisiana | • USDA Food Security Survey Module, modified  
• 1 24-h recall at beginning of month and 1 24-h recall at end of month | • Significant within-food security group differences for various nutrients were observed when comparing intake at beginning of month with end of month  
• Energy and nutrient intakes were not significantly different between food security groups, except for cholesterol ($P = .03$); cholesterol was higher at beginning of month for more food-insecure individuals and lower at end of month for more food-insecure individuals |
| Castellari et al, 2015 | To examine the relationship between timing of SNAP receipt and food consumption patterns | • About 100,000 households | • 2004–2011 Nielson Homescan Consumer Panel Dataset: Purchases at daily level and purchases at monthly level  
• Considered all SNAP-eligible households as SNAP recipients  
• Food good examined: milk, bread, and soft drinks | • For all goods, there were significant, positive relationships ($P < .001$) between time of purchase and SNAP benefit receipt |
| Damon et al, 2013 | To examine household food expenditure patterns by SNAP distribution and retail type | • 7 metropolitan areas: Detroit, Memphis, New York City, Washington, DC, Atlanta, Baltimore, Boston, Milwaukee, New Orleans/Mobile, Philadelphia | • 2003 Consumer Expenditure Survey  
• 2003 Nielson Homescan Consumer Panel Dataset  
• Early vs staggered SNAP payment schedule  
• Low-income vs high-income household | • Regardless of payment schedule, there were increased expenditures at drugstores after first week of month  
• Comparing low-income household on early payment schedules with households on staggered payment schedules:  
• There was a significant decline in food purchases by end of month  
• Grocery and supercenter/mass merchandiser/warehouse club stores purchases were concentrated at beginning of month |

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| Goldin et al, 2016 | To examine the effect of staggering benefit issuance on food expenditures among SNAP participants | - 40–60,000 households  
- 35,000 retail stores | - 2004–2013  
Kilts-Nielsen Consumer Panel Dataset  
- 2006–2012  
Kilts-Nielsen Retail Scanner Dataset | followed by supplemented purchases at convenience stores and expenditures on food away from home later in month  
- Cyclical food expenditures were more pronounced for SNAP-eligible participants compared with non–SNAP eligible participants  
- Food expenditures decreased by 22% to 32% among SNAP-eligible participants compared with 2% to 5% among non–SNAP eligible participants; overall 27% reduction in expenditures from first week of month to last week of month comparing SNAP-eligible participants with non–SNAP eligible participants  
- Macronutrient intake may be U-shaped with regard to SNAP receipt cycle, suggesting consumption of foods that are cheaper and more accessible, and have a longer shelf-life  
- When examining food choices, there was a significant difference for all food categories (continued) |
| Kharmats et al, 2014 | To examine the relationship between the SNAP benefit stage and dietary outcomes | - n = 244  
- Low-income, African American adults  
- Baltimore, MD | - One 24-h dietary recall: macronutrient consumption, HEI score, fruit and vegetable consumption  
- SNAP benefit > or ≤ 15 d from day of survey | Participants surveyed ≤15 d: Calories and HEI scores were lower for each 1 day since SNAP receipt  
- Participants surveyed >15 d: Energy, total fat, saturated fat, and protein were higher for each 1 day since SNAP receipt  
- Macronutrient intake may be U-shaped with regard to SNAP receipt cycle, suggesting consumption of foods that are cheaper and more accessible, and have a longer shelf-life  
- When examining food choices, there was a significant difference for all food categories (continued) |
| Malkin-Washeim, 2015 | To examine food choice decisions among SNAP benefit recipients | - n = 36  
- Prediabetic adults aged 18–70 y | - Food frequency questionnaire: National Cancer Institute Dietary Health | (continued) |
Table 2. Continued

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<tr>
<td>Shapiro et al, 2004</td>
<td>To examine the nutritional intake of SNAP recipients over the course of the SNAP benefit cycle</td>
<td>● South and Central Bronx, NY</td>
<td>Questionnaire 2: food choices and food expenditures (except sweetened beverages when comparing weeks 1 and 2) when comparing weeks 1 and weeks 2, 3, and 4, respectively ( P &lt; .05, &lt; .01, ) and (&lt; .005)</td>
<td>● SNAP participants consumed 54.1%, 27.3%, 10.3%, and 8.2% of foods in weeks 1, 2, 3, and 4, respectively</td>
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<td>Todd, 2015</td>
<td>To examine the monthly cycle of daily food intake among SNAP participants</td>
<td>● Nationally representive datasets</td>
<td>1989–1991 CSFII: Consumption patterns of SNAP recipients</td>
<td>There was a 0.40% decline in calorie intake each day after SNAP benefit receipt, resulting in an overall 10% to 15% decline over the entire month</td>
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<td>Cognitive outcomes</td>
<td></td>
<td>● ( n = 2,875 ) SNAP households (CEX)</td>
<td>1988–1991: Individual daily intake</td>
<td>● Significant decline in HEI in last week of month ( P &lt; .01 )</td>
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<tr>
<td>Gassman-Pines and Bellows, 2016</td>
<td>To examine school disciplinary incidents as they relate to SNAP benefit receipt</td>
<td>● ( n = 395,710 ) Students aged 5–18 y North Carolina public schools</td>
<td>1998–1992 CEX: household daily expenditures</td>
<td>● Within first 3 d of SNAP benefit receipt, mean household food intake peaks</td>
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<td>● North Carolina Education Research Data Center: number and severity of disciplinary incidents</td>
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<td>● Among once a month shopping households, mean calorie intake decreases significantly by week 4</td>
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<td>● Among households that shop more frequently, energy intake does not decrease significantly throughout month</td>
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<td>● An increase in student disciplinary incidents occurs as time from SNAP benefit receipt increases:</td>
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distribution would have no effect, whereas 6.5\% stated that it would have a positive effect and 35.5\% stated that it would have a negative effect.\textsuperscript{39} Gorczycki’s recommendation was to conduct an actual cost–benefit analysis tracking changes in food spending among 1,000 recipients who receive benefits bimonthly.\textsuperscript{39} It remains to be determined whether and to what extent these results hold true for other temporary benefits programs such as SEBTC.

Working in concert with the SFSP, the SEBTC has been proposed as a solution to address the problem of child food security during the summer. Initial SEBTC findings from the demonstration project show promise; accordingly, the federal government approved substantial funding for its continuation. Before expanding the program, there is a need to examine results from the SEBTC demonstration project in correspondence with the relevant peer-reviewed EBT literature, to develop sound policy that will ensure program optimization so that it may achieve its intended goal: improving child health and food security when school is out of session. Based on a review of empirical assessments of SEBTC and relevant EBT literature, research-informed policy considerations in the program’s future expansion include the amount of benefit ($60 vs $30) and timing of benefit distribution (monthly vs bimonthly).

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2. Nord M, Romig K. Hunger in the summer: seasonal food insecurity and the National School Lunch and

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<tr>
<td>Gennetian et al, 2015\textsuperscript{32}</td>
<td>To examine school disciplinary incidents as they relate to SNAP benefit receipt</td>
<td>Students in grades 5–8 Chicago public schools</td>
<td>- SNAP recipient data from Division of Social Services in North Carolina Department of Health and Human Services - Random, 19-d SNAP distribution schedule</td>
<td>- Odds of any incident 30 d after SNAP receipt are 4.35 times higher than on day of receipt - Odds of serious incident 30 d after SNAP receipt are 3.19 times higher than on day of receipt - From first week of month to last week of month, disciplinary incidents increase by 48% SNAP recipient students compared with 39% for non–SNAP recipient students</td>
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Hypoglycemia and diabetes

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<tr>
<td>Seligman et al, 2014\textsuperscript{33}</td>
<td>To examine the incidence of emergency room hypoglycemia admissions by income level</td>
<td>n = 5,177 Patients aged ≥18 y</td>
<td>- 2000–2008 California Office of Statewide Health Planning and Development administrative data - Hospital discharges associated with hypoglycemia - Low-income vs high-income: linked household zip code to mean annual income Internal Revenue Service data for that zip code</td>
<td>- Number of household admissions increased from 230 during first week of month to 290 during fourth week of month among low-income individuals (P = .02) - Hypoglycemia admission risk increased by 27% during last week of month compared with first week of month in low-income patients (P &lt; .001)</td>
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CEX indicates Consumer Expenditure Dietary Survey; CSFII, Continuing Survey of Food Intake by Individuals; HEI, Healthy Eating Index; SNAP, Supplemental Nutrition Assistance Program; USDA, US Department of Agriculture.
CONFLICT OF INTEREST

The authors have not stated any conflicts of interest.