

Georgia 2019 SNAP-Ed Programs Outcome Evaluation Report

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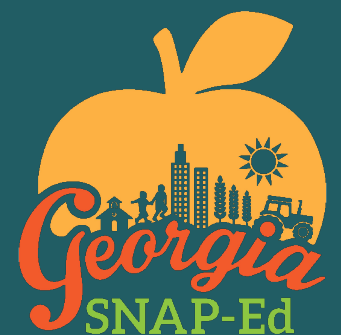


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Executive Summary

Background and Aims: Georgia's Supplemental Nutrition Assistance Program – Education (SNAP-Ed) is administered by the Georgia Division of Family & Children Services who partners with four implementing agencies, HealthMPowers (HMP), Open Hand Atlanta (OH), the Georgia Department of Public Health (GDPH), and the University of Georgia (UGA) to promote healthy lifestyles, increase food security through food resource management strategies, and increase levels of physical activity in low-income communities across the state.

The aim of this study is to assess whether Georgia's SNAP-Ed programs are associated with improvements in healthy eating behaviors (MT1) and food resource management (MT2), and to identify the number of policy, systems, and environmental (PSE) changes (MT5 and MT6) as defined in the *SNAP-Ed Evaluation Framework* (USDA-FNS, 2016). Specifically, the aims are to use evaluation data collected during the federal fiscal year 2019 to: 1) identify changes in self-reported healthy eating (MT1) and food resource management behaviors (MT2) before and after a SNAP-Ed evidence-based program has been implemented, and 2) measure the PSE changes (MT5 and MT6) that are adopted at the SNAP-Ed intervention sites supported by the implementing agencies.

Methods: Data were provided by the four SNAP-Ed Implementing Agencies (IAs) operating in the state of Georgia. Data were collected using pre- and post-surveys for healthy eating (MT1) and food resource management (MT2) behavior indicators. Sites used various instruments to collect information about seven MT1 and six MT2 indicators. Therefore, the specific questions and responses varied for each site. To account for these differences, each question used was evaluated by the Public Health Institute Center for Wellness and Nutrition (PHI CWN) Evaluation Team staff to determine if it met the criteria of the *Framework*. If the question met the criteria, the responses were recoded by the IAs so that they could be standardized across sites using guidelines developed by PHI CWN. The guidelines used were based on meeting the *Dietary Guidelines for Americans* (DGA) (MT1) or recommendations for positive outcomes related to food resource management behaviors (MT2). IAs submitted their summary data to PHI CWN in standardized, Excel templates. Matched cases were statistically analyzed to assess differences from pre-test to post-test on meeting recommendations for dietary and resource management behaviors.

Policy, systems, and environmental (PSE) change (MT5) data were collected using direct observation, interviews with key informants, repeated assessments or surveys, and photographic evidence. Sites submitted data on PSE changes using a standardized, Excel template. Descriptive analyses were conducted to calculate the number of PSE changes and the estimated reach of those changes.

Results: Results from pre- and post-survey analyses showed improvements in self-reported healthy eating and food resource management behaviors. Out of 25 analyses, 15 showed a statistically significant change. Out of the 15 statistically significant analyses, 12 showed either a small (6) or a medium (6) effect size.

A total of 432 PSE changes reaching 244,956 people across 265 sites were recorded. The highest number of PSE changes were systems changes ($n=231$), followed by environmental changes ($n=146$), and policy changes ($n=55$). Of the PSE changes conducted in 2019, IAs identified 251 as new and 71 as being maintained. The most common systems change implemented was improvements in free water access, taste, quality, smell, or temperature ($n=46$). The most common policy change was improved hours of operation to improve access/convenience ($n=33$). The most common environmental change was edible gardens (establish, reinvigorate, or maintain food gardens) ($n=79$). The highest number of PSE changes were reported in schools ($n=124$), followed by early care and education ($n=90$).

Conclusions and recommendations: Georgia SNAP-Ed programs are associated with significant, positive improvements in self-reported healthy eating behaviors and food resource management behaviors. Adults showed the greatest number of improvements followed by early childcare settings. Georgia SNAP-Ed also boasts a thriving program of PSE nutrition and physical activity interventions that support healthier eating. Georgia SNAP-Ed collectively implemented 432 supports to make the healthy choice the easy choice primarily in the learn, play, and shop settings reaching more than 240,000 low-income Georgians.

While the highest absolute number for PSE was reported in the school learn setting, individual-level behaviors only had a few that were significantly different after participation in SNAP-Ed programs in this setting. It is recommended that Georgia youth programs explore innovative ways to reach children and teens using a mix of education, social marketing, digital and youth engagement approaches for children in elementary, middle and high school settings to have a further impact on healthy eating behaviors. Programs need stronger focus on fruit and vegetable consumption using interactive approaches and culturally appropriate produce items and recipes and strategies to increase visibility and access to fruits and vegetables is encouraged, particularly in the adult setting. Continuing to promote drinking more water and reducing sugar sweetened beverages consumption across all age groups is encouraged. Small and medium effects are seen in adults, children, and preschool-children. Georgia should explore improvements to aggregating data across the implementing agencies. By recoding response options to aggregate questions into dichotomous variables, analyses lost sensitivity to detect incremental change. Using a standardization subset of questions in future years would allow us to detect changes in participants eating behaviors that recoding might otherwise miss.

Background

The Supplemental Nutrition Assistance Program (SNAP) formerly known as Food Stamps, administered by the United States Department of Agriculture (USDA), is the largest federal food safety net program in the United States that offers nutrition assistance to millions of eligible, low-income individuals and families to reduce hunger and help put healthy food on the table. The SNAP-Education program of SNAP is designed to increase the likelihood that individuals with limited budgets can eat a healthy diet and achieve a physically active lifestyle based on the *Dietary Guidelines for Americans* (DGA) and reduce obesity through public health approaches. The DGA provide evidence-based nutrition information and advice for people ages two and older to help Americans make healthy choices about food and beverages in their daily lives. These recommendations include the amount of macro and micro nutrients Americans need and recommend a plant centric diet rich in fruits and vegetables and whole grains and legumes while limiting added sugars, salt and fats (U.S. Department of Health and Human Services & U.S. Department of Agriculture, 2015). SNAP-Education also uses the *Physical Activity Guidelines for Americans* similar to the DGA provides science-based guidance and recommendations for Americans to improve their health through participation in regular physical activity both aerobic and strength building and reducing sedentary lifestyles for better health (U.S. Department of Health and Human Services, 2018).

Georgia's SNAP-Education program is administered by the **GEORGIA DIVISION OF FAMILY & CHILDREN SERVICES** and aims to improve the health of low-income Georgians by providing nutrition education, social marketing campaigns, and increasing access to healthy foods. SNAP-Education empowers low-income families with the skills they need to make healthy food choices and be physically active.

In 2018, Georgia was ranked 21st among states for the highest adult obesity rate of 32.5% (Warren, Beck, Deigado, 2019). However, adults are not the only ones affected by obesity. Data from 2016-2017 showed that Georgia's children and teens ages 10 to 17 had a rate of obesity at 18.4% (Warren, Beck, Deigado, 2019).

Obesity increases the risk of certain health conditions, which include heart disease, stroke, and type 2 diabetes (Centers for Disease Control and Prevention, 2016). In 2018, Georgia's adult diabetes rate was 12.6% and the rate of adult hypertension was 33.1% (Reilly & Kelly, 2010). Additionally, low-income populations have the highest rates of obesity and diabetes in the US (Krewnowski & Darmon, 2005). In 2018, Georgia had roughly 30% of its population under 185% of the federal poverty level (U.S. Census Bureau, 2018). This highlights the importance of Georgia's SNAP-Education work to improve health outcomes for its low-income residents.

The **GEORGIA DIVISION OF FAMILY & CHILDREN SERVICES** partners with four implementing agencies, **HealthMPowers**, **Open Hand Atlanta**, the **Georgia Department of Public Health**, and the **University of Georgia** to promote healthy lifestyles, increase food security through food

resource management strategies, and increase levels of physical activity in low-income communities across the state where families live, work, learn, shop, and play.

This is accomplished using two primary strategies: direct-education and PSE changes. Direct-education interventions, which consist of in-person, interactive classes and hands on activities are aimed at teaching healthy eating behaviors and skills to cook and eat healthier and practical strategies to stretch limited food dollars. Policy, systems, and the environmental changes are healthy changes that aim to make the healthy choose the easy choose where participants eat, learn, live, play, shop, and work. An example of a policy change might consist of a school formalizing a written policy to reduce the use of unhealthy food as a reward. Systems changes are less formal changes in the ways in which business is done, such as a school cafeteria implementing a farm-to-school program. An environment change consists of changing the physical environment to increase healthful behaviors. An example might be a store rearranging its displays for a healthy checkout lane prominently displaying healthy food and removing unhealthy foods and beverages from this area.

In federal fiscal year (FFY) 2019, Georgia’s IAs identified common direct-education and PSE SNAP-Ed indicators to evaluate on across all IAs. The selected direct-education indicators are Healthy Eating Behaviors (MT1) and Food Resource Management Behaviors (MT2). The PSE indicators are Nutrition Supports (MT5) and Physical Activity and Reduced Sedentary Behavior Supports (MT6).

The following tables identify all of the indicators on which an IA could report, but not all IAs reported on every indicator.

Table 1. Healthy Eating Behaviors (MT1) indicators and definitions

Indicator	Definition	Reported by IA
MT1c	Ate more than one kind of fruit throughout the day or week	GDPH, HMP, OH, UGA
MT1d	Ate more than one kind of vegetable throughout the day or week	GDPH, HMP, OH, UGA
MT1g	Drinking water more frequently	GDPH, HMP, OH, UGA
MT1h	Drinking fewer sugar-sweetened beverages	GDPH, HMP, OH, UGA
MT1i	Consuming low-fat or fat-free milk (including with cereal) and milk products (e.g. yogurt or cheese)	GDPH, OH

MT1l	Cups of fruit consumed per day	GDPH, UGA
MT1m	Cups of vegetables consumed per day	GDPH, UGA

Table 2. Food Resource Management Behaviors (MT2) indicators and definitions

Indicator	Definition	Reported by IA
MT2a	Choose healthy foods for my family on a budget	GDPH, UGA
MT2b	Read nutrition facts labels or nutrition ingredients lists	GDPH, OH, UGA
MT2g	Not run out of food before month's end	GDPH, UGA
MT2h	Compare prices before buying foods	GDPH, OH, UGA
MT2i	Identify foods on sale or use coupons to save money	GDPH, UGA
MT2j	Shop with a list	GDPH, OH, UGA

Table 3. PSE Nutrition Supports (MT5)

Indicator	Definition
MT5b	Total number of policy changes
MT5c	Total number of systems changes
MT5d	Total number of environmental changes
MT5e	Total number of promotional changes
MT5f	Reach - Total potential number of persons who encounter the improved environment or are affected by the policy change on a regular basis and are assumed to be influenced by it

Table 4. PSE Physical Activity and Reduced Sedentary Behavior Supports (MT6)

Indicator	Definition
MT6b	Total number of policy changes

MT6c	Total number of systems changes
MT6d	Total number of environmental changes
MT6e	Total number of promotional changes
MT6f	Reach - Total potential number of persons who encounter the improved environment or are affected by the policy change on a regular basis and are assumed to be influenced by it

Methods

Using the indicators selected by the Georgia IAs and data collected by the IAs in FFY 2019, the Public Health Institute Center for Wellness and Nutrition (PHI CWN) conducted analyses to evaluate Georgia's direct-education and PSE activities during that fiscal year.

Data Sources

Data were provided by all four IAs in Georgia. The data were collected from SNAP-Ed direct-education and PSE interventions targeting children, teens, adults, and seniors. Interventions were evidence based and developed to address the specific needs of each age group. The interventions were targeted toward the SNAP-Ed Framework Healthy Eating Behaviors (MT1) and Food Resource Management Behaviors (MT2), as well as PSE Nutrition Supports (MT5) and Physical Activity and Reduced Sedentary Behavior Supports (MT6) SNAP-Ed indicators (USDA-FNS, 2016). All IAs used evidence-based curricula, although the exact curricula used by each site varied.

Direct-education

Data were collected at each site conducting direct-education using pre- and post-surveys that measured Healthy Eating (MT1) and Food Resource Management (MT2) behaviors. Pre-surveys were delivered on the first day of the intervention and post-surveys on the last day of the intervention. In accordance with the *Interpretive Guide to the SNAP-Ed Evaluation Framework* (USDA-FNS, 2016) IAs used validated surveys to collect information about the MT1 (7) and MT2 (6) indicators. To collect this information, IAs used one of nine surveys resulting in a variety of questions used and responses received. To account for differences between instruments, PHI CWN developed guidelines for recoding survey responses for the MT1 and MT2 indicators. PHI CWN previously reviewed each survey question to determine its fit for evaluating direct-education in accordance with the *SNAP-Ed Evaluation Framework* (USDA-FNS, 2016). For healthy eating behavior (MT1) changes, responses will be recoded to identify whether the participant meets or does not meet the standards set by the *Dietary Guidelines for Americans*. For food resource management (MT2), PHI CWN will use its previously determined cutoffs for the indicators related to food security and food resource management. Participant responses will be coded as meeting or not meeting those cutoffs.

Each IA used these standards/cutoffs to recode participant responses to each question from pre- and post-surveys to indicate whether the participant meets or does not meet guidelines defined by PHI CWN based on the DGA and reviewed by nutrition evaluation experts with regard to content validity for each question. This method will be referred to as PHI CWN scoring throughout the plan.

Each question used was evaluated by PHI CWN staff to determine whether it met criteria for the indicators of interest to Georgia SNAP-Ed Indicators. If it met the criteria, the responses to each question were recoded by the IAs so that they could be standardized across sites.

In an Excel template, each IA indicated whether a participant's response at pretest either met or did not meet dietary guidelines. The same procedure was used for coding post-test responses. There was an exception to this procedure for two indicators, MT1l and MT1m, for which the exact numbers of reported cups of fruit and cups of vegetables were recorded by the IAs (continuous variable).

Descriptive analyses included all pre-test and post-test responses. Direct-education participants' responses were included in inferential analyses if both a pre-test and a post-test response was present. A total of 10,503 participants were included in the analyses and 1,467 unmatched pre- and post-test responses were excluded.

Policy, Systems, and Environmental Changes

Evaluation data for MT5 were collected using direct observation, repeated assessments or surveys, and photographic evidence, as recommended by the *Interpretive Guide to the SNAP-Ed Evaluation Framework* (USDA-FNS, 2016). With the IAs, PHI CWN developed a standardized template and definitions for reporting PSE sites and changes, as well as promotional efforts associated with PSEs in Georgia. The IAs used this standardized Excel template to ensure that the information collected was uniform. The template provided drop down menus to indicate the PSE change and promotional effort used. Any duplicated items reported for a site were deleted and not included in analyses. No other items were excluded from analysis. The items in each list were derived from options provided by the *Interpretive Guide* (USDA-FNS, 2016). Because the list of options was not exhaustive, IAs had the option of providing a description of the work done in an additional field. PHI CWN reviewed the entered items to determine that they fit within the *SNAP-Ed Evaluation Framework* prior to conducting analyses.

IAs reported reach (MT5f) as the “total potential number of persons who encounter the improved environment or are affected by the change on a regular (typical) basis and are assumed to be influenced by it,” as recommended in the *Interpretive Guide* (USDA-FNS-2016). There was no limit on how many PSE changes or promotional efforts the IAs could report at each site, but the reach of the PSE change at each site was only counted once. For example, if one site reported one policy change with a reach of 100 children and one systems change with a reach of 150 children, then the site would be reported as having completed two PSE changes with a reach of 150 children.

Data from each Georgia IA were combined into two datasets for analysis. One dataset for direct-education and a second dataset for PSE changes.

Outcomes

The primary outcome related to healthy eating behaviors was whether a significant difference was observed for participants who met the recoding standards from pre- to post-test for Healthy Eating Behaviors (MT1) and Food Resource Management Behaviors (MT2). Additionally, descriptive statistics are provided by IA, language, and congressional district, identifying the proportion of those who met or did not meet the guidelines set by PHI's coding rules.

Eight outcomes related to PSE changes were analyzed: number of policy changes (MT5b and MT6b), number of systems changes (MT5c and MT6c), number of environmental changes (MT5d and MT6d), and number of promotional changes to support PSE (MT5e and MT6e). A sum was computed for reach (MT5f and MT6f).

Analysis

Individual Behavior Changes

Two statistical analyses were used for direct-education data. For categorical variables, a McNemar test was used to determine whether there was a significant change from pre- to post-survey. For continuous variables (MT1l and MT1m), a *t*-test was used to determine whether there was a significant change in reported means from pre- to post-survey. When a significant difference was identified, a test of effect size was used to provide information on the magnitude of the change. A statistical significance criterion of p -value < 0.05 was set for each test, separately.

All analyses were conducted using SPSS statistical software. To confirm the accuracy of all analyses, two PHI CWN researchers conducted analyses using identical methodologies and verified that their results were identical.

PSE Changes

No statistical analyses were used in the analysis of PSE changes. Instead, descriptive statistics (counts and proportions) were provided to represent the work conducted by the IAs. Counts were computed for all PSE types (policy, systems, environmental) as well as promotional efforts and a sum was computed for Reach. The total numbers of PSE changes taking place in each PSE setting (e.g., worksites, schools, food stores) were also counted.

Results

Direct-education

Descriptives

The IAs reported that 11,809 low-income Georgians participated in direct-education classes in FFY 2019. Among participants, 15.7% were black, 7.0% were white, and 2.9% were Hispanic. For 74.8% of participants, race was either not collected or it was not disclosed by the participant. A full breakdown is provided in Table 5. The IAs served 2,535 adults; 3,353 teens, aged 12 to 17; 4,879 school-age children, aged 6 to 11 years; and 1,134 preschool-age children, aged 2 to 5 years old. Of the direct-education interventions provided, 8,714 (72.8%) were provided in English, 178 (1.5%) were provided in Spanish, and 3,078 (25.7%) did not report the language. Georgia SNAP-Ed served low-income people in all 14 of Georgia’s congressional districts. Table 7 indicates how many Georgians SNAP-ed IAs served in each of the 14 districts. Descriptive statistical analyses below are grouped by participant age group: adults, teens, school-age children, and preschool-age children. Although the tests of statistical significance, which follow this section, could only include responses that could be matched at pre-test and post-test, here we present descriptions of all Georgians served, regardless of whether their responses could be matched for further analysis. Additional tables are presented in the appendix that provide the number and percent of direct-education participants who met dietary recommendations at pre-test and post-test, broken down by ethnicity and race for adults. Race and ethnicity information was not collected for preschool-age children.

Table 5. Race and ethnicity breakdown for direct-education

Race/Ethnicity	Total	Percent
Black	1880	15.7
White	843	7.0
Hispanic	353	2.9
Other	172	1.4
More than one race	80	0.7
Asian	34	0.3
Pacific Islander	4	0.0

Table 6. Total served by IA

Implementing Agency	Total	Percent
HMP	8844	73.9
OH	1360	11.4
UGA	1140	9.5
GDPH	626	5.2

Table 7. Total served by congressional district

Congressional District	Total	Percent
1	736	6.1
2	1,727	14.4
3	242	2.0
4	675	5.6
5	2,233	18.7
6	338	2.8
7	259	2.2
8	625	5.2
9	753	6.3
10	746	6.2
11	201	1.7
12	905	7.6
13	2,394	20.0
14	83	0.7

Analyses – Comparisons from Pre- to Post-Survey

To examine the extent to which pre- and post-survey reports of behavior changes differed, analyses were conducted on all indicators for each of the four age groups: Adults, Teens, Children, and Early Childhood Education (ECE). These analyses compare the pre-survey and post-survey responses using either McNemar test or *t*-test analyses. Only matched cases that included responses for both pre- and post-survey were included in analyses.

Adult Direct-Education Results

MT1c. Ate more than one kind of fruit.

Participants were asked whether they ate more than one kind of fruit each day. A significant increase was found for reports of adults consuming more than one kind of fruit (Figure 1). Prior to the intervention, 296 participants (26.4%) met recommendations. After the intervention, 406 participants (36.2%) met recommendations.

Figure 1. "Do you eat more than one kind of fruit each day?"(Adults)

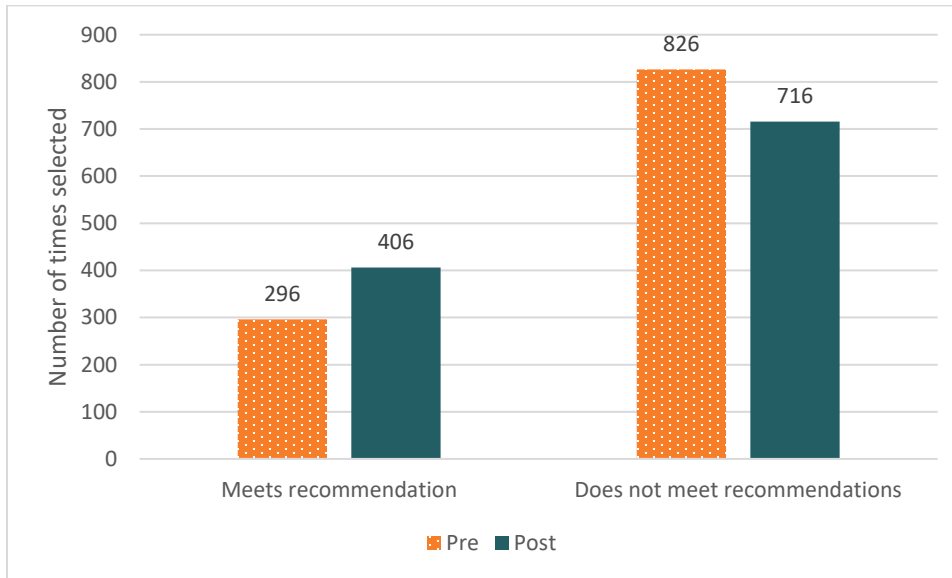


Figure 1. A McNemar test showed a significant increase in reports of eating more than one kind of fruit each day ($\chi^2(1) = 39.827, p < 0.001, g = -0.18$).

MT1d. Eating more than one kind of vegetable.

Participants were asked whether they ate more than one kind of vegetable each day. A significant increase was found for adults reporting having consumed more than one kind of vegetable (Figure 2). Prior to the intervention, 466 participants (41.7%) met recommendations. After the intervention, 583 participants (52.2%) met recommendations.

Figure 2. "Do you eat more than one kind of vegetable each day?" (Adults)

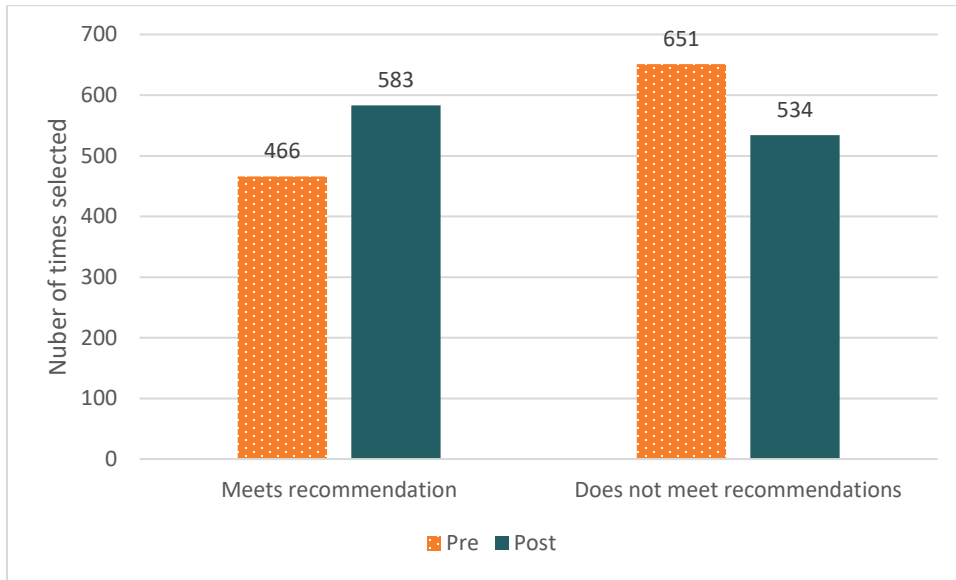


Figure 2. A McNemar test showed a significant increase in reports of eating vegetables each day ($\chi^2(1) = 40.653, p < 0.001, g = -0.18$).

MT1g. Drinking water.

Participants were asked the frequency with which they drank water. A significant increase was found for adults drinking water (Figure 3). Prior to the intervention, 652 participants (70.5%) met recommendations. After the intervention, 695 participants (75.1%) met recommendations.

Figure 3. "How often do you drink water?" (Adults)

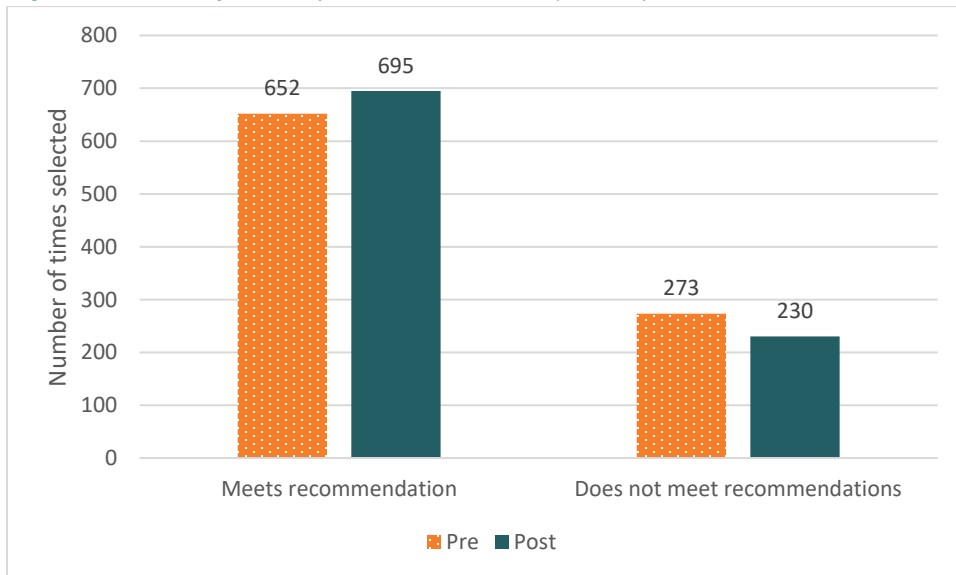


Figure 3. A McNemar test showed a significant increase in reports of drinking water ($\chi^2(1) = 9.535, p = 0.002, g = -0.12$).

MT1h. Drinking fewer sugar-sweetened beverages.

Participants were asked the frequency with which they drank fruit drinks, sports drinks, or punch. A significant decrease was found for adults reporting drinking sugar-sweetened beverages resulting in an increase in adults meeting the recommendations (Figure 4). Prior to the intervention, 446 participants (48.8%) met recommendations. After the intervention, 489 participants (53.5%) met recommendations.

Figure 4. "How often do you drink fruit drinks, sports drinks or punch?" (Adults)

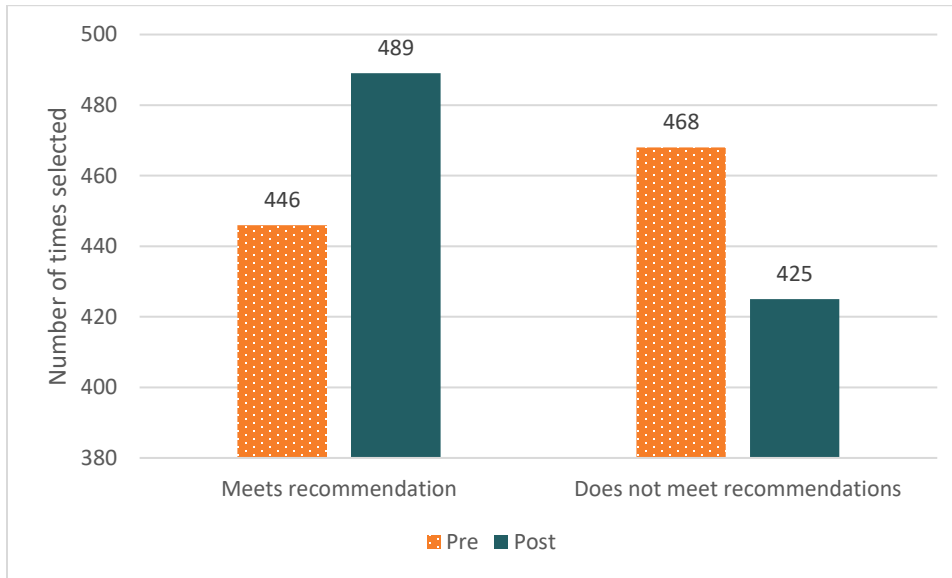


Figure 4. A McNemar test showed a significant increase in adults meeting the recommendations for drinking sugar-sweetened beverages ($\chi^2(1) = 10.691, p = 0.001, g = -0.13$).

MT1i. Consuming low-fat or fat-free milk, milk products, or fortified soy beverages.

Participants were asked the frequency with which they consumed low-fat or fat-free milk, milk products, or fortified soy beverages. A significant increase was found for adults consuming low-fat or fat-free milk, milk products, or fortified soy beverages (Figure 5). At pre-survey, 57 participants (8.9%) met recommendations. At post-survey, 76 participants (11.8%) met recommendations.

Figure 5. “How often do you consume low-fat or fat-free milk, milk products, or fortified soy beverages?” (Adults)

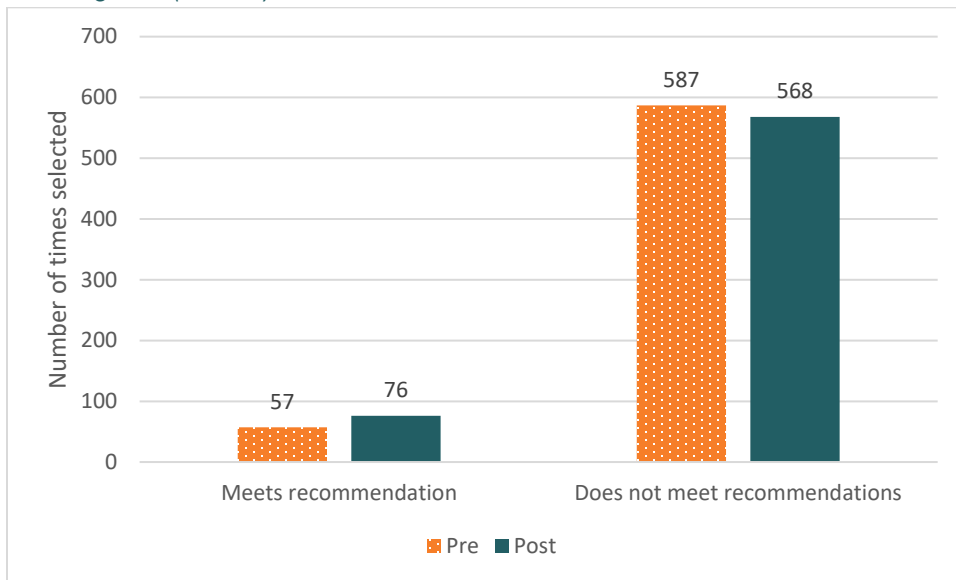


Figure 5. A McNemar test showed a significant increase in reports of consuming low-fat or fat-free milk, milk products, or fortified soy beverages ($X^2(1) = 4.696$, $p = 0.03$, $g = -0.14$).

MT11. Cups of fruit consumed per day.

Participants were asked to indicate the number of cups of fruit they ate each day. As depicted in Figure 6, there was a significant increase in the number of cups of fruit participants reported consuming. At pre-survey, the mean amount of fruit eaten was 0.69 cups ($SD = 1.06$); whereas at post-survey, the mean amount of fruit eaten was 0.79 cups ($SD = 1.04$).

Figure 6. "Fruit: How much do you eat each day?" (Adults)

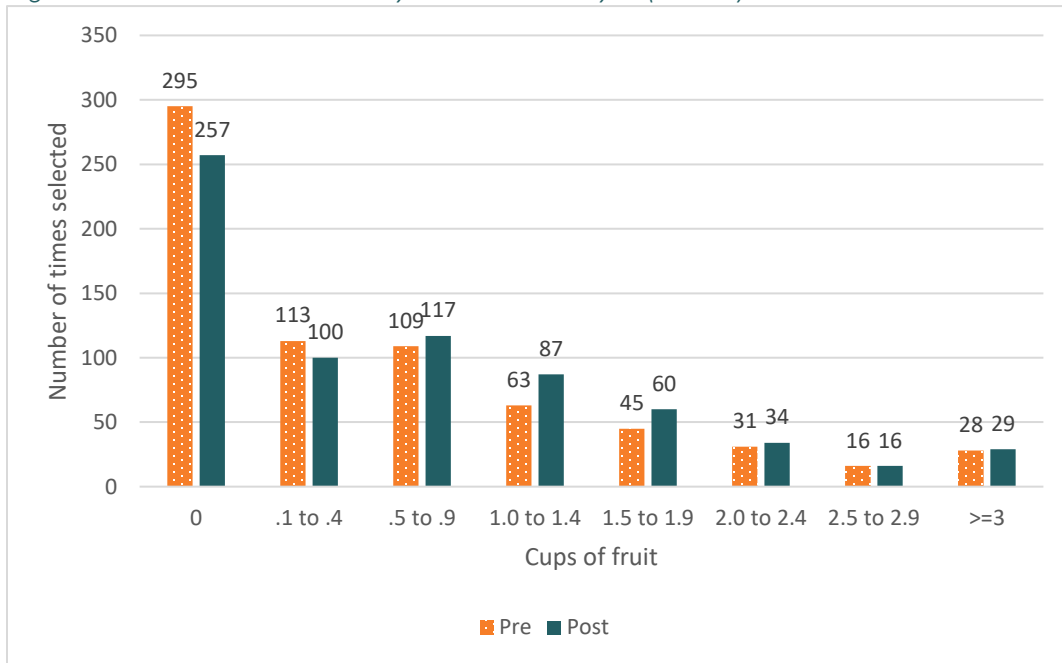


Figure 6. A paired-samples t-test revealed a significant increase in reports of cups of fruit consumed from the pre-survey ($M = 0.69$, $SD = 1.06$) to the post-survey [$M = 0.79$, $SD = 1.04$; $t(699) = 2.11$, $p = 0.04$, $d = 0.09$].

MT1m. Cups of vegetables consumed per day.

Participants were asked to indicate the number of cups of vegetables they ate each day. As shown in Figure 7, there was no significant change in the number of cups of vegetables participants reported consuming. At pre-survey, the mean amount of vegetables eaten was 1.24 cups ($SD = 1.19$). At post-survey, the mean amount of fruit eaten was 1.29 cups ($SD = 1.08$).

Figure 7. "Vegetables: How much do you eat each day?" (Adults)

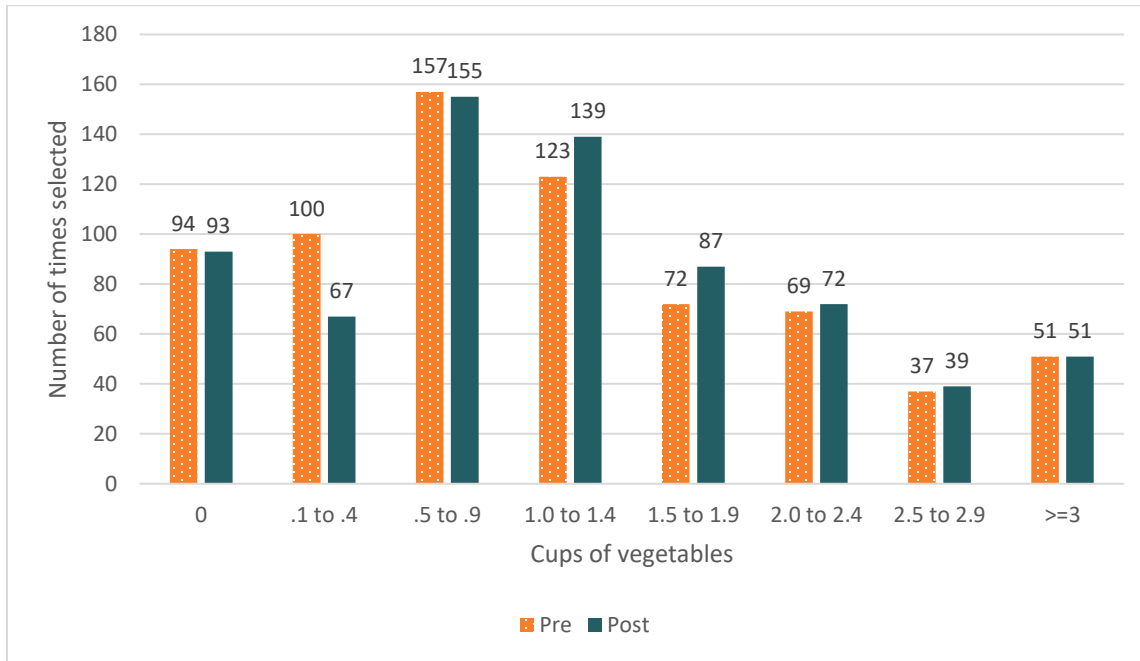


Figure 7. A paired-samples t-test revealed there was no significant change from the pre-survey (M = 1.24, SD = 1.19) to the post-survey [M=1.29, SD = 1.08; t(702) = 0.92, p = 0.348].

MT2a. Choose healthy foods on a budget.

Participants were asked how often they chose healthy food for their families on a budget. There was a significant increase in the number of adults reporting that they chose healthy food (Figure 8). At pre-survey, 323 participants (51.5%) met recommendations. At post-survey, 379 participants (60.4%) met recommendations.

Figure 8. "Do you choose healthy foods on a budget?" (Adults)

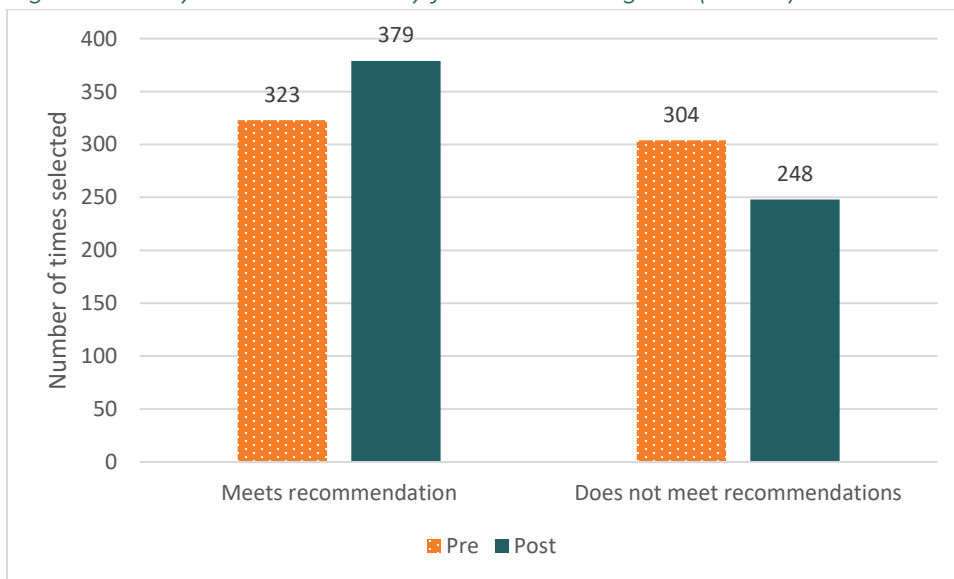


Figure 8. A McNemar test showed a significant increase in participants meeting guidelines and reporting that they chose healthy foods on a budget ($X^2(1) = 19.146, p < 0.001, g = -0.18$).

MT2b. Read nutrition facts labels or nutrition ingredients lists.

Participants were asked how often they used nutrition labels on food items when shopping. There was a significant increase in the number of adults reporting that they use the nutrition label when shopping (Figure 9). At pre-survey, 349 participants (28.4%) met recommendations. At post-survey, 434 participants (35.3%) met recommendations.

Figure 9. "Do you use this label when food shopping?" (Adults)

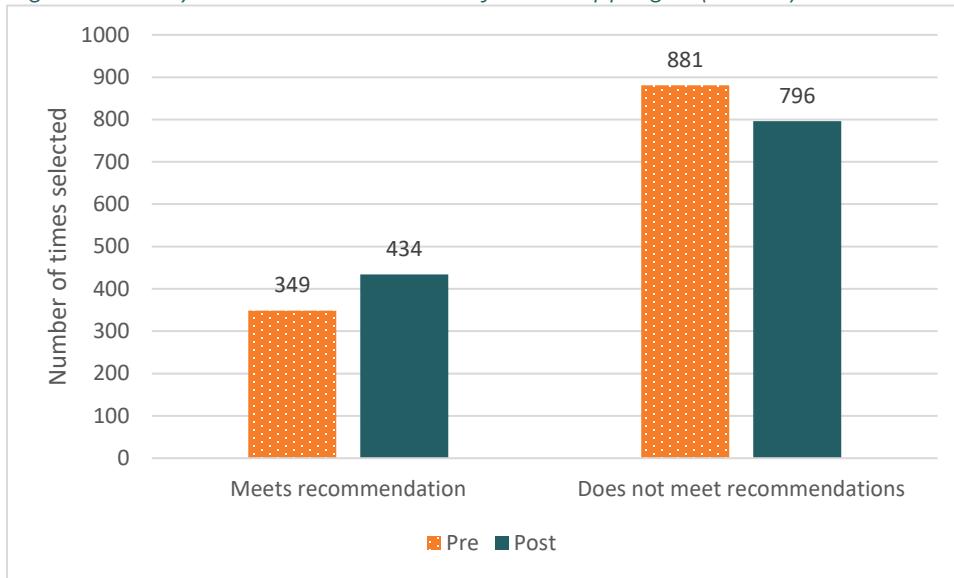


Figure 9. A McNemar test showed a significant increase in the number of participants meeting the guidelines and reporting that they use the nutrition label when shopping responses ($X^2(1) = 25.110, p < 0.001, g = -0.15$).

MT2g. Not running out of food before month's end.

Participants were asked to report how often they ran out of food before the end of the month. Results indicated there was no significant difference in adults reporting that they run out of food at the end of the month (Figure 10). At pre-survey, 345 participants (56.7%) met recommendations. At post-survey, 348 participants (57.1%) met recommendations.

Figure 10. "Do you run out of food before the end of the month?" (Adults)

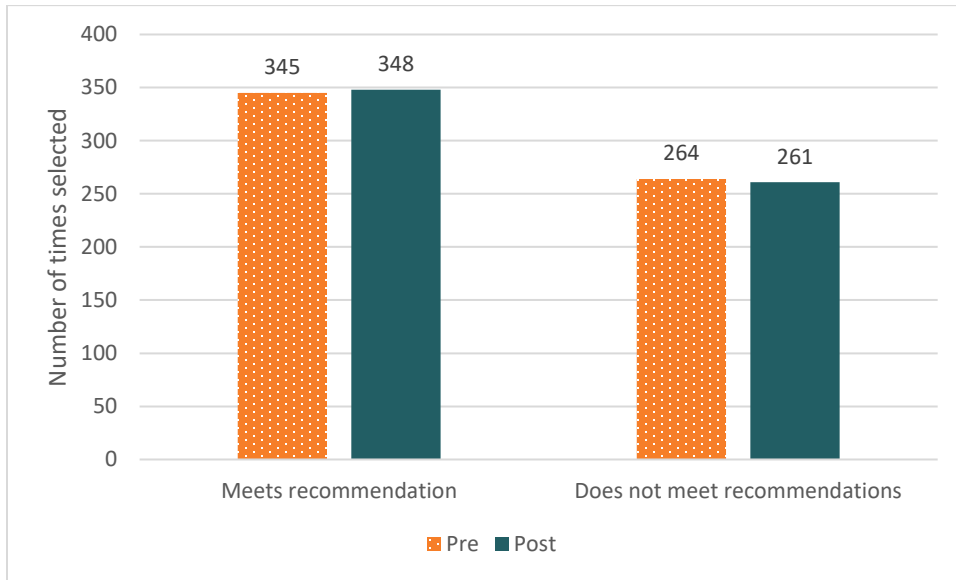


Figure 10. A McNemar test showed no significant change in participants meeting recommendations for not running out of food before month's end at post-survey ($\chi^2(1) = 0.022$, $p = 0.88$).

MT2h. Compare prices before buying foods.

Participants were asked to report how often they compare prices before buying foods. Results indicated there was a significant increase in adults reporting that they compare prices before buying foods (Figure 11). At pre-survey, 594 participants (63.1%) met recommendations. At post-survey, 652 participants (69.3%) met recommendations.

Figure 11. "Do you compare prices before buying foods?" (Adults)

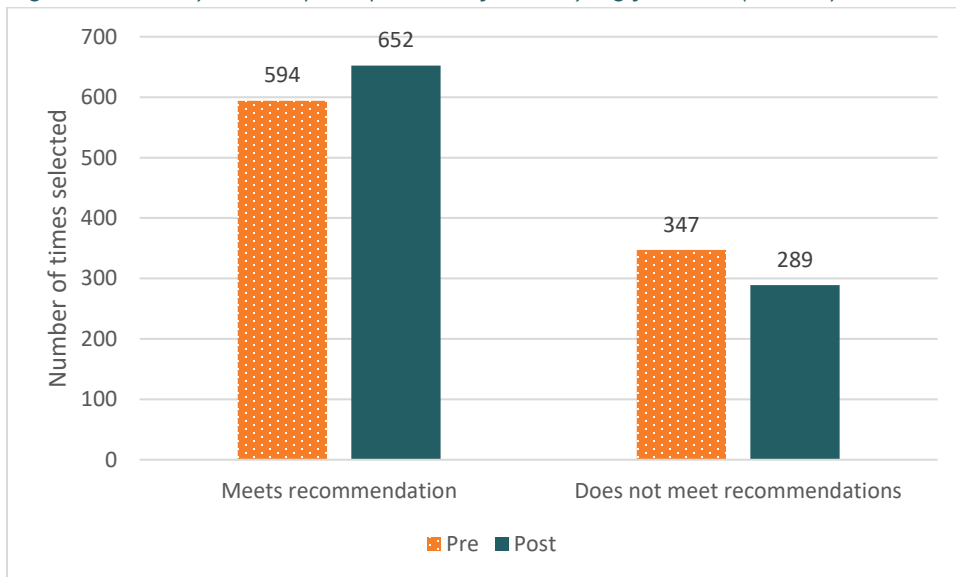


Figure 11. A McNemar test showed a significant increase in participants meeting guidelines for comparing prices when shopping when measured at post-survey ($X^2(1) = 13.767$, $p < 0.001$, $g = -0.12$).

MT2i. Identify foods on sale or use coupons to save money.

Participants were asked whether they identify foods on sale or use coupons to save money. Results indicated there was no significant change in adults reporting that they identify foods on sale or use coupons to save money (Figure 12). At pre-survey, 139 participants (40.5%) met recommendations. At post-survey, 144 participants (42.0%) met recommendations.

Figure 12. "Do you compare prices before buying foods?" (Adults)

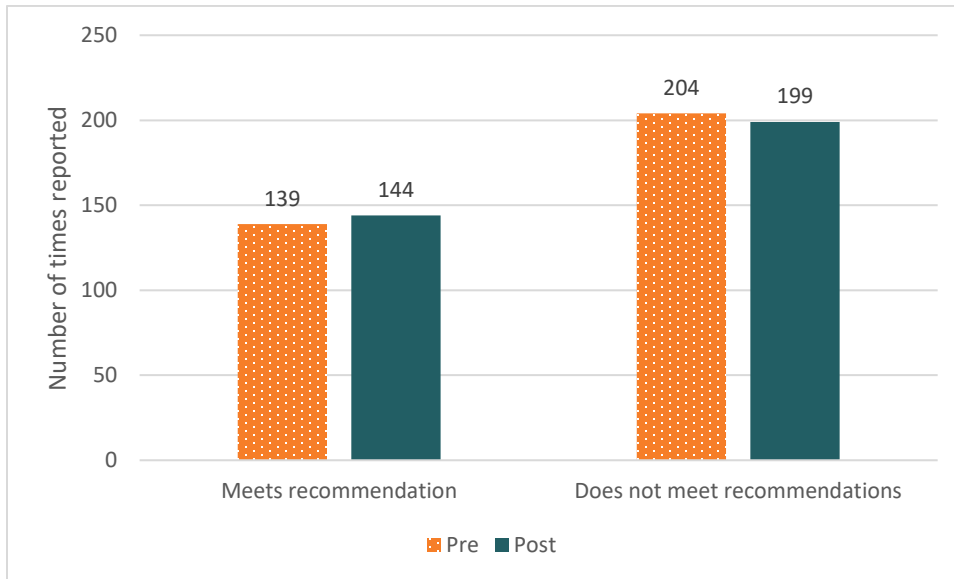


Figure 12. A McNemar test showed no significant change in participants meeting the guidelines for identifying foods that are on sale or use coupons to save money when measured at post-survey ($X^2(1) = 0.172$, $p = 0.68$).

MT2j. Shop with a list.

Participants were asked whether they shop using a list. Results indicate there was a significant increase in adults reporting that they shop with a list (Figure 13). At pre-survey, 418 participants (44.5%) met recommendations. At post-survey, 502 participants (53.5%) met recommendations.

Figure 13. "Do you shop using a list?" (Adults)

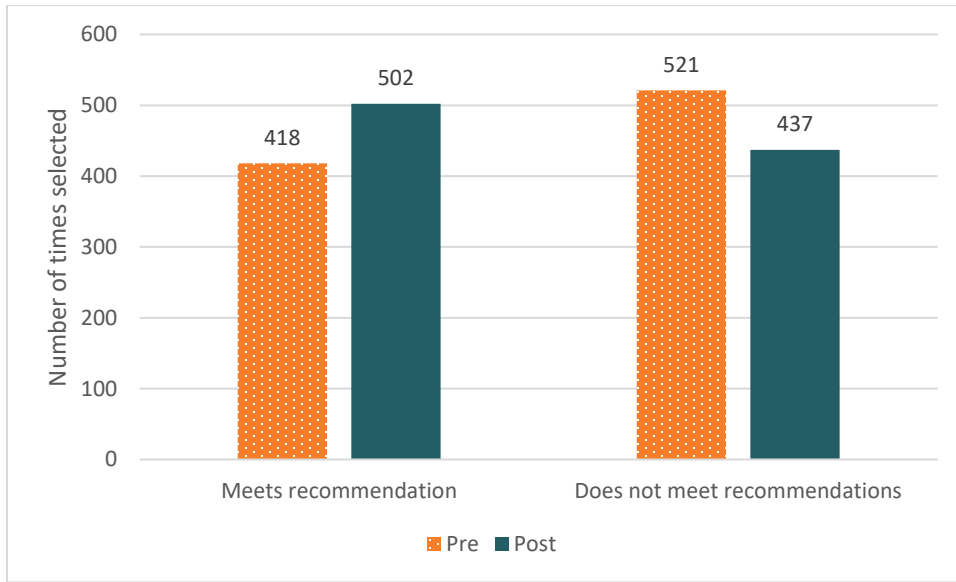


Figure 13. A McNemar test showed a significant increase in participants meeting guidelines for shopping with a list when measured at post-survey ($X^2(1) = 31.314$, $p < 0.001$, $g = -0.19$).

Teen Direct-Education Results

MT1c. Ate more than one kind of fruit.

Teen participants were asked whether they ate more than one kind of fruit each day. There was no significant change for teens reporting that they consumed more than one kind of fruit (Figure 14). At pre-survey, 1,482 participants (45.0%) met recommendations. At post-survey, 1,512 participants (45.9%) met recommendations.

Figure 14. "Do you eat more than one kind of fruit each day?" (Teens)

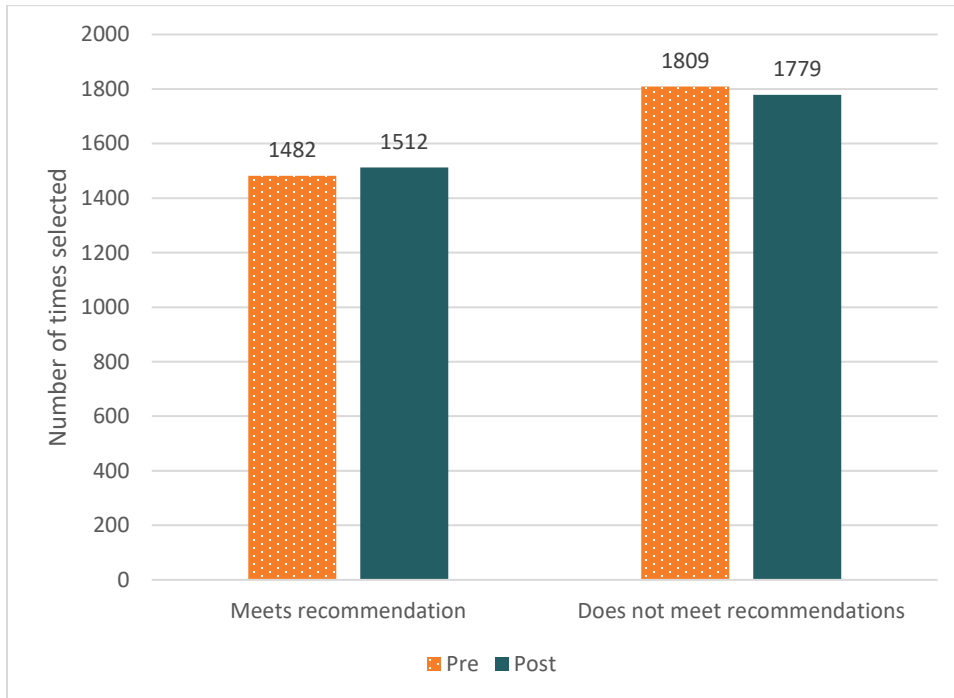


Figure 14. A McNemar test showed no significant change in participants meeting guidelines for eating more than one kind of fruit when measured at post-survey ($\chi^2(1) = 0.758, p = 0.38$).

MT1d. Eating more than one kind of vegetable.

Teen participants were asked whether they ate more than one kind of vegetable each day. Results showed a significant change for teens consuming more than one kind of vegetable (Figure 15). At pre-survey, 1,028 participants (31.3%) met recommendations. At post-survey, 1,101 participants (33.5%) met recommendations.

Figure 15. "Do you eat more than one kind of vegetable each day?" (Teens)

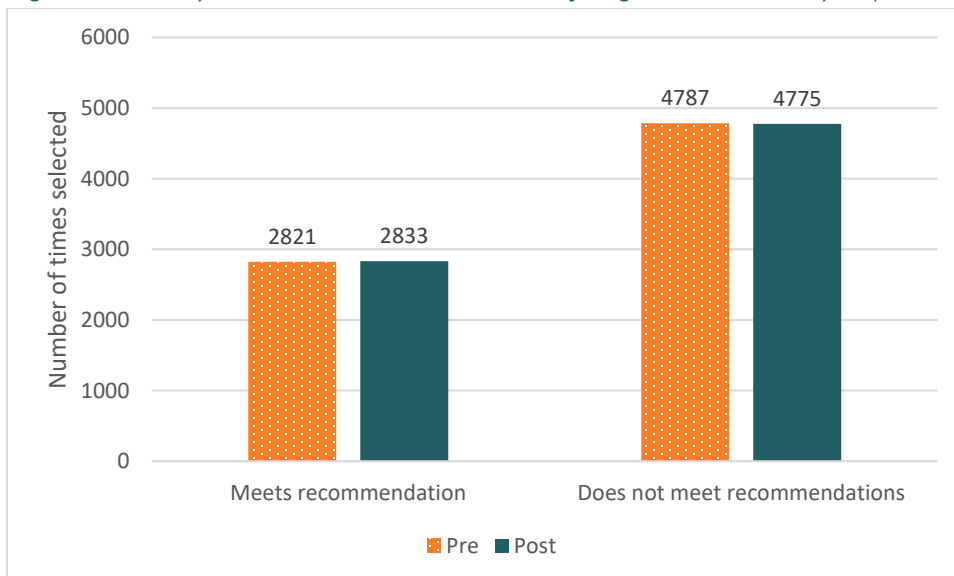


Figure 15. A McNemar test showed a significant change in reports of eating more than one kind of vegetable each day ($X^2(1) = 5.117, p = 0.02, g = -0.04$).

MT1g. Drinking water.

Teen participants were asked to indicate the number of times they drank water the previous day. There was no significant change in the number of times teens reported drinking water (Figure 16). At pre-survey, 1,273 participants (40.2%) met recommendations. At post-survey, 1,274 participants (40.2%) met recommendations.

Figure 16. "Yesterday, did you drink any water, such as from a glass, a bottle, or a water fountain?" (Teens)

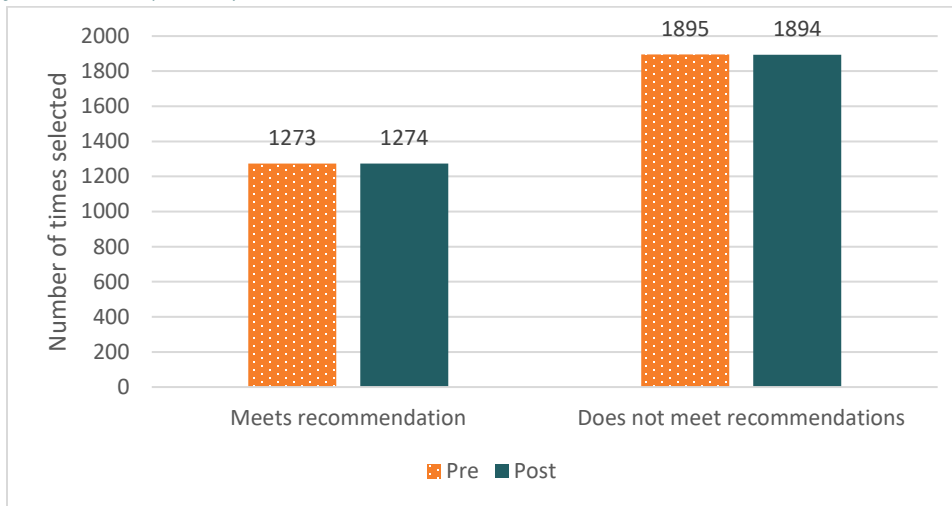


Figure 16. A McNemar test showed no significant change in meeting the guidelines for reports of drinking water ($X^2(1) = 0.000, p = 1.00$).

MT1h. Drinking fewer sugar-sweetened beverages (e.g., regular soda or sports drinks).

Teen participants were asked the frequency with which they drank any punch, sports drinks, or other fruit flavored drinks during the previous day. There was no significant change in the number of times participants reported drinking sugar sweetened beverages (Figure 17). At pre-survey, 1,142 participants (35.6%) met recommendations. At post-survey, 1,092 participants (34.1%) met recommendations.

Figure 17. "Yesterday, did you drink any punch, sports drinks or other fruit-flavored drinks?" (Teens)

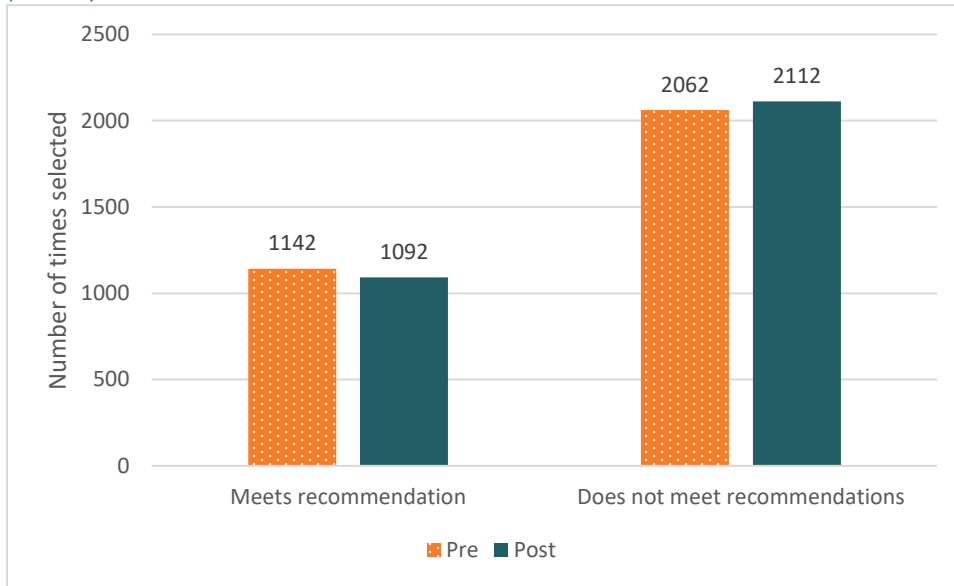


Figure 17. A McNemar test showed no significant change in teens meeting the guidelines for reports of drinking sugar-sweetened beverages ($\chi^2(1) = 2.114, p = 0.15$).

MT1i. Consuming low-fat or fat-free milk, milk products, or fortified soy beverages.

Participants were asked the frequency with which they consumed low-fat or fat-free milk, milk products, or fortified soy beverages. A significant increase was found for teens consuming low-fat or fat-free milk, milk products, or fortified soy beverages (Figure 18). At pre-survey, 15 participants (20.8%) met recommendations. At post-survey, 21 participants (29.2%) met recommendations.

Figure 18. "How often do you consume low-fat or fat-free milk, milk products, or fortified soy beverages?" (Teens)

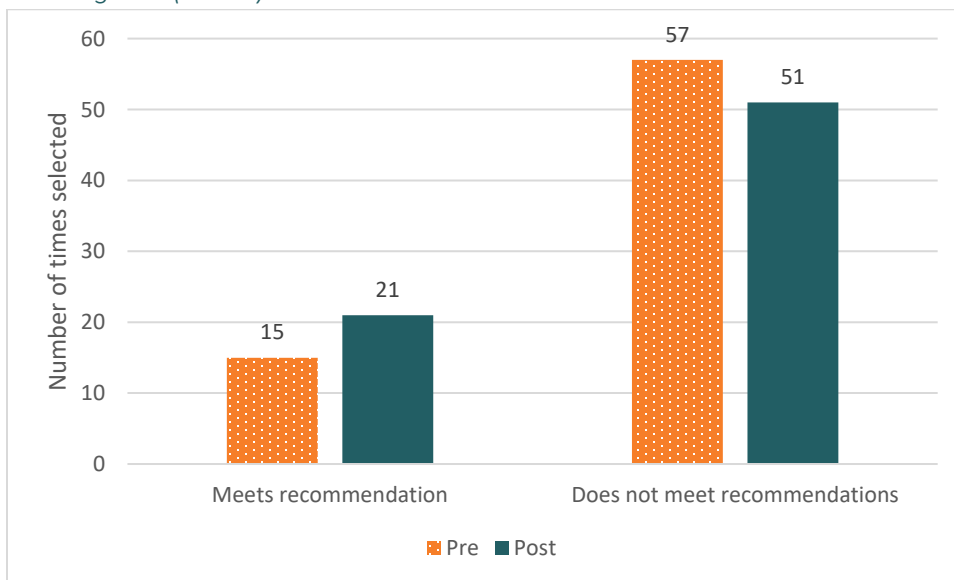


Figure 18. A McNemar test showed no significant change in the number of participants meeting the guidelines for reports of consuming low-fat or fat-free milk, milk products, or fortified soy beverages ($\chi^2(1) = 1.563, p = 0.21$).

School-Age Children – Direct-Education Results

MT1c. Ate more than one kind of fruit.

Participants were asked whether they ate more than one kind of fruit each day. Results showed there was no significant change for children consuming more than one kind of fruit (Figure 19). At pre-survey, 2,493 participants (52.7%) met recommendations. At post-survey, 2,570 participants (54.3%) met recommendations.

Figure 19. "Do you eat more than one kind of fruit each day?" (Children)

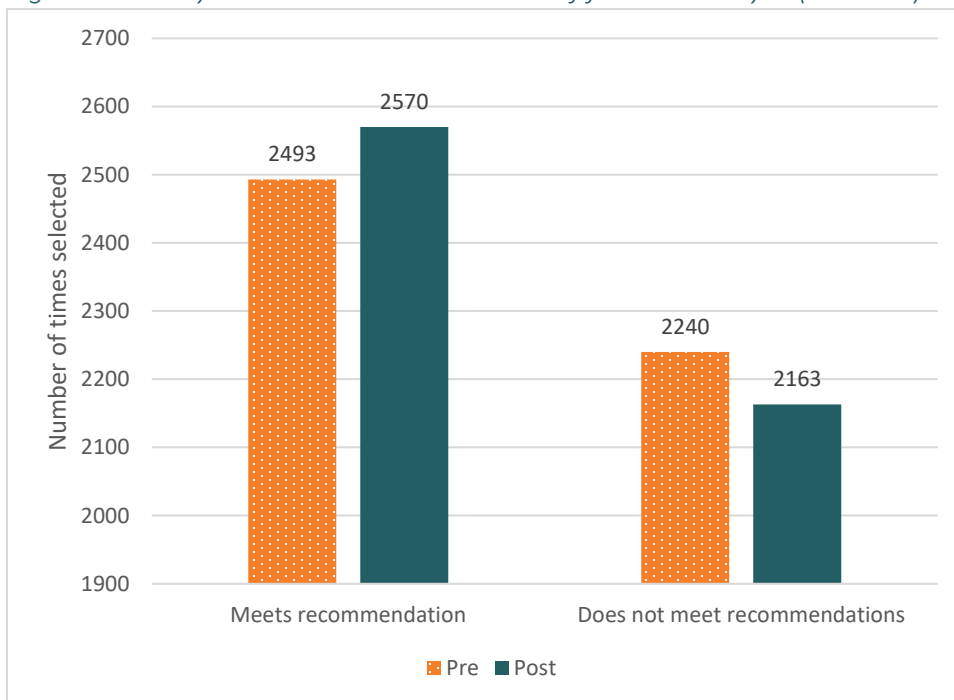


Figure 19. A McNemar test showed no significant increase in how many children met guidelines for reports of eating fruit each day ($\chi^2(1) = 3.318, p = .07$).

MT1d. Eating more than one kind of vegetable.

Participants were asked whether they ate more than one kind of vegetable each day. There was no significant change for children consuming more than one kind of vegetable (Figure 20). At pre-survey, 1,953 participants (41.4%) met recommendations. At post-survey, 1,913 participants (40.5%) met recommendations.

Figure 20. "Do you eat more than one kind of vegetable each day?" (Children)

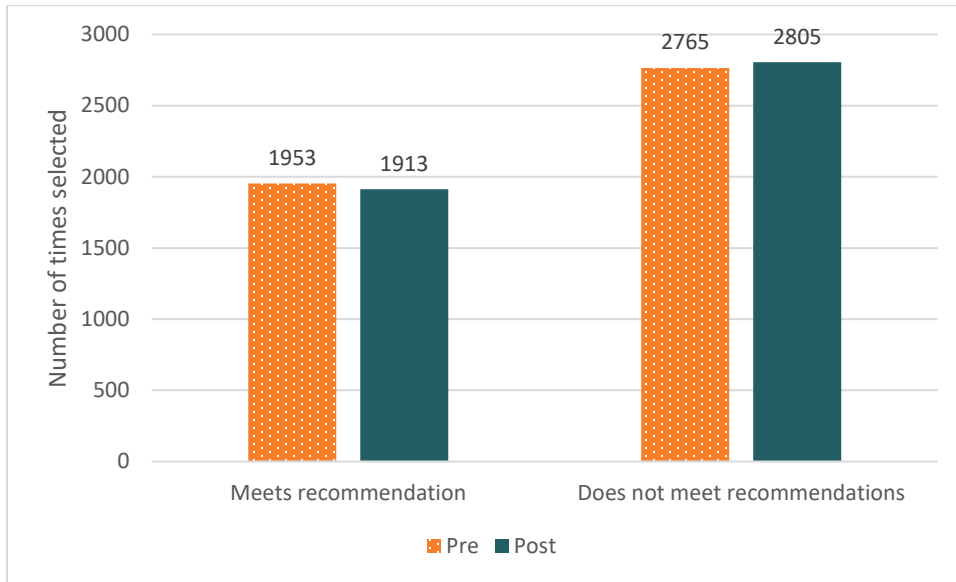


Figure 20. A McNemar test showed no significant change in how many children met the guidelines for reports of eating vegetables each day ($\chi^2(1) = 0.952, p = 0.17$).

MT1g. Drinking water.

Participants were asked the frequency with which they drank water during the previous day. There was a significant increase in the number of times children reported drinking water (Figure 21). At pre-survey, 4,039 participants (91.7%) met recommendations. At post-survey, 4,085 participants (92.8%) met recommendations.

Figure 21. "How often do you drink water?" (Children)

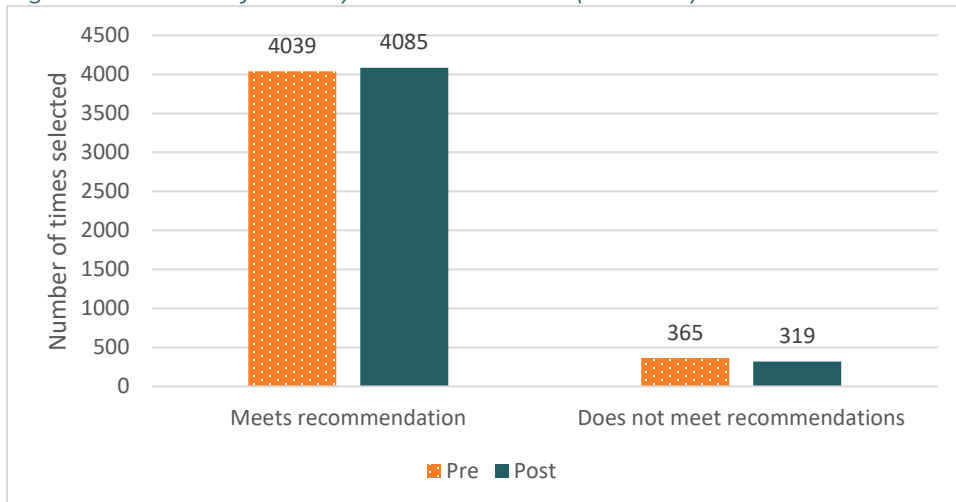


Figure 21. A McNemar test showed a significant increase in the number of children meeting the guideline for reports of drinking water ($\chi^2(1) = 3.865, p = 0.05, g = -0.04$).

MT1h. Drinking fewer sugar-sweetened beverages (e.g., regular soda or sports drinks).

Participants were asked the frequency with which they drank any punch, sports drinks, or other fruit flavored drinks during the previous day. Results showed no significant change in the number of times children reported drinking sugar sweetened beverages (Figure 22). At pre-survey, 2,093 participants (45.3%) met recommendations. At post-survey, 2,075 participants (44.9%) met recommendations.

Figure 22. "Yesterday, did you drink any punch, sports drinks or other fruit-flavored drinks?" (Children)

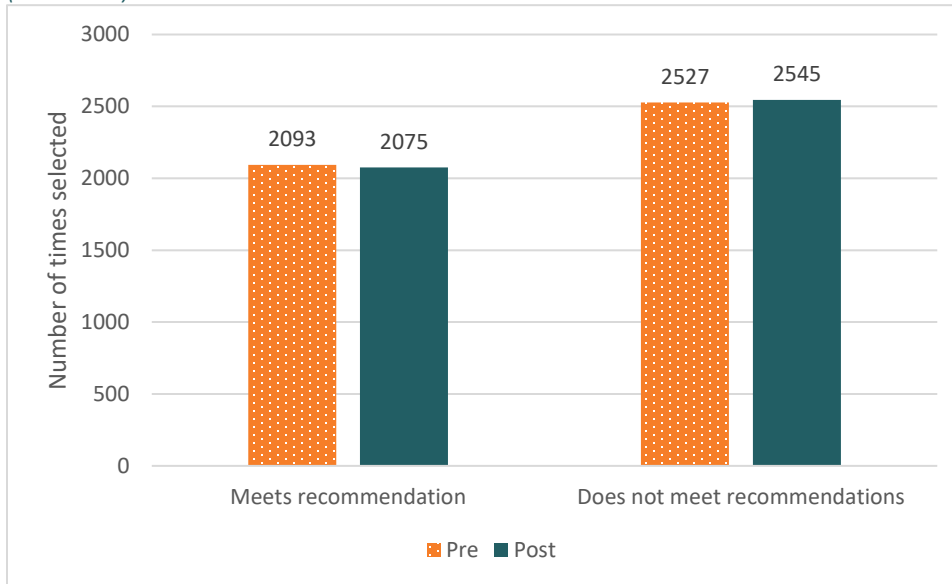


Figure 22. A McNemar test showed a significant decrease in the number of children meeting the guideline for reports of drinking sugar-sweetened beverages ($\chi^2(1) = 0.153, p = 0.70$).

Preschool-Age Children – Direct-Education Results

MT1c. Ate more than one kind of fruit.

Caregivers were asked whether their child ate more than one kind of fruit each day. There was a significant increase for caregivers reporting their child consumed more than one kind of fruit (Figure 23). At pre-survey, 753 participants (72.8%) met recommendations. At post-survey, 805 participants (77.8%) met recommendations.

Figure 23. "Do you eat more than one kind of fruit each day?" (ECE)

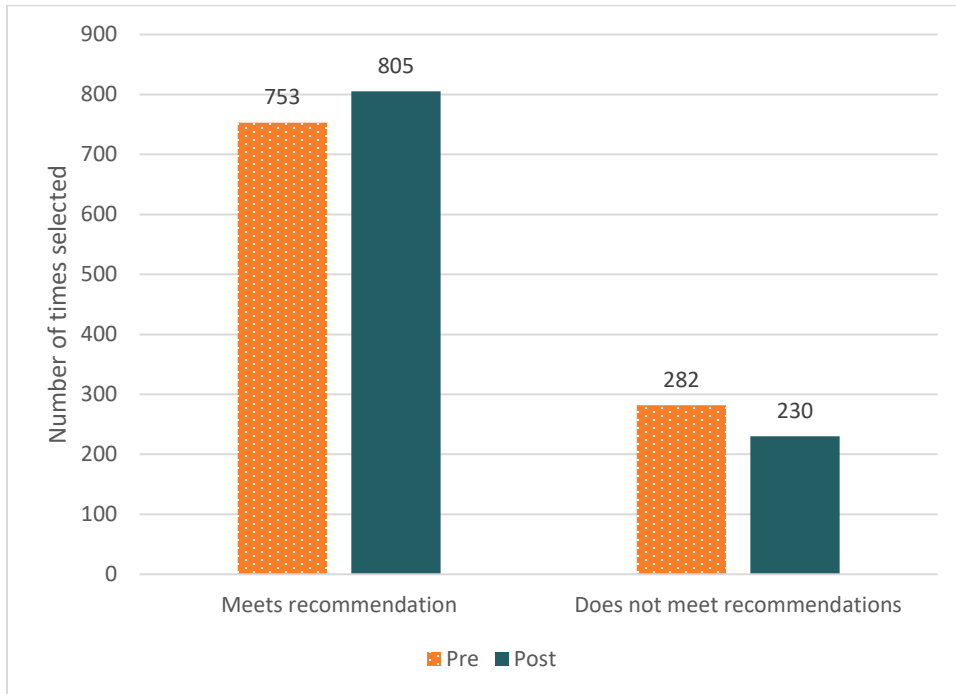


Figure 23. A McNemar test showed a significant increase in caregiver reports of their child eating more than one kind of fruit each day ($\chi^2(1) = 8.445, p = 0.004, g = -0.08$).

MT1d. Eating more than one kind of vegetable.

Caregivers were asked whether their child ate more than one kind of vegetable each day. There was a significant increase for caregivers reporting their child consumed more than one kind of vegetable (Figure 24). At pre-survey, 537 participants (51.9%) met recommendations. At post-survey, 614 participants (59.3%) met recommendations.

Figure 24. "Do you eat more than one kind of vegetable each day?" (ECE)

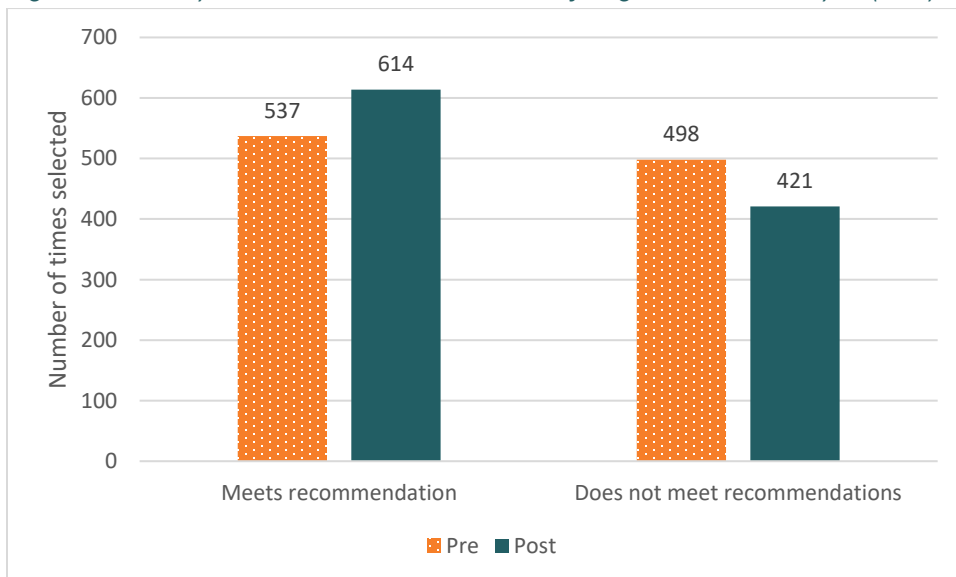


Figure 24. A McNemar test showed a significant change in caregivers reporting their child eating more than one kind of vegetable each day ($X^2(1) = 14.476, p < 0.001, g = -0.10$).

MT1g. Drinking water.

Caregivers were asked to indicate whether their child drank water the previous day. There was a significant increase in caregivers reporting the number of times their child drank water (Figure 25). At pre-survey, 784 participants (75.7%) met recommendations. At post-survey, 895 participants (86.5%) met recommendations.

Figure 25. "Yesterday, did you drink any water, such as from a glass, a bottle, or a water fountain?" (ECE)

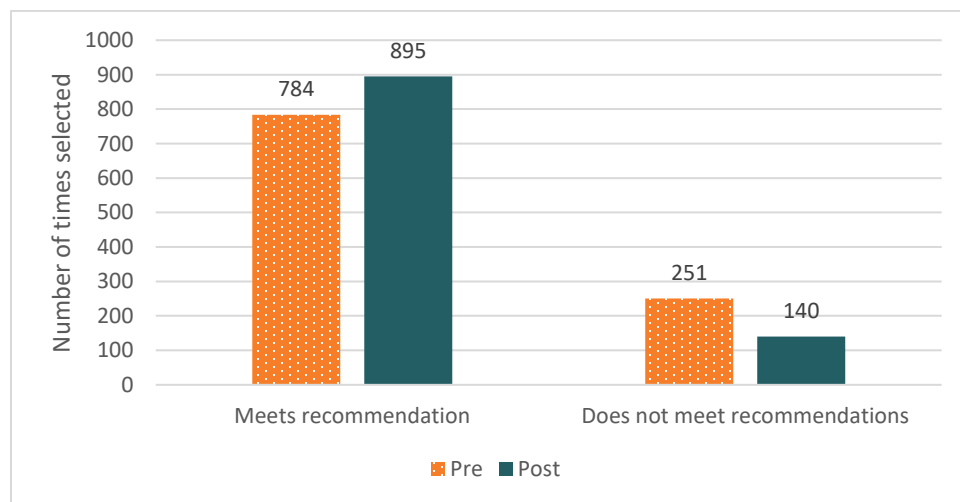


Figure 25. A McNemar test showed a significant increase in caregivers reporting that their child drank water ($X^2(1) = 42.160, p < 0.001, g = -0.19$).

Summary of Results

The overall results of the aggregated analyses for FFY 2019 direct-education interventions were encouraging. A total of 25 analyses were conducted with 15 being statistically significant (60%). For those analyses that were statistically significant, an effect size was calculated. An effect size can be thought of as the measure of the magnitude of the change. This means that an analysis that resulted in a larger effect size indicates a larger and more meaningful change in the behaviors direct-education participants reported.

Two measures of effect size were used, based on the analyses that were performed. The first measure of effect size, the d statistic, is used when looking at the mean difference between two groups. To assess the effect size for McNemar tests, the g statistic was used. The suggested interpretations are as follows.

Table 8. Effect Size Ranges

Effect size	Small	Medium	Large
<i>d</i>	.20 - < 0.50	0.50 - < 0.80	≥ 0.80
<i>g</i>	.05 - < 0.15	0.15 - < 0.25	≥ 0.25

When analyses are significant but have an effect size that falls below the indicated “small” range for the respective effect size measure, the reported change is considered to be trivial and does not reflect a meaningful change. When this is the case, findings should be interpreted cautiously. Using these criteria, the direct-education outcomes can be summarized as follows.

Table 9. Effect Size Interpretations

Population	Indicator	Description	Effect size	Trivial	Small	Medium
Adult						
	MT1c	Ate more than one kind of fruit	<i>g</i> = -0.18			✓
	MT1d	Eating more than one kind of vegetable	<i>g</i> = -0.18			✓
	MT1g	Drinking water	<i>g</i> = -0.12		✓	
	MT1h	Drinking fewer sugar-sweetened beverages	<i>g</i> = -0.13		✓	
	MT1i	Consuming low-fat or fat-free milk, milk products, or fortified soy beverages	<i>g</i> = -0.14		✓	
	MT1l	Cups of fruit consumed per day	<i>d</i> = 0.09	✓		

	MT2a	Choose healthy foods on a budget	$g = -0.18$			✓
	MT2b	Read nutrition facts labels or nutrition ingredients lists	$g = -0.15$			✓
	MT2h	Compare prices before buying foods	$g = -0.12$		✓	
	MT2j	Shop with a list	$g = -0.19$			✓
Teens						
	MT1d	Eating more than one kind of vegetable	$g = -0.04$	✓		
Child						
	MT1g	Drinking water	$g = -0.04$	✓		
ECE						
	MT1c	Ate more than one kind of fruit	$g = -0.08$		✓	
	MT1d	Eating more than one kind of vegetable	$g = -0.10$		✓	
	MT1g	Drinking water	$g = -0.19$			✓

The fact that all analyses but three had a small or medium effect size is promising and illustrates the impact of Georgia SNAP-Ed. These data can be used to evaluate and improve programming to improve outcomes in future years.

Policy, Systems, and Environmental Changes

Nutrition Supports Implementation (MT5)

PSE changes that served as nutrition supports were documented using direct observation, photographic evidence, and repeated assessments or surveys as recommended in the *Framework*.

A total of 432 PSE changes reached 244,956 people across 265 sites. Of those changes, there were 55 policy, 231 systems, and 146 environmental changes. IAs identified whether the PSE work done in 2019 was new (n=251) or being maintained (n=71). The most common **policy** change was improved hours of operation to improve access/convenience (n=33) followed by improvements in hours of operations/time allotted for meals or food service (n=8) and established or improved a nutrition policy (n=8). The most common **systems** change was improvements in free water access, taste, quality, smell, or temperature (n=46) followed by prioritized farm-to-table/increase in fresh or local produce (n=43). In addition to the systems changes provided in the Excel drop-down menu, IAs filled in an additional change of nutrition education being integrated into lesson plans and other GELD domains (n=8). The most common **environmental** change was edible gardens (establish, reinvigorate, or maintain food gardens) (n=79) followed by improved appeal, layout or display of foods to encourage healthy and discourage unhealthy selections (n=24).

PSE changes were supported by 68 promotional efforts. The most common promotion was using posters/visual displays, taste testing, live demonstrations, audiovisuals, celebrities (n=50) followed by point-of-purchase/distribution prompts (n=17).

Table 10. Counts and percentages of policy changes (MT5b)

Description of Policy Change	Frequency	Percent
8. Improved hours of operation to improve access/convenience	33	60.0
1. Improvements in hours of operations/time allotted for meals or food service	8	14.5
7. Established or improved a nutrition policy	8	14.5
5. School wellness or child care wellness policy implemented	6	10.9
Total policy changes	55	100.0

Table 11. Counts and percentages of systems changes (MT5c)

Description of Systems Change	Frequency	Percent
9. Improvements in free water access, taste, quality, smell, or temperature	46	19.9
17. Prioritized farm-to-table/increase in fresh or local produce	43	18.6
7. Change in/improved menus (variety, quality, offering lighter fares)	38	16.5
12. Improved or increased healthy beverage options	27	11.7
1. Improved child feeding practices (e.g., served family style, adults role model healthy behaviors, etc.)	16	6.9
13. Implemented a system for youth, parent, and/or client leadership or involvement in decision-making	11	4.8
11. Implemented guidelines for healthier snack options	9	3.9
3. Implemented a system to involve youth in food service decision-making	8	3.5
CUSTOM: Nutrition education is integrated into lesson plans and other GELD domains	8	3.5
10. Restrictions on use of food as rewards or during celebrations	7	3.0
16. Change in/improved food purchasing/donation specifications towards healthier food(s)	6	2.6
14. Implemented guidelines for foods offered during events, celebrations, education programs, etc., not at schools/day care	4	1.7
8. Implemented, improved or expanded healthy fundraisers	4	1.7
15. Change in/improved vendor agreement towards healthier food(s)	3	1.3
2. Implemented guidelines for healthier competitive foods options	1	0.4
Total systems changes	231	100.0

Table 12. Counts and percentages of environmental changes (MT5d)

Description of Environmental Changes	Frequency	Percent
2. Edible gardens (establish, reinvigorate or maintain food gardens)	79	54.1
12. Improved appeal, layout or display of foods to encourage healthy and discourage unhealthy selections	24	16.4
3. Lactation supports or dedication lactation space	14	9.6
17. Improved facilities or equipment to accommodate healthier options or make them more convenient/appealing/ accessible - if allowable	13	8.9
1. Improvements in layout or display of food (Smarter Lunchrooms, worksite cafeterias)	10	6.8
8. Established or improved salad bar	3	2.1
10. Improved quality of healthy options	1	0.7
13. Increased shelf space/amount/variety of healthy options	1	0.7
14. Established a new food bank, pantry or distribution site	1	0.7
Total environmental changes	146	100.0

Table 13. Counts and percentages of promotional changes (MT5e)

Description of Promotional Changes	Frequency	Percent
5. Used posters/visual displays, taste testing, live demonstrations, audiovisuals, celebrities, etc.	50	73.5
1. Point-of-purchase/distribution prompts	17	25.0
7. School meal foods promoted outside of meal times	1	1.5
Total promotional changes	68	100.0

Figure 26. Policy, Systems, and Environmental Changes by Setting

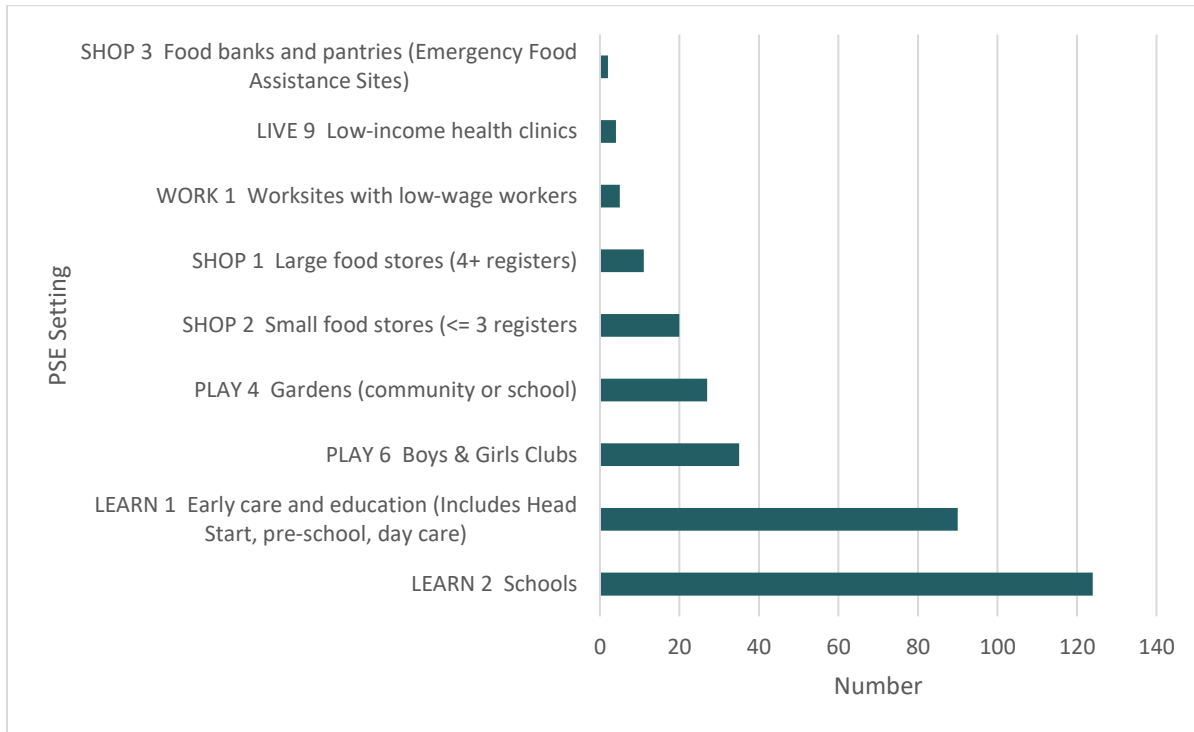


Table 14. MT5 PSE Change totals by congressional district

Congressional District	Policy	Systems	Environment	Total	%
1	2	12	9	23	5.3
2	15	29	11	55	12.7
3	2	7	7	16	3.7
4	1	18	5	24	5.6
5	5	34	24	63	14.6
6	0	12	5	17	3.9
7	0	12	6	18	4.2
8	3	4	2	9	2.1
9	3	12	22	37	8.6
10	11	30	22	63	14.6
11	0	6	3	9	2.1
12	2	21	18	41	9.5

13	11	32	11	54	12.5
14	0	2	1	3	0.7

Physical Activity and Reduced Sedentary Behavior Supports (MT6)

In addition to Nutrition Supports, one IA, HealthMPowers, also reported on Physical Activity and Reduced Sedentary Behavior Supports.

A total of 250 physical activity PSE changes reached 70,890 people across 185 sites. Of those changes, there were 39 policy, 184 systems, and 27 environmental changes. IAs identified whether the PSE work done in 2019 was new (n=167) or being maintained (n=56). The most common policy change was improvements in time spent in daily recess (n=23) followed by increase in school days/time spent in physical education (n=10). The most common systems change was new or improved access to structured physical activity (PA) programs (n=44) followed by increased or improved opportunities for unstructured physical activity time/free play (n=43). The most common environmental change was improvements in access to exercise or recreation facilities (n=15) followed by improved or expanded physical activity facilities, equipment, or structures (n=11).

PSE changes were supported by 14 promotional efforts. The most common promotion was increased awareness of PSE change by target audience (n=10) follow by signage and prompts for use of walking and bicycling paths (n=3).

Table 15. Counts and percentages of policy changes (MT6b)

Policy Change Type (MT6b)	Frequency	Percent
Improvements in time spent in daily recess	23	59.0
Increase in school days/time spent in physical education	10	25.6
New or increased use of school facilities during non-school hours for recreation or shared use policies	3	7.7
New or stronger limits on entertainment screen time (in accordance with AAP)	2	5.1
New or improved access to physical activity programs	1	2.6
Total	39	100

Table 16. Counts and percentages of systems changes (MT6c)

Systems Change Type (MT6c)	Frequency	Percent
New or improved access to structured PA programs	44	23.9
Increased or improved opportunities for unstructured physical activity time/free play	43	23.4
Incorporating physical activity into the school day or during classroom-based instruction	29	15.8
Incorporating physical activity into all program areas	26	14.1
Increased access/opportunities for structured physical activity before/after school	17	9.2
Incorporating physical activity into the school day or during classroom-based instruction.	9	4.9
Improved structured PA due to teachers expected to teach students in a manner that requires students to be physically active	6	3.3
Increase use of culturally appropriate materials to promote PA	4	2.2
Improved quality of structured physical activity	3	1.6
improved structured PA due to teachers expected to teach students in a manner that requires students to be physically active	3	1.6
Total	184	100

Table 17. Counts and Percentages of environmental changes (MT6d)

Environmental Change Type (MT6d)	Frequency	Percent
Improvements in access to exercise or recreation facilities	15	55.6
Improved or expanded physical activity facilities, equipment, structures	11	40.7
Improvements in access to safe walking or bicycling paths or Safe Routes to School or work	1	3.7
Total	27	100

Table 18. Counts and percentages of promotional changes (MT6e)

Promotion Change Type (MT6e)	Frequency	Percent
Increased awareness of PSE change by target audience	10	71.4
Signage and prompts for use of walking and bicycling paths	3	21.4
Initiated or improved playground markings/stencils to encourage physical activity	1	7.1
Total	14	100

Table 19. MT6 PSE Change totals by congressional district

Congressional District	Policy	Systems	Environment	Total	%
1	7	11	2	20	8.0
2	8	14	4	26	10.4
3	0	5	0	5	2.0
4	2	18	0	20	8.0
5	1	30	4	35	14.0
6	2	8	1	11	4.4
7	0	12	5	17	6.8
8	1	7	0	8	3.2
9	1	21	1	23	9.2
10	3	16	0	19	7.6
11	0	5	2	7	2.8
12	5	6	1	12	4.8
13	9	29	7	45	18.0
14	0	2	0	2	0.8

Limitations

First, this study used self-report data for the pre- and post-surveys to measure healthy eating and food resource behaviors. Self-report data can be prone to errors of recall or influenced by social desirability. Furthermore, data were only included in analyses if there was a matched set of pre- and post-survey responses. Participants who only completed one survey were not included in the analysis. If these participants did not complete a post-survey because they did not finish the series and their healthy eating or food resource management behaviors were significantly different from those who did complete both surveys this may have biased results.

Second, the survey instruments used by IAs varied in type and contained different questions and response options attempting to capture the same information. By recoding response options to aggregate questions into dichotomous variables, analyses lose sensitivity to detect incremental change. Through a standardization of question use, future analyses could detect changes in participants report eating behaviors that recoded might otherwise miss.

Third, by design, the set of data provided, and the analyses of those data, are limited to already-implemented and documented PSE changes, as they were reported by the implementing agencies. The state SNAP-Ed implementers were asked to identify, for each PSE reported, the method of documentation they used to confirm implementation. Despite the precautions used to ensure data quality, there is some subjectivity inherent in the reporting of PSEs. SNAP-Ed PSE Reach is not standardized and therefore can be a subjective measure of PSE impact. Therefore, IAs may not have been uniform in their reporting of PSE reach. While PHI CWN evaluation staff provided guidelines for calculating reach, some of the data submitted for reach may have been reported as marketing impressions, and therefore may not represent unique individuals who were likely exposed to PSE changes, particularly for the shop setting. Where possible, data cleaning was performed to minimize the overestimation of reach and promote accuracy. However, it is worth noting that the reach of PSEs reported in the current analysis should be interpreted as a liberal estimate. Technical assistance may be useful in future efforts to uniformly report reach.

Conclusions and Recommendations

Georgia SNAP-Education programs are associated with significant, positive improvements in self-reported healthy eating behaviors and food resource management behaviors. Adults showed the greatest number of improvements followed by early childcare settings. The fact that all analyses but three had a small or medium effect size is promising and illustrates the impact of Georgia SNAP-Education.

Georgia SNAP-Education also boasts a thriving program of PSE nutrition and physical activity interventions that support healthier eating. Georgia SNAP-Education collectively implemented 432 supports to make the healthy choice the easy choice primarily in the learn, play, and shop settings reaching more than 240,000 low-income Georgians.

While the highest absolute number for PSE was reported in the school learn setting, individual-level behaviors were not significantly different after participation in SNAP-Education programs in this setting. It is recommended that Georgia youth programs explore innovative ways to reach children and teens using a mix of education, social marketing, digital and youth engagement approaches for children in elementary, middle and high school settings to have a further impact on healthy eating behaviors (programming for children typically does not include material about food resource management).

The early childcare learn settings showed significant results in changes for self-reported behaviors this year as well as a robust set of PSE changes implemented in this setting. Further exploration of these multi-layered strategies to understand their replicability and scalability is recommended.

Georgia SNAP-Education programs continue to not have significant effect on vegetables consumption and a trivial effect on fruit consumption. Stronger focus on fruit and vegetable consumption using interactive approaches and culturally appropriate produce items and recipes and strategies to increase visibility and access to fruits and vegetables is encouraged, particularly in the adult setting. In school settings strategies like the Smarter Lunch Movement may support more students selecting the fruits and vegetables that are offering at school lunch and breakfast meals.

Continuing to promote drinking more water and reducing sugar sweetened beverage consumption across all age groups is encouraged. Small effects are seen in adults, medium effects for preschool-children, and a trivial change for school-age children for increased consumption of water. There was no change in water consumption for teens. This is a nutrition behavior we recommend intentionally emphasizing with teens as we have seen no significant changes in water or sugar-sweetened beverage (SSB) behaviors over the last several years. This is also a key area where teens can take a leadership role and have peer influence over other students. Research suggests that using a youth empowerment model for teens may be effective (Wang, Otis, Rosal, Griecci & Lemon, 2019). An example may be to have youth lead Hydrate My State activities in middle and high schools next year where they teach their peers about the

importance of drinking water and reducing SSB consumption. The Youth Participatory Action Research program Teens as Teachers could be used as a model where teens teach peers and younger students. Additionally, Media Smart type curriculum with youth could also help them understand the deceptive marketing practices the soda industry uses. Studies have shown black and brown youth are particularly targeted by fast food and sugary beverage companies (Harris, Frazier, Kumanyika, & Ramirez, 2019). Helping youth understand how they are targeted by advertising may help them to make more healthful beverage choices.

Lastly, we recommend looking at different methods to aggregate data across the implementing agencies. By recoding response options to aggregate questions into dichotomous variables, analyses lost sensitivity to detect incremental change. Using a standardization subset of questions in future years would allow us to detect changes in participants eating behaviors that recoding might otherwise miss. We are also excited as Georgia SNAP-Education transitions to the Program Evaluation And Reporting System (PEARS) to use additional functions in the PSE module to provide more detailed information related to PSEs that are being implemented.

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Appendix 1

Descriptive Analyses: Adults

All Indicators

Table 1 presents the counts and proportions of adults who met dietary recommendations at pre- and post-survey, for each of the 11 direct-education indicators.

Table 1. All Adults for All Indicators

Indicator	Pre-Survey			Post-Survey		
	Total	Met Recommendations	Percent	Total	Met Recommendations	Percent
MT1c	2270	642	28.3%	1154	414	35.9%
MT1d	2265	980	43.3%	1151	596	51.8%
MT1g	1901	1396	73.4%	941	708	75.2%
MT1h	1874	631	33.7%	937	498	53.2%
MT1i	1383	274	19.8%	649	77	11.9%
MT2a	1642	898	54.7%	665	398	59.9%
MT2b	2383	761	31.9%	1269	442	34.8%
MT2g	1578	946	60.3%	666	374	56.2%
MT2h	1890	1175	62.2%	967	668	69.1%
MT2i	1128	495	43.9%	368	155	42.1%
MT2j	1887	853	45.2%	967	510	52.7%

Race and Ethnicity

Table 2 presents the counts and proportions of adults who met the dietary recommendations for pre- and post-survey, by ethnicity and race.

Table 2. All Adults Pre-Survey for all Indicators by Ethnicity and Race

Indicator			Pre-Survey			Post-Survey		
			Total	Met Recommendations	Percent	Total	Met Recommendations	Percent
MT1c								
	Ethnicity							
		Hispanic or Latino	218	83	38.1%	69	33	47.8%
		Not Hispanic or Latino	2022	549	27.2%	1078	380	35.3%
	Race							
		Asian	25	8	32.0%	8	2	25.0%
		Black	1303	364	27.9%	719	273	38.0%
		Pacific Islander	2	1	50.0%	2	2	100.0%
		White	745	197	26.4%	370	116	31.4%
		Other Race	96	33	34.4%	15	6	40.0%
		More than 1 Race	55	13	23.6%	30	10	33.3%
MT1d								
	Ethnicity							

		Hispanic or Latino	216	100	46.3%	69	39	56.5%
		Not Hispanic or Latino	2020	870	43.1%	1075	556	51.7%
	Race							
		Asian	25	13	52.0%	8	4	50.0%
		Black	1298	532	41.0%	716	367	51.3%
		Pacific Islander	2	1	50.0%	2	2	100.0%
		White	746	334	44.8%	370	197	53.2%
		Other Race	96	46	47.9%	15	7	46.7%
		More than 1 Race	55	28	50.9%	30	14	46.7%
MT1g								
	Ethnicity							
		Hispanic or Latino	197	160	81.2%	55	44	80.0%
		Not Hispanic or Latino	1675	1218	72.7%	873	657	75.3%
	Race							
		Asian	20	18	90.0%	4	3	75.0%
		Black	1147	840	73.2%	645	508	78.8%
		Pacific Islander	2	2	100.0%	2	2	100.0%
		White	555	388	69.9%	246	162	65.9%
		Other Race	93	80	86.0%	12	12	100.0%
		More than 1 Race	37	29	78.4%	19	12	63.2%
MT1h								

	Ethnicity							
		Hispanic or Latino	196	64	32.7%	55	34	61.8%
		Not Hispanic or Latino	1648	560	34.0%	870	458	52.6%
	Race							
		Asian	21	7	33.3%	4	3	75.0%
		Black	1139	420	36.9%	643	375	58.3%
		Pacific Islander	2	0	0.0%	2	0	0.0%
		White	541	164	30.3%	244	99	40.6%
		Other Race	91	22	24.2%	12	7	58.3%
		More than 1 Race	36	9	25.0%	19	7	36.8%
MT1i								
	Ethnicity							
		Hispanic or Latino	162	56	34.6%	42	2	4.8%
		Not Hispanic or Latino	1197	214	17.9%	597	74	12.4%
	Race							
		Asian	14	0	0.0%	3	0	0.0%
		Black	852	135	15.9%	493	60	12.1%
		Pacific Islander	1	0	0.0%	1	0	0.0%
		White	362	82	22.7%	123	15	12.2%
		Other Race	89	31	34.8%	11	0	0.0%
		More than 1 Race	24	6	25.0%	8	1	12.5%

MT2a								
	Ethnicity							
		Hispanic or Latino	156	80	51.3%	30	17	56.7%
		Not Hispanic or Latino	1458	804	55.1%	629	380	60.4%
	Race							
		Asian	19	14	73.7%	6	6	100.0%
		Black	873	466	53.4%	367	217	59.1%
		Pacific Islander	2	2	100.0%	2	1	50.0%
		White	587	319	54.3%	256	153	59.8%
		Other Race	78	45	57.7%	6	3	50.0%
		More than 1 Race	47	30	63.8%	24	14	58.3%
MT2b								
	Ethnicity							
		Hispanic or Latino	214	79	36.9%	64	20	31.3%
		Not Hispanic or Latino	2133	672	31.5%	1191	419	35.2%
	Race							
		Asian	27	10	37.0%	9	4	44.4%
		Black	1430	406	28.4%	842	288	34.2%
		Pacific Islander	2	0	0.0%	2	1	50.0%
		White	733	260	35.5%	360	127	35.3%
		Other Race	93	39	41.9%	15	5	33.3%

		More than 1 Race	54	27	50.0%	31	12	38.7%
MT2g								
	Ethnicity							
		Hispanic or Latino	151	102	67.6%	29	14	48.3%
		Not Hispanic or Latino	1402	831	59.7%	632	355	56.2%
	Race							
		Asian	19	17	89.5%	6	5	83.3%
		Black	841	472	56.3%	367	192	52.3%
		Pacific Islander	2	1	50.0%	2	0	0.0%
		White	561	365	66.0%	258	160	62.0%
		Other Race	75	46	61.3%	6	2	33.3%
		More than 1 Race	56	22	47.8%	23	12	52.2%
MT2h								
	Ethnicity							
		Hispanic or Latino	176	90	51.1%	51	27	52.9%
		Not Hispanic or Latino	1683	1068	63.5%	905	636	70.3%
	Race							
		Asian	20	10	50.0%	8	5	62.5%
		Black	1146	718	62.7%	676	473	70.0%
		Pacific Islander	1	1	100.0%	1	1	100.0%
		White	550	348	63.3%	242	164	67.8%

		Other Race	91	47	51.7%	12	8	66.7%
		More than 1 Race	43	29	67.4%	20	13	65.0%
MT2i								
	Ethnicity							
		Hispanic or Latino	120	34	28.3%	17	3	17.7%
		Not Hispanic or Latino	986	454	46.0%	348	151	43.4%
	Race							
		Asian	13	3	23.1%	5	2	40.0%
		Black	575	254	44.2%	205	86	42.0%
		Pacific Islander	1	1	100.0%	1	1	100.0%
		White	401	193	48.1%	140	59	42.1%
		Other Race	74	28	37.8%	3	0	0.0%
		More than 1 Race	34	9	26.5%	13	6	46.2%
MT2j								
	Ethnicity							
		Hispanic or Latino	175	71	40.6%	52	26	50.0%
		Not Hispanic or Latino	1682	770	45.8%	904	480	53.1%
	Race							
		Asian	20	9	45.0%	8	6	75.0%
		Black	1139	458	40.2%	674	332	49.3%
		Pacific Islander	1	0	0.0%	1	0	0.0%

		White	554	311	56.1%	244	155	63.5%
		Other Race	91	40	44.0%	12	5	41.7%
		More than 1 Race	43	18	41.9%	20	9	45.0%

Implementing Agency

Table 3 presents the counts and proportions of adults who met the recommendations at pre- and post-survey by implementing agency (IA). Not all implementing agencies collected data for each indicator and therefore may not be represented in each area of the table.

Table 3. All Adults all Indicators by Implementing Agency

Indicator			Pre-Survey			Post-Survey		
			Total	Met Recommendations	Percent	Total	Met Recommendations	Percent
MT1c								
	IA							
		GDPH	620	233	37.6%	39	16	41.0%
		OH	598	178	29.8%	470	212	45.1%
		UGA	1052	231	22.0%	645	186	28.8%
MT1d								
	IA							
		GDPH	619	317	51.2%	39	21	53.9%
		OH	597	284	47.6%	470	269	57.2%
		UGA	1049	379	36.1%	642	306	47.7%

MT1g								
	IA							
		GDPH	607	525	86.5%	37	32	86.5%
		OH	774	602	77.8%	612	513	83.8%
		UGA	520	269	51.7%	292	163	55.8%
MT1h								
	IA							
		GDPH	582	64	11.0%	37	5	13.5%
		OH	773	493	63.8%	610	435	71.3%
		UGA	519	74	14.3%	290	58	20.0%
MT1i								
	IA							
		GDPH	607	226	37.2%	38	14	36.8%
		OH	776	48	6.1%	611	63	10.3%
		UGA		-	-		-	-
MT2a								
	IA							
		GDPH	608	359	59.1%	37	22	59.5%
		OH		-	-		-	-
		UGA	1034	539	52.1%	628	376	59.9%
MT2b								

	IA							
		GDPH	584	280	48.0%	38	15	39.5%
		OH	760	172	22.6%	596	179	30.0%
		UGA	1039	309	29.7%	635	248	39.1%
MT2g								
	IA							
		GDPH	581	404	70.8%	38	17	44.7%
		OH		-	-		-	-
		UGA	997	542	54.4%	628	357	56.9%
MT2h								
	IA							
		GDPH	606	361	59.6%	36	25	69.4%
		OH	763	505	66.2%	601	425	70.2%
		UGA	521	309	59.3%	330	218	66.1%
MT2i								
	IA							
		GDPH	609	289	47.5%	38	20	52.6%
		OH		-	-		-	-
		UGA	519	206	39.7%	330	135	40.9%
MT2j								
	IA							

		GDPH	606	289	47.7%	38	26	68.4%
		OH	758	348	45.9%	598	316	52.8%
		UGA	523	216	41.3%	331	168	50.8%

Language

Table 4 presents the counts and proportions of adults who met the recommendations at pre- and post-survey by language spoken (English or Spanish).

Table 4. All Adults for all Indicators by Language

Indicator			Pre-Survey			Post-Survey		
			Total	Met Recommendations	Percent	Total	Met Recommendations	Percent
MT1c								
	Language							
		English	2235	628	28.1%	1132	398	35.2%
		Spanish	35	14	40.0%	22	16	72.7%
MT1d								
	Language							
		English	2230	964	43.2%	1129	579	51.3%
		Spanish	35	16	45.7%	22	17	77.3%
MT1g								
	Language							
		English	1867	1366	73.2%	920	691	75.1%

		Spanish	34	30	88.2%	21	17	81.0%
MT1h								
	Language							
		English	1840	612	33.3%	916	481	52.5%
		Spanish	34	19	55.9%	21	17	81.0%
MT1i								
	Language							
		English	1353	274	20.3%	630	77	12.2%
		Spanish	30	0	0.0%	19	0	0.0%
MT2a								
	Language							
		English	1637	894	54.6%	662	396	59.8%
		Spanish	5	4	80.0%	3	2	66.7%
MT2b								
	Language							
		English	2348	756	32.2%	1248	434	34.8%
		Spanish	35	5	14.3%	21	8	38.1%
MT2g								
	Language							
		English	1573	943	60.3%	663	373	56.3%
		Spanish	5	3	60.0%	3	1	33.3%

MT2h								
	Language							
		English	1861	1168	62.8%	948	659	69.1%
		Spanish	29	7	24.1%	19	9	47.4%
MT2i								
	Language							
		English	1128	495	43.9%	368	155	42.2%
		Spanish		-	-		-	-
MT2j								
	Language							
		English	1857	844	45.5%	948	500	52.4%
		Spanish	30	9	30.0%	19	10	52.3%

Congressional District

Table 5 presents the counts and proportions of adults who met the recommendations at pre- and post-survey by congressional district.

Table 5. All Adults for all Indicators by Congressional District

			Pre-Survey			Post-Survey		
			Total	Met Recommendations	Percent	Total	Met Recommendations	Percent
Indicator								
MT1c								

	Congressional District							
		1	160	46	28.8%	98	34	34.7%
		2	102	33	32.4%	14	6	42.9%
		3	-	-	-	-	-	-
		4	89	34	38.0%	52	31	59.2%
		5	743	205	27.6%	476	194	40.8%
		6	6	3	50.0%	6	3	50.0%
		7	10	2	20.0%	7	4	57.4%
		8	57	11	19.0%	50	18	36.0%
		9	153	40	26.4%	95	27	28.2%
		10	102	20	19.1%	57	9	15.8%
		11	163	27	16.6%	113	29	25.7%
		12	444	162	36.5%	55	20	36.4%
		13	211	49	23.2%	114	36	31.6%
		14	30	10	33.3%	17	3	17.7%
MT1d								
	Congressional District							
		1	160	72	45.0%	98	55	56.12%
		2	102	46	45.1%	14	6	42.86%
		3	-	-	-	-	-	-

		4	89	50	56.2%	52	34	65.4%
		5	741	306	41.3%	474	259	54.6%
		6	6	4	66.7%	6	4	66.7%
		7	10	5	50.0%	7	4	57.1%
		8	57	19	33.3%	50	28	56.0%
		9	153	57	37.3%	95	50	52.6%
		10	102	31	30.4%	57	16	28.0%
		11	163	57	35.0%	113	50	44.3%
		12	444	231	52.0%	54	30	55.6%
		13	208	87	41.9%	114	51	44.7%
		14	30	15	50.0%	17	9	52.9%
MT1g								
	Congressional District							
		1	159	123	77.4%	91	72	79.1%
		2	102	83	81.4%	13	8	61.5%
		3	-	-	-	-	-	-
		4	81	65	80.3%	46	38	82.6%
		5	722	546	75.6%	492	409	83.1%
		6	6	5	83.3%	4	4	100.0%
		7	10	10	100.0%	7	6	85.7%

		8	56	35	62.5%	51	37	72.6%
		9	42	23	54.8%	25	13	52.0%
		10	61	23	37.7%	35	13	37.1%
		11	101	38	37.6%	67	35	52.2%
		12	412	350	85.0%	34	20	58.8%
		13	139	89	64.0%	71	50	70.4%
		14	10	6	60.0%	5	3	60.0%
MT1h								
	Congressional District							
		1	146	77	52.7%	91	57	62.6%
		2	102	16	15.7%	13	5	38.5%
		3	-	-	-	-	-	-
		4	80	35	43.8%	45	30	66.7%
		5	715	352	49.2%	492	317	64.4%
		6	6	6	100.0%	4	3	75.0%
		7	10	7	70.0%	7	5	71.4%
		8	56	30	53.6%	50	26	52.0%
		9	41	10	24.4%	25	10	40.0%
		10	62	4	6.5%	35	5	14.3%
		11	99	16	16.2%	67	15	22.4%

		12	404	45	11.1%	34	7	20.6%
		13	143	31	21.7%	69	16	23.2%
		14	10	2	20.0%	5	2	40.0%
MT1i								
	Congressional District							
		1	148	36	24.3%	82	10	12.2%
		2	102	32	31.4%	13	0	0.0%
		3	-	-	-	-	-	-
		4	68	8	11.8%	41	3	7.3%
		5	589	69	11.7%	438	63	14.4%
		6	6	0	0.0%	4	0	0.0%
		7	10	0	0.0%	7	0	0.0%
		8	47	0	0.0%	43	0	0.0%
		9	5	3	60.0%	-	-	-
		10	-	-	-	-	-	-
		11	11	1	9.1%	6	0	0.0%
		12	381	125	32.8%	5	1	20.0%
		13	16	0	0.0%	10	0	0.0%
		14	-	-	-	-	-	-
MT2a								

	Congressional District							
		1	61	30	49.2%	16	11	68.8%
		2	88	44	50.0%	2	2	100.0%
		3	-		-	-	-	-
		4	36	21	58.3%	15	12	80.0%
		5	392	205	52.3%	198	113	57.1%
		6	-	-	-	-	-	-
		7	-	-	-	-	-	-
		8	8	1	12.5%	8	1	12.5%
		9	153	89	58.2%	96	68	70.8%
		10	101	43	42.6%	56	27	48.2%
		11	149	53	35.6%	105	53	50.5%
		12	434	278	64.1%	50	30	60.0%
		13	189	115	60.9%	103	71	68.9%
		14	31	19	61.3%	16	10	62.5%
MT2b								
	Congressional District							
		1	148	48	32.4%	88	23	26.1%
		2	102	46	45.1%	13	3	23.1%
		3	-	-	-	-	-	-

		4	89	21	23.6%	49	17	34.7%
		5	912	243	26.6%	622	224	36.0%
		6	6	1	16.7%	4	2	50.0%
		7	10	0	0.0%	7	3	42.9%
		8	49	5	10.2%	44	9	20.5%
		9	152	53	34.9%	95	49	51.6%
		10	100	24	24.0%	55	11	20.0%
		11	161	30	18.6%	111	33	29.7%
		12	423	204	48.2%	52	22	42.3%
		13	200	74	37.0%	112	41	36.6%
		14	31	12	38.7%	17	5	29.4%
MT2g								
	Congressional District							
		1	47	33	70.2%	18	7	38.9%
		2	87	66	75.9%	2	1	50.0%
		3	-	-	-	-	-	-
		4	36	23	63.9%	14	6	42.9%
		5	379	194	51.7%	202	104	52.0%
		6	-	-	-	-	-	-
		7	-	-	-	-	-	-

		8	8	4	50.0%	8	4	50.0%
		9	147	101	68.7%	96	75	78.1%
		10	99	46	46.5%	56	27	48.2%
		11	149	71	47.7%	105	52	49.5%
		12	421	274	66.0%	51	28	54.9%
		13	175	109	62.3%	99	63	63.6%
		14	30	25	83.3%	15	7	46.7%
MT2h								
	Congressional District							
		1	149	102	68.5%	82	59	72.0%
		2	102	60	58.8%	13	9	69.2%
		3	-	-	-	-	-	-
		4	74	32	43.2%	45	23	51.1%
		5	783	519	66.3%	552	397	71.9%
		6	6	3	50.0%	4	0	0.0%
		7	10	3	30.0%	7	5	71.4%
		8	42	28	66.7%	36	27	75.0%
		9	115	70	60.9%	71	51	71.8%
		10	39	25	64.1%	21	14	66.7%
		11	70	36	51.4%	50	24	48.0%

		12	403	249	61.8%	23	19	82.6%
		13	76	42	55.3%	51	32	62.8%
		14	21	6	28.6%	12	8	66.7%
MT2i								
	Congressional District							
		1	50	22	44.0%	10	7	70.0%
		2	88	30	34.1%	2	1	50.0%
		3	-	-	-	-	-	-
		4	23	6	26.1%	9	4	44.4%
		5	262	111	42.4%	131	57	43.5%
		6	-	-	-	-	-	-
		7	-	-	-	-	-	-
		8	-	-	-	-	-	-
		9	116	50	43.1%	71	29	40.9%
		10	39	12	30.8%	21	9	42.9%
		11	61	23	37.7%	46	13	28.3%
		12	403	211	52.4%	22	10	45.5%
		13	65	23	35.4%	44	18	40.9%
		14	21	7	33.3%	12	7	58.3%
MT2j								

	Congressional District							
		1	151	81	53.6%	83	48	57.8%
		2	100	36	36.0%	13	9	69.2%
		3	-	-	-		-	-
		4	74	30	40.5%	45	16	35.6%
		5	781	329	42.1%	551	290	52.6%
		6	6	2	33.3%	4	0	0.0%
		7	10	3	30.0%	7	5	71.4%
		8	40	20	50.0%	35	18	51.4%
		9	116	69	59.5%	71	49	69.0%
		10	39	13	33.3%	21	9	42.9%
		11	71	31	43.7%	51	24	47.1%
		12	402	206	51.2%	23	14	60.9%
		13	76	23	30.3%	51	22	43.1%
		14	21	10	47.6%	12	6	50.0%

Appendix 2

Descriptive Analyses: Teens

All Indicators

Table 1 presents the counts and proportions of teens who met the recommendations at pre- and post-survey for all indicators.

Table 1. All Teens for All Indicators

Indicator	Pre-Survey			Post-Survey		
	Total	Met Recommendations	Percent	Total	Met Recommendations	Percent
MT1c	3350	1508	45.0%	3293	1514	46.0%
MT1d	3349	1047	31.3%	3292	1103	33.5%
MT1g	3213	1303	40.6%	3170	1275	40.2%
MT1h	3267	1173	36.0%	3206	1093	34.1%
MT1i	105	19	18.1%	72	21	29.2%

Race and Ethnicity

Table 2 presents the counts and proportions of teens who met the recommendations at pre- and post-survey by ethnicity and race. Ethnicity and race data were not available for the majority of teens.

Table 2. All Teens for all Indicators by Ethnicity and Race

Indicator			Pre-Survey			Post-Survey		
			Total	Met Recommendations	Percent	Total	Met Recommendations	Percent

MT1c								
	Ethnicity							
		Hispanic or Latino	70	30	42.9%	51	25	49.0%
		Not Hispanic or Latino	206	116	56.3%	169	120	71.0%
	Race							
		Asian	-	-	-	-	-	-
		Black	103	46	44.7%	77	50	64.9%
		Pacific Islander	2	2	100.0%	2	1	50.0%
		White	30	18	60.0%	21	11	52.4%
		Other Race	41	17	41.5%	27	15	55.6%
		More than 1 Race	14	3	21.4%	7	5	71.4%
MT1d								
	Ethnicity							
		Hispanic or Latino	70	21	30.0%	51	22	43.1%
		Not Hispanic or Latino	205	79	38.0%	168	84	50.0%
	Race							
		Asian	-	-	-	-	-	-
		Black	103	42	40.8%	77	43	55.9%
		Pacific Islander	2	2	100.0%	2	2	100.0%
		White	29	11	37.9%	20	9	45.0%
		Other Race	41	14	34.2%	27	13	48.2%

		More than 1 Race	14	4	28.6%	7	4	57.1%
MT1g								
	Ethnicity							
		Hispanic or Latino	44	27	61.4%	32	19	59.4%
		Not Hispanic or Latino	94	69	73.4%	66	56	84.9%
	Race							
		Asian	-	-	-	-	-	-
		Black	77	55	71.4%	58	46	79.3%
		Pacific Islander	2	1	50.0%	2	2	100.0%
		White	26	22	84.6%	19	17	89.5%
		Other Race	21	14	66.7%	10	7	70.0%
		More than 1 Race	12	4	33.3%	6	1	16.7%
MT1h								
	Ethnicity							
		Hispanic or Latino	68	40	58.8%	49	17	34.7%
		Not Hispanic or Latino	123	51	41.5%	85	32	37.7%
	Race							
		Asian	-	-	-	-	-	-
		Black	104	40	38.5%	75	25	33.3%
		Pacific Islander	2	1	50.0%	2	2	100.0%
		White	29	18	62.1%	17	6	35.3%

		Other Race	41	23	56.1%	26	10	38.5%
		More than 1 Race	11	8	72.7%	7	5	71.4%
MT1i	Ethnicity							
		Hispanic or Latino	19	3	15.8%	14	3	21.4%
		Not Hispanic or Latino	78	14	18.0%	52	16	30.8%
	Race							
		Asian	-	-	0.0%	-	-	-
		Black	67	12	17.9%	50	16	32.0%
		Pacific Islander	2	1	50.0%	2	1	50.0%
		White	15	1	6.7%	9	1	11.1%
		Other Race	4	2	50.0%	1	1	100.0%
		More than 1 Race	13	1	7.7%	6	1	16.7%

Implementing Agency

Table 3 presents the counts and proportions of teens who met the recommendations at pre- and post-survey by implementing agency.

Table 3. All Teens for all Indicators by Implementing Agency

			Pre-Survey			Post-Survey		
			Total	Meets Recommendations	Percent	Total	Meets Recommendations	Percent
Indicator								

MT1c								
	IA							
		GDPH	1	0	0.0%	-	-	-
		HMP	3145	1416	45.0%	3145	1028	32.7%
		OH	202	78	38.6%	147	75	51.0%
		UGA	1	0	0.0%	-	-	-
MT1d								
	IA							
		GDPH	1	0	0.0%	-	-	-
		HMP	3145	969	30.8%	7487	2767	37.0%
		OH	202	78	38.6%	147	75	51.0%
		UGA	1	0	0.0%	-	-	-
MT1g								
	IA							
		GDPH	1	1	100.0%	-	-	-
		HMP	3065	1200	39.2%	3065	1196	39.0%
		OH	147	102	69.4%	105	80	76.2%
		UGA	-	-	-	-	-	-
MT1h								
	IA							
		GDPH	1	0	0.0%	-	-	-

		HMP	3065	1075	35.0%	3065	1040	33.9%
		OH	201	98	48.8%	141	53	37.6%
		UGA	-	-	-	-	-	-
MT1i								
	IA							
		GDPH	1	0	0.0%		-	-
		HMP	-	-	-	-	-	-
		OH	104	19	18.3%	72	21	29.2%
		UGA	-	-	-	-	-	-

Language

Table 4 presents the counts and proportions of teens who met the recommendations at pre- and post-survey by language (English or Spanish).

Table 4. All Teens for all Indicators by Language

Indicator	Language	Pre-Survey			Post-Survey		
		Total	Met Recommendations	Percent	Total	Met Recommendations	Percent
MT1c							
	English	268	141	52.6%	219	144	65.8%
	Spanish	4	1	25.0%	-	-	-

MT1d								
	Language							
		English	267	96	36.0%	218	102	46.8%
		Spanish	4	2	50.0%	-	-	-
MT1g								
	Language							
		English	135	94	69.6%	96	74	77.1%
		Spanish	-	-	-	-	-	-
MT1h								
	Language							
		English	186	90	48.4%	132	50	37.9%
		Spanish	4	3	75.0%	-	-	-
MT1i								
	Language							
		English	92	14	15.2%	63	19	30.2%
		Spanish	-	-	-	-	-	-

Congressional District

Table 5 presents the counts and proportions of teens who met the recommendations at pre- and post-test by language (English or Spanish).

Table 5. All Teens for All Indicators by Language

Indicator			Pre-Survey			Post-Survey		
			Total	Met Recommendations	Percent	Total	Met Recommendations	Percent
MT1c								
	Congressional District							
		1	263	115	43.7%	249	102	41.0%
		2	682	325	47.7%	681	304	44.6%
		3	65	37	56.9%	65	44	67.7%
		4	125	53	42.4%	125	55	44.0%
		5	520	255	59.0%	515	252	48.9%
		6	134	56	41.8%	122	66	54.1%
		7	154	62	40.3%	154	65	42.2%
		8	245	109	44.5%	239	120	50.2%
		9	3	2	66.7%	3	3	100.0%
		10	200	84	42.0%	200	86	43.0%
		11	16	10	62.5%	9	6	66.7%
		12	176	77	43.0%	176	86	48.9%
		13	741	308	50.3%	738	314	42.5%
		14	6	4	38.3%	5	4	80.0%

MT1d								
	Congressional District							
		1	262	90	34.4%	248	86	34.7%
		2	682	204	29.9%	681	212	31.1%
		3	65	14	21.5%	65	23	35.4%
		4	125	39	31.2%	125	38	30.4%
		5	520	162	31.2%	515	167	32.4%
		6	134	39	29.1%	122	56	45.9%
		7	154	47	30.5%	154	57	37.0%
		8	245	77	31.4%	239	87	36.4%
		9	3	1	33.3%	3	2	66.7%
		10	200	67	33.5%	200	58	29.0%
		11	16	8	50.0%	9	3	33.3%
		12	176	59	33.5%	176	57	32.4%
		13	741	230	31.0%	738	247	33.5%
		14	6	2	33.3%	5	3	60.0%
MT1g								
	Congressional District							
		1	258	135	47.7%	246	133	45.9%
		2	682	448	34.3%	681	464	31.9%

		3	40	32	20.0%	40	25	37.5%
		4	123	73	40.7%	123	72	41.5%
		5	474	283	40.3%	472	273	42.2%
		6	121	59	51.2%	113	52	54.0%
		7	147	79	46.3%	147	86	41.5%
		8	240	138	42.5%	233	137	41.2%
		9	-	-	-	-	-	-
		10	200	118	41.0%	200	119	40.5%
		11	12	5	58.3%	5	3	40.0%
		12	176	123	30.1%	176	109	38.1%
		13	727	413	43.2%	725	419	42.2%
		14	-	-	-	-	-	-
MT1h								
	Congressional District							
		1	261	132	49.4%	246	146	40.7%
		2	682	473	30.6%	681	511	25.0%
		3	40	27	32.5%	40	28	30.0%
		4	124	69	44.4%	124	69	44.4%
		5	496	342	31.0%	490	343	30.0%
		6	130	64	50.8%	117	64	45.3%

		7	147	75	49.0%	147	69	53.1%
		8	246	164	33.3%	238	155	34.9%
		9	3	2	33.3%	3	2	33.3%
		10	200	128	36.0%	200	127	36.5%
		11	12	4	66.7%	5	2	60.0%
		12	176	128	27.3%	176	134	23.9%
		13	731	476	34.9%	728	456	37.4%
		14	-	-	-	-	-	-
MT1i								
	Congressional District							
		1	21	20	4.8%	12	3	25.0%
		2	1	1	0.0%	-	-	-
		3	-	-	-	-	-	-
		4	-	-	-	-	-	-
		5	19	6	31.6%	17	8	47.1%
		6	-	-	-	-	-	-
		7	-	-	-	-	-	-
		8	22	3	13.6%	15	3	20.0%
		9	-	-	-	-	-	-
		10	-	-	-	-	-	-

		11	12	3	25.0%	5	2	40.0%
		12	-	-	-	-	-	-
		13	17	1	5.9%	14	3	21.4%
		14	-	-	-	-	-	-

Appendix 3

Descriptive Analyses: School-Age Children

All Indicators

Table 1 presents the counts and proportions of school-age children who met the recommendations at pre- and post-survey for all indicators.

Table 1. All School-age Children for All Indicators

Indicator	Pre-Survey			Post-Survey		
	Total	Met Recommendations	Percent	Total	Met Recommendations	Percent
MT1c	4844	2545	52.5%	4756	2585	54.4%
MT1d	4836	2005	41.5%	4747	1923	40.5%
MT1g	4458	4084	91.6%	4425	4103	92.7%
MT1h	4758	2167	45.5%	4658	2096	45.0%

Race and Ethnicity

Table 2 presents the counts and proportions of school-age children who met the recommendations at pre- and post-survey by ethnicity and race. Ethnicity and race data were not available for the majority of children.

Table 2. All School-age Children for All Indicators by Ethnicity and Race

Indicator			Pre-Survey			Post-Survey		
			Total	Met Recommendations	Percent	Total	Met Recommendations	Percent

MT1c								
	Ethnicity							
		Hispanic or Latino	51	23	45.1%	46	28	60.9%
		Not Hispanic or Latino	318	158	49.7%	268	182	67.9%
	Race							
		Asian	7	4	57.1%	5	4	80.0%
		Black	223	86	38.6%	174	109	62.6%
		Pacific Islander	-	-	-	-	-	-
		White	30	19	63.3%	28	18	64.3%
		Other Race	31	15	48.4%	30	16	53.3%
		More than 1 Race	8	3	37.5%	7	6	85.7%
MT1d								
	Ethnicity							
		Hispanic or Latino	51	15	29.4%	45	16	35.6%
		Not Hispanic or Latino	316	138	43.7%	267	125	46.8%
	Race							
		Asian	7	2	28.6%	5	4	80.0%
		Black	222	92	41.4%	173	84	48.6%
		Pacific Islander	-	-	-	-	-	-
		White	30	14	46.7%	27	12	44.4%
		Other Race	31	9	29.0%	30	10	33.3%

		More than 1 Race	7	3	42.9%	7	2	28.6%
MT1g								
	Ethnicity							
		Hispanic or Latino	-	-	-	-	-	-
		Not Hispanic or Latino	1	1	100.0%	1	1	100.0%
	Race							
		Asian	-	-	-	-	-	-
		Black	1	1	100.0%	1	1	100.0%
		Pacific Islander	-	-	-	-	-	-
		White	-	-	-	-	-	-
		Other Race	-	-	-	-	-	-
		More than 1 Race	-	-	-	-	-	-
MT1h								
	Ethnicity							
		Hispanic or Latino	52	26	50.0%	45	24	53.3%
		Not Hispanic or Latino	244	148	60.7%	195	95	48.7%
	Race							
		Asian	7	5	71.4%	5	4	80.0%
		Black	226	133	58.8%	183	91	49.7%
		Pacific Islander	-	-	-	-	-	-
		White	32	20	62.5%	27	15	55.6%

		Other Race	32	14	43.8%	30	13	43.3%
		More than 1 Race	9	7	77.8%	6	1	16.7%

Implementing Agency

Table 3 presents the counts and proportions of school-age children who met the recommendations at pre- and post-survey by implementing agency.

Table 3. All School-age Children for All Indicators by Implementing Agency

Indicator			Pre-Survey			Post-Survey		
			Total	Met Recommendations	Percent	Total	Met Recommendations	Percent
MT1c								
	IA							
		HMP	4541	2416	53.2%	4509	2429	53.9%
		OH	303	129	42.6%	247	156	63.26%
MT1d								
	IA							
		HMP	4535	1882	41.5%	4502	1808	40.2%
		OH	301	123	40.9%	245	115	46.9%
MT1g								
	IA							
		HMP	4424	4102	92.7%	4445	1981	44.6%
		OH	1	1	100.0%	313	186	59.4%

MT1h								
	IA							
		HMP	4445	1981	44.6%	4403	1969	44.7%
		OH	313	186	59.4%	255	127	49.8%

Language

Table 4 presents the counts and proportions of school-age children who met the recommendations at pre- and post-survey by language (English or Spanish).

Table 4. All Children for All Indicators by Language

Indicator			Pre-Survey			Post-Survey		
			Total	Met Recommendations	Percent	Total	Met Recommendations	Percent
MT1c								
	Language							
		English	4837	2540	52.5%	4749	2581	54.3%
		Spanish	7	5	71.4%	7	4	57.1%
MT1d								
	Language							
		English	4829	2005	41.5%	4741	1921	40.5%
		Spanish	7	0	0.0%	6	2	33.33%
MT1g								
	Language							

		English	4458	4084	91.6%	4425	4103	92.7%
		Spanish	-	-	-	-	-	-
MT1h								
	Language							
		English	4751	2165	45.6%	4652	2093	45.0%
		Spanish	7	2	28.6%	6	3	50.0%

Congressional District

Table 5 presents the counts and proportions of school-age children who met the recommendations at pre- and post-survey by congressional district.

Table 5. All School-age Children for All Indicators by Congressional District

Indicator			Pre-Survey			Post-Survey		
			Total	Met Recommendations	Percent	Total	Met Recommendations	Percent
MT1c								
	Congressional District							
		1	258	124	48.1%	235	137	58.3%
		2	941	472	50.2%	939	474	50.5%
		3	121	69	57.0%	121	69	57.0%
		4	330	180	54.5%	325	187	57.5%
		5	685	359	52.4%	663	378	57.0%

		6	82	44	53.7%	80	42	52.5%
		7	9	9	100.0%	9	9	100.0%
		8	311	173	55.6%	302	169	56.0%
		9	136	77	56.6%	135	64	47.4%
		10	232	127	54.7%	232	132	56.9%
		11	7	5	71.4%	7	5	71.4%
		12	243	103	42.4%	243	122	50.2%
		13	1421	777	54.7%	1400	760	54.3%
		14	46	17	37.0%	46	23	50.0%
MT1d								
	Congressional District							
		1	258	115	44.6%	235	105	44.7%
		2	940	350	37.2%	937	350	37.4%
		3	121	44	36.4%	121	48	39.7%
		4	328	138	42.1%	319	133	41.7%
		5	680	267	39.3%	664	289	43.5%
		6	82	30	36.6%	79	30	38.0%
		7	9	4	44.4%	9	5	55.6%
		8	311	134	43.1%	300	125	41.7%
		9	136	53	39.0%	135	49	36.3%

		10	235	112	47.7%	232	106	45.7%
		11	7	4	57.1%	7	4	57.1%
		12	243	92	37.9%	243	94	38.7%
		13	1419	631	44.5%	1401	558	39.8%
		14	46	20	43.5%	46	18	39.1%
MT1g								
	Congressional District							
		1	194	179	92.3%	194	190	97.9%
		2	942	851	90.3%	936	846	90.4%
		3	109	100	91.7%	109	100	91.7%
		4	305	290	95.1%	306	282	92.2%
		5	550	519	94.4%	551	515	93.5%
		6	62	56	90.3%	62	54	87.1%
		7	-	-	-	-	-	-
		8	261	238	91.2%	256	238	93.0%
		9	105	96	91.4%	105	98	93.3%
		10	237	218	92.0%	236	218	92.4%
		11	-	-	-	-	-	-
		12	243	220	90.5%	243	226	93.0%
		13	1404	1279	91.1%	1381	1295	93.8%

		14	46	38	82.6%	46	41	89.1%
MT1h								
	Congressional District							
		1	260	140	53.8%	242	115	47.5%
		2	937	421	44.9%	934	372	39.8%
		3	109	48	44.0%	109	62	56.9%
		4	315	155	49.2%	309	143	46.3%
		5	644	303	47.0%	620	303	48.9%
		6	82	41	50.0%	80	28	35.0%
		7	-	-	-	-	-	-
		8	312	136	43.6%	294	114	38.8%
		9	137	72	52.6%	131	42	32.1%
		10	238	117	49.2%	236	97	41.1%
		11	-	-	-	-	-	-
		12	243	97	39.9%	243	97	39.9%
		13	1406	596	42.4%	1388	684	49.3%
		14	46	22	47.8%	46	21	45.7%

Appendix 4

Descriptive Analyses: Preschool-Age Children

Data were not provided for ethnicity or race. The only implementing agency that provided preschool-age data was HMP.

All Indicators

Table 1 presents the counts and proportions of preschool-age children who met the recommendations at pre- and post-survey for all indicators. Only one implementing agency served preschool-age children. Race and ethnicity information were not reported for this age group.

Table 1. All preschool-age children for All Indicators

Indicator	Pre-Survey			Post-Survey		
	Total	Met Recommendations	Percent	Total	Met Recommendations	Percent
MT1c	1134	829	73.1%	1035	805	77.8%
MT1d	1134	587	51.8%	1035	614	59.3%
MT1g	1134	866	76.4%	1035	895	86.5%

Language

Table 2 presents the counts and proportions of preschool-age children who met the recommendations at pre- and post-survey by language (English or Spanish).

Table 2. All Preschool-age Children for All Indicators by Language

Indicator			Pre-Survey			Post-Survey		
			Total	Met Recommendations	Percent	Total	Met Recommendations	Percent
MT1c								

	Language							
		English	1007	744	73.9%	915	717	78.4%
		Spanish	127	85	66.9%	120	88	73.3%
MT1d								
	Language							
		English	1007	530	52.6%	915	550	60.1%
		Spanish	127	57	44.9%	120	64	53.3%
MT1g								
	Language							
		English	1007	768	76.3%	915	789	86.2%
		Spanish	127	98	77.2%	120	106	88.3%

Congressional District

Table 3 presents the counts and proportions of preschool-age children who met the recommendations at pre- and post-survey by congressional district.

Table 3. All Preschool-age Children for All Indicators by Congressional District

Indicator	Congressional District	Pre-Survey			Post-Survey		
		Total	Met Recommendations	Percent	Total	Met Recommendations	Percent
MT1c							
	Congressional District						

		1	42	36	85.7%	34	30	88.2%
		2	-	-	-	-	-	-
		3	55	34	61.8%	50	35	70.0%
		4	127	87	68.5%	117	86	73.5%
		5	62	51	82.3%	59	44	74.6%
		6	111	83	74.8%	93	70	75.3%
		7	86	50	58.1%	79	59	74.7%
		8	-	-	-	-	-	-
		9	429	337	78.6%	397	313	78.8%
		10	191	132	69.1%	183	148	80.9%
		11	-	-	-	-	-	-
		12	28	16	57.1%	21	18	85.7%
		13	3	3	100.0%	2	2	100.0%
		14		-	-	-	-	-
MT1d								
	Congressional District							
		1	42	29	69.0%	34	27	79.4%
		2	-	-	-	-	-	-
		3	55	26	47.3%	50	31	62.0%
		4	127	51	40.2%	117	40	34.2%

		5	62	34	54.8%	59	35	59.3%
		6	111	63	56.8%	93	58	62.4%
		7	86	34	39.5%	79	47	59.5%
		8	-	-	-	-	-	-
		9	429	234	54.6%	397	239	60.2%
		10	191	96	50.3%	183	117	63.9%
		11	-	-	-	-	-	-
		12	28	18	64.3%	21	18	85.7%
		13	3	2	66.7%	2	2	100.0%
		14	-	-	-	-	-	-
MT1g								
	Congressional District							
		1	42	39	92.9%	34	32	94.1%
		2	-	-	-	-	-	-
		3	55	46	83.6%	50	43	86.0%
		4	127	94	74.0%	117	97	82.9%
		5	62	36	58.0%	59	44	74.6%
		6	111	87	78.4%	93	70	75.3%
		7	86	66	76.7%	79	74	93.7%
		8	-	-	-	-	-	-

		9	429	354	82.5%	387	371	93.5%
		10	191	121	63.4%	183	143	78.1%
		11	-	-	-	-	-	-
		12	28	20	71.4%	21	19	90.5%
		13	3	3	100.0%	2	2	100.0%
		14	-	-	-	-	-	-