

# NORTH CAROLINA

## SNAP-Ed PROGRAM OUTCOME EVALUATION

FEDERAL FISCAL YEAR 2020



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# BACKGROUND

The Supplemental Nutrition Assistance Program Education (SNAP-Ed) is the federal nutrition education program of the United States Department of Agriculture Food and Nutrition Service (USDA-FNS) Supplemental Nutrition Assistance Program (SNAP). SNAP-Ed 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 2020-2025 Dietary Guidelines for Americans (DGA) (U.S. Department of Health and Human Services & U.S. Department of Agriculture, 2020) and public health approaches.

SNAP-Ed programs are implemented across North Carolina to address nutrition, food security, and physical activity for low-income families (i.e., those with incomes at or below 185% of the federal poverty level). Specifically, direct education programs are implemented to engage participants in learning about nutrition, how to make their food dollars stretch further, and ways to be more physically active (USDA-FNS, 2016). Recognizing that consumers' choices take place in the context of what is available, affordable, and accessible in their communities, SNAP-Ed also funds policy, systems, and environmental (PSEs) change interventions to complement direct education efforts and support healthy choices. These PSE strategies function to help low-income North Carolinians improve their nutrition-related skills and behaviors by improving the contexts in which an individual uses her or his skills and chooses from among healthy and unhealthy options for behavior. SNAP-Ed encourages multi-component and multi-level interventions such as marketing, education, staff training, and parent/community involvement to develop sustainable PSE changes.

SNAP-Ed programs also use promotional efforts like social marketing messages and campaigns to promote PSE changes, healthy choices, and influence behaviors. These promotions publicize the available PSE improvements and act as cues in school or community settings to encourage consumers to recognize and nudge them toward the healthier choices.

To improve the health of eligible North Carolinians, the North Carolina Department of Health and Human Services Division of Social Services, Economic and Family Services partners with the following nine implementing agencies (IAs):

1. Alice Aycock Poe Center for Health Education
2. Down East Partnership for Children
3. Durham County Department of Health – Durham's Innovative Nutrition Education
4. East Carolina University – Motivating Adolescents with Technology to Choose Health
5. North Carolina Agricultural and Technical State University – Try Healthy
6. North Carolina State University – Steps to Health
7. Second Harvest Food Bank of Northwest North Carolina
8. University of North Carolina at Chapel Hill – Center for Health Promotion and Disease Prevention
9. University of North Carolina at Greensboro – Recipe for Success

To ensure consistent and high-quality evaluation of SNAP-Ed interventions, the USDA-FNS adopted the SNAP-Ed Evaluation Framework for its programs nationally in 2016 (USDA-FNS, 2016). This framework includes recommendations for assessing and reporting on indicators that evaluate outcomes related to direct education and the amount of PSE changes implemented.

This evaluation assessed SNAP-Ed direct nutrition education interventions and PSE changes implemented by nine North Carolina IAs for the federal fiscal year (FFY) 2020. Of particular interest were medium-term (MT) and long-term (LT) indicators focused on nutrition supports (MT5, LT5) and physical activity and reduced sedentary behavior supports (MT6, LT6) that are defined by the Interpretive Guide to the SNAP-Ed Evaluation Framework (USDA-FNS, 2016).

Additionally, the coronavirus (COVID-19) pandemic changed the way SNAP-Ed programs were delivered in FFY 2020. Therefore, IAs had the option to report on PSE changes that were impacted by COVID-19. They also had sent a success story to capture how North Carolina IAs responded to the COVID-19 pandemic.

## **METHODS**

### **PARTICIPANTS AND PROCEDURE**

Participants were from the SNAP-Ed-eligible population in North Carolina and were at or below 185% of the federal poverty level. Each IA delivered direct education programming for varying age groups including children, teens, adults, and seniors. Age group and other demographic information were reported by IAs with direct-education survey response data.

### **DIRECT EDUCATION**

For direct education, self-reported eating behaviors were assessed using pre-and post-tests. Participants completed a pre-test at the beginning of the direct education program and a post-test at the end of the program. Participants' responses to questions on these two surveys were compared to determine whether there were statistically significant changes in self-reported dietary consumption as assessed by responses to questions related to healthy eating behaviors (MT1) (Table 1). IAs used a variety of survey instruments and questions to capture this information. To account for differences between instruments, the Public Health Institute Center for Wellness and Nutrition (PHI CWN) developed guidelines for recoding survey responses for the MT1 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, PHI CWN established standards and cutoff criteria for dichotomous recoding of participants' original responses so that they could be combined across IAs and used in analyses. Responses were recoded to indicate whether participants reported that their behavior conformed to recommendations of the Dietary Guidelines for Americans (U.S. Department of Health and Human Services & U.S. Department of Agriculture, 2015). Cutoff criteria were reviewed by nutrition evaluation experts and an expert committee regarding content validity for each question.

Each IA used these cutoff criteria to recode participant responses to each question from pre- and post-tests to indicate whether the participant either met or did not meet dietary guidelines. This method of establishing and applying cutoff criteria to recode responses will be referred to as PHI CWN scoring throughout the report.

Table 1. SNAP-Ed Evaluation Framework indicators relevant to the North Carolina direct-education activities

Relevant Indicator	Description
MT1c	Eating more than one kind of fruit throughout the day or week
MT1d	Eating more than one kind of vegetable throughout the day or week
MT1g	Drinking water
MT1h	Drinking fewer sugar-sweetened beverages
MT1i	Consuming low-fat or fat-free milk, milk products, or fortified soy beverages
MT1l	Cups of fruit consumed per day
MT1m	Cups of vegetables consumed per day

## POLICY, SYSTEMS, AND ENVIRONMENTAL CHANGES

PSE changes were reported by the North Carolina IAs using the MT5 and MT6 indicators as described in Table 2. Those IAs that worked with sites or organizations to implement nutritional or physical activity supports reported each PSE site, PSE change, promotional effort, and estimated reach. Reporting of reach was not standardized, but IAs were provided general guidelines to support them in estimating reach counts. North Carolina IAs also reported on LT5 and LT6 indicators as sites that implemented a multi-level and multi-component intervention (i.e.: sites with a PSE change and one or more of the following components: evidence-based education, marketing, parent/community involvement, and staff training on continuous program and policy implementation). The SNAP-Ed Evaluation Framework further describes that these multi-level and multi-component interventions play an important role in achieving positive outcomes and promoting sustainability for PSE changes (USDA-FNS, 2016).



Table 2. SNAP-Ed Evaluation Framework indicators relevant to PSE work in North Carolina

Relevant Indicator	Description
MT5b/MT6b	Total number of policy changes
MT5c/MT6c	Total number of systems changes
MT5d/MT6d	Total number of environmental changes
MT5e/MT6e	Total number of promotional efforts for a PSE change
MT5f/MT6f	Reach: Total potential number of individuals who encountered the improved environment or were affected by the policy change on a regular (typical) basis and were assumed to be influenced by it.
LT5a/LT6a	Total number of sites or organizations that implemented a multi-component and multi-level intervention with one or more changes in MT5/MT6 (site or organizational adoption of PSE changes and promotion) and one or more of the following additional components: <ol style="list-style-type: none"> <li>1. Evidence-based education</li> <li>2. Marketing</li> <li>3. Parent/community involvement</li> <li>4. Staff training on continuous program and policy implementation</li> </ol>
LT5b/LT6b	Total number of components per site or organization, and types of components implemented during the period assessed

## STATISTICAL ANALYSIS

The following statistical analyses were performed to evaluate direct education and PSE changes across all nine North Carolina IAs.

### DIRECT EDUCATION

Direct education participant demographics and survey data, as recorded by the North Carolina SNAP-Ed IAs, were reported in a Microsoft Excel template to PHI CWN. Descriptive statistics of the population that completed assessments for direct education interventions in North Carolina were reported. For matched responses percentages of those who met dietary guidelines at pre- and post-tests were reported.

To determine whether more individuals met dietary guidelines, as determined by PHI CWN scoring, on post-tests compared to pre-tests statistical analyses were performed. For dichotomous outcomes, as reported for indicators related to healthy eating (MT1), McNemar tests were conducted to test for differences in the proportions of participants that met guidelines on post-tests, compared to pre-tests. For continuous outcomes, related to cups of fruit (MT1l) and cups of vegetables (MT1m) consumed per day, t-tests were conducted to test for differences in self-reported cups of fruits or vegetables on post-tests compared to pre-tests. For statistically significant results on McNemar tests or t-tests ( $p < .05$ ), an effect size was calculated to report the magnitude of differences between post- and pre-tests.

SNAP-Education interventions are tailored for specific age groups to address different dietary needs for each age group. Therefore, all statistical analyses for direct education were conducted by age group and not combined. By analyzing each age group separately, this accounted for the different curricula and programming used for each age group.

## POLICY, SYSTEMS, AND ENVIRONMENTAL CHANGES

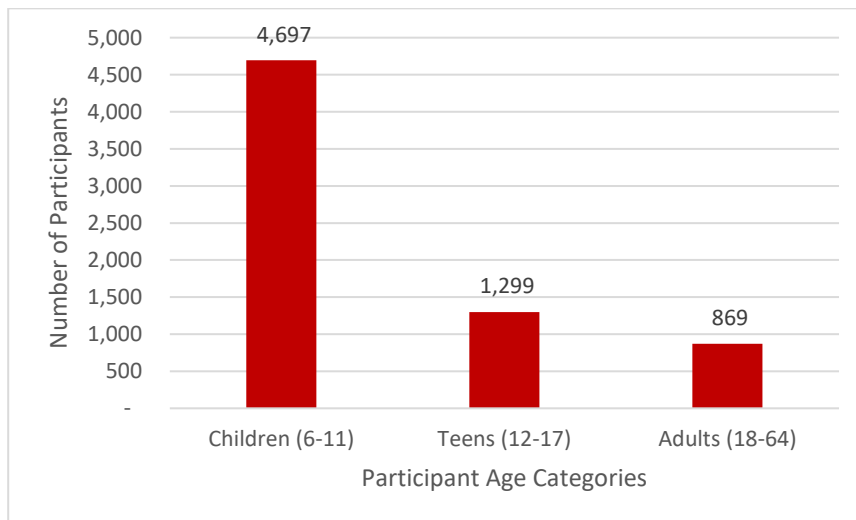
Nutrition and physical activity supports were assessed to identify the number of PSE sites and changes that were implemented within various community settings throughout North Carolina. The total number of PSE sites throughout North Carolina, as recorded by the North Carolina SNAP-Education IAs were reported in a Microsoft Excel template to PHI CWN. For the MT5 and MT6 indicators listed in Table 2, the total number of policy (MT5b, MT6b), systems (MT5c, MT6c), and environmental (MT5d, MT6d) changes, the number of promotional efforts (MT5e, MT6e), and the top settings where PSEs occurred were reported. Estimated reach (MT5f, MT6f) was reported for PSE changes. For LT5 and LT6 indicators, the total number of sites that implemented a multi-component and multi-level intervention with one or more changes in MT5/MT6 (LT5a, LT6a) were reported. Additionally, the total number of components per site, and types of components implemented (LT5b/LT6b) were reported.

## DIRECT EDUCATION

A total of 6,865 participants provided both pre- and post-test responses for at least one MT1 indicator and were included in analyses. As depicted in Figure 1, of these 6,865 participants, there were 4,697 children, 1,299 teens, and 869 adults. There were not enough responses from senior participants, therefore this age group was excluded from these analyses. The entire sample for the evaluation consisted of 11,303 participants who provided a response for at least one indicator at either the pre-test or post-test. Appendix 1 has the demographics of the entire sample.



Figure 1. Total Number of Participants by Age Categories (N = 6,865)



In addition to age, participants were asked to report their ethnicity, race, and sex. Table 3 represents participants' ethnicity, race, and sex by age category.

Table 3. Participant Ethnicity, Race, and Sex by Age Category (N = 6,865)

		Children (6-11 years) N = 4,697	Teens (12-17 years) N = 1,299	Adults (18-63 years) N = 869
Demographics	Categories	N (%)	N (%)	N (%)
Ethnicity	Hispanic or Latino	729 (15.5%)	257 (19.8%)	59 (6.8%)
	Not Hispanic or Latino	3967 (84.5%)	1042 (80.2%)	810 (93.2%)
	Did not report	1 (0.02%)	0 (0%)	0 (0%)
Race	Asian	86 (1.8%)	22 (1.7%)	8 (0.92%)
	Black	1154 (24.6%)	482 (37.1%)	508 (58.5%)
	Pacific Islander	35 (0.75%)	0 (0%)	2 (0.2%)
	White	3029 (61.0%)	616 (47.4%)	335 (38.5%)
	Other race	298 (6.3%)	32 (2.5%)	12 (1.4%)
	More than 1 race	23 (0.46%)	30 (2.3%)	2 (0.2%)
	Did not report	72 (1.4%)	117 (9.0%)	2 (0.2%)
Sex	Female	2339 (49.8%)	720 (55.4%)	738 (84.9%)
	Male	2357 (50.2%)	579 (44.6%)	131 (15.1%)
	Did not report	1 (0.02%)	0 (0%)	0 (0%)

## ADULT DIRECT EDUCATION RESULTS

Results are presented for each MT1 indicator.

### MT1c. Ate more than one kind of fruit.

A total of 842 adult participants reported whether they ate more than one kind of fruit throughout the day or week. Results from a McNemar test showed no statistically significant changes in adults' reports of whether they ate more than one kind of fruit throughout the day or week ( $X^2(1) = 1.73, p = 0.19$ ).

Figure 2. Ate more than one kind of fruit throughout the day or week (Adults)

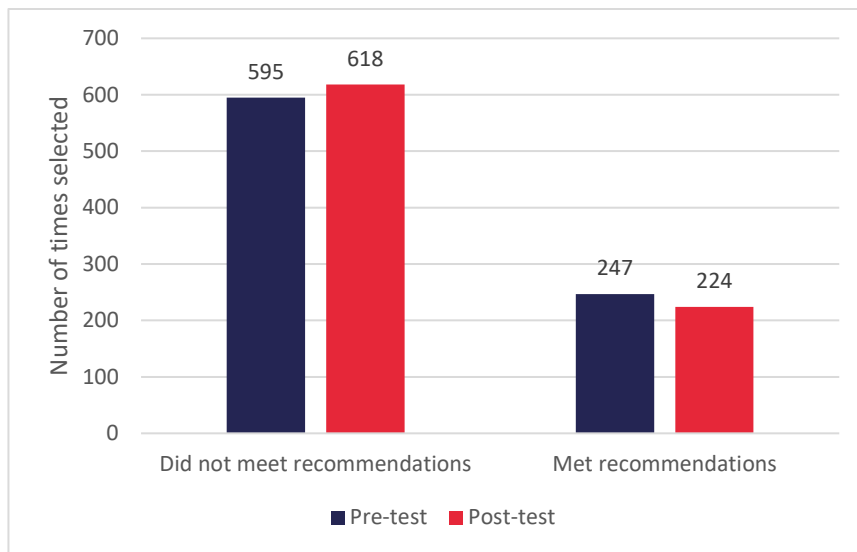


Figure 2. At pre-test, 247 participants (29.3%) met the recommendation, whereas at post-test, 224 participants (26.6%) met the recommendation.

### MT1d. Eating more than one kind of vegetable.

A total of 840 adult participants reported whether they ate more than one kind of vegetable each day or week. A McNemar test showed that there was a statistically significant decrease in adults reporting whether they ate more than one kind of vegetable each day or week ( $X^2(1) = 18.99, p < .001, g = -0.12$ ).

“ In addition to liking our posts, members from our [online] communities posted comments such as: “Recipe for Success has been a lifesaver for me. I have lost 10 pounds and been able to maintain it. The recipes are easy to prepare and inexpensive. I have actually prepared dishes in less than 30 minutes. My favorites have been salmon patties, zucchini stir fry, and watermelon salsa. I usually get about 4 servings per recipe which reduces my need to cook during the week. I look forward to the cooking sessions.” –  
**Recipe for Success from University of North Carolina Greensboro** ”



Figure 3. Ate more than one kind of vegetable throughout the day or week (Adults)

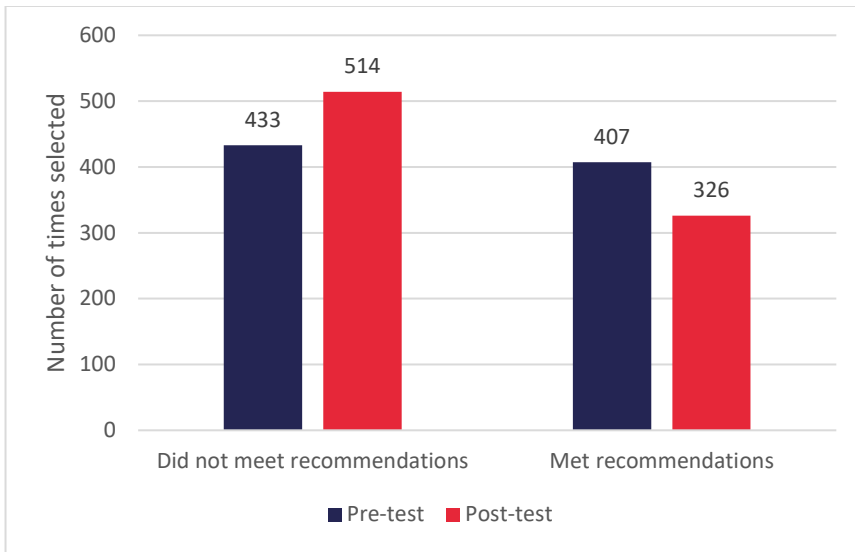


Figure 3. At pre-test, 407 participants (48.5%) met the recommendation, whereas at post-test, 326 participants (38.8%) met the recommendation.

**MT1g. Drinking water.**

A total of 858 adult participants reported the frequency with which they drank water. A McNemar test showed that there was a statistically significant decrease in adults' reports of drinking water ( $X^2(1) = 65.76, p < .001, g = -0.22$ ). See Figure 4 for proportions of participants who did and did not meet recommendations.

Figure 4. Drinking water frequency (Adults)

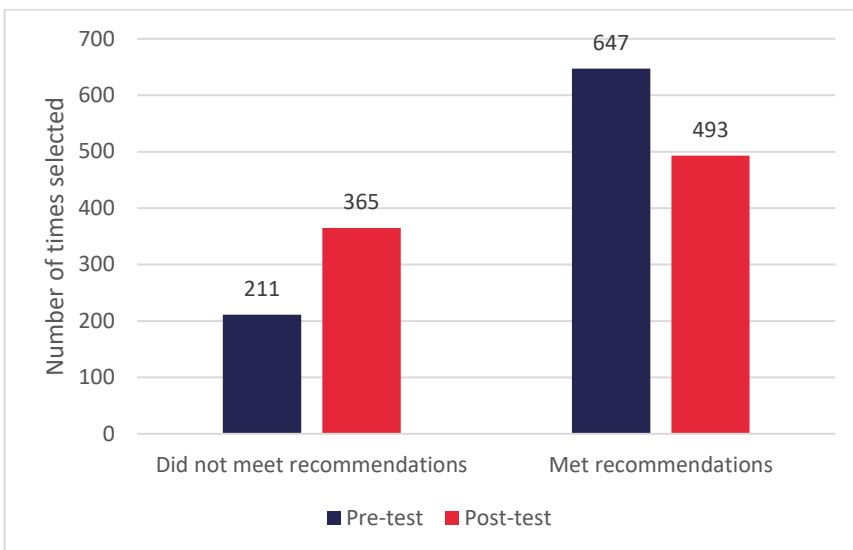


Figure 4. At pre-test, 647 participants (75.4%) met the recommendation, whereas, post-test, 493 participants (57.5%) met the recommendation.

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

A total of 858 adult participants reported the frequency with which they drank fruit drinks, sports drinks, or punch. A McNemar test showed that there was a significant increase in reports of drinking sugar-sweetened beverages (SSBs) ( $X^2(1) = 10.06, p = .002, g = -0.13$ ).

Figure 5. Drinking fewer sugar-sweetened beverages (Adults)

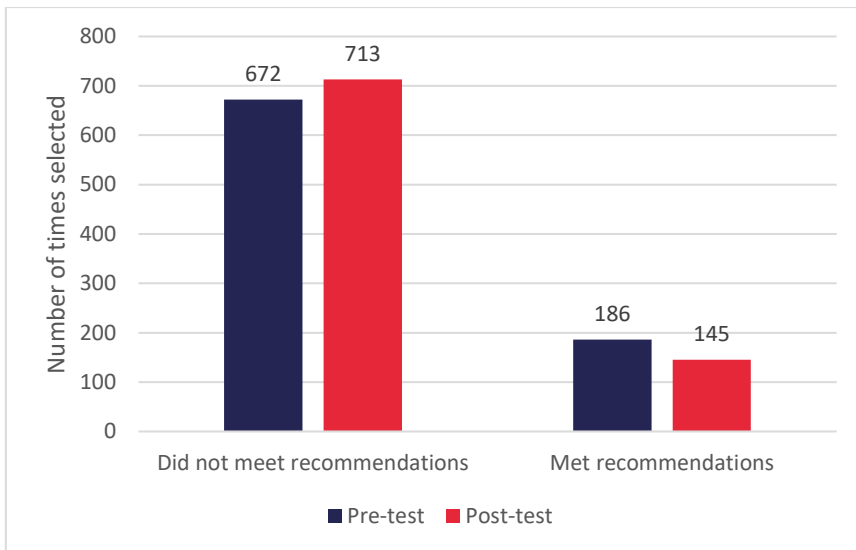


Figure 5. At pre-test, 186 participants (21.7%) met the recommendation, whereas at post-test, 145 participants (16.9%) met the recommendation.

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

A total of 821 adult participants reported the frequency with which they consumed low-fat or fat-free milk. A McNemar test showed that there was a significant decrease in reports of consuming low-fat or fat-free milk ( $X^2(1) = 7.50, p = .006, g = -0.09$ ). See Figure 5 for the proportions of participants who did and did not meet recommendations.

Figure 6. Consuming low-fat or fat-free milk (Adults)

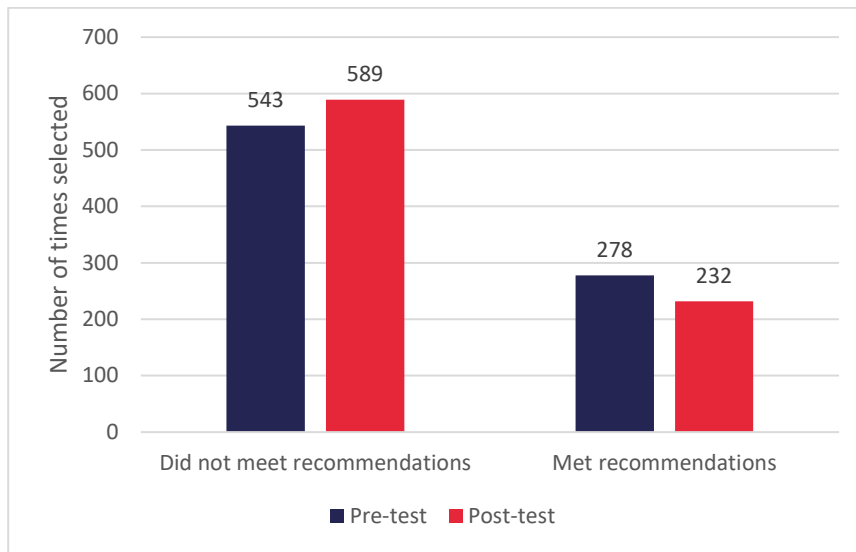


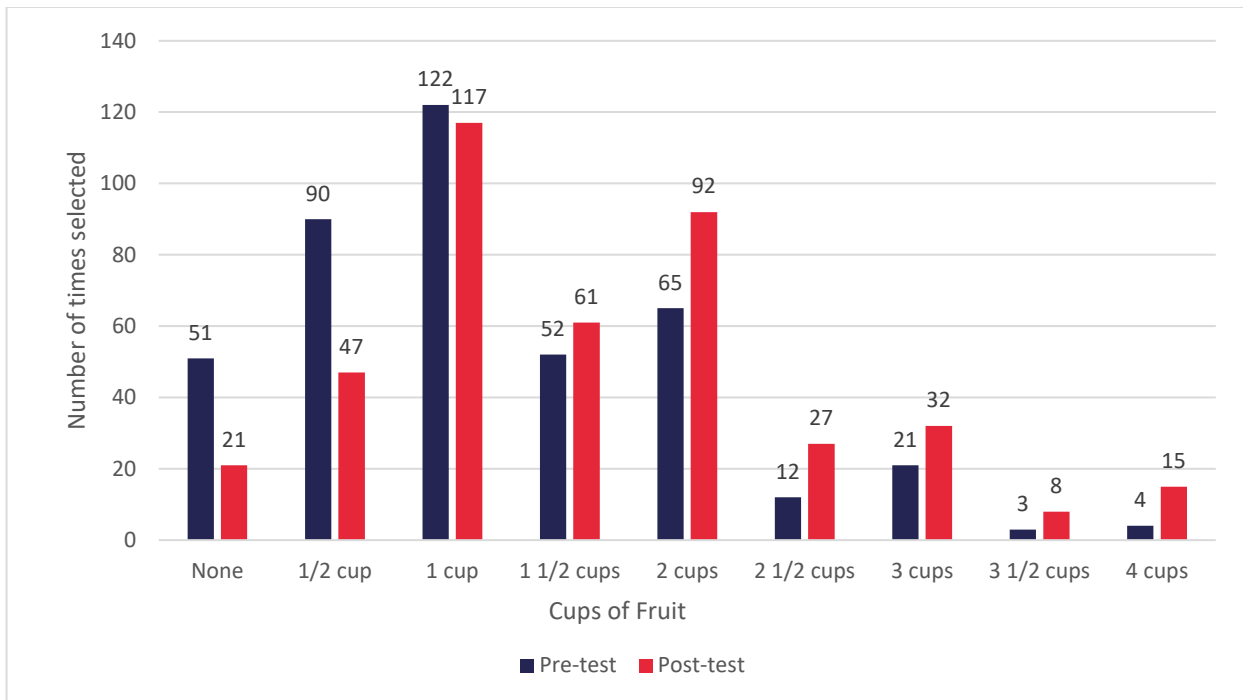
Figure 6. At pre-test, 278 participants (33.9%) met the recommendation, whereas at post-test, 232 participants (28.3%) met the recommendation.

#### **MT1I. Cups of fruit consumed per day.**

A total of 420 adult participants reported the number of cups of fruit they ate each day. The DGA (U.S. Department of Health and Human Services & U.S. Department of Agriculture, 2015) recommends consuming two or more cups of fruit per day. At the pre-test, 25.0% of participants (n = 105) reported that they ate two or more cups of fruit, whereas, at the post-test, 41.4% of participants (n = 174) reported that they ate two or more cups of fruit.

A paired-samples t-test revealed that there was a statistically significant increase in the number of cups of fruit participants reported consuming ( $t(419) = -9.07, p < .001, d = 0.38$ ). At the pre-test, the mean amount of fruit reported was 1.23 cups (Standard Deviation = 0.91). At post-test, the mean amount of fruit reported was 1.59 cups (Standard Deviation = 0.96). Figure 7 shows the distribution of the number of cups of fruit adults reported consuming per day.

Figure 7. Cups of fruit consumed per day (Adults)

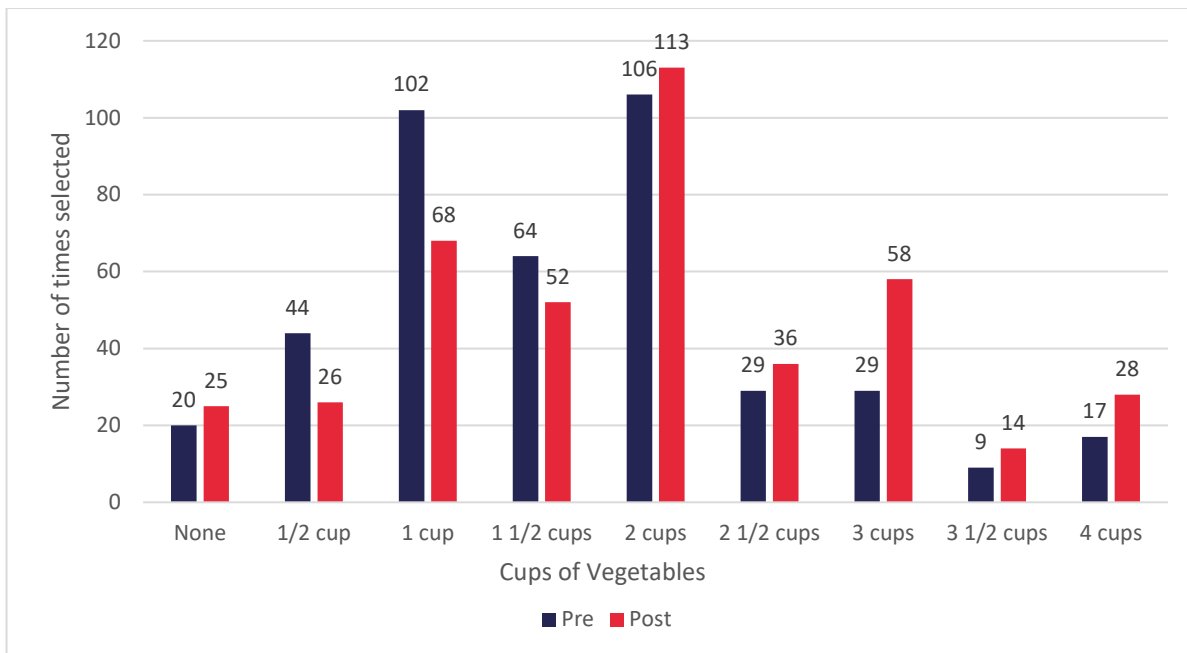


**MT1m. Cups of vegetables consumed per day.**

A total of 420 adult participants reported the number of cups of vegetables they ate each day. The DGA (U.S. Department of Health and Human Services & U.S. Department of Agriculture, 2015) recommends consuming 2.5 or more cups of vegetables per day. At the pre-test, 20.0% of participants (n = 84) reported that they ate 2.5 or more cups of vegetables, whereas, at the post-test, 32.4% of participants (n = 136) reported that they ate 2.5 or more cups of vegetables.

A paired-samples t-test showed that there was a significant increase in the number of cups of vegetables participants reported consuming ( $t(419) = -5.68, p < .001, d = 0.22$ ). At the pre-test, the mean number of vegetables reported was 1.72 cups (Standard Deviation= 0.99). At post-test, the mean number of vegetables reported was 1.94 cups (Standard Deviation= 1.03). Figure 8 shows the distribution of the number of cups of vegetables consumed per day.

Figure 8. Cups of vegetables consumed per day (Adults)



## TEEN DIRECT EDUCATION RESULTS

Results for teens are reported by each MT1 indicator.

### MT1c. Ate more than one kind of fruit.

A total of 237 teen participants reported whether they ate more than one kind of fruit throughout the day or week. A McNemar test indicated that there were no statistically significant changes in teens' reports of consuming more than one kind of fruit ( $X^2(1) = 1.09, p = .30$ ).

Figure 9. Ate more than one kind of fruit throughout the day or week (Teens)

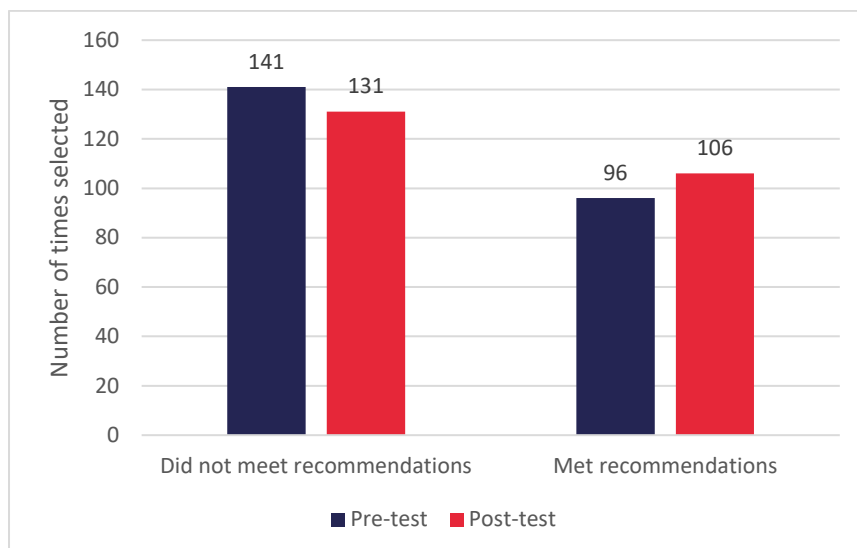


Figure 9. At pre-test, 96 participants (40.5%) met the recommendation, whereas at post-test, 106 participants (44.7%) met the recommendation.

### MT1d. Eating more than one kind of vegetable.

A total of 299 teen participants reported whether they ate more than one kind of vegetable throughout the day or week. A McNemar test showed no significant change in reports of eating more than one kind of vegetable each day ( $X^2(1) = 0.40, p = .53$ ).

Figure 10. Ate more than one kind of vegetable throughout the day or week (Teens)

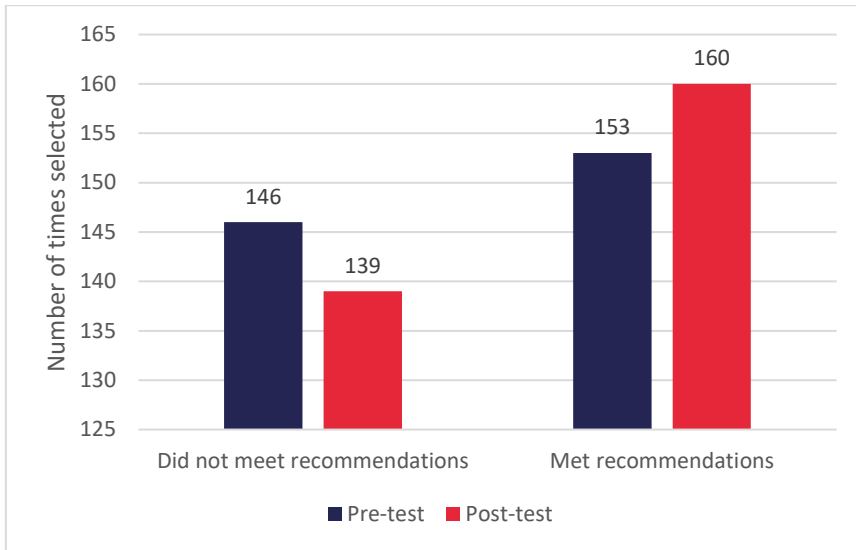


Figure 10. At pre-test, 153 participants (51.2%) met the recommendation, whereas at post-test, 160 participants (53.5%) met the recommendation.

### MT1g. Drinking water.

A total of 890 teen participants were asked to indicate the number of times they drank water the previous day. A McNemar test showed there was no significant change in the number of times teens reported drinking water, ( $X^2(1) = 0.04, p = .85$ ).

Figure 11. Drinking water frequency (Teens)

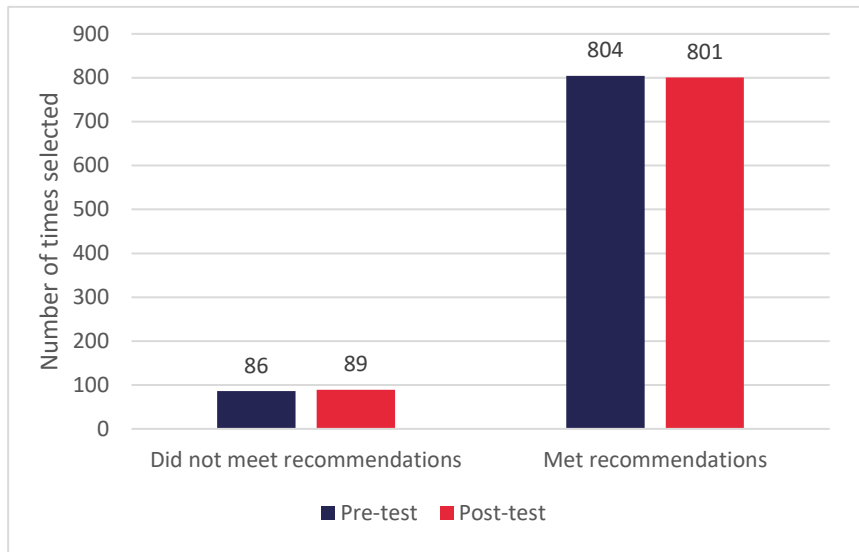


Figure 11. At pre-test, 804 participants (90.3%) met the recommendation, whereas at post-test, 801 participants (90.7%) met the recommendation.

**MT1h. Drinking fewer sugar-sweetened beverages.**

A total of 1,299 teen participants were asked the frequency with which they drank any SSBs during the previous day. A McNemar test showed a statistically significant increase in reports of meeting the dietary guidelines (reflecting a decrease in the reported frequency of drinking SSBs from pre- to post-test;  $X^2(1) = 7.27, p = .007, g = 0.08$ ).

Figure 12. Drinking fewer sugar-sweetened beverages (Teens)

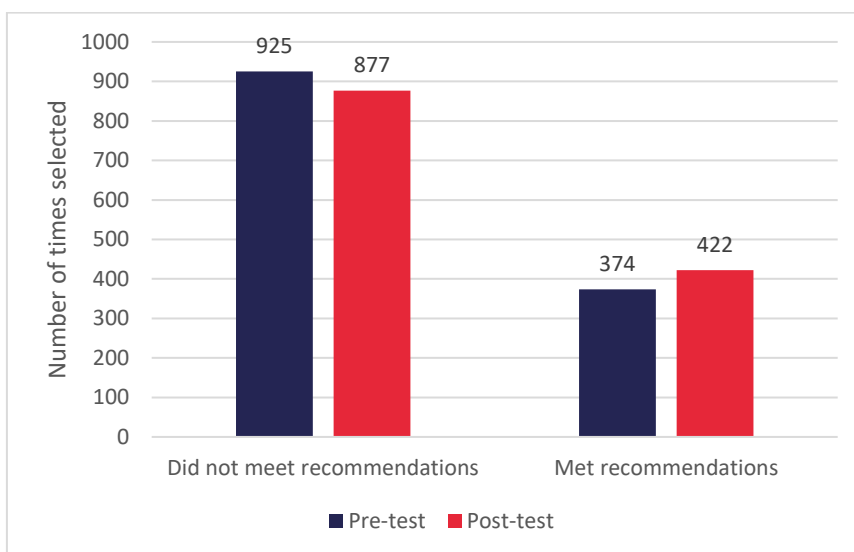


Figure 12. At pre-test, 374 participants (28.8%) met the recommendation, whereas at post-test, 422 participants (32.5%) met the recommendation.

## CHILD DIRECT EDUCATION RESULTS

Results for children are reported by each MT1 indicator.

### MT1c. Ate more than one kind of fruit.

A total of 202 child participants reported whether they ate more than one kind of fruit throughout the day or week. A McNemar test showed no statistically significant changes in reports of eating fruit each throughout the day or week ( $X^2(1) = 3.36, p = .07$ ).

Figure 13. Ate more than one kind of fruit throughout the day or week (Children)

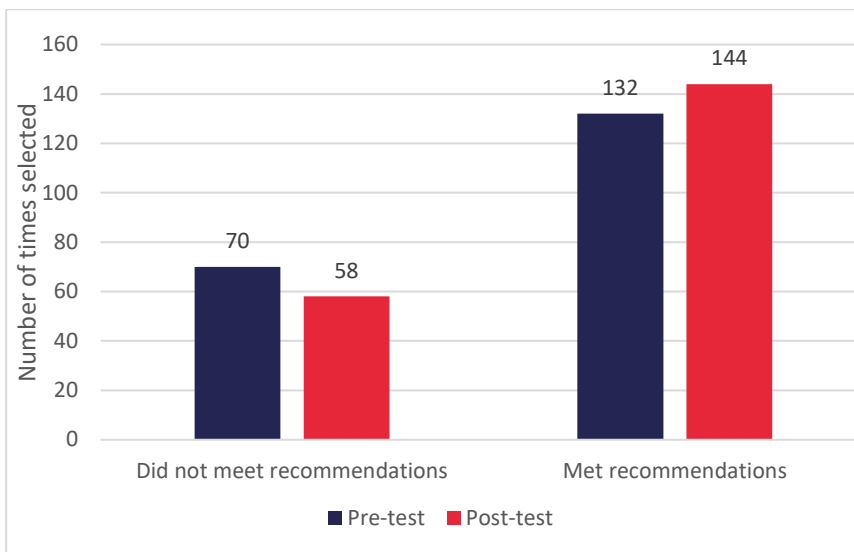


Figure 13. At pre-test, 132 participants (65.3%) met the recommendation, whereas at post-test, 144 participants (71.3%) met the recommendation.

### MT1d. Eating more than one kind of vegetable.

A total of 265 child participants were asked whether they ate more than one kind of vegetable throughout the day or week. A McNemar test showed no significant change in reports of eating vegetables each day ( $X^2(1) = 1.51, p = .22$ ).

“I really enjoyed the healthy interactions, snacks, and teachings that came from each session!!! [My daughter] really enjoyed the trail mix and the fruit pizza! This was awesome.” - Alice Aycock Poe Center for Health Education, Healthy Habits Camp

Figure 14. Ate more than one kind of vegetable throughout the day or week (Children)

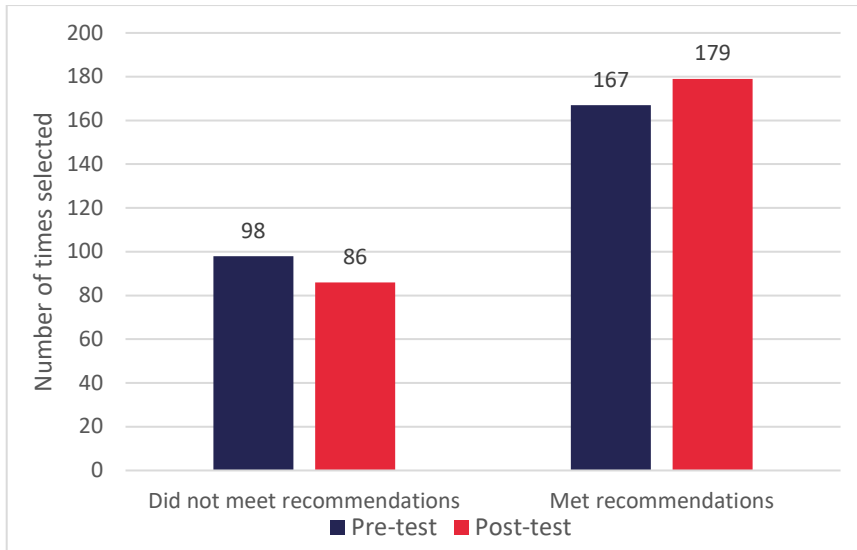


Figure 14. At pre-test, 167 participants (63.0%) met the recommendation, whereas at post-test, 179 participants (67.5%) met the recommendation.

**MT1g. Drinking water.**

A total of 4,692 child participants were asked to indicate whether they drank water the previous day. A McNemar test showed no significant change in reports of drinking water ( $X^2(1) = 0, p = 1$ ).

Figure 15. Drinking water frequency (Children)

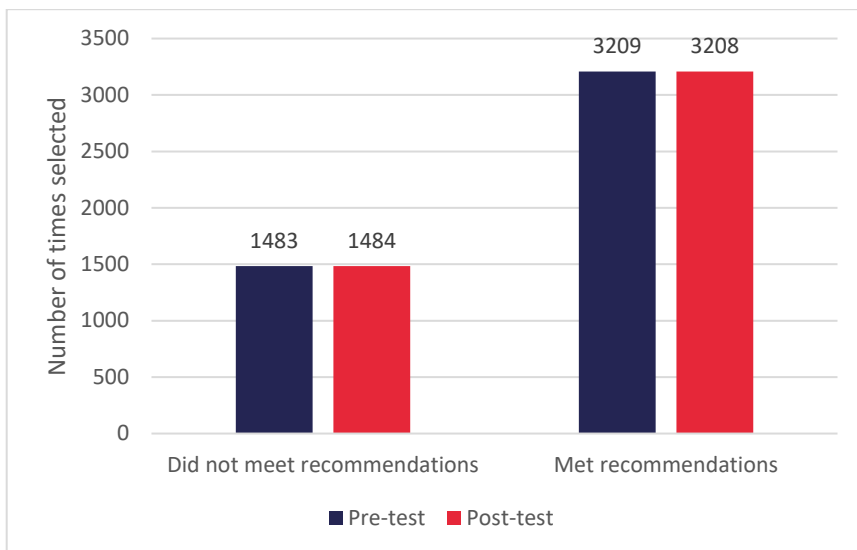


Figure 15. At pre-test, 3,209 participants (68.4%) met the recommendation, whereas at post-test, 3,208 participants (68.4%) met the recommendation.

### MT1h. Drinking fewer sugar-sweetened beverages.

A total of 4,695 child participants were asked the frequency with which they drank any SSBs during the previous day. A McNemar test showed that there was a significant decrease in the number of participants who met recommendations at pre-test compared to post-test ( $X^2(1) = 42.36, p < .001, g = -0.10$ ). That is, compared to the pre-test, more children reported drinking SSBs at post-test.

Figure 16. Drinking fewer sugar-sweetened beverages (Children)

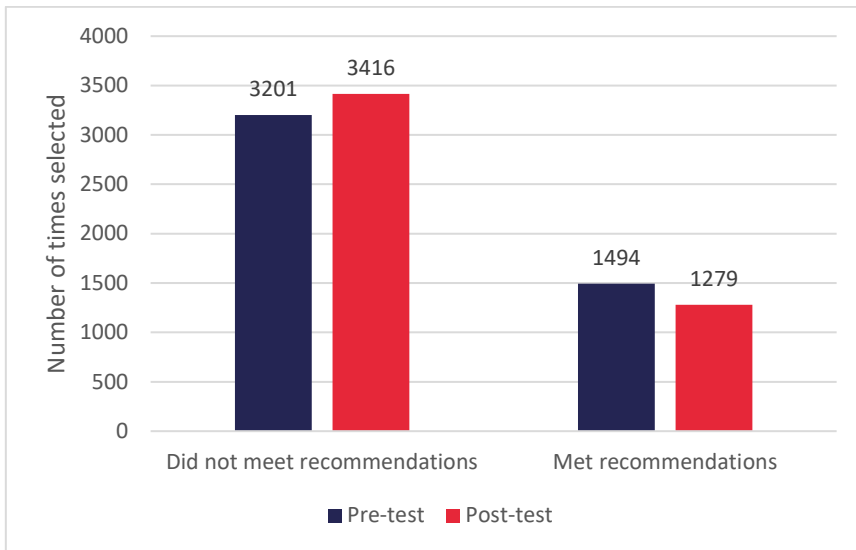


Figure 16. At pre-test, 1,494 participants (31.8%) met the recommendation, whereas at post-test, 1,279 participants (27.2%) met the recommendation.

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

A total of 4,376 child participants were asked the frequency with which they consumed low-fat or fat-free milk. A McNemar test showed a significant increase in the number of children who reported consuming low-fat or fat-free milk ( $X^2(1) = 4.40, p = .04, g = 0.03$ ).

Figure 17. Consuming low-fat or fat-free milk (Children)

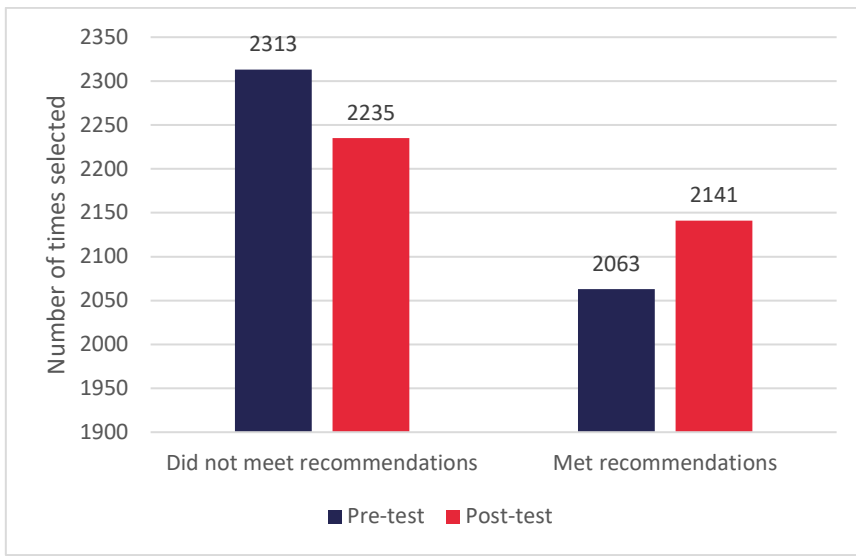


Figure 17. At pre-test, 2,063 participants (47.1%) met the recommendation, whereas at post-test, 2,141 participants (48.9%) met the recommendation.

## SUCCESS STORY

### Farm Fresh: A Community-Based Approach to Preventing Diabetes, Supporting Local Farms, and Increasing Access to Healthy Foods in Rural North Carolina.

Individuals and families living in rural Appalachia experience unique challenges to achieving good health. As the novel coronavirus spread across the nation, households living within this community experienced an increased need for food assistance, reduced transportation options, changes in employment status, and cancellation of in-person health services. To meet the needs of the community, emergency food providers partnered with local farms to launch Farm Fresh, a program that combined fresh produce with text-message health education. To identify Farm Fresh participants, staff and volunteers at food pantry sites were trained to use the Center for Disease Control's six-question screening survey that identified people at risk for diabetes.

Those recognized as "at-risk" were given the option to participate. The food pantry partners received a grant to purchase produce directly from the farm. Farm Fresh transformed the physical food environment at the food pantry by increasing the variety of healthy food options and improving the storage capacity for fresh produce.

"I enjoyed the amazing produce, texts and your efforts. Knowing there were people caring to help was really nice too."

- **Farm Fresh participant**

The text-message health education program included a combination of direct education – designed to increase consumption and variety of vegetables and increase physical activity – and promotional materials that included recipes and handouts. Complementary activities included training pantry staff and volunteers on pre-diabetes risk factors in addition to methods for properly storing fresh produce to ensure quality and safety.

The produce boxes included five to seven different vegetables, such as cucumbers, tomatoes, fennel, kale, pattypan squash, onions, cabbage, and sweet peppers. The fresh produce shares were prepared on the farm and distributed during regular pantry hours via an outside, contactless drive-through. The text-message health education program offered a unique opportunity to provide tailored health education without the need for in-person interaction or the internet.

"Our farm has been considering offering produce shares but did not have the administrative support to work with a hundred families. This program has allowed us to provide fresh produce to these families without an administrative burden."

- **Farm Partner**

Farm Fresh connects the dots around challenges and opportunities in rural communities for food insecure families, while providing much needed income for small-scale fruit and vegetable growers. The program was designed to reach 50 households -

with the increase in need due to the novel coronavirus - the program expanded and reached 100 households representing 205 individuals.

### Individual Outcomes:

- 100% of participants reported improved confidence in managing their health
- 97% of participants reported that the fresh produce helped them eat healthier
- 94% shared that the fresh produce helped their entire household eat healthier
- 88% experienced improved food security status
- 74% increased frequency in regular physical activity
- 74% purchased more healthy foods at the grocery store

### Community-level Outcomes:

- Generated \$17,703.61 in local economic activity
- Food pantries distributed 500 shares of fresh produce, amounting to 9,500 pounds of produce
- Established three new markets for local farms to sell their products
- Distributed 47 unique health education text messages to 97 households
- Distributed 1,012 education handouts

### Key Partners:

- Second Harvest Food Bank of Northwest North Carolina
- Food Pantry at Jefferson United Methodist Church
- Food Pantry at Ashe Really Cares
- Food Pantry at Ashe Outreach Ministries
- Mountain Roots Farm
- Appalachian State University



## DIRECT EDUCATION SUMMARY OF RESULTS

The overall results of the aggregated analyses for FFY 2020 direct education programs were mixed, with several encouraging findings indicating likely improvements at the conclusion of direct education program participation. The analyses revealed that compared to the pre-test, the post-test results showed more adults reported eating more cups of fruit and more cups of vegetables. While adults reported eating more fruits and vegetables overall fewer adults reported eating more than one kind of vegetable indicating that adults had less varied intake. The results also showed an increase in meeting the dietary guidelines for children drinking low-fat milk and teens drinking fewer SSBs.

However, analyses also revealed that there were statistically significant decreases in certain self-reported healthy behaviors from pre- to post-test. In terms of MT1 indicators, post-test results, compared to pre-test, showed that more children and adults reported drinking SSBs on post-tests. Fewer adults reported drinking water and low-fat dairy and eating more than one kind of vegetable.

As Table 4 shows, almost all effect size estimates were interpreted as having a small impact, except for consuming low-fat or fat-free milk for children, which resulted in effects of limited practical significance. Results indicated that compared to the pre-test, adults reported eating more cups of fruit and cups of vegetables at post-test. These findings suggested that North Carolina direct education programs were contributing to improvements in SNAP-Ed-eligible North Carolinians' fruit and vegetable consumption in FFY 2020, a key goal in SNAP-Ed direct education programming.

Table 4. Interpretation of Effect Size

Indicator	Description	Direction of Change from Pre-test to Post-test	Effect Size	Effect Size Interpretation
MT1d	Ate more than one kind of vegetable (adults)***	Decreased vegetable consumption	$g = -0.12$	Small
MT1g	Drinking water frequency (adults)***	Decreased water consumption	$g = -0.22$	Small
MT1h	Drinking fewer sugar-sweetened beverages (adults)**	Increased sugar-sweetened beverage consumption	$g = -0.13$	Small
MT1i	Consuming low-fat or fat free milk (adults)**	Decreased low-fat or fat-free milk consumption	$g = -0.09$	Small
MT1l	Cups of fruits consumed per day (adults)***	Increased fruit consumption	$d = 0.38$	Small

Indicator	Description	Direction of Change from Pre-test to Post-test	Effect Size	Effect Size Interpretation
MT1m	Cups of vegetables consumed per day (adults)***	Increased vegetable consumption	$d = 0.22$	Small
MT1h	Drinking fewer sugar-sweetened beverages (teens)**	Decreased sugar-sweetened beverage consumption	$g = 0.08$	Small
MT1h	Drinking fewer sugar-sweetened beverages (children)***	Increased sugar-sweetened beverage consumption	$g = -0.10$	Small
MT1i	Consuming low-fat or fat-free milk (children)*	Increased low-fat or fat-free milk consumption	$g = 0.03$	Effects of limited practical significance

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

Unfortunately, these analyses showed meaningful decreases in self-reported healthy eating behaviors for adults and children. Results showed decreases for adults reporting to eat more than one kind of vegetable, drink water and low-fat or non-fat milk, and more adults reporting to drink SSBs. For children, results showed an increase in reported SSB consumption. One possibility that may have contributed to this finding is that children may have been at home and not at school due to COVID-19 (where SSB access is limited) and had increased access in the home environment to SSBs throughout the day. Due to limitations inherent in the data, follow-up tests to probe the meaning of these effects were not possible. Although the authors are aware of substantial variation in SNAP-Ed direct education programming, they were unable to examine the data to confirm that participants who reported on a specific behavior received the relevant programming. For example, it is possible that some proportion of the adults who reported that they drank less water participated in direct education activities that did not specifically address water consumption.

Another possible contributor to the unexpected findings pertains to when the interventions took place as well as when pre-and post-tests were administered. Seasonality can play a role in people's beverage consumption which means people's consumption of water and SSBs may vary across seasons. Additionally, a large survey study provides early evidence that shows shopping behaviors changed during the COVID-19 pandemic (Ellison et. Al, 2020), but the degree to which the COVID-19 pandemic may have altered shopping and dietary behaviors in this population is unknown. With the current data, it was not possible to determine the time of year during which participants gave their pre-test and post-test responses. It would be useful to examine or control for the extent to which season, COVID-19, and duration between pre-and post-test could affect beverage choice findings in future analyses.

Changes in data collection and reporting methodologies would also support improved analyses and lead to more robust interpretations. Currently, the data are recoded to indicate whether an

individual met dietary guidelines or did not meet dietary guidelines. This results in only identifying changes that cross the threshold of meets/does not meet guidelines. Alternatively, the use of a standardized survey tool and data collection method would allow for analyses to detect changes in dietary behaviors both below and above the threshold and could change the outcome of the results.

## POLICY, SYSTEMS, AND ENVIRONMENTAL CHANGES

IAs reported a total of 213 PSE changes at 164 sites with a combined reach of 108,175. Of those changes, there were 62 (29.1%) policy changes, 89 (41.8%) systems changes, 62 (29.1%) environmental changes.

### POLICY CHANGES

Most policy changes were policies for increasing nutrition education or cooking activities (n=50; 86.2%), followed by changes that established or improved food/beverage or nutrition-related policy (n=4; 6.7%) and policies increasing healthy foods and beverages (n=3; 5.2%). Table 5 describes policy changes with frequencies and percentages.

Table 5. Policy changes (MT5b)

Policy Change Description	Frequency	Percent
Policy for increasing nutrition education or cooking activities	50	86.2%
Established or improved food/beverage or nutrition related policy	4	6.9%
Policy increasing healthy foods and beverages	3	5.2%
Policy to improve hours of operation of food distribution site, food banks, retail, cafeterias, etc. to improve convenience of/access to healthy food	1	1.7%
<b>Total number of policy changes</b>	<b>58</b>	

Physical activity supports (MT6) policy changes were also reported for FFY 2020. A total of four (n=4; 100.0%) policy changes were reported, all were policies to increase time spent doing physical activity.

### SYSTEMS CHANGES

The most common systems change was the implementation of novel distribution systems to reach high-risk populations (n=25; 31.6%), followed by the initiation or expansion of farm-to-table/use of fresh or local produce (n=10; 12.7%) and improved feeding practices (e.g., served family-style, adult role model healthy behavior, staff sitting with children, children deciding when they are full, etc.) (n=10; 12.7%). All systems change descriptions, frequencies, and percentages are reported in Table 6 below.

Table 6. Systems changes (MT5c)

Systems Change Description	Frequency	Percent
Novel distribution systems to reach high-risk populations	25	31.6%
Initiated or expanded farm-to-table/use of fresh or local produce	10	12.7%
Improved feeding practices (e.g., served family style, adult role model healthy behavior, staff sitting with children, children deciding when they are full, etc.)	10	12.7%
Improved or increased healthy beverage options	4	5.1%
Improved menus/recipes (variety, quality, etc.)	4	5.1%
Initiated, improved, or expanded implementation of guidelines for healthier snack options	4	5.1%
Initiated, improved, or expanded use of standardized, healthy recipes	4	5.1%
Childcare staff included nutrition education as a learning standard	3	3.8%
Improved food purchasing/donation specifications or vendor agreements toward healthier food(s)/beverages	2	2.5%
Implemented price manipulation/coupons/discounts to encourage healthy choices	2	2.5%
Implemented nutrition standards for foods distributed (at food pantries)	2	2.5%
Initiated or expanded a mechanism for distributing onsite garden produce to families or communities	1	1.3%
Initiated, improved, or expanded implementation of guidelines on use of food as rewards or during celebrations	1	1.3%
Initiated or expanded the collection or gleaning of excess healthy food for distribution to clients, needy individuals, or charitable organizations	1	1.3%
Improved free water access, taste, quality, smell, or temperature	1	1.3%
Initiated, improved, or expanded use of federal food programs (CACFP, TEAFAP, summer meals, NSLBP, etc.) including improvements in enrollment procedures	1	1.3%
Began, expanded, or promoted acceptance and use of SNAP/EBT/WIC	1	1.3%
Initiated, improved, or expanded opportunities for parents/students/community to access fruits and vegetables from the garden	1	1.3
Offered on-site enrollment in federal food programs	1	1.3
Initiated, improved, or expanded professional development opportunities on nutrition	1	1.3
<b>Total number of systems changes</b>	<b>79</b>	

Eight physical activity support (MT6) systems changes were reported. The most-reported MT6 systems change was incorporating physical activity into the school day or during classroom-based instruction (n=4; 50.0%), followed by increased or improved opportunities for unstructured physical activity time/free play (n=3; 37.5%). One site reported a system change that initiated, improved, or expanded professional development opportunities on physical activity (n=1; 12.5%).

Two sites reported changes that supported both nutritional and physical activity systems changes (MT5c and MT6c) by initiating, improving, or expanding opportunities for parents to take part in decision-making through a wellness committee.

## ENVIRONMENTAL CHANGES

The most common environmental changes were the establishment, reinvigoration, or maintenance of edible food gardens (n=26; 56.5%). Additional environmental changes were the initiation or expanded use of gardens for nutrition education (n=4; 8.7%) and the improvement or expansion of cafeteria/dining/serving areas or facilities (n=4; 8.7%). All environmental changes, descriptions, and frequencies are presented in Table 7.

“In 2020, at the height of the COVID-19 pandemic, the Warren County Food Policy Council expanded the herb garden at an apartment complex by building two additional raised beds for residents to grow their own food. This expansion resulted in residents having more access to free, fresh vegetables and safe outdoor activities with social distancing and face masks. The complex Director commented on the importance of this outdoor space, “It’s not only a place to raise our own vegetables, but also to have engaging conversations, especially now.” -  
**University of North Carolina Chapel Hill**

Table 7. Environmental changes (MT5d)

Environmental Change Description	Frequency	Percent
Edible gardens (established, reinvigorated, or maintained food gardens)	26	56.5
Initiated or expanded use of the garden for nutrition education	4	8.7
Improved or expanded cafeteria/dining/serving areas or facilities	4	8.7
Improved appeal, layout or display of snack or competitive foods to encourage healthier selections	3	6.5
Improved or expanded kitchen/food preparation facilities that allow for healthier or more appealing options (e.g., refrigeration, appliances that allow for scratch cooking, etc.)	3	6.5
Established a new food bank, pantry, or distribution site	2	4.3
Initiated or expanded use of onsite garden produce for meals/snacks provided onsite	1	2.2
Established a new healthy retail outlet	1	2.2
Established or improved salad bar	1	2.2
Healthier vending machine initiatives (e.g., access to healthier foods and beverages)	1	2.2
<b>Total number of environmental changes</b>	<b>46</b>	

Environmental changes supported physical activity most commonly through increased or improved opportunities for structured physical activity (n=5; 31.2%) and through improved or expanded physical activity facilities, equipment, structures, or outdoor space (n=5; 31.2%). A full list of environmental changes for physical activity is described in Table 8.

Table 8. Environmental changes (MT6d)

MT6d Environmental Changes Description	Frequency	Percent
Increased or improved opportunities for structured physical activity	5	31.2%
Improved or expanded physical activity facilities, equipment, structures, or outdoor space	5	31.2%
Improved quality of structured physical activity	3	18.8%
Increased, improved, or incorporated physical activity/reduced sitting during usual, on-going site activities and functions	2	12.5%
Increased access or safety of walking or bicycling paths	1	6.2%
<b>Total number of environmental changes</b>	<b>16</b>	

## PROMOTIONAL CHANGES

Nutritional supports (MT5) PSE changes were reinforced with 15 promotional changes. All promotional changes reported used interactive educational displays, other visual displays, posters, taste testing, live demonstrations, audiovisuals, celebrities, etc. to prompt healthy behavior choices close to the point of decision. Additionally, physical activity (MT6) PSE changes were supported with two promotional changes where sites installed signage and prompt for the use of walking, stairs, and bicycle paths.

## PSEs BY DOMAIN

PSE changes took place in multiple settings where North Carolinians eat, learn, live, play, shop, and work. Most PSEs took place in settings where people learn (n=104; 76.5%) with fewer taking place where people live (n=11; 8.1%) and shop (n=10; 7.4%). All domains and frequencies are presented in Figure 18. In addition to reporting domain, IAs also reported the reach of PSE changes. IAs reported that programs at places where people learn had the largest reach (n=92,478; 85.5%), followed by places where people play (n=7,075; 6.5%), and shop (n=3,789; 3.5%). Table 9 shows reach by domain.

Figure 18. PSEs by domain

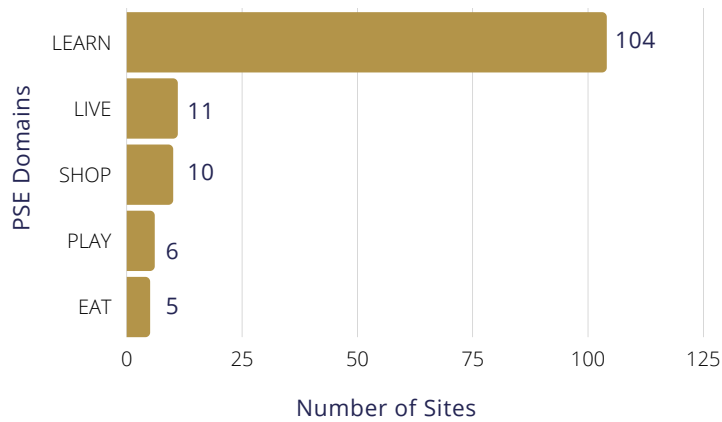


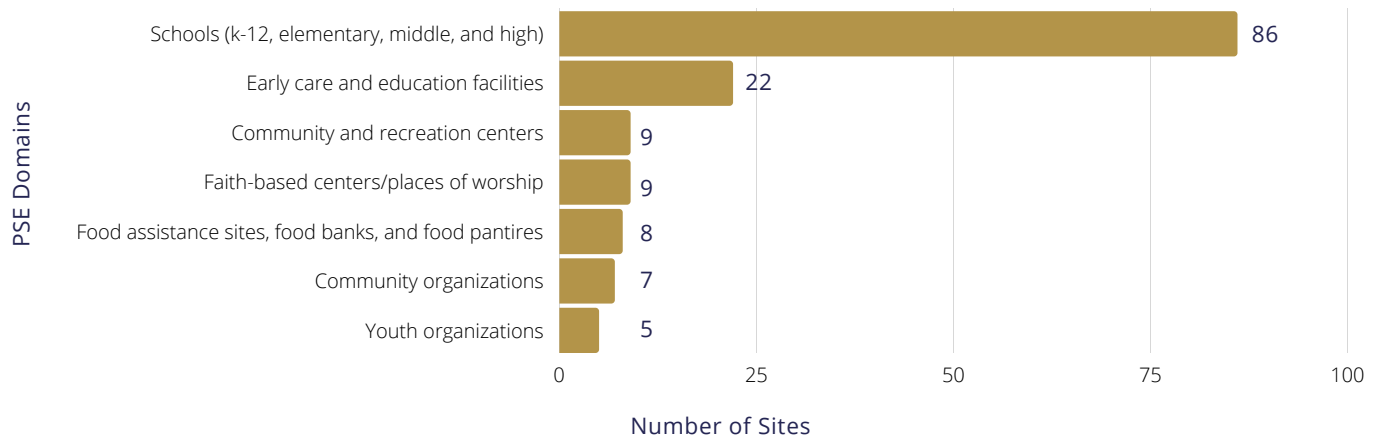
Table 9. Reach by domain

Domain	Reach	Percent
Learn	92,478	85.5
Play	7,075	6.5
Shop	3,789	3.5
Live	1,508	1.4
Eat	395	0.4
Sites reporting reach without reporting domain	2,930	2.7
<b>Total Reach</b>	<b>108,175</b>	

## PSEs BY SETTING

IAs reported the specific settings where PSE changes took place. The most-reported setting was school sites (K-12, elementary, middle, and high) (n=86; 51.5%), followed by early care and education facilities (n=22; 13.2%). Figure 19 shows the number of PSE changes that took place in each setting. In addition to the settings included in Figure 19, SNAP-Ed also reached eligible North Carolinians at homes or public housing sites, before and after school programs, USDA Summer Meal sites, congregate meal sites and other senior nutrition centers, family resource centers, farmers markets, gardens, small food stores, and other places people go to “play.”

Figure 19. PSEs by Setting\*



\*Only settings reported by 5 or more sites are depicted in the graph (total settings=16).

## Nutrition and Physical Activity Supports Implementation (LT5 / LT6)

Implementation of PSE changes was assessed by looking at the number of sites in each type of setting within the eat, learn, live, play, shop, and work domains reporting a multi-component and multi-level intervention. The implementation features are intended to enhance the likelihood of the interventions' impact and sustainability and therefore represent the long-term (LT5 and LT6) indicators from the SNAP-Ed Evaluation Framework (USDA-FNS, 2016). All nine IAs reported implementation of a multi-component and multi-level intervention at a total of 123 sites (LT5a and LT6a).

A total of 108 sites reported at least one nutritional supports (MT5) PSE change and one or more of the following components:

- Evidence-based education
- Marketing
- Parent/community involvement
- Staff training on continuous program and policy implementation

A total of 13 sites reported at least one physical activity support (MT6) PSE change and one or more of the components listed above. Lastly, two sites implemented a PSE change that was classified as both MT5 and MT6 and one or more multi-component listed above.

For MT5 PSE changes, most IAs reported one component paired with at least one PSE change (n=53; 41.4%). Frequently, IAs reported that their MT5 PSE changes were accompanied by all four other components (n=23; 18.0%). There were 20 sites that reported they had not yet implemented a multi-component intervention and all of these were new sites due to COVID-19. The total number of components per site reported by IAs can be found in Table 10.

Table 10. Total number of components per site, for sites that implemented at least one MT5 PSE change (LT5b)

Number of components	Number of Sites	Percent
One component	53	41.4%
Two components	17	13.3%
Three components	15	11.7%
Four components	23	18.0%
Have not yet implemented a multi-component intervention	20	15.6%

IAs most reported three components (n=5; 38.5%) in addition to at least one MT6 PSE change for sites. The total number of components per site with at least one MT6 PSE change can be found in Table 11.

Table 11. Total number of components per site, for sites that implemented at least one MT6 PSE change (LT6b)

Number of components	Number of Sites	Percent
One component	2	15.4%
Two components	3	23.1%
Three components	5	38.5%
Four components	3	23.1%
Have not yet implemented a multi-component intervention	0	0.0%

The most frequently reported component paired with MT5 PSE changes was evidence-based education (n=101; 42.4%), followed by marketing (n=51; 21.4%). A complete list of the specific components reported can be found in Table 12.

Table 12. Number of sites implementing at least one MT6 PSE change and each type of specific additional component (LT5b)

Specific Component	Number of Sites	Percent
Evidence-based education	101	42.4%
Marketing	51	21.4%
Parent/community involvement	46	19.3%
Staff training on continuous program and policy implementation	40	16.8%

Similarly, the most frequently reported component paired with MT6 PSE changes was evidence-based education (n=12; 34.3%), followed by parent/community involvement (n=8; 22.9%), and staff training on continuous program and policy implementation (n=8; 22.9%). A complete list of the specific additional components is reported in Table 12.

Table 13. Number of sites implementing at least one MT6 PSE and each type of specific additional component (LT6b)

Specific Component	Number of Sites	Percent
Evidence-based education	12	34.3%
Marketing	7	20.0%
Parent/community involvement	8	22.9%
Staff training on continuous program and policy implementation	8	22.9%

## COVID-19 IMPACTS

IAs were asked to voluntarily report on how COVID-19 impacted their PSE interventions in 2020. Of those who reported, postponed was the most common impact (n=59; 36.0%), followed by cancelled (n=27; 16.5%), and new because of COVID-19 (n=27; 16.5%). Thirty-seven sites did not report on the impact that COVID-19 had on their PSE changes. A complete list of the COVID-19 impacts can be found in Table 14.

Table 14. COVID-19 impacts on PSE changes

COVID-19 Impact Description	Frequency	Percent of Sites
Postponed	59	36.0%
Not Reported	37	22.6%
Cancelled	27	16.5%
New	27	16.5%
Modified	14	8.5%
<b>Total number of sites</b>	<b>164</b>	

## SUCCESS STORY

### Farmers Market Nutrition Program Produce Distribution

In 2014, Durham County launched its Double Bucks (SNAP incentive) program, which matches any amount of SNAP benefits a participant wants to spend on food that day at the market. Through the years, the Double Bucks program has matched cash purchases for Women, Infants, and Children (WIC) participants, people living in Durham Housing Authority sites, those with Section 8 vouchers, and for seniors participating at Durham Center for Senior Life (DCSL). The program also doubles WIC and Senior Farmers' Market Nutrition Program (FMNP) vouchers distributed in the summer months.

This summer Durham's Innovative Nutrition Education (DINE) collaboratively implemented a project that would allow WIC and Senior FMNP recipients to not only receive their vouchers but also spend them and utilize Double Bucks safely during the COVID-19 pandemic. A new system was developed to provide choice to participants and follow social distancing guidelines. Five drive-thru local produce distributions were established, three for WIC clients and two for seniors, from June through August 2020.

Families were given appointment times to visit the drive-through locations. While scheduling participants were asked how much of their vouchers they wanted to spend. The farmers packed bags of produce based on the pre-purchased value and doubled that amount using Double Bucks funding. FMNP vouchers were distributed to participants and signed on-site.

In addition, to produce, participants received resources in their produce bags including healthy recipes, information about changes at WIC, and information about Double Bucks eligibility. Families were also given information on the current precautions in place at the markets, to encourage families to use the rest of their FMNP vouchers and continue using the program year-round.

One WIC distribution site also distributed "grow kits". These kits, created by DINE team members, contained seeds and materials needed for children to start planting their own home gardens, regardless of their available space.

A total of 78 older adults and 105 WIC families received nearly \$8,000 in local produce at the five drive-through sites. WIC families and seniors were offered a viable alternative to use their FMNP vouchers that may have gone unredeemed due to the COVID-19 pandemic.

Of WIC participants surveyed:

- 100% found the produce distribution useful.
- 52% noted it was the first time they had heard about the Double Bucks program.



Hopefully, this new awareness will lead to the participants utilizing the Double Bucks program even after the distributions. RAFI-USA and DINE staff hope to make a case for increased funding of FMNP vouchers in the future, given that redemption rates at markets have increased significantly over the past three years. Hopefully, these successful, well-attended distributions will lend additional support for the NC DHHS FMNP office to expand the program.

## PSE SUMMARY OF RESULTS

IAs reported a total of 213 PSE changes at 164 sites, which had a combined reach of 108,175. Of those changes, there were 62 (29.1%) policy changes, 89 (42.8%) systems changes, and 62 (29.1%) environmental changes. Most policy changes were focused on increasing nutrition education and cooking activities. The most common system changes were the implementation of novel distribution systems to reach high-risk populations and incorporating physical activity into the school day or during classroom-based instruction. Most nutritional environmental changes took place in food gardens and most physical activity environmental changes were geared toward increasing or improving opportunities for structured physical activity and through improving or expanding physical activity facilities, equipment, structures, or outdoor space.

PSE changes were supported by 15 nutrition-focused promotional efforts for prompting healthy behavior choices close to the point of decision and two physical activity-focused promotional efforts that prompted the use of walking, stairs, and bicycle paths.

All nine North Carolina IAs reported implementation of a multi-component and multi-level intervention at a total of 123 (75%) sites out of 164 sites for FFY 2020. Evidence-based education was the additional component that most supported their nutritional and physical activity PSE changes. For the sites that had not yet reported a multi-component intervention most of these sites were new due to COVID-19.

Over a third, (n=59; 36.0%) of sites reported that COVID-19 postponed their PSE work this year. Other sites reported that their PSE changes were canceled (n=27; 16.5%) or modified (n=14; 8.5%) and some reported that they had new PSEs (n=27; 16.5%) this year because of the pandemic.

The overall results of the aggregated PSE data for FFY 2020 show that, despite COVID-19, a wide array of nutrition and physical activity-related PSE work was done in North Carolina with a total reach of 108,175. PSE changes most commonly took place where people learn, including at elementary, middle, and high school, as well as at early care and education facilities. PSE reach was highest in settings where people learn and play. North Carolina IAs were also able to successfully report physical activity supports (MT6) in addition to the typically reported nutritional supports (MT5) highlighting the additional work being done in this area even through a pandemic. A limitation of this evaluation was our inability to assess effectiveness alongside implementation for LT5 and LT6 indicators. The SNAP-Ed Evaluation Framework suggests that these indicators are intended to be assessed together; however, this was the first year North Carolina IAs reported on LT indicators for PSE implementation and effectiveness could be included in future evaluations.

# CONCLUSIONS AND RECOMMENDATIONS

This evaluation provides evidence of positive changes in self-reported healthy eating behaviors among participants in SNAP-Ed direct education nutrition programs in North Carolina. Notably, adults reported eating more fruits and vegetables, teens reported drinking fewer SSBs, and more children were drinking low-fat and fat-free milk. This evaluation detected unexpected changes from pre- to post-tests for healthy eating behaviors among all age groups. The COVID-19 pandemic changed the way North Carolina IAs delivered nutrition education, and some post-tests may have been administered after an in-person program transitioned to virtual lessons as IAs were piloting virtual nutrition education classes. This evaluation was limited to detect changes in healthy eating behaviors that may have been impacted by changes to nutrition education delivery or timing of pre- and post-tests. These findings highlight the importance of **best practices for surveying participants of nutrition education classes**. Additionally, it is recommended that North Carolina IAs **ensure curriculums are appropriate for the age groups** they are serving. If possible, IAs could report direct education curricula to enhance future evaluations and better understand healthy eating behavior changes for participants in North Carolina SNAP-Ed direct education interventions. Lastly, participant responses were recoded to support aggregation across the state, however the recoding approach limits the ability to detect subtle changes in behavior changes. A **common survey tool could be used across direct education classes in North Carolina** to allow for combining data across IAs and for the ability to detect subtle changes across response categories that may currently be masked with the meets/does not meet coding.

Despite COVID-19, a wide array of nutrition and physical activity-related PSE changes were implemented across North Carolina with a total reach of 108,175. All 9 IAs reported implementation of multi-component and multi-level interventions at a total of 123 (75%) sites. For the sites that had not yet reported on multi-components, many had reported they were new due to COVID-19. This shows that all North Carolina SNAP-Ed IAs are implementing multi-level and multi-component interventions. IAs are encouraged to implement multi-component interventions at new sites. These additional implementation features (LT5/LT6) are intended to enhance the likelihood of impact and sustainability of the intervention. With most sites reporting at least one additional component, the likelihood that interventions will be carried into future years is promising. In future years North Carolina IAs are excited to report PSE activities in the Program Evaluation And Reporting System (PEARS) which will provide more detailed information about PSE changes that are implemented across North Carolina. Finally, it is recommended that North Carolina IAs **include LT5 and LT6 effectiveness measures** to enhance PSE evaluation.

## REFERENCES

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# APPENDIX I

A total of 11,303 participants provided a response for at least one indicator at either the pre-test or post-test. Table A1 shows the demographics of the entire sample.

Table A1: Participant’s ethnicity, race, and sex by age category for the entire sample (N=11,303).

		Children (6-11 years) N = 4,957	Teens (12-17 years) N = 5,392	Adults (18-63 years) N = 909	Seniors (65+) N = 45
Demographics	Categories	N (%)	N (%)	N (%)	N (%)
Ethnicity	Hispanic or Latino	752(15.2%)	1036 (19.2%)	64 (7.0%)	1 (2.2%)
	Not Hispanic or Latino	4027 (81.2%)	4356 (80.8%)	826 (90.9%)	24 (53.3%)
	Did not report	178 (3.6%)	0 (0%)	19 (2.1%)	20 (44.4%)
Race	Asian	95 (1.9%)	94 (1.7%)	8 (0.9%)	0 (0%)
	Black	1268 (25.6%)	1539 (28.5%)	524 (57.6%)	22 (48.9%)
	Pacific Islander	36 (0.7%)	3 (0.1%)	2(0.2%)	1 (2.2%)
	White	3044 (61.4%)	2436 (45.2%)	346 (38.1%)	13 (28.9%)
	Other race	348 (7.0%)	250 (4.6%)	13 (1.4%)	1 (2.2%)
	More than 1 race	35 (0.7%)	30 (0.6%)	5 (0.6%)	8 (17.8%)
	Did not report	131 (2.6%)	1040 (19.3%)	11 (1.2%)	0 (0%)
Sex	Female	2463 (49.7%)	2926 (54.3%)	752 (82.7%)	23 (51.1%)
	Male	2477 (50.0%)	2465 (45.7%)	145 (16.0%)	12 (26.7%)
	Did not report	17 (0.3%)	1 (0.0%)	12 (1.3%)	10 (22.2%)

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