Children's Healthy Living Program

For Remote Underserved Minority Populations

In the Pacific Region

Final Report on Intervention Results

For the CHL-wide region and

Anchorage, Alaska

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The CHL Partnership

Commonwealth of the Northern Mariana Islands

Alaska

Hawaii

Guam

Republic of the Marshall Islands

Republic of Palau

Federated States of Micronesia

American Samoa

Distances between some CHL partners

Fairbanks, AK to Pago Pago, American Samoa - 5,595 mi. • Koror, Palau to Washington, DC - 8,686 mi.

Honolulu, HI to Washington, DC - 4,829 mi. • Agana, Guam to San Francisco, CA - 5,805 mi.

EXECUTIVE SUMMARY ON CHL-WIDE INTERVENTION RESULTS

Effectiveness of the Children's Healthy Living (CHL) Multilevel Community Randomized Intervention Program on Child Measures in Five US-affiliated Pacific Jurisdictions

The Children's Healthy Living (CHL) program was developed to prevent young child obesity and improve child health and wellness with a focus on community action across the US affiliated Pacific region. The regional multilevel, community-based intervention consisted of 4 cross-cutting functions or categories (initiate or strengthen school wellness policies; partner and advocate for environmental change; promote CHL messages; and local capacity building) with 19 activities addressing 6 targeted behaviors (physical activity, sedentary behavior, sleep, fruit and vegetable intake, sugar sweetened beverage intake, and water intake). A common intervention template was developed, implemented and tracked over a 24 month period. Baseline and 24 month measures were collected on 8,407, 2-8 year old children by trained and standardized teams, in 27 selected communities, in 5 jurisdictions in the Pacific region (Alaska, Hawaii, Guam, American Samoa, and Commonwealth of the Northern Mariana Islands). IRB approval or ceding of approval was obtained in each jurisdiction. 4,787 children were available for food intake variables (Sugar Sweetened Beverage, Water, Fruit, and Vegetable). Controlling for age and sex and accounting for the randomization units and clustering, the CHL intervention communities had significant changes compared to control communities, adjusted for temporal changes, in prevalence of child acanthosis nigricans (-4.08 % vs -0.46 %, p=0.002), child overweight plus obesity (-3.18 % vs +0.99 %, p=0.027), and child waist circumference (-0.29 cm vs +0.77 cm, p=0.007). BMIZ score change was not significant (-0.07 vs -0.02, p=0.150). Screen time change (-0.18 vs +0.3 h/d) was not significant at p=0.103. Levels of change of other behavioral variables (moderate and vigorous physical activity, Sugar-Sweetened Beverage intake, water intake, fruit intake, vegetable intake, sleep time) were also not significantly different between groups. The CHL community-based multilevel multicomponent

intervention decreased prevalence of young child overweight and obesity and risk for diabetes in the remote underserved Pacific region. Likely small changes in multiple components at multiple levels worked together to nudge the overweight and obesity prevalence downward. The CHL team and other interested parties will continue to study the data to understand these combinations and interactions further.

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1. Introduction

Children's Healthy Living Program (CHL)

The Children's Healthy Living Program for Remote Underserved Minority Populations in the Pacific Region (CHL) is a partnership among the remote Pacific jurisdictions that includes an intervention study in Alaska; American Samoa; Commonwealth of the Northern Mariana Islands (CNMI); Guam; and Hawaii to study childhood obesity among Pacific children, ages 2 to 8 years old.

The program is funded by the United States Department of Agriculture (USDA), National Institute of Food and Agriculture, Agriculture and Food Research Initiative (Grant no. 2016-67032-24989). CHL is coordinated from the Department of Human Nutrition, Food and Animal Sciences in the College of Tropical Agriculture at the University of Hawaii at Manoa (UH) with subcontracts to the University of Guam, University of Alaska Fairbanks, American Samoa Community College and Northern Marianas College.

The goal of CHL is to help to create a social, cultural, political, economic, and physical environment in the Pacific Region that supports active play, physical activity, and eating healthy food, in order to promote health. In partnership with our communities, our mission is to elevate the capacity of the region to build and sustain a healthy food and physical environment to help maintain healthy weight and prevent obesity among young children in the Pacific region.

Purpose Statement

This report describes the intervention effect in the CHL region, including Alaska; American Samoa; Commonwealth of the Northern Mariana Islands (CNMI); Guam; and Hawaii, and for a specific community and its jurisdiction, as well as the post-intervention and change from baseline results for the Community Assessment Tool data for a specific community.

Figure 1 illustrates CHL's model to influence multiple aspects of the environment to promote healthy food intake and physical activity in young children ages 2 to 8 years old.

Figure 1. CHL Conceptual Model
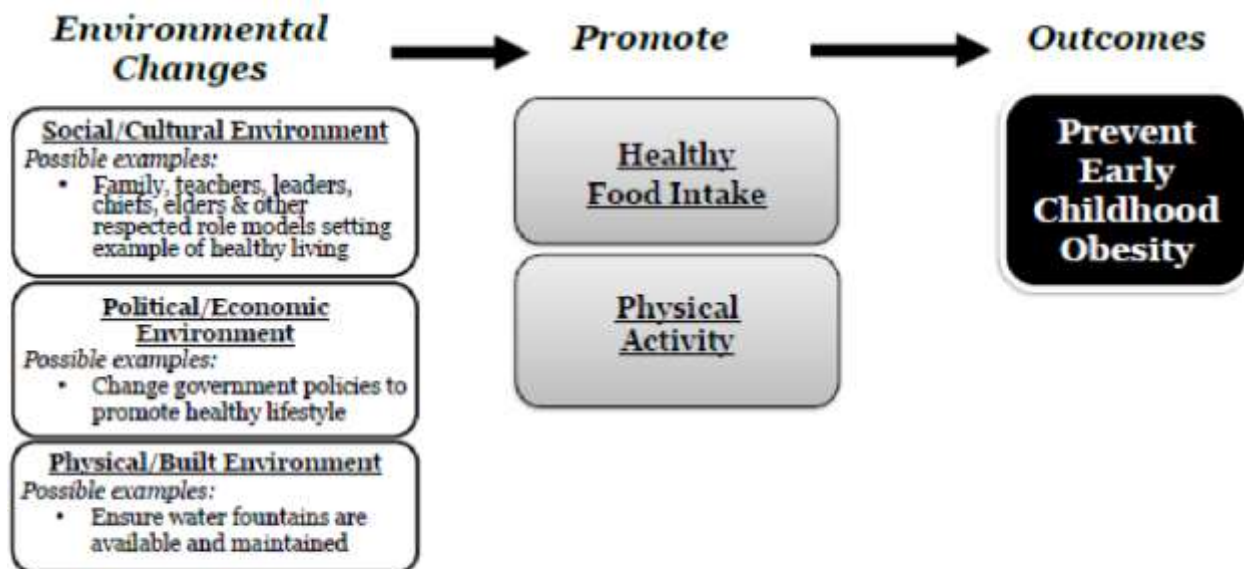
2. Intervention Activities

Section 1. CHL Target Behaviors

CHL's goal was to achieve healthy weight among young children (ages 2 to 8 years) by promoting *six target behaviors*:

1. Increase consumption of fruits and vegetables, preferably locally grown fruits and vegetables

2. Increase physical activity

3. Increase water consumption

4. Increase hours of sleep

5. Decrease consumption of sugar sweetened beverages

6. Decrease screen time

Section 2. Measures Overview

The CHL study design was to collect data on body size, functional outcomes of obesity, food intake, physical activity, lifestyle behavior which includes screen time, and demographics. These are measured through anthropometry, food and activity logs, questionnaires, and visual inspection (of the neck). In addition to these individual level variables a wide range of tools were used to survey and inventory food and physical activity resources in the community. The role of community environment and resources can be used to explore their relationship to individual health outcomes and obesity.

The following study outcomes were measured for children across jurisdictions using a common methodology:

Body size: Body size measures included weight, height and waist circumference and the resultant calculations of BMI, percent overweight and obese. Trained staff in all jurisdictions used standardized instruments, such as common scales for weight, stadiometers for height, and tape measures for waist circumference. Body size outcomes include overweight, defined as the 85th - 94th percentile for BMI (weight, kg/height, m^2) and obesity, defined as greater than or equal to the 95th percentile for BMI and BMI Z-Score (Centers for Disease Control and Prevention, 2009), and waist circumference. During training sessions on anthropometry, inter- and intra-person reliability of each measurement, as well as agreement to an expert measurer, were determined. We followed guidelines by Zerfas to assess agreement (1986).

Functional outcomes of obesity: Functional outcomes of obesity (Ropka, 2002) included sleep quality and duration, both as minutes per night from the accelerometer and self-reported average duration, and presence of Acanthosis nigricans as an indicator of insulin resistance/pre-diabetes.

Food intake: We calculated nutrients and food groups of the children's diet from two days of food logs, which were completed by the parent / caregiver, with assistance from other child caregivers. We are using these data to estimate prevalence of food intake in the region. These data have been entered into PacTrac3. We used the food composition database which was developed and is maintained by the Nutrition Support Shared Resource at the UH Cancer Center. This database includes information on local foods in the Pacific region.

Physical activity: We measured physical activity with several strategies with which we have experience – accelerometers and physical activity logs.

Physical Activity Log: We developed 24-hour activity logs to measure physical activity of children in the PacDASH study, which were successfully pilot-tested for children aged 3-5 years. Parents were asked to record all activities for the child for the two days when food intake was recorded. These activity logs provided us with the type and duration of each activity of their child. Trained CHL staff assigned a metabolic equivalent (MET) that reflected the energy expenditure for the child's activity (Ridley, Ainsworth, & Olds, 2008), and a 24-hour METs could be computed.

Accelerometers: Children were asked to wear accelerometers for six days in this study. In Year 1 of CHL, we pilot tested Actical accelerometers as a method to measure physical activity in young children to be used in the full study. Based on our successful CHL Physical Activity Pilot results, we used accelerometry at all sites (Nigg et al., 2012; Ettienne et al. 2016). The CHL Coordinating Center (CCC) trained staff at each jurisdiction on use of the accelerometers before measurement began.

Accelerometers are objective tools for measuring physical activity. Children were instructed to wear the accelerometers for 6 days without removal. Accelerometers were set to record children's movements at each second. Recorded movements are known as counts. The accelerometer counts were summed for each day to derive the number

of counts per minute (cpm), overall and within sustained bouts of 5 minutes. These cpm were then used to derive activity levels based on the following criteria:

- Sedentary, if cpm ≤40

- Light, if 41≤ cpm ≤ 2295

- Moderate, if 2296 ≤ cpm ≤ 6815

- Vigorous, if cpm ≥ 6816

<u>Sedentary</u> (physical inactivity) behaviors includes excessive sitting, lying, as well as screen time. In this study, time spent sleeping was not excluded from the sedentary results and was also considered as sedentary. <u>Light</u> activities include things such as walking at a slow pace or cleaning. <u>Moderate</u> types of activities include brisk walking, dancing and some active play, while <u>Vigorous</u> activities include running, fast cycling and fast swimming.

Other questionnaires: Parents / caregiver respondents for the children completed questionnaires about demographics, lifestyle measures and culture. Lifestyle measures included food security and food expenditures (USDA, 2008). In addition, parents / caregivers completed standardized questions about screen time, regarded as sedentary behavior and a lifestyle measure (Haas & Nigg, 2009).

Table 2.2.1 displays an overview of all the measures used for CHL, and the frequency of their use. The community level measures are described in Volume 2 of the CHL Data Dictionary.

Table 2.2.1. The Children's Healthy Living (CHL) Program Individual-level

Individual level measures				Assessed in matched-pair communities		Assessed in temporal communities	
Category	Measurement	Measurement tools	Completed by	0 month	24 month	0 month	24 month

Demographic	Demographic [15,43-48]	Questionnaire	Surrogate*	X	X	X	X
Anthropometry	Height	Stadiometer	Staff	X	X	X	X
	Weight	Portable Scale	Staff	X	X	X	X
	Waist circumference	Circumference Tape	Staff	X	X	X	X
Diet	2 d$^{\#}$ Food intake [61,62]	Food & Activity Log	Surrogate*	X	X		
Physical Activity (PA)	6 d PA [66]	Accelerometer**	Child	X	X		
	2 d$^{\#}$ Activity Log [62]	Food & Activity Log	Surrogate*	X			
Sedentary behavior (SB)/Screen Time (ST)	6 d SB/ST [66]	Accelerometer**	Child	X	X		
	2 d$^{\#}$ Activity Log [62]	Food & Activity Log	Surrogate*	X			
	Usual SB/ST [52]	Questionnaire	Surrogate*	X	X		
Sleep	Sleeping behavior [53]	Questionnaire	Surrogate*	X	X	X	X
Acanthosis Nigricans	Presence/Severity [67]	Visual observation/ assessment form	Staff	X	X		
Culture	Language/culture [49-51]	Questionnaire	Surrogate*	X	X		

X = indicates measurement completed.
*Surrogate reporter = parent/caregiver.
**A minimum of 100 children in each matched-pair community and jurisdiction wore an accelerometer.

3. Research

Section 1. Participant Data

The following table (Table 3.1.1) reports the number of participants included in the final data set. These results are presented CHL-wide (which includes the jurisdictions

Alaska, American Samoa, CNMI, Guam, and Hawaii) and then by jurisdiction and experimental group (intervention, optimized, temporal). The total number of participants CHL-wide was 4,353 at baseline and 4,054 at post-intervention.

Table 3.1.1 Number of Participants

Sample Group	Number	
	Baseline	**Post-intervention**
CHL-wide (Alaska, American Samoa, CNMI, Guam, and Hawaii) Total	4,353	4,054
Intervention	1,522	1,347
Optimized	1,499	1,298
Temporal	1,332	1,409
Alaska*	666	666
Intervention	191	177
Optimized	194	178
Temporal	281	339
American Samoa	972	812
Intervention	337	235
Optimized	313	261
Temporal	322	316
CNMI	910	885
Intervention	323	292
Optimized	294	284
Temporal	293	309
Guam*	863	696

Intervention	349	323
Optimized	386	268
Temporal	128	105
Hawaii	942	975
Intervention	322	325
Optimized	312	310
Temporal	308	340

*All jurisdictions included 2 interventions, 2 optimized, and 2 temporal communities, except for Alaska that had 1 intervention, 1 optimized, and 2 temporal communities, and Guam that had 2 interventions, 2 optimized, and 1 temporal community.

The following table (Table 3.1.2) reports the mean age in months of participants and the percent female in the final data set. These results are presented CHL-wide (which includes the jurisdictions Alaska, American Samoa, CNMI, Guam, and Hawaii) and then by jurisdiction and experimental group (intervention, optimized, temporal). For participants CHL-wide, the mean age at baseline was 63.25 months while the mean age at post-intervention was 66.16 months. The proportion of participants of the female sex was 0.49 at baseline and 0.50 at post-intervention.

Table 3.1.2. Sample Characteristics by Age and Sex

	Age months (Mean)		Sex (Proportion Female)	
	Baseline	**Post-Intervention**	**Baseline**	**Post-Intervention**
CHL-wide (Alaska, American Samoa, CNMI, Guam, and Hawaii)	63.25	66.16	0.49	0.50
Intervention	65.11	65.52	0.50	0.50
Optimized	64.42	68.00	0.48	0.49

Temporal	59.81	65.06	0.47	0.50
Alaska	60.14	62.31	0.47	0.51
Intervention	59.55	61.81	0.43	0.56
Optimized	60.24	64.06	0.47	0.49
Temporal	60.47	61.65	0.51	0.49
American Samoa	63.15	71.29	0.47	0.51
Intervention	67.26	72.27	0.48	0.50
Optimized	63.13	71.63	0.48	0.52
Temporal	58.95	70.30	0.47	0.53
CNMI	65.08	67.40	0.47	0.46
Intervention	65.12	66.62	0.52	0.52
Optimized	68.37	69.61	0.45	0.43
Temporal	61.69	66.13	0.45	0.44
Guam	69.44	68.64	0.48	0.50
Intervention	70.01	65.54	0.50	0.47
Optimized	70.24	70.84	0.47	0.52
Temporal	65.43	72.30	0.45	0.56
Hawaii	58.08	61.71	0.52	0.50
Intervention	60.72	61.77	0.54	0.48
Optimized	57.45	63.29	0.54	0.50
Temporal	56.01	60.18	0.47	0.52

The following table (Table 3.1.3) presents the study sample characteristics by status as Native Hawaiian or Other Pacific Islander (NHPI) race and indigenous ethnicity. These

results are presented CHL-wide (which includes the jurisdictions Alaska, American Samoa, CNMI, Guam, and Hawaii) and then by jurisdiction and experimental group (intervention, optimized, temporal). Indigenous participants were those whose caregivers reported the child being of the ethnicity that is native to their jurisdiction of recruitment. For example, in the jurisdiction of Hawaii, only those participants of Native Hawaiian ethnicity would be counted as indigenous for Hawaii, while participants of Native Hawaiian ethnicity living in a CHL jurisdiction other than Hawaii would not be counted as indigenous. In Alaska, indigenous includes children having at least one of the following ethnicities: Athabascan, Cupik, Inupiaq, Siberian, and Yupik. In American Samoa, indigenous includes children of Samoan ethnicity. In CNMI, indigenous includes children of Carolinian or Chamorro ethnicity. In Guam, indigenous includes children of Chamorro ethnicity.

For participants CHL-wide, the proportion of the participants reported as NPHI at baseline was 70.97% and 69.03% at post-intervention. The proportion of the participants of Indigenous status was 65.99% at baseline and 62.00% at post-intervention.

Table 3.1.3. Sample Characteristics by NHPI Race and Indigenous Status*

Location	% NHPI		% Indigenous	
	Baseline	Post-Intervention	Baseline	Post-Intervention
CHL-wide (Alaska, American Samoa, CNMI, Guam, and Hawaii)	70.97	69.03	65.99	62.00
Intervention	80.29	79.29	72.16	65.63
Optimized	72.20	72.73	64.97	59.12
Temporal	58.93	54.75	60.12	61.17
Alaska	4.95	3.77	36.21	33.19

(Athabascan, Cupik, Inupiaq, Siberian, or Yupik)				
Intervention	1.57	1.53	27.81	12.00
Optimized	5.67	7.18	21.24	15.91
Temporal	6.76	3.17	52.14	53.27
American Samoa (Samoan)	99.28	99.04	97.11	94.88
Intervention	98.52	98.57	99.40	92.14
Optimized	100.00	99.36	99.04	99.23
Temporal	99.38	99.14	92.86	93.29
CNMI (Carolinian or Chamorro)	65.09	65.50	56.83	58.07
Intervention	87.31	89.47	79.88	84.35
Optimized	51.86	56.93	39.80	43.55
Temporal	53.92	49.24	48.45	46.62
Guam (Chamorro)	89.34	90.89	64.89	59.41
Intervention	86.82	93.03	56.16	60.73
Optimized	93.26	92.48	76.42	60.74
Temporal	84.38	79.20	53.91	51.89
Hawaii (Native Hawaiian)	77.28	74.93	64.71	60.74
Intervention	93.79	81.23	79.38	63.84

Optimized	78.85	81.00	67.42	63.25
Temporal	58.44	62.97	46.75	55.45

The following table (Table 3.1.4) presents the top three ethnic groups for each location by jurisdiction and intervention group. These results are presented CHL-wide (which includes the jurisdictions Alaska, American Samoa, CNMI, Guam, and Hawaii) and then by jurisdiction and experimental group (intervention, optimized, temporal). The top most frequent ethnicities across all intervention groups CHL-wide were NHPI-Samoan (20.8%), NPHI-Chamorro (15.7%), and White (7.9%) at baseline. The top most frequent ethnicities across all intervention groups CHL-wide were NHPI-Chamorro (18.5%), NPHI-Samoan (14.2%), and White (10.3%) at post-intervention.

Table 3.1.4. Top 3 Ethnic Groups by Jurisdiction and Intervention Group

Location	Baseline Top Ethnicities			Post-Intervention Top Ethnicities		
	1st	2nd	3rd	1st	2nd	3rd
CHL-wide (Alaska, American Samoa, CNMI, Guam, and Hawaii)						
Intervention	NHPI-Samoan, 314 (20.8%)	NHPI-Chamorro, 237 (15.7%)	White, 120 (7.9%)	NHPI-Chamorro, 247 (18.5%)	NHPI-Samoan, 189 (14.2%)	White, 138 (10.3%)
Optimized	NHPI-Chamorro, 286 (19.1%)	NHPI-Samoan, 284 (19.0%)	Asian-Filipino, 159 (10.6%)	NHPI-Samoan, 222 (17.3%)	NHPI-Chamorro, 161 (12.5%)	White, 139 (10.8%)
Temporal	NHPI-Samoan, 259 (19.5%)	Asian-Filipino, 153 (11.5%)	White, 151 (11.4%)	NHPI-Samoan, 223 (16.0%)	White, 183 (13.1%)	Asian-Filipino, 142 (10.2%)

Alaska						
Intervention	White, 109 (58.3%)	Aian-Athabascan, 9 (4.8%)	Black and White, 9 (4.8%)	White, 124 (70.9%)	Black, 11 (6.3%)	Black and White, 4 (2.3%)
Optimized	White, 128 (66.3%)	Aian-Inupiaq, 5 (2.6%)	Black and White, 4 (2.1%)	White, 129 (73.7%)	Black and White, 6 (3.4%)	Aian-Yupik, Asian-Filipino, Asian-Japanese, and NHPI-Hawaiian, 4 (2.3%)
Temporal	White, 105 (37.5%)	Aian-Yupik, 28 (10.0%)	Aian-Inupiaq and White E, 11 (3.9%)	White, 140 (41.8%)	Aian-Yupik, 17 (5.1%)	Aian-Inupiaq, 15 (4.5%)
American Samoa						
Intervention	NHPI-Samoan, 306 (91.9%)	NHPI-Hawaiian and NHPI-Samoan, 9 (2.7%)	Asian-Chinese and NHPI-Samoan, 4 (1.2%)	NHPI-Samoan, 175 (77.1%)	NHPI, 12 (5.3%)	Asian and NHPI-Samoan, 11 (4.8%)
Optimized	NHPI-Samoan, 279 (89.1%)	NHPI-Hawaiian and NHPI-Samoan, 8 (2.6%)	NHPI-Samoan and NHPI-Tongan, 6 (1.9%)	NHPI-Samoan, 219 (85.2%)	Asian and NHPI-Samoan, 8 (3.1%)	NHPI-Samoan and White, 7 (2.7%)
Temporal	NHPI-Samoan, 259 (80.4%)	NHPI-Tongan, 18 (5.6%)	NHPI-Hawaiian and NHPI-Samoan, 15 (4.7%)	NHPI-Samoan, 223 (71.2%)	NHPI-Tongan, 12 (3.8%)	Aian and NHPI-Samoan, 11 (3.5%)
CNMI						
Intervention	NHPI-Chamorro, 98 (30.3%)	NHPI-Carolinian and NHPI-Chamorro, 35 (10.8%)	Asian-Filipino, 26 (8.0%)	NHPI-Chamorro, 79 (27.1%)	NHPI-Carolinian and NHPI-Chamorro, 46 (15.8%)	Asian-Filipino and NHPI-Chamorro, 26 (8.9%)

Optimized	Asian-Filipino, 115 (39.1%)	NHPI-Chamorro, 40 (13.6%)	NHPI-Carolinian, 20 (6.8%)	Asian-Filipino, 100 (35.2%)	NHPI-Chamorro, 29 (10.2%)	NHPI-Carolinian, 23 (8.1%)
Temporal	Asian-Filipino, 108 (37.1%)	NHPI-Chamorro, 94 (32.3%)	Asian-Filipino and NHPI-Chamorro, 21 (7.2%)	Asian-Filipino, 113 (36.6%)	NHPI-Chamorro, 74 (23.9%)	Asian-Filipino and NHPI-Chamorro, 23 (7.4%)
Guam						
Intervention	NHPI-Chamorro, 139 (39.8%)	NHPI-Chuukese, 72 (20.6%)	Asian-Filipino, 41 (11.7%)	NHPI-Chamorro, 168 (52.0%)	NHPI-Chuukese, 84 (26.0%)	Asian-Filipino, 19 (5.9%)
Optimized	NHPI-Chamorro, 246 (63.7%)	NHPI-Chuukese, 43 (11.1%)	Asian-Filipino, 22 (5.7%)	NHPI-Chamorro, 132 (49.3%)	NHPI-Chuukese, 70 (26.1%)	Asian-Filipino, 14 (5.2%)
Temporal	NHPI-Chamorro, 51 (39.8%)	NHPI-Chuukese, 28 (21.9%)	Asian-Filipino, 12 (9.4%)	NHPI-Chamorro, 42 (40.0%)	Asian-Filipino, 17 (16.2%)	NHPI-Chuukese, 14 (13.3%)
Hawaii						
Intervention	NHPI-Hawaiian, 66 (20.6%)	NHPI-Hawaiian and White, 19 (5.9%)	Asian-Chinese, Asian-Filipino, and NHPI-Hawaiian, 16 (5.0%)	NHPI-Hawaiian, 47 (14.8%)	NHPI, 21 (6.6%)	Asian-Chinese, Asian-Filipino, and NHPI-Hawaiian, 15 (4.7%)
Optimized	NHPI-Hawaiian, 44 (14.2%)	Asian-Filipino, 22 (7.1%)	White, 17 (5.5%)	NHPI-Hawaiian, 50 (16.6%)	NHPI, 15 (5.0%)	NHPI-Chuukese, 14 (4.6%)
Temporal	NHPI-Hawaiian, 56 (18.2%)	White, 45 (14.6%)	Asian-Filipino, 33 (10.7%)	NHPI-Hawaiian, 51 (15.5%)	White, 43 (13.0%)	Asian-Filipino and White, 15 (4.5%)

4. CHL-wide Intervention Results

This section examines the effects of the CHL intervention CHL-wide. The unit of randomization, and therefore analysis, is the community. All the intervention, optimized and temporal communities in the five jurisdictions participating in the CHL intervention study are included in this analysis.

The prevalence estimates presented in this report have been calculated using a statistical model that includes adjustments for sex and age, weighting to the population size, and consideration for clustering in communities within the strata of jurisdiction.

- Sex and age variables are used as adjustment variables as changes in outcomes over time could be due to differences in the sex and age distributions of the samples rather than due to an intervention effect. Note race/ethnicity is not adjusted for, as it is very highly co-linear with jurisdiction.

- Sample Weights were constructed for each CHL participant to relate how many individuals in their respective community each participant's answer represents. Such individual case weights are created in order to produce more accurate population estimates from the study sample. In the case of the CHL study, weighting is based on geographic community of the participant and demographic measures for population size of children ages 2 to 8 years old for that community using 2010 US Census Data. An individual weight involves the reciprocal of the probability of selection in his or her given community.

- Participants were sampled using a complex sampling method. Select communities were randomized within select jurisdictions. Children were recruited from community clusters within the jurisdiction strata. This complex sampling design is accounted for in the analysis in order to obtain valid estimates in the results.

The goal of the CHL intervention was to promote healthy weight as measured through

body mass index (BMI), through 6 target behaviors including:

1. Increase consumption of fruits and vegetables, preferably locally grown fruits and vegetables

2. Increase physical activity

3. Increase water consumption

4. Increase hours of sleep

5. Decrease consumption of sugar sweetened beverages

6. Decrease screen time

The results of the intervention as related to BMI and the CHL target behaviors are reported below. Statistical significance is reported at the level of α=0.05. The baseline estimates, post-intervention estimates, and differences, are calculated using the weighted, age and sex adjusted model.

Section 1. Body Mass Index (BMI) Outcomes

A CHL target was to reduce the percent of children who are overweight and obese (≥ 85th percentile BMI for age and sex). BMI was measured and is reported as both a continuous (BMI Z-score) and categorical (overweight or obese prevalence) (OWOB) outcome. For BMI Z-score, the difference between the change in intervention groups versus the change in optimized groups is -0.05, p-value = 0.150. This is not statistically significant. This analysis does not include individuals that have an extreme absolute BMI Z-score greater than 3. Towards the goal of decreasing BMI Z-score, the decrease was greater in intervention communities than optimized communities. For OWOB prevalence, the difference between the change in intervention groups versus the change in optimized groups is -4.17, p-value = 0.027. This is statistically significant. This analysis does not include individuals that have an extreme absolute BMI Z-score greater than 3. Towards the goal of decreasing OWOB, the decrease was greater in

intervention communities than optimized communities. The following table (Table 4.1.1) shows the results for measures of body mass index (BMI) and OWOB prevalence.

Table 4.1.1. Body Mass Index (BMI) CHL-wide Results (communities=27, BMI Z-score participants=7,863, OWOB prevalence participants=7,863)

Main outcomes	Baseline	Post-Intervention	Difference	P-value
Mean *(Continuous variables)*				
BMI *Z*-score				
Intervention	0.63	0.56	-0.07	0.012
Optimized	0.58	0.56	-0.02	0.516
Temporal	0.58	0.57	-0.02	0.704
Intervention vs. Optimized	NA	NA	-0.05	0.150
Percentage *(Categorical variables)*				
OWOB prevalence				
Intervention	33.20	30.03	-3.18	0.012
Optimized	31.42	32.41	0.99	0.445
Temporal	32.24	32.30	0.06	0.974
Intervention vs. Optimized	NA	NA	-4.17	0.027

Figure 4.1.1.a. BMI CHL-wide Differences between Baseline and Post-Intervention
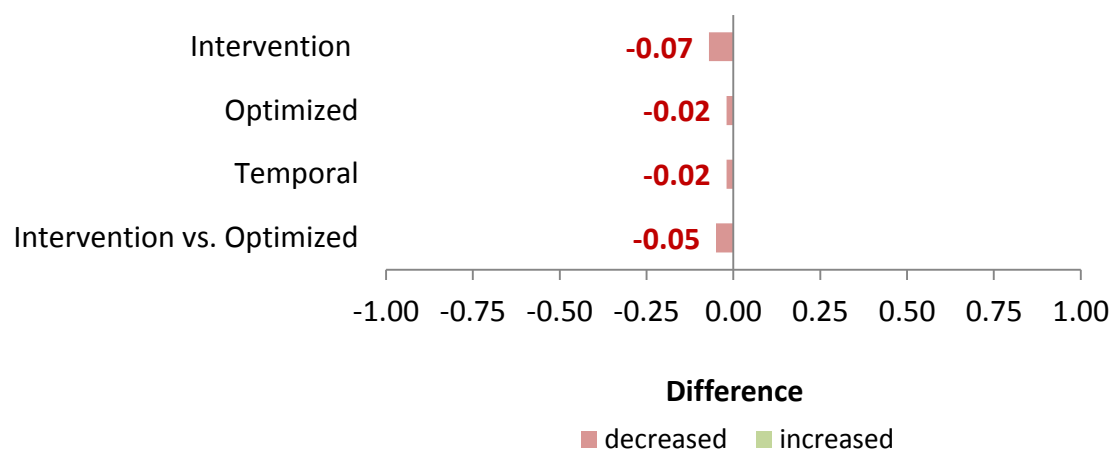
Figure 4.1.1.b. OWOB Prevalence, CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=27, participants=7,863)
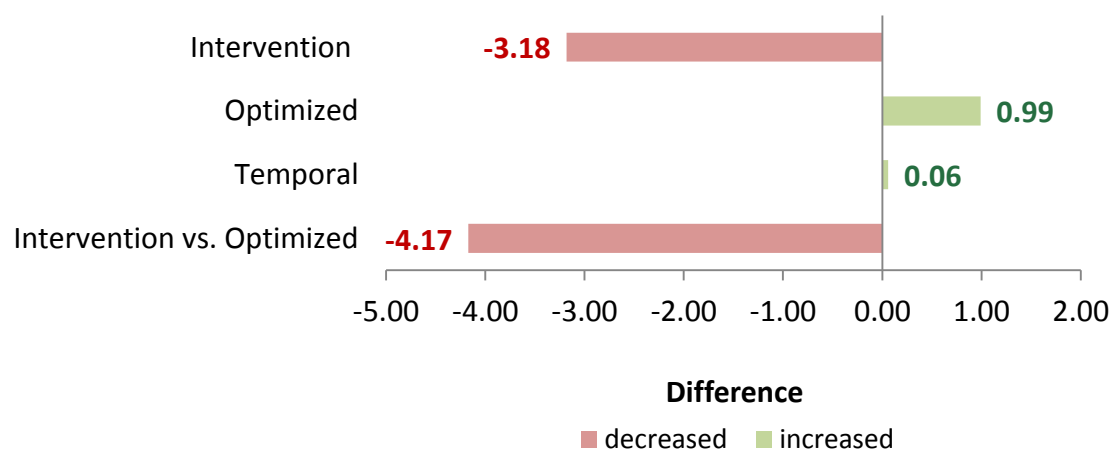
Section 2. Abdominal Obesity

A CHL target was to decrease abdominal obesity as measured through waist circumference. The International Diabetes Federation (IDF) suggests that children 6 years or older with a waist circumference equal or greater than 90th percentile be considered as having abdominal obesity (Zimmett, et al., 2007). For children younger than 6 years of age, currently there is insufficient information for such classification. Using children ages 6-8 years in the CHL data set as the reference data, the 90th

percentile cutoff value is 71.47 cm. The 90th percentile cutoff value reported from the IDF, which uses "a nationally representative sample" of boys and girls, is 67.65 cm for 7-year-olds.

The difference between the change in intervention groups versus the change in optimized groups is -1.06, p-value = 0.007. This is statistically significant. Towards the goal of decreasing abdominal obesity, the decrease is greater in intervention communities than optimized communities. The following table (Table 4.2.1) shows the results for the measure of abdominal obesity.

Table 4.2.1. Abdominal Obesity CHL-wide Results (communities=27, participants=8,052)

| Main outcomes	Baseline	Post-intervention	Difference	P-value
	Mean *(Continuous variables)*			
Waist circumference (cm)				
Intervention	55.08	54.78	-0.29	0.357
Optimized	54.41	55.18	0.77	<.0001
Temporal	54.88	55.50	0.62	0.070
Intervention vs. Optimized	NA	NA	-1.06	0.007

Figure 4.2.1. Abdominal Obesity, CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=27, participants=8,052)
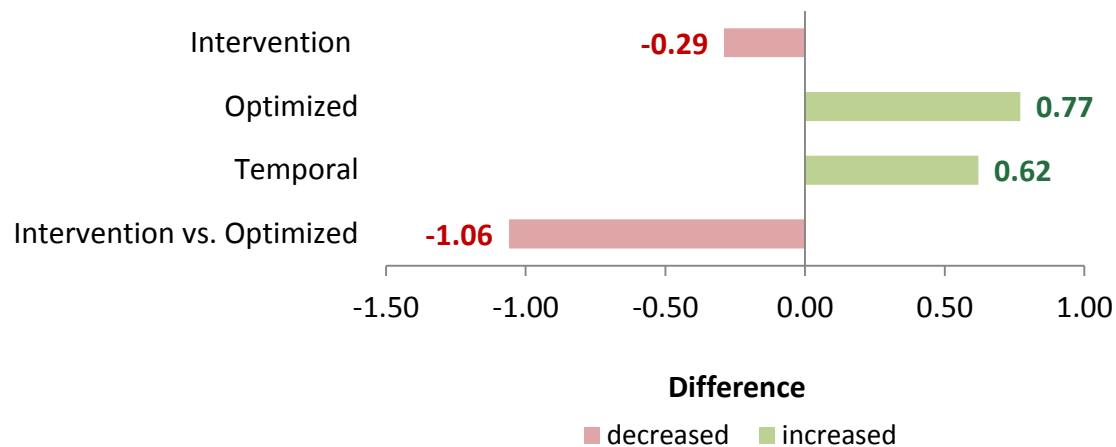
Section 3. Acanthosis Nigricans (AN)

A CHL target was to decrease Acanthosis Nigricans (AN), an indicator of high insulin levels, which can lead to insulin resistance and Type 2 diabetes. AN presents as a light brown, black velvety, rough, or a thickened lesion on the surface of the skin. These features are usually seen in body folds and creases, on the nape of the neck, armpits, and over the knuckles. Burke's (1999) quantitative scale was utilized, with scores given for the severity of AN. For AN, the difference between the change in intervention groups versus the change in optimized groups is -3.62, p-value = 0.002. This is statistically significant. Towards the goal of decreasing AN, a decrease is seen in both groups and the decrease is greater in intervention communities than optimized communities. The following table (Table 4.3.1) shows the results for the measure of AN.

Table 4.3.1. Acanthosis Nigricans (AN) Prevalence CHL-wide Results (communities=18, participants=5,611)

Main outcomes	Baseline	Post-intervention	Difference	P-value
	Percentage *(Categorical variables)*			
AN prevalence				
Intervention	5.62	1.54	-4.08	<.0001
Optimized	3.50	3.03	-0.46	0.616
Intervention vs. Optimized	NA	NA	-3.62	0.002

Figure 4.4.1. Acanthosis Nigricans (AN) Prevalence, CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=18, participants=5,611)
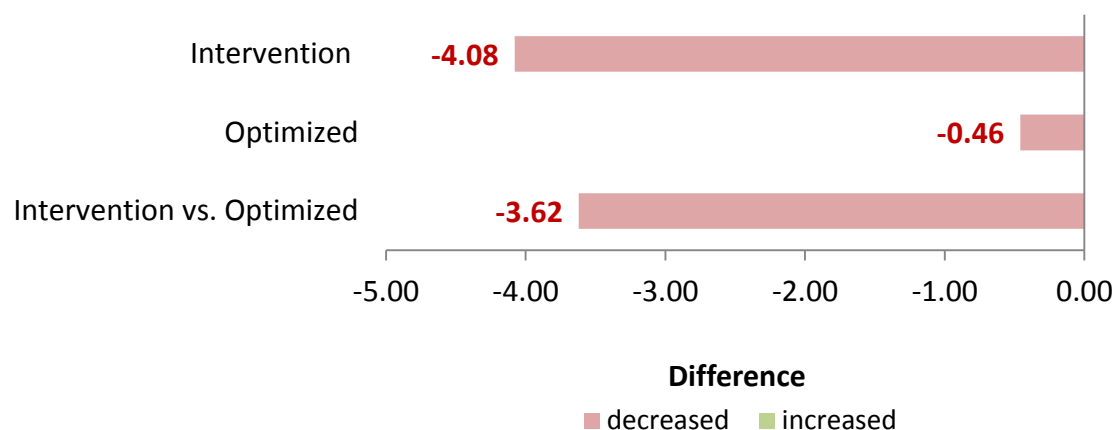
Section 4. Physical Activity

A CHL target was to increase physical activity. It is recommended that children have at least 60 minutes of moderate and vigorous physical activity (MVPA) per day, in sustained intervals (Strong et al. 2005). Physical activity levels were measured by accelerometry. Daily MPVA is calculated as the amount of minutes spent in continuous bouts of at least 5 minutes of moderate or vigorous activity, averaged over several days of accelerometer use, and weighted for weekend or weekday use. For physical activity,

the difference between the change in intervention groups versus the change in optimized groups is -4.79, p-value = 0.341. This is not statistically significant. Towards the goal of increasing physical activity, a decrease is seen in both groups and the decrease was greater in intervention communities than optimized communities. The following table (Table 4.4.1) shows the results for the measure of daily average minutes of MVPA per day.

Table 4.4.1. Moderate and Vigorous Physical Activity from Accelerometers CHL-wide Results (communities=18, participants=3,167)

Main outcomes	Baseline	Post-intervention	Difference	P-value
	Mean (Continuous variables)			
Minutes of MVPA				
Intervention	69.23	61.54	-7.69	0.050
Optimized	67.71	64.81	-2.89	0.294
Intervention vs. Optimized	NA	NA	-4.79	0.341

Figure 4.4.1. Moderate and Vigorous Physical Activity from Accelerometers CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=18, participants=3,167)
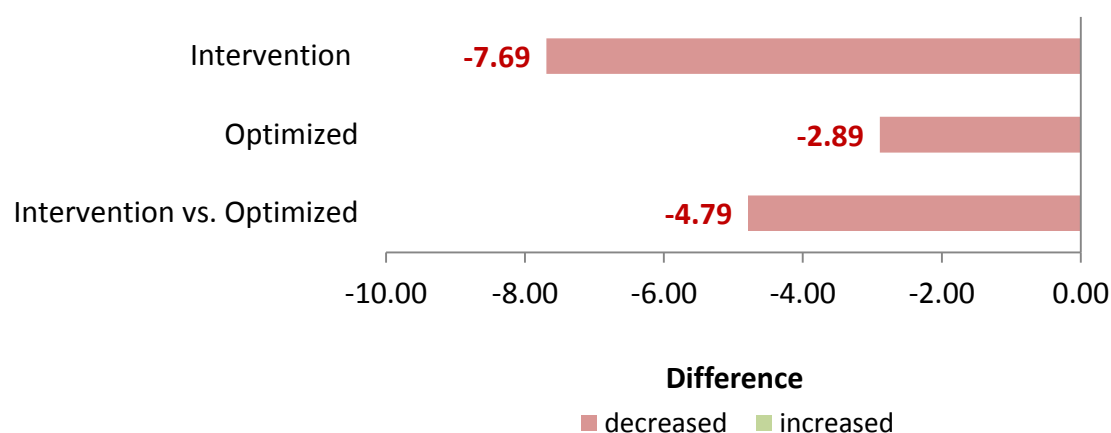
CHL also measured the number of children who met the national recommendation of at least 60 minutes of MVPA in sustained intervals, which we defined as at least 5 minute intervals/bouts. For percent meeting the national recommendation for physical activity, the difference between the change in intervention groups versus the change in optimized groups is -5.11, p-value = 0.420. This is not statistically significant. Towards the goal of increasing physical activity, the decrease was greater in intervention communities than optimized communities. The following table (Table 4.4.2) shows the results for the measure of those who met the national recommendation for average minutes of moderate and vigorous physical activity (MVPA) per day.

Table 4.4.2. Percent Who Met National Recommendation of At Least 60 Minutes of Moderate and Vigorous Physical Activity per Day CHL-wide Results (communities=18, participants=3,167)

Main outcomes	Baseline	Post-intervention	Difference	P-value
	Percentage *(Categorical variables)*			
Meets MVPA				
Intervention	55.48	46.63	-8.85	0.051
Optimized	54.55	50.81	-3.74	0.387
Intervention vs. Optimized	NA	NA	-5.11	0.420

Figure 4.4.2. Percent Who Met National Recommendation of At Least 60 Minutes of Moderate and Vigorous Physical Activity Per Day, CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=18, participants=3,167)

Difference
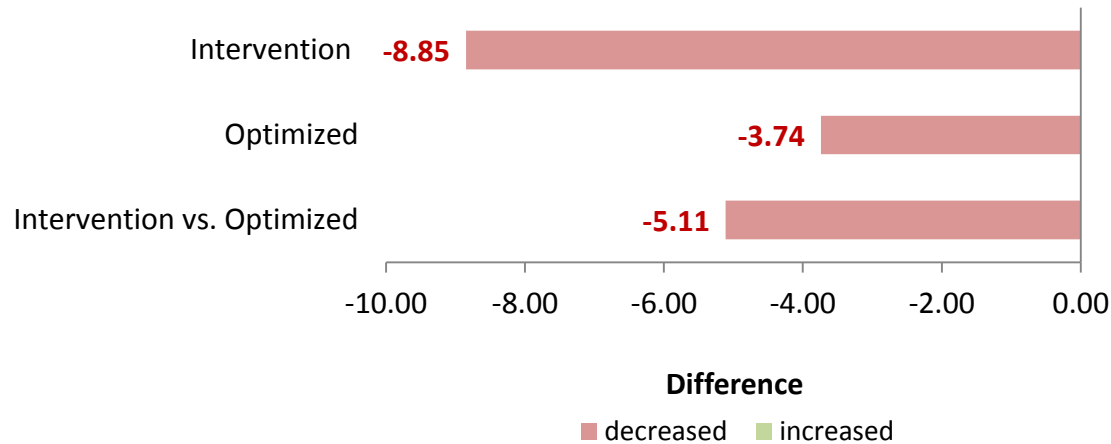
■ decreased ■ increased

Section 5. Sleep

A CHL target was to increase the amount of sleep children acquire. The mean number of hours of sleep calculated is based upon parent report. For sleep, the difference between the change in intervention groups versus the change in optimized groups is –0.18, p-value = 0.490. This is not statistically significant. Towards the goal of increasing sleep, an increase is seen in both groups and the increase was greater in optimized communities than intervention communities. The following table (Table 4.5.1) shows the results for the measure of sleep.

Table 4.5.1. Average Hours of Sleep at Night and in Naps during 24 Hours CHL-wide Results (communities=27, participants=7,736)

Main outcomes	Baseline	Post-intervention	Difference	P-value
	Mean *(Continuous variables)*			
Hours of sleep				
Intervention	9.45	9.52	0.07	0.624
Optimized	9.74	9.99	0.26	0.138

Temporal	9.71	9.81	0.10	0.565
Intervention vs. Optimized	NA	NA	-0.18	0.490

Figure 4.5.1. Average Hours of Sleep at Night and in Naps during 24 Hours, CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=27, participants=7,736)
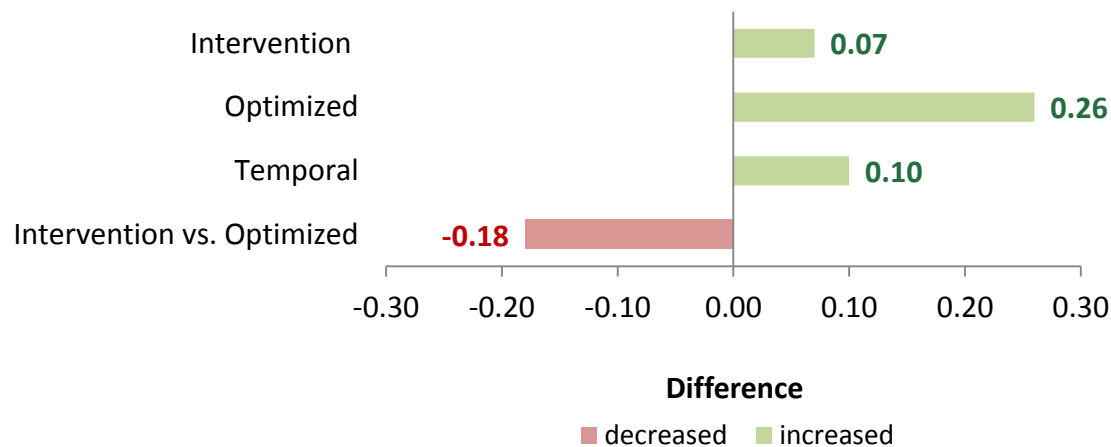
CHL also measured the number of children who meet the national recommendation for sleep according to their age group (Hirshkowitz M et al. 2015). The National Sleep Foundation recommends for 2 year olds: 11-14 hours of sleep/night; for 3 to 5 year olds: 10-13 hours/night; and for 6 to 8 year olds: 9-11 hours/night. For children who met the national recommendation for sleep, the difference between the change in intervention groups versus the change in optimized groups is -8.04, p-value = 0.146. This is not statistically significant. Towards the goal of increasing sleep, the increase was greater in optimized communities than intervention communities. The following table (Table 4.5.2) shows the results for the measure of those who met the national recommendation for sleep.

Table 4.5.2. Percent Who Met National Recommendation of Age-Specific Sleep per Day CHL-wide Results (communities=27, participants=7,736)

Main outcomes	Baseline	Post-intervention	Difference	P-value
	Percentage *(Categorical variables)*			
Meets age for specific recommended hours of sleep				
Intervention	50.36	48.50	-1.86	0.603
Optimized	49.93	56.11	6.18	0.073
Temporal	51.79	52.85	1.06	0.566
Intervention vs. Optimized	NA	NA	-8.04	0.146

Figure 4.5.2. Percent Who Met National Recommendation of Age-Specific Sleep per Day, CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=27, participants=7,736)
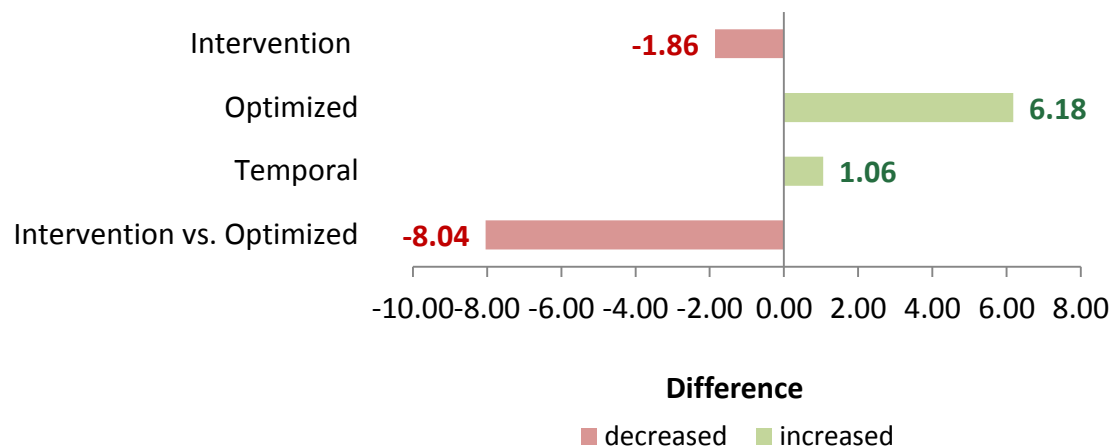

Section 6. Screen Time Sedentary Behavior

A CHL target was to decrease the amount of time children spend in sedentary behavior such as screen time. It is recommended that children spend less than 2 hours of screen time per day (American Academy of Pediatrics Committee on Public Education, 2001). The mean number of hours of screen time for children in intervention, optimized and

temporal communities is based on parent report. For the total hours of screen time, the difference between the change in intervention groups versus the change in optimized groups is -0.49, p-value =0.103. This is not statistically significant. Towards the goal of decreasing total screen time, the decrease was greater in intervention communities than optimized communities. For the hours of TV / DVD screen time, the difference between the change in intervention groups versus the change in optimized groups is -0.18, p-value = 0.205. This is not statistically significant. Towards the goal of decreasing TV / DVD screen time, the decrease was greater in intervention communities than optimized communities. The following table (Table 4.6.1) shows the results for the measure of screen time from parental reports.

Table 4.6.1. Mean Hours of Screen Time per Day (Adjusted for Weekday and Weekend Activity) Child Watches TV, Videos, DVDs, or Plays Video Games CHL-wide Results (communities=18, participants=5,519)

Screen time	Baseline	Post-Intervention	Difference	P-value
	Mean *(Continuous variables)*			
Hours total screen time				
Intervention	3.98	3.80	-0.18	0.235
Optimized	4.02	4.32	0.30	0.195
Intervention vs. Optimized	NA	NA	-0.49	0.103
Hours TV / DVD screen time				
Intervention	2.21	2.17	-0.04	0.507
Optimized	2.24	2.38	0.14	0.146
Intervention vs. Optimized	NA	NA	-0.18	0.205

Figure 4.6.1a. Mean Hours of Total Screen Time Per Day (Adjusted for Weekday and Weekend Activity) Child Watches TV, Videos, DVDs, or Plays Video Games, CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=18, participants=5,519)
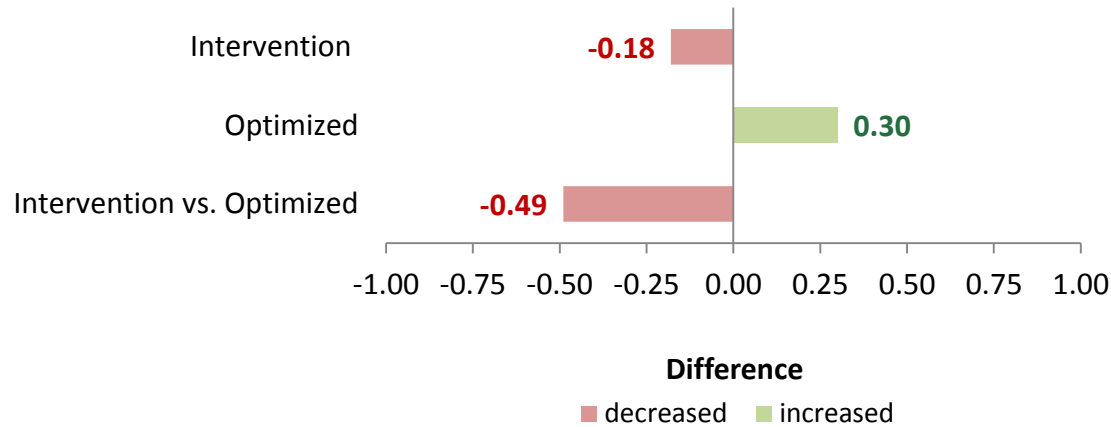
Figure 4.6.1b. Mean Hours of TV / DVD Screen Time Per Day (Adjusted for Weekday and Weekend Activity) Child Watches TV, CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=18, participants=5,519)
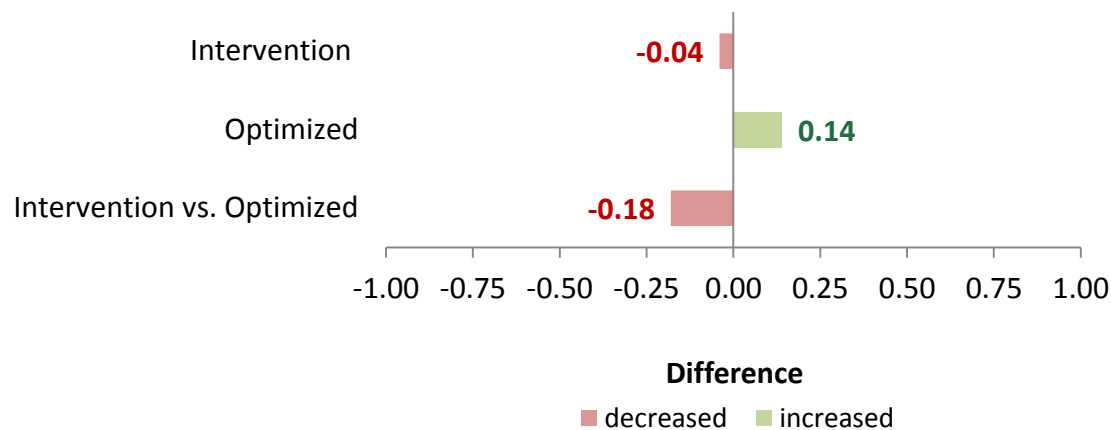
CHL also measured the number of children who meet the national recommendation of less than 2 hours of screen time per day. For those who met the national recommendation for screen time, the difference between the change in intervention groups versus the change in optimized groups is 2.19, p-value = 0.380. This is not statistically significant. Towards the goal of increasing the percent of children who meet

national recommendations for screen time, the increase was greater in intervention communities than optimized communities. The following table (Table 4.6.2) shows the results for the measure of those who met the national recommendation for screen time.

Table 4.6.2. Percent Who Met National Recommendation of Less Than 2 Hours of Screen Time per Day CHL-wide Results (communities=18, participants=5,519)

Main outcomes	Baseline	Post-intervention	Difference	P-value
	Percentage *(Categorical variables)*			
Meets recommended hours of screen time				
Intervention	20.08	21.86	1.78	0.097
Optimized	18.86	18.45	-0.41	0.852
Intervention vs. Optimized	NA	NA	2.19	0.380

Figure 4.6.2b. Percent Who Met National Recommendation for Screen Time, CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=18, participants=5,519)

**Section 7. Fruit and Vegetable Intake**
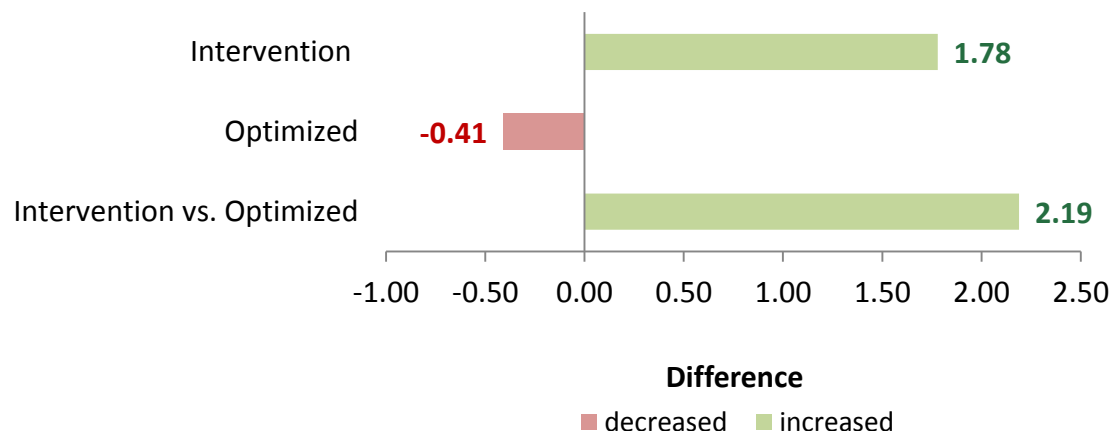
A CHL target was to encourage children to consume more fruits and vegetables. The United States Department of Agriculture (USDA) daily recommended amounts are at

least 1 cup per day for fruits and at least 1.5 cups per day for vegetables for young children (USDA My Plan, https://supertracker.usda.gov/myplan.aspx). Fruit and vegetable intake were captured through parent report via a food log of two days.

For daily vegetable intake in cups, the difference between the change in intervention groups versus the change in optimized groups is 0.00, p-value = 0.992. This is not statistically significant. Towards the goal of increasing vegetable consumption, there was no increase between intervention and optimized communities. The following table (Table 4.7.1) shows the results for the measure of vegetable intake. The estimates for vegetable consumption were adjusted for intake distribution corrected for day-to-day variability.

Table 4.7.1. Vegetable Intake per Day in Cups CHL-wide Results (communities=18, participants=4,787)

Main Outcomes	Baseline	Post-Intervention	Difference	P-value
	Mean *(Continuous variables)*			
Vegetable intake (cups / day)				
Intervention	1.13	1.13	0.00	0.817
Optimized	1.14	1.14	0.00	0.801
Intervention vs. Optimized	NA	NA	0.00	0.992

*These are based on an intake distribution corrected for day-to-day variability.

Figure 4.7.1. Vegetable Intake per Day in Cups, CHL-wide Baseline and Post-Intervention Differences by Experimental Group CHL-wide Results (communities=18, participants=4,787)

*These are based on an intake distribution corrected for day-to-day variability.

For fruit intake, the difference between the change in intervention groups versus the change in optimized groups is -0.03, p-value = 0.559. This is not statistically significant. Towards the goal of increasing fruit consumption, a decrease is seen in both groups and the decrease was greater in intervention communities than optimized communities. The following table (Table 4.7.2) shows the results for the measure of fruit intake. The estimates for fruit consumption were adjusted for intake distribution corrected for day-to-day variability.

Table 4.7.2. Fruit Intake per Day in Cups CHL-wide Results (communities=18, participants=4,787)

Main Outcomes	Baseline	Post-Intervention	Difference	P-value
	Mean *(Continuous variables)*			
Fruit intake (cups / day)				
Intervention	0.98	0.90	-0.08	0.065
Optimized	1.04	0.99	-0.05	0.079
Intervention vs. Optimized	NA	NA	-0.03	0.559

*These are based on an intake distribution corrected for day-to-day variability.

Figure 4.7.2. Fruit Intake per Day in Cups, CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=18, participants=4,787)

*These are based on an intake distribution corrected for day-to-day variability.

CHL also measured the number of children who meet the national recommendation for vegetable intake of 1 cup for 2-year-olds and 1.5 cups for 3 to 8 year olds of vegetables per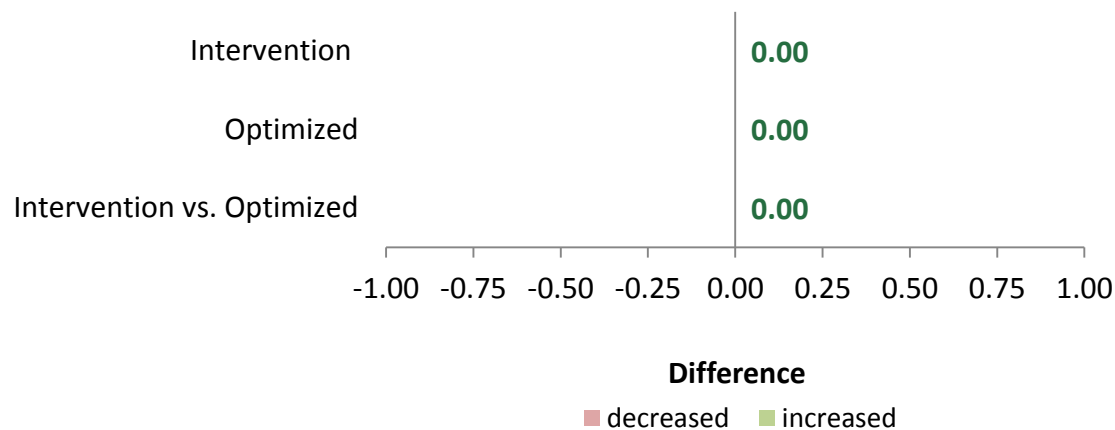 day. For the percent of children who met the national recommendation for vegetable consumption, the difference between the change in intervention groups versus the change in optimized groups is 0.78, p-value = 0.423. This is not statistically significant. Towards the goal of increasing vegetable intake, the increase was greater in intervention communities than optimized communities. The following table (Table 4.7.3) shows the results for the measure of those who met the national recommendation for vegetable intake.

Table 4.7.3. Percent Who Met National Recommendation of Age-Specific Vegetable Intake per Day CHL-wide Results (communities=18, participants=4,787)

Main Outcomes	Baseline	Post-Intervention	Difference	P-value
	Percentage *(Categorical variables)*			
Meets vegetable intake				
Intervention	1.80	1.88	0.08	0.866
Optimized	2.91	2.21	-0.70	0.423
Intervention vs. Optimized	NA	NA	0.78	0.423

*These are based on an intake distribution corrected for day-to-day variability.

Figure 4.7.3. Percent Who Met National Recommendation of Age-Specific Vegetable Intake per Day, CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=18, participants=4,787)
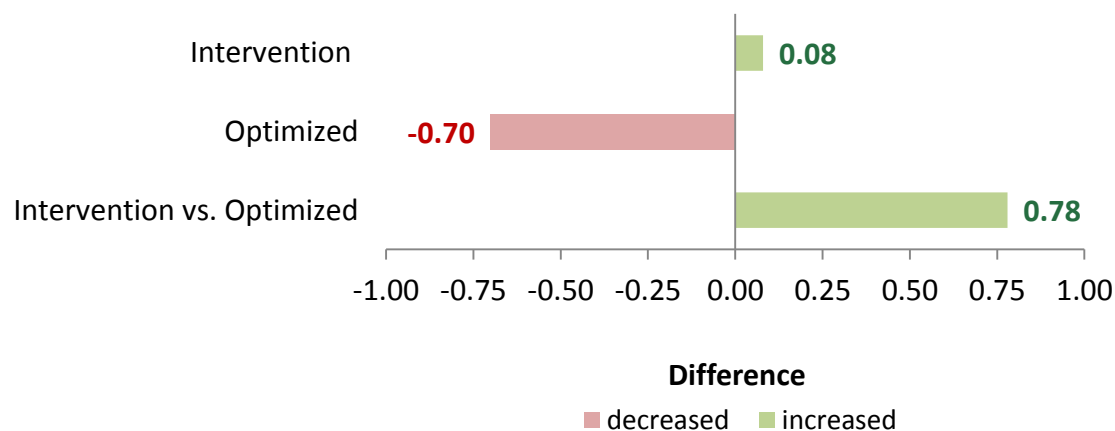
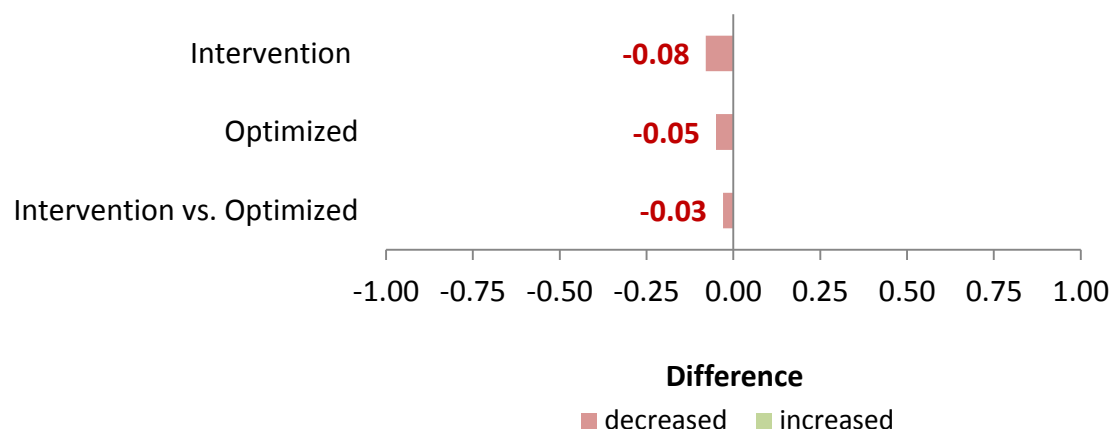*These are based on an intake distribution corrected for day-to-day variability.

CHL also measured the number of children who meet the national recommendation for fruit intake among 2 to 8 year olds of at least one cup of fruit per day (USDA My Plan, https://supertracker.usda.gov/myplan.aspx). For the percent of children who met the national recommendation for fruit consumption, the difference between the change in intervention groups versus the change in optimized groups is -1.68, p-value = 0.624. This is not statistically significant. Towards the goal of increasing fruit intake, a decrease is seen in both groups and the decrease was greater in intervention

communities than optimized communities. The following table (Table 4.7.4) shows the results for the measure of those who met the national recommendation for fruit intake.

Table 4.7.4. Percent Who Met My Daily Food Plan of Age-Specific Fruit Intake CHL-wide Results (communities=18, participants=4,787)

Main Outcomes	Baseline	Post-Intervention	Difference	P-value
	Percentage *(Categorical variables)*			
Meets fruit intake				
Intervention	50.23	45.39	-4.85	0.156
Optimized	53.79	50.63	-3.16	0.079
Intervention vs. Optimized	NA	NA	-1.68	0.624

*These are based on an intake distribution corrected for day-to-day variability.

Figure 4.7.4. Percent Who Met My Daily Food Plan of Age-Specific Fruit Intake, CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=18, participants=4,787)
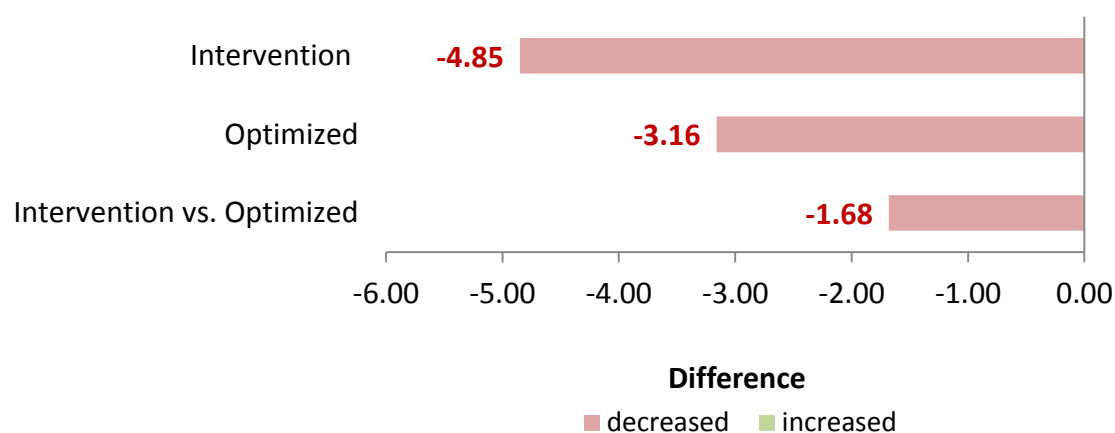
*These are based on an intake distribution corrected for day-to-day variability.

Section 8. Water

A CHL target or goal was to increase the consumption of water by children. The recommendation is that children should consume at least 32 - 40 fluid ounces (4 - 5

cups) of water from all beverages (milk, juice, drinking water) daily (Institute of Medicine, 2004). CHL measured water which was consumed as a separate beverage, and the following estimates do not include water from other sources. Water intake was captured through parent report via a food log of two days. For water intake, the difference between the change in intervention groups versus the change in optimized groups is -0.03, p-value = 0.737. This is not statistically significant. Towards the goal of increasing water intake, an increase is seen in both groups and the increase was greater in optimized communities than intervention communities. The following table (Table 4.8.1) shows the results for the measure of water intake.

Table 4.8.1. Water Intake as a Beverage in Cups per Day CHL-wide Results (communities=18, participants=4,787)

Main Outcomes	Baseline	Post-Intervention	Difference	P-value
	Mean *(Continuous variables)*			
Water Intake (cups / day)				
Intervention	1.29	1.37	0.08	0.245
Optimized	1.35	1.46	0.11	0.010
Intervention vs. Optimized	NA	NA	-0.03	0.737

Figure 4.8.1. Water Intake as a Beverage in Cups per Day, CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=18, participants=4,787)
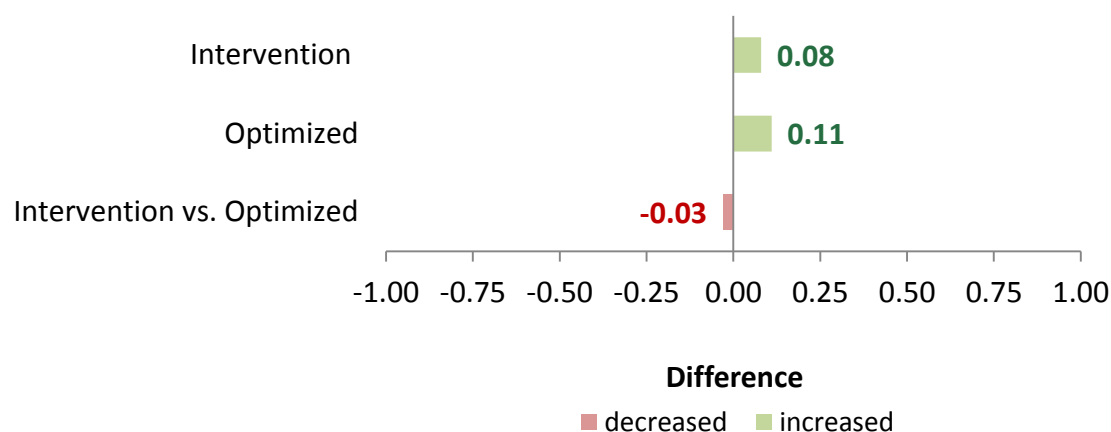
Section 9. Sugar-Sweetened Beverages

A CHL target was to decrease the consumption of sugar-sweetened beverages (SSB) by children. It is recommended that children consume no SSB (Popkin et al., 2006).

For SSB intake, the difference between the change in intervention groups versus the change in optimized groups is 0.02, p-value = 0.809. This is not statistically significant. Towards the goal of decreasing SSB intake, the decrease was the greater in optimized communities than intervention communities. The following table (Table 4.9.1) shows the results for the measure of SSB intake.

Table 4.9.1. Sugar-Sweetened Beverages (SSB) Intake in Cups per Day CHL-wide Results (communities=18, participants=4,787)

Main Outcomes	Baseline	Post-Intervention	Difference	P-value
	Percentage *(Categorical variables)*			
SSB Intake (cups / day)				
Intervention	0.66	0.61	-0.05	0.125
Optimized	0.66	0.59	-0.06	0.381
Intervention	NA	NA	0.02	0.809

vs. Optimized				

Figure 4.9.1. Sugar-Sweetened Beverages (SSB) Intake in Cups per Day, CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=18, participants=4,787)

Intervention **-0.05**

Optimized **-0.06**

Intervention vs. Optimized **0.02**

-1.00 -0.75 -0.50 -0.25 0.00 0.25 0.50 0.75 1.00

Difference

■ decreased ■ increased
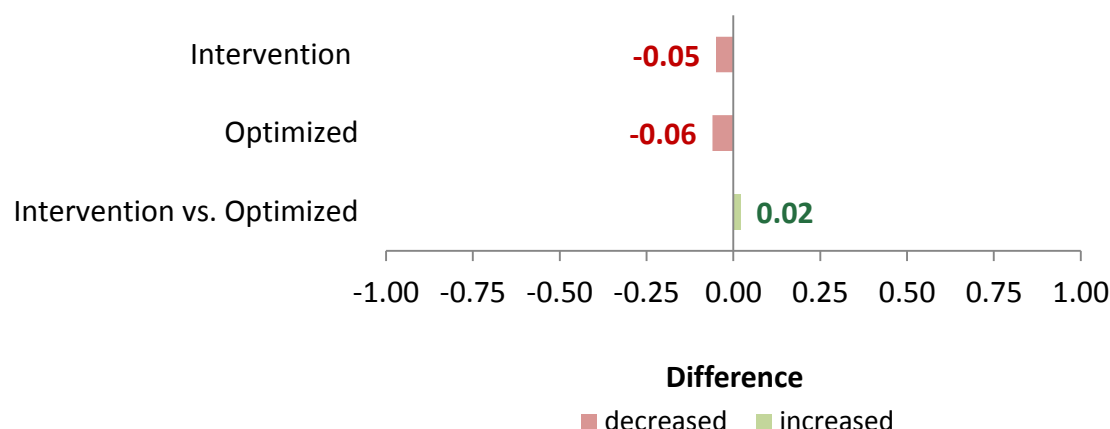
CHL also measured the number of children who meet the national recommendation of consuming zero SSB. For those who met the national recommendation for SSB intake, the difference between the change in intervention groups versus the change in optimized groups is 1.72, p-value = 0.670. This is not statistically significant. Towards the goal of decreasing SSB intake, an increase is seen in both groups and the increase was greater in intervention communities than optimized communities. The following table (Table 4.9.2) shows the results for the measure of those who met the recommendation for SSB intake.

Table 4.9.2. Percent Who Met Sugar-Sweetened Beverage Intake of Zero Cups CHL-wide Results (communities=18, participants=4,787)

Main Outcomes	Baseline	Post-Intervention	Difference	P-value
	Mean *(Continuous variables)*			
Meets SSB Intake				
Intervention	32.17	38.71	6.55	0.014
Optimized	33.57	38.40	4.83	0.105

Intervention vs. Optimized	NA	NA	1.72	0.670

Figure 4.9.2. Percent Who Met Sugar-Sweetened Beverage Intake of Zero Cups, CHL-wide Baseline and Post-Intervention Differences by Experimental Group (communities=18, participants=4,787)
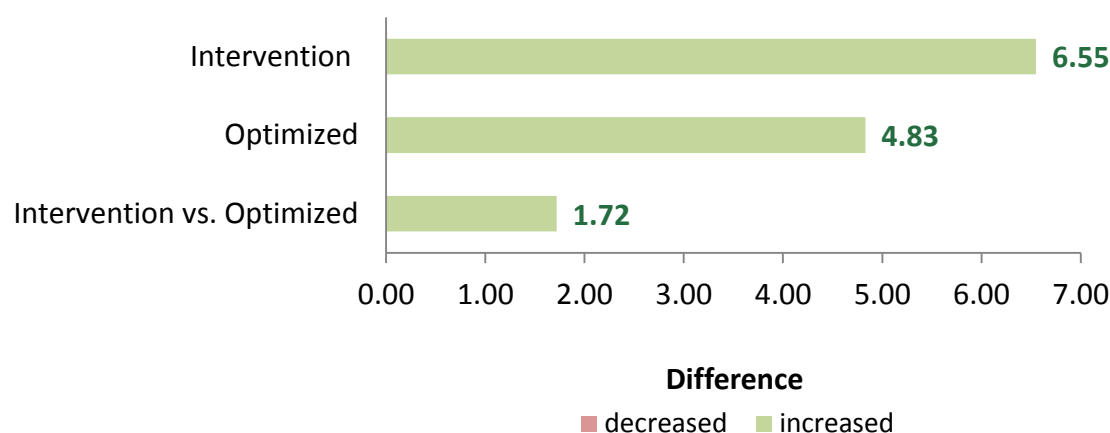
5. Main Effects Results for Your Jurisdiction of Alaska

This section examines the effects of the CHL intervention for your jurisdiction by experimental group (intervention, control, temporal) as applicable. The prevalence estimates presented for the jurisdiction main effects have been calculated using a statistical model that includes adjustments for sex and age, weighting to the population size, and consideration for clustering by communities.

Section 1. Jurisdiction Level Participant Demographics

Age: Child's age was calculated between age in years elapsed between child's date of birth and the date when anthropometry was measured. In **Alaska**, among the 666 children who participated in at baseline, 487 (73.1%) were ages 2-5 and 179 (26.9%) were ages 6-8. Among the 666 children who participated in at post-intervention, 487 (73.1%) were ages 2-5 and 179 (26.9%) were ages 6-8.

Sex: In **Alaska**, among the 666 children who participated at baseline, 350 (52.6%) were male and 316 (47.4%) were female. Among the 666 children who participated at post-intervention, 350 (52.6%) were male and 316 (47.4%) were female.

Racial and Ethnic Heritage: In **Alaska**, the top frequent ethnicity was White (51.8%), followed by AIAN-Yupik (5.2%), and AIAN-Inupiaq, White (2.9%) at baseline. At post-intervention, the top frequent ethnicity was White (57.2%), followed by AIAN-Yupik (3.2%), and Black (3.2%). The distribution of participants by age, sex, and ethnic group are shown in the following table (Table 5.1.1).

Table 5.1.1. Participant Descriptions for Alaska (Baseline=666, Post-Intervention=666)

Measure	Baseline (%)	Post-Intervention (%)
Group		
Intervention	28.7	28.7
Optimized	29.1	29.1
Control	42.2	42.2
Age in years		
Age 2 - 5	73.1	73.1
Age 6 - 8	26.9	26.9
Sex		
Male	52.6	52.6
Female	47.4	47.4
Race/Ethnic Groups		
Top 1st	White (51.8)	White (57.2)
Top 2nd	AIAN-Yupik (5.2)	AIAN-Yupik (3.2)

| Top 3rd | AIAN-Inupiaq, White (2.9) | Black (3.2) |

Section 2. Jurisdiction Level Continuous Outcomes

CHL target behaviors include decreasing childhood BMI, decreasing abdominal obesity (waist circumference), increasing hours of sleep, increasing fruit and vegetable intake, decreasing sugar sweetened beverage consumption, and increasing water consumption. The following table (Table 5.2.1) and figures (Figures 5.2.1a - 5.2.1i) presents jurisdiction results for continuous measures for CHL target outcomes. These results are presented for your jurisdiction by experimental group (intervention, control, temporal) as applicable.

Results for intervention communities in **Alaska** are as follows. For childhood BMI z-score, the average was 0.61 at baseline and 0.54 at post-intervention. For abdominal obesity, the average waist circumference in centimeters was 55.93 at baseline and 56.27 at post-intervention. For physical activity, the average hours of physical activity per day was 0.03 at baseline and 0.04 at post-intervention. For sleep, the average hours of sleep was 10.02 at baseline and 10.09 at post-intervention. For screen time, the average hours of screen time per day was 2.43 at baseline and 2.35 at post-intervention. For vegetable intake, the average cups consumed per day was 0.82 at baseline and 0.78 at post-intervention. For fruit intake, the average cups consumed per day was 1.27 at baseline and 1.07 at post-intervention. For water intake, the average cups consumed per day was 0.87 at baseline and 1.18 at post-intervention. For sugar sweetened beverage intake, the average cups consumed per day was 0.34 at baseline and 0.33 at post-intervention.

Table 5.2.1. Continuous Outcomes for Alaska (Baseline=666, Post-Intervention=666)

CHL Targets	Baseline	Post-Intervention	Difference
BMI z-score (standard deviation score)			
Intervention	0.61	0.54	-0.07
Optimized	0.74	0.65	-0.09
Temporal	0.88	0.90	0.02
Waist Circumference (cm)			
Intervention	55.93	56.27	0.34
Optimized	55.76	56.23	0.47
Temporal	57.60	57.90	0.30
Moderate or Vigorous Physical activity (hours / day)			
Intervention	0.03	0.04	0.01
Optimized	0.03	0.03	0.00
Sleep (hours / day)			
Intervention	10.02	10.09	0.07
Optimized	9.94	9.59	-0.35
Temporal	9.82	9.80	-0.02
Total screen time (hours / day)			
Intervention	2.43	2.35	-0.08
Optimized	2.75	3.29	0.54
Vegetable intake (cups / day)*			
Intervention	0.82	0.78	-0.04

Optimized	0.78	0.79	0.01
Fruit intake (cups / day)*			
Intervention	1.27	1.07	-0.20
Optimized	1.18	1.20	0.02
Water (cups / day)			
Intervention	0.87	1.18	0.31
Optimized	0.89	1.21	0.32
Sugar Sweetened Beverage (cups / day)			
Intervention	0.34	0.33	-0.01
Optimized	0.28	0.26	-0.02

* These are based on an intake distribution corrected for day-to-day variability.

Figure 5.2.1a. Mean BMI Z-Score for Alaska, at Baseline, Post-intervention, and Difference by Experimental Group (Communities=4, Participants=1,301)
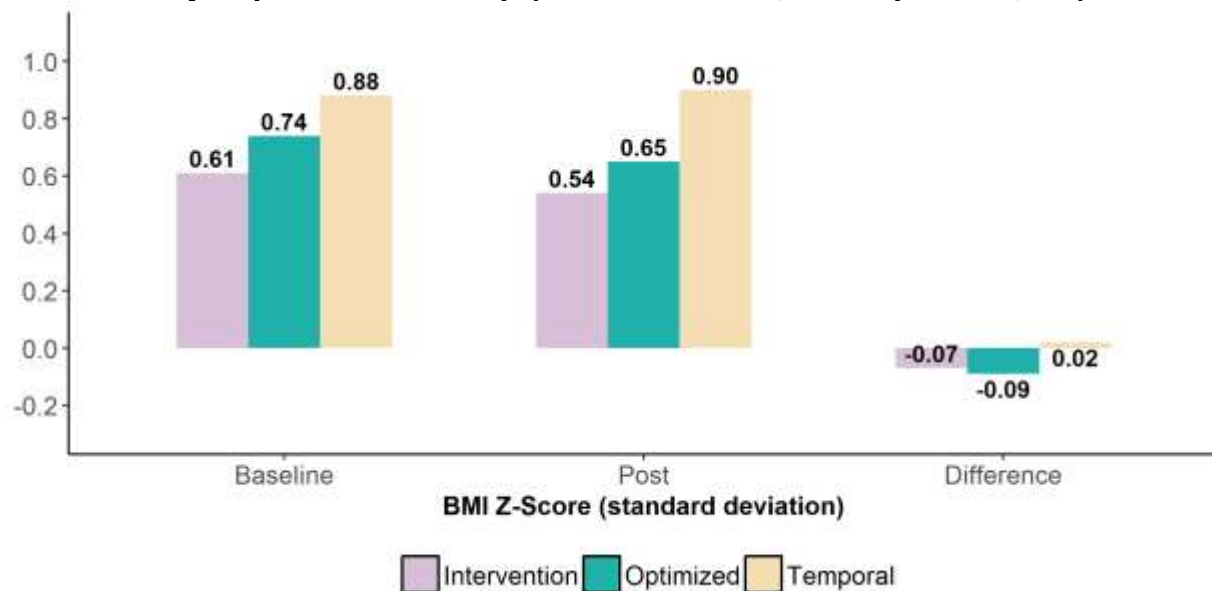
Figure 5.2.1b. Mean Waist Circumference for Alaska at Baseline, Post-intervention, and Difference by Experimental Group (Communities=4, Participants=1,214)
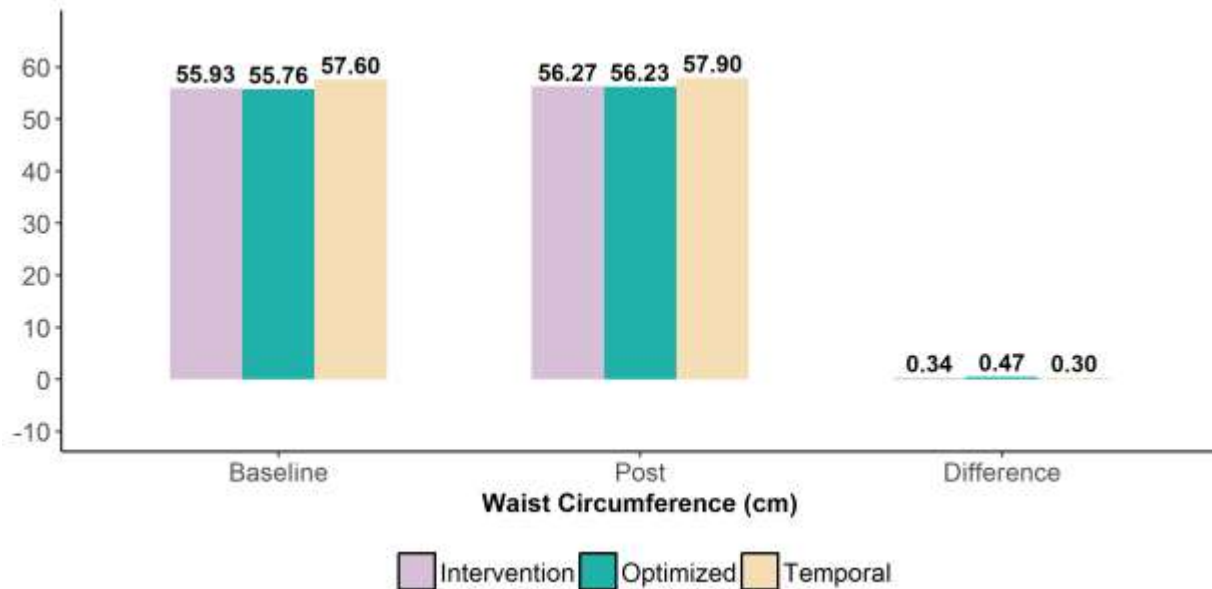
Figure 5.2.1c. Mean Daily Hours of Moderate or Vigorous Physical Activity from Accelerometers for Alaska at Baseline, Post-intervention, and Difference by Experimental Group (Communities=4, Participants=448)
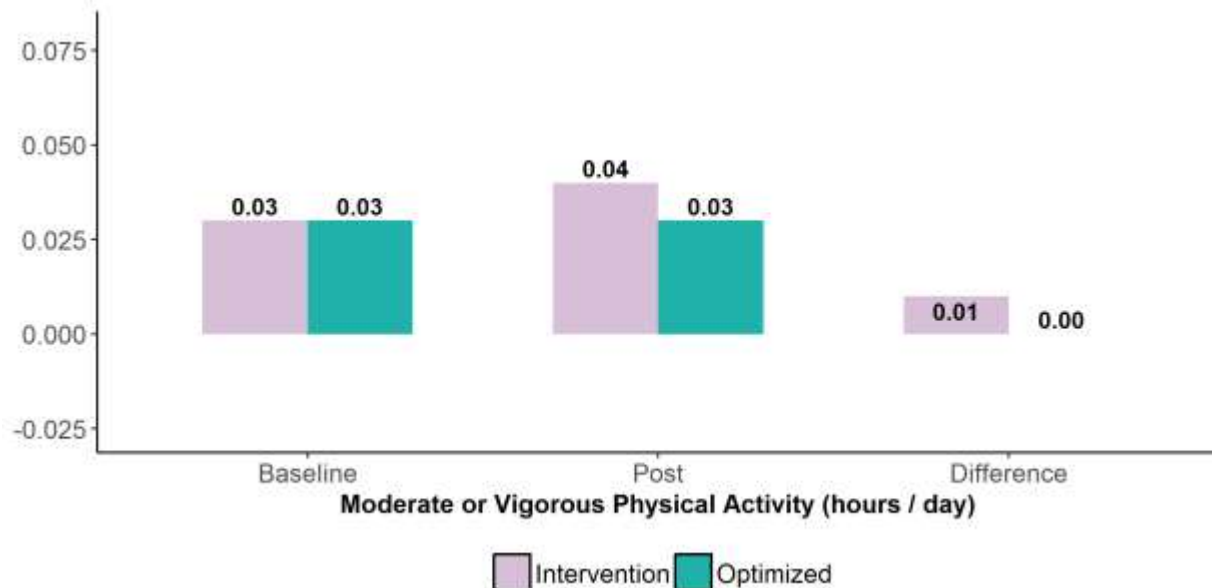
Figure 5.2.1d. Mean Average Hours of Sleep at Night and in Naps during 24 Hours for Alaska at Baseline, Post-intervention, and Difference by Experimental Group (Communities=4, Participants=1,340)
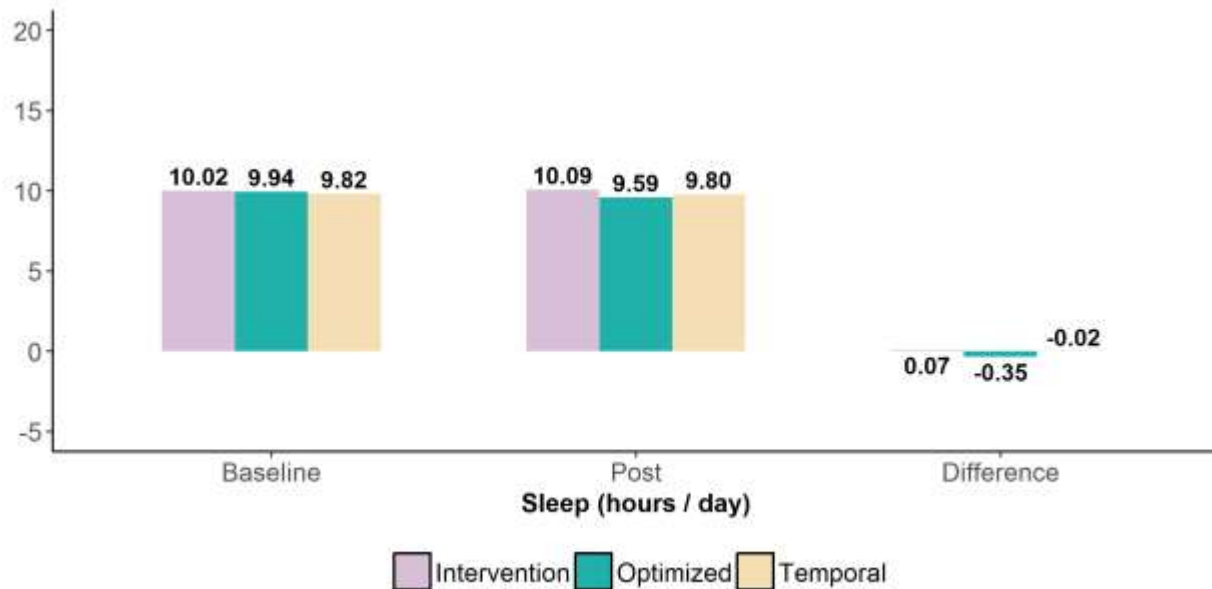
Figure 5.2.1e. Mean Hours of Total Screen Time Per Day (Adjusted for Weekday and Weekend Activity) Child Watches TV, Videos, DVDs, or Plays Video Games for Alaska at Baseline, Post-intervention, and Difference by Experimental Group (Communities=2, Participants=734)
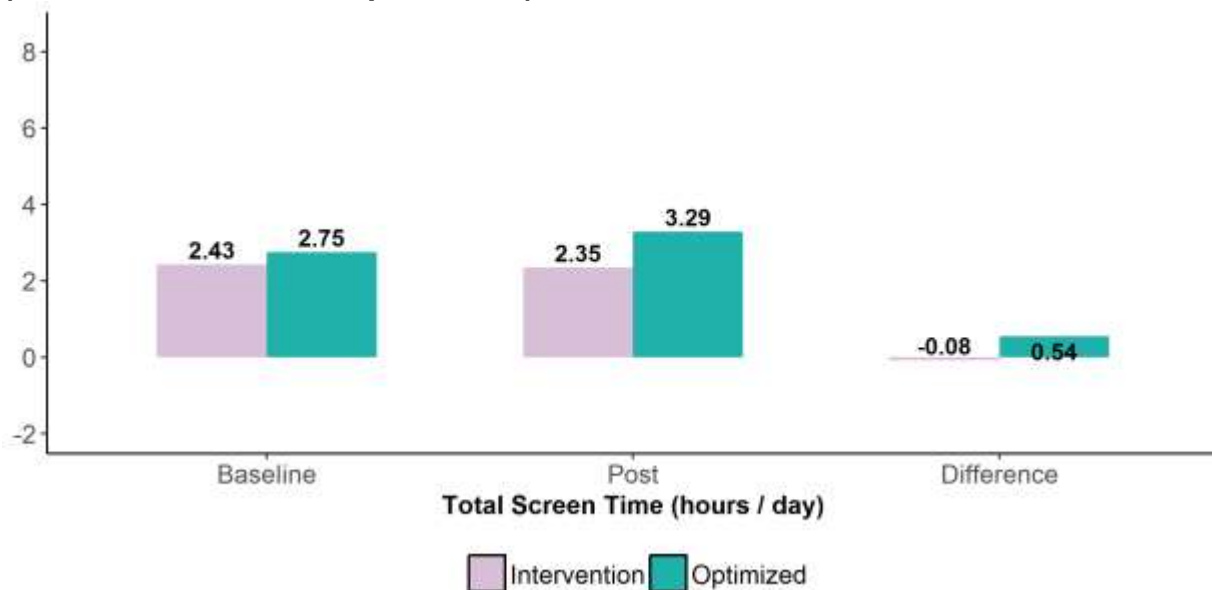
Figure 5.2.1f. Mean Vegetable Intake Per Day in Cups for Alaska at Baseline, Post-intervention, and Difference by Experimental Group (Communities=2, Participants=617)

Vegetable Intake (cups / day)
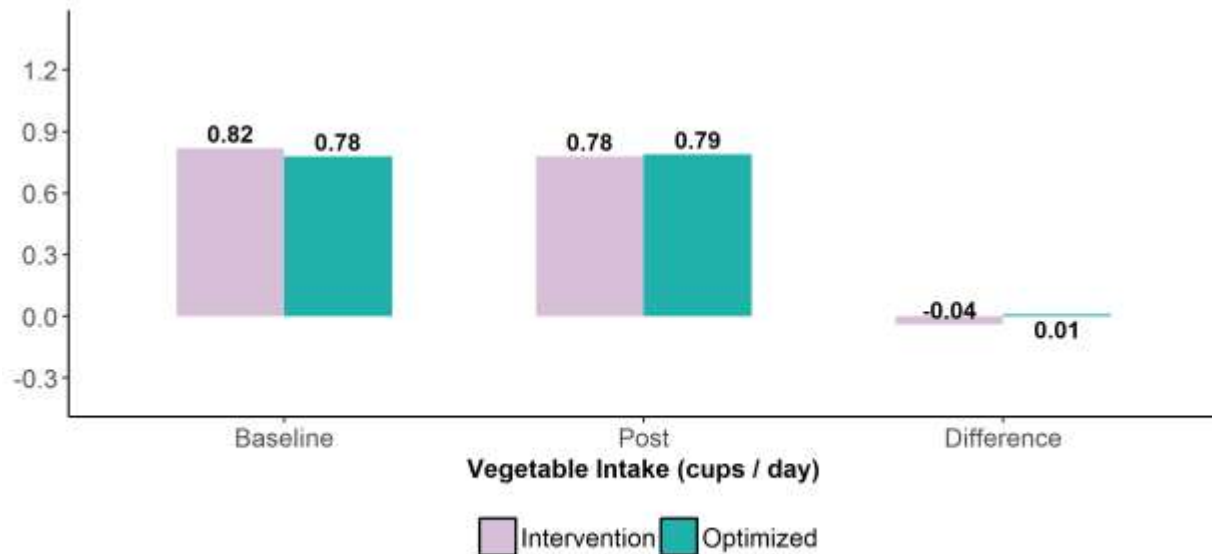
* These are based on an intake distribution corrected for day-to-day variability.

Figure 5.2.1g. Mean Fruit Intake Per Day in Cups for Alaska at Baseline, Post-intervention, and Difference by Experimental Group (Communities=2, Participants=617)

Fruit Intake (cups / day)
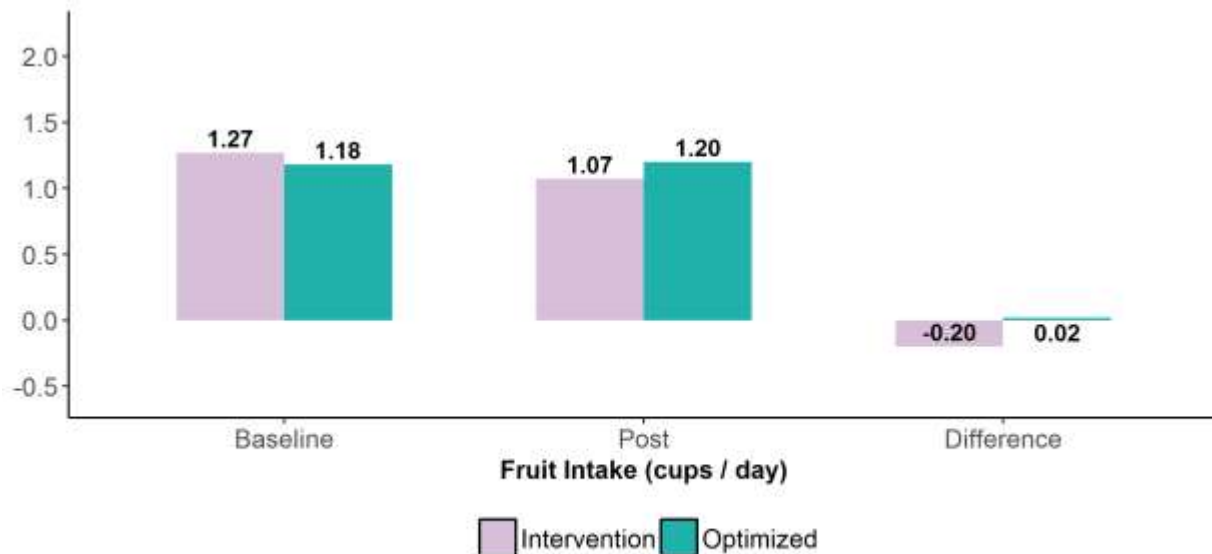
* These are based on an intake distribution corrected for day-to-day variability.

Figure 5.2.1h. Mean Water Intake as a Beverage In Cups Per Day for Alaska at Baseline, Post-intervention, and Difference by Experimental Group (Communities=2, Participants=617)
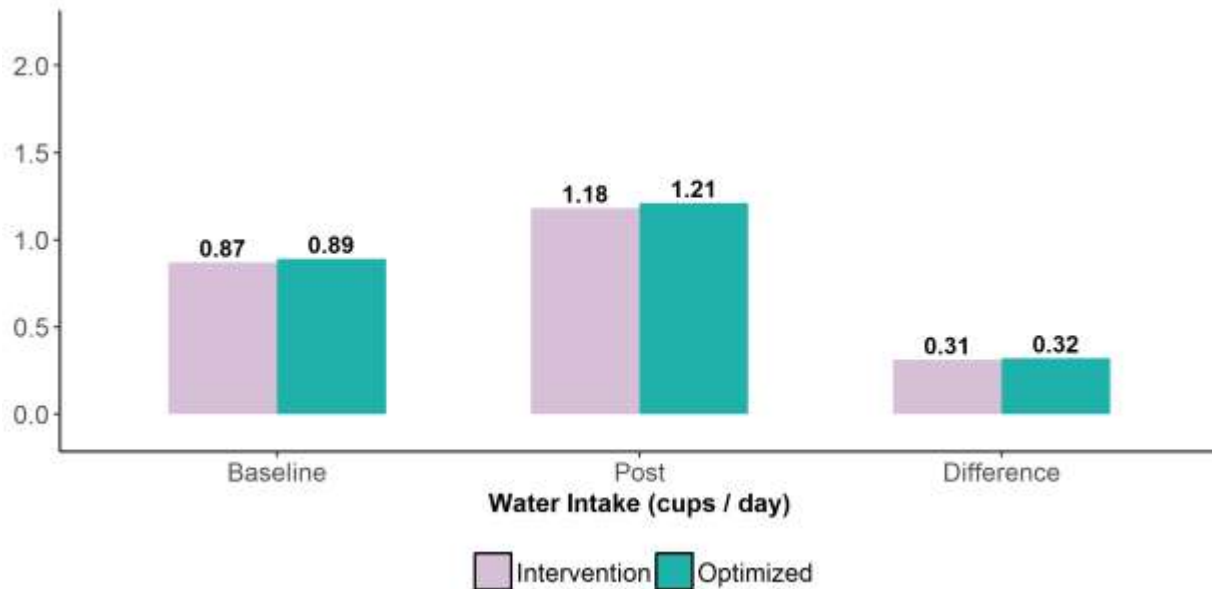
Figure 5.2.1i. Mean Sugar Sweetened Beverages (SSB) Intake In Cups Per Day for Alaska at Baseline, Post-intervention, and Difference by Experimental Group (Communities=2, Participants=617)
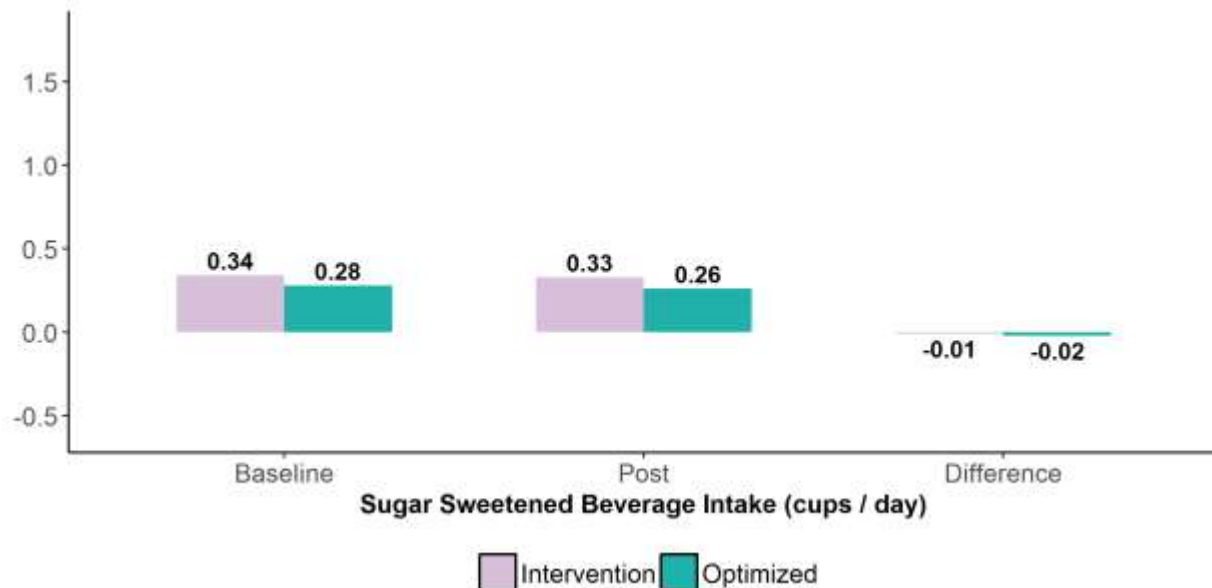
Section 3. Jurisdiction Level Categorical Outcomes

The following table (Table 5.3.1) and figures (Figures 5.3.1a - 5.3.1h) presents jurisdiction results for categorical measures for CHL target outcomes including status of being overweight or obese, acanthosis nigricans presence, meeting the recommendation for daily fruit intake, meeting the recommendation for daily vegetable intake, and meeting the recommendation for daily sleep. These results are presented for your jurisdiction by experimental group (intervention, control, temporal) as applicable.

The following results for CHL target behaviors are described for the intervention community of **Alaska**. The prevalence for OWOB was 29.44% at baseline and 27.18% at post-intervention. The prevalence of AN was 0.00% at baseline and 0.00% at post-intervention. The proportion of participants who met the national recommendation for moderate or vigorous physical activity (MVPA) was 3.66% at baseline and 3.66% at post-intervention. The proportion of participants who met the national recommendation for sleep was 71.28% at baseline and 72.87% at post-intervention. The proportion of participants who met the national recommendation for screen time was 39.61% at baseline and 40.94% at post-intervention. The proportion of participants who met the national recommendation for vegetable intake was 3.36% at baseline and 5.38% at post-intervention. The proportion of participants who met the national recommendation for fruit intake was 72.64% at baseline and 55.71% at post-intervention. The proportion of participants who met the national recommendation for sugar sweetened beverage intake was 61.29% at baseline and 61.30% at post-intervention.

Table 5.3.1. Categorical Outcomes for Alaska (Baseline=666, Post-Intervention=666)

CHL Targets	Baseline (%)	Post-Intervention (%)	Difference
OWOB prevalence			
Intervention	29.44	27.18	-2.26
Optimized	37.16	33.44	-3.72
Temporal	43.24	46.39	3.15
AN prevalence			
Intervention	0.00	0.00	0.00
Optimized	0.00	0.00	0.00
Meets MVPA			
Intervention	3.66	3.66	0.00
Optimized	1.00	0.74	-0.26
Meets age for specific recommended hours of sleep			
Intervention	71.28	72.87	1.59
Optimized	65.97	56.10	-9.87
Temporal	63.38	65.99	2.61
Meets screen time			
Intervention	39.61	40.94	1.33
Optimized	37.11	26.54	-10.57
Meets vegetable intake*			
Intervention	3.36	5.38	2.02
Optimized	3.24	0.54	-2.70

Meets fruit intake*			
Intervention	72.64	55.71	-16.93
Optimized	69.51	69.77	0.26
Meets SSB intake			
Intervention	61.29	61.30	0.01
Optimized	53.21	52.51	-0.70

* These are based on an intake distribution corrected for day-to-day variability.

Figure 5.3.1a. Percent Overweight/Obesity (OWOB) Prevalence for Alaska (Communities=4, Participants=1,352)
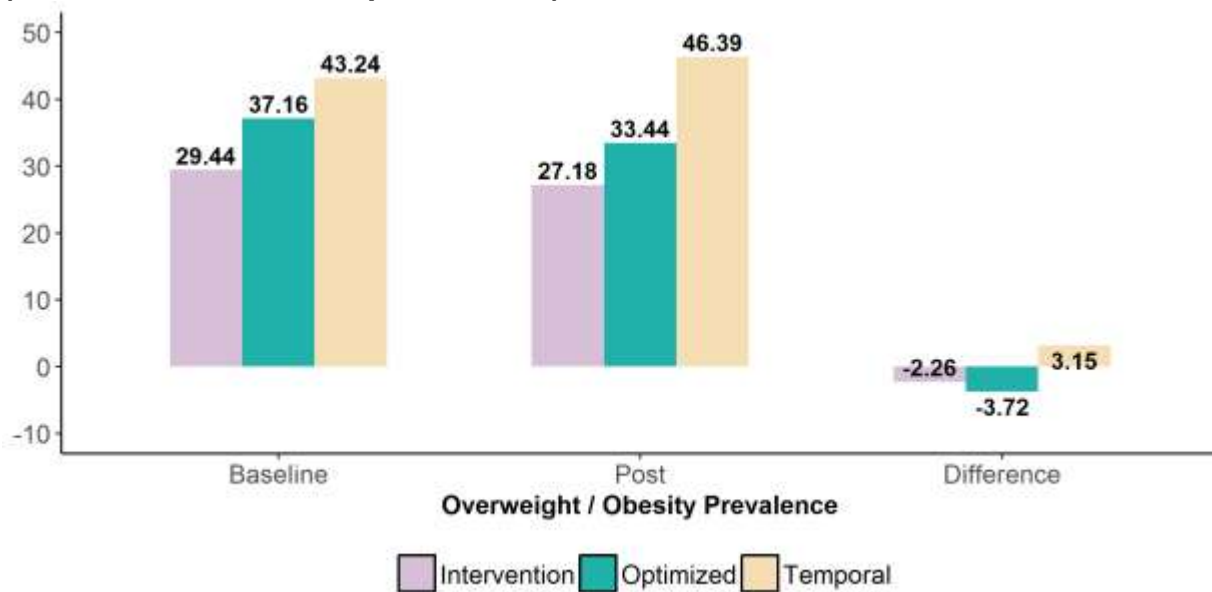
Figure 5.3.1b. Percent Acanthosis Nigricans (AN) Prevalence for Alaska (Communities=2, Participants=730)
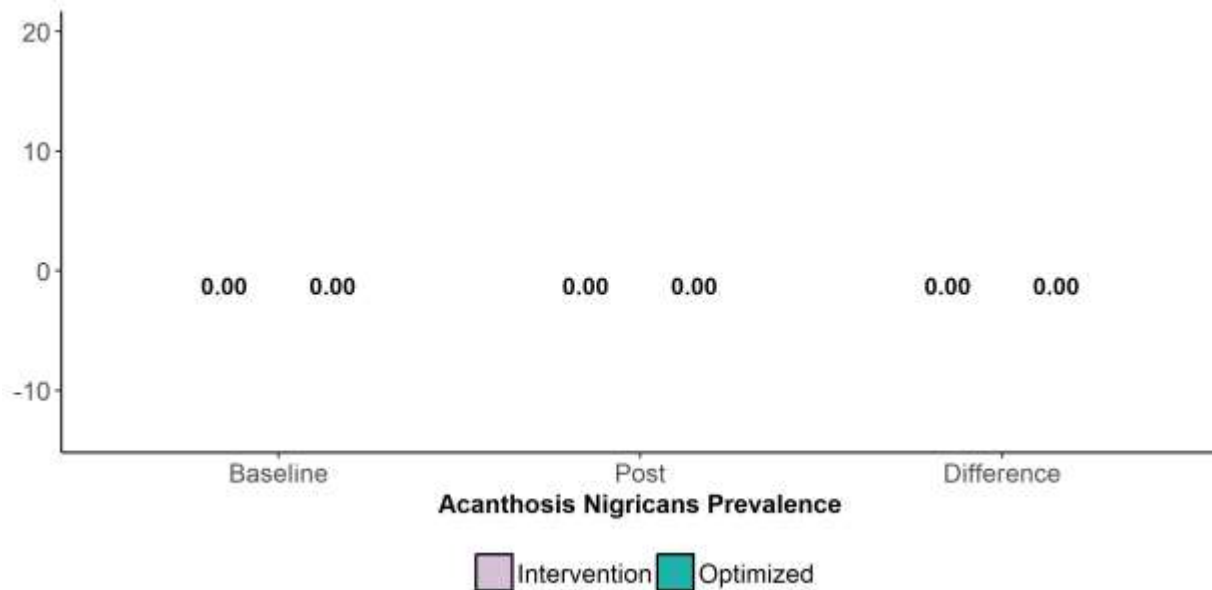
Figure 5.3.1c. Percent Who Met National Recommendation of At Least 60 Minutes of Moderate and Vigorous Physical Activity Per Day for Alaska (Communities=2, Participants=448)
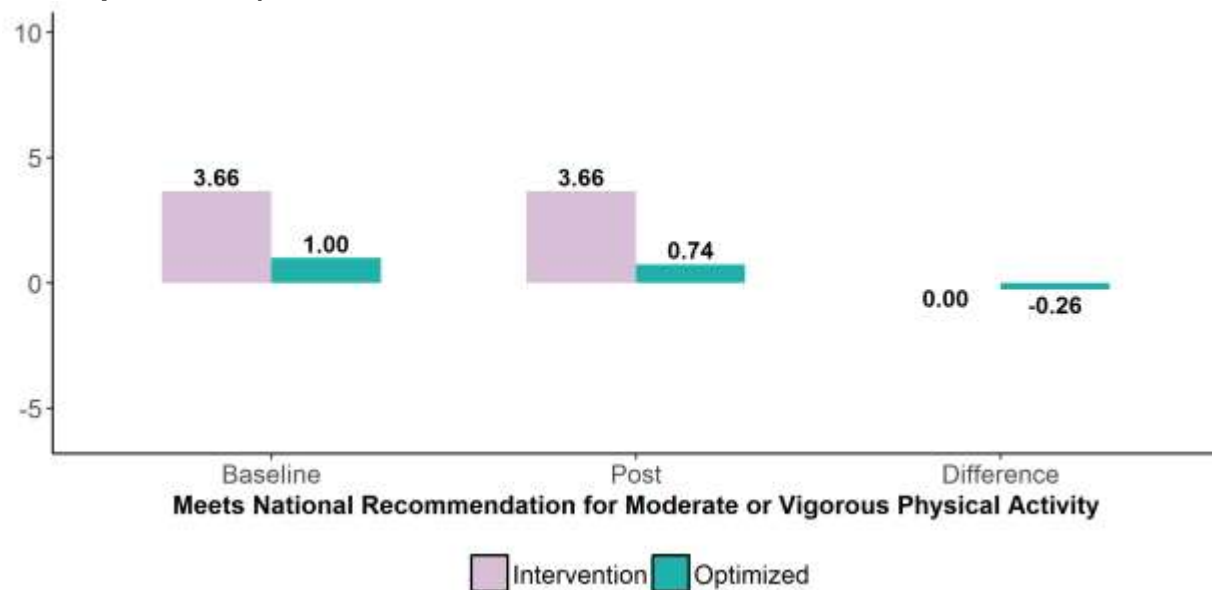
Figure 5.3.1d. Percent Who Met National Recommendation of Age-Specific Sleep Per Day for Alaska (Communities=4, Participants=1,340)
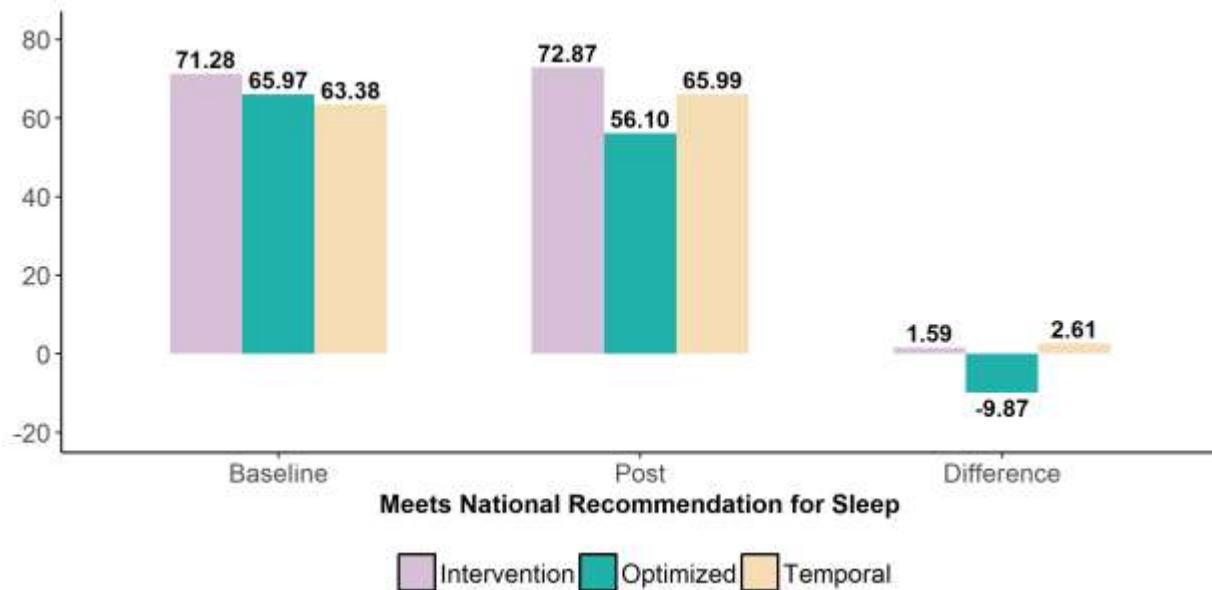
Figure 5.3.1e. Percent Who Met National Recommendation of Less Than 2 Hours of Screen Time Per Day for Alaska (Communities=2, Participants=734)
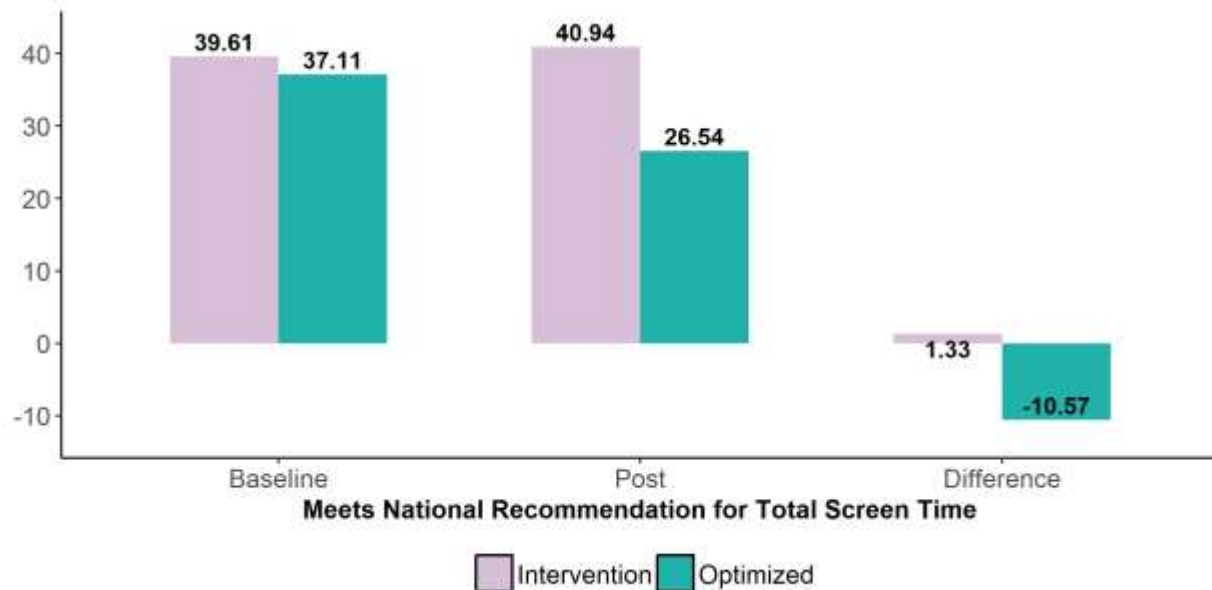
Figure 5.3.1f. Percent Who Met National Recommendation of Age-Specific Vegetable Intake Per Day for Alaska (Communities=2, Participants=617)
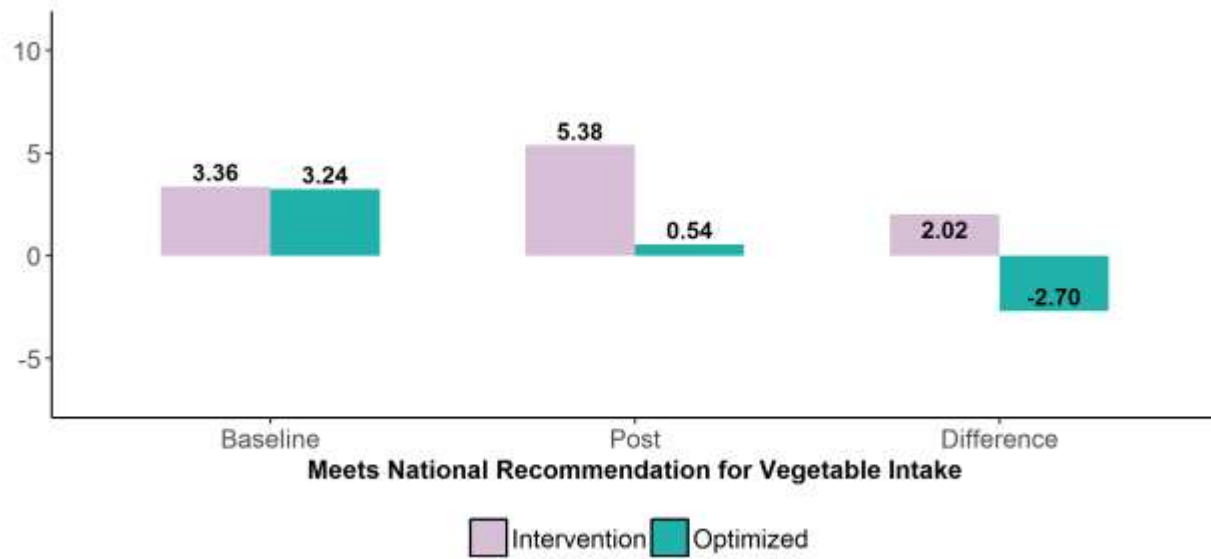
* These are based on an intake distribution corrected for day-to-day variability.

Figure 5.3.1g. Percent Who Met My Daily Food Plan of Age-Specific Fruit Intake for Alaska (Communities=2, Participants=617)
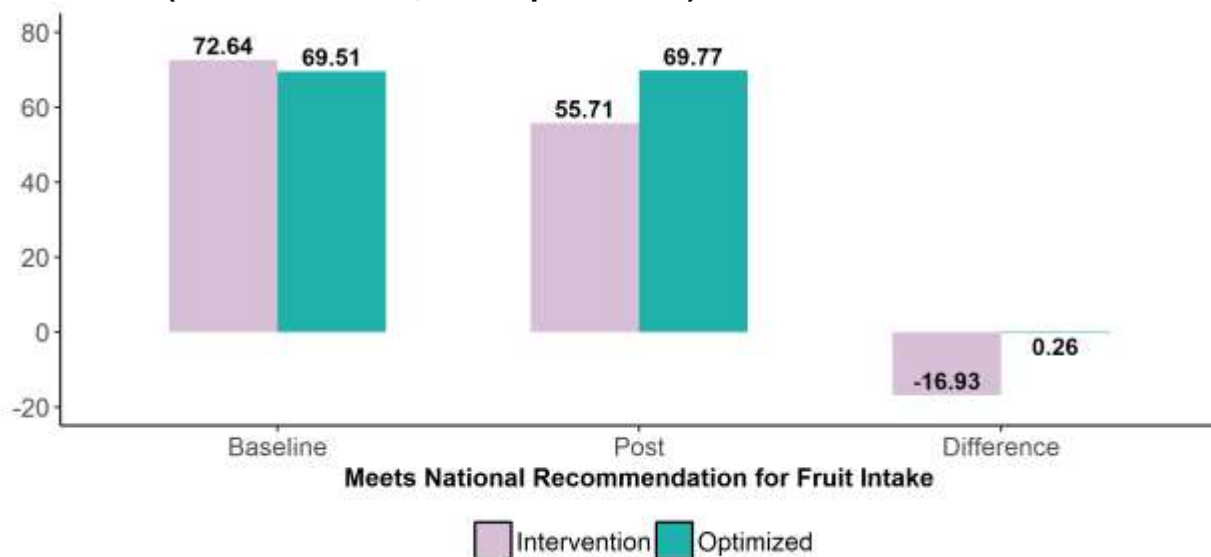
* These are based on an intake distribution corrected for day-to-day variability.

Figure 5.3.1h. Percent Who Met Sugar Sweetened Beverage Intake of Zero Cups for Alaska (Communities=2, Participants=617)
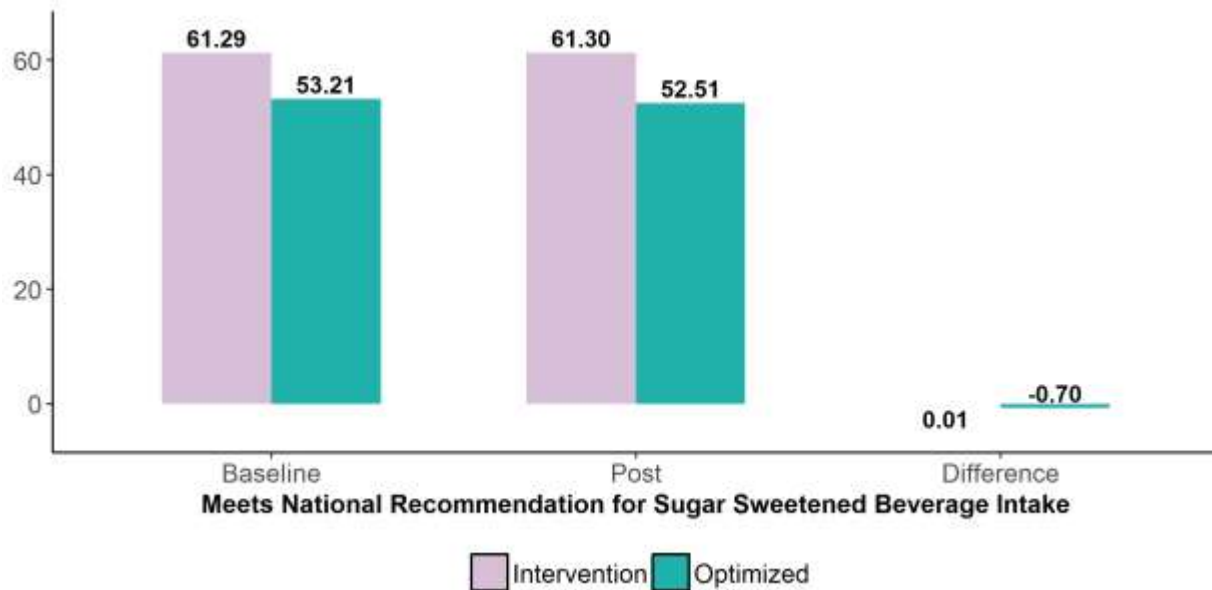
6. Main Effects Results for Your Community of Anchorage

This section examines the effects of the CHL intervention for your community. The prevalence estimates presented for the community main effects have been calculated using a statistical model that includes adjustments for sex, age, and weighting to the population size.

The community of **Anchorage** was randomized to be a community.

Section 1. Community Level Participant Demographics

Age: Child's age was calculated between age in years elapsed between child's date of birth and the date when anthropometry was measured. In **Anchorage**, among the 162 children who participated at baseline, 115 (71.0%) were ages 2-5 and 47 (29.0%) were ages 6-8. Among the 185 children who participated at post-intervention, 147 (79.5%) were ages 2-5 and 38 (20.5%) were ages 6-8.

Sex: In **Anchorage**, among the 162 children who participated at baseline, 84 (51.9%) were male and 78 (48.1%) were female. Among the 185 children who participated at post-intervention, 97 (52.4%) were male and 88 (47.6%) were female.

Racial and Ethnic Heritage: In **Anchorage**, the top frequent ethnicity was White (27.3%), followed by AIAN-Yupik (11.2%), and AIAN-Inupiaq, White (4.3%) at baseline. At post-intervention, the top frequent ethnicity was White (26.0%), followed by AIAN-Inupiaq (5.0%), and Black (5.0%). The distribution of participants by age, sex, and ethnic group are shown in the following table (Table 6.2.1).

Table 6.2.1. Participant Descriptions for Anchorage (Baseline=162, Post-Intervention=185)

Measure	Baseline (%)	Post-Intervention (%)
Group		
Temporal	100.0	100.0
Age in years		
Age 2 - 5	71.0	79.5
Age 6 - 8	29.0	20.5
Sex		
Male	51.9	52.4
Female	48.1	47.6
Race/Ethnic Groups		
Top 1st	White (27.3)	White (26.0)
Top 2nd	AIAN-Yupik (11.2)	AIAN-Inupiaq (5.0)
Top 3rd	AIAN-Inupiaq, White (4.3)	Black (5.0)

Section 2. Community Level Continuous Outcomes

CHL target behaviors include decreasing childhood BMI, decreasing abdominal obesity (waist circumference), increasing hours of sleep, increasing fruit and vegetable intake, decreasing sugar sweetened beverage consumption, and increasing water consumption. The following table (Table 6.2.2) and figures (Figures 6.2.2a - 6.2.2i) presents community results for continuous measures for CHL target outcomes.

Results for intervention communities in **Anchorage** are as follows. For childhood BMI z-score, the average was 0.87 at baseline and 0.95 at post-intervention. For abdominal obesity, the average waist circumference in centimeters was 57.56 at baseline and 58.16 at post-intervention. For physical activity, the average hours of physical activity per day was NA at baseline and NA at post-intervention. For sleep, the average hours of sleep was 9.80 at baseline and 9.74 at post-intervention. For screen time, the average hours of screen time per day was NA at baseline and NA at post-intervention. For vegetable intake, the average cups consumed per day was NA at baseline and NA at post-intervention. For fruit intake, the average cups consumed per day was NA at baseline and NA at post-intervention. For water intake, the average cups consumed per day was NA at baseline and NA at post-intervention. For sugar sweetened beverage intake, the average cups consumed per day was NA at baseline and NA at post-intervention.

Table 6.2.2. Continuous Outcomes for Anchorage (Baseline=162, Post-Intervention=185)

CHL Targets	Baseline	Post-Intervention	Difference
BMI z-score (standard deviation score)	0.87	0.95	0.08
Waist circumference (cm)	57.56	58.16	0.60
Moderate or Vigorous Physical activity (hours / day)	NA	NA	NA

Sleep (hours / day)	9.80	9.74	-0.06
Total screen time (hours / day)	NA	NA	NA
Vegetable intake (cups / day)*	NA	NA	NA
Fruit intake (cups / day)*	NA	NA	NA
Water (cups / day)	NA	NA	NA
Sugar Sweetened Beverage (cups / day)	NA	NA	NA

* These are based on an intake distribution corrected for day-to-day variability.

Figure 6.2.2a. Mean BMI Z-Score for Anchorage, at Baseline, Post-intervention, and Difference (Participants=347)
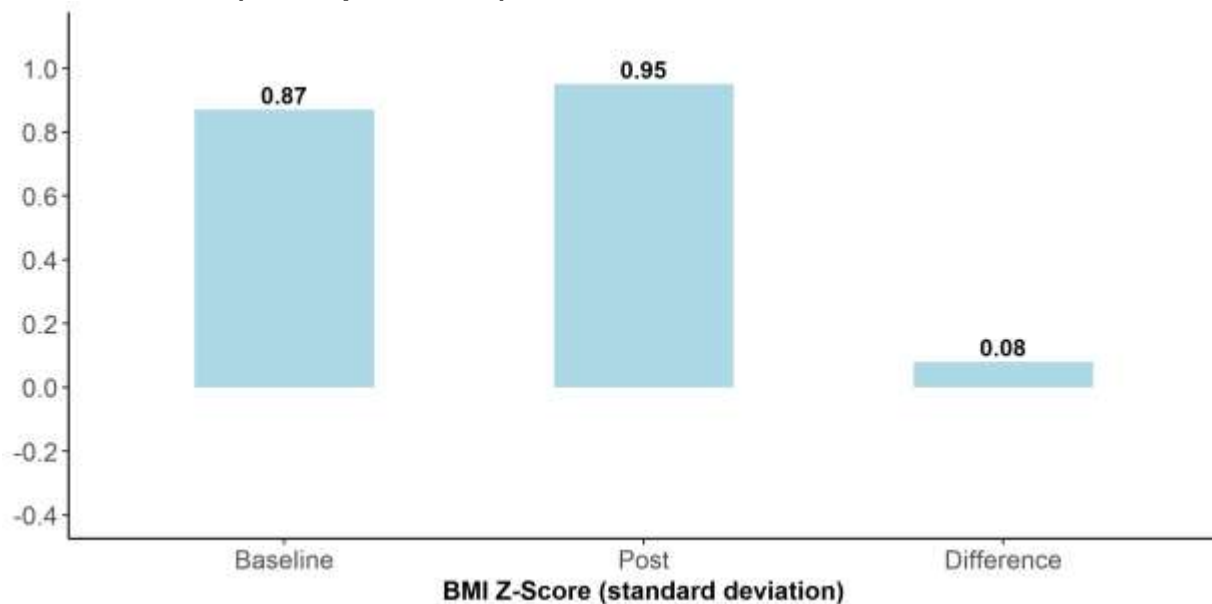
Figure 6.2.2b. Mean Waist Circumference for Anchorage at Baseline, Post-intervention, and Difference (Participants=347)

Waist Circumference (cm)
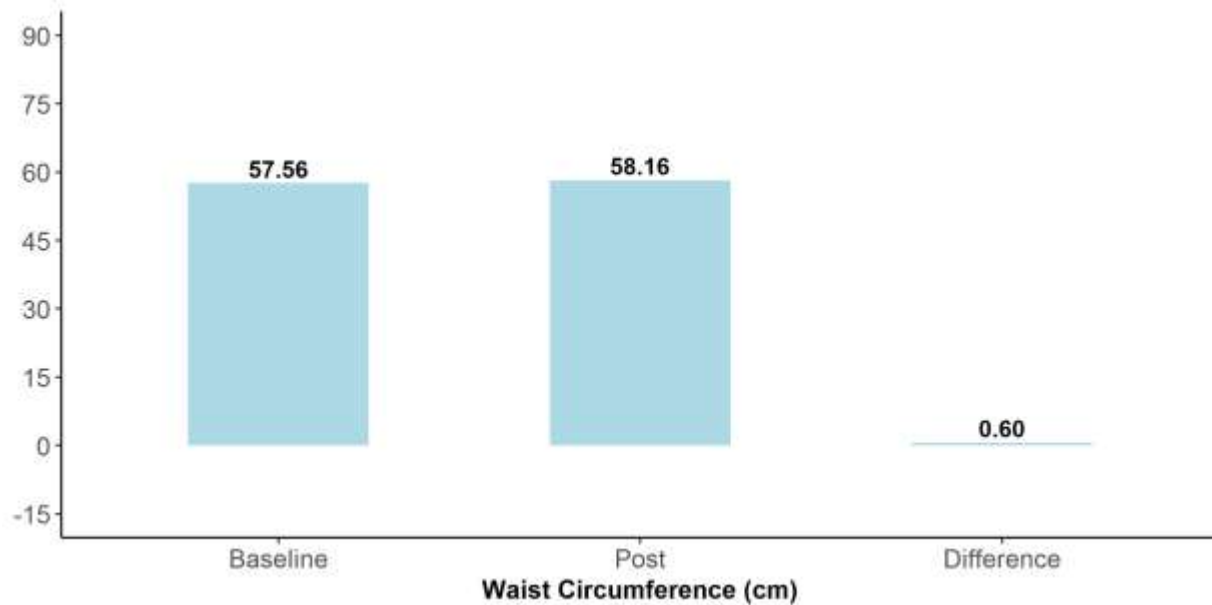
Figure 6.2.2c. Mean Daily Hours of Moderate or Vigorous Physical Activity from Accelerometers for Anchorage at Baseline, Post-intervention, and Difference (Participants=347)

Moderate or Vigorous Physical Activity (hours / day)
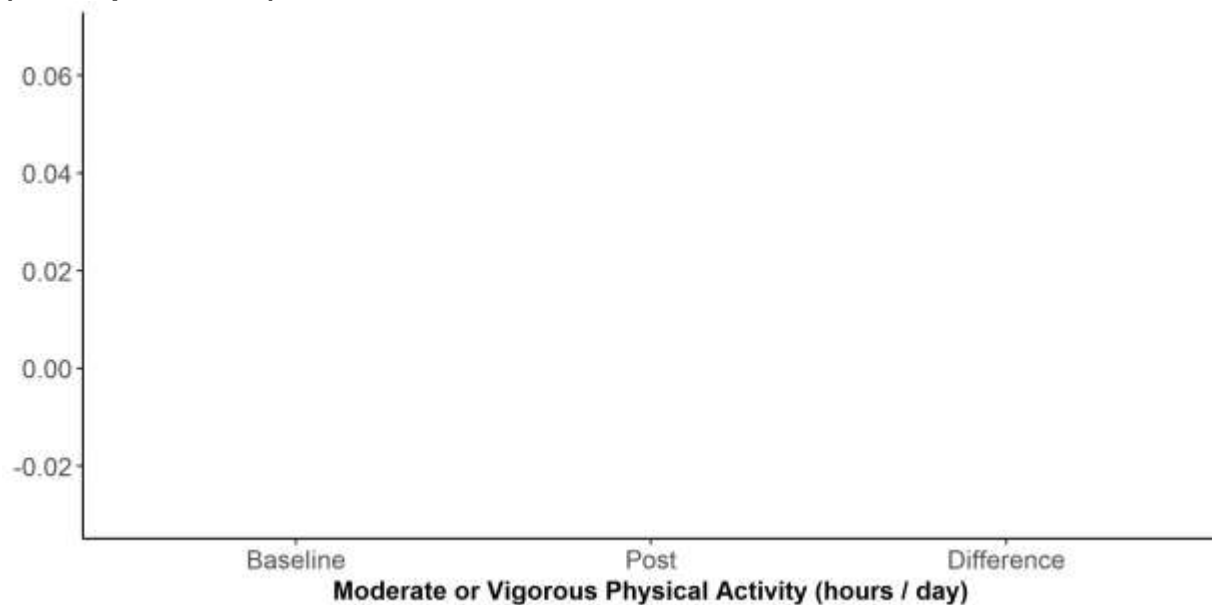
Figure 6.2.2d. Mean Average Hours of Sleep at Night and in Naps during 24 Hours for Anchorage at Baseline, Post-intervention, and Difference (Participants=347)
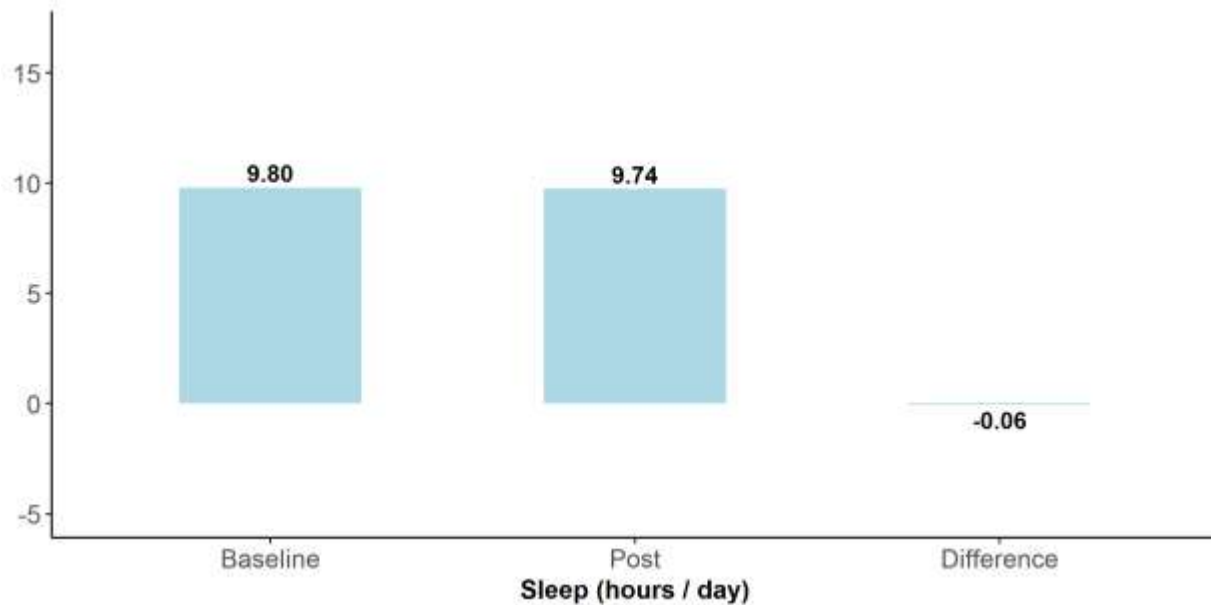
Figure 6.2.2e. Mean Hours of Total Screen Time Per Day (Adjusted for Weekday and Weekend Activity) Child Watches TV, Videos, DVDs, or Plays Video Games for Anchorage at Baseline, Post-intervention, and Difference (Participants=347)
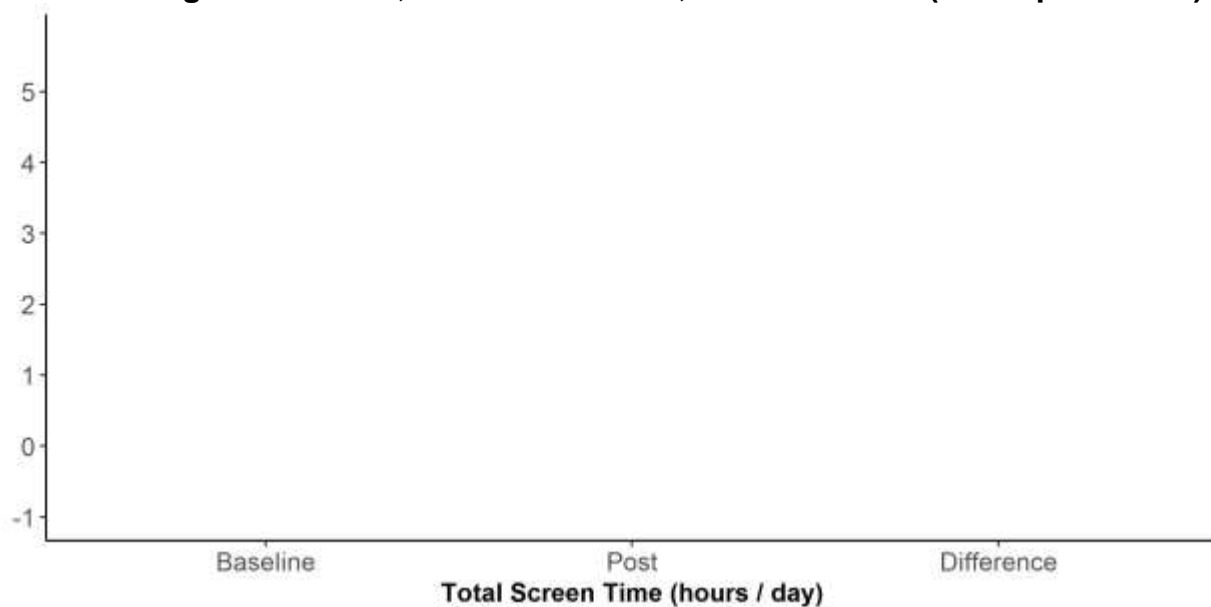
Figure 6.2.2f. Mean Vegetable Intake Per Day in Cups for Anchorage at Baseline, Post-intervention, and Difference (Participants=347)

* These are based on an intake distribution corrected for day-to-day variability.
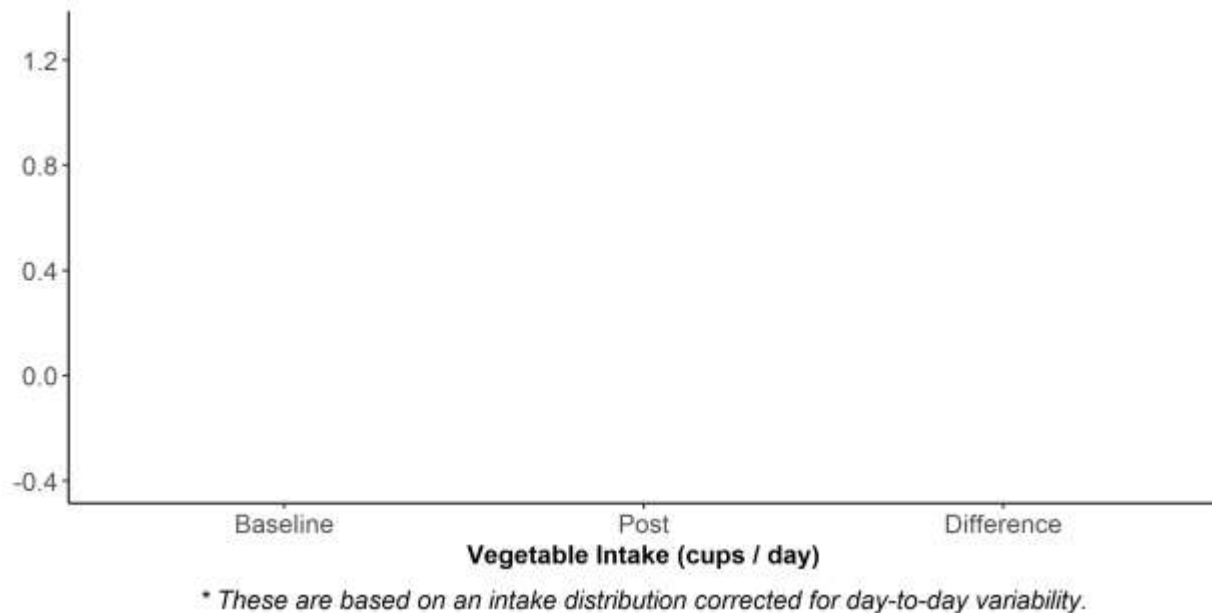
Figure 6.2.2g. Mean Fruit Intake Per Day in Cups for Anchorage at Baseline, Post-intervention, and Difference (Participants=347)

* These are based on an intake distribution corrected for day-to-day variability.
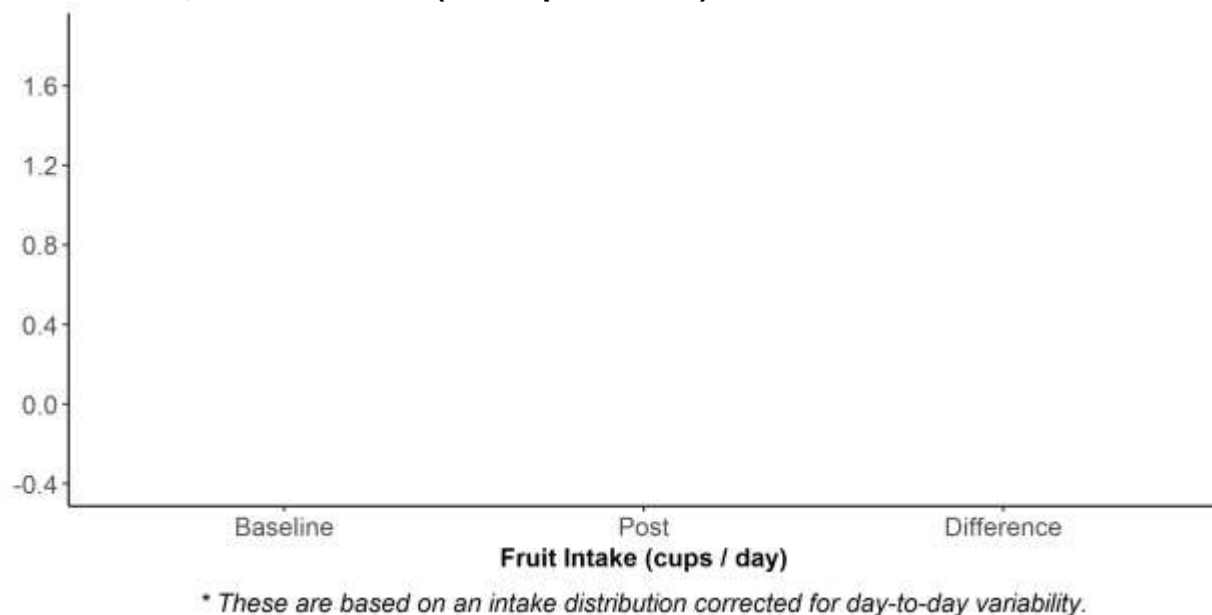
Figure 6.2.2h. Mean Water Intake as a Beverage In Cups Per Day for Anchorage at Baseline, Post-intervention, and Difference (Participants=347)
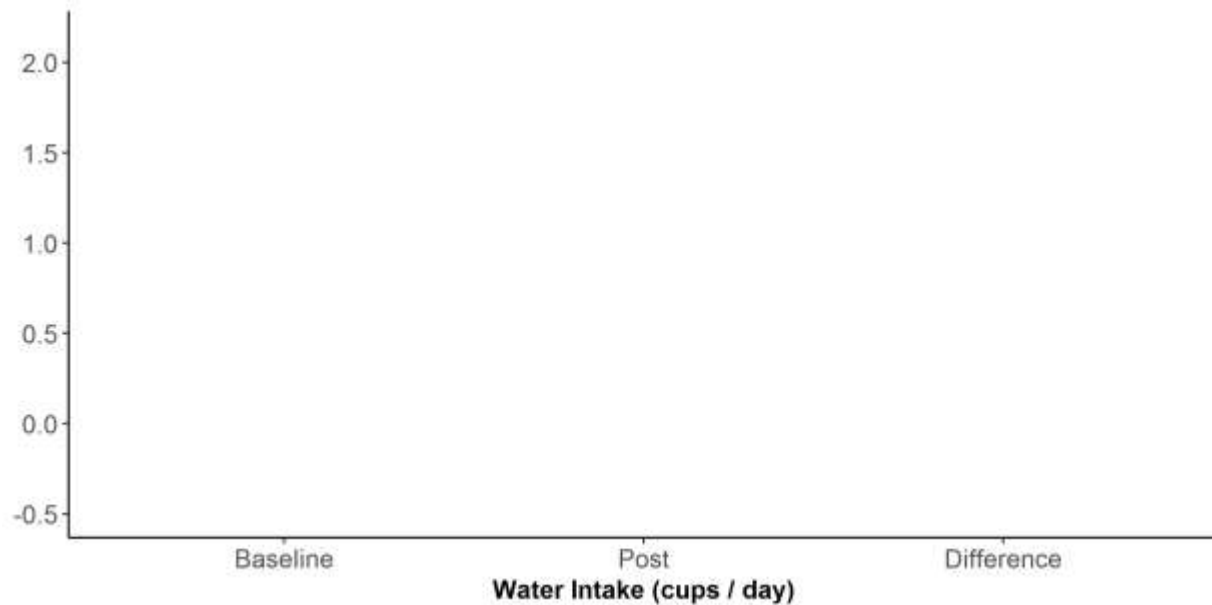
Figure 6.2.2i. Mean Sugar Sweetened Beverages (SSB) Intake In Cups Per Day for Anchorage at Baseline, Post-intervention, and Difference (Participants=347)
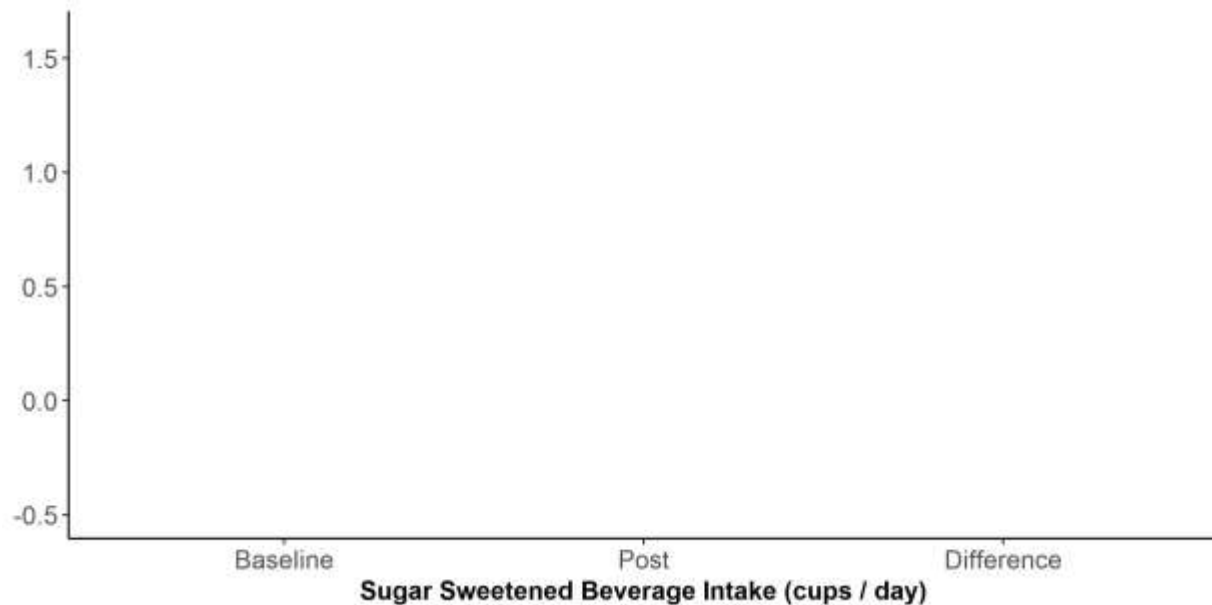
Section 3. Community Level Categorical Outcomes

The following table (Table 6.3.1) and figures (Figures 6.2.3a - 6.2.3h) presents community results for categorical measures for CHL target outcomes including status of being overweight or obese, acanthosis nigricans presence, meeting the recommendation for daily fruit intake, meeting the recommendation for daily vegetable intake, and meeting the recommendation for daily sleep.

The following results for CHL target behaviors are described for the intervention community of **Anchorage**. The prevalence for OWOB was 42.70% at baseline and 48.33% at post-intervention. The prevalence of AN was NA% at baseline and NA% at post-intervention. The proportion of participants who met the national recommendation for moderate or vigorous physical activity (MVPA) was NA% at baseline and NA% at post-intervention. The proportion of participants who met the national recommendation for sleep was 61.98% at baseline and 65.68% at post-intervention. The proportion of participants who met the national recommendation for screen time was NA% at baseline and NA% at post-intervention. The proportion of participants who met the national recommendation for vegetable intake was NA% at baseline and NA% at post-intervention. The proportion of participants who met the national recommendation for fruit intake was NA% at baseline and NA% at post-intervention. The proportion of participants who met the national recommendation for sugar sweetened beverage intake was NA% at baseline and NA% at post-intervention.

Table 6.3.1. Categorical Outcomes for Anchorage (Baseline=162, Post-Intervention=185)

CHL Targets	Baseline (%)	Post-Intervention (%)	Difference
OWOB prevalence	42.70	48.33	5.63
AN prevalence	NA	NA	NA
Meets MVPA	NA	NA	NA

Meets age for specific recommended hours of sleep	61.98	65.68	3.70
Meets screen time	NA	NA	NA
Meets vegetable intake*	NA	NA	NA
Meets fruit intake*	NA	NA	NA
Meets SSB intake	NA	NA	NA

* These are based on an intake distribution corrected for day-to-day variability.

Figure 6.3.1a. Percent Overweight/Obesity (OWOB) Prevalence for Anchorage (Participants=347)
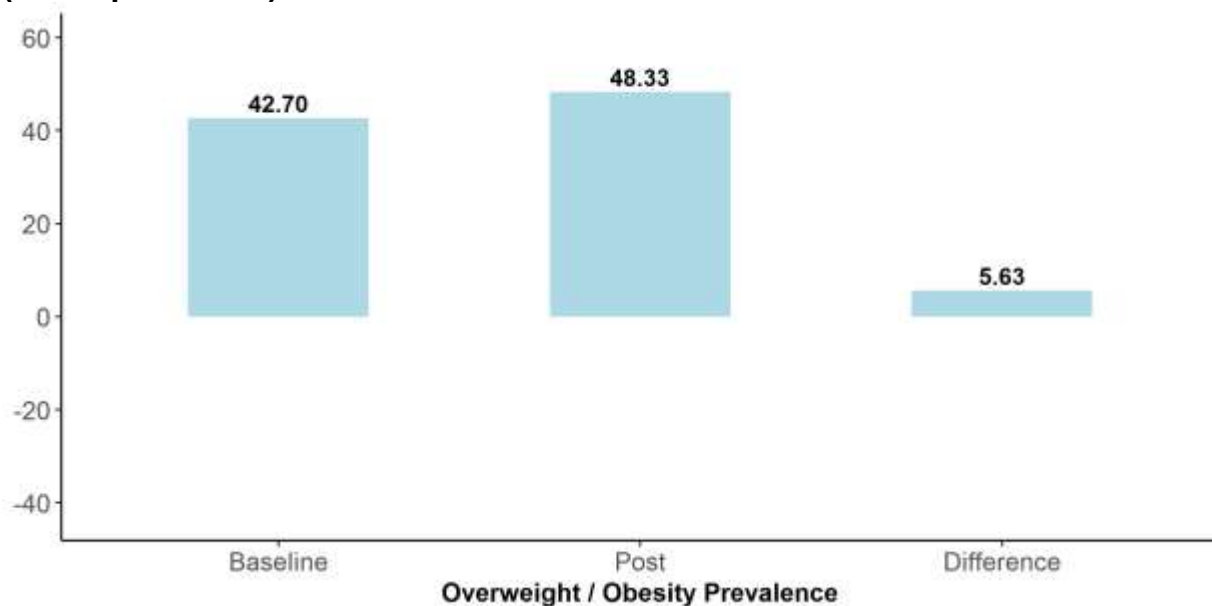
Figure 6.3.1b. Percent Acanthosis Nigricans (AN) Prevalence for Anchorage (Participants=347)

Acanthosis Nigricans Prevalence
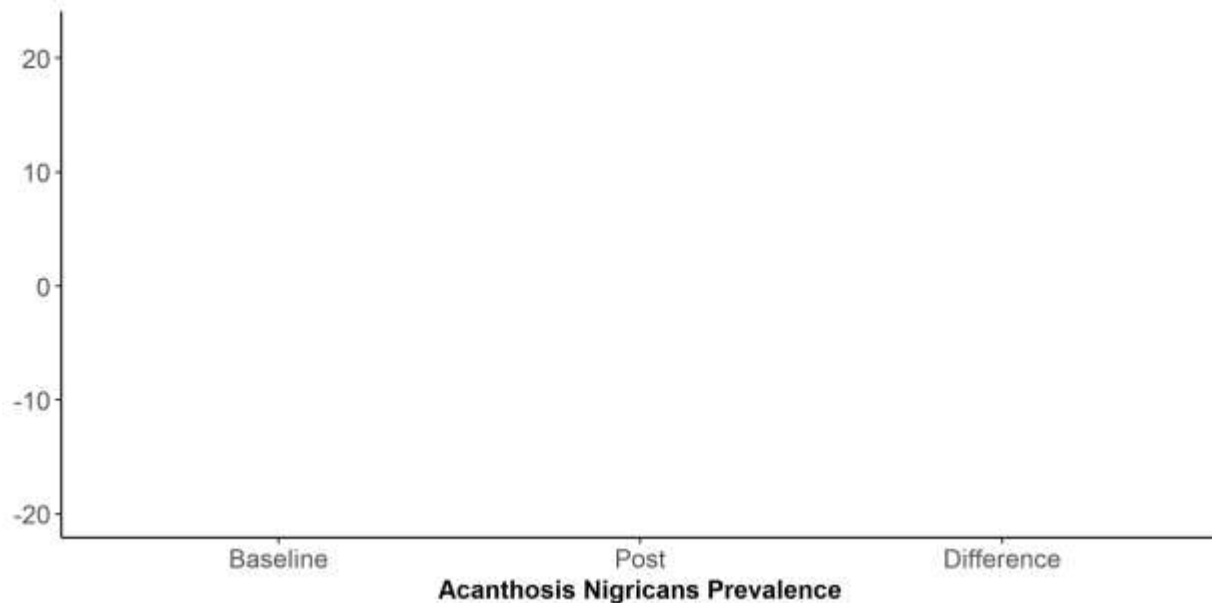
Figure 6.3.1c. Percent Who Met National Recommendation of At Least 60 Minutes of Moderate and Vigorous Physical Activity Per Day for Anchorage (Participants=347)

Meets National Recommendation for Moderate or Vigorous Physical Activity

Figure 6.3.1d. Percent Who Met National Recommendation of Age-Specific Sleep Per Day for Anchorage (Participants=347)
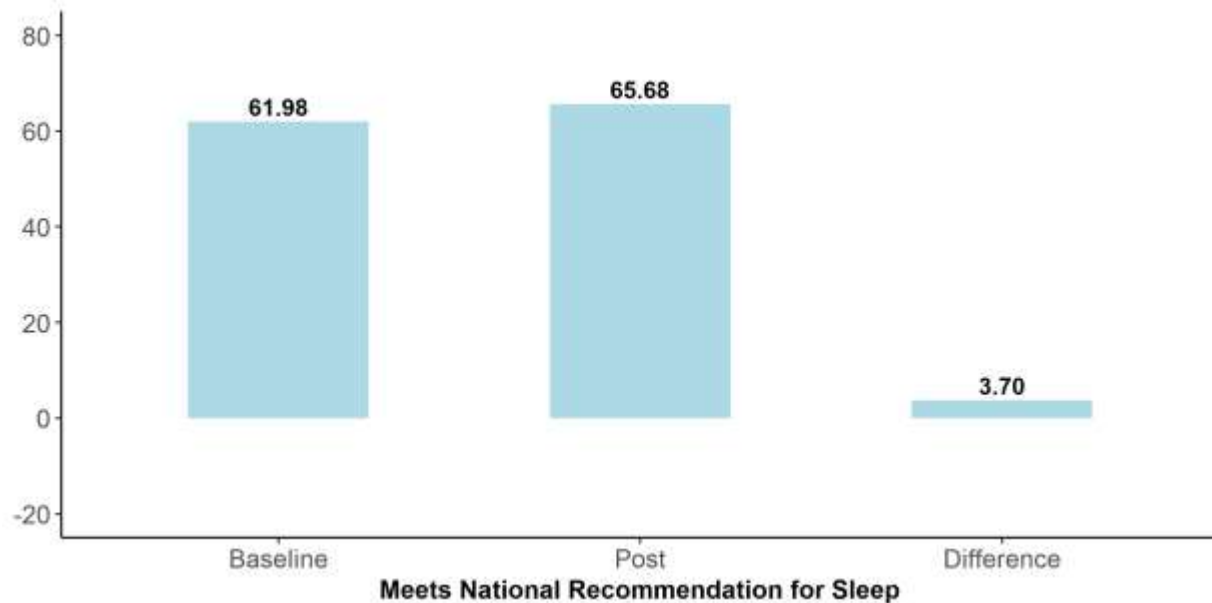
Figure 6.3.1e. Percent Who Met National Recommendation of Less Than 2 Hours of Screen Time Per Day for Anchorage (Participants=347)
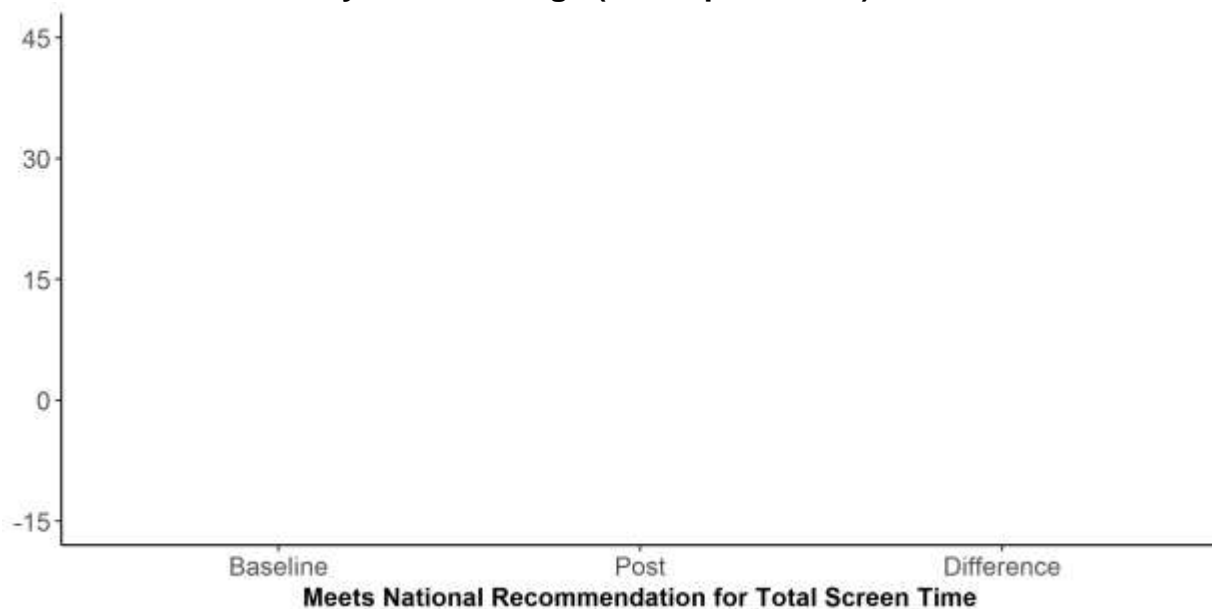
Figure 6.3.1f. Percent Who Met National Recommendation of Age-Specific Vegetable Intake Per Day for Anchorage (Participants=347)

Meets National Recommendation for Vegetable Intake

* These are based on an intake distribution corrected for day-to-day variability.
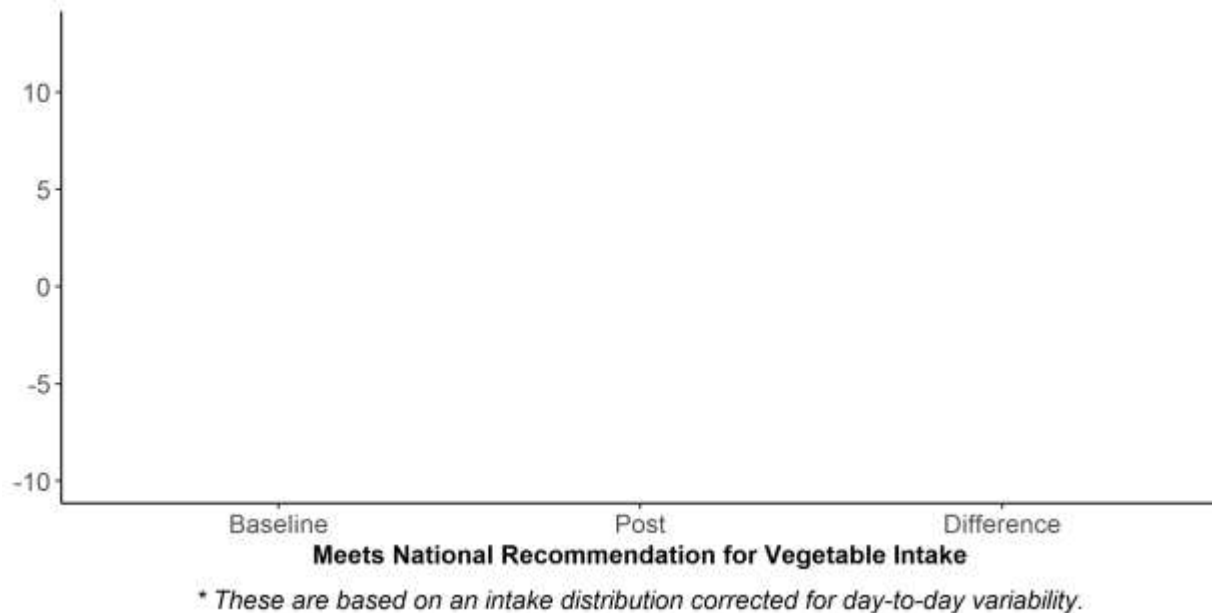
Figure 6.3.1g. Percent Who Met My Daily Food Plan of Age-Specific Fruit Intake for Anchorage (Participants=347)

Meets National Recommendation for Fruit Intake

* These are based on an intake distribution corrected for day-to-day variability.
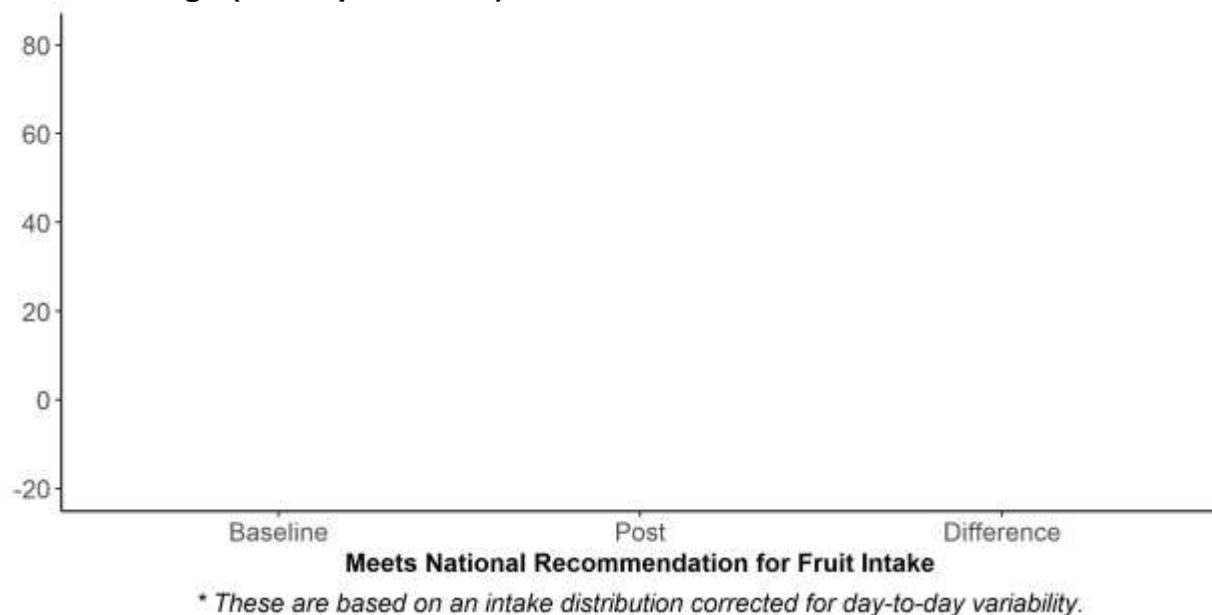
Figure 6.3.1h. Percent Who Met Sugar Sweetened Beverage Intake of Zero Cups for Anchorage (Participants=347)

7. Community Assessment Results

The Community Assessment Toolkit or CAT is a collection of data-recording forms to evaluate the food and physical activity environments of communities. These enabled us to study determinants of healthy eating, physical activity, and obesity among youth.

Occasionally staff was unable to complete a full assessment of a resource and such cases were dropped from the final data set. The CAT assessment was conducted in the intervention and optimized communities at baseline and in the intervention, optimized, and temporal communities during the 24 month post-intervention data collection period — except for Alaska who completed the baseline CAT assessment in temporal communities at both time points. Therefore, it is not possible to look at change for temporal communities, except in **Alaska.**

The CAT results are presented for the 24 month post-intervention data collection period for the community of **Anchorage, Alaska.** The full baseline CAT results are not included in this report and are provided in the baseline community report on CHL-pacific.org. After the full 24 month post-intervention data is presented, we present select measures from all the forms to highlight the change from baseline and 24 month CAT data for the jurisdiction and the community level summaries.

Section 1. Physical Activity Environment and Food Resources

Physical Activity Environment Resources

The assessment of the physical activity environment included inventories and surveys of parks, school grounds, church grounds, and physical activity facilities, with documents adapted from Bridging the Gap (BTG) (http://bridgingthegaphawaii.com). The assessment of community walkability was assessed with documents adapted from the National Center for Safe Routes to School (https://www.saferoutespartnership.org).

The following forms assess these features:

- **PA Facilities (Form 60-03)**

    a. Indoor and/or outdoor sports features

    b. Facility amenities

    c. Childcare services and/or Teen Center

    d. Sliding scale fees for low income and/or discounts for youth and students

    e. Accessibility and parking for drivers and bicyclists

    f. Exterior incivilities

- **Parks (Form 60-01) / Schools (Form 60-02) / Churches (Form 60-05)**

a. Sports features

b. Park amenities

c. Settings

d. Accessibility and parking for drivers and bicyclists

e. Exterior incivilities

- **Community Walkability (60-08)**

  a. Room to walk

  b. Crossing of streets

  c. Ease of following safety rules

  d. Pleasantness

  e. Drivers' behaviors

  f. Other features of the walk

Food Environment and Resources

The assessment of the food environment included inventories and surveys of fast food restaurants, food outlets, and food costs with survey tools adapted from Bridging the Gap (BTG) (http://bridgingthegaphawaii.com), Community of Excellence (CX3) (https://snaped.fns.usda.gov/materials/communities-excellence-nutrition-physical-activity-obesity-prevention-cx3), and the Alaska Thrifty Food Plan (https://www.cnpp.usda.gov/sites/default/files/AKHI1stHalf2017.pdf), respectively.

- **Fast food**

  a. Advertisements that promoted price

  b. Advertisements that included sugar-sweetened beverages

  c. Number of healthy food options on the menu

d. Number healthy beverage options

- **CX3 Scores for Food outlet**

    e. Accepts WIC and Food stamps / SNAP/ EBT

    f. Availability of fresh fruit and quality of fruit

    g. Availability of fresh vegetable and quality of vegetable

    h. Other healthful foods

    i. Unhealthy products

    j. Nutrition information

    k. Number of healthy and unhealthy ads present inside and outside the food outlet

    l. Walkability

- **USDA Thrifty Food Plan** (see baseline community report on http://www.chl-pacific.org/ for results)

    a. Cost of specific food items that are part of the USDA Thrifty Food Plan

    b. Weekly costs for meal based on the TFP for a family

Please see the original forms used in Appendix A. CHL adapted forms can be found in Appendix B.

- http://chl-pacific.org/wp-content/uploads/2016/09/Appendix-A.pdf

- http://chl-pacific.org/wp-content/uploads/2016/09/Appendix-B.pdf

Section 2. Assessment of Parks

The Form used to assess parks was modified from the Bridging the Gap Program, University of Illinois at Chicago, Park Observation Form. The purpose of this survey is to

improve our understanding of accessibility of park settings and quality of opportunities for physical activity in these settings among CHL communities. A complete list of parks that were located within the community boundary, or on the periphery, and their locations was compiled for each community by local staff. Staff then assessed up to ten parks per community or all of them when there were less than ten parks in a community. Staff where instructed to spend about 30 minutes walking through each park to survey its accessibility, setting, amenities, sports fields (e.g., soccer, football, baseball), courts (e.g., tennis, basketball, volleyball), walking/running/biking trails, and incivilities.

Eligible Parks: Local municipal or county park that is open to the public

- Has equipment used for physical activity or play, including playing fields and courts AND/OR has green space or natural features, benches, walking paths, picnic tables, or other park features

- On-the-ground parks only. Must also have a sign designating it as a public park if no sports features are present

Exclusions: Campgrounds, golf courses, forest preserves, stadiums, zoos

7.2.1. Park Setting, Parking, Sidewalks, and Amenities

Upon entering the park, staff assessed the presence of certain park settings, parking and sidewalk features, and certain park amenities.

Observations on park setting included whether it was a public park, whether it was adjacent to a school, and whether it shared sports features with a school. In **Anchorage**, there were 6 parks with this information. Among the 6 parks, 6 (100.0%) were a public park, none were adjacent to a school, and none shared sports features with an adjacent school.

A total of 6 (100.0%) parks had on-site parking, 4 (66.7%) had an on-site parking with overhead lighting, and 5 (83.3%) had bicycle parking. Among the 6 parks surveyed, 4

(66.7%) had sidewalks leading up to the entrance of the park and 3 (75.0%) had sidewalks with overhead lighting.

Observations on park amenities included whether it had closing time signage, restrooms, showers, and beverage vending machines. Among the parks with such information, 5 (83.3%) had closing time signage, 4 (66.7%) had restrooms, none had showers, and none had beverage vending machines. The following table (Table 7.2.1) summarizes this information on park settings.

Table 7.2.1. Park Setting in Anchorage (n=6), Post-Intervention

Park Setting	Number	Percent	n Missing
Setting			
Public Park	6	100.0	0
Adjacent to a school	0	0.0	0
Shares sports features with a school	0	0.0	4
Parking			
Parking on-site available (not including street parking)	6	100.0	0
Parking has lights	4	66.7	0
Bicycle parking racks or cages available	5	83.3	0
Sidewalk			
Sidewalks on street lead up to the entrance	4	66.7	0
Sidewalks have lighting	3	75.0	2
Amenities			
Park has closing time signage	5	83.3	0
Restrooms present	4	66.7	0

Showers present	0	0.0	0
Beverage vending machines present	0	0.0	0

7.2.2. Park Access and Barriers to Entry

Staff assessed each park for an entrance fee, signage limiting entry and any physical barriers around the perimeter of the park. Among the 6 parks surveyed in **Anchorage**, there were 6 parks with this information. Among the 6 parks, none had an entrance fee, 5 (83.3%) had signage indicating the park name, 5 (83.3%) had signage stating that public use of the park was limited to specific times, none had signage indicating that the park was private or has restricted access at all times, and there was no information on whether the measure(s) had a locked fence or other physical barrier around the perimeter. The following table (Table 7.2.2) summarizes this information on park access and physical barriers.

Table 7.2.2. Park Access and Barriers in Anchorage (n=6), Post-Intervention

Access and Barriers	Number	Percent	n Missing
Park has an entrance fee	0	0.0	0
Signage indicates park name	5	83.3	0
Signage states public use of area is limited to specific times	5	83.3	0
Signage states area is private or restricted access at all times	0	0.0	0

7.2.3. Sports Features

Staff assessed each park for a specific list of sports features to determine the number of each feature present and whether such a feature had lighting or not. The condition of a feature could be recorded as "poor", "okay/good", or "not rated". When there was more than one of a particular feature, each was evaluated for condition while the presence of lighting was assessed across all features. For example, if a park had 3 basketball courts and 2 were in okay condition, 1 was in poor condition, and 1 of them had lighting, then the staff would record the number of basketball courts as 3, 2 of which was rated as okay/good, 1 was rated as poor, and that this school had lighting for this feature.

Survey Results for Sports Features

Across the 6 parks surveyed in **Anchorage**, 6 parks had information on sports features. There were a total of 28 sports features assessed. Among the 28 sports features assessed, 28 (100%) were rated as ok/good, none were rated as poor, and none were not rated.

The most common sports features present were baseball fields (14), multiuse fields (5), and playgrounds (4).

Playgrounds may be of particular interest to families with young children. In **Anchorage**, there were 4 playgrounds, of which 4 were rated as ok/good, none were rated as poor, none were not rated, and 2 had a playground area with lighting. The following table (Table 7.2.3) summarizes the number of each sports feature, the conditions of the feature, and whether lighting was present for the feature across the 6 parks in **Anchorage.**

Table 7.2.3. Sports Features Across Parks in Anchorage (n=6), Post-Intervention

Feature	Number	OK/Good	Poor	Not Rated	Lighting
Total Sports Features	28	28	0	0	8

Baseball Fields	14	14	0	0	2
Multiuse Fields	5	5	0	0	1
Playgrounds	4	4	0	0	2
Soccer Fields	2	2	0	0	0
Volleyball Courts	1	1	0	0	1
Football Fields	1	1	0	0	1
Track	1	1	0	0	1
Basketball Courts	0	0	0	0	0
Multiuse Courts	0	0	0	0	0
Tennis Courts	0	0	0	0	0
Exercise Stations	0	0	0	0	0
Pools	0	0	0	0	0
Rock Climbing	0	0	0	0	0
Skateboarding	0	0	0	0	0

7.2.4. Park Features and Amenities

Staff assessed each park for a specific list of features and amenities to determine if the feature or amenity was present and to rate the condition of the surface or feature.

When staff were unable to determine the condition of one or more features of a specific type (if more than one present), they rated the features of that type that were able to be rated. When any feature of a specific type could not be rated due to construction/ repairs or seasonal closure, staff selected "not rated".

Survey Results of Park Features and Amenities

Among the 6 parks surveyed in **Anchorage**, 6 parks had information on features and amenities. There were a total of 37 features and amenities assessed. Among the 37 features and amenities assessed, 35 (94.6%) were rated as ok/good, none were rated as poor, and 2 (5.4%) were not rated.

The most common features and amenities present were trash bins (6), trails (6), and picnic tables with no shade (5). The following table (Table 7.2.4) summarizes the total number and condition of each individual feature/amenity which was assessed.

Table 7.2.4. Features and Amenities Across Parks in Anchorage (n=6), Post-Intervention

Feature	Number	OK/Good	Poor	Not Rated
Total Features and Amenities	37	35	0	2
Trash Bins	6	6	0	0
Trails	6	6	0	0
Picnic Tables with no Shade	5	5	0	0
Green Spaces	4	4	0	0
Benches	4	4	0	0
Shelters	3	2	0	1
Picnic Tables with Shade	3	3	0	0
Fences	3	3	0	0
Grills	2	2	0	0
Waterparks	1	0	0	1
Swimming Beaches	0	0	0	0
Recreational Beaches	0	0	0	0

Beach with Lifeguards	0	0	0	0
Drinking Fountains	0	0	0	0
Decor Fountains	0	0	0	0

7.2.5. Incivilities

Staff assessed each park for a list of incivilities and how much of each incivility was present. The term incivility is used to describe items in the environment that might discourage physical activity. These items are often signs of area deprivation. The following items in this section were used to assess the physical disorder of the park grounds environment.

Amount of Incivilities

Staff looked for incivilities throughout the park and assigned a score for each incivility type based upon the amount that was present across the park settings. The possible ratings were: none (0), a little (1), some (2), and a lot (3). For the community, the average rating for each incivility across parks was used. The mean rating across all 9 items was then used as an overall rating of incivilities across all parks surveyed in that community.

Among the 6 parks surveyed in **Anchorage**, 6 parks had information on incivility types. Among the 6 parks assessed, the mean rating across all incivility types was 0.3. At post-intervention, overall there was "a little" amount of incivilities (Table 7.2.5).

Table 7.2.5. Average Amount of Each Incivility Across Parks in Anchorage (n=6), Post-Intervention

Measure	Amount
Mean Incivility Score	A little

Garbage	A little
Broken glass	A little
Graffiti/Tagging	A little
Evidence of Alcohol use	A little
Evidence of Substance Abuse	None
Sex Paraphernalia	None
Dog Refuse	A little
Unattended Dogs	None
Vandalism	A little

Section 3. Assessment of Schools

The tool used to assess schools is modified from the Bridging the Gap Program, University of Illinois at Chicago, School Observation Form. The purpose of this survey is to improve our understanding of the availability and quality of physical activity features that are located on school grounds in CHL communities. A complete list of schools that were located within the community boundary, or on the periphery, and their locations was compiled for each community by local staff. Staff then assessed up to ten schools per community or assessed all of them when there were fewer than ten schools in a community. Staff were instructed to spend about 30 minutes walking through each school to survey its accessibility, setting, amenities, sports fields (e.g., soccer, football, baseball), courts (e.g., tennis, basketball, volleyball), other features (e.g. track, pool, and playground) and incivilities.

Eligible Schools: All school grounds were eligible for assessment. This includes schools sharing some sports features with an adjacent park.

7.3.1. School Setting, Parking, Sidewalks, and Amenities

Upon entering the school, staff assessed the presence of certain school settings, parking and sidewalk features, and certain school amenities.

Observations on school setting included whether it was adjacent to a park and whether it shared sports features with a park. In **Anchorage**, there were 9 schools with this information. Among the 9 schools, there was no information on whether the measure(s) were adjacent to a park and none shared sports features with an adjacent park.

A total of 9 (100.0%) schools had on-site parking, 9 (100.0%) had an on-site parking with overhead lighting, and 9 (100.0%) had bicycle parking. Among the 9 schools surveyed, 8 (100.0%) had sidewalks leading up to the entrance of the school and 8 (100.0%) had sidewalks with overhead lighting.

Observations on school amenities included whether it had closing time signage, restrooms, showers, and beverage vending machines. Among the schools with such information, 3 (37.5%) had closing time signage, 2 (22.2) had restrooms, none had showers, and none had beverage vending machines. The following table (Table 7.3.1) summarizes this information on school settings.

Table 7.3.1. School Setting in Anchorage (n=9), Post-Intervention

School Setting	Number	Percent	n Missing
Setting			
Adjacent to a park	NA	NA	9
Shares sports features with a park	0	0.0	1
Parking			
Parking on-site available (not including street parking)	9	100.0	0
Parking has lights	9	100.0	0

Bicycle parking racks or cages available	9	100.0	0
Sidewalk			
Sidewalks on street lead up to the entrance	8	100.0	1
Sidewalks have lighting	8	100.0	1
Amenities			
School has closing time signage	3	37.5	1
Restrooms present	2	22.2	0
Showers present	0	0.0	0
Beverage vending machines present	0	0.0	0

7.3.2. School Access and Barriers to Entry

Staff assessed each school for an entrance fee, signage limiting entry and any physical barriers around the perimeter of the school. Among the 9 schools surveyed in **Anchorage**, 9 (100%) had signage indicating the school name, 5 (62.5%) had signage stating that public use of the school was limited to specific times, none had signage indicating that the school was private or has restricted access at all times, and 1 (14.3%) had a locked fence or other physical barrier around the perimeter. The following table (Table 7.3.2) summarizes this information on school access and physical barriers.

Table 7.3.2. School Access and Barriers in Anchorage (n=9), Post-Intervention

Access and Barriers	Number	Percent	n Missing
Signage indicates school name	9	100.0	0
Signage states public use of area is limited to specific times	5	62.5	1

Signage states area is private or restricted access at all times	0	0.0	1
Locked fence or other physical barrier around the perimeter prevents public access	1	14.3	2

7.3.3. Sports Features

Staff assessed each school for a specific list of sports features to determine the number of each feature present and whether such a feature had lighting or not. Staff also rated the condition of each feature. These features are the same as those included in the assessment of parks.

Condition of the Feature

Staff rated the condition and the presence of lighting for each feature item. The condition of a feature could be recorded as "poor", "okay/good", or "not rated". When there was more than one of a particular feature, each was evaluated for condition while the presence of lighting was assessed across all features. For example, if a school had 3 basketball courts and 2 were in okay condition, 1 was in poor condition, and 1 of them had lighting, then the staff would record the number of basketball courts as 3, 2 of which was rated as okay/good, 1 was rated as poor, and that this school had lighting for this feature.

Survey Results for Sports Features

Across the 9 schools surveyed in **Anchorage**, 9 schools had information on sports features. There were a total of 57 sports features assessed. Among the 57 sports features assessed, 56 (98.2%) were rated as ok/good, 1 (1.8%) was rated as poor, and none were not rated.

The most common sports features present were multiuse fields (16), tennis courts (8), and playgrounds (8).

Playgrounds may be of particular interest to families with young children. In **Anchorage**, there were 8 playgrounds, of which 8 were rated as ok/good, none were rated as poor, none were not rated, and 3 had a playground area with lighting. The following table (Table 7.3.3) summarizes the number of each sports feature, the conditions of the feature, and whether lighting was present for the feature across the 9 schools in **Anchorage.**

Table 7.3.3. Sports Features Across Schools in Anchorage (n=9), Post-Intervention

Feature	Number	OK/Good	Poor	Not Rated	Lighting
Total Sports Features	57	56	1	0	22
Multiuse Fields	16	16	0	0	3
Tennis Courts	8	8	0	0	0
Playgrounds	8	8	0	0	3
Basketball Courts	7	7	0	0	2
Multiuse Courts	6	6	0	0	4
Track	4	4	0	0	4
Football Fields	3	3	0	0	3
Baseball Fields	2	2	0	0	2
Soccer Fields	2	2	0	0	1
Exercise Stations	1	0	1	0	0
Volleyball Courts	0	0	0	0	0
Pools	0	0	0	0	0

Rock Climbing	0	0	0	0	0
Skateboarding	0	0	0	0	0

7.3.4. School Features and Amenities

Staff assessed each school for a specific list of features and amenities to determine if the feature or amenity was present and to rate the condition of the surface or feature.

When staff were unable to determine the condition of one or more features of a specific type (if more than one present), they rated the features of that type that were able to be rated. When no feature of a specific type could not be rated due to construction/ repairs or seasonal closure, staff selected "not rated".

Survey Results of School Features and Amenities

Among the 9 schools surveyed in **Anchorage**, 9 schools had information on features and amenities. There were a total of 38 features and amenities assessed. Among the 38 features and amenities assessed, 35 (92.1%) were rated as ok/good, none were rated as poor, and 3 (7.9%) were not rated.

The most common features and amenities present were green spaces (8), fence (8), and trash bins (7). The following table (Table 7.3.4) summarizes the total number and condition of each individual feature/amenity which was assessed.

Table 7.3.4. Features and Amenities Across Schools in Anchorage (n=9), Post-Intervention

Feature	Number	OK/Good	Poor	Not Rated
Total Features and Amenities	38	35	0	3
Green Spaces	8	8	0	0

Fence	8	7	0	1
Trash Bins	7	6	0	1
Trails	7	6	0	1
Benches	5	5	0	0
Shelters	2	2	0	0
Picnic Tables with no Shade	1	1	0	0
Swimming Beaches	0	0	0	0
Recreational Beaches	0	0	0	0
Beach with Lifeguards	0	0	0	0
Waterparks	0	0	0	0
Picnic Tables with Shade	0	0	0	0
Drinking Fountains	0	0	0	0
Decor Fountains	0	0	0	0
Grills	0	0	0	0

7.3.5. Incivilities

Staff assessed each school for a list of incivilities and how much of each incivility was present. The term incivility is used to describe items in the environment that might discourage physical activity. These items are often signs of area deprivation. The following items in this section were used to assess the physical disorder of the school grounds environment.

Amount of Incivilities

Staff looked for incivilities throughout the school and assigned a score for each incivility type based upon the amount that was present across the school settings. The possible ratings were: none (0), a little (1), some (2), and a lot (3). For the community, the average rating for each incivility across schools was used. The mean rating across all 9 items was then used as an overall rating of incivilities across all schools surveyed in that community.

Among the 9 schools surveyed in **Anchorage**, 9 schools had information on incivility types. Among the 9 schools assessed, the mean rating across all incivility types was 0.25. At post-intervention, overall there was "a little" amount of incivilities (Table 7.3.5).

Table 7.3.5. Average Amount of Each Incivility Across Schools in Anchorage (n=9), Post-Intervention

Measure	Amount
Mean Incivility Score	A little
Garbage	A little
Broken glass	A little
Graffiti/Tagging	A little
Evidence of Alcohol use	None
Evidence of Substance Abuse	None
Sex Paraphernalia	None
Dog Refuse	A little
Unattended Dogs	None
Vandalism	A little

Section 4. Assessment of Churches

Churches were not assessed for physical activity facilities in **Anchorage.**

Section 5. Assessment of Physical Activity Facilities

The tool used to assess physical activity (PA) facilities is modified from the Bridging the Gap Program, University of Illinois at Chicago, PA Facility Observation Form. The purpose of this survey is to improve our understanding of the availability and quality of physical activity features that are located on PA facility grounds in CHL communities. A complete list of PA facilities that were located within the community boundary, or on the periphery, and their locations was compiled for each community by local staff. Staff then assessed up to ten PA facilities per community or assessed all of them when there were fewer than ten PA facilities in a community. Staff were instructed to spend about 30 minutes walking through each PA facility grounds to survey its setting, amenities, sports fields (e.g., soccer, football, baseball), courts (e.g., tennis, basketball, volleyball), other features (e.g. track, pool, and playground) and incivilities.

Eligible PA Facilities: Observations in PA facilities included for-profit and non-profit facilities. Examples of non-profit PA facilities are public community recreation centers, YMCA/YWCAs, and Boys and Girls Clubs (BGCs). For-profit PA facilities include gyms, health clubs, and other physical-activity related businesses that allow patrons to come in and use equipment or other facilities (e.g., courts, gymnasiums), usually for a recurring fee or membership schedule.

7.5.1. Pysical Activity Facility Setting and Fees

Upon entering the Physical Activity (PA) facility, staff assessed the presence of certain PA facility settings and fees.

Observations on PA facility setting included facility type, the presence of indoor and outdoor sports features, childcare and teen services, and types of fees. In **Anchorage**, 8 PA facilities were assessed. Among the 8 PA facilities, none were a community recreation center, none were a Boys and Girls Club, none were a church community center, 1 (12.5%) was a YMCA/YWCA, 7 (87.5%) were a for-profit PA facility, and none were in the category of Other.

Across the 8 PA facilities surveyed in **Anchorage**, 7 (87.5%) had indoor features, none had outdoor features, and 1 (12.5%) had both indoor and outdoor features. Among the 8 PA facilities, 3 (37.5%) offered child care, 1 (12.5%) offered teen services, 6 (75.0%) offered a daily fee, 1 (14.3%) offered a discount for low-income patrons, and 3 (37.5%) offered a discount for youth. The following table (Table 7.5.1) summarizes this information on PA Facility setting and fees.

Table 7.5.1. PA Facility Setting in Anchorage (n=8)

PA Facility Setting	Number	Percent	n Missing
Setting			
Community Recreation Center	0	0.0	0
Boys and Girls Club	0	0.0	0
Church Community Center	0	0.0	0
YMCA/YWCA	1	12.5	0
For-Profit PA Facility	7	87.5	0
Other	0	0.0	0
Sport Feature Location			
Indoor	7	87.5	0
Outdoor	0	0.0	0
Both Indoor and Outdoor	1	12.5	0

Fees			
Childcare	3	37.5	0
Teen activities	1	12.5	0
Daily Fees	6	75.0	0
Fee discount for low-income	1	14.3	1
Fee discount for youth	3	37.5	0

7.5.1. PA Facility Parking, Sidewalks and Amenities

Staff assessed each PA facility for on-site parking, parking overhead lighting, bicycle parking, a sidewalk leading up to the entrance, and sidewalk overhead lighting. Among the 8 PA facilities surveyed in **Anchorage**, 8 (100%) had on-site parking, 8 (100%) had parking overhead lighting, and 5 (62.5%) had bicycle parking. A total of 7 (87.5%) had a sidewalk leading up to the entrance and 5 (62.5%) had sidewalks with overhead lighting.

Observations on PA facility amenities included whether it had restrooms, showers, and beverage vending machines both inside and outside. Among the 8 PA facilities, 5 (62.5%) had restrooms, 5 (62.5%) had showers, and 4 (50%) had beverage vending machines present inside. Among the 8 PA facilities, 1 (20%) had restrooms, none had showers, and none had a beverage vending machine present outside. The following table (Table 7.5.2) summarizes this information on PA facility parking, sidewalks, and amenities.

Table 7.5.2. PA Facility Amenities in Anchorage (n=8)

Access and Barriers	Number	Percent	n Missing
Parking			
Parking on-site available (not including street parking)	8	100	0
Parking has lights	8	100	0
Bicycle parking racks or cages available	5	62.5	0
Sidewalk			
Sidewalks on street lead up to the entrance	7	87.5	0
Sidewalks have lighting	5	62.5	0
Amenities			
Restrooms present inside	5	62.5	0
Showers present inside	5	62.5	0
Beverage vending machines present inside	4	50	0
Restrooms present outside	1	20	3
Showers present outside	0	0	3
Beverage vending machines present outside	0	0	0
Restrooms present inside or outside	5	100	3
Showers present inside or outside	5	100	3
Beverage vending machines present inside or outside	4	50	0

7.5.3. Indoor Sports Features

Staff assessed each PA facility for a specific list of sports features indoors and outdoors to determine the number of each feature present, the condition of each feature, and, for outdoor features, whether lighting was present. Staff also rated the condition of each feature.

Condition of the Feature

Staff rated the condition for each feature item and, for outside features, the presence of lighting. The condition of a feature could be recorded as "poor", "okay/good", or "not rated". When there was more than one of a particular feature, each was evaluated for condition while the presence of lighting was assessed across all features. For example, if a PA facility had 3 basketball courts and 2 were in okay condition, 1 was in poor condition, and 1 of them had lighting, then the staff would record the number of basketball courts as 3, 2 of which were rated okay/good, 1 was rated as poor, and that this PA facility had lighting for this feature.

Feature condition was rated based on the feature's surface and related equipment, if any was available for the feature. Ultimately the feature condition rating was related to whether or not players could safely play or engage in physical activity on a feature without risking injury or falling. Staff took into consideration the type of activities that would take place on or within a particular feature as well as the material comprising the surface when considering its condition. When assessing the condition of equipment used for physical activity, staff took into consideration age, functionality, wear and tear, damage such as dents or sharp edges, missing pieces, and rust. For example, if a playing surface was composed of concrete, staff assessed whether smooth concrete covered the entire surface and looked for cracks or uneven slabs in the concrete surface.

Survey Results for Indoor Sports Features

Across the 8 PA facilities surveyed in **Anchorage**, 8 PA facilities had information on indoor sports features. There were a total of 47 indoor sports features assessed. Among the 47 indoor sports features assessed, 35 (74.5%) were rated as ok/good, none were rated as poor, and 12 (25.5%) were not rated.

The most common sports features present were exercise machine areas (16), multipurpose rooms (11), and pools (7). The following table (Table 7.5.3) summarizes this information on indoor sports features.

Table 7.5.3. Indoor Sports Features Across PA Facilities in Anchorage (n=8)

Feature	Number	OK/Good	Poor	Not Rated	Lighting
Total Sports Features	47	35	0	12	0
Exercise Machine Areas	16	13	0	3	0
Multipurpose Rooms	11	8	0	3	0
Pools	7	6	0	1	0
Basketball Courts	5	2	0	3	0
Soccer Fields	4	4	0	0	0
Racquetball Courts	2	0	0	2	0
Rock Climbing	1	1	0	0	0
Track	1	1	0	0	0
Multiuse Courts	0	0	0	0	0
Tennis Courts	0	0	0	0	0
Volleyball Courts	0	0	0	0	0
Gymnastic Facilities	0	0	0	0	0
Skateboarding	0	0	0	0	0

7.5.4. Outdoor Sports Features

Survey Results for Outdoor Sports Features

Across the 8 PA facilities surveyed in **Anchorage**, 8 PA facilities had information on outdoor sports features. There were a total of 7 outdoor sports features assessed. Among the 7 outdoor sports features assessed, 6 (85.7%) were rated as ok/good, none were rated as poor, and 1 (14.3%) was not rated.

The most common features and amenities present were soccer fields (5), playgrounds (2), and multiuse fields (0).

Playgrounds may be of particular interest to families with young children. In **Anchorage**, there were 2 playgrounds, of which 1 was rated as ok/good, none were rated as poor, 1 was not rated, and none had a playground area with lighting. The following table (Table 7.5.4) summarizes the number of each outdoor sports feature, the conditions of the feature, and whether lighting was present for the feature across the 8 PA facilities in **Anchorage.**

Table 7.5.4. Outdoor Sports Features Across PA Facilities in Anchorage (n=8)

Feature	Number	OK/Good	Poor	Not Rated	Lighting
Total Sports Features	7	6	0	1	0
Soccer Fields	5	5	0	0	0
Playgrounds	2	1	0	1	0
Multiuse Fields	0	0	0	0	0
Football Fields	0	0	0	0	0
Baseball Fields	0	0	0	0	0
Basketball Courts	0	0	0	0	0
Tennis Courts	0	0	0	0	0

Volleyball Courts	0	0	0	0	0
Multiuse Courts	0	0	0	0	0
Track	0	0	0	0	0
Pools	0	0	0	0	0
Skateboarding	0	0	0	0	0
Exercise Stations	0	0	0	0	0
Rock Climbing	0	0	0	0	0

7.5.5. PA Facility Amenities

Staff assessed each PA facility for a specific list of amenities to determine if the amenity was present and to rate the condition of the item.

When staff were unable to determine the condition of one or more features of a specific type (if more than one present), they rated the features of that type that were able to be rated. When any feature of a specific type could not be rated due to construction/ repairs or seasonal closure, staff selected "not rated".

Among the 8 PA facilities surveyed in **Anchorage**, 8 PA facilities had information on features and amenities. There were a total of 9 features and amenities assessed. Among the 9 features and amenities assessed, 9 (100%) were rated as ok/good, none were rated as poor, and none were not rated.

The amenities present were indoor drinking fountains (7), trash containers (1), benches (1), and outdoor drinking fountains (0). The following table (Table 7.5.5) summarizes the total number and condition of each individual feature/amenity which was assessed.

Table 7.5.5. Amenities Across PA Facilities in Anchorage (n=8)

Feature	Number	OK/Good	Poor	Not Rated
Indoor Drinking Fountains	7	7	0	0
Trash Containers	1	1	0	0
Benches	1	1	0	0
Outdoor Drinking Fountains	0	0	0	0

7.5.6. Incivilities

Staff assessed each PA facility for a list of incivilities and how much of each incivility was present. The term incivility is used to describe items in the environment that might discourage physical activity. These items are often signs of area deprivation or markers of blight.

Amount of Incivilities

Staff looked for incivilities throughout the PA facility and assigned a score for each incivility type based upon the amount that was present across the PA facility settings. The possible ratings were: none (0), a little (1), some (2), and a lot (3). For the community, the average rating for each incivility across PA facilities was used. The mean rating across all 9 items was then used as an overall rating of incivilities across all PA facilities surveyed in that community.

Among the 8 PA facilities surveyed in **Anchorage**, 8 PA facilities had information on incivility types. Among the 8 PA facilities assessed, the mean rating across all incivility types was 0.14. At post-intervention, overall there was "a little" amount of incivilities (Table 7.5.6).

Table 7.5.6. Average Amount of Each Incivility Across PA Facilities in Anchorage (n=8)

Measure	Amount
Mean Incivility Score	A little
Garbage	A little
Broken glass	A little
Graffiti/Tagging	A little
Evidence of Alcohol use	None
Evidence of Substance Abuse	None
Sex Paraphernalia	None
Dog Refuse	None
Unattended Dogs	None
Vandalism	None

Section 6. Assessment of Fast Food Outlets

The tool used by CHL to assess fast food outlets (FFO) is modified from the Bridging the Gap Program (BTG), University of Illinois at Chicago. The BTG-COMP Fast Food Observation Form was designed to assess a variety of attributes in the fast food outlet environment, including advertising and marketing, availability of nutritional information and healthy options, availability and pricing of specific food and beverage items, as well as other characteristics of the facility. The purpose of this data collection is to characterize the away-from-home food environment, with a focus on fast-food outlets and pizzerias, which are often popular destinations for youth.

Eligible Fast Food Outlets: Any national and regional fast food chains or franchises and independent fast food outlets that were located within **Anchorage** were eligible.

Fast food outlets are most often characterized by the fact that customers order and pay at the counter prior to eating. Data collection was also conducted in pizzerias, which may have table service. Specialty snack/drink shops where 50% or more of the menu items are a snack or drink item (e.g. Dunkin' Donuts, Starbucks, Baskin Robbins, Auntie Anne's Pretzels, Tropical Smoothie Café), buffets, and "take & bake" pizza places (e.g. Papa Murphy's, Homemade Pizza Co.) were excluded.

7.6.1. Outlet Type and Shared Space

Upon entering the outlet, staff assessed the outlet type according to the main cuisine or type of food/beverages on the menu board and whether it shared space with another business.

The outlet type was selected from a list, or other could be selected. Among the 3 fast food outlets in **Anchorage**, none were a Burger and Fries outlet, none were a Mexican/Latin American outlet, none were a Fried Chicken/Fried Fish outlet, none were a Sandwich or Sub Shop outlet, 1 (33.3%) was a Sandwich/Pastry outlet, 1 (33.3%) were a Pizzeria/Italian outlet, none were a Plate Lunch/Lunch Truck outlet, none were a Chinese/Pan-Asian outlet, and 1 (33.3%) was in the Other category described as having multiple cuisine types.

Each outlet was assessed for whether it had its own building /exterior or whether it shared spaced with a food court, grocery store, gas station, or other restaurant. Among the 3 fast food outlets in **Anchorage**, 3 (100.0%) shared space with a food court, none shared space with a grocery store, none shared space with a gas station, and none shared space with another restaurant. The following table (Table 7.6.1) summarizes this information on outlet type and shared space.

Table 7.6.1. Outlet Type and Shared Space in Anchorage (n=3)

Outlet Setting	Number	Percent	n Missing
Outlet Type			
Burger and Fries	0	0.0	0
Mexican/Latin American	0	0.0	0
Fried Chicken/Fried Fish	0	0.0	0
Sandwich or Sub Shop	0	0.0	0
Sandwich/Pastry	1	33.3	0
Pizzeria/Italian	1	33.3	0
Plate Lunch/Lunch Truck	0	0.0	0
Chinese/Pan-Asian	0	0.0	0
Other	1	33.3	0
Shared Space			
Shares Space with Food Court	3	100.0	0
Shares Space with Grocery Store	0	0.0	0
Shares Space with Gas Station	0	0.0	0
Shares Space with Other Restaurant	0	0.0	0

7.6.2. Outlet Parking and Sidewalks

Staff assessed each outlet for certain amenities such as on-site parking, bicycle parking, parking overhead lighting, sidewalks, and sidewalk overhead lighting.

Among the 3 fast food outlets surveyed in **Anchorage**, none had on-site parking, none had parking overhead lighting, and none had bicycle parking. A total of none had a sidewalk leading up to the entrance and none had sidewalks with overhead lighting.

Observations on outlet amenities included whether it had outdoor seating, bars on the windows, an exterior play area, an indoor play area visible from the outside, and a drive-thru window. Among the 3 fast food outlets in **Anchorage**, none had outdoor seating, none had bars on the windows, none had an exterior play area, none had an indoor play area that was visible from the outside, and none had a drive-thru window. The following table (Table 7.6.2) summarizes this information on outlet parking, sidewalks, and amenities.

Table 7.6.2. Parking, Sidewalks, and Exterior in Anchorage (n=3)

Exterior Feature	Number	Percent	n Missing
Parking			
Parking on-site available	0	0.0	0
Parking has lights	0	0.0	0
Bicycle parking racks or cages available	0	0.0	0
Sidewalk			
Sidewalks on street lead up to the entrance	0	0.0	0
Sidewalks have lighting	0	0.0	0
Exterior			
Outdoor seating	0	0.0	0
Bars on windows	0	0.0	0
Exterior play area	0	0.0	0
Indoor play area visible from outside	0	0.0	0

Drive thru window	0	0.0	4

7.6.3. Graffiti and Garbage on the Property

Staff also assessed the number of external walls visible from the street and the level of graffiti and garbage that was present. Among the 3 fast food outlets surveyed in **Anchorage**, none had no visible walls, 2 (66.7%) had one visible wall, none had two visible walls, none had three visible walls, and none had four visible walls. This question was intended to give a sense of the size/layout of the restaurant property and the number of sides on which advertisements can be placed.

Staff rated each fast food outlet as having none, a little, some, or a lot of graffiti and garbage for the level of graffiti and garbage that was present. Among the 3 fast food outlets in **Anchorage**, 3 (100.0%) had no graffiti, none had a little, none had some, and none had a lot. Furthermore, 3 (100.0%) had no garbage, none had a little, none had some, and none had a lot. The following table (Table 7.6.3) summarizes this information on exterior amenities.

Table 7.6.3. Exterior in Anchorage (n=3)

Exterior Feature	Number	Percent	n Missing
Walls visible from street			
0	0	0.0	0
1	2	66.7	0
2	0	0.0	0
3	0	0.0	0
4	0	0.0	0
Graffiti			

None	3	100.0	0
A little	0	0.0	0
Some	0	0.0	0
A lot	0	0.0	0
Garbage			
None	3	100.0	0
A little	0	0.0	0
Some	0	0.0	0
A lot	0	0.0	0

7.6.4. Ads on the Building Exterior or Property

Staff assessed food and beverage advertisements on the building exterior and property, child-targeted marketing on the exterior, and other ad themes.

The number of advertisements at least 8½ x 11 inches in size that were posted on the building exterior and restaurant property was recorded. To be counted, ads must have been visible from the parking lot(s) and/or from the street(s) bordering the restaurant. Ads which could be considered a price promotion, food ad, beverage ad, or soda ad were separately tallied.

In **Anchorage**, 3 fast food outlets were assessed for ads on the building exterior and on the property. Among the 3 fast food outlets assessed, there were a total of no ads on the building exterior, no ads for price promotion, no food ads, no beverage ads, and no soda ads. Among the 3 fast food outlets in **Anchorage**, 9 had ads on the property. The following table (Table 7.6.4) summarizes this information on building exterior or property ads.

Table 7.6.4. Summary of Price Promotion, Food, Beverage, or Soda Ads on the Building Exterior or Property in Anchorage (n=3)

Location	# Surveyed	Total	Price Promo	Food Ad	Beverage Ad	Soda Ad
Exterior	3	0	0	0	0	0
Property	3	9	4	1	5	2

7.6.5. Other Ads on the Exterior

Staff also assessed the presence of ads on the outlet's exterior that included a dollar menu promotion, health claim, cartoon character(s), a celebrity, kids' meal toy, or other child-directed marketing. Any one ad can be coded as having one or more of the characteristics described above. For example, the same ad could feature both cartoon characters and the kids' meal toy.

Among the 3 fast food outlets in **Anchorage**, none had a dollar menu ad, none had a health claim ad, none had a cartoon ad, none had a celebrity ad, none had a kids' meal toy ad, and none had health ads or other child-directed marketing. The following (Table 7.6.5) summarizes this information on exterior ad types.

Table 7.6.5. Presence of Ads by Type in Anchorage (n=3)

Type of Ad	Number	Percent	n Missing
External Price Promo			
Price Promo	0	0.0	0
Food Ad	0	0.0	0
Beverage Ad	0	0.0	0
External Soda Ad	0	0.0	0
Property Price Promo			

Price Promo	1	33.3	0
Food Ad	1	33.3	0
Beverage Ad	1	33.3	0
Soda Ad	1	33.3	0
Exterior Ads			
Dollar menu	0	0.0	0
Health claim	0	0.0	0
Cartoon character(s)	0	0.0	0
TV/ movie star/sports start/youth celebrity	0	0.0	0
Kids' meal toy	0	0.0	0
Other child-targeted marketing	0	0.0	0

7.6.6. Counter Service and Restaurant Interior

Staff assessed items describing the type of service offered within the establishment, characteristics of the checkout area, characteristics of the restaurant interior, and availability of self-service beverages and a salad bar.

Among the 3 fast food outlets in **Anchorage**, none were a drive-in only restaurant and so they were all assessed for restaurant interior characteristics. A total of 3 fast food outlets had information about whether food was ordered at the counter, and among these, food was ordered at the counter in 3 (100.0%) of the outlets, 3 (100.0%) had food pick up, and 3 (100.0%) had payment at the counter.

Staff counted the number of cash registers inside of the restaurant and found that 2 (66.7%) of the fast food outlets had one register, 1 (33.3%) had two registers, none had

three registers, and none had four registers. Furthermore, none had a glass or Plexiglas divider between customers and a cash register in the restaurant interior.

Regarding other interior characteristics, 2 (66.7%) of the fast food outlets had bathrooms available to customers, 3 (100.0%) had indoor seating, and none had a toy display that was recorded at being less than 3 and a half feet or less from the ground (at eye level of children). Regarding specific food and beverage items, 2 (66.7%) had sweets - such as cookies and candy-near the cash register, none had self-serve fountain drinks, 1 (33.3%) had free water, and none had self-serve salads. The following table (Table 7.6.6) summarizes this information on counter service and restaurant interior.

Table 7.6.6. Counter Service and Restaurant Interior in Anchorage (n=3)

Restaurant Feature	Number	Percent	n Missing
Drive-in			
Drive-in only	0	0.0	0
Counter Service			
Ordering food	3	100.0	0
Picking up food	3	100.0	0
Paying for food	3	100.0	0
Interior Register Count			
1	2	66.7	0
2	1	33.3	0
3	0	0.0	0
4	0	0.0	0
Interior Characteristics			

Divider between customer and cash register	0	0.0	0
Restrooms	2	66.7	0
Indoor Seats	3	100.0	0
Indoor displays for kids' meal toys			
Any ad or display	0	0.0	0
Toy display 3½ feet or less from the ground	0	0.0	0
Food and Beverage Items			
Sweet snacks near counter	2	66.7	0
Self-serve fountain drinks	0	0.0	0
Free water	1	33.3	0
Self-serve salad	0	0.0	0

7.6.7. General Menu: Dollar Menu Items, Combo Meals, Salad, Fruits and Vegetables, and Signs for Health Options

Staff assessed the availability of a dollar menu and specific items on it, combo meals, salads and other fruit and vegetable sides. Signage for "healthy" items on the menu was also assessed.

Among the 3 fast food outlets in **Anchorage**, none offered fruit, none offered dessert, none offered no drink, none offered fries, and none offered an entrée on the dollar menu. A total of none had availability of a combo meal, 1 (33.3%) had salad as an entrée, and 1 (33.3%) had low-fat dressing.

Staff tallied the number of side items on the menu that were vegetables, fresh fruit, or other fruit besides fresh fruit. Staff looked for the availability of any side salad(s) or other

vegetable(s) listed on the menu as a "side" or "extra" and assessed whether it met the criteria of being non-fried and not having added fat. Vegetables that were part of a main dish were also not counted. Staffed looked for the availability of any fresh fruit listed on the menu as a "side" or "extra." Beverages such as juice or smoothies were not counted. Staff also looked for the availability of canned, dried, or other processed (not fresh) fruit options listed on the menu as a "side" or "extra."

In **Anchorage**, 3 fast food outlets were assessed for vegetables and fruit. Across the menus of the 3 fast food outlets, there were a total of 3 (100.0%) vegetable options and 2 (66.7%) fresh fruit options.

Staff looked for signage indicating food as low calorie, low fat, low sodium, or healthy. Among the 3 fast food outlets in **Anchorage**, none had signage for low calorie, none had signage for low fat, none had signage for low sodium food, and 1 (33.3%) had signage for healthy food items. Furthermore, none had liquor on the menu. The following table (Table 7.6.7) summarizes this information on general menu items.

Table 7.6.7. General Menu Items in Anchorage (n=3)

Menu Feature	Number	Percent	n Missing
Dollar Menu			
Fruit on Dollar Menu	0	0.0	0
Dessert on Dollar Menu	0	0.0	0
Drink on Dollar Menu	0	0.0	0
Fries on Dollar Menu	0	0.0	0
Entree on Dollar Menu	0	0.0	0
Combo Meals and Side Items			
Combo meal	0	0.0	0
Salad as an entree	1	33.3	0

Low-fat salad dressing	1	33.3	0
Vegetable Items Count	3	100.0	0
Fruit Items Count	2	66.7	0
Signage on the Menu			
Low calorie	0	0.0	0
Low fat	0	0.0	0
Low sodium	0	0.0	0
Healthy	1	33.3	0
Alcoholic Beverage			
Liquor	0	0.0	0

7.6.8. Beverage Item Assessment

Staff assessed the posted menu board for the availability and price of specific beverage items-such as soda, juice, milk, water, coffee, and shakes-commonly found in fast food establishments.

A total of 3 fast food outlets in **Anchorage** had information on beverage items. The most commonly available drinks were packaged soda (n=2, 66.7%) and bottled water (n=1, 33.3%). The following table (Table 7.6.8) summarizes this information on beverage items.

Table 7.6.8. Beverage Items in Anchorage (n=3)

Beverage	Number	Percent	n Missing
Packaged soda	2	66.7	0
Bottled Water	1	33.3	0

Flavored Coffee Drinks (hot or iced)	1	33.3	0
Shakes or Malts	1	33.3	0
Flavored Milk (e.g., chocolate, strawberry)	1	33.3	0
Fountain drink	0	0.0	0
100% Juice	0	0.0	0
Milk, skim or 1% fat (unflavored)	0	0.0	0
Milk, whole/Vit D or 2% fat (unflavored)	0	0.0	0

7.6.9. Food Item Assessment

Staff assessed the posted menu board for the availability and price for specific food items commonly found in fast food establishments and pizzerias.

Among the 3 fast food outlets in **Anchorage**, the most commonly available food item from the list of specific foods were chicken entree salads (n=2, 66.7%) and cheese pizza (n=2, 66.7%). The following table (Table 7.6.9) summarizes this information on food items.

Table 7.6.9. Food Items in Anchorage (n=3)

Food	Number	Percent	n Missing
Entree salad, with roasted or grilled chicken	2	66.7	0
Cheese pizza, thin crust	2	66.7	0
Sub sandwich, with turkey and cheese	2	66.7	0
Chicken Sandwich, with roasted or grilled chicken	1	33.3	0
Fried chicken – legs, drumstick, and thigh	1	33.3	0
French fries	0	0.0	0

Cheeseburger	0	0.0	0
Taco with ground beef	0	0.0	0

7.6.10. Children's Menu Assessment

Staff assessed each outlet for items that were available and promoted to children (usually ages 12 and under), via the establishment's kids' meal or kids' menu. Staff looked for healthy beverage and food options and asked for these items when they were not posted on the menu board. Staff also assessed the availability of toys.

Among the 3 fast food outlets in **Anchorage**, 1 (33.3%) had a kids' menu or meal available, 1 (33.3%) had an unflavored skim/1% milk, 100% juice, or bottled water option on the board, none had a fruit, vegetable (only non-fried vegetables w/o added fat), salad or yogurt option on the board, none offered a free toy with the kids' meal, and there was no information on whether the measure(s) offered a toy for an additional charge. The following table (Table 7.6.10) summarizes this information on the children's menu assessment.

Table 7.6.10. Children's Menu in Anchorage (n=3)

Type of Ad	Number	Percent	n Missing
Kids' menu or meal	1	33.3	0
Unflavored skim/1% milk, 100% juice, or bottled water (listed or shown on board)	1	33.3	0
Unflavored skim/1% milk, 100% juice, or bottled water (available when asked)	1	33.3	0
Fruit, vegetable (only non-fried vegetables w/o added fat), salad or yogurt (listed or shown on board)	0	0.0	0

Fruit, vegetable (only non-fried vegetables w/o added fat), salad or yogurt (available when asked)	0	0.0	0
Free toy with kids' meal	0	0.0	0

Section 7. Food Availability and Marketing Form

7.7.1. Types of Stores

CHL's Food Availability Survey and Marketing Form is modified from the California Department of Health Communities of Excellence in Nutrition, Physical Activity, and Obesity Prevention program (CX3). The purpose of this survey is to access the availability of healthy foods, price, nutrition information, and marketing of foods in stores. In addition to the food environment, we surveyed the safety and walkability around stores. A complete list of food stores, including their locations, was compiled for each community by local staff. Staff then assessed up to ten stores per community or all of them when there were less than ten stores in a community. The types of stores assessed include supermarket chain, large grocery store, small market, convenience store, and other community sources for food products. The staff surveyed at least 1 store of each type if present.

The following table is a breakdown of the store types surveyed in **Anchorage.** Among the 11 stores assessed, the most common store types in **Anchorage** were supermarket chain (4) and small market (3). The following table (Table 7.7.1) summarizes this information on store types.

Table 7.7.1. Type of Store in Anchorage (n=11)

Type of Store	Number	Percent	n Missing
Supermarket chain	4	36.4	0
Small market	3	27.3	0

Convenience	3	27.3	0
Large grocery store	1	9.1	0
Other	0	0.0	0

7.7.2. Federal Food Assistance Acceptance at Store (WIC and Food Stamps/SNAP)

Stores were assessed for whether or not they accept Federal Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and Food Stamps/SNAP benefits. WIC provides Federal grants to States to provide supplemental foods to low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk (USDA, 2015). The Supplemental Nutrition Assistance Program (SNAP) offers nutrition assistance to eligible, low-income individuals and families.

Stores were also assessed on whether or not they display signage saying "We Accept WIC" and "We Accept Food Stamps/EBT" (electronic benefit transfer). Among the 11 stores surveyed in **Anchorage** with information on participating in WIC or Food Stamps/EBT, 4 (36.4%) accept WIC and 7 (63.6%) accept Food Stamps/EBT. Among the 11 stores with information on signage, 2 (18.2%) display signage for WIC being accepted and 3 (27.3%) display signage for Food Stamps/EBT being accepted. The following table (Table 7.7.2) summarizes this information on federal food assistance at stores.

Table 7.7.2. Food Assistance Benefits in Anchorage (n=11)

Federal Benefits	Number	Percent	n Missing
Accepts WIC	4	36.4	0
Accepts Food Stamps or a SNAP vendor	7	63.6	0

We Accept WIC signage displayed	2	18.2	0
We Accept Food Stamps/EBT signage displayed	3	27.3	0

7.7.3. Variety of Fruits and Vegetables

Stores were also assessed on the quality of their fruits and vegetables. Staff looked for signs of quality in the produce such as the lack of wilting, decay, shriveling, brown stems, and color changes.

- **Wilting** - leaves or stems are limp

- **Decay** - mold or blackening

- **Shriveling** - skin has wrinkles

- **Brown stems/dry stem cuts**

- **Color changes** - yellowing when item should be dark green

The quality was rated as:

- **None** - None sold

- **Poor** - All or most of fruit is of poor quality (brown, bruised, overripe, wilted)

- **Mixed Poor** - Mixed quality; more poor than good

- **Mixed Good** - Mixed quality; more good than poor

- **Good** - All or most of fruit is of good quality (very fresh, no soft spots, excellent color)

Staff looked at the overall variety, quality, and availability of specific fruits and vegetables in stores. Stores were assessed for whether they had a wide variety (7 or

more types), moderate variety (4-6 types), limited variety (1-3 types) or none of fruits and vegetables, separately. Of the 11 stores with this data in **Anchorage**, 5 (45.5%) had a wide variety of fruit and 5 (45.5%) had a wide variety of vegetables. The following table (Table 7.7.3) summarizes this information on fruit and vegetable variety.

Table 7.7.3. Variety of Fruits and Vegetables in Anchorage (n=11)

Variety	Number	Percent	n Missing
Fruit			
None	2	18.2	0
Limited	2	18.2	0
Moderate variety	2	18.2	0
Wide variety	5	45.5	0
Vegetable			
None	3	27.3	0
Limited	1	9.1	0
Moderate variety	2	18.2	0
Wide variety	5	45.5	0

7.7.4. Quality of Fruit and Vegetables

Stores were also assessed on the quality of their fruits and vegetables. Staff looked for signs of quality in the produce such as the lack of wilting, decay, shriveling, brown stems, and color changes.

Of the 11 stores in **Anchorage** assessed for food quality, 2 (18.2%) had a good quality for fruit and 3 (27.3%) had a good quality for vegetables. The following table (Table 7.7.4) summarizes this information on fruit and vegetable quality.

Table 7.7.4. Quality of Fruit and Vegetables in Anchorage (n=11)

Quality	Number	Percent	n Missing
Fruit			
None	2	18.2	0
Poor	0	0.0	0
Mixed Poor	2	18.2	0
Mixed Good	5	45.5	0
Good	2	18.2	0
Vegetable			
None	3	27.3	0
Poor	0	0.0	0
Mixed Poor	0	0.0	0
Mixed Good	5	45.5	0
Good	3	27.3	0

7.7.5. Availability of Selected Fruits and Vegetables

Stores were assessed for the availability of specific fruits (apple, banana, and orange) and vegetables (carrot, tomato, broccoli, and cabbage). A total of 11 stores in **Anchorage** had data on the availability of these produce items. Fruits, apples, bananas, and oranges were available in 7 (70.0%), 7 (70.0%), and 7 (70.0%) of stores. Vegetables, carrots, tomatoes, cabbage, and broccoli were available in 6 (60.0%), 5 (55.6%), 4 (44.4%), and 4 (44.4%) of the stores that assessed each of these items. The following table (Table 7.7.5) summarizes this information on fruit and vegetable availability.

Table 7.7.5. Availability of Selected Fruits and Vegetables in Anchorage (n=11)

Quality	Number	Percent	n Missing
Selected Fruit			
Apples	7	70.0	1
Bananas	7	70.0	1
Oranges	7	70.0	1
Selected Vegetable			
Carrots	6	60.0	1
Tomatoes	5	55.6	2
Broccoli	4	44.4	2
Cabbage	4	44.4	2

7.7.6. Availability of Other Health Foods

Stores were assessed for the availability of other healthy foods. Healthy foods are fruits and vegetables, whole grains, beans, nuts and seeds, non-fat and low fat milk products, and lean meat, poultry, and fish. Healthy foods include minimal or no added fat, sugars, or sweeteners. Unsweetened black coffee is included. Pickled vegetables, whole coconut, and coconut water are included. Unhealthy products are high calorie, low nutrient foods and beverages that include alcoholic beverages, soft drinks and other sweetened beverages including diet drinks, sweet desserts and highly sugared cereals, chips and other salty snacks, most solid fats, fried foods, and other foods with high amounts of sugar, fat and/or sodium. Healthy products include minimal or no added fat, sugars, or sweeteners. Examples include fresh or dried fruits and vegetables, whole grain snacks (≥ 2 g fiber per serving), energy bars (≤ 14 g sugar per serving), nuts and seeds, non-fat and low fat milk products, water, or 100% fruit juice.

Stores were specifically assessed for a variety of items considered to be low/reduced fat dairy or soy drinks, lean meat protein, non-meat protein, whole-grain, canned/frozen fruit or vegetables, and baby food.

Of the 11 stores assessed in **Anchorage**, 11 (100.0%) had at least one low/reduced fat dairy or soy beverage, 10 (90.9%) had at least one lean meat protein, 8 (72.7%) had at least one non-meat protein, 10 (90.9%) had at least one whole-grain item, 11 (100.0%) had at least one canned/ frozen fruit or vegetable, and 4 (36.4%) had at least one baby food. The following table (Table 7.7.6) summarizes this information on other healthy foods.

Table 7.7.6. Availability of Other Healthy Foods in Stores in Anchorage (n=11)

Other Healthy Foods	Number	Percent	n Missing
Low/reduced fat dairy or soy beverage	11	100.0	0
1% milk	10	90.9	0
2% milk	10	90.9	0
Skim milk	8	72.7	0
Mozzarella	11	100.0	0
Flavored soy beverage	6	54.5	0
Plain soy beverage	6	54.5	0
Lean meat protein	10	90.9	0
Ground beef or turkey, lean (85% or higher)	7	63.6	0
Whole chicken	7	63.6	0
Tuna (light) canned in water	10	90.9	0
Salmon canned in water	7	63.6	0
Sardines canned in water, tomato, or mustard	6	54.5	0

Non-meat protein	8	72.7	0
Tofu, plain	7	63.6	0
Beans, dried	8	72.7	0
Beans, canned with no added fats, sugar or sweetener	7	63.6	0
Whole grain	10	90.9	0
Whole grain bread	8	72.7	0
Brown rice	9	81.8	0
High fiber cereal (>= 3 grams fiber, <=12 grams sugar per serving)	10	90.9	0
Oatmeal (plain)	8	72.7	0
Tortillas, soft corn or whole wheat (no lard)	6	54.5	0
Canned/ frozen fruit or vegetables	11	100.0	0
Any canned fruit packed in 100% fruit juice	11	100.0	0
Any canned vegetable with no added fats, sugar, or sweetener	11	100.0	0
Any frozen fruit with no added fats, sugar, or sweetener	7	63.6	0
Any frozen vegetable with no added fats, sugar, or sweetener	7	63.6	0
Baby food	4	36.4	0
Baby food, jarred, single fruit	4	36.4	0
Baby food, jarred, single vegetable	4	36.4	0
Baby food, jarred, single meat	4	36.4	0

7.7.7. Store Interior Advertisements or Promotions

Stores were assessed for specific ads or promotion themes in the interior of the store. First, staff looked to see if there were health promotion items around the fruit and vegetables display. Staff then categorized each health promotion item into one of the following themes:

- 5 A Day signs

- Nutrition information

- Fruit and Veggies: More matters

- Children's Healthy Living (CHL) or CHL partnership

- Other

Among the 11 stores surveyed in **Anchorage**, 4 (36.4%) had a health promotion item. Stores were also assessed for ads promoting locally grown produce. Of the 11 stores with this data, 2 (18.2%) promoted locally grown produce. The following table (Table 7.7.7) summarizes this information on marketing ads inside stores.

Table 7.7.7. Advertisements Inside the Store in Anchorage (n=11)

Interior Advertisements	Number	Percent	n Missing
Health promotion around the fruit and vegetable display	4	36.4	0
5 A Day signs	0	0.0	6
Nutrition information	0	0.0	6
Fruit and Veggies: More matters	0	0.0	6
Children's Healthy Living (CHL) or CHL partnership	0	0.0	6

Other	2	28.6	4
Promotion of locally grown produce	2	18.2	0

Staff looked at the marketing (presence of ads and product placement) of specific healthy and unhealthy foods near the main check-out area. The presence of ads or promotions recorded included those next to or below the check out, on the floor, or hanging from the ceiling. The presence of products recorded included those next to or below the check out and near the exit doorway.

Among the 11 stores surveyed in **Anchorage**, 11 had information on the marketing near the main check-out area. Looking at ads for healthy food products, 11 had 0 ads, none had ads for 1-2 items, and none had ads for 3-5 items. Looking at stores with ads for unhealthy food products, none had 0 ads, 1 had ads for 1-2 items, and 10 had ads for 3-4 items. More stores had ads for unhealthy food products than healthy food products near the main check-out area (11 versus 0).

Looking at stores for the presence of healthy food products near the main check-out area, 4 had 0 items, 7 had 1-2 items, and none had 3-5 items. Looking at the presence of unhealthy food products near the main check-out area, 10 had 0 items, 1 had 1-2 items, and none had 3-5 items. More stores had healthy food products than unhealthy food products near the main check-out area (1 versus 7). The following table (Table 7.7.8) summarizes this information on marketing ads at store check-out.

Table 7.7.8. Store Check-out Area Marketing in Anchorage (n=11)

Interior Advertisements	Healthy Food Products	Unhealthy Food Products
Presence of ads or promotions		
0	11	0

1-2 items	0	1
3-5 items	0	10
Presence of product		
0	4	10
1-2 items	7	1
3-5 items	0	0

7.7.8. Store Exterior Advertisements on Healthy and Unhealthy Foods

Stores were assessed for ads promoting healthy or unhealthy foods on the exterior of the store. The definition of healthy and unhealthy foods is given in Section 7.7.6.

Among the 11 stores surveyed in **Anchorage**, 1 (9.1%) had exterior ads for healthy foods while 4 (36.4%) had exterior ads for unhealthy foods.

7.7.9. Store Exterior Conditions

Stores were assessed for specific exterior conditions for food promotion. Among the 11 stores surveyed in **Anchorage**, none had produce bins on the sidewalk in front of the store, none had other products (e.g., soda, water) displayed on the sidewalk in front of the store or inside the store next to the window so they are clearly visible from the outside, none had vending machines on the sidewalk in front of any of the 11 stores surveyed, 1 (9.1%) had ads on the roof, walls, or anywhere on the store property, 3 (27.3%) had images of unhealthy foods and/or beverages painted on doors or windows of the storefront, and none had painted murals of healthy food and/or beverages on the building walls of the store. The following table (Table 7.7.9) summarizes this information on exterior store conditions.

Table 7.7.9. Store Exterior in Anchorage (n=11)

Exterior Conditions	Number	Percent	n Missing
Produce bins on the sidewalk in front of the store	0	0.0	0
Products displayed on the sidewalk in front for the store or inside the store next to the window	0	0.0	0
Vending machines on the sidewalk in front of the store	0	0.0	0
Advertising (banners, posters, temporary signs, etc.) on the roof, walls or elsewhere on the property	1	9.1	0
Images of healthy food (e.g. tomato, apple) and/or beverages (e.g. milk) painted on doors or windows of the storefront	1	9.1	0
Images of unhealthy food (e.g. hamburger, hot dog) and/or beverages (e.g. soda, shake) painted on doors or windows of the storefront	3	27.3	0
Painted murals of healthy foods and/or beverages anywhere on the building walls	0	0.0	0

7.7.10. Perceptions of Safety at Store

Stores were assessed for perceptions of safety including whether there were bars or chains on the exterior, whether advertisements covered no more than 1/3 of the window area and the cash register could be seen from the outside for stores that sold alcoholic beverages (e.g. the Lee Law which was passed in California), whether people felt safe walking in and around the store, and if the store was located in a safe, walkable environment.

Among the 11 stores in **Anchorage** with this information, 10 (90.9%) had bars, 4 (80.0%) complied with Lee Law, 8 (72.7%) were rated that people feel safe during the

walk around or outside of the store, and 8 (72.7%) met standards for being located in a safe, walkable environment. The following table (Table 7.7.10) summarizes this information on perceived store safety and walkability.

Table 7.7.10. Perceived Safety of Store in Anchorage (n=11)

Exterior Conditions	Number	Percent	n Missing
Store has bars or chains on windows or doors	10	90.9	0
Store sells alcohol and no more than 1/3 of window area is covered with ads (Lee Law)	4	80.0	6
People feel safe during the walk around or outside of the store	8	72.7	0
Store meets standards for being located in a safe, walkable environment	8	72.7	0

Section 8. Walkability Survey

7.8.1. Communtiy Walking Features

Everyone benefits from walking. These benefits include: improved fitness, cleaner air, reduced risks of certain health problems, and a greater sense of community, but walking needs to be safe and easy.

CHL staff conducted a walkability survey in each community. The survey included a checklist of 5 items to be observed and rated, which are related to the safety and quality of the walk. Each of the 5 individual items is on a scale from 1 to 6, of which 1 means awful, 2 means many problems, 3 means some problems, 4 means good, 5 means very good, and 6 means excellent. The individual scores for these items were then added for a total score to get an overall rating for the community walkability.

- 26-30: Celebrate! You have a great neighborhood for walking.

- 21-25: Celebrate a little. Your neighborhood is pretty good.

- 16-20: Okay, but it needs work.

- 11-15: It needs lots of work.

- 5-10: It's a disaster for walking!

For the total score in **Anchorage**, the number of neighborhoods audited (n) was 2 and the mean total score was 12. This score indicates that the walking environment surveyed in **Anchorage** needs a lot of work to encourage community walkability. The following table (Table 7.8.1) summarizes this information on community walking features.

Table 7.8.1. Community Walking Features in Anchorage

Walking Features	Number	Mean	n Missing
Total Walking Rating	2	12.0	0
Room to Walk	2	1.0	0
Ease of Crossing Street (s)	2	2.0	0
Ease of Following Safety Rules	1	3.0	1
Drivers' Behavior	2	4.0	0
Pleasantness of Walk	2	3.5	0

Walkability survey and rating scale is adapted from The National Center for Safe Routes to School (www.saferoutesinfo.org/sites/default/files/walkabilitychecklist.pdf)

Section 9. Comparing Baseline and Post-Intervention CAT Measures

As part of the CHL protocol, up to ten of each community resource type (i.e. parks, stores, churches) were assessed in each community.

Occasionally staff was unable to complete a full assessment of a resource and such cases were dropped from the final data set. The CAT assessment was conducted in the intervention and optimized communities at baseline and in the intervention, optimized, and temporal communities during the 24 month post-intervention data collection period — except for Alaska who completed the baseline CAT assessment in temporal communities at both time points. Therefore, it is not possible to look at change for temporal communities, except in **Alaska.**

The CAT data must be interpreted with caution, in particular for the results of the comparison between baseline and 24-month follow up measures. The number of facilities assessed at baseline and post-intervention are not always the same, the locations assessed or included in the analysis may change for a variety of reasons, and the sample sizes are small within jurisdictions.

Measurements on CAT data were taken at baseline and at post-intervention. The following sections look at the change from baseline and 24 month CAT data for select measures. The data are first presented for your jurisdiction and then for your community.

Every measure is evaluated at baseline and post-intervention. If a measure increased from baseline to post-intervention, then the change is noted as an "increase." If a measure decreased from baseline to post-intervention, then the change is noted as an "decrease." If a measure was only evaluated at one time point (baseline or post-intervention) or neither, then the change is noted as "had no comparison."

Please see the original forms used in Appendix A. CHL adapted forms can be found in Appendix B.

- http://chl-pacific.org/wp-content/uploads/2016/09/Appendix-A.pdf

- http://chl-pacific.org/wp-content/uploads/2016/09/Appendix-B.pdf

Features, Amenities, and Incivilities

Staff assessed each community physical activity resource type for a specific list of sports features and amenities present, whether such a feature had lighting or not, and rated the condition of the feature at baseline and at post-intervention. This assessment was made at parks, schools, churches, and PA facilities. Staff also looked for incivilities and assigned a score for each incivility type that was present. The possible ratings were: none (0), a little (1), some (2), and a lot (3).

Jurisdiction Level Data

7.9.1. Parks: Jurisdiction Level Data

In **Alaska**, 38 parks were assessed at baseline, 37 parks were assessed at post-intervention, and 4 communities were assessed for the park analysis. The changes among the features and amenities present between baseline and post-intervention are as follows:

The number of features present increased (8.6%). The number of amenities present increased (13.6%). Density of features per park increased (11.5%). Density of amenities per park increased (16.7%). Features rated as ok/good increased (1.9%). The number of parks assessed decreased (-2.6%). Features with lighting present decreased (-27.1%). Amenities rated as ok/good did not change (0.0%).

Table 7.9.1a. Change in Parks Features and Amenities for Alaska (Communities n=4, Baseline n=38, Post-Intervention n=37)

Measure	Baseline	Post	% Change
Number of Assessed Parks	38	37	-2.6
Number of Features Present	93	101	8.6
Number of Amenities Present	220	250	13.6
Density of Features Per Park	2.0	3.0	11.5

Density of Amenities Per Park	6.0	7.0	16.7
% Features Rated Good	98.0	100.0	1.9
% Features with Lighting	26.0	19.0	-27.1
% Amenities Rated Good	100.0	100.0	0.0

Figure 7.9.1a. Change in Parks Features and Amenities for Alaska (Communities n=4, Baseline n=38, Post-Intervention n=37)
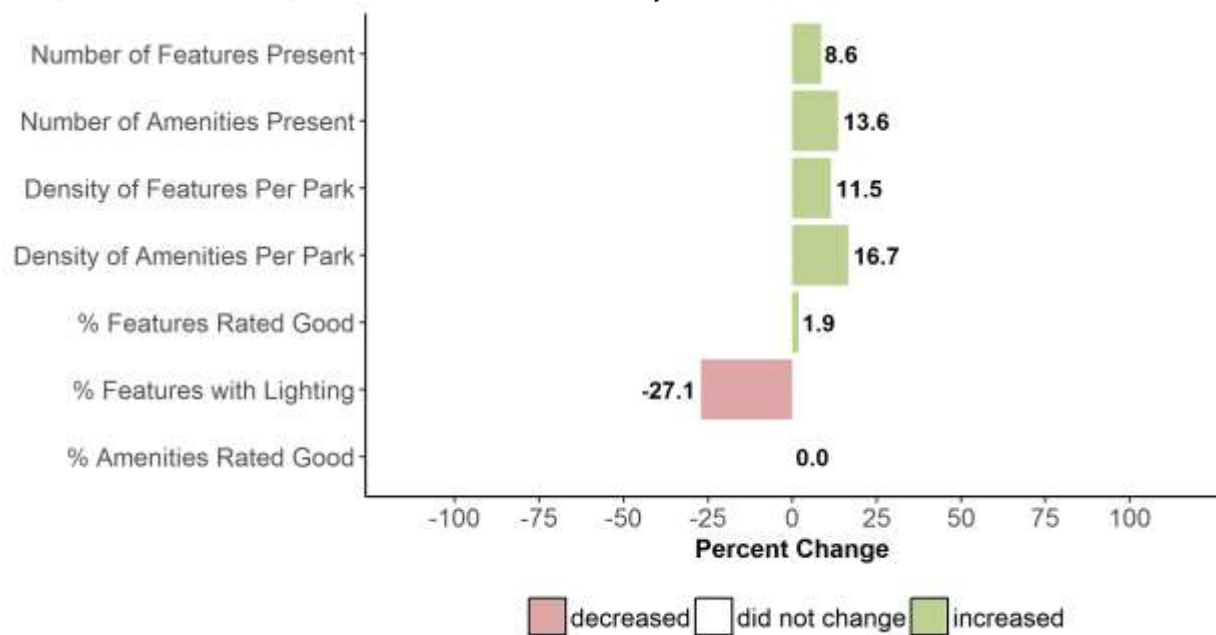
Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

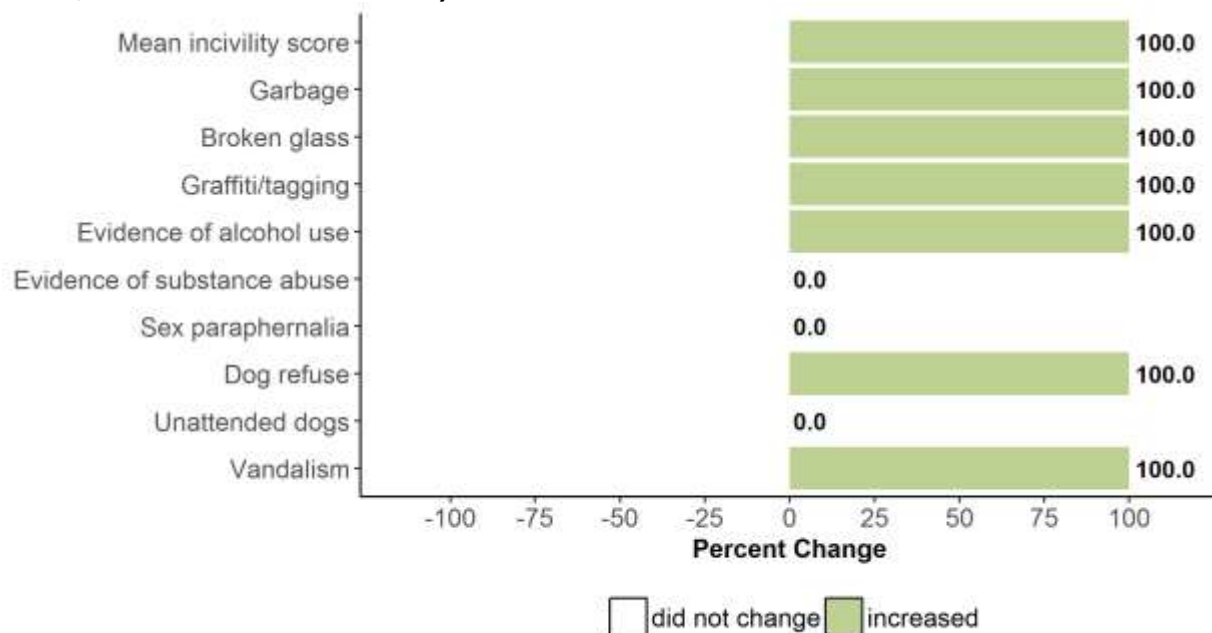Among the parks surveyed in **Alaska**, overall among all incivility types at baseline there was "a little" amount and at post-intervention there was "a little" amount. The mean incivility increased by 276.9% from baseline (0.04) to post-intervention (0.15).

Between baseline and post-intervention, there was an increase in 7 incivilities and there was no decrease in any incivility type (refer to Table 7.9.1b).

Table 7.9.1b. Change in Parks Incivilities for Alaska (Communities n=4, Baseline n=38, Post-Intervention n=37)

Measure	Baseline	Post	% Change
Mean Incivility Score	0.04	0.15	276.9
Garbage	0.16	0.62	293.7
Broken glass	0.03	0.05	105.4
Graffiti/Tagging	0.16	0.41	156.8
Evidence of Alcohol use	0.00	0.05	100.0
Evidence of Substance Abuse	0.00	0.00	0.0
Sex Paraphernalia	0.00	0.00	0.0
Dog Refuse	0.03	0.22	744.4
Unattended Dogs	0.00	0.00	0.0
Vandalism	0.00	0.03	100.0

Figure 7.9.1b. Change in Parks Incivilities for Alaska (Communities n=4, Baseline n=38, Post-Intervention n=37)

	Percent Change
Mean incivility score	100.0
Garbage	100.0
Broken glass	100.0
Graffiti/tagging	100.0
Evidence of alcohol use	100.0
Evidence of substance abuse	0.0
Sex paraphernalia	0.0
Dog refuse	100.0
Unattended dogs	0.0
Vandalism	100.0

☐ did not change ☐ increased

Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

7.9.2. Schools: Jurisdiction Level Data

In **Alaska**, 40 schools were assessed at baseline, 40 schools were assessed at post-intervention, and 4 communities were assessed for the school analysis. The changes among the features and amenities present between baseline and post-intervention are as follows:

The number of features present increased (24.5%). The number of amenities present increased (32.5%). Density of features per school increased (24.5%). Density of amenities per school increased (32.5%). Amenities rated as ok/good increased (1.3%). Features rated as ok/good decreased (-5.1%). Features with lighting present decreased (-40.9%). The number of schools assessed did not change (0.0%).

Table 7.9.2a. Change in Schools Features and Amenities for Alaska (Communities n=4, Baseline n=40, Post-Intervention n=40)

Measure	Baseline	Post	% Change
Number of Assessed Schools	40	40	0.0
Number of Features Present	147	183	24.5
Number of Amenities Present	123	163	32.5
Density of Features Per School	4.0	5.0	24.5
Density of Amenities Per School	3.0	4.0	32.5
% Features Rated Good	100.0	95.0	-5.1
% Features with Lighting	62.0	37.0	-40.9
% Amenities Rated Good	99.0	100.0	1.3

Figure 7.9.2a. Change in Schools Features and Amenities for Alaska (Communities n=4, Baseline n=40, Post-Intervention n=40)
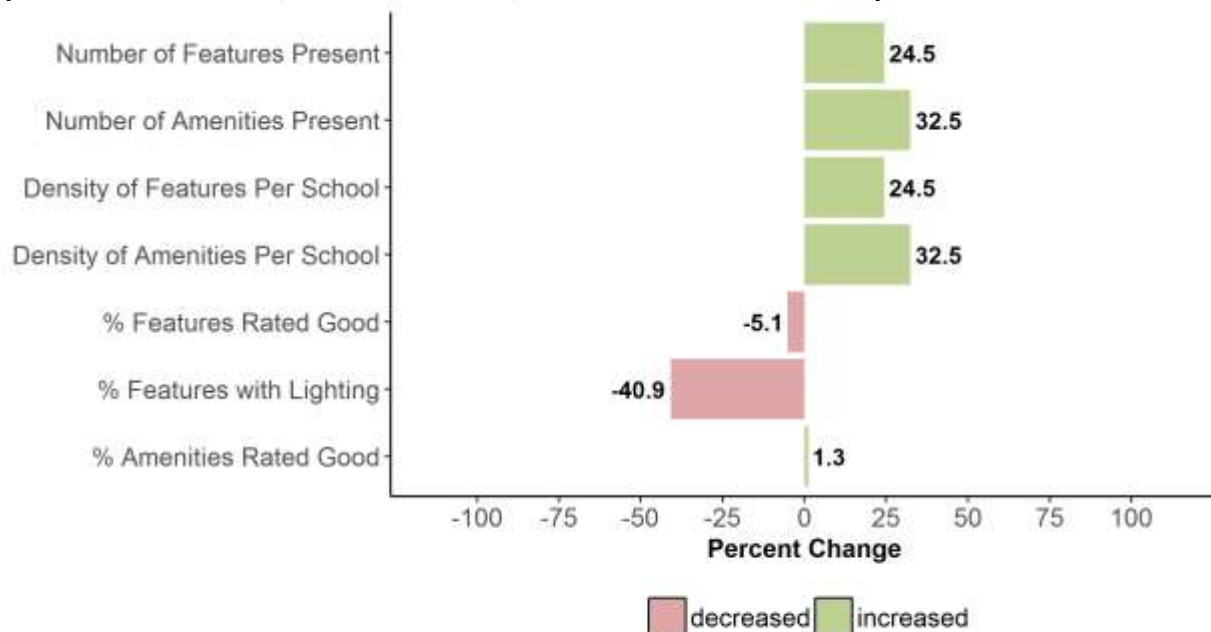
*Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

Among the schools surveyed in **Alaska**, overall among all incivility types at baseline there was "a little" amount and at post-intervention there was "a little" amount. The mean incivility increased by 301.1% from baseline (0.03) to post-intervention (0.12).

Between baseline and post-intervention, there was an increase in 5 incivilities and there was a decrease in 1 incivility (refer to Table 7.9.2b).

Table 7.9.2b. Change in Schools Incivilities for Alaska (Communities n=4, Baseline n=40, Post-Intervention n=40)

Measure	Baseline	Post	% Change
Mean Incivility Score	0.03	0.12	301.1
Garbage	0.15	0.88	483.3
Broken glass	0.00	0.08	100.0
Graffiti/Tagging	0.13	0.10	-20.0
Evidence of Alcohol use	0.00	0.00	0.0
Evidence of Substance Abuse	0.00	0.00	0.0
Sex Paraphernalia	0.00	0.00	0.0
Dog Refuse	0.00	0.03	100.0
Unattended Dogs	0.00	0.00	0.0
Vandalism	0.00	0.03	100.0

Figure 7.9.2b. Change in Schools Incivilities for Alaska (Communities n=4, Baseline n=40, Post-Intervention n=40)
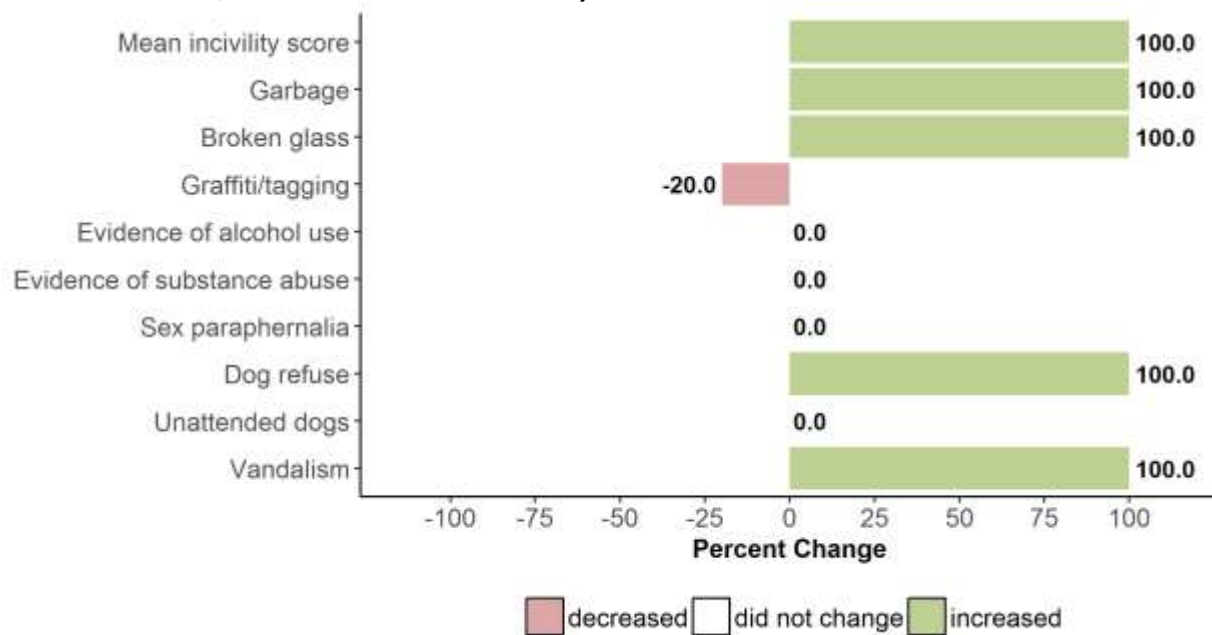
*Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

7.9.3. Churches: Jurisdiction Level Data

Churches were not assessed for physical activity facilities in **Alaska.**

7.9.4. Physical Activity Facilities: Jurisdiction Level Data

In **Alaska**, 36 PA facilities were assessed at baseline, 33 PA facilities were assessed at post-intervention, and 4 communities were assessed for the PA facility analysis. The changes among the features and amenities present between baseline and post-intervention are as follows:

The number of indoor features present increased (4.5%). The number of outdoor features present increased (205.3%). Density of indoor features per PA facility

increased (10.9%). Density of outdoor features per PA facility increased (223.8%). The number of PA facilities assessed decreased (-8.3%). Outdoor features with lighting present decreased (-34.5%). Indoor features rated as ok/good did not change (0.0%). Outdoor features rated as ok/good did not change (0.0%).

Table 7.9.4a. Change in Physical Activity Facilities Features and Amenities for Alaska (Communities n=4, Baseline n=36, Post-Intervention n=33)

Measure	Baseline	Post	% Change
Number of Assessed PA Facilities	36	33	-8.3
Number of Indoor Features Present	154	161	4.5
Number of Outdoors Features Present	19	58	205.3
Density of Indoor Features Per Facility	4.0	5.0	10.9
Density of Outdoor Features Per Facility	0.0	2.0	223.8
% Indoor Features Rated Good	100.0	100.0	0.0
% Outdoor Features Rated Good	100.0	100.0	0.0
% Outdoor Features with Lighting	26.0	17.0	-34.5

Figure 7.9.4a. Change in Physical Activity Facilities Features and Amenities for Alaska (Communities n=4, Baseline n=36, Post-Intervention n=33)
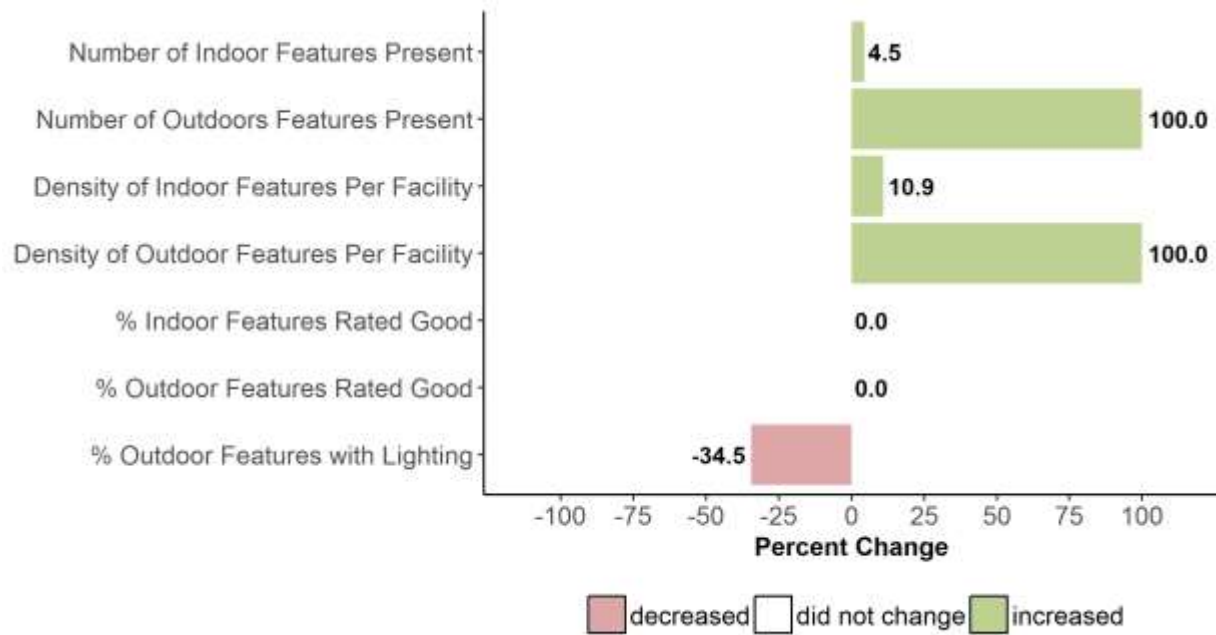
Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

Among the PA facilities surveyed in **Alaska**, overall among all incivility types at baseline there was "a little" amount and at post-intervention there was "a little" amount. The mean incivility increased by 1013.6% from baseline (0.01) to post-intervention (0.07).

Between baseline and post-intervention, there was an increase in 4 incivilities and there was no decrease in any incivility type (refer to Table 7.9.4b).

Table 7.9.4b. Change in Physical Activity Facilities Incivilities for Alaska (Communities n=4, Baseline n=36, Post-Intervention n=33)

Measure	Baseline	Post	% Change
Mean Incivility Score	0.01	0.07	1013.6
Garbage	0.06	0.58	907.6
Broken glass	0.00	0.03	100.0

Graffiti/Tagging	0.00	0.03	100.0
Evidence of Alcohol use	0.00	0.00	0.0
Evidence of Substance Abuse	0.00	0.00	0.0
Sex Paraphernalia	0.00	0.00	0.0
Dog Refuse	0.00	0.00	0.0
Unattended Dogs	0.00	0.00	0.0
Vandalism	0.00	0.00	0.0

Figure 7.9.4b. Change in Physical Activity Facilities Incivilities for Alaska (Communities n=4, Baseline n=36, Post-Intervention n=33)
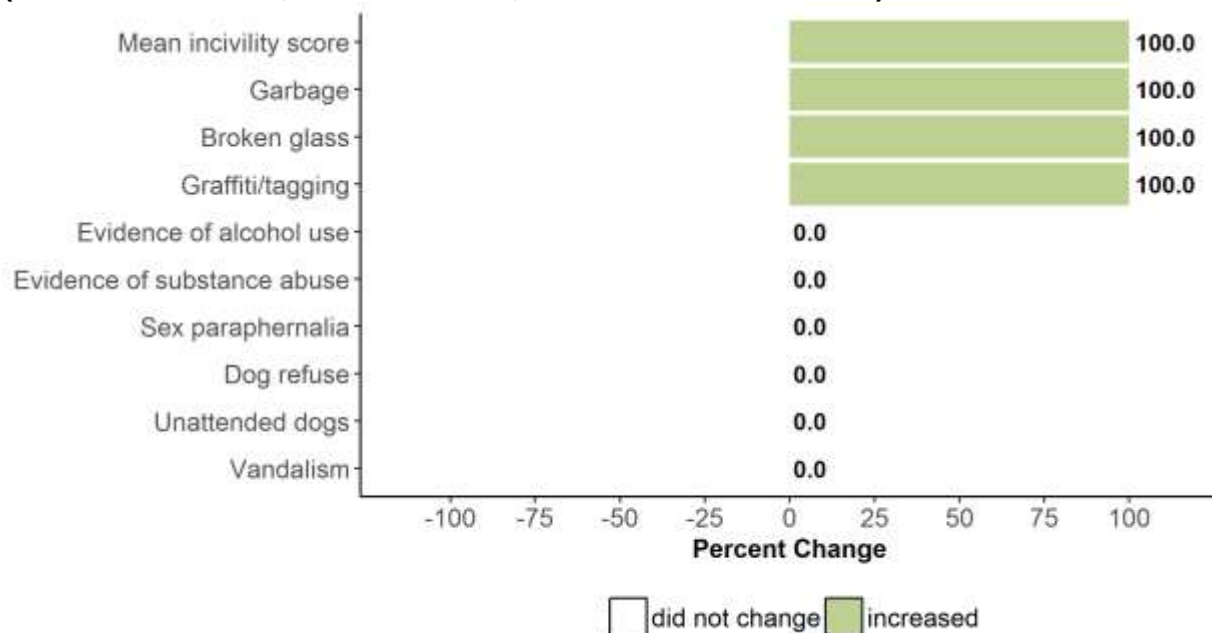
*Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

7.9.5. Fast Food: Jurisdiction Level Data

Staff assessed fast food outlets for the presence of food and beverage advertisements, child-directed marketing, health claim ads, health promotion, and other ad themes at baseline and post-intervention.

In **Alaska**, 40 fast food outlets were assessed at baseline, 23 fast food outlets were assessed at post-intervention, and 4 communities were assessed for the fast food outlet analysis. The changes among the features and amenities present between baseline and post-intervention are as follows:

Health claim ads on the outlets' exterior increased (100.0%). The presence of a vegetable dish on the menu increased (112.5%). Healthy drinks increased (32.0%). The number of fast food restaurants assessed decreased (-42.5%). Ads for soda on the outlets' exterior decreased (-75.0%). The presence of a fruit dish on the menu decreased (-43.8%). The number of restaurants with a kids menu decreased (-48.1%). Signs for healthy menu items did not change (0.0%).

Table 7.9.5. Change in Fast Food Healthy Menu Options for Alaska (Communities n=4, Baseline n=40, Post-Intervention n=23)

Measure	Baseline	Post	% Change
Number of Assessed Fast Food Restaurants	40	23	-42.5
Healthy Advertisements on Exterior	1	2	100.0
Signs for Healthy Menu Items Interior	2	2	0.0
Soda Advertisements on Exterior	16	4	-75.0
Vegetable dish on menu	16	34	112.5
Fruit dish on menu	16	9	-43.8
Number of Restaurants with Kids Menu	27	14	-48.1
Percent Kids Menu with Healthy Drink on Menu	70.0	93.0	32.0

Figure 7.9.5. Change in Fast Food Healthy Menu Options for Alaska (Communities
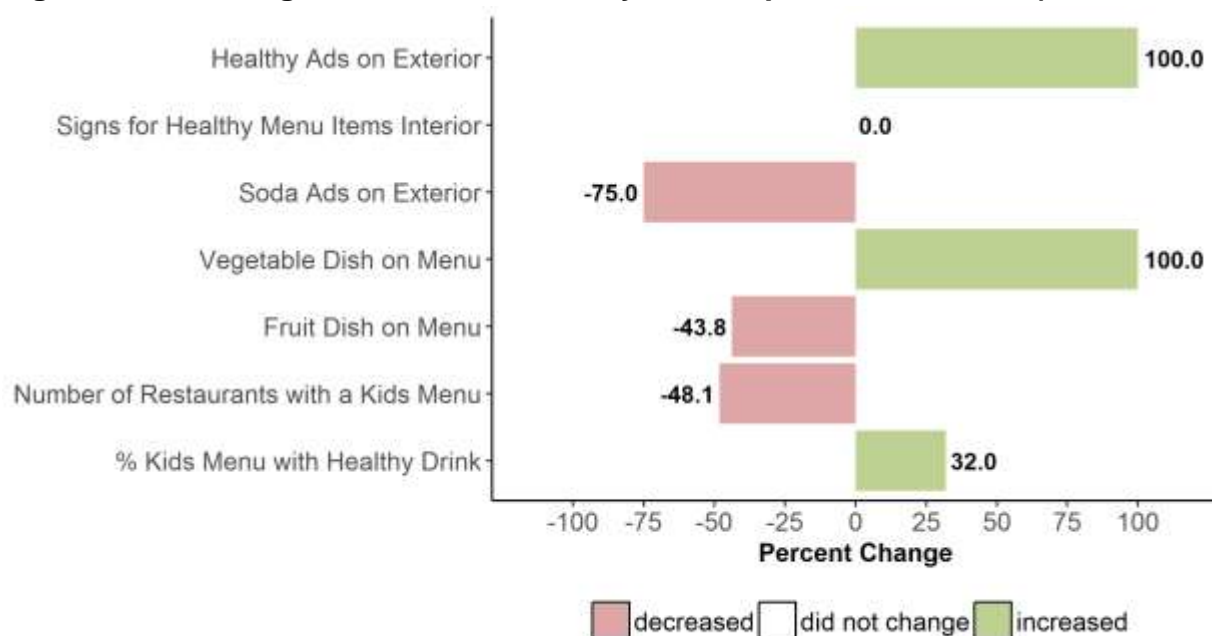
*Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

7.9.6. Stores: Jurisdiction Level Data

Staff measured store information on the availability of healthy foods and store marketing of WIC/ SNAP benefits at baseline and at post-intervention. The CX3 Survey Tools provided guidelines for scoring features such as fruit and vegetable variety, fruit and vegetable quality, WIC/SNAP participation, and safety around the store.

For fruit and vegetable variety, each store was given a score based on the following rating scale: None = 0; Limited = 4; Moderate = 8; Wide variety = 12. For fruit and vegetable quality, each store was given a score based on the following rating scale: None sold = 0; Poor = 0; Mixed/poor = 4; Mixed/good = 6; Good overall = 8.

A score for WIC/SNAP participation was determined by adding up the points across the following four measures. Is store a WIC vendor? Yes = 0. No = 4. Is store a Food Stamp or SNAP vendor? Yes = 0. No = 4. Is "We accept WIC" signage displayed? Yes = 0. No

= 1. Is "We accept Food Stamps/EBT" signage displayed? Yes = 0. No = 1 (California Department of Health Communities of Excellence Program, https://www.cdph.ca.gov/Programs/CCDPHP/DCDIC/NEOPB/Pages/CommunitiesofExcellence3.aspx).

In **Alaska**, 41 stores were assessed at baseline, 42 stores were assessed at post-intervention, and 4 communities were assessed for the store marketing and food availability analysis. The changes among the features and amenities present between baseline and post-intervention are as follows:

The availability of at least one low/reduced fat dairy or soy beverage increased (7.8%). The availability of at least one lean meat protein increased (14.5%). The availability of at least one whole-grain item increased (2.0%). Stores offering a wide variety for fruits increased (14.3%). Stores offering a wide variety for vegetables increased (5.2%). Stores offering a good quality for vegetables increased (0.9%). Stores that meet standards for being located in a safe, walkable environment increased (9.8%). Stores offering a good quality for fruit decreased (-1.8%). Signage for WIC/SNAP being accepted decreased (-5.0%).

Table 7.9.6. Change in Store Marketing and Food Availability for Alaska (Communities n=4, Baseline n=41, Post-Intervention n=42)

Measure	Baseline n	Post n	Baseline n missing	Post n missing	Baseline mean	Post mean	% Change
Low/reduced fat dairy or soy beverage	41	39	0	3	0.90	0.97	7.8
Lean meat protein	41	39	0	3	0.83	0.95	14.5
Whole grain	41	39	0	3	1.51	1.54	2.0
Score for variety of fruits (0-12)	41	39	0	3	6.73	7.69	14.3

Score for variety of vegetables (0-12)	41	39	0	3	6.73	7.08	5.2
Score for quality of fruits (0-8)	41	39	0	3	5.12	5.03	-1.8
Score for quality of vegetables (0-8)	41	39	0	3	4.63	4.67	0.9
Score for accepting WIC/SNAP and having signs (0-10)	41	39	0	3	5.56	5.28	-5.0
Percent of stores that meet standards for being located in a safe, walkable environment	41	42	0	0	0.41	0.45	9.8

Figure 7.9.6. Change in Store Marketing and Food Availability for Alaska (Communities n=4, Baseline n=41, Post-Intervention n=42)
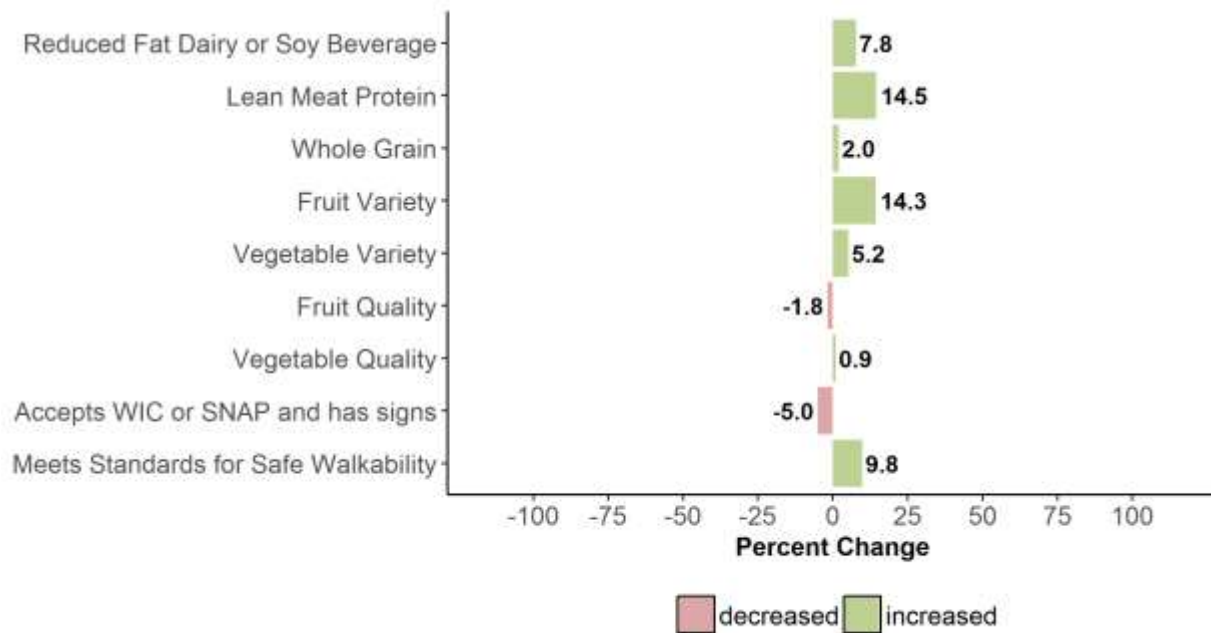
*Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

7.9.7. Walkability: Jurisdiction Level Data

CHL staff conducted a walkability survey to measure the overall rating for community walkability at baseline and at post-intervention. The survey included a checklist of 5 items to be observed and rated, which are related to the safety and quality of the walk. Each of the 5 individual items is on a scale from 1 to 6, of which 1 means awful, 2 means many problems, 3 means some problems, 4 means good, 5 means very good, and 6 means excellent. For the neighborhood walk assessment, the number of street segments audited is 8 at both baseline and post-intervention.

In **Alaska**, 7 walkability surveys were assessed at baseline, 10 walkability surveys were assessed at post-intervention, and 4 communities were assessed for the community walkability analysis. The changes among the submeasures for safe walkability around neighborhoods between baseline and post-intervention are as follows:

The mean for the total walking rating score increased (41.4%). Room to walk increased (5.7%). Ease of crossing street(s) increased (20.0%). Pleasantness of walk increased (46.9%). Ease of following safety rules decreased (-25.8%). Drivers' behavior decreased (-4.0%).

Table 7.9.7. Change in Community Walkability for Alaska (Communities n=4, Baseline n=7, Post-Intervention n=10)

Measure	Baseline n	Post n	Baseline n missing	Post n missing	Baseline mean	Post mean	% Change
Total Walking Rating	7	10	0	0	14.14	20.00	41.4
Room to Walk	6	10	1	0	3.50	3.70	5.7
Ease of Crossing Street (s)	6	10	1	0	3.00	3.60	20.0
Ease of Following Safety Rules	5	9	2	1	4.80	3.56	-25.8
Drivers' Behavior	4	10	3	0	5.00	4.80	-4.0
Pleasantness of Walk	5	10	2	0	3.20	4.70	46.9

Figure 7.9.7 Change in Community Walkability for Alaska (Communities n=communities were, Baseline n=7, Post-Intervention n=10)

Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

Community Level Data

**7.9.8. Parks: Community Level Data**

In **Anchorage**, 7 parks were assessed at baseline and 6 parks were assessed at post-intervention for the park analysis. The changes among the features and amenities present between baseline and post-intervention are as follows:

The number of features present increased (40.0%). The number of amenities present increased (2.8%). Density of features per park increased (122.2%). Density of amenities per park increased (23.3%). Features rated as ok/good increased (10.0%). Features with lighting present increased (100.0%). The number of parks assessed decreased (-14.3%). Amenities rated as ok/good did not change (0.0%).

Table 7.9.8a. Change in Parks Features and Amenities for Anchorage (Baseline n=7, Post-Intervention n=6)

Measure	Baseline	Post	% Change
Number of Assessed Parks	7	6	-14.3
Number of Features Present	20	28	40.0
Number of Amenities Present	36	37	2.8
Density of Features Per Park	2.0	5.0	122.2
Density of Amenities Per Park	5.0	6.0	23.3
% Features Rated Good	91.0	100.0	10.0
% Features with Lighting	0.0	29.0	100.0
% Amenities Rated Good	100.0	100.0	0.0

Figure 7.9.8a. Change in Parks Features and Amenities for Anchorage (Baseline n=7, Post-Intervention n=6)
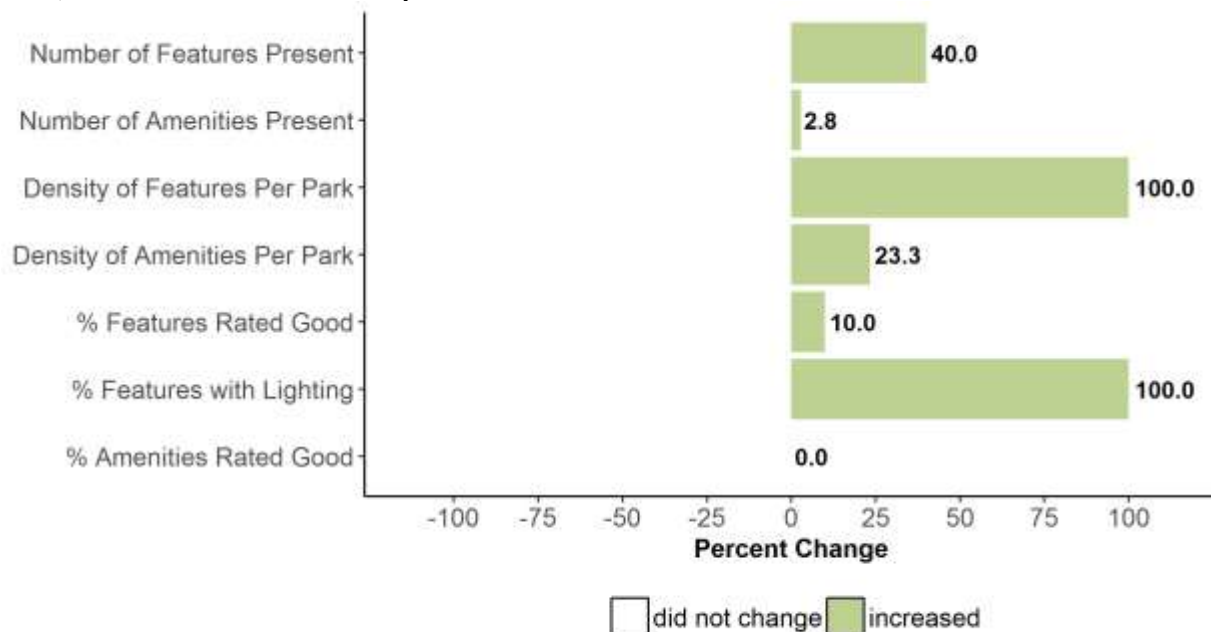
Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

Among the parks surveyed in **Anchorage**, overall among all incivility types at baseline there was "a little" amount and at post-intervention there was "a little" amount. The mean incivility increased by 522.2% from baseline (0.05) to post-intervention (0.30).

Between baseline and post-intervention, there was an increase in 7 incivilities and there was no decrease in any incivility type (refer to Table 7.9.8b).

Table 7.9.8b. Change in Parks Incivilities for Anchorage (Baseline n=7, Post-Intervention n=6)

Measure	Baseline	Post	% Change
Mean Incivility Score	0.05	0.30	522.2
Garbage	0.43	1.00	133.3
Broken glass	0.00	0.17	100.0
Graffiti/Tagging	0.00	0.33	100.0
Evidence of Alcohol use	0.00	0.17	100.0
Evidence of Substance Abuse	0.00	0.00	0.0
Sex Paraphernalia	0.00	0.00	0.0
Dog Refuse	0.00	0.83	100.0
Unattended Dogs	0.00	0.00	0.0
Vandalism	0.00	0.17	100.0

Figure 7.9.8b. Change in Parks Incivilities for Anchorage (Baseline n=7, Post-Intervention n=6)
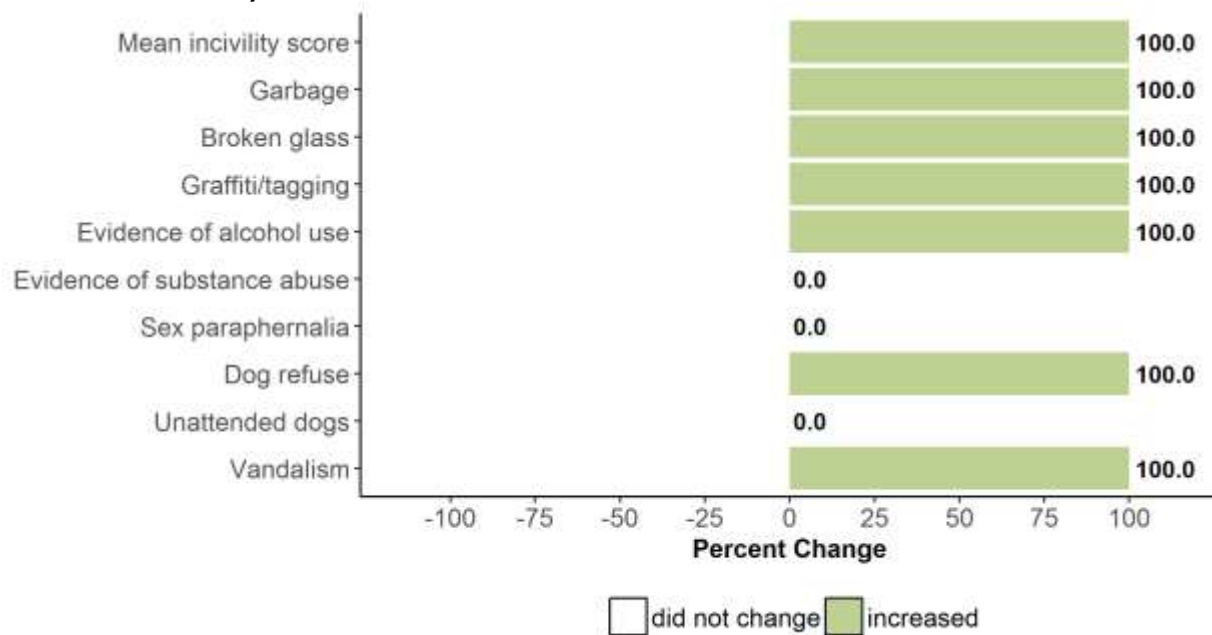
*Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

7.9.9. Schools: Community Level Data

In **Anchorage**, 10 schools were assessed at baseline and 9 schools were assessed at post-intervention for the school analysis. The changes among the features and amenities present between baseline and post-intervention are as follows:

The number of features present increased (23.9%). The number of amenities present increased (40.7%). Density of features per school increased (37.7%). Density of amenities per school increased (56.4%). Amenities rated as ok/good increased (5.6%). The number of schools assessed decreased (-10.0%). Features rated as ok/good decreased (-1.8%). Features with lighting present decreased (-31.7%).

Table 7.9.9a. Change in Schools Features and Amenities for Anchorage (Baseline n=10, Post-Intervention n=9)

Measure	Baseline	Post	% Change
Number of Assessed Schools	10	9	-10.0
Number of Features Present	46	57	23.9
Number of Amenities Present	27	38	40.7
Density of Features Per School	5.0	6.0	37.7
Density of Amenities Per School	3.0	4.0	56.4
% Features Rated Good	100.0	98.0	-1.8
% Features with Lighting	56.0	39.0	-31.7
% Amenities Rated Good	95.0	100.0	5.6

Figure 7.9.9a. Change in Schools Features and Amenities for Anchorage (Baseline n=10, Post-Intervention n=9)
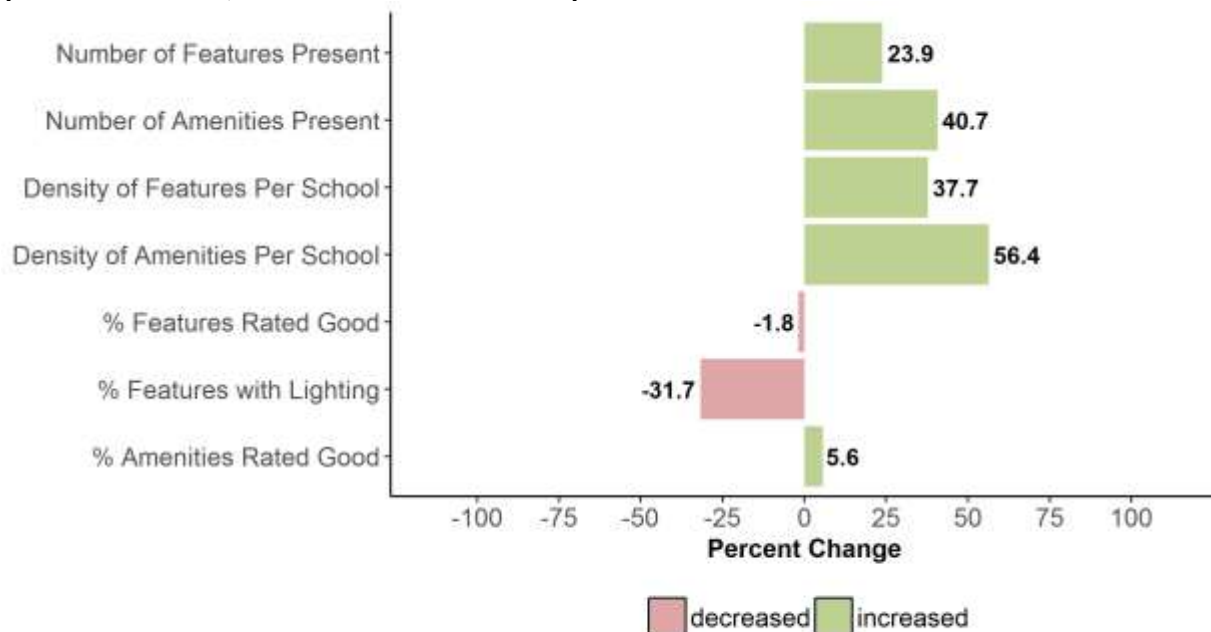
Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

Among the schools surveyed in **Anchorage**, overall among all incivility types at baseline there was "a little" amount and at post-intervention there was "a little" amount. The mean incivility increased by 2122.2% from baseline (0.01) to post-intervention (0.25).

Between baseline and post-intervention, there was an increase in 6 incivilities and there was no decrease in any incivility type (refer to Table 7.9.9b).

Table 7.9.9b. Change in Schools Incivilities for Anchorage (Baseline n=10, Post-Intervention n=9)

Measure	Baseline	Post	% Change
Mean Incivility Score	0.01	0.25	2122.2
Garbage	0.10	1.56	1455.6
Broken glass	0.00	0.33	100.0
Graffiti/Tagging	0.00	0.11	100.0
Evidence of Alcohol use	0.00	0.00	0.0
Evidence of Substance Abuse	0.00	0.00	0.0
Sex Paraphernalia	0.00	0.00	0.0
Dog Refuse	0.00	0.11	100.0
Unattended Dogs	0.00	0.00	0.0
Vandalism	0.00	0.11	100.0

Figure 7.9.9b. Change in Schools Incivilities for Anchorage (Baseline n=10, Post-Intervention n=9)
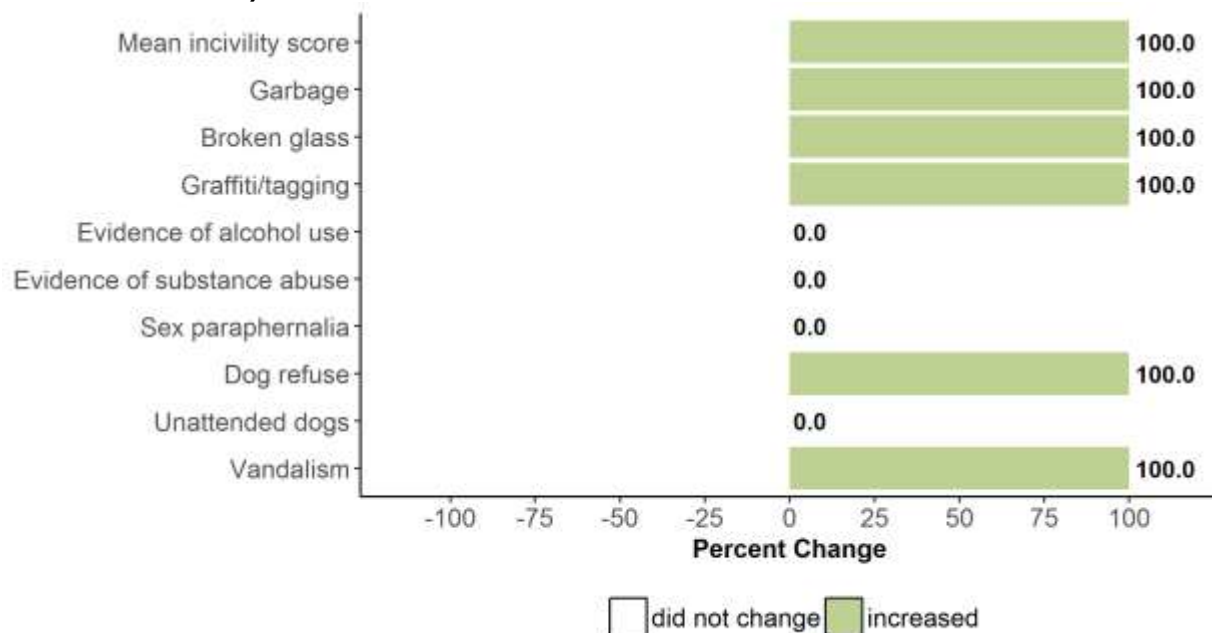
*Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

7.9.10. Churches: Community Level Data

Churches were not assessed for physical activity facilities in **Anchorage.**

7.9.11. Physical Activity Facilities: Community Level Data

In **Anchorage**, 9 PA facilities were assessed at baseline and 8 PA facilities were assessed at post-intervention for the PA facility analysis. The changes among the features and amenities present between baseline and post-intervention are as follows:

The number of indoor features present increased (34.3%). The number of outdoor features present increased (75.0%). Density of indoor features per PA facility increased (34.3%). Density of outdoor features per PA facility increased (75.0%). The number of

PA facilities assessed decreased (-11.1%). Indoor features rated as ok/good did not change (0.0%). Outdoor features rated as ok/good did not change (0.0%). Outdoor features with lighting present did not change (0.0%).

Table 7.9.11a. Change in Physical Activity Facilities Features and Amenities for Anchorage (Baseline n=9, Post-Intervention n=8)

Measure	Baseline	Post	% Change
Number of Assessed PA Facilities	9	8	-11.1
Number of Indoor Features Present	35	47	34.3
Number of Outdoors Features Present	4	7	75.0
Density of Indoor Features Per Facility	4.0	6.0	34.3
Density of Outdoor Features Per Facility	0.0	1.0	75.0
% Indoor Features Rated Good	100.0	100.0	0.0
% Outdoor Features Rated Good	100.0	100.0	0.0
% Outdoor Features with Lighting	0.0	0.0	0.0

Figure 7.9.11a. Change in Physical Activity Facilities Features and Amenities for Anchorage (Baseline n=9, Post-Intervention n=8)
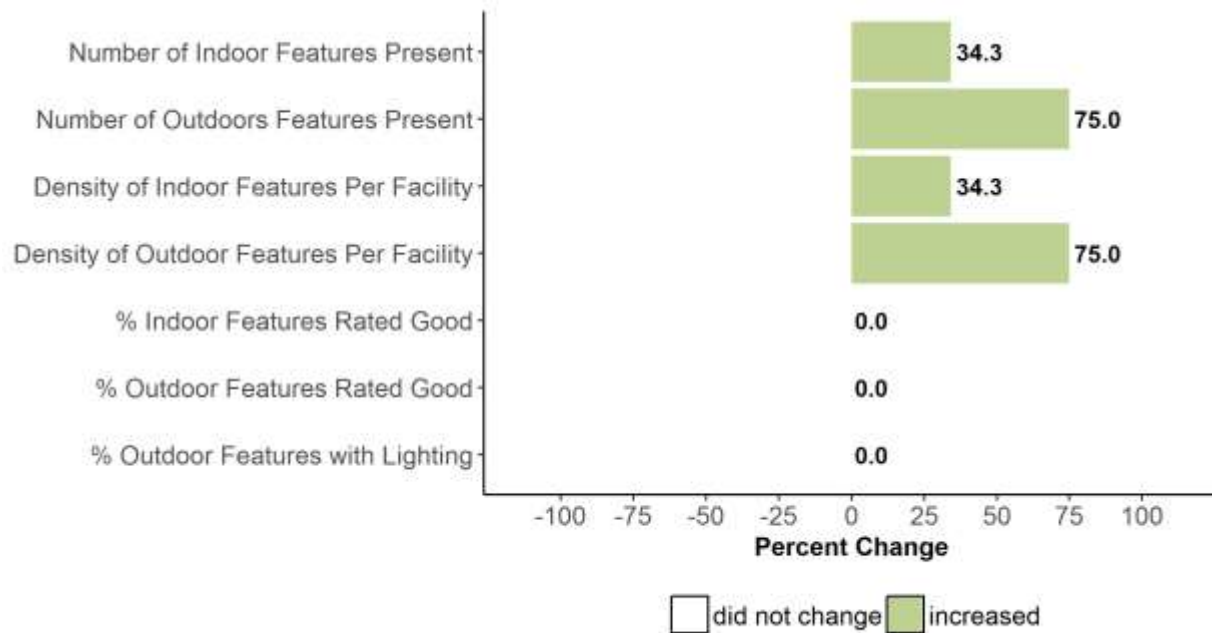
*Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

Among the PA facilities surveyed in **Anchorage**, overall among all incivility types at baseline there was "a little" amount and at post-intervention there was "a little" amount. The mean incivility increased by 100.0% from baseline (0.00) to post-intervention (0.14).

Between baseline and post-intervention, there was an increase in 4 incivilities and there was no decrease in any incivility type (refer to Table 7.9.11b).

Table 7.9.11b. Change in Physical Activity Facilities Incivilities for Anchorage (Baseline n=9, Post-Intervention n=8)

Measure	Baseline	Post	% Change
Mean Incivility Score	0.00	0.14	100.0
Garbage	0.00	1.00	100.0
Broken glass	0.00	0.13	100.0

Graffiti/Tagging	0.00	0.13	100.0
Evidence of Alcohol use	0.00	0.00	0.0
Evidence of Substance Abuse	0.00	0.00	0.0
Sex Paraphernalia	0.00	0.00	0.0
Dog Refuse	0.00	0.00	0.0
Unattended Dogs	0.00	0.00	0.0
Vandalism	0.00	0.00	0.0

Figure 7.9.11b. Change in Physical Activity Facilities Incivilities for Anchorage (Baseline n=9, Post-Intervention n=8)
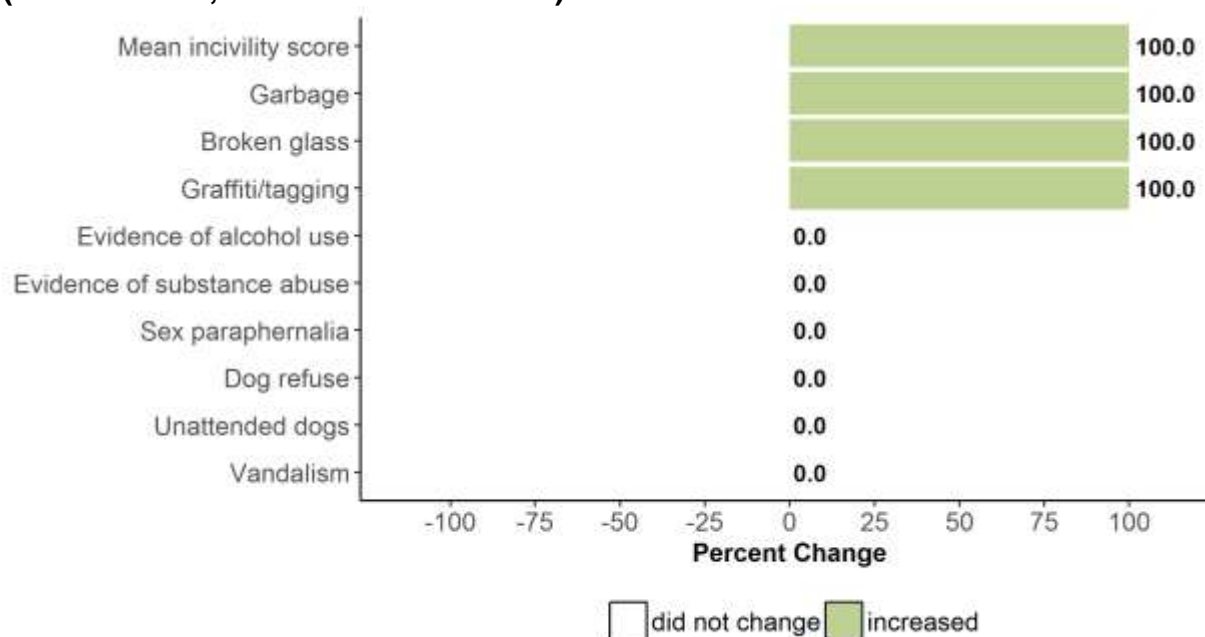
*Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

7.9.12. Fast Food: Community Level Data

In **Anchorage**, 10 fast food outlets were assessed at baseline and 3 fast food outlets were assessed at post-intervention for the fast food outlet analysis. The changes among the features and amenities present between baseline and post-intervention are as follows:

Healthy drinks increased (20.0%). The number of fast food restaurants assessed decreased (-70.0%). Health claim ads on the outlets' exterior decreased (-100.0%). Signs for healthy menu items decreased (-50.0%). Ads for soda on the outlets' exterior decreased (-100.0%). The presence of a vegetable dish on the menu decreased (-22.2%). The presence of a fruit dish on the menu decreased (-50.0%). The number of restaurants with a kids menu decreased (-83.3%).

Table 7.9.12. Change in Fast Food Healthy Menu Options for Anchorage (Baseline n=10, Post-Intervention n=3)

Measure	Baseline	Post	% Change
Number of Assessed Fast Food Restaurants	10	3	-70.0
Healthy Advertisements on Exterior	1	0	-100.0
Signs for Healthy Menu Items Interior	2	1	-50.0
Soda Advertisements on Exterior	8	0	-100.0
Vegetable dish on menu	9	7	-22.2
Fruit dish on menu	4	2	-50.0
Number of Restaurants with Kids Menu	6	1	-83.3
Percent Kids Menu with Healthy Drink on Menu	83.0	100.0	20.0

Figure 7.9.12. Change in Fast Food Healthy Menu Options for Anchorage (Baseline n=10, Post-Intervention n=3)
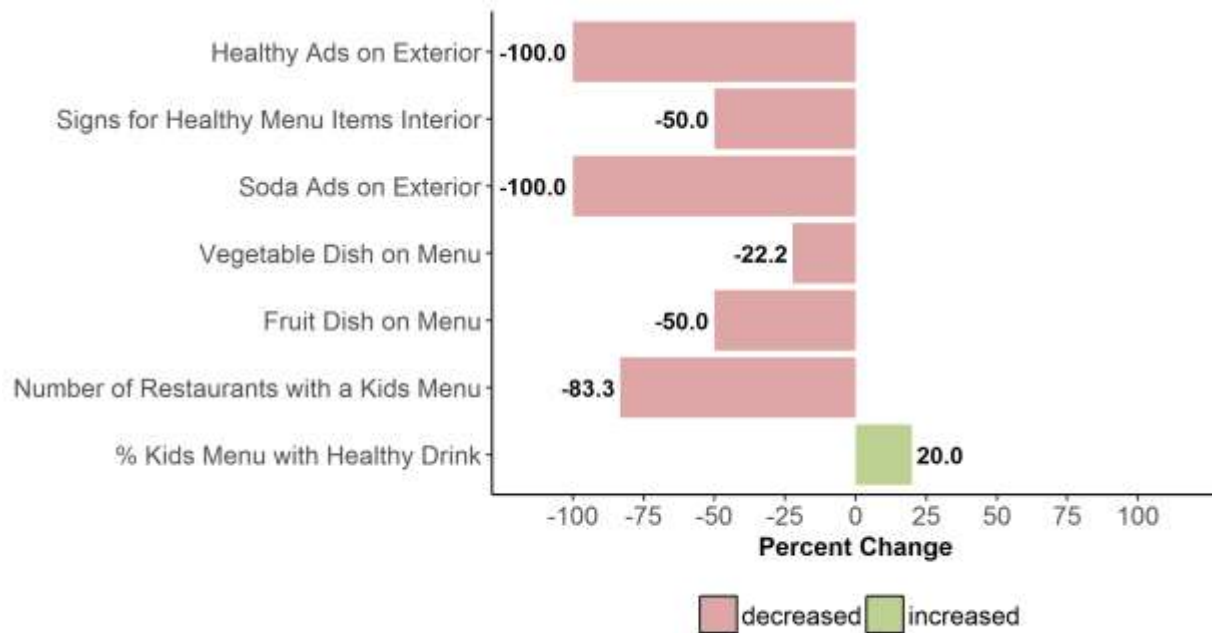
*Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

7.9.13. Stores: Community Level Data

Staff measured store information on the availability of healthy foods and store marketing of WIC/ SNAP benefits at baseline and at post-intervention. The CX3 Survey Tools provided guidelines for scoring features such as fruit and vegetable variety, fruit and vegetable quality, WIC/SNAP participation, and safety around the store.

For fruit and vegetable variety, each store was given a score based on the following rating scale: None = 0; Limited = 4; Moderate = 8; Wide variety = 12. For fruit and vegetable quality, each store was given a score based on the following rating scale: None sold = 0; Poor = 0; Mixed/poor = 4; Mixed/good = 6; Good overall = 8.

A score for WIC/SNAP participation was determined by adding up the points across the following four measures. Is store a WIC vendor? Yes = 0. No = 4. Is store a Food Stamp or SNAP vendor? Yes = 0. No = 4. Is "We accept WIC" signage displayed? Yes = 0. No

= 1. Is "We accept Food Stamps/EBT" signage displayed? Yes = 0. No = 1 (California Department of Health Communities of Excellence Program, https://www.cdph.ca.gov/Programs/CCDPHP/DCDIC/NEOPB/Pages/CommunitiesofExcellence3.aspx).

In **Anchorage**, 11 stores were assessed at baseline and 11 stores were assessed at post-intervention for the store marketing and food availability analysis. The changes among the features and amenities present between baseline and post-intervention are as follows:

The availability of at least one low/reduced fat dairy or soy beverage did not change (0.0%). The availability of at least one lean meat protein did not change (0.0%). The availability of at least one whole-grain item did not change (0.0%). Stores offering a wide variety for fruits did not change (0.0%). Stores offering a wide variety for vegetables did not change (0.0%). Stores offering a good quality for fruit did not change (0.0%). Stores offering a good quality for vegetables did not change (0.0%). Signage for WIC/SNAP being accepted did not change (0.0%). Stores that meet standards for being located in a safe, walkable environment did not change (0.0%).

Table 7.9.13. Change in Store Marketing and Food Availability for Anchorage (Baseline n=11, Post-Intervention n=11)

Measure	Baseline n	Post n	Baseline n missing	Post n missing	Baseline mean	Post mean	% Change
Low/reduced fat dairy or soy beverage	11	11	0	0	0.82	0.82	0.0
Lean meat protein	11	11	0	0	0.91	0.91	0.0
Whole grain	11	11	0	0	1.45	1.45	0.0
Score for variety of fruits	11	11	0	0	8.00	8.00	0.0

(0-12)							
Score for variety of vegetables (0-12)	11	11	0	0	8.00	8.00	0.0
Score for quality of fruits (0-8)	11	11	0	0	6.55	6.55	0.0
Score for quality of vegetables (0-8)	11	11	0	0	4.73	4.73	0.0
Score for accepting WIC/SNAP and having signs (0-10)	11	11	0	0	4.91	4.91	0.0
Percent of stores that meet standards for being located in a safe, walkable environment	11	11	0	0	0.36	0.36	0.0

Figure 7.9.13. Change in Store Marketing and Food Availability for Anchorage (Baseline n=11, Post-Intervention n=11)
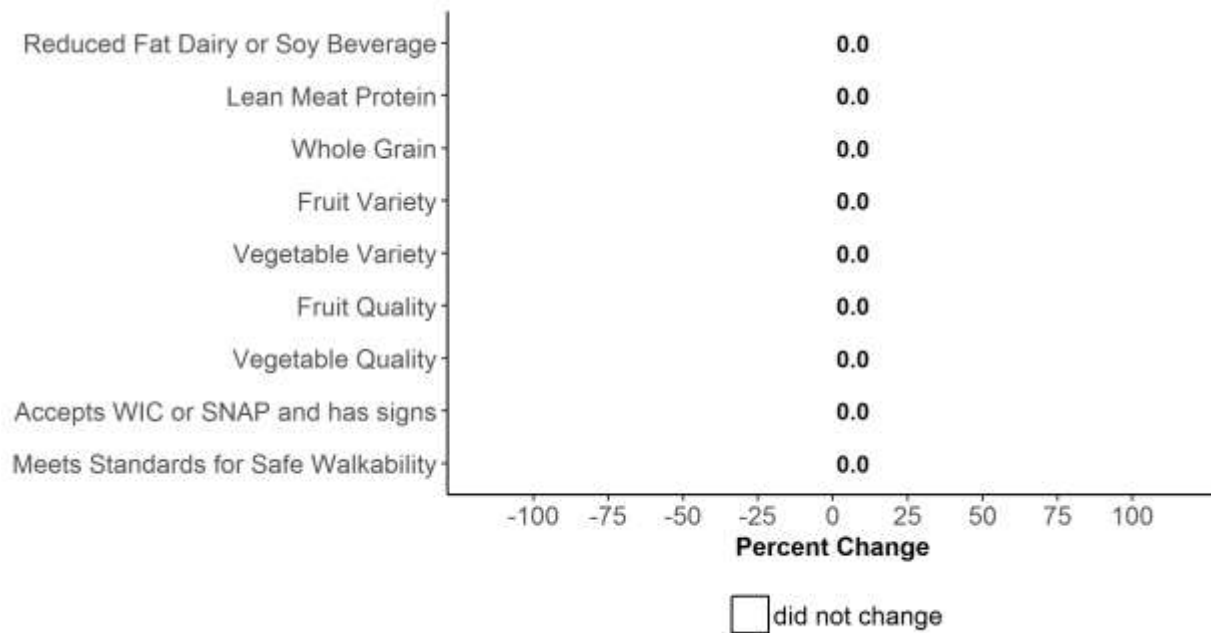
*Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

7.9.14. Walkability: Community Level Data

In **Anchorage**, 2 walkability surveys were assessed at baseline and 2 walkability surveys were assessed at post-intervention for the community walkability analysis. The changes among the submeasures for safe walkability around neighborhoods between baseline and post-intervention are as follows:

The mean for the total walking rating score decreased (-52.0%). Room to walk decreased (-77.8%). Ease of crossing street(s) decreased (-63.6%). Ease of following safety rules decreased (-50.0%). Drivers' behavior decreased (-33.3%). Pleasantness of walk decreased (-41.7%).

Table 7.9.14. Change in Community Walkability for Anchorage (Baseline n=2, Post-Intervention n=2)

Measure	Baseline n	Post n	Baseline n missing	Post n missing	Baseline mean	Post mean	% Change
Total Walking Rating	2	2	0	0	25.00	12.00	-52.0
Room to Walk	2	2	0	0	4.50	1.00	-77.8
Ease of Crossing Street (s)	2	2	0	0	5.50	2.00	-63.6
Ease of Following Safety Rules	2	1	0	1	6.00	3.00	-50.0
Drivers' Behavior	2	2	0	0	6.00	4.00	-33.3
Pleasantness of Walk	1	2	1	0	6.00	3.50	-41.7

Figure 7.9.14. Change in Community Walkability for Anchorage (Baseline n=2, Post-Intervention n=2)

*Within the figure, for each measure the change was set to a minimum of -100% and maximum of 100%.

Appendix

The initial baseline measurement period for individual measures was between October 2012 through February 2014 to complete measurement in all five jurisdictions. The post-intervention measurement period was between January 2015 – December 2015.

The following table reports the data collection periods by each jurisdiction for the baseline and post-intervention.

CHL-wide Data Collection Periods (Month and Year) by Jurisdiction and Experimental Group

Data Collection Group	Baseline Data Collection	Post-Intervention Data Collection
CHL–wide Total	Oct 2012 – Jan 2014	Nov 2014 – Sep 2015

Intervention (n=9)	Jan 2012 – Dec 2013	Jan 2015 – Sep 2015
Optimized (n=9)	Aug 2012 – Jan 2014	Nov 2014 – Feb 2015
Temporal (n=9)	Nov 20, 2012 – Mar 2014	May 2010 – Aug 2015
Alaska*		
Intervention (n=1)	Nov 2012 – Dec 2013	Feb 2015 – Sep 2015
Optimized (n=1)	Nov 2012 – Jan 2014	Nov 2014 – Oct 2015
Temporal (n=2)	Nov 2012 – March 2014	Dec 2014 – Aug 2015
American Samoa		
Intervention (n=2)	Jan 2013 – Oct 2013	Apr 2015 – Jul 2015
Optimized (n=2)	May 2013 – Nov 2013	Mar 2015 – Apr 2015
Temporal (n=2)	Apr 2013 – Apr 2013	May 2010 – Jul 2015
CNMI		
Intervention (n=2)	Jan 2012 – May 2013	Mar 2015 – Jun 2015
Optimized (n=2)	Jan 2013 – Apr 2013	Jan 2015 – Feb 2015
Temporal (n=2)	Nov 2011 – Feb 2013	Jan 2015 – Mar 2015
Guam*		
Intervention (n=2)	Nov 2012 – Oct 2013	Jul 2015 – Sep 2015
Optimized (n=2)	Nov 2012 – Oct 2013	Jan 2015 – May 2015
Temporal (n=1)	Nov 2012 – Oct 2013	May 2015 – Aug 2015
Hawaii		
Intervention (n=2)	Oct 2013 – Oct 2013	Jan 2015 – Jun 2015
Optimized (n=2)	Aug 2013 – Sep 2013	Jan 2015 – Sep 2015
Temporal (n=2)	Aug 2013 – Aug 2013	Apr 2015 – May 2015

*All jurisdictions included 2 interventions, 2 optimized, and 2 temporal communities, except for Alaska that had 1 intervention, 1 optimized, and 2 temporal communities, and Guam that had 2 intervention, 2 optimized, and 1 temporal community.

The following table summarizes the CHL target behaviors, the recommendation for each target, and a reference.

National Recommendations for CHL Target Behaviors

CHL Target Behavior	National Recommendation	Reference
Body Mass Index (BMI)	Between the 5th to 85th percentile for age and sex.	Centers for Disease Control and Prevention, 2009
Overweight/Obesity (OWOB)	A waist circumference equal or less than the 90th percentile for children 6 years or older.	Zimmett et al., 2007
Sleep	Recommended sleep time durations by age group: 11-14 hours for 2 year olds, 10-13 hours for 3 to 5 year olds, and 9-11 hours for 6 to 8 year olds.	Hirshkowitz et al., 2015
Moderate to Vigorous Physical Activity (MVPA)	At least 60 minutes of MVPA per day in sustained intervals.	Strong et al., 2005
Total Screen Time	Less than 2 hours daily.	American Academy of Pediatrics Committee on Public Education, 2001
Fruit Intake	At least 1 cup for 2 to 8 year olds.	USDA My Plan
Vegetable Intake	At least 1 cup for 2 year olds and at least 1.5 cups for 3 to 8 year olds.	USDA My Plan
Water Intake	An intake of 32-40 fluid ounces (4-5 cups) from all beverages consumed (milk, juice, drinking water) daily.	Institute of Medicine, 2004

Sugar Sweetened Beverage Intake	No sugar sweetened beverages.	Popkin et al., 2006

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