

Interim Report

An Evaluation of Alaska's Play Every Day Public Education Campaign and Obesity Related Knowledge, Attitudes, & Behaviors

December 2014 Survey

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Introduction

In 2012, the Alaska Obesity Prevention and Control Program (OPCP) launched the Play Every Day campaign to increase public awareness about the risks of childhood obesity and the importance of physical activity to prevent and reduce childhood obesity. The Play Every Day campaign consisted of several flights of campaign ads that aired during 2012, 2013, and 2014. Campaign media included T.V., radio, online, print, out of home, and social media. The campaign targeted parents of children ages 5 to 12.

In late 2014, the Play Every Day campaign turned its focus to sugar and sugary drinks by airing a T.V. ad about the sugar content in sugary drinks, comparing the amount of sugar in a 20-ounce bottle of soda to the amount of sugar in 16 chocolate mini doughnuts. In addition, the ad talked about how sugary drinks can lead to health problems such as tooth decay, obesity and diabetes.

This report presents findings from a media survey conducted in December 2014 that assessed recall and reaction to T.V. ads about sugar and sugary drink that aired during fall 2014. In addition, this report compares baseline survey responses on knowledge, attitudes, and behaviors about sugary drinks to responses on the December survey.

Methods

Overview

In June 2014, Hays Research Group was contracted by OPCP to conduct a statewide survey of 750 Alaska parents' knowledge, attitudes, and behaviors regarding sugary drinks, along with asking questions related to ad-specific recall and reaction to Play Every Day television ads that ran February-May 2014. In December 2014, Hays Research Group conducted a second survey of 500 Alaska parents who resided in the urban areas of Anchorage/Mat-Su, Fairbanks, and Southeast. The second survey repeated questions about knowledge, attitudes, and behaviors regarding sugary drinks, as well as included additional questions for ad recall and reaction to a sugary drink ad that ran September-October 2014.

This report summarizes results from the descriptive analysis of Survey 2 using the same analytic methods as Survey 1, and compares the responses from the second survey to those of the first survey for survey items that were repeated. A secondary analysis compared the responses of the subset of urban responders from Survey 1 to all responders from Survey 2.

Sample

Similar to the sampling strategy in Survey 1 (baseline survey), sampling used a random-digit-dial (RDD) procedure to survey Alaska adults with at least one child between the ages of 5 and 12. Unlike the baseline survey, which sampled adults in five regions throughout Alaska (Anchorage/Mat-Su, Fairbanks, Southeast, Gulf Coast, and rural), Survey 2 sampled adults only in the three urban areas (Anchorage/Mat-Su, Fairbanks, and Southeast) where the sugary drink ad ran. The survey data collection procedure was designed to obtain 500 completed surveys, with 20% completed on cell phones and 80% completed on landlines.

Survey Procedures

Survey procedures were identical for Survey 1 and Survey 2. Final disposition was determined after at least 3 calling occasions, each consisting of no more than 3 attempts at least one hour apart, for a minimum of 9 call attempts, with times varying between day, evening, and weekend. Call attempts were made over about one week, and the final disposition code was determined at the end of this period. A maximum of two voicemail messages per potential participant were allowed.

Measures

T.V. Recall and Reaction

A complete description of the ads included in Survey 1 can be found in the report: An Evaluation of Alaska's Play Every Day 2014 Public Education Campaign and Knowledge, Attitudes, & Behaviors about Sugary Drinks, October 2014.

The recall and reaction section of Survey 2 asked about a T.V. ad about soda and its sugar equivalence to that of mini doughnuts: "In this ad, a male voice compares the amount of sugar in a 20-ounce bottle of soda to the amount of sugar in 16 chocolate mini doughnuts. He talks about how sugary drinks can lead to health problems such as tooth decay, obesity and diabetes. The ad shows a boy sitting at a table with doughnuts dropping down from above onto an empty plate. A glass of soda overflows onto the table."

Respondents were first asked a general recall question: "Thinking about the last 60 days, have you seen any ads on T.V. about Play Every Day? (Note: the wording for the general recall question in Survey 1 was slightly different: "Thinking about the last 90 days, have you seen any ads on T.V. about getting kids to Play Every Day?"). Respondents who answered "yes" were then asked more specifically, "Thinking about the last 60 days, have you seen any ads that feature a child, a soda and sugary treats?" Again, if the respondent answered "yes," the interviewer then asked what they remembered about the ad. Respondents who answered "no" to the initial recall question, or who could not remember a specific element of the ad were asked an aided recall question that described specific elements of the spot and then asked whether or not they recalled the ad.

Respondents who either correctly identified a specific element of the ad (unaided recall), or who recalled the ad once it was described by the interviewer (aided recall) were considered to have recalled the ad, and were then asked a series of reaction questions. Specifically:

1. Have you talked about or shared these ads with friends, family or co-workers?
2. Would you say these ads gave you new information or perspective about the amount of sugar in sugary drinks?
3. Would you say this ad gave you new information or perspective about the health problems linked to sugary drinks?
4. Did this ad make you want to figure out the sugar content in your beverages before you drink them?
5. Did this ad make you want to drink healthier beverages, such as water or low-fat milk?
6. Did this ad make you want to drink fewer sugary drinks?
7. Did this ad make you want to serve fewer sugary drinks to your child?
8. Did you or your child drink fewer sugary drinks because of this ad?
9. Did you or your child drink more water or low-fat milk because of this ad?

10. What do you think was the main message of this ad? Responses were open ended and coded into the following categories: a) There is a lot of sugar hidden in some drinks; b) Too much sugar can lead to health problems (examples: obesity, diabetes, tooth decay); c) Don't let your children drink or eat too much sugar; d) Choose healthier drinks like water or milk; e) There's as much sugar in a bottle of soda as there is in mini doughnuts; and f) other.
11. Would you like to see more ads that provide information about sugary drinks?

General recall

Respondents who responded "yes" they had seen any ads on T.V. about Play Every Day were considered to have general recall of the Play Every Day campaign.

Ad-specific recall

Respondents who either correctly identified a specific element of the soda/doughnut T.V. ad (unaided recall), or who recalled the T.V. ad once it was described by the interviewer (aided recall) were considered to have ad-specific recall of the Play Every Day campaign.

Knowledge

Respondents were asked a series of questions to assess their knowledge about added sugars in drinks, the health-related harms of added sugars, identification of added sugars in product ingredient lists, and sugar equivalency between sugary drinks and sugary food items. Respondents were asked if they agreed or disagreed with the following statements. If a respondent indicated they agreed with a statement, he or she was then asked if they strongly or somewhat agreed. Although the option was not read by the interviewer, responses of "don't know" were retained and coded separately for all questions.

1. Sports drinks such as Gatorade and Powerade contain added sugars.
2. Non-diet Vitamin Water contains added sugars.
3. Sugary drinks are linked to diabetes, even in young children.
4. Sugary drinks are linked to weight gain and obesity in adults.
5. Sugary drinks are linked to weight gain and obesity in children.
6. Sugary drinks are linked to heart disease.
7. Water or low-fat milk are the healthiest drink options for my family.
8. I know how to identify added sugars on the ingredient list of a drink.
9. If added sugars are named in the first three ingredients of a drink, that drink is high in sugar.
10. A 20-ounce bottle of non-diet soda has as much sugar as 16 chocolate mini donuts.

Attitudes/Beliefs

Respondents were asked several questions to assess their attitudes/beliefs related to obesity.

1. It is important for me to set an example for my child by consuming fewer sugary drinks.
2. How much responsibility does/do (INSERT ITEM) have in addressing the problem of obesity in the United States – A lot of responsibility, some responsibility, not much responsibility, or no responsibility at all? Items included government, food industry, doctors and other health care providers, schools, individuals, and parents
3. Should schools be allowed to sell (INSERT FIRST ITEM) on campus? Items included non-diet soda or pop, non-diet sports drinks, non-diet fruit-flavored drinks, non-diet energy drinks, candy, salty snacks, cookies, or cakes.

Behaviors

Respondents were asked 14 questions to assess consumption of sugary drinks by their children or themselves, as well as behaviors related to purchasing and limiting access to sugary drinks at home.

1. I make decisions about drinks I buy based on their ingredients. (agree or disagree)
2. I limit the amount of drinks that I serve to my family that contain added sugars in the ingredient list. (agree or disagree)
3. Now I'd like to ask you some questions about sugary drinks at mealtimes, including packed lunches, or outside of meals. First I'd like to ask you about what your child (you) drinks....During the past 7 days, how often did you provide (did you drink) non-diet soda like Coco-Cola or 7-UP to your child?
4.During the past 7 days, how often did you provide (did you drink) non-diet fruit flavored or powdered drinks like Sunny-D, Tang, Capri Sun, or Kool-Aid to your child? Do not include 100% fruit juice.
5.During the past 7 days, how often did you provide (did you drink) non-diet sports drinks like Gatorade or Vitamin Water to your child?
6.During the past 7 days, how often did you provide (did you drink) non-diet energy drinks like Red Bull or Rock Star to your child?
7.During the past 7 days, how often did you provide (did you drink) non-diet coffee drinks like mochas or Frappuccinos to your child?
8.During the past 7 days, how often did you provide plain low- or non-fat milk to your child?
9.During the past 7 days, how often did you provide water to your child?

Demographic characteristics

The survey assessed the demographic characteristics of each respondent. For analyses, we examined region (Anchorage, Mat-Su, Fairbanks, Southeast); race (non-Hispanic White, Alaska Native-American Indian (ANAI) – any mention, and Other – includes multiple races/ethnicities but not ANAI); gender (male, female); age (20-29,30-39,40-49,50+ and continuous); household income (\$0-\$19,999, \$20,000-\$49,999, \$50,000-\$74,999, \$75,000-\$99,999, \$100,000+, and above or below 185% of poverty guidelines for Alaska¹); education (high school/GED or less, some college or technical school, college graduate +); and phone type (landline, cell).

Analysis

Descriptive analyses

We conducted frequencies and bivariate analyses with chi-square tests of demographic characteristics, campaign recall, and knowledge, attitudes, and behaviors (KAB) about sugary drinks. For each question, responses of “don’t know/not sure,” and refusals were coded as missing; therefore, the denominator for each question varied depending on the number of responses other than “don’t know/not sure” or refusals and on skip patterns in the survey. There were two exceptions. We included respondents who answered “don’t know/not sure” or refused in the denominator for the general and specific ad recall questions.

Comparison of Survey 1 to Survey 2

We selected the subset of urban responders from Survey 1 and performed a chi-square test in a two-by-two table for each survey item that was repeated in Survey 2. The dependent variable (column) was the dichotomous response to each survey item (e.g., served 1 or more sugary drink to child vs. none, or agree vs. disagree). The independent variable (row) was survey administration (e.g., Survey 1 or Survey 2). For specific ad recall, we compared the family ad from Survey 1 (aided + unaided) to the sugary drink ad in Survey 2 (aided + unaided).

Multivariable models

We used logistic regression to determine the impact of SES and race on all KAB and recall outcomes. For all logistic models, we dichotomized the response categories for all survey items;

¹ The poverty guidelines, issued each year in the Federal Register by the Department of Health and Human Services (HHS), are a simplified version of the federal poverty thresholds and are used to determine financial eligibility for federal programs. The Alaska-specific guideline totals are used to create a cut-point of household incomes at or below the 185% poverty guideline for this report because this percent corresponds with eligibility criteria for the Supplemental Nutrition Assistance Program (SNAP), the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and some parts of Medicaid.

responses of “don’t know/not sure” and refusals were excluded from the analyses, except for where noted above. All models were adjusted for respondent age (as a continuous variable) and gender. No adjustments were made for region or cell/landline, as they were determined in the bivariate analyses to provide limited information. Results from the logistic regression models are presented as odds ratios (OR) with 95% confidence intervals (CI).

All analyses were performed with unweighted data.

Results:

Survey 1 (September 2014) and Survey 2 (December 2014)

The tables below show the results for Survey 1 and Survey 2. Although some notable comparisons are highlighted, the side-by-side comparison of characteristics for the two samples does not control for the demographic differences between the two samples. Survey 2 was conducted only in urban areas (Anchorage/Mat-Su, Fairbanks, and Southeast), whereas Survey 1 included Gulf Coast and rural Alaska, in addition to the same urban areas. Notably, the demographic composition of respondents in Survey 1 included proportionally more Alaska Natives; larger proportions of Survey 2 respondents had high incomes and high educational attainment.

Respondent Demographics

Expected number of completes by region compared to actual are shown in Table 1.

Notable changes in demographics from Survey 1 to Survey 2:

- By design, there was a higher proportion of urban respondents in Survey 2, especially in Anchorage/Mat-Su, which increased from 46% in Survey 1 to 70% in Survey 2.
- The proportion of Alaska Native/American Indian respondents decreased by 50%, from 12% in Survey 1 to 6% in Survey 2.
- Respondents in Survey 2 were slightly older than in Survey 1, with larger proportion in higher income and education groups. However, the proportion above and below 185% of PGL stayed about the same.

Table 1. Respondents by Region

Region	Survey 1				Survey 2			
	Actual		Planned		Actual		Planned	
	%	N	%	N	%	N	%	N
Anchorage/Mat-Su	45.8	343	49.7	373	70.0	350	70.0	350
Gulf Coast	15.2	114	10.4	78	NA		NA	
Southeast	12.9	97	9.2	69	12.0	60	12.0	60
Rural Alaska	12.9	97	17.6	132	NA		NA	
Fairbanks/North Star	13.2	99	13.1	98	18.0	90	18.0	90

Table 2 shows demographic characteristics of respondents.

Table 2. Demographics of Survey Respondents^a

	Survey 1		Survey 2	
	%	N	%	N
Race^b				
White	77.6	572	81.1	395
ANAI	11.5	85	5.8	28
Other	10.9	80	13.1	64
Gender				
Male	31.3	235	36.0	180
Female	68.7	515	64.0	320
Age^c				
20-29	13.1	98	2.2	11
30-39	43.6	327	37.2	182
40-49	37.6	282	49.6	243
50+	4.3	32	11.0	54
Household Income				
\$0-\$19.9k	3.0	21	3.9	18
\$20-\$49.9k	18.1	126	17.7	82
\$50-\$74.9k	17.8	124	15.5	72
\$75-\$99.9k	21.4	149	19.8	92
\$100k+	39.6	275	43.1	200
< 185% PGL ^d	21.6	150	22.4	104
>185% PGL ^d	78.4	545	77.6	360
Education				
< H.S.	3.0	22	2.2	11
H.S. or GED	19.6	146	12.4	61
Some college	28.2	210	27.4	135
College +	49.2	366	58.0	286
# Children 5-12 in Household 4 days/week^e				
1	49.9	374	47.6	238
2	35.1	263	37.8	189
3	10.0	75	11.0	55
4	3.9	29	2.4	12
5	0.9	7	1.0	5
6	0.3	2	0.2	1
Child Age^f				
5	12.3	92	9.2	46
6	9.5	71	12.5	62
7	13.2	99	11.4	57
8	11.3	85	12.7	63
9	13.0	97	10.4	52
10	13.8	103	15.1	75
11	13.0	97	13.3	66
12	14.0	105	15.5	77

Phone Type					
	Landline	80.0	600	80.0	400
	Cell Phone	20.0	150	20.0	100

^aExcludes respondents who answered don't know/not sure or refused.

^b"ANAI" includes all survey respondents who report being Alaska Native/American Indian, alone or in combination with another race. "White" includes only non-Hispanic White. "Other" includes those who report all other races/ethnicities or multiple race groups, not including ANAI.

^cMedian age of respondents Survey 1 = 41, Survey 2 = 42

^dAlaska Poverty Guidelines. See also footnote on page 6 of this report.

^eMedian # children 5-12 = 1 (both surveys)

^fMedian age of children 5-12 = 9 (both surveys)

Ad Recall

Notable changes from Survey 1 to Survey 2:

- General ad recall declined from 58% in Survey 1 to 53% in Survey 2; however, the wording of the question also changed from “Thinking about the last 90 days, have you seen any ads on T.V. about getting kids to Play Every Day?” to “Thinking about the last 60 days, have you seen any ads on T.V. about Play Every Day?”
- Specific ad recall about the sugary drink ad was 43% compared to 59% for the active family ads and 18% for the animated overweight ad.
- Sugary drink ad prompted behavioral intentions for sugary drink consumption in over 50% of respondents - about the same as for physical activity for the ads in Survey 1. However, fewer than 20% attributed the ad to actual change in behavior (drinking fewer sugary drinks). Ad attribution for PA behavior change was higher (26%-29%).

Table 3. Play Every Day Campaign Recall

	<i>Survey 1 General Play Every Day</i>		Survey 2 General		<i>Survey 1 Specific Active Family Ads</i>		<i>Survey 1 Specific Animated Owgt Ad</i>		Survey 2 Donut Ad	
	%	N	%	N	%	N	%	N	%	N
General Recall ^a	57.5	431	53.0	265						
Ad Specific Recall					58.9 ^b	442	18.4 ^c	138	42.6^g	213
Talked about ads with others ^d					17.4	77	21.7	30	24.9	53
Ads gave new information or perspective ^d					27.7	121	47.1	64		
Ads gave new information or perspective – sugar in drinks									39.3	83
Ads gave new information or perspective – health problems									27.4	58
Ads made respondent want to get child more physically active ^d					48.0	208	52.2	71		
Ads made respondent want to get more active with child ^d					63.5	275	59.4	82		
Did physical activity because of ads ^d					26.3	114	28.7	39		
Ad made respondent want to figure out sugar content ^d									29.1	62
Ad made respondent want to drink healthier beverages ^d									52.4	111
Ad made respondent want to drink fewer sugary drinks ^d									58.7	125

Ad made respondent want serve fewer sugary drinks to child ^d						62.9	132
Respondent/child drank fewer sugary drinks because of ad ^d						18.0	37
Respondent/child drank more water or milk because of ad ^d						19.0	40
Main message of family active ads ^d							
Inspire your kids to play every day			79.9	345			
Childhood obesity is a public health problem			16.0	69			
Kids eat too much junk food			4.2	18			
Main message of animated child overweight ad ^d							
Overweight children face health risks during childhood					75.8	97	
Drinking sugary drinks is linked to obesity					15.6	20	
Kids need less screen time					8.6	11	
Main message of sugary drink ad							
Lot of sugar hidden in drinks						33.7	68
Too much sugar can lead to health problems						12.9	26
Don't let your children drink/eat too much sugar						10.4	21
Choose healthier drinks like milk or water						10.4	21
There's as much sugar in soda as in mini donuts						2.5	5
Other						30.2	61
Like to see more ads about... ^d							
...ways families can be active			84.5	359	78.5	106	
...health risks childhood obesity							
...information about sugary drinks							
Ad made respondent want to learn more about prevent/treat childhood obesity ^d							
Website							
Heard of website "PlayEveryDay.Alaska.gov" ^e	38.0	285					
Visited website "PlayEveryDay.Alaska.gov" ^f	17.2	49					

^aSurvey 1: Denominator = 750, which includes 34 "don't know/not sure" and 1 refusal. Survey 2: Denominator = 500, includes 20 DK and 0 refused.

^bDenominator = 750, which includes 33 "don't know/not sure" and 2 refusals.

^cDenominator = 750, which includes 34 "don't know/not sure" and 1 refusal.

^dTarget denominator for active family ads = 442; target denominator for animated overweight ad = 138; however, each item excludes don't know/not sure and refused which causes denominator to vary for each question. Target denominator for sugary drink ad = 213, excludes DK/not sure and refused for each item.

^eDenominator = 750, which includes 14 don't know/not sure and 0 refusals.

^fDenominator = 285, which includes 1 don't know/not sure and 0 refusals

^gDenominator = 500. There were no DK or refusals.

Knowledge, Attitudes, Behaviors – Sugary Drinks and Obesity

Notable items in Survey 2, as well as notable changes from Survey 1 to Survey 2:

- The percentages for all the repeated knowledge items are slightly lower in Survey 2 compared to Survey 1, except for the question about sugar equivalency in 20-oz. soda and 15 mini doughnuts, which was higher in Survey 2 (from 90% in Survey 1 to 93% in Survey 2).
- Regarding opinions about what entities should take responsibility for obesity, “Government” was lowest (54%), “Parents” was highest (99%). Note: the survey the asked about “the problem of obesity in the United States, ” not about childhood obesity.
- Slight increase in the percentage of respondents providing no soda, no fruit drinks, no sports drinks, or no energy drinks, as well as all drinks combined, to child in Survey 2 (increases in % “None”).

	Survey 1		Survey 2	
KAB Survey Item	%	N	%	N
KNOWLEDGE				
Knowledge – Sugary Drinks (% Agree)^a				
Non-diet soda or pop such as Coca Cola, Pepsi, Mountain Dew, Sprite, and Dr. Pepper contain added sugars.	91.5	678		
Sports drinks such as Gatorade and Powerade contain added sugars.	93.6	683	92.2	447
Non-diet Vitamin Water contains added sugars.	83.1	507	81.0	357
Non-diet fruit flavored or powdered drinks such as Sunny-D, Tang, Capri Sun, or Kool-Aid contain added sugars.	94.9	700		
Sugary drinks are linked to tooth decay and cavities.	98.1	736		
Sugary drinks are linked to diabetes, even in young children.	95.8	700	93.2	455
Sugary drinks are linked to weight gain and obesity in adults.	97.7	729	97.4	484
Sugary drinks are linked to weight gain and obesity in children.			97.2	482
Sugary drinks are linked to heart disease.	89.1	575	88.9	386
Young children should have no more than 4 teaspoons of added sugar each day.	91.6	642		
Water or low-fat milk are the healthiest drink options for my family.	96.5	722	95.4	474
I know how to identify added sugars on the ingredient list of a drink.	97.8	724	96.4	481
If added sugars are named in the first three ingredients	97.0	705	96.8	477

of a drink, that drink is high in sugar.				
A 20-ounce bottle of non-diet soda has as much sugar as 16 chocolate mini donuts.	89.7	506	93.1	404
Knowledge – Physical Activity/Physical Education				
Have you heard any recommendations about the amount of physical activity or exercise a child or youth should get each day for good health?	90.5	679 ^b		
How many days per week/minutes per day have you heard that a child or youth should be physically active?				
7 days/wk and 60-120 min/day	32.1	241 ^c		
1-2 days	1.6	11 ^d		
3-4 days	12.5	84 ^d		
5-6 days	24.5	164 ^d		
7 days	61.3	411 ^d		
1-29 min/day	8.3	55 ^e		
30-59 min/day	35.2	233 ^e		
60-120 min/day	55.4	366 ^e		
>120 min/day	1.1	7 ^e		
ATTITUDES				
Attitudes/Opinions – Sugary Drinks (% Agree)^a				
It is important for me to set an example for my child by consuming fewer sugary drinks.	97.5	731	97.0	485
Attitudes/Opinions – Physical Education				
In your opinion, should elementary school students have physical education, or PE, in school?	98.8	741 ^b		
In your opinion, out of a 5 day school week, how many days a week should elementary school students have PE? On those days, in your opinion, how many minutes of PE should elementary school students have?				
At least 150 minutes/week (combined days + minutes)	71.3	535 ^c		
1-2 days				
3 days	5.5	41 ^f		
4 days	23.8	176 ^f		
5 days	3.1	23 ^f		
67.6	500 ^f			
1-29 min/day				
30-44 min/day	3.7	27 ^g		
45-59 min/day	45.7	336 ^g		
60+ min/day	26.0	191 ^g		
24.7	182 ^g			
Attitudes/Opinions – Responsibility for Obesity (% A Lot/Some)^a				
How much responsibility does government have in addressing the problem of obesity?			53.9	265
How much responsibility does the food industry have in addressing the problem of obesity?			75.0	372
How much responsibility do doctors have in addressing the problem of obesity?			75.6	374

How much responsibility do schools have in addressing the problem of obesity?			79.2	391
How much responsibility do parents have in addressing the problem of obesity?			98.8	493
How much responsibility do individuals have in addressing the problem of obesity?			92.2	450
Attitudes/Opinions –Should Schools Be Allowed to Sell... (% Yes)^a				
Non-diet soda or pop			27.7	137
Non-diet sports drinks			49.6	244
Non-diet fruit-flavored drinks			47.3	231
Non-diet energy drinks			14.63	72
Candy, salty snacks, cookies, cakes			35.5	173
BEHAVIORS				
Behaviors – Added Sugars, Sugary Drinks, Water, Milk (% Agree)^a				
I make decisions about drinks I buy based on their ingredients.	92.0	688	91.8	459
I limit the amount of drinks that I serve to my family that contain added sugars in the ingredient list.	95.9	717	98.2	488
During the past 7 days, how often did you provide (did you drink) non-diet soda like Coco-Cola or 7-UP to your child?				
Provide to Child				
None	62.6	466	64.3	321
1-2/wk	26.5	197	30.5	152
3-6/wk	5.0	37	2.6	13
1/day	3.8	28	2.0	10
>1/day	2.2	16	0.6	3
Adult consume				
None	63.2	470	62.5	311
1-2/wk	21.1	157	21.5	107
3-6/wk	6.5	48	8.2	41
1/day	5.9	44	4.6	23
>1/day	3.8	28	3.2	16
During the past 7 days, how often did you provide (did you drink) non-diet fruit flavored or powdered drinks like Sunny-D, Tang, Capri Sun, or Kool-Aid to your child? Do not include 100% fruit juice.				
Provide to Child				
None	64.8	484	72.1	356
1-2/wk	21.3	159	14.4	71
3-6/wk	4.6	34	7.9	39
1/day	5.1	38	4.3	21
>1/day	4.3	32	1.4	7

Adult consume				
None	86.1	643	92.2	460
1-2/wk	8.4	63	4.2	21
3-6/wk	1.9	14	2.4	12
1/day	2.4	18	0.8	4
>1/day	1.6	12	0.4	2
During the past 7 days, how often did you provide (did you drink) non-diet sports drinks like Gatorade or Vitamin Water to your child?				
Provide to Child				
None	73.6	550	82.1	408
1-2/wk	17.9	134	12.5	62
3-6/wk	4.3	32	2.4	12
1/day	3.1	23	2.0	10
>1/day	1.1	8	1.0	5
Adult consume				
None	80.7	603	83.4	416
1-2/wk	11.4	85	9.4	47
3-6/wk	4.6	34	4.4	22
1/day	2.5	19	1.8	9
>1/day	1.1	8	1.0	5
During the past 7 days, how often did you provide (did you drink) non-diet energy drinks like Red Bull or Rock Star to your child?				
Provide to Child				
None	99.2	742	99.6	496
1-2/wk	0.3	2	0.2	1
3-6/wk	0.1	1	0.0	0
1/day	0.3	2	0.0	0
>1/day	0.1	1	0.2	1
Adult consume				
None	92.9	695	92.6	462
1-2/wk	3.5	26	3.8	19
3-6/wk	1.9	14	1.8	9
1/day	1.5	11	1.0	5
>1/day	0.4	3	0.8	4
During the past 7 days, how often did you provide (did you drink) non-diet coffee drinks like mochas or Frappuccinos to your child?				
Provide to Child				
None	97.2	728	96.6	482
1-2/wk	2.0	15	2.8	14
3-6/wk	0.0	0	0.4	2
1/day	0.7	5	0.2	1
>1/day	0.1	1	0.0	0
Adult consume	63.6	476		
None	11.1	83	57.6	288
1-2/wk	6.3	47	15.5	77

	3-6/wk	13.8	103	6.8	34
	1/day	5.2	39	12.7	63
	>1/day			7.0	35
During the past 7 days, how often did you provide plain low- or non-fat milk to your child?					
	None	12.2	91	12.0	60
	<1/day	18.2	136	16.6	83
	1/day	37.2	278	30.7	153
	1-2/day	19.0	142	24.5	122
	>2/day	13.4	100	16.2	81
During the past 7 days, how often did you provide water to your child?					
	<2/day	29.7	219	21.2	104
	2-4/day	27.4	202	32.2	158
	4-6/day	23.3	172	25.9	127
	6-8/day	11.0	81	11.2	55
	8+/day	8.7	64	9.6	47
Sugary Drink Score: Total of all sugary drinks provided to a child in the past 7 days					
	None	35.2	260	44.9	220
	1-2/wk	28.7	212	29.6	145
	3-6/wk	16.8	124	14.1	69
	1/day	7.3	54	3.9	19
	>1/day	12.0	89	7.6	37
Behaviors – Physical Activity					
Child's school participated in Healthy Futures Challenge					
	- % yes	55.5	416 ^h		
Child participated in Healthy Futures Challenge - % yes					
		83.8	341 ⁱ		

^aExcludes don't know/not sure, refused.

^bDenominator = 750, includes 5 don't know/not sure and 0 refusals.

^cDenominator = 750

^dAmong the 679 who had heard recommendations and were eligible to answer the question (because of the skip pattern in the survey), 670 responded (denominator); excludes 8 don't know/not sure and 1 refusal.

^eAmong the 670 who had heard recommendations, responded to number of days, and were eligible to answer the question (because of the skip pattern in the survey), 661 responded (denominator); excludes 8 don't know/not sure and 1 refusal.

^fAmong the 741 who said elementary school students should have PE and were eligible to answer the question (because of the skip pattern in the survey), 740 responded (denominator); excludes 1 don't know/not sure and 0 refusals.

^gAmong the 740 who said elementary school students should have PE and were eligible to answer the question (because of the skip pattern in the survey), 736 responded (denominator); excludes 3 don't know/not sure and 1 refusal.

^hDenominator = 750, includes 167 don't know/not sure and 0 refusals.

ⁱAmong the 416 who said their child's school participated in Healthy Futures; excludes 9 don't know/not sure and 0 refusals.

Bivariate Analyses

The table of bivariate results for Survey 2 is presented first (Table 5A), followed by Survey 1 in Table 5B. Notable changes in Survey 2 are:

- The distribution of knowledge across income categories, education categories, and race categories remained fairly constant between Survey 1 and Survey 2.
- Regarding the “responsibility for obesity” questions in Survey 2, there were no significant differences in responses between income groups or among race groups (except responsibility – parents). There were, however, significant differences in proportions among education groups. Respondents with college+ education more likely to express support for the food industry and medical providers taking responsibility for obesity, as well as support for individuals taking responsibility for obesity.
- Regarding the questions about schools selling sugary drinks and snacks, there were significant differences in opinion by education. The percentages of respondents in the college+ education group that expressed support the sale of junk items were smaller for all categories of junk, and significantly smaller for soda, sports drinks, and fruit drinks. There were no significant differences by income or race.
- The significance of education and race on sugary drink behaviors remained fairly stable from Survey 1 to Survey 2; however, there were far fewer significance differences between income groups in Survey 2.

Table 5A. SURVEY 2: Crosstabs for Knowledge, Attitudes, Behaviors by Selected Demographics
% Agree, % Yes, or % > 1 per Week^a

Outcomes ^b	Income		Education			Race		
	<=185%	>185%	<=H.S.	Some College	College+	White	ANAI	Other
Knowledge								
Added sugars - soda								
Added sugars – sports drinks	87.1*	93.4*	87.1	94.7	92.0	93.7*	81.5*	85.7*
Added sugars – Vitamin Water	71.1*	83.3*	71.9*	78.0*	84.5*	84.7*	56.0*	70.7*
Added sugars – fruit drinks								
Sugary drinks - tooth decay								
Sugary drinks - diabetes	88.4*	94.9*	81.7*	90.8*	97.1*	95.4*	80.8*	87.1*
Sugary drinks – obesity adults	94.2*	98.3*	93.0*	94.8*	99.7*	99.0*	92.9*	90.3*
Sugary drinks – obesity children	93.2*	98.0*	91.6*	94.8*	99.7*	98.5*	92.9*	91.9*
Sugary drinks – heart disease	84.6	89.7	82.1*	84.0*	92.9*	93.0*	65.2*	77.8*
Young children 4 tsp sugar								
Water/milk healthiest options	89.4*	97.2*	88.9*	96.3*	96.8*	95.4	96.4	93.7
Identify sugars ingredient list	95.2	96.7	91.7*	95.6*	97.9*	97.5*	89.3*	92.1*
Sugars first three ingredients	95.2	97.2	89.7*	97.8*	97.9*	97.7*	96.2*	90.5*
20 oz soda = 16 mini donuts	88.3*	94.5*	89.4	93.3	93.8	95.1*	94.7*	78.2*
Heard PA recommendations ^c								
Knows PA 7 days per wk, 60-120 min per day ^c								
Attitudes								
Important set example fewer sugary drinks	96.2	97.5	93.1	96.3	98.3	98.7*	89.3*	93.8*
Responsibility for obesity – government	55.9	54.9	49.3*	44.6*	59.7*	54.1	55.6	56.5
Responsibility for obesity – food industry	76.9	75.1	66.7*	67.4*	81.1*	76.8	60.7	74.6

Responsibility for obesity – medical providers	77.5	75.9	63.4*	73.5*	79.7*	77.1	80.8	66.7
Responsibility for obesity – schools	79.4	78.7	78.9	74.4	80.9	80.0	67.9	81.0
Responsibility for obesity – individuals	94.2	92.3	88.4*	88.7*	95.7*	92.5	89.3	93.4
Responsibility for obesity – parents	99.0	98.9	98.6*	98.5	99.3	99.2*	92.9*	98.4*
Should schools sell soda or pop	22.8	29.1	32.9*	33.6*	23.3*	27.0	32.1	26.6
Should schools sell sports drinks	49.0	50.1	62.9*	57.5*	42.7*	48.7	55.6	53.1
Should schools sell fruit drinks	48.0	46.9	55.6*	55.3*	41.2*	46.2	46.4	53.1
Should schools sell energy drinks	13.6	15.3	15.5	19.3	12.2	14.7	21.4	11.1
Should schools sell candy, snacks	38.2	33.2	39.4	42.0	31.2	34.9	39.3	34.9
PE in elementary school ^c PE 150+ minutes per week ^c								
Behaviors								
Buying decisions based on ingredients	88.5	93.1	77.8*	88.9*	97.2*	93.9*	75.0*	85.9*
Limit drinks with added sugars	96.1	98.9	93.0*	98.5*	99.3*	99.2*	100.0*	93.8*
Provide soda to child (% at least 1/wk)	41.4	34.4	47.9*	37.8*	31.1*	35.3	35.7	32.8
Consume soda – adult (% at least 1/wk)	38.8	37.2	48.6*	44.8*	31.1*	36.5	48.2	37.5
Provide fruit drinks to child (% at least 1/wk)	30.1	27.5	36.1	28.9	25.2	26.5*	53.9*	23.4*
Consume fruit drinks – adult (% at least 1/wk)	16.4*	5.8*	20.8*	7.4*	4.6*	5.8*	28.6*	9.4*
Provide sports drinks to child (% at least 1/wk)	17.5	18.4	26.4*	22.6*	13.3*	16.3	21.4	25.0
Consume sports drinks – adult (% at least 1/wk)	17.3	15.8	26.4*	20.7*	11.5*	14.7	17.9	26.6
Provide energy drinks to child (% at least 1/wk)	1.0	0.3	0.0	0.0	0.7	0.3	0.0	1.6
Consume energy drinks – adult (% at least 1/wk)	8.7	7.2	19.4*	8.2*	3.9*	6.3	14.3	10.9
Provide coffee drinks to child (% at least 1/wk)	2.9	3.9	6.9	4.4	2.1	3.8	3.6	0.0
Consume coffee drinks – adult (% at least 1/wk)	41.8	40.8	45.8	44.4	39.2	42.2	21.4	45.3
Provide milk to child (%)	70.2	72.2	77.8	68.2	71.3	72.2	66.7	68.8

at least 1 per day)								
Provide water to child (% at least 2 per day)	76.7	79.7	74.3	80.3	78.8	79.5	74.1	74.2
Provide any sugary drink to child (% at least 1/wk)	53.5	56.2	65.7*	63.2*	48.6*	54.1	65.4	54.7
Healthy Futures Challenge – school ^c								
Healthy Futures Challenge - child								
Ad Recall								
General recall Play Every Day ^c	48.1	55.3	54.2	51.9	52.5	49.9*	64.3*	64.1*
Ad-specific recall active family ^c								
Ad-specific recall childhood obesity ^c								
Ad-specific recall sugary drinks ^c	49.0	41.1	54.2*	46.7*	37.4*	41.8	42.9	46.9
Play Every Day website – heard ^c								
Play Every Day website - used								

^aAsterisk (*) indicates statistically significant different proportions within each demographic group at the $p \leq 0.05$ level.

^bEach survey item excludes don't know/not sure and refusals from the denominator except: (1) heard PA recommendations, (2) knows PA recommendations for 7 days/60-120 minutes, (3) PE in elementary schools, (4) 150+ PE minutes per week, (5) Healthy Futures – school, (6) general and specific ad recall, and (7) heard about Play Every Day website.

^cDenominator = 750 in Survey 1, 500 in Survey 2; includes don't know/not sure and refusals.

Table 5B. SURVEY 1: Crosstabs for Knowledge, Attitudes, Behaviors by Selected Demographics
% Agree, % Yes, or % > 1 per Week^a

Outcomes ^b	Income		Education			Race		
	<=185%	>185%	<=H.S.	Some College	College+	White	ANAI	Other
Knowledge								
Added sugars - soda	87.9	92.2	83.0*	92.8*	94.8*	92.6	86.9	88.6
Added sugars – sports drinks	86.4*	95.3*	82.6*	96.6*	96.8*	95.3*	84.3*	91.1*
Added sugars – Vitamin Water	72.8*	85.0*	71.1*	87.3*	85.9*	84.5	75.0	83.1
Added sugars – fruit drinks	89.9*	95.7*	89.1*	96.1*	96.7*	95.7*	88.1*	94.9*
Sugary drinks - tooth decay	97.3	98.2	94.6*	99.5*	98.9*	98.8*	95.3*	96.3*
Sugary drinks - diabetes	93.8	96.1	92.6*	95.1*	97.5*	95.7	95.2	96.3
Sugary drinks – obesity	95.3*	98.2*	95.8	97.6	98.6	97.6	98.8	97.5
Sugary drinks – heart disease	86.2	89.8	80.7*	90.8*	92.2*	89.9	87.0	89.0
Young children 4 tsp sugar	90.1	92.1	89.7	93.5	91.2	92.3	91.5	88.2
Water/milk healthiest options	96.7	96.1	97.0	97.1	95.9	96.0	100.0	96.3
Identify sugars ingredient list	96.6	98.1	94.6*	98.1*	99.2*	98.4	96.4	94.9
Sugars first three ingredients	94.4*	97.7*	92.6*	98.5*	98.0*	97.7	95.1	93.7
20 oz soda = 16 mini donuts	84.2*	91.2*	80.3*	96.1*	90.7*	92.5*	84.1*	81.7*
Heard PA recommendations ^c	82.7*	93.0*	79.8*	89.5*	95.9*	92.5*	80.0*	87.5*
Knows PA 7 days per wk, 60-120 min per day ^c	28.0	33.2	28.6	32.4	33.6	33.0	28.2	30.0
Attitudes								
Important set example fewer sugary drinks	95.3	97.8	96.4	97.6	97.8	98.1	97.7	95.0
PE in elementary school ^c	99.3	98.5	98.2	98.1	99.5	98.8	97.7	100.0
PE 150+ minutes per week ^c	64.7*	74.3*	69.1*	66.2*	75.4*	70.3	70.6	77.5
Behaviors								
Buying decisions based	84.5*	93.8*	82.6*	91.9*	96.2*	94.1*	81.0*	88.8*

on ingredients								
Limit drinks with added sugars	94.0	96.2	94.0	94.3	97.5	96.9	91.7	94.9
Provide soda to child (% at least 1/wk)	37.8	36.6	35.9	42.4	34.6	37.5	37.7	32.5
Consume soda – adult (% at least 1/wk)	48.3*	35.2*	49.1*	41.4*	29.1*	34.6*	56.0*	36.3*
Provide fruit drinks to child (% at least 1/wk)	49.0*	31.3*	47.3*	36.4*	29.0*	31.1*	58.8*	38.8*
Consume fruit drinks – adult (% at least 1/wk)	27.3*	10.3*	23.8*	12.9*	10.7*	10.1*	36.5*	18.8*
Provide sports drinks to child (% at least 1/wk)	32.7*	24.9*	31.0	26.0	24.9	23.9*	32.9*	38.8*
Consume sports drinks – adult (% at least 1/wk)	28.0*	17.3*	29.2*	21.9*	14.0*	17.7*	32.9*	17.5*
Provide energy drinks to child (% at least 1/wk)	0.7	0.9	1.2	0.5	0.8	0.7	1.2	1.3
Consume energy drinks – adult (% at least 1/wk)	13.3*	5.5*	15.5*	8.1*	3.0*	6.7*	14.1*	5.0*
Provide coffee drinks to child (% at least 1/wk)	1.3	3.5	3.0	2.9	2.7	2.8*	0.0*	6.3*
Consume coffee drinks – adult (% at least 1/wk)	32.9	38.2	34.1	39.2	35.8	37.0	28.8	42.5
Provide milk to child (% at least 1 per day)	62.7*	70.9*	68.5	70.3	69.5	70.6	64.7	65.4
Provide water to child (% at least 2 per day)	68.0	71.1	70.3	66.4	72.4	72.3	62.2	63.6
Provide any sugary drink to child (% at least 1/wk)	74.2*	61.7*	69.9*	68.0*	60.4*	62.2*	77.7*	67.5*
Healthy Futures Challenge – school ^c	50.0	56.2	51.2	52.4	59.0	56.8	44.7	60.0
Healthy Futures Challenge - child	84.7	83.3	85.5	82.4	83.5	83.0	92.0	81.3
Ad Recall								
General recall Play Every Day ^c	54.0	58.2	55.4	63.3	54.9	56.8	57.7	63.8
Ad-specific recall active family ^c	57.3	58.9	58.9	65.2	55.5	55.9*	67.1*	72.5*
Ad-specific recall childhood obesity ^c	23.3	17.8	19.1	22.4	16.1	16.6*	23.5*	28.8*
Play Every Day website – heard ^c	31.3	39.8	25.6*	44.8*	39.9*	38.5	30.6	41.3
Play Every Day website - used	23.4	14.3	18.6	8.5	21.9	16.4*	7.7*	30.3*

^aAsterisk (*) indicates statistically significant different proportions within each demographic group at the p <=0.05 level.

^bEach survey item excludes don't know/not sure and refusals from the denominator except: (1) heard PA recommendations, (2) knows PA recommendations for 7 days/60-120 minutes, (3) PE in elementary

schools, (4) 150+ PE minutes per week, (5) Healthy Futures – school, (6) general and specific ad recall, and (7) heard about Play Every Day website.

^cDenominator = 750; includes don't know/not sure and refusals.

Region. For Survey 2, there were 4 significant differences in outcomes by region. When considering only the regions that were surveyed at both time points, there was a considerable decline in the percentage of respondents in Southeast who provided any sugary drink to a child, from 54% in Survey 1 to 37% in Survey 2.

Table 6. Significant Differences by Gender - % Agree, % Yes, % A Lot/Some

	Survey 1					Survey 2										
	Anchorage		Southeast		Fairbanks		Gulf Coast		Rural		Anch.		SE		Fairbanks	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
Significant Items Only																
Heard PA recommendations	92.4	317	85.6	83	91.9	91	93.9	107	83.5	81						
Healthy Futures Challenge – school	61.8	212	53.6	52	47.5	47	64.0	73	33.0	32						
Provide fruit drink to child (% at least 1/wk)	34.9	119	23.7	23	32.3	32	31.9	36	54.6	53						
Consume fruit drinks adult (% at least 1/wk)	12.5	43	10.3	10	14.1	14	7.9	9	32.0	31						
Knowledge: sports drinks added sugars											90.1	310	94.4	51	98.9	86
Provide soda to child (% at least 1/wk)											37.0	129	20.0	12	41.1	37
Provide water to child (% at least 2 per day)											80.2	276	66.7	40	81.6	71
Provide any sugary drink to child (% at least 1/wk)	65.1	220	54.2	52	68.4	67	60.9	67	75.3	73	56.6	194	36.7	22	62.1	54

Gender. For Survey 2, there were numerous significant differences in outcomes by gender. The gender differences in sugary drink consumption behaviors were similar from Survey 1 to Survey 2 (fewer females providing and consuming sugary drinks than males); however, there were more significant differences in knowledge on Survey 1, with higher percentages of females expressing agreement with numerous knowledge items than males.

Table 7. Significant Differences by Gender - % Agree, % Yes, % A Lot/Some

	Survey 1				Survey 2			
	Female		Male		Female		Male	
	%	N	%	N	%	N	%	N
Significant Items Only								
Added sugars - soda	93.3	475	87.5	203				
Added sugars – vitamin water	86.2	367	76.1	140				
Sugary drinks linked to tooth decay	98.8	509	96.6	227				
Sugary drinks linked to diabetes	97.4	494	92.0	206				
Sugary drinks linked to obesity adults	98.4	504	96.2	225				
Sugary drinks linked to heart disease	92.1	410	82.5	165				
Limit drinks with added sugars	96.9	497	93.6	220				
Important to set example for child	98.6	508	94.9	223				
Sugar first 3 ingredients	98.6	500	93.2	205				
Buy drinks based on ingredients	93.4	481	88.8	207	95.3	305	85.6	154
Know how to identify added sugars on ingredient list	98.6	504	96.1	220	97.8	312	93.9	169
20oz soda = 16 mini donuts	92.3	369	83.5	137	95.3	265	89.1	139
Responsibility obesity - government					59.0	187	44.6	78
Responsibility obesity – food industry					80.5	256	65.2	116
Responsibility obesity – medical providers					78.9	251	69.5	123
Responsibility obesity – schools					83.0	263	77.3	128
Should schools sell soda					23.8	75	34.6	62
Should schools sell					45.4	143	57.1	101

sports drinks								
Should schools sell fruit drinks				41.9	130	56.7	101	
Should schools sell energy drinks				11.2	35	20.8	37	
Provide fruit drinks to child (% at least 1/wk)	30.0	154	46.6	109	25.0	79	33.2	59
Provide sports drinks to child (% at least 1/wk)					14.2	45	24.4	44
Consume soda – adult (% at least 1/wk)	31.3	160	49.8	117	31.5	100	48.3	87
Consume fruit drinks – adult (% at least 1/wk)	10.9	56	21.7	51	5.3	17	12.2	22
Consume sports drinks – adult (% at least 1/wk)	16.0	82	27.2	64	12.9	41	23.3	42
Consume energy drinks – adult (% at least 1/wk)					5.3	17	11.1	20
Provide any sugary drink to child (% at least 1/wk)	60.4	308	74.7	171	51.0	159	62.4	111
Heard of Play Every Day website	40.8	210	31.9	75				
Participate Healthy Futures - school	59.0	304	47.7	112				

Cell/Landline. For Survey 2, there were five significant differences by telephone type.

Table 8. Significant Differences by Phnone Type - % Agree, % Yes, % A Lot/Some

	<i>Survey 1</i>				Survey 2			
	<i>Cell</i>		<i>Landline</i>		Cell		Landline	
	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	%	N	%	N
Significant Items Only								
Knowledge: sports drinks added sugars					85.6	83	93.8	364
Knowledge: sugary drinks linked heart disease	94.6	122	87.8	453	82.6	71	90.5	315
Knowledge: identify added sugars	93.2	137	99.0	587	93.0	93	97.2	388
Heard PA recommendations	86.0	129	91.7	550				
Responsibility obesity - government					70.8	68	49.8	197
Consume energy drinks – adult (% at least 1/wk)					14.0	14	5.8	23

Multivariable Logistic Regression

- Compared to Survey 1, education played less of a role in knowledge outcomes, whereas Alaska Native race played a stronger role with ANAI being less knowledgeable about added sugars in sports drinks, vitamin water, diabetes, obesity, and heart disease.
- Similar to Survey 1, ANAI were more likely to provide and consume fruit drinks compared to non-ANAI.

Table9A – SURVEY 2. Logistic Regressions for Knowledge, Attitudes, Behaviors by Income, Education, and Race, Controlling for Age^a and Gender^b

Outcomes	Odds Ratios (95% CI)			
	Income ≤185% PGL ^c	Education ≤H.S. ^d	Race ANAI ^e	Race Other ^f
Knowledge				
Added sugars - soda				
Added sugars – sports drinks	.69 (.31-1.54)	.80 (.32-2.01)	.23 (.08-.71)*	.41 (.17-.96)*
Added sugars – Vitamin Water ^{a,b}	.55 (.30-1.00)	.71 (.36-1.39)	.24 (.10-.60)*	.43 (.22-.83)*
Added sugars – fruit drinks				
Sugary drinks - tooth decay				
Sugary drinks – diabetes ^b	.54 (.22-1.32)	.30 (.12-.72)*	.21 (.06-.68)*	.36 (.13-.97)*
Sugary drinks – obesity adults	.41 (.10-1.64)	.36 (.08-1.51)	.14 (.02-.98)*	.10 (.02-.46)*
Sugary drinks – obesity children	.38 (.10-1.36)	.37 (.10-1.34)	.24 (.04-1.36)	.29 (.07-1.12)
Sugary drinks – heart disease ^b	.81 (.37-1.80)	.65 (.27-1.60)	.13 (.05-.34)*	.30 (.13-.67)*
Young children 4 tsp sugar				
Water/milk healthiest options	.25 (.09-.65)*	.34 (.13-.91)*	^g	.91 (.27-3.01)
Identify sugars ingredient list	.82 (.26-2.65)	.40 (.13-1.19)	.25 (.06-1.07)	.42 (.12-1.44)
Sugars first three ingredients ^b	1.31 (.35-4.90)	.19 (.06-.64)	.47 (.05-4.18)	.21 (.06-.68)*
20 oz soda = 16 mini donuts ^{a,b}	.51 (.21-1.26)	.76 (.27-2.09)	1.04 (.13-8.63)	.19 (.08-.45)*
Heard PA recommendations ^a				
Know PA 7 days per wk, 60-120 min per day ^a				
Attitudes				
Important set example fewer sugary drinks ^b	.64 (.16-2.62)	.38 (.09-1.54)	.10 (.02-.50)*	.24 (.05-1.14)
Responsibility for obesity – government	1.05 (.65-1.69)	.84 (.49-1.44)	1.07 (.47-2.44)	1.19 (.67-2.11)
Responsibility for obesity – food industry	1.18 (.67-2.07)	.74 (.41-1.34)	.46 (.19-1.08)	.88 (.46-1.69)
Responsibility for obesity	1.43	.43	1.13	.73

– medical providers	(.79-2.58)	(.24-.78)*	(.40-3.23)	(.39-1.38)
Responsibility for obesity	1.01	1.13	.43	1.27
– schools	(.56-1.83)	(.58-2.22)	(.18-1.03)	(.61-2.67)
Responsibility for obesity	1.72	.51	.92	1.17
– individuals	(.64-4.62)	(.21-1.24)	(.20-4.26)	(.38-3.56)
Responsibility for obesity	1.21	.92	.21	.47
– parents	(.12-11.91)	(.09-9.31)	(.02-2.35)	(.05-4.70)
Should schools sell soda	.67	1.38	1.04	.86
or pop	(.38-1.17)	(.77-2.49)	(.41-2.63)	(.45-1.62)
Should schools sell	.86	1.73	1.22	1.01
sports drinks	(.53-1.39)	(.99-3.04)	(.52-2.88)	(.58-1.78)
Should schools sell fruit	.97	1.41	.92	1.24
drinks	(.59-1.57)	(.81-2.44)	(.39-2.14)	(.70-2.18)
Should schools sell	1.03	.91	1.39	.61
energy drinks	(.53-2.01)	(.43-1.94)	(.49-3.94)	(.25-1.50)
Should schools sell	1.18	1.06	1.10	.85
candy, snacks	(.72-1.93)	(.60-1.87)	(.47-2.61)	(.47-1.54)
PE in elementary school				
PE 150+ minutes/wk ^a				
Behaviors				
Buying decisions based	.81	.22	.20	.48
on ingredients ^{a,b}	(.35-1.90)	(.10-.48)*	(.09-.91)*	(.19-1.22)
Limit drinks with added	.32	.10	^g	.09
sugars	(.04-2.31)	(.01-.71)*		(.01-.58)*
Provide 1+ soda to child	1.37	1.73	.81	.83
	(.85-2.21)	(1.00-2.96)*	(.34-1.90)	(.46-1.49)
Consume 1+ soda – adult	.98	1.52	1.69	.92
^{a,b}	(.60-1.60)	(.88-2.64)	(.72-3.96)	(.51-1.65)
Provide 1+ fruit drinks to	1.25	1.38	3.29	.89
child ^b	(.75-2.10)	(.78-2.44)	(1.42-7.63)*	(.47-1.69)
Consume 1+ fruit drinks	3.09	2.73	5.27	1.24
– adult ^{a,b}	(1.43-6.69)*	(1.24-6.00)*	(1.83-15.23)*	(.45-3.40)
Provide 1+ sports drinks	.77	1.97	1.17	1.64
to child ^b	(.41-1.44)	(1.05-3.69)	(.41-3.30)	(.84-3.17)
Consume 1+ sports	.83	2.07*	1.08	1.75
drinks – adult ^{a,b}	(.43-1.61)	(1.06-4.03)	(.34-3.45)	(.88-3.51)
Provide 1+ energy drinks	3.53			6.08
to child	(.19-66.90)	^g	^g	(.34-108.15)
Consume 1+ energy	.73	3.98	2.54	1.39
drinks – adult ^a	(.29-1.81)	(1.79-8.86)*	(.75-8.58)	(.51-3.77)
Provide 1+ coffee drinks	.82	1.97	.86	^g
to child	(.22-3.09)	(.59-6.56)	(.10-7.01)	
Consume 1+ coffee	1.03	1.36	.32	1.13
drinks – adult ^a	(.64-1.65)	.79-2.35)	(.11-.87)*	(.65-1.96)
Provide 1+ sugary drinks	.85	1.68	1.72	1.07
to child ^b	(.52-1.36)	(.95-2.97)	(.71-4.15)	(.61-1.88)

Provide 1+ per day milk to child	.89 (.53-1.48)	1.48 (.78-2.78)	.87 (.36-2.09)	.89 (.48-1.62)
Provide 2+ per day water to child	.84 (.48-1.48)	.98 (.51-1.90)	.71 (.28-1.79)	.79 (.41-1.53)
Healthy Futures Challenge – school ^b				
Healthy Futures Challenge - child				
Ad Recall				
General recall Play Every Day	.67 (.42-1.06)	1.03 (.60-1.76)	1.99 (.85-4.66)	1.90 (1.07-3.39)
Ad-specific recall active family				
Ad-specific recall childhood obesity				
Ad-specific recall sugary drinks	1.18 (.74-1.89)	1.61 (.94-2.76)	1.13 (.50-2.55)	1.25 (.72-2.17)
Play Every Day website – heard ^a				
Play Every Day website - used				

^a Age significant $p \leq 0.05$

^b Gender significant $p \leq 0.05$

^c Referent category is > 185% PGL

^d Referent category is > H.S.

^e Referent category is Not ANAI

^f Referent category is Not Other Race

^g Omitted. 100% agreement

Table9B – SURVEY 1. Logistic Regressions for Knowledge, Attitudes, Behaviors by Income, Education, and Race, Controlling for Age^a and Gender^b

Outcomes	Odds Ratios (95% CI)			
	Income ≤185% PGL ^c	Education ≤H.S. ^d	Race ANAI ^e	Race Other ^f
Knowledge				
	.97	.35	.85	.68
Added sugars - soda	(.49-1.94)	(.19-.65)*	(.36-1.98)	(.31-1.52)
Added sugars – sports drinks	.63 (.30-1.31)	.22 (.10-.44)*	.65 (.27-1.55)	.69 (.27-1.76)
Added sugars – Vitamin Water ^{a,b}	.59 (.34-1.02)	.47 (.28-.80)*	.88 (.45-1.73)	1.29 (.61-2.74)
Added sugars – fruit drinks	.67 (.30-1.48)	.44 (.21-.95)*	.54 (.22-1.36)	1.01 (.33-3.08)
Sugary drinks - tooth decay	2.25 (.56-9.05)	.19 (.06-.63)*	.29 (.07-1.26)	.33 (.08-1.38)
Sugary drinks – diabetes ^b	.76 (.30-1.91)	.50 (.21-1.18)	1.24 (.36-4.25)	1.29 (.36-4.56)
Sugary drinks – obesity	.35 (.12-1.05)	.50 (.17-1.50)	4.56 (.53-39.50)	1.36 (.29-6.50)
Sugary drinks – heart disease ^b	.91 (.46-1.81)	.43 (.23-.79)*	1.16 (.49-2.78)	1.0 (.43-2.30)
Young children 4 tsp sugar	.78 (.38-1.60)	.85 (.41-1.74)	1.15 (.43-3.10)	.62 (.28-1.36)
Water/milk healthiest options	.81 (.29-2.29)	1.02 (.36-2.94)	^g	1.10 (.32-3.84)
Identify sugars ingredient list	.94 (.27-3.33)	.29 (.09-.93)*	1.21 (.21-6.88)	.36 (.10-1.26)
Sugars first three ingredients ^b	.64 (.22-1.89)	.34 (.12-.95)*	1.05 (.24-4.52)	.40 (.13-1.28)
20 oz soda = 16 mini donuts ^{a,b}	.73 (.35-1.53)	.40 (.20-.80)*	.57 (.24-1.36)	.37 (.16-.82)*
Heard PA recommendations ^a	.59 (.31-1.09)	.31 (.17-.56)*	.83 (.38-1.80)	.80 (.36-1.80)
Know PA 7 days per wk, 60-120 min per day ^a	.83 (.53-1.30)	.90 (.59-1.39)	.84 (.46-1.51)	.87 (.51-1.49)
Attitudes				
Important set example fewer sugary drinks ^b	.40 (.13-1.22)	.90 (.28-2.90)	1.27 (.23-6.91)	.42 (.12-1.44)
PE in elementary school	4.32 (.42-44.48)	.51 (.11-2.43)	.39 (.06-2.41)	^g
PE 150+ minutes/wk ^a	.60 (.29-.93)*	.92 (.59-1.42)	1.53 (.83-2.80)	1.44 (.81-2.55)
Behaviors				
Buying decisions based	.61	.37	.60	.71

on ingredients ^{a,b}	(.31-1.20)	(.19-.70)*	(.26-1.34)	(.30-1.67)
Limit drinks with added sugars	.74 (.28-1.94)	.89 (.34-2.32)	.48 (.16-1.49)	.60 (.19-1.89)
Provide 1+ soda to child	1.13 (.74-1.73)	.84 (.55-1.27)	.92 (.53-1.60)	.85 (.51-1.44)
Consume 1+ soda – adult ^{a,b}	1.30 (.85-1.98)	1.46 (.97-2.20)	1.77 (1.02-3.06)*	.96 (.57-1.62)
Provide 1+ fruit drinks to child ^b	1.62 (1.06-2.48)*	1.20 (.79-1.83)	2.76 (1.60-4.79)*	1.26 (.76-2.12)
Consume 1+ fruit drinks – adult ^{a,b}	2.28 (1.32-3.96)*	1.06 (.60-1.6)	4.31 (2.27-8.23)*	2.06 (1.04-4.06)*
Provide 1+ sports drinks to child ^b	1.29 (.82-2.02)	1.05 (.67-1.63)	1.42 (.80-2.52)	1.76 (1.04-2.97)*
Consume 1+ sports drinks – adult ^{a,b}	1.40 (.84-2.31)	1.38 (.85-2.24)	1.82 (.98-3.38)	.83 (.42-1.63)
Provide 1+ energy drinks to child	.44 (.04-5.01)	1.76 (.26-11.71)	1.85 (.15-22.40)	1.81 (.19-16.91)
Consume 1+ energy drinks – adult ^a	1.52 (.74-3.15)	3.14 (1.57-6.27)*	.77 (.30-1.94)	.40 (.11-1.41)
Provide 1+ coffee drinks to child	.43 (.09-2.00)	1.57 (.53-4.65)	^g	1.96 (.62-6.18)
Consume 1+ coffee drinks – adult ^a	.86 (.56-1.32)	1.0 (.66-1.52)	.68 (.38-1.22)	1.22 (.75-2.02)
Provide 1+ sugary drinks to child ^b	1.64 (1.05-2.60)*	.83 (.54-1.27)	1.92 (1.04-3.54)*	1.24 (.73-2.10)
Provide 1+ per day milk to child	.70 (.46-1.08)	1.09 (.71-1.68)	.93 (.53-1.63)	.85 (.51-1.42)
Provide 2+ per day water to child	.99 (.64-1.55)	1.07 (.69-1.67)	.61 (.34-1.07)	.61 (.36-1.03)
Healthy Futures Challenge – school ^b	.83 (.55-1.25)	.96 (.64-1.42)	.78 (.46-1.33)	1.16 (.70-1.91)
Healthy Futures Challenge - child	.96 (.43-2.15)	.92 (.42-2.00)	2.60 (.71-9.55)	.95 (.41-2.20)
Ad Recall				
General recall Play Every Day	.77 (.51-1.15)	.87 (.58-1.30)	1.36 (.80-2.33)	1.48 (.89-2.46)
Ad-specific recall active family	.78 (.52-1.18)	.99 (.66-1.49)	1.69 (.97-2.94)	2.27 (1.31-3.92)*
Ad-specific recall childhood obesity	1.28 (.78-2.11)	.89 (.54-1.47)	1.50 (.80-2.82)	2.17 (1.25-3.76)*
Play Every Day website – heard ^a	.80 (.52-1.25)	.49 (.31-.76)*	.97 (.55-1.73)	1.15 (.69-1.92)
Play Every Day website - used	2.02 (.86-4.76)	.73 (.24-2.19)	.43 (.09-2.11)	2.01 (.80-5.03)

^a Age significant $p \leq 0.05$

^b Gender significant $p \leq 0.05$

^c Referent category is > 185% PGL

^d Referent category is > H.S.

^e Referent category is Not ANAI

^f Referent category is Not Other Race

^g Omitted. 100% agreement

Statistical Comparison of Survey 1 to Survey 2: Urban Responders Only

Table 10 compares responses from Survey 1 to Survey 2 for those items that repeated across the two survey administrations.

Table 10. Comparison of Knowledge, Attitudes, Behaviors from Survey 1 to Survey 2

	Survey 1	Survey 2	p-value
	% agree (n=539)	% agree (n=500)	
Outcomes			
Knowledge			
Sports drinks such as Gatorade and Powerade contain added sugars.	94.7	92.2	0.112
Non-diet Vitamin Water contains added sugars.	83.3	81.0	0.375
Sugary drinks are linked to diabetes, even in young children.	95.4	93.2	0.131
Sugary drinks are linked to weight gain and obesity in adults.	97.2	97.4	0.857
Sugary drinks are linked to heart disease.	89.1	88.9	0.956
Water or low-fat milk are the healthiest drink options for my family.	95.7	95.4	0.788
I know how to identify added sugars on the ingredient list of a drink.	98.1	96.4	0.088
If added sugars are named in the first three ingredients of a drink, that drink is high in sugar.	97.0	96.8	0.857
A 20-ounce bottle of non-diet soda has as much sugar as 16 chocolate mini donuts.	89.3	93.1	0.051 *
Attitudes			
It is important for me to set an example for my child by consuming fewer sugary drinks.	97.2	97.0	0.835
Behaviors			
Buying decisions based on ingredients	92.8	91.8	0.566
Limit drinks with added sugars	96.1	98.2	0.044

			*
Provide soda to child (% at least 1/wk)	37.8	35.7	0.473
Consume soda – adult (% at least 1/wk)	35.0	37.6	0.395
Provide fruit drinks to child (% at least 1/wk)	32.4	27.9	0.119
Consume fruit drinks – adult (% at least 1/wk)	12.4	7.8	0.014 *
Provide sports drinks to child (% at least 1/wk)	26.1	17.9	0.002 *
Consume sports drinks – adult (% at least 1/wk)	20.3	16.6	1.133
Provide energy drinks to child (% at least 1/wk)	0.9	0.4	0.300
Consume energy drinks – adult (% at least 1/wk)	7.1	7.4	0.827
Provide coffee drinks to child (% at least 1/wk)	3.2	3.4	0.823
Consume coffee drinks – adult (% at least 1/wk)	37.0	42.1	0.096
Provide milk to child (% at least 1 per day)	70.6	71.3	0.786
Provide water to child (% at least 2 per day)	71.1	78.8	0.004 *
Provide any sugary drink to child (% at least 1/wk)	63.7	55.1	0.005 *
Ad Recall			
General Ad Recall – Play Every Day	56.4	53.0	0.271
Target Ad Recall – Family Ad (S1)-Sugar Ad (S2)	57.3	42.6	0.000 *

*Statistically significant difference from Survey 1 to Survey 2

Key Take-Aways

Play Every Day Recall and Reaction

The results of Survey 2 indicate that about 53% of urban Alaskans recalled the Play Every Day campaign, down from 56% in Survey 1 (urban areas only), but this was not a statistically significant difference. Fewer than half of the urban responders in Survey 2 recalled the sugary drink ad. Although this was a smaller percentage than the 57% (urban) that recalled the family ad from Survey 1, the sugary drink ad ran for a shorter period of time.

The sugary drink ad appeared to be successfully communicating its key message, as about 70% of those who recalled the ad were able to identify elements of the main message. The majority of respondents indicated they were interested in seeing more similar ads in the future.

Sugary Drinks

Overall knowledge about the harms of sugary drinks and added sugars was high; however, fewer respondents were aware of the added sugars in Vitamin Water. There was a significant increase in the percentage of urban respondents that agreed with the statement that a 20-oz bottle of non-diet soda has as much sugar as 16 mini chocolate doughnuts.

There were other significant improvements in sugary drink behaviors among urban respondents from Survey 1 to Survey 2: increase in the percentage who said they limit drinks with added sugars; increase in the percentage that provide 2 or more glasses of water a day to their child; decrease in the percentage who consume fruit drinks (adults), provide sports drinks to their child, or provide any sugary drink to their child.

Race and educational attainment were the dominant SES-related variables associated with knowledge and behaviors related to sugary drinks.

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