

Increase Food Security Through Nutrition, Traditional Foods, and Health Messaging

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Topics

- WIC and SNAP ED Programs
- Nutrition Education and Health Messaging
- Traditional Food Research

Women, Infants, and Children Special Supplemental Nutrition Program

Our Mission:

To support Alaskan families in making nutrition decisions for life-long health and wellbeing.

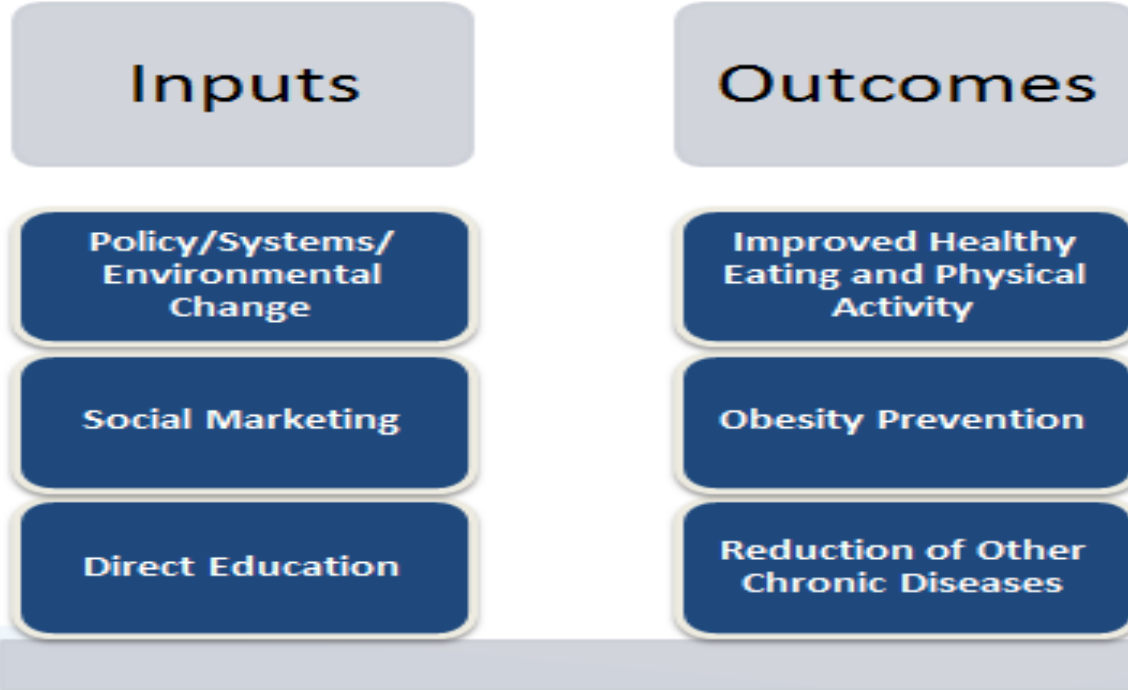
Our Programs: *(see page 2 for more information)*

- Women, Infants and Children
- Commodity Supplemental Food Program
- Farmers' Market Nutrition Program
- Senior Farmers' Market Nutrition Program
- Supplemental Nutrition Program and Nutrition Education
- Breastfeeding Peer Counseling Program

Women, Infants and Children Supplemental Nutrition Program (WIC)



Supplemental Nutrition Assistance and Education Program (SNAP ED)



WIC

Low-income/working poor
Women, infants, Children

- Nutrition Assessments
- Individual Counseling
- Food Prescription
- Targeted Nutrition Information

SNAP ED

SNAP Eligible Population
General Nutrition Messages

- Healthy foods
- Food Budgeting
- Physical Activity

Make Policy, Social and
Environmental changes

Food and Nutrition Program Goals

- Increased intake of vegetables and fruits
- Increase physical activity
- Decreased intake of sugar-sweetened beverages
- Promote and support breastfeeding

FFY 14 SNAP ED Needs Assessment Recommendations

- Bethel, Mat-Su, Anchorage, Kenai, & Nome
- K-12 and Alaska Native People who are un- or underserved
- Increase development of culturally relevant nutrition messages
- Increase partnerships
- Use surveillance tools to monitor and evaluate services

Barriers to Reaching Health Goals

- High cost of transporting healthy foods
- Limited access to fresh fruits & vegetables
- Easy access to low-cost sugar sweetened beverages and low-nutrient dense foods
- Limited access water/sewage treatment
- Long term support for breastfeeding mothers

WIC and SNAP ED Website

- State of Alaska/Family Nutrition Programs
<http://dhss.alaska.gov/dpa/Pages/nutri/wic/default.aspx>
- SNAP ED Needs Assessment
 - http://dhss.alaska.gov/dpa/Documents/dpa/pdf/Alaska_SNAP_needs_assessment_report.pdf

Traditional Food Research

- In rural Alaska
 - 95% of households are using wild fish
 - 300 +/- pounds/person/year harvested
 - 189% of population's required daily protein
 - 26% of population's required daily calories



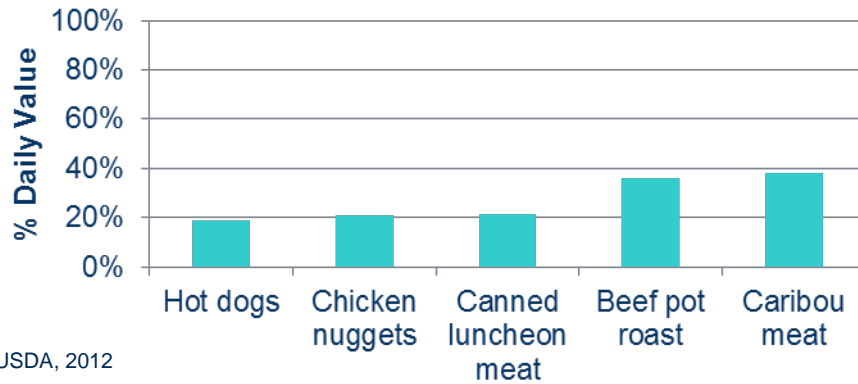
SNAP and Subsistence Gear

- Nets, lines, hooks, fishing rods, harpoons, knives, ice augers and other equipment necessary for subsistence hunting and/or fishing
- Equipment NOT eligible includes transportation, clothing, shelter, firearms, ammunition, and explosives



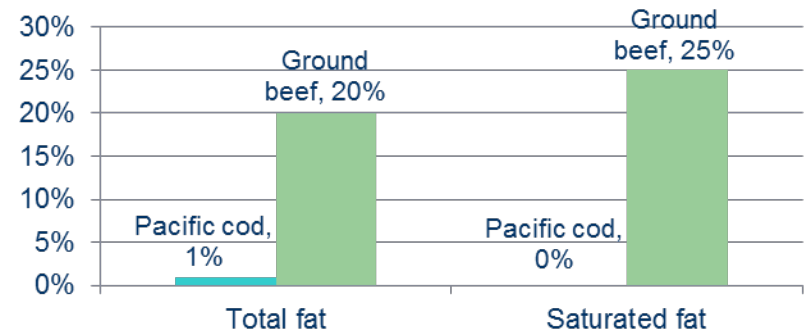
Wild Foods & Replacement Foods

Nutrient: Protein



USDA, 2012

Nutrient: Fat



Traditional Food and its contribution to the current diet



What was your first traditional food?

Breastfeeding
is Food
Sovereignty

FOOD USE OF DENE/MÉTIS AND YUKON CHILDREN

Tomoko Nakano, Karen Fediuk, Norma Kassi, Harriet V. Kuhnlein

Centre for Indigenous Peoples' Nutrition and Environment (CINE), and School of Dietetics and Human Nutrition, Macdonald Campus of McGill University, Quebec, Canada

Results. MF was the major portion of the diet, with TF contributing only an average 4.3% - 4.7% of energy in the two seasons. Most TF was in the form of land animal meats. More than half of the energy intake from MF came from less nutrient dense food items. In spite of low TF intake, children who consumed TF had significantly ($P \leq 0.05$) more protein, iron, zinc, copper, magnesium, phosphorus, potassium, vitamin E, riboflavin and vitamin B6 than those who did not. Children in the more northern communities consumed significantly ($P \leq 0.05$) more TF, protein, iron, copper, vitamin B6 and manganese, and less energy, fat, saturated fat and sodium.

Paper's Conclusion

In conclusion, the important messages of this research with Arctic children are:

1) High use of food of low nutrient density was a concern in diets of Western Arctic children in this study, suggesting the need for dietary improvement.

2) TF use, even at levels as low as 4-5 percent of energy, contributed to significantly higher intakes of a number of essential nutrients.

Indigenous Peoples' food systems & well-being

interventions & policies for healthy communities

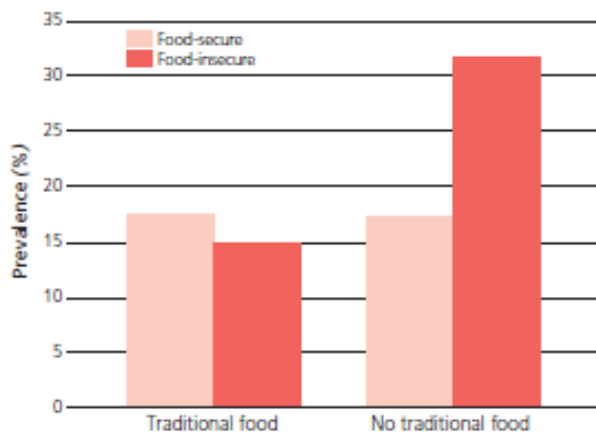


Edited by 🌱 HARRIET V. KUHNLEIN 🌱 BILL ERASMUS 🌱 DINA SPIGELSKI 🌱 BARBARA BURLINGAME



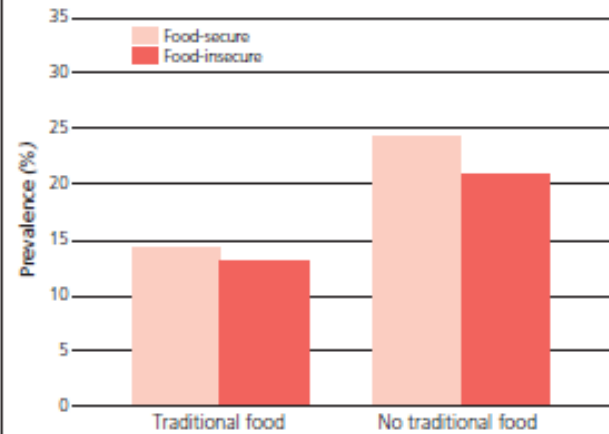
Health disparities: promoting Indigenous Peoples' health through traditional food systems and self-determination

Figure 2.1 Percentage anaemic, by previous-day traditional food (TF) consumption (yes or no) and past-year child food security status



Anaemia defined as venous or capillary haemoglobin < 110 g/litre for three-to-four-year-olds and < 115 g/litre for five-year-olds.
 $p < 0.10$ for the interaction term TF by food security in logistic regression model adjusting for age, sex and sampling method (capillary versus venous).
 Sources: Data from Egeland et al., 2011; Nunavut Inuit Child Health Survey 2007–2008.

Figure 2.2 Percentage iron-deficient, by previous-day traditional food (TF) consumption (yes or no) and past-year food security status



Iron deficiency defined as plasma ferritin < 12 µg/litre; those with hsCRP > 8 mg/litre were excluded.
 $p < 0.06$, indicating a borderline significantly lower percentage of iron deficiency among Inuit preschoolers who consumed TF the previous day compared with non-TF consumers in logistic regression analyses, adjusting for age and sex.
 Sources: Data from Egeland et al., 2011; Nunavut Inuit Child Health Survey 2007–2008.

DIETARY INTAKE OF ALASKA NATIVE PEOPLE IN TWO REGIONS AND IMPLICATIONS FOR HEALTH: THE ALASKA NATIVE DIETARY AND SUBSISTENCE FOOD ASSESSMENT PROJECT

Table IV. Proportion of energy and nutrients contributed by Native foods for 333 participants in 2 regions of Alaska, 2002–2004.

Proportion of energy and nutrients from Native foods	YKHC %	Maniilaq %	Total %
Calories	23	20	21
Protein	46	45	46
Carbohydrates	3	2	3
Total fat	33	28	31
Saturated fat	26	19	22
Monounsaturated fat	35	32	33
Polyunsaturated fat	38	29	34
ALA	28	19	24
EPA	85	99	90
DHA	91	72	93
Cholesterol	39	40	40
Sucrose	5	3	4
Iron	31	41	37
Zinc	29	41	35
Sodium	17	14	16
Vitamin A	22	30	26
Vitamin C	5	12	8
Vitamin D	81	85	83
Dietary fiber	8	5	7

WIC Nutrition Education





WIC Breastfeeding Promotion

Share love, share strength, share health 



The longer you breastfeed the better

Alaska Moms Grow Strong Babies 



They start by breastfeeding

Breastfeeding your baby for the first year of life or longer nourishes your baby for life.

Kid's Page

Find these hidden words!

SOURDOCK
TASTY
HEALTHY
ORGANIC
VEGETABLE
YUPIK

K V Z Y U P I K B S
W V H E A M I A W O
H B E M I J N C S U
E V Z G I O I Y H R
A Y L L E N B M U D
L C J Z A T T B K O
T Z B G F N A V W C
H Y R R B J S B L K
Y O U G M T T X L P
T V A D W R Y C I E

Can you spot five differences between these two pictures?
Color the pictures when you are done.



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Quagciq: Sourdock

Feast Freely
on Organic Greens
from the Tundra!



FOOD IS MEDICINE



Get the facts to make healthy choices for your family.

Quagciq has tasty green leaves. Eating greens from the tundra, such as quagciq, may protect you and your family from cancer, heart disease, and diabetes. You and your family can enjoy gathering and eating sourdock together. Kids are never too young to learn about tundra foods!



Wild Salmon,
Brown Rice,
and Quagciq.

438 Calories

Frozen Fried Chicken,
Soda and a Candy Bar.



708 Calories

VS.



194%
Vitamin A



84%
Vitamin C



24%
Fiber



2%
Vitamin A



8%
Vitamin C



11%
Fiber

Eat 100% of these nutrients daily.



1 cup of
quagciq
has more
Vitamin A
than 5.5
carrot!

Nutrition Facts

Sourdock: Quagciq
Serving size 1 cup

Amount per 1 cup
Calories 25

%DV	
1%	Total Fat <1g
1%	Saturated Fat <1g
	Trans Fat <1g
0%	Cholesterol 0mg
	Sodium 0mg
1%	Total Carbs 3.0g
2%	Dietary Fiber 2.0g
	Sugars <1g
	Added Sugars 0g
8%	Protein 2.0g
50%	Vitamin C
7%	Calcium
10%	Iron
17%	Potassium

Gathering Curaq

Family Fun

Teach your family where real food comes from. Enjoy a peaceful walk on the tundra to pick blueberries. Blueberries from the tundra don't have to travel to your community, so they are better for the environment.

What does it look like?

Blueberry plants can grow up to 3 feet tall. The leaves are small and smooth. The berries are purplish black and taste delicious!

Where can you find it?

Blueberries are abundant and can be found on the tundra, both wet and dry, and in the forests.



Antioxidants

One cup of Tundra blueberries has more antioxidants than 3 cups of store blueberries!







Tundra Blueberries

Store Blueberries

Eating Curaq

Some Serving Suggestions

-  Mix with seal oil and a little sugar for a nutritious treat.
-  Eat with yogurt for a quick snack.
-  Add to a smoothie for an antioxidant-packed beverage.
-  Add to oatmeal for a fiber-filled breakfast.

Curaq Recipes

Overnight Oats

Ingredients:

- 1 clean jar with lid
- ½ cup of oatmeal
- ½ cup milk (or yogurt or other liquid)
- ½ cup blueberries
- honey (optional)

For a variation add nuts, peanut butter, spices, or any other ingredient that sounds good.

Instructions:

1. Combine ingredients in a jar, screw the lid on tight, shake, and put into the fridge.
2. The next morning add a dash of milk and honey (if you want) and enjoy.

Overnight oats can last for a couple days in the fridge, so make a big batch at the beginning of the week!



Cooking with Kids

Kids love to cook!

- Kids that help cook are more likely to try new foods.
- Kids can help pick and clean blueberries.
- Kids can make Overnight Oatmeal all on their own!



TRADITIONAL KNOWLEDGE CORNER

- ◆ You can harvest blueberries from taller bushes by beating them into a basket using a qalutaa, or large wooden spoon. But be gentle—unbruised berries keep longer.
- ◆ Blueberries can be used to pickle other traditional foods. They help preserve the food and add flavor.

Kid's Page

Find these hidden words!

ANGUKAQ

FIBER

HEALTH

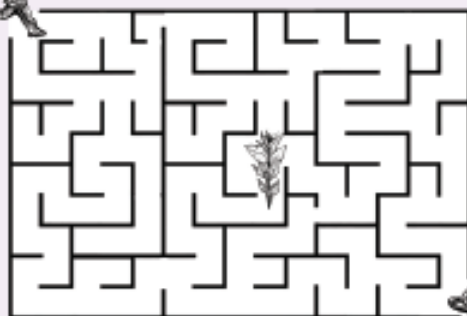
NUTRITION

RHUBARB

VITAMINS

N T H X B T R A R V
 R U H T S G N U E I
 N Q T Y L G P Z B T
 W Q T R U A A N I A
 Q Z V K I A E Q F M
 Y S A O U T L H K I
 Y Q M A T R I Z N N
 B R A B U H R O P S
 J K A Y D C D F N P
 B L C X S D G Z A Z

A-Mazing Angukaq!



Find the angukaq and the put it in the collander!



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Angukaq: Wild Rhubarb

Feast Freely
on Organic Greens
from the Tundra!



FOOD IS MEDICINE



Get the facts to make healthy choices for your family.

Angukaq has tasty green leaves. Eating greens from the tundra, such as Angukaq, may protect you and your family from cancer, heart disease, and diabetes. Kids are never too young to learn about tundra foods!

TIP!

The tall dead stalks of last year's angukaq show where new shoots can be found!

Angukaq: Excellent Source of Folate!

- Folate is a water-soluble B vitamin. This vitamin cannot be stored in your body. You should eat foliate-rich foods every day.
- Folate is important for everyone. It helps make red blood cells. If you do not have enough foliate, you can get a type of anemia.
- Folate is very important for infants, children and women who are pregnant. It helps to prevent some birth defects.

Angukaq has more folate than spinach!

1 cup of angukaq can provide 58% of the folate you need each day.

58%

15%


1 cup of spinach provides 15% of the folate you need each day.



Nutrition Facts

Wild Rhubarb: Angukaq	
Serving size	1 cup
Amount per 1 cup	
Calories	49
% DV	
1%	Total Fat <1g
0%	Saturated Fat 0g
0%	Trans Fat 0g
0%	Cholesterol 0mg
1%	Sodium 2mg
0%	Total Carbs 3g
99%	Dietary Fiber 3g
	Sugars 1g
	Added Sugars 0g
1%	Protein 2g
41%	Vitamin C
20%	Calcium
22%	Vitamin A
1%	Potassium

Exploring the Potential for Technology-Based Nutrition Education for WIC Recipients in AK

- TXT4HAPPYKIDS: A Pilot Study
 - Assessing Technology Use in Southwest AK
- 

Background

- Most interventions to improve diet are costly and time consuming
- Text messaging is an inexpensive way to disperse health information on a large scale
- >90% of adults in the U.S. own a cell phone, and >80% of cell phone owners send or receive text messages on their phone
- Americans send and receive 6.3 billion texts per day
- 85% of adults with an annual income <\$30K owned a cell phone in 2014
- ~ 90% of text messages are read within 3 minutes

Background: mHealth

- Delivery of healthcare services through mobile communication devices, such as mobile phones:
 - Medical test delivery
 - Management of chronic conditions
 - Medication compliance
 - Appointment keeping
 - Health promotion programs
 - Patient-provider communication
 - Provide psychological support

TXT4HAPPYKIDS: A Pilot Study

- Purpose: To examine the preliminary efficacy and acceptability of a text messaging service to promote F&V intake among low-income families with young children



Methods

- Participants (n = 107) were recruited from WIC clinic, Head Start, & other community venues in Fairbanks
 - Unlimited texting plan on mobile phone
 - Young children in the family
- Pre-post study design to measure behaviors and attitudes associated with F&V intake

Pre-Intervention Survey (n=107)

- Self-report attitudes & behavior

11 Week Intervention

- 2 text messages/week
- Limited to 160 characters

Post-Intervention Survey (n=74)

- Self-report attitudes & behavior
- Perceived change
- Satisfaction
- Process (open-ended)

Data Analysis

- Descriptive Statistics
- Wilcoxon Signed-Rank Test

Based on Social Cognitive Theory (SCT)

Cost: Announce sales at grocery stores so more F&V are available at home

Preference: Portray eating F&V as to good and something children enjoy

Role models: Motivate parents to be positive role models for their children by eating F&V

Knowledge: Provide information about health benefits of eating F&V

Self-efficacy: Improve skills related to

Apples are on sale for 1.49/lb @ Fred Meyer! Peel, core & chop. Add water & ground cinnamon. Cook for 30 min until soft, then mash. Kids love warm applesauce!

time together

Frozen broccoli has as much fiber as fresh broccoli! Microwave until tender & toss with some olive oil, lemon juice, garlic powder, salt & pepper!

Results: Demographics

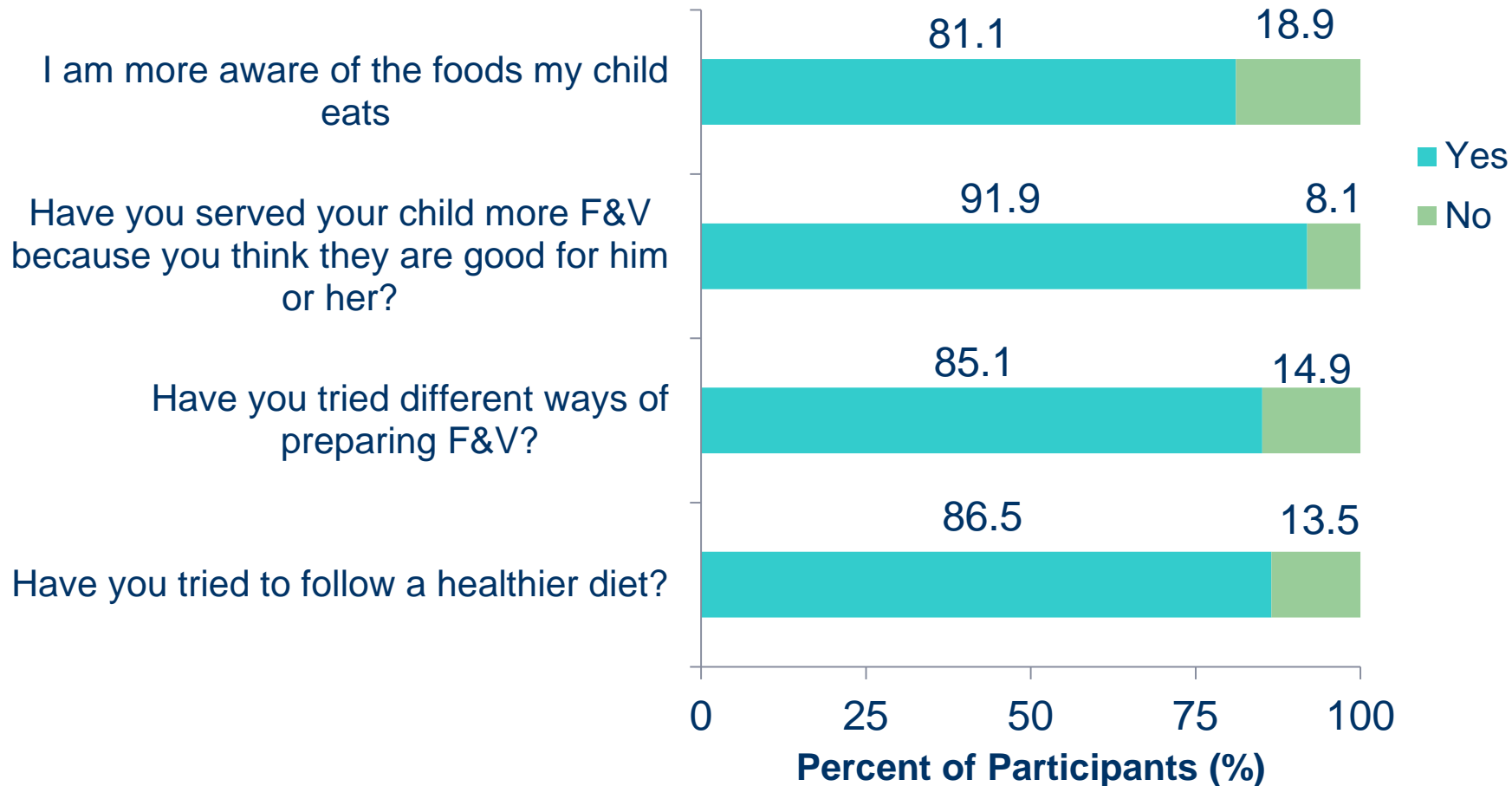
- 74 participants completed the post-intervention survey (69% retention rate)
- Participant characteristics...
 - White (69.4%)
 - Women (98.6%)
 - 25-34 years old (50%)
 - Some college education (79.5%)
 - Received food assistance from SNAP, WIC, emergency food banks, and/or meals served at a food kitchen (48.6%)

Results: Baseline Behaviors

- 91.6% described the foods their child eats as somewhat or very healthy
- 70.9% serve meals with F&V very often or always
- ~40% reported that their child eats more than 1 veggie or fruit a day very often or always
- 44.4% were already serving 1 or more cups of fruit a day
- 31.9% were already serving 1 or more cups of veggies a day

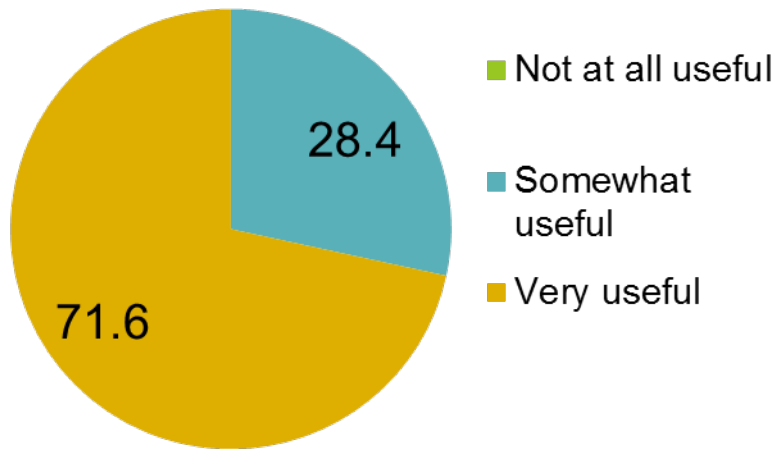
Results: Preliminary Efficacy

When asked: *Since participating in Txt4HappyKids...*

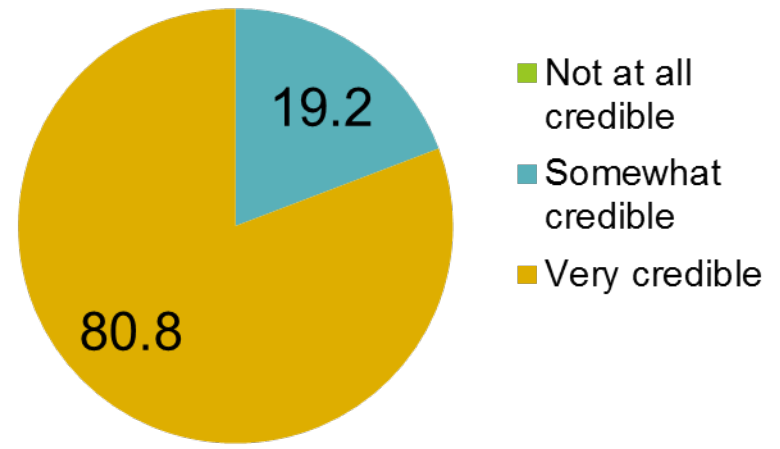


Results: Acceptability

How useful is Txt4Happy Kids for families with young children?



In your opinion, how credible was Txt4Happy Kids?



Results: Acceptability

When asked: *What did you like most about Txt4HappyKids?*

“Convenient, consistent and free”

“I liked that I was given more ideas and recipes on how to prepare healthier food for my child. It helped me help my son explore new foods.”

“It was simple and a nice reminder of ways to include more fruits and vegetables throughout the week.”

“A text to read on my own time”

“I liked getting info on sales for the fruit and veggies, it helped me plan what to buy.”

“The different advice. It wasn't just ‘you should do this or that.’ It was actually ideas”

“...I also liked the reminder that if I eat better, my kids will see that as an example. It's easy to forget that at times.”

Conclusions



- Text messages created positive perceptions of changes in behavior among parents of young children
- Participants thought the program was useful, credible, and reported high satisfaction
- These results show promise that text messaging may be a practical and effective way to supplement food assistance programs to promote a healthy diet

Assessing Technology Use in Southwest Alaska

- **Objectives:**

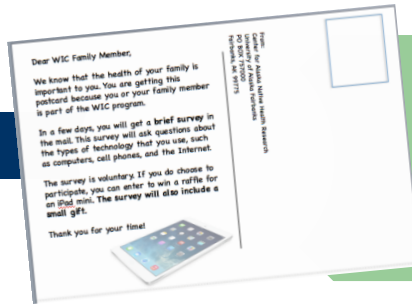
- Understand media technology use among Alaska Native WIC recipients in Southwest Alaska
- Understand the feasibility of technology-based nutrition education

Background



Yukon-Kuskokwim Delta:	Bethel Census Area	Kusilvak Census Area
Population	17,758	7,977
Population density	0.4	0.4
Alaska Native (%)	81.5	93.2
Below poverty threshold (%)	33.3	55.4
Overweight or obese (%)	63.7	56.1
Consuming fewer than recommended amounts of F&V (%)	83.9	78.3

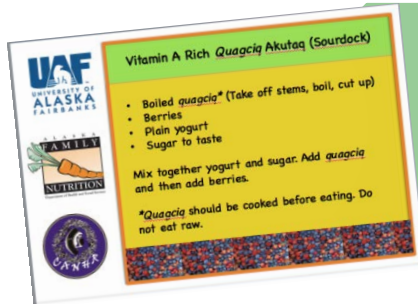
Survey Design: The Tailored Design Method



Announcement
Postcard



Survey



Reminder/thank-you
Postcard

Study Design

3300 Authorized WIC
Representatives



975 Authorized WIC
Representatives
Randomly Selected
and Mailed Survey



368 Surveys Returned
37.7% response rate



8 Surveys Undeliverable
599 non-response

Next Steps

- Share findings with key stakeholders
- If respondents are interested in using technology for nutrition services:
 - Develop culturally relevant nutrition messages that can be delivered via technology
 - Feasibility study
- If respondents are not interested in using technology for nutrition services:
 - Follow-up interviews to determine WHY not and possible barriers

Next Steps

- Vegetable and fruit access is very poor
- Knowledge of tundra plants is limited
- Interest in tundra plants is high

- To inform next steps, we conducted focus groups with 21 women in Bethel



Questions/Comments?

