



Making Data Count

Measuring Diabetes and Obesity in the Indian Health System

December 18-20, 2007

IHS Division of Diabetes Treatment and Prevention

Strategies and Challenges in Assessing and Treating Overweight in Children

Kevin Sweeney, MD

Kelly Keyes, RD, LD

Session: C5

What is Summercise?



- Summer program for the youth of Nome, Alaska
- Program is designed to prevent diabetes in Nome's youth
- Group leaders teach healthy nutrition & exercise

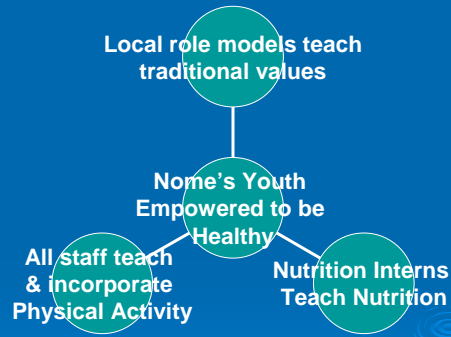
Where is Nome, Alaska?

- Nome is a secluded arctic town located in Northwest Alaska on the Seward Peninsula on the Bering Sea
- 539 air miles from Anchorage and ~1,000 dog sled miles (or by land)
- You can only reach Nome by boat, plane, or dog sled
- No Roads lead to Nome



Summercise Program

- Teach the youth of the region about healthy living to prevent diabetes
- Provides activities for the young people to do in summer months
- Incorporate Traditional Native activities



Summercise Goals

1. Increase Physical Fitness in Youth
2. Increase Healthy Eating in Youth



Physical Activity Objectives



- Increase the number of youth who engage in 30-60 minutes of physical activity daily
- Increase knowledge & skill of physical activity
- 1st Year: Increase the # of youth with BMI \leq 85%

Nutrition Education Objective



- Increase knowledge and skill of healthy eating
- Increase level of healthy eating
- Increase attitude towards healthy eating

Outcome Measures

- 1st year checked weights before and after program
- Pre/post tests for classes
- Set 2 healthy goals
- Attendance
- Attitude
- Parent Survey/Kid Surveys

Outcome Measures: Challenges & Changes

- Weight and height only measured first year
- Smaller number of participants in the beginning
- Wanted measurable outcomes, however we didn't want to send the wrong message to the kids



Outcome Measures: Challenges & Changes



- Pre & Post Test
- Too much data, not enough staff to analyze it all
- Surveys completed by parents and kids at the beginning and the end of Summercise

Summercise Kids set 2 Healthy Goals

- At registration kids make 2 healthy goals for the summer
- Staff encourage and remind kids throughout the summer to reach their healthy goals
- Empower kids to be honest and let us know if they achieved their goals
- Ask parents/guardians to monitor

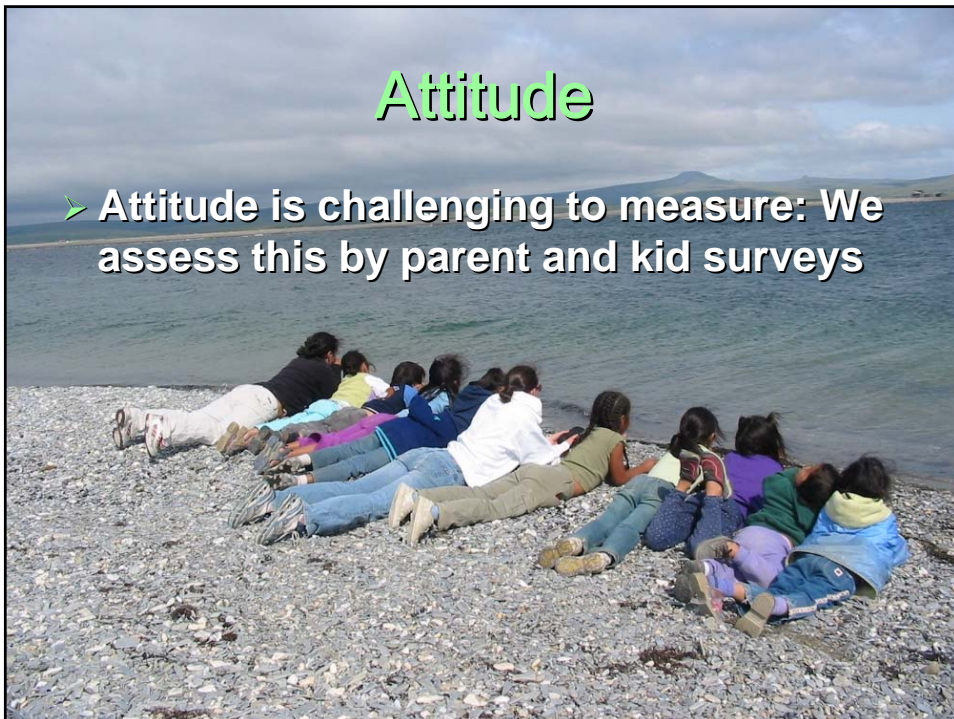
Attendance

- Attendance is taken at the beginning of each individual class
- Many variables to this:
 - Nome is a transient town
 - Fishing, camping and subsistence activities
 - Weather



Attitude

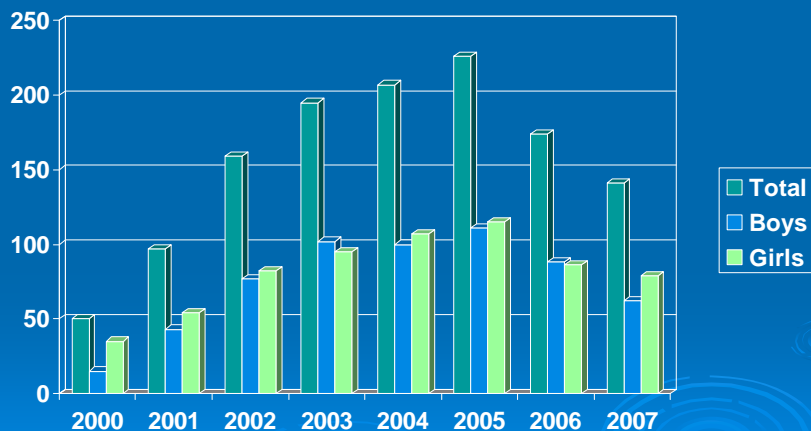
- Attitude is challenging to measure: We assess this by parent and kid surveys



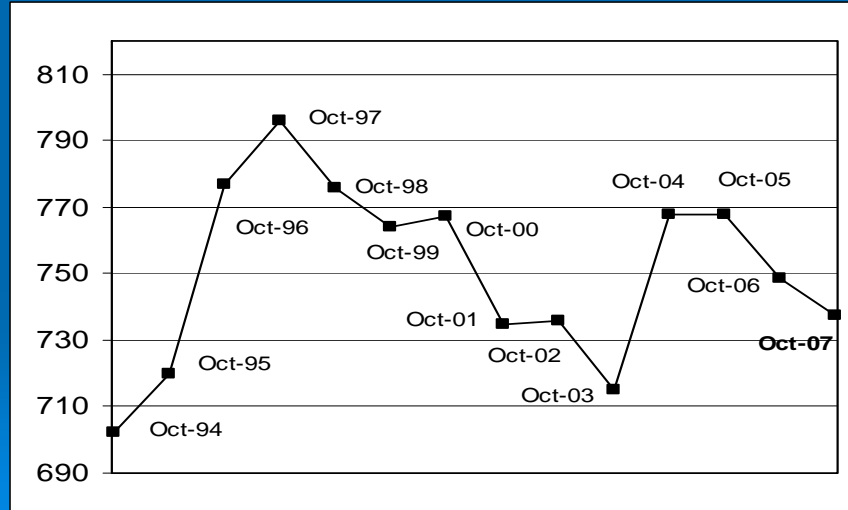
Challenges in Assessing the Summercise Program

- > Many different leaders & leadership styles
- > Interns evaluated each class in different manners- Inconsistent data
- > Difficult to get volunteers to evaluate their classes
- > Lots of data & not enough time/staff to analyze all the data
- > Measuring behavior change
- > Discontinued weight/height measurements

Enrollment in Summercise from 2000-2007



Enrollment in School System in Nome, AK



Performance Indicators: Fitness

Objective	2000: Outcome Measures	2001: Outcome Measures	2002: Outcome Measures
Increase # of youth active at least 3 hrs/day	Daily attendance	Daily attendance	Daily Attendance
Increase knowledge of leisure-time fitness activity	Pre/post tests Survey	Pre/post Tests	Pre/Post Test Parent Survey
Improve attitude towards physical activity	Parent survey	NA	Parent Survey
Increase skill level of leisure-time activity	Parent survey	Fitness testing	Pedometers, # of steps/day
Increase # of youth with BMI \leq 85%	Weight/height	NA	NA

Summercise Fitness Outcomes

Objective	Physical Fitness Outcomes
Increase # of youth active at least 3 hrs/day	34% Daily attendance (Avg. 3 yrs) Parent survey: 88% Yes- Are kids more active because of Summercise
Increase knowledge of leisure-time physical activity	Kids performing fitness at home? 2002 survey (villages) 60% Yes
Increase attitude of leisure-time activity	Kids excited? 80% Nome parents say "Yes" 88% Village parents say "Yes"
Increase skill level in leisure-time activity	Fitness testing: 85% improved score on fitness post-test (2001)
Increase # of youth with a BMI \leq 85%	33% boys & 30% girls > 85%- $\frac{1}{4}$ lost weight summer of 2000

Performance Indicators: Healthy Eating

Objective	2000: Outcome Measures	2001: Outcome Measures	2002: Outcome Measures
Increase knowledge towards healthy eating	Pre/post test	Pre/post tests	Pre/post tests
Increase level related to healthy eating	Parent survey	NA	Parent Survey
Increase skill related to healthy eating	Parent survey	NA	Parent Survey
Increase attitude toward healthy eating	Parent/kids survey	NA	Parent survey

Summercise Outcomes: Healthy Eating

Objective	Healthy Eating Outcomes
Increase knowledge of healthy eating	Nome: 88% improved score Villages: 80% improved score
Increase skill of healthy eating	Kids reading food labels at home? 66% village parents say "yes" (Summer 2002)
Increase Level of Health Eating	Kids making healthy choices at home? 66% of parents say "Yes" Food frequencies- Inaccurate data

Parent Survey Results 2006

Did your child enjoy his/her experience at Summercise this year?

- 86 % parents said Yes

Do you feel that your child learned a lot about healthy eating?

- 73% parents said Yes

Do you feel that your child's involvement kept him/her more active than normal?

- 77% parents said Yes

Parent Survey 2006

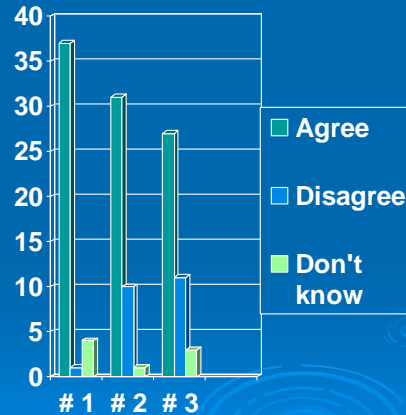
- Did you notice any difference in your child's food and activity preferences after Summercise?
 - 50% of the parents said Yes
- Did your child reach his/her healthy goal?
 - 64% of parents said Yes

Results from Parent Survey 2007

- Surveys filled out at Summercise 2007
Registration by parents
- 42 Surveys filled out
- Measured parent's response to their child's attitude, skill level, and knowledge towards healthy eating and exercise

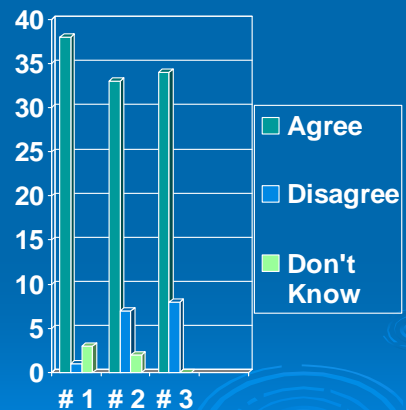
Assessing “Attitude” Towards Healthy Living

1. My child gets excited about Summercise: **88%**
2. My child would rather play than watch TV/video games: **74%**
3. My child likes to make healthy food choices: **64%**



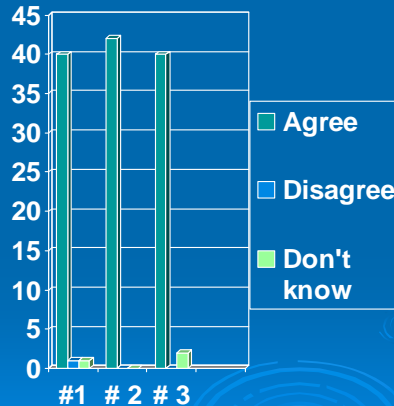
Assessing the “Level” of Physical Activity and Healthy Choices

1. My child gets 60 minutes of physical activity most days: **91%**
2. My child eats healthy foods most of the time: **79 %**
3. My child limits sugary drinks: **81%**



Assessing Kids “Knowledge” about Healthy Choices and Exercise

1. My child can identify healthy vs. unhealthy food choices: **95%**
2. My child understands that sugary drinks are not healthy choices: **100%**
3. My child understands that physical activity is important daily: **95%**



2007 Kids Survey

- Surveys sent out October 2007 to all children participating in Summercise 2007
- 5 Questions asked about Summercise
- Any child that returned their survey would receive a choice of water bottle, tote bag, or cookbook
- Out of 144 surveys mailed 22 returned (15%)

2007 Kids survey results

How many years have you been involved in Summercise?

1 year: 21%	4 years: 14%
2 years: 38%	5 years: 0%
3 years: 21%	6 years: 5%

2007 Kids Survey Results

➤ Does Summercise teach you how to make healthy choices?

- 91% Yes 9% No

- The 2 children that chose “no” wrote on survey that they are already taught healthy choices at home

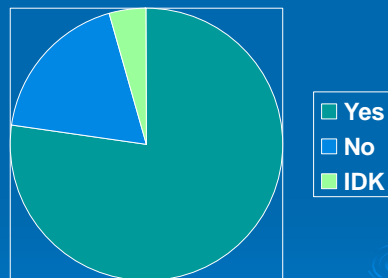
2007 Kids Survey Results

- Does Summercise make you want to exercise 60 minutes everyday?
 - 73% Yes 27% No
- Does Summercise make you want to eat healthy foods?
 - 91% Yes 9% No

2007 Kids Survey Results

- Do you look forward to Summercise each year?

- 77% Yes
- 18% No
- 5% I don't know



What is the impact of Summercise?

- 75% of parents agree: Their child has a good attitude towards healthy living
- 84% parents agree: Their child's "level" of healthy eating and exercise reaches the recommended levels
- 97% of parents agree: Their child has a good "knowledge" about healthy eating and exercise

What's the impact of Summercise?

According to the Kids:

- 77% of kids have good "Attitude" towards healthy living
- 83% of kids agree Summercise increases their "Level" of healthy eating and exercise
- 91% of the kids agree that Summercise increases their "Knowledge" about healthy living

Quotes from Parents for Improvement

- “There needs to be more structure and team sports for the younger ages”
- “This summer we missed the boundless enthusiasm and excitement the interns brought to the program. When this excitement doesn’t pop, the program can fall flat” (2006)
- “The younger kids don’t get as many activities planned for them”
- “Get more volunteers and staff”

Positive Quotes from Parents

- “I personally love the program. The staff is fantastic. It’s all good”
- “Particularly touched with the tenderness shown by several staff toward our children”
- “Summercise is a great program for children”
- “ I hope you are able to continue and expand this program”
- “Thank You”

Quote

- “Summercise is one of the best things that enters a child’s life...because Nome is a very small community, with not much to do. It gives children the opportunity to learn and explore new things in life. Thanks to everyone who made this happen.”



Any Questions??

