Child Health Initiative for Lifelong Eating and Exercise
A trans-community intervention for preschool children
Presented by:

Sally M. Davis, PhD
Glenda Canaca, MD
Theresa Cruz, PhD
Patricia Keane, MS, RD
Alexandra Morshed, MS
Sarah Sanders, RN, MS
Primary Goal

Design and implement a trans-community obesity prevention project for promoting healthful behaviors in preschool-aged children and for instituting preschool environmental changes to reduce children’s risk of obesity.
Significance

- Prevalence of overweight has increased
- Obesity in childhood is a risk factor for obesity and chronic diseases in adults
- Obesity is costing $117 billion annually
- Social and psychological costs
CHILE

Multi-level, trans-community project to decrease obesity risk in 3 to 5-year-old rural Hispanic and American Indian children enrolled in Head Start

- 16 Head Start centers
- More than 3,600 children and their families enrolled during project
Rationale for Head Start

- Essential to start early
- Where enrolled children spend their days
- 90% come from low-income households
- Health and nutrition are focus of Head Start Program
- Family involvement priority
Conceptual Framework

- Social-ecological model
- Multi-level trans-community
- Addresses environmental determinants of healthful eating, physical activity, & TV/screen time
- Individual, interpersonal, & environmental strategies to influence behavioral determinants
Aims

• Increase moderate to vigorous physical activity

• Decrease television viewing/screen time
Aims

- Increase consumption of fruits and vegetables and whole grains
- Decrease consumption of sweetened beverages and high-fat foods
Intervention

6 components

- Classroom curriculum
- In-service training for Head Start teachers/aides
- Training for Head Start foodservice
- Grocery store
- Healthcare providers
- Family event
Multi-Level Engagement & Recruitment
Guiding Principles

• Lessons Learned from Pathways*
  • Developing and maintaining relationships
  • Promoting benefits to sites and communities

• Principles of Community Engaged Research†
  • Establishing trust
  • Treating participants with respect
  • Ensuring equitable relationships
  • Building clear communications mechanisms
  • Following through on commitments


Site (Head Start) Level Strategies

- Build on previous relationships
- Identify an individual in each community to advocate for the project
- Jointly develop a Memorandum of Agreement (MOA)
- Incorporate the partner organization’s goals
- Assign a dedicated person from each organization to maintain contact
Individual and Family Level Strategies

- Employ local champions to assist with the project
- Use culturally appropriate language and materials
- Communicate in person with families
- Provide incentives
Community Level Strategies

Grocery Store
- Involve a nutrition scientist
- Maintain intervention materials

Healthcare Provider
- Work through an established network of healthcare providers
- Make minimal requests on healthcare provider time
- Use professional recommendations (e.g., AAP)
- Offer an intervention-related incentive
Challenges and Lessons Learned
Site (Head Start)

Challenges

• High staff turnover
• Inconsistent implementation
• Barriers to implementation

Lessons Learned

• Conduct more frequent site visits
• Provide more feedback to the sites
• Incorporate Head Start staff suggestions
Grocery Store

Challenges

• Grocery store personnel had limited time
• Lack of understanding of the intervention by employees

Lessons Learned

• Do not expect stores to dedicate employee time to the project
• Provide employees with information as well as owner/managers
Healthcare Provider

Challenges

• Limited response by providers
• Limited provider time
• Limited provider engagement

Lessons Learned

• Using physician to contact and interact
• Meeting over lunch (with food)
• Building relationships over time/working with those already invested
Intervention

Child Health Initiative for Lifelong Eating and Exercise
CHILE Physical Activity Curriculum: Format

30 minutes every day structured physical activity

• In addition to the physical activities that were already in place

• NOT meant to replace play time, recess time or any other active time of the day.
CHILE Physical Activity Curriculum: Evidence Base

National Association of Sport and Physical Education (NASPE) Guidelines for 3-5 yrs

- At least 60 minutes every day of unstructured physical activity
- At least 60 minutes every day of structured physical activity
- No more than one hour at a time of sedentary time except when sleeping!
- Total: 2 hours minimum every day
CHILE Physical Activity Curriculum: Evidence Base

- Increase time children spend outside
- Introduce portable play equipment
- Provide staff with training in the delivery of structured physical activity sessions
- Increase time for structured physical activity sessions
- Integrate physically active teaching and learning activities
CHILE Physical Activity Curriculum: Equipment

- Playground balls
- Parachute
- Music CDs
- Bumpy Balls
- Game Hoops
- Bean Bags
- Scarves
- Activity Mat Set
- Beach Balls
Challenges

• **Time**
  Teachers must answer to the many different priorities of Head Start policies – they have a hard time fitting in additional activities

• **Documentation**
  Timely and accurate documentation of physical activity in the classroom
Lessons Learned

Provide Strategies to incorporate physical activity in the classroom

• Write into lesson plans
• Start the day with physical activity
• Add to the beginning or end of a circle time activity
• Add to the beginning or end of regular outside play
Lessons Learned

Tie Physical Activities to Head Start Learning Goals

• Meet alphabet goals
  Alphabet bean bags, ABC song

• Meet number goals
  Step by number

• Learn days of the week
  Exercise Break Days of the Week

• Start quiet time with yoga activity
Family Take Home Materials

Active Play... Every Day!

Catch!

Play ball, kick the ball, or pass the ball to your child. Keep it moving without dropping it.

Beach Ball Games

- Beach ball basketball
- Pass the ball from hand to hand

¡Juego Activo Todos los Días!

Walking like a angler
- Walk with a fishing line
- Walk on the beach

Calzón como cabeza
- Walk on your head
- Walk like a snail

Unplug & Play!

Turn Off Tuesdays!

Have you forgotten what to do when the TV is off? Here are a few suggestions:

- Cuddle with your child
- Play games with your child
- Talk, smile and hug your child
- Play with objects, blocks, toys, pots and pans, colored paper. Then spend time together putting those things away
- Sing or dance
- Play classical music
- Play counting games
- Play hide and seek
- Let your child set the table and help with dinner

Child Health Initiative for Lifelong Eating & Exercise
Family Take Home Materials
Challenges and Lessons Learned

Challenges
• Forget to hand out
• Lost in backpacks
• Children who ride the bus

Lessons Learned
• Create schedule for handing out
• Give to parents in person whenever possible
• Use as in-kind activity
Food Detectives
Taste Testers
Let's Get Cooking!

http://hsc.unm.edu/som/prc/_pages/projects/_completed/CHILE_intervention.html
CHILE Nutrition Curriculum: Evidence Base

- Fruit & vegetables
  - Fresh, canned or frozen
  - No added sugar or cream sauces
- Whole grains
  - 100% whole wheat bread, pasta, brown rice
  - Cereals: whole grain + low-sugar
- Low-fat dairy
  - Low-fat (1%) milk, cheese and yogurt
- Water and 100% fruit juice
CHILE Nutrition Curriculum: Evidence Base

- Repeated opportunities to taste new foods
  - Food neophobia is common
  - Develop a taste preference for that food
  - No “magic number”, but 8-12 good range
CHILE Nutrition Curriculum

- Developed in partnership with Head Start teachers and families
- Meet Head Start CYFD/CACFP requirements
- Involve dramatic play
- Developmentally appropriate
- Address Head Start learning domains
- Teachers model healthy eating behavior
- Optional enrichment activities
Head Start Learning Domains

- Physical Development & Health
- Social & Emotional Development
- Approaches to Learning
- Language Development
- Literacy Knowledge & Skills
- Mathematics Knowledge & Skills
- Science Knowledge & Skills
- Creative Arts Expression
- Logic & Reasoning*
- Social Studies Knowledge & Skills*
- English Language Development*
CHILE Nutrition Curriculum

• Goal for every lesson: Children taste the target fruit or vegetable
• One fruit and one vegetable per Module
  • Food Detectives
  • Taste Testers
  • Let’s Get Cooking! (2)
• Total of 8 exposures at Head Start for each F&V!
  • Classroom: 4 times
  • Foodservice: 4 times
• Parent materials: Take-home kits and newsletters feature same F&V
CHILE Nutrition Curriculum: Materials

• CHILE provided:
  • Nutrition curriculum
  • Chef hats
  • Aprons
  • Magnifying glasses
  • Tasting cups
  • $20 cash per classroom, per module
• Head Start provided:
  • Equipment for lessons
CHILE Family Materials

- Nutrition newsletter and take-home “kits”
  - Recipes, cooking tips, shopping lists for each module
- Practical, realistic, affordable
- Same fruit and vegetable that are the target foods in the CHILE Nutrition Curriculum
- Consistent messaging & visuals
- Support Head Start to meet performance standards for family engagement
Half of the grains you and your family eat should be whole grains. By making the switch to whole grain pastas, cereals and 100% whole wheat brown or wild rice instead of white rice is another great way to get more whole grains in your family’s diet.

Most families find it easy to make the switch from white to brown or wild rice, which has more flavor and is healthier than white rice.

- Brown rice can be used in any dish that calls for white rice, including stuffed peppers, burritos, soups, stews, etc.
- Remember that the change will be much easier for your children if you change yourself during mealtimes.
- Brown rice is often the same price as white rice.
- Look for wild rice or wild rice mixed with brown rice.
- Regular brown rice takes longer to cook than regular white rice, but it is available as an instant variety.
- Brown rice has a shorter shelf life than white rice, but it will keep for longer if stored in the freezer.
- Some people find it easier to cook a large batch of brown rice and store smaller portions to use for future meals.

The red CHILE shell label on your CHILE participating store will help you identify brown or wild rice.

**CHILE Project Goals**
- Families will eat more fruits, vegetables, and foods made with whole grains.
- Families will eat less sugar and high-fat foods.
- Families will be more physically active.
- Families will watch less TV.

**Remember to look for CHILE**
- Shell labels this month on your local CHILE participating grocery store.

**Nutrition News**

**What’s Up…**

Over the past few weeks, your child has been tasting spinach and apples in classroom activities, meals, and snacks offered by the Head Start. Keep an eye out for the CHILE take home activities that include recipe ideas for spinach and apple. The more times you and your child try these new foods together, the more likely your child is to develop a taste for spinach and apple to enjoy these foods throughout his or her life.

Some ideas include:

1. **Add spinach to any soup or pasta for added color and flavor.**
2. **Cook spinach on the stove top with a little bit of olive oil and garlic for a healthy side dish.**
3. **Include spinach in your favorite lasagna recipe.**
4. **Make a low fat dip made with spinach for dipping pretzels or crackers. Try the Low Fat Spinach Dip recipe included in this newsletter.**
5. **Make your own appetizer. Cut cored apple into small pieces, cover in water and cook over medium heat on stove until soft. Drain the water and blend. Let cool. Add cinnamon before serving.**
6. **Serve apple slices with part-skim mozzarella cheese for an easy snack.**
7. **Add small apple pieces to your favorite chicken or tuna salad.**

**Low-Fat Spinach Dip**

*Ingredients:*
- 1 cup fat free sour cream
- 2 cups fat free mayonnaise
- ½ cup chopped onion
- 8 oz frozen spinach, thawed and drained, dash of lemon juice.

*Directions:* Combine all ingredients in a bowl and mix well. Serve with whole grain crackers, thin pretzels, or pieces of whole wheat tortilla.
Challenges and Lessons Learned

- **Challenges**
  - Seasonality of fruit and vegetable
  - Seems like “extra”
  - Coordination of food for lessons
  - Change in equipment

- **Lessons Learned**
  - Highlight domain integration
  - More interactive training
  - Staff needed review
  - Involve multiple levels at Head Start
Foodservice*

Foodservice

Goals
- Complement the CHILE Nutrition Curriculum
- Support foodservice staff in creating policy and practice changes to purchasing and food preparation

Implementation
- Quarterly trainings for foodservice staff
- Engagement and retention strategies
Evidence Base

- 2005 Dietary Guidelines for Americans
- Guidelines from the American Academy of Pediatrics
- Food neophobia and importance of repeated exposures to novel foods
- Importance of food environment:
  - Availability, nutritional composition, portion size
  - Social context of food experiences
Preparation & Purchasing Practices

- Using **fruits and vegetables** that are fresh, frozen or canned without added sugars or high-fat sauce
- Switching to **whole-grain** bread, pasta, and tortillas
- Switching to **low-fat dairy** products
- Switching to **brown rice**
- Using whole-grain, low-sugar ready-to-eat **cereal**
- **Rinsing and draining ground beef** after cooking to reduce fat content.
- No more than 4-6 oz. per day of **100% fruit juice**

The same practices are emphasized in family materials and activities, and classroom nutrition lessons.
Challenges and Lessons Learned

• No one size fits all → Individualized approach
  • Authority to implement changes
  • Structure of foodservice administration
  • Base nutrition knowledge and skills
• Buy-in → Combined trainings to include teachers, administrators and foodservice
• Policy environment constraints → Focus on attainable changes
Grocery Store Materials

- Shelf labels with CHILE logo
- Recipe cards
  - 6 per module (2 fruit, 2 veg, 2 whole grain/dairy)
- Brochures
  - Introducing New Foods
  - Say No to Soda
  - Whole Grains
  - Physical Activity
  - Preventing Choking
  - Low-Fat Dairy
  - Ground Beef
- Consistent messaging & visuals
Challenges and Lessons Learned

- **Challenges**
  - Inconsistent communication with store staff
  - Material maintenance
  - Shelf life and storage
- **Lessons Learned**
  - Understand the primary value for the store
  - Promote the stores at the Head Start
Health Care Providers
Community Health Care Provider Involvement

- Trained to provide a brief message to families that was informative, clear and personalized

- Attended quarterly CHILE Family Events where they were available to meet with families on a one-on-one basis
Welcome to the CHILE Project!

- Letter to Introduce CHILE
- CHILE curriculum
- Family intervention
- From the AAP
Consistent Messages
Health Care Providers at Family Events
Health Care Providers as Change Agents
Challenges and Lessons Learned

- **Challenges**
  - Health care providers have very little time for community activities

- **Lessons Learned**
  - Recruitment should be done through the Head Start, through the community
Family Component

- Take-home materials
- Family events
- Presentations at Head Start parent meetings
Family Events
Challenges and Lessons Learned

- Challenges
  - Competing priorities
  - Engaging families

- Lessons Learned
  - Bolster family participation with invitations, posters, performances
CHILE Video