



CHILE

Child Health Initiative for Lifelong Eating and Exercise

A trans-community intervention for
preschool children



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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

* Gittelsohn, J., Davis, S. M., Steckler, A., Ethelbah, B., Clay, T., Metcalfe, L., & Rock, B. H. (2003). Pathways: Lessons learned and future directions for school-based interventions among American Indians. *Preventive Medicine*, 37(6 Pt 2), S107-112.

† US Department of Health and Human Services. (2011). Principles of Community Engagement (2nd ed., pp. 111-113). Washington, DC: US Government Printing Office.

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

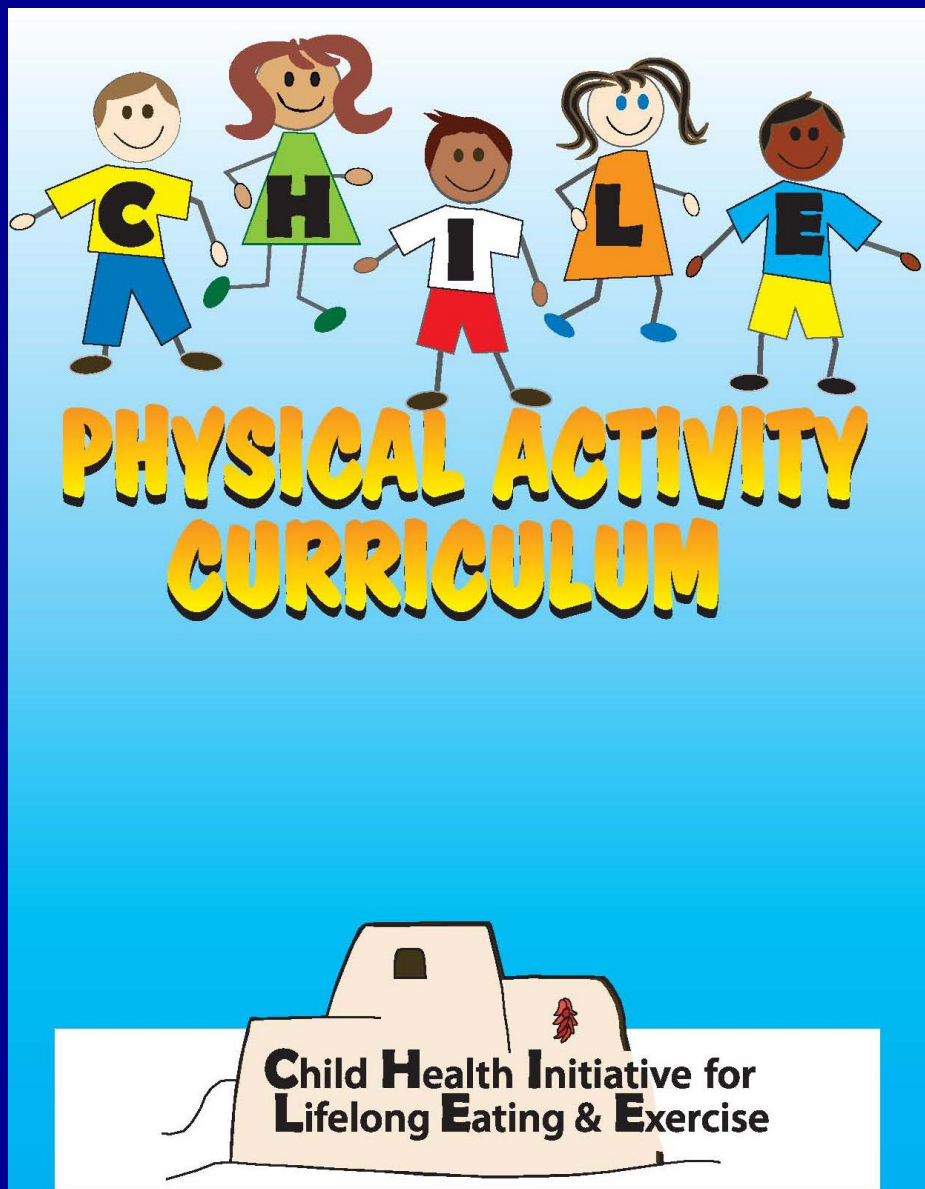
Lessons Learned

- 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



Game Time



Exercise Breaks



@MoveN'Groove

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!
Beach Ball Games
 Module 1

Catch!
 Play catch using the beach ball. Pretend it's like a hot potato. Keep it moving without dropping it!

Beach ball basketball!
 Cut the bottom out of a used ice-cream bucket or container to use as a hoop. Attach the hoop to the wall with some tape or a hook. Each family member must stand behind the sofa or other piece of furniture and try to throw the beach ball through the "hoop". If you miss, you have to do three sit-ups. Each hoop gets one point. Award a prize to the winner!

Play beach ball volleyball!
 Hang it up like a volleyball net. Play volleyball with the beach ball. Make it more challenging by making the older kids do more sit-ups!



¡JUEGO ACTIVO TODOS LOS DÍAS!

Los preescolares necesitan practicar habilidades motoras gruesas. Las habilidades motoras gruesas incluyen cosas como balance, conocimiento de su cuerpo y el uso de grupos de músculos grandes para hacer actividades. Estas actividades son muy buenas para practicar habilidades motoras gruesas.

CAMINANDO COMO CANGREJO – caminar en cuatro patas, con el ombligo hacia arriba.

CAMINANDO COMO OSO – caminar en cuatro patas, con la espalda hacia arriba.

CAMINANDO DE CABEZA – caminar en cuatro patas mientras un adulto sostiene su cabeza.

GALOPE COMO GATO – galopar en cuatro patas.

Habilidades Motoras Gruesas

SALTE EN UN PIE
 SKIP
 PATEE una pelota grande, usando un pie y luego el otro.

RE Y ATAJE una bola grande.

TIQUE RELACIONES DE
 TO – párese al frente de una silla de una silla, al lado de una silla, sobre una silla y métese en una silla.

Eating & Exercise

UNPLUG & PLAY!
 Turn Off Tuesdays!

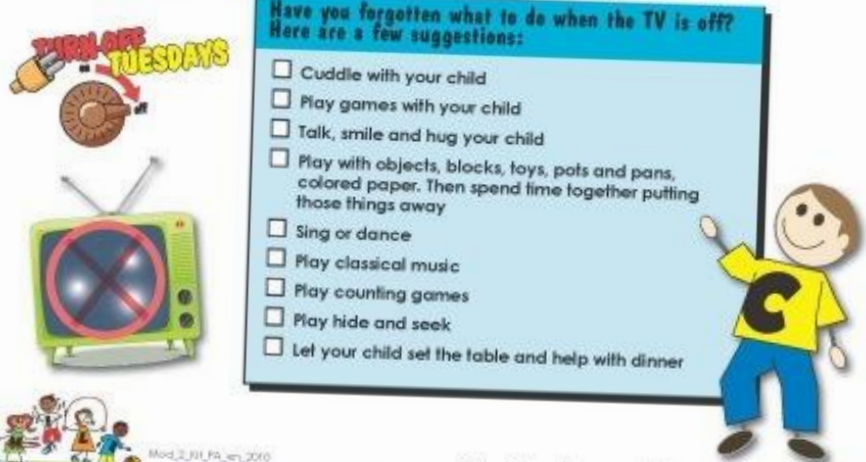
TURN OFF TUESDAYS

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

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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! 

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



Switching to Brown Rice and Wild Rice instead of White Rice Module 7

TIPS



Half of the grains you and your family eat should be whole grains. By made the switch to whole grain pastas, cereals and 100% whole wh **brown** or **wild rice** instead of white rice is another great way to get r your family's diet.

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

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

The **red CHILE shelf label** at your CHILE participating store will help y brown or wild rice.

Child Health Initiative for Life!



CHILE PROJECT GOALS

- Families will eat more fruit, 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 shelf labels this month of your local CHILE participating grocery store.



"Don't know which local grocery store is a CHILE-participating store in your community? Ask someone at your Head Start!"



Bring your child along and find spinach and apple in the produce section. Look for spinach in the canned and frozen food aisles and applesauce with the other canned fruits as well. Look for applesauce without added sugar.

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 and to enjoy these foods throughout his or her life. Try adding spinach and apple into meals and snacks at home over the next few weeks. Remember to cut foods into small pieces no larger than a 1/2 inch to prevent choking.

Some ideas include:

- Add spinach to any soup or pasta for added color and flavor.
- Cook spinach on the stove top with a little bit of olive oil and garlic for a healthy side dish.
- Include spinach in your favorite lasagna recipe.
- Make a low fat dip made with spinach for dipping pretzels or crackers. Try the Low Fat Spinach Dip recipe included in this newsletter.
- Make your own applesauce. 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.
- Serve apple slices with part-skim mozzarella cheese for an easy snack.
- 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
- 1/2 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.



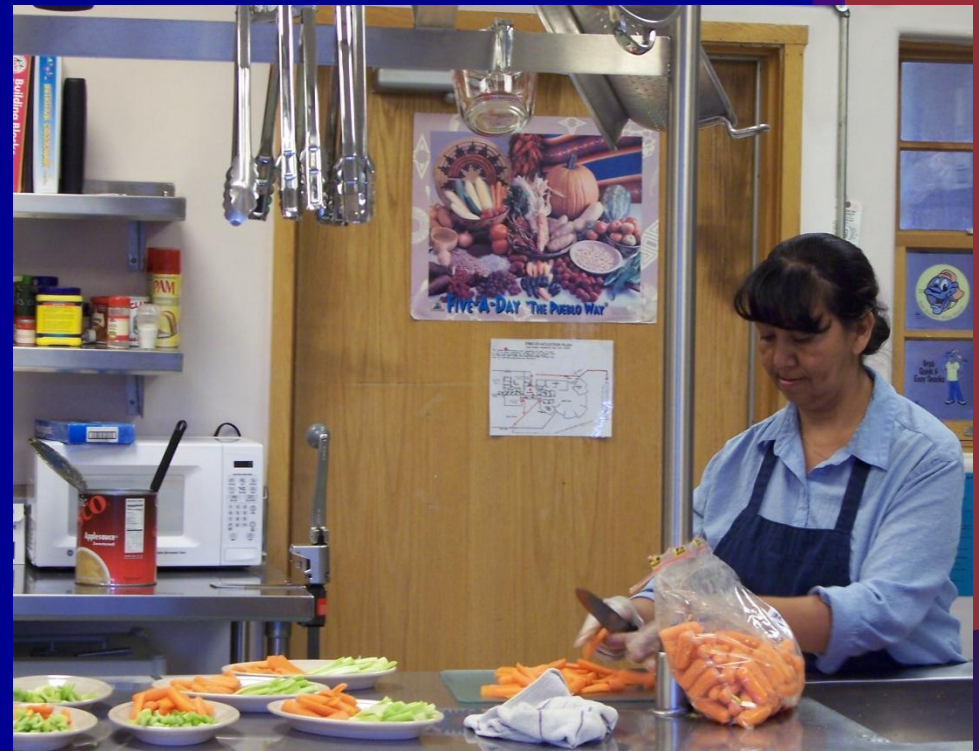
CHILE RECIPE



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*



*Morshed AB, Davis SM, Keane PC, Myers OB, Mishra SI. *The impact of the CHILE intervention on the food served in Head Start centers in rural New Mexico.* Submitted to *Public Health Nutrition*. 2014. Submitted for publication.

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

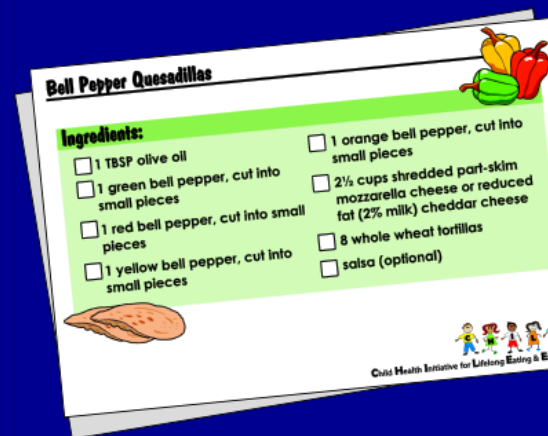
- No one size fits all → Individualized approach
 - Authority to implement changes
 - Structure of foodservice administration
 - Base nutrition knowledge and skills
- Buy-in → Combined trainings to include teachers, administrators and foodservice
- Policy environment constraints → Focus on attainable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

Grocery Store



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



Recruiting the Health Care Providers

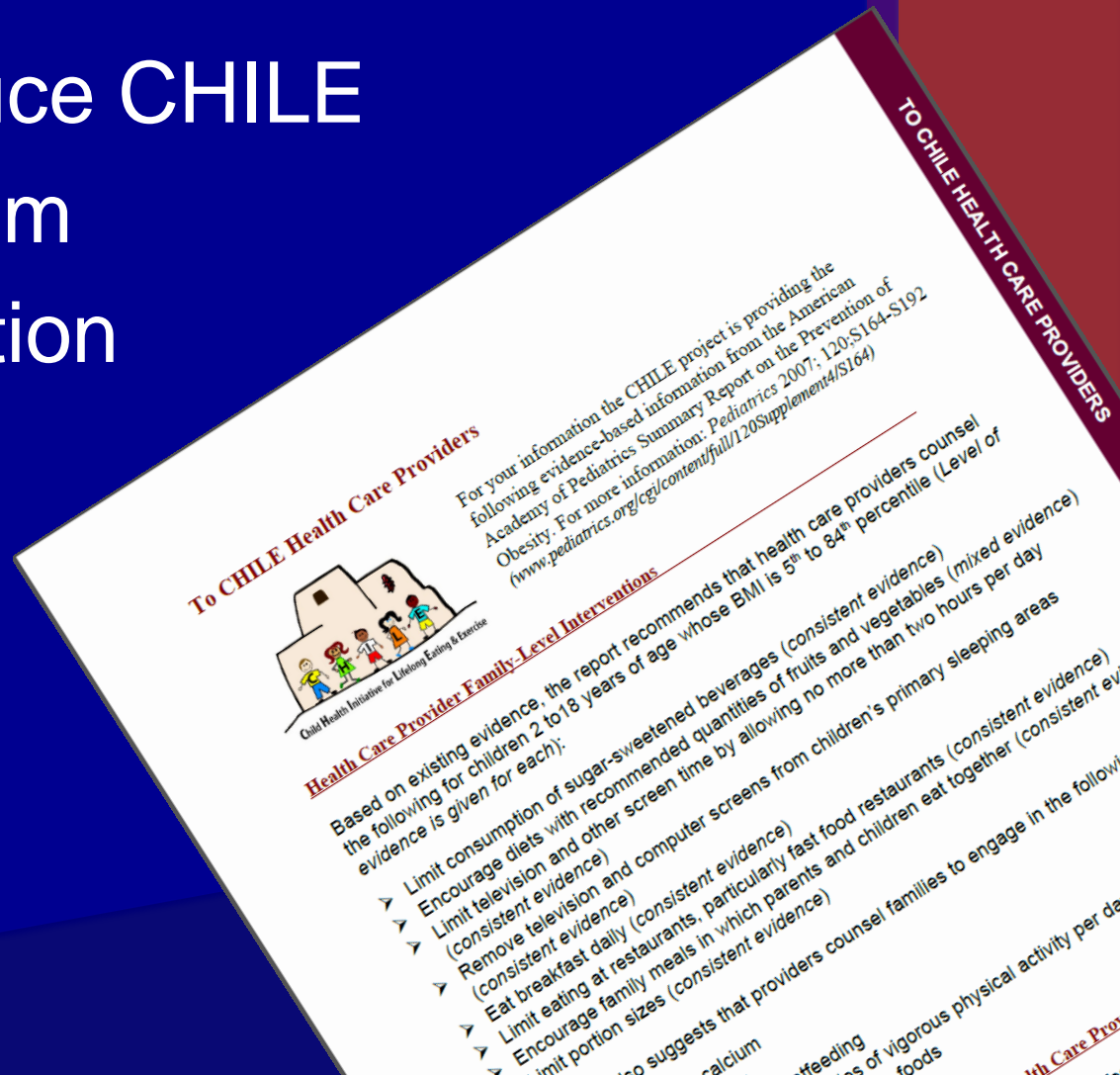


Community Health Care Provider Involvement

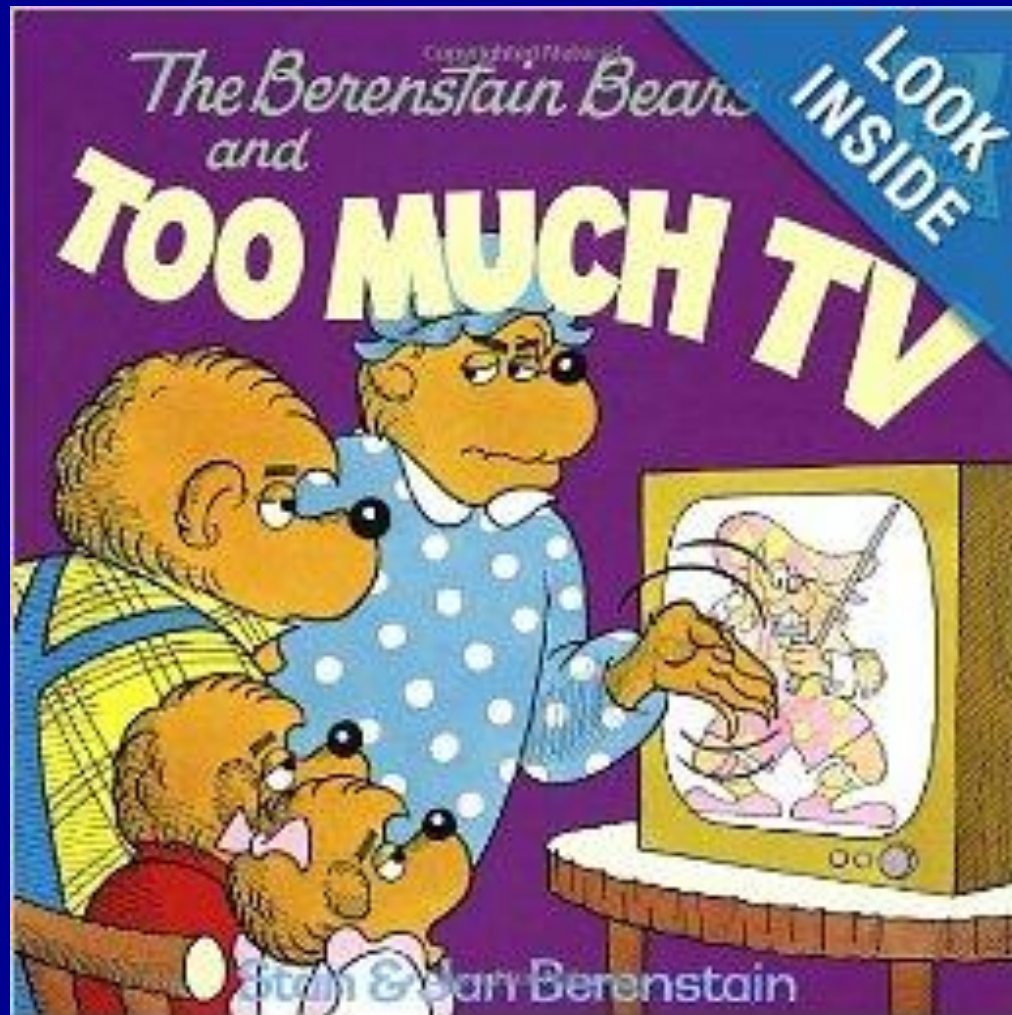
- Trained to provide a brief message to families that was informative, clear and personalized
- Attended quarterly CHILE Family Events where they were available to meet with families on a one-on-one basis

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