

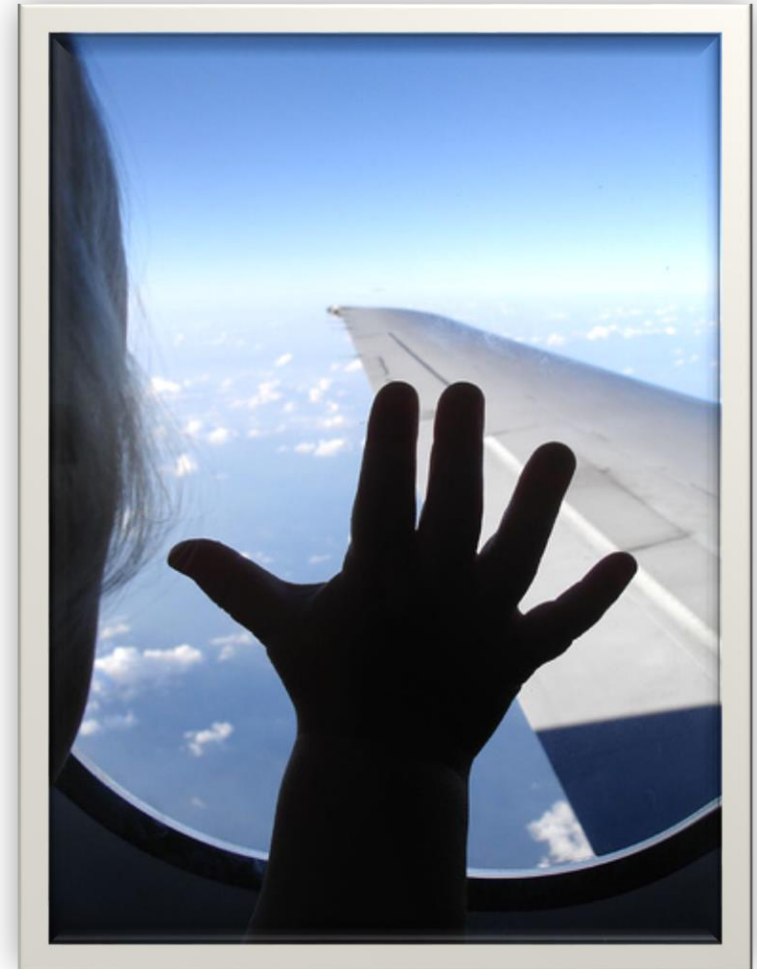
# ENHANCING PHYSICAL ACTIVITY AND NUTRITION IN EARLY CARE AND EDUCATION ENVIRONMENTS IN OKLAHOMA

Susan B. Sisson, PhD, RDN, CHES

*Early Childhood Workgroup July 15, 2019*

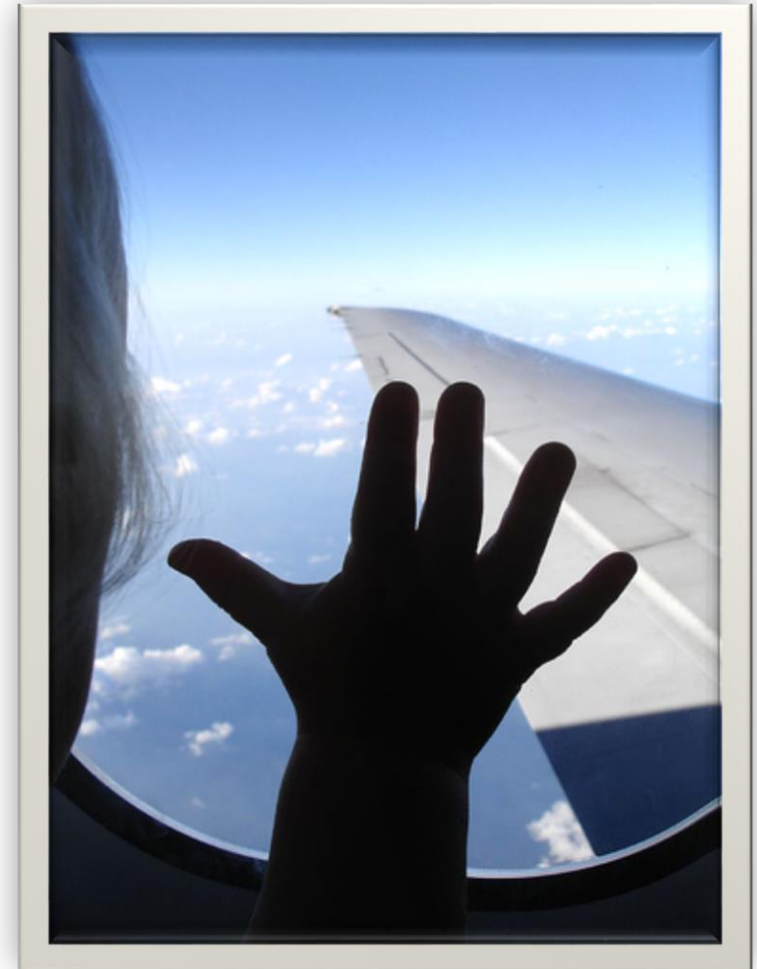
# OVERVIEW OF TODAY'S TALK

- Happy Healthy Homes FCCH intervention
- Wellness Around Traditional Community Health intervention
- Discussion Questions



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# Happy Healthy Homes

**OUHSC College of Allied Health & College of Public Health**

**OSU College of Human Sciences**

**Oklahoma Cooperative Extension Service**

**Oklahoma Department of Human Services**

**State Department of Education**

# ACKNOWLEDGMENTS

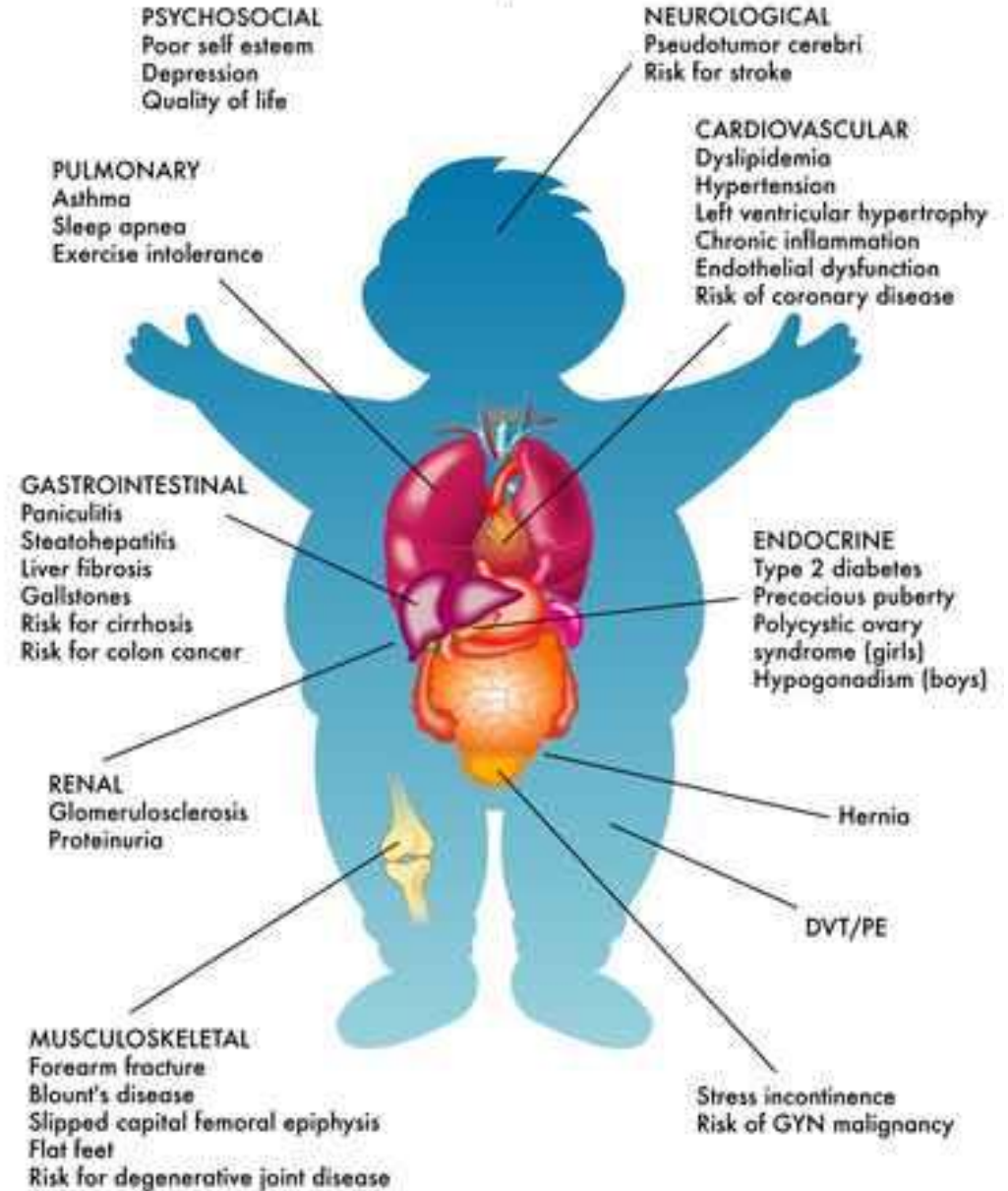
- Inspiring Mentors
- Excellent Colleagues
- Fantastic Graduate Students
- No Disclosures



# Childhood Obesity medical complications

8.4% of American preschoolers are obese

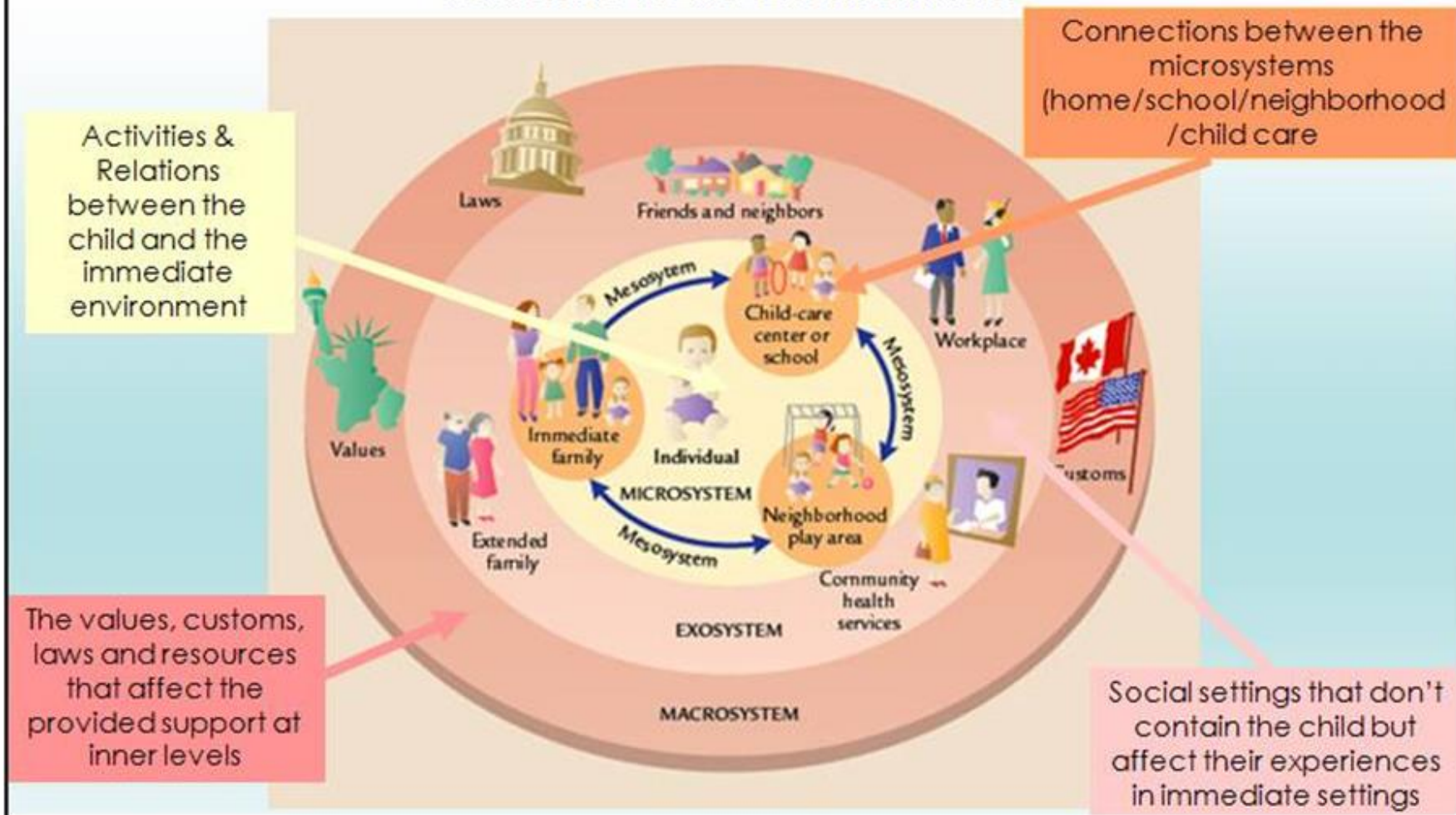
14.3% of Oklahoma preschoolers are obese



(Ogden et al. 2014; Weedn et al. 2014)

# Ecological Systems Theory

## Structure of the Environment



# THEORETICAL FOUNDATION

Theoretical Constructs	Intervention Activities
<b>Social Cognitive Theory</b>	
<b>Behavioral capability</b>	Educational lessons, hands-on activities, cooking class, making household cleaners
<b>Self-control</b>	Goal setting, problem solving, goal progress evaluation
<b>Expectancies (value of outcome)</b>	Educational lessons integrated with qualitative teacher self-perspectives
<b>Observational learning</b>	Hands-on activities, cooking class, making household cleaners, community partner involvement
<b>Self Determination Theory</b>	
<b>Proactive</b>	Elective modules, hands-on activities
<b>Personal importance</b>	Educational lessons integrated with qualitative teacher self-perspectives
<b>Interest</b>	Hands-on activities
<b>Adult Learning Principles</b>	
<b>Active Learning</b>	Elective modules, hands-on activities
<b>Preconceptions</b>	Reflective listening
<b>Understanding</b>	Educational lessons include “why”
<b>Self-assessment</b>	Goal setting, progress check-ins, and troubleshooting
<b>Community-centered</b>	Small group cooking and children's environmental health classes
<b>Social Support</b>	
<b>Instrumental support</b>	Hands-on activities, cooking class, toolkit materials
<b>Informational support</b>	Educational lessons, goal setting, trouble shooting
<b>Appraisal support</b>	Discussion and troubleshooting of SMART goal progress and challenges experienced
<b>Peer support</b>	Small group cooking and children's environmental health classes with other providers



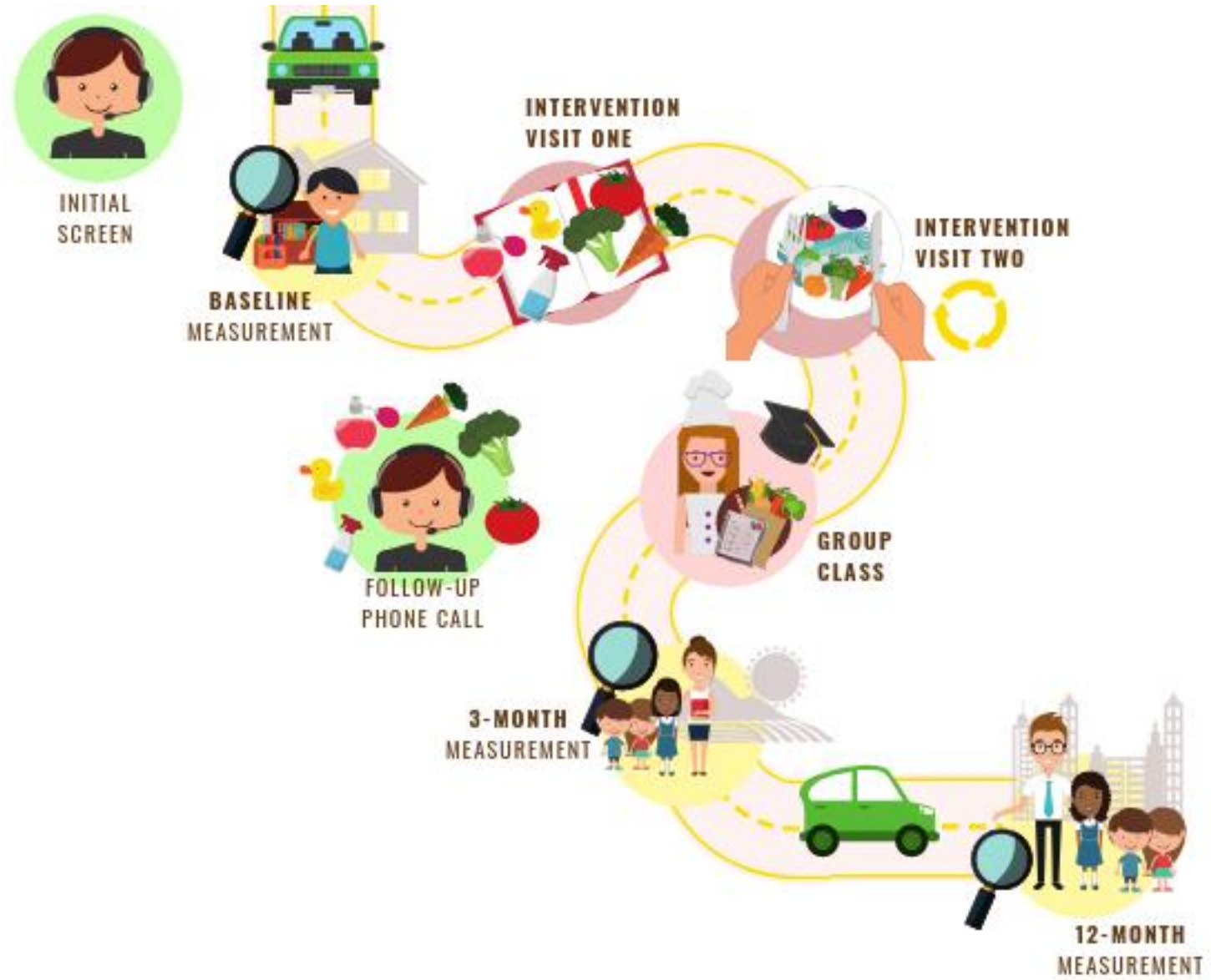
# INTERVENTION OVERVIEW

- 2 interventions
  - Nutrition and Environmental health (Eco
- Family Child Care Home providers randomly assigned
- About 3 months each



OR





# NUTRITION MODULES

## Core

- SMART Goals
- Why Meet Best Practices
- Portion Distortion
- Staff Behaviors: Leading the Way for Healthy Eating

## Elective

- A Fluid Situation
- Begin with Breakfast
- Cooking Across the Rainbow
- Getting Kids in the Kitchen
- Gardening
- Menu and Meal Planning
- Picky Eaters, Food Allergies, and Aversions
- Understanding Nutrition Facts and Reading a Label

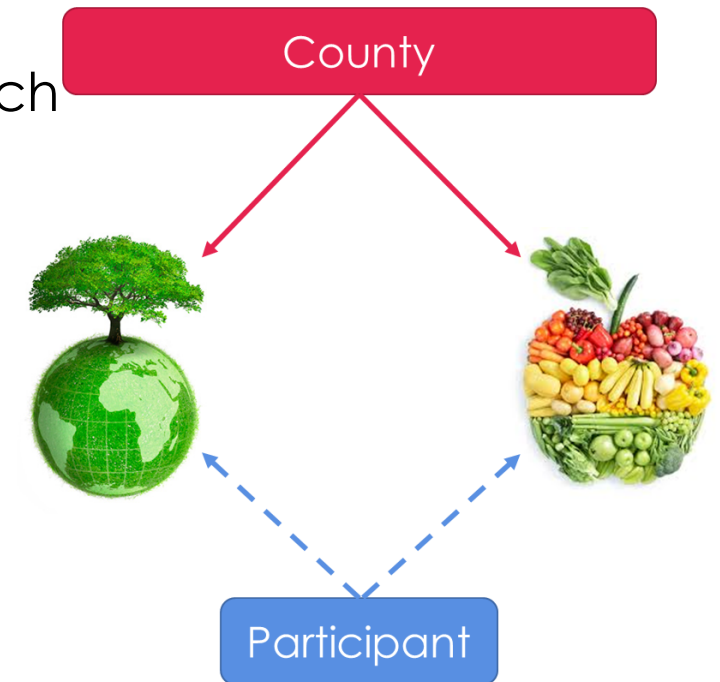
# STUDY PHASES

## Phase 1

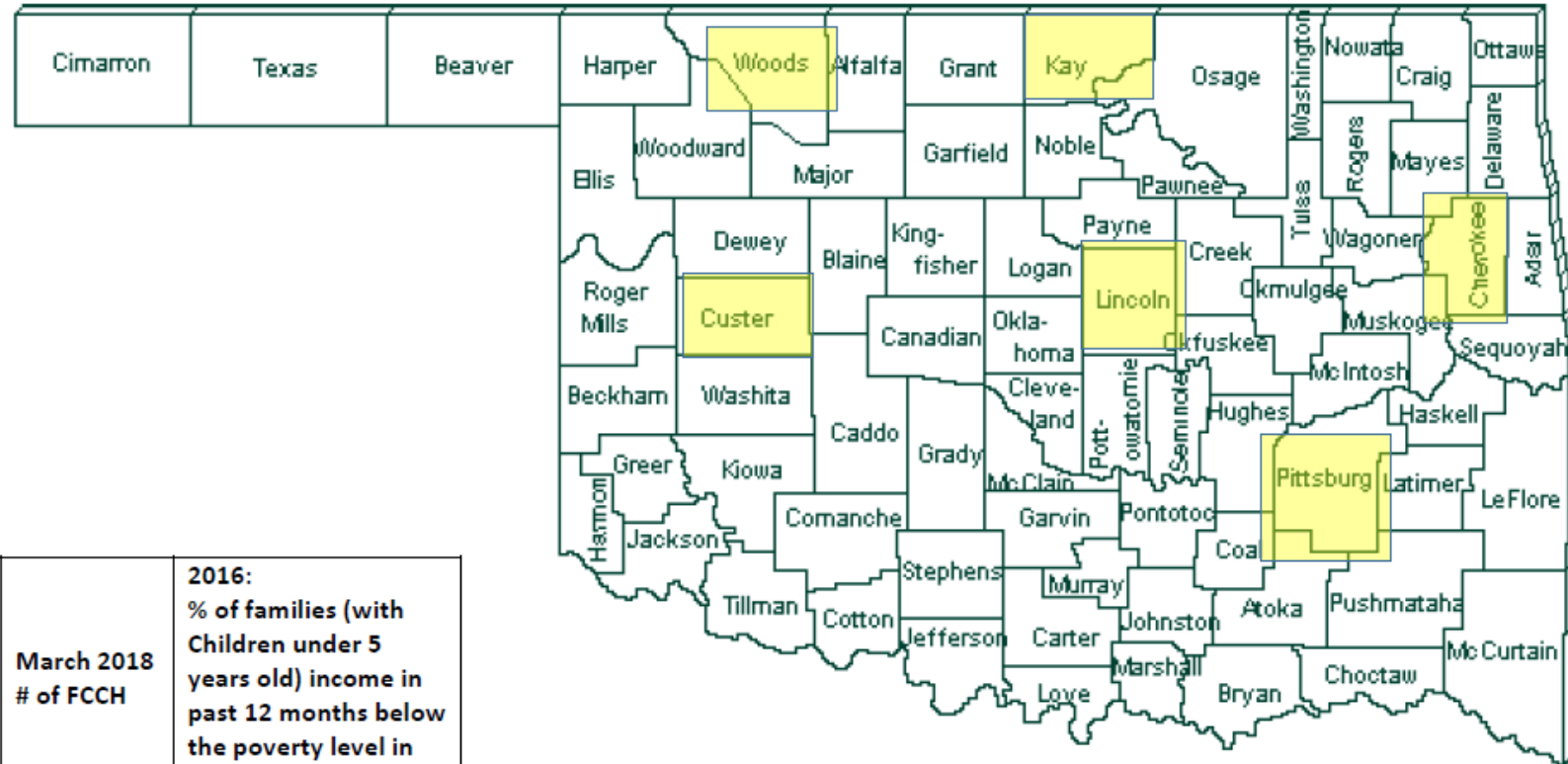
- Oklahoma City metro (ish)
- 3 waves/cohorts
  - Wave 1 completed 3 and 12 month follow-up
  - Wave 2 completed 3 and 12 month follow-up
  - Wave 3 completed 3 month follow-up, 12 month starts in September

## Phase 2

- Rural outreach
  - 6 counties
  - 10 FCCH each



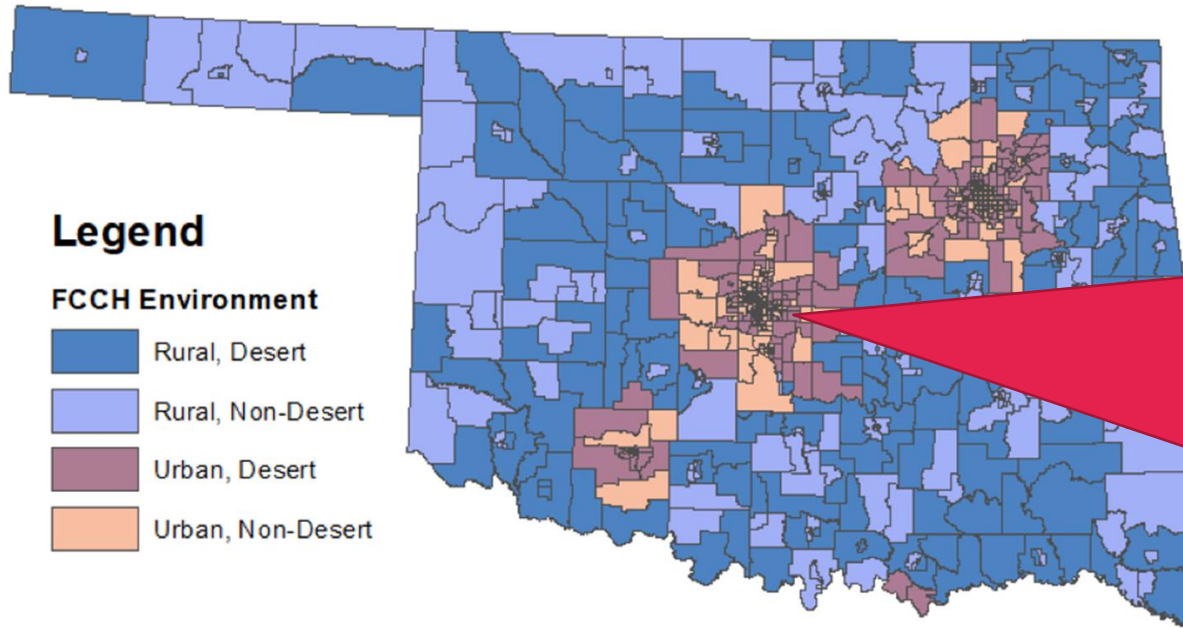
# RURAL OUTREACH



County	% population of county that is small town and rural	March 2018 # of FCCH	2016: % of families (with Children under 5 years old) income in past 12 months below the poverty level in county
Cherokee	100	19	23.6
Custer	100	36	22.4
Kay	100	37	24.7
Lincoln	77.3	20	17.2
Pittsburg	100	20	22.3
Woods	100	19	28.3





# OUTCOME MEASURES

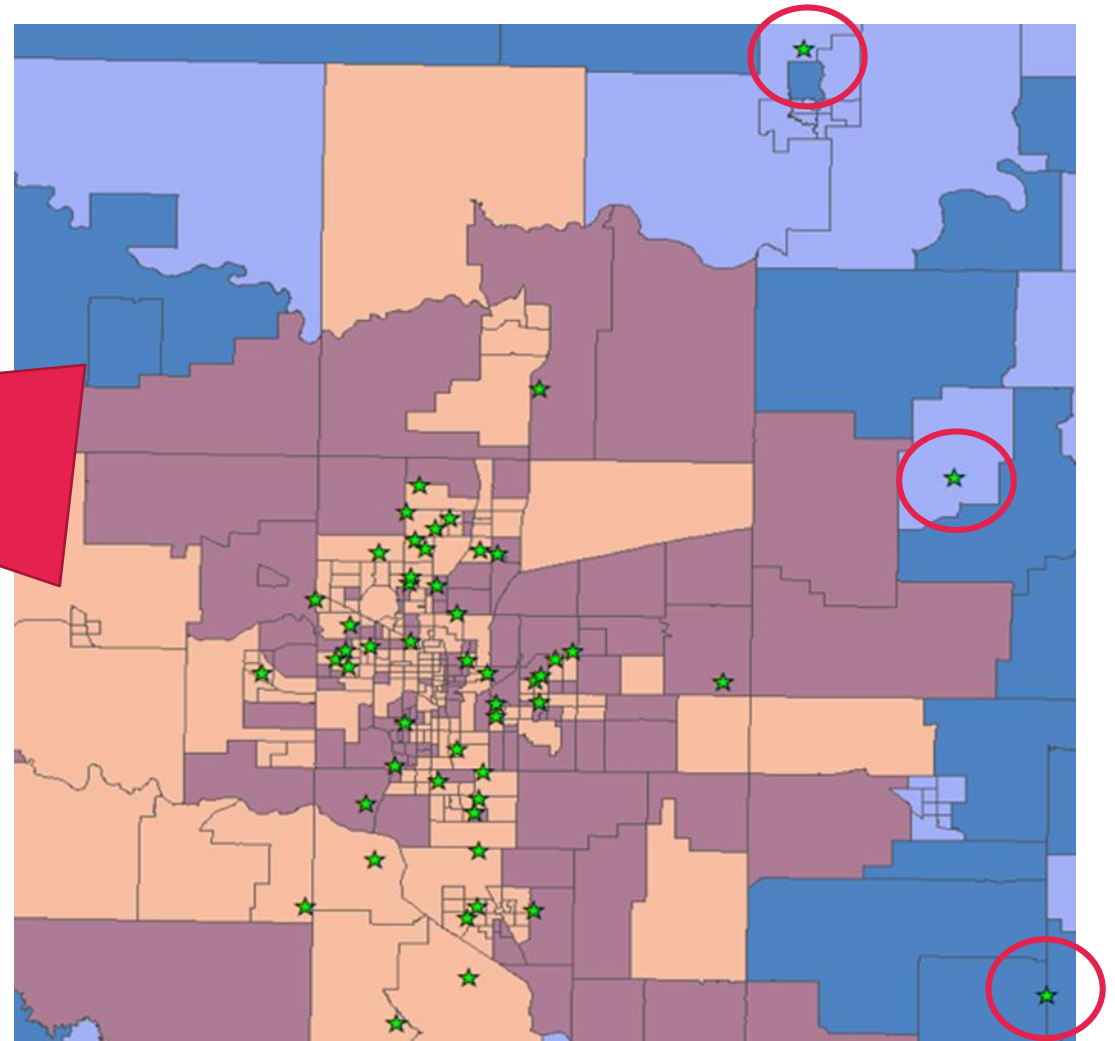
Primary Outcome Measures	Secondary Outcome Measures	Fidelity Measures
<ul style="list-style-type: none"> <li>• Self-reported nutrition practices</li> <li>• Observed nutrition practices</li> <li>• Observed dietary intake of children</li> <li>• Observed CACFP Compliance</li> </ul>	<ul style="list-style-type: none"> <li>• Nutrition self-efficacy</li> <li>• Nutrition knowledge</li> <li>• CACFP knowledge</li> <li>• Staff nutrition behaviors</li> <li>• Menu CACFP compliance</li> <li>• Meal service style</li> </ul>	<ul style="list-style-type: none"> <li>• Proportion of participants who complete intervention</li> <li>• Interventionist adherence to intervention curriculum</li> <li>• Interventionist competence in delivering curriculum</li> <li>• Participant satisfaction and overall intervention experience</li> </ul>



### Legend

#### FCCH Environment

-  Rural, Desert
-  Rural, Non-Desert
-  Urban, Desert
-  Urban, Non-Desert



# RESULTS

- 100% women, 44.2 ± 14.2 years
- Supervise 9.7 ± 4.2 children
- In business 10.8 ± 9.6 years
- 47% (n=23) have NO additional staff
- Spend 2.8 ± 6.2 hours/week prepping meals
- Baking (98%) and slow cooker (70%) were most common food prep methods
- 91.8% believe the Child and Adult Care Food Program (CACFP) enhances dietary quality





# PHYSICAL ACTIVITY PRACTICES

0%

Outdoor play Environment



9.8% Daily Physical Activity Practices

6.4%

Physical Activity Education and Professional Development



12.8% Physical Activity Policies

# NUTRITION PRACTICES

Percent Providers Meeting All Domain Best Practices

4.3% Food provided



2.2% Beverages provided

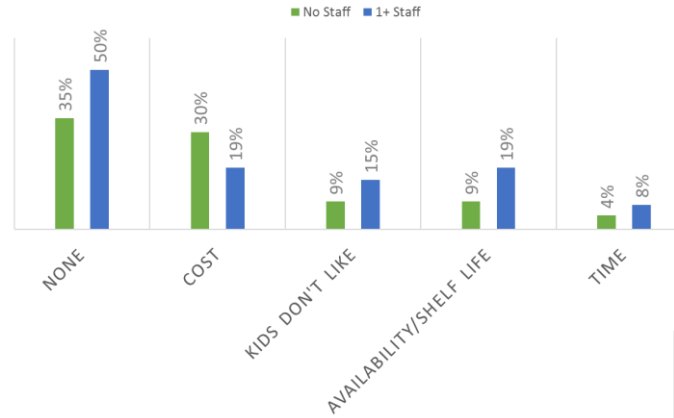
0%

Feeding environment

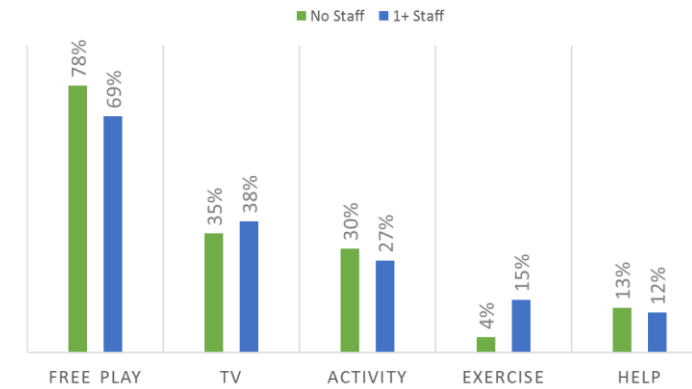


43.8% Menus and Variety

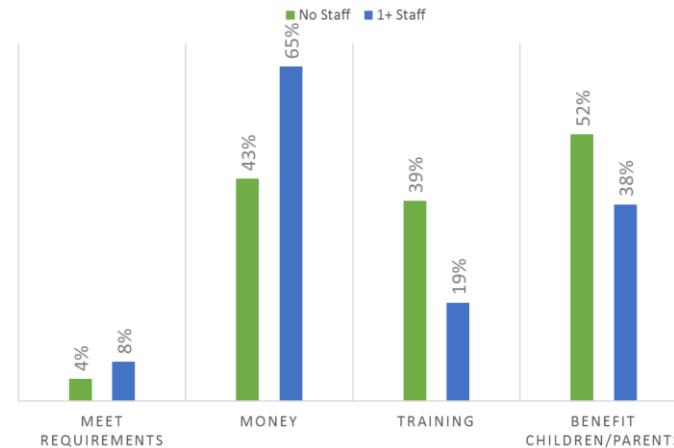
## BARRIERS TO HEALTHY FOODS



## CHILDREN'S ACTIVITY DURING MEAL PREPARATION

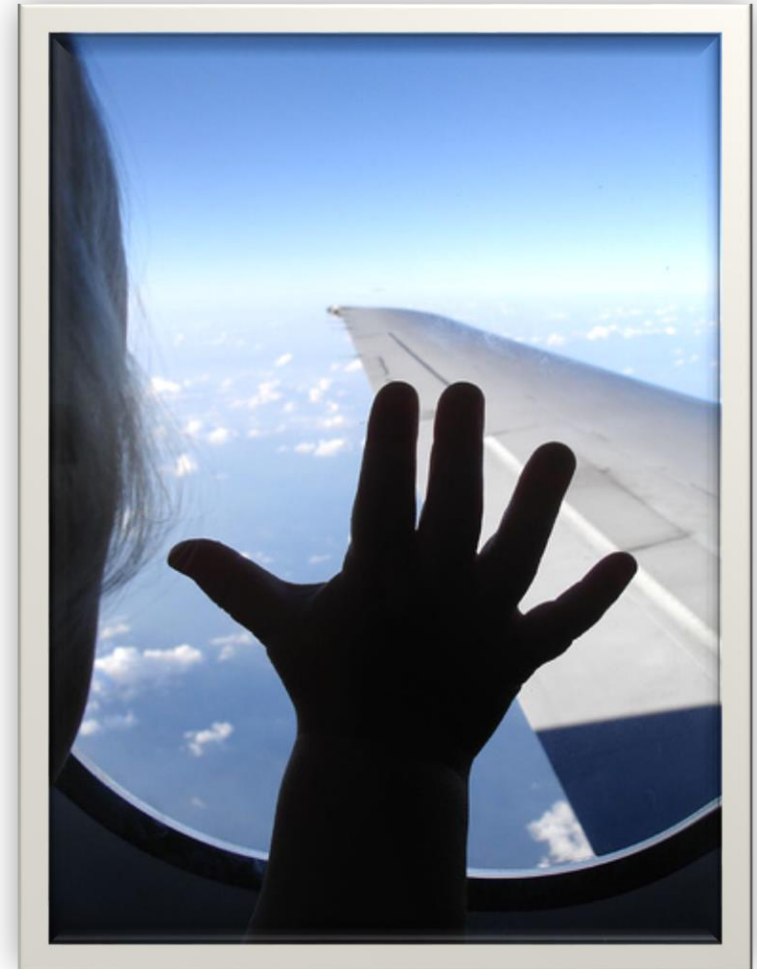


## CACFP PARTICIPATION



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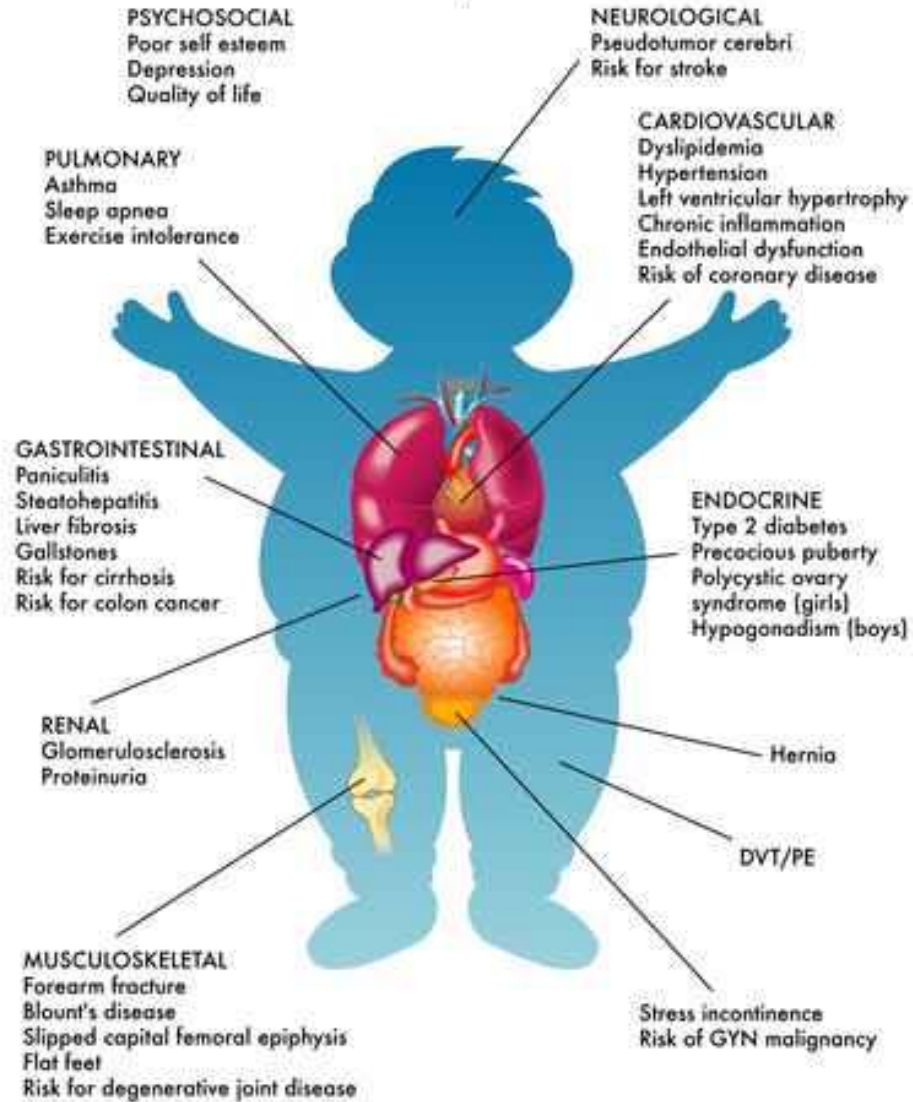
**W** **o** **t** **c** **H**

W E L L N E S S   A R O U N D  
T R A D I T I O N A L   C O M M U N I T Y   H E A L T H

# Acknowledgements



# Childhood Obesity medical complications



21% of American preschoolers are overweight

31% of Oklahoma preschoolers are overweight

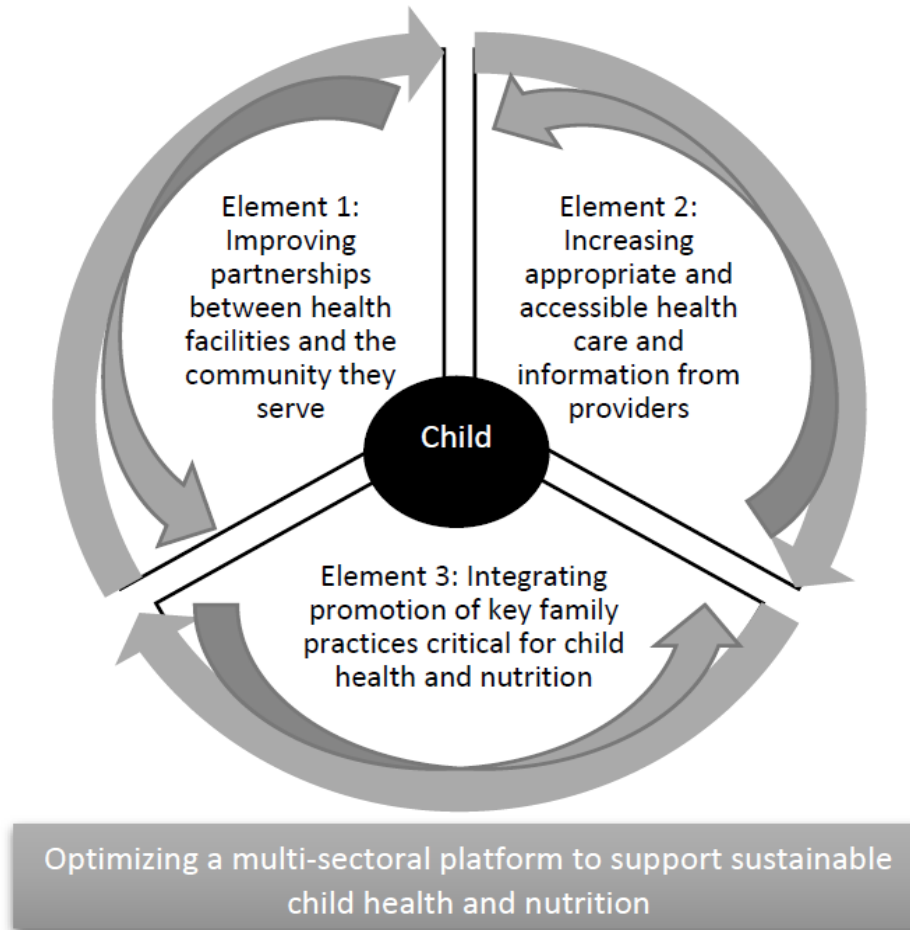
Native American children are 19% more likely to be obese

38% of Native American preschoolers in OK are overweight

(Ogden et al. 2014; Weedn et al. 2011; Weedn et al. 2014; Sisson et al. 2017)

# How We Organize Our Initiative: A Model

Figure 1. Elements of the Household Community Integrated Management of Childhood Illness Framework



(Winch et al. 2002)

# Study Phases

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## Phase 1

- 2015
- 60 Stakeholder interviews
- Literature review

## Phase 2

- 2016-2017
- Stakeholder meetings and intervention development
- 2 rounds of community meetings across Oklahoma

## Phase 3

- 2018-now
- Pilot testing intervention
- Thus far 2 communities
- More planned



# 60 Formative Interviews

## Teachers:

- Value role as caregiver, not as health educator or role model
- Struggle with personal health
- Limited interaction with health care but welcome that opportunity
- Parents have barriers for health

## Health Care Providers:

- Importance of working with family
- Felt ECE was logical place for health education
- Notable disconnect in understanding this environment
- Parents have barriers for health

## Parents:

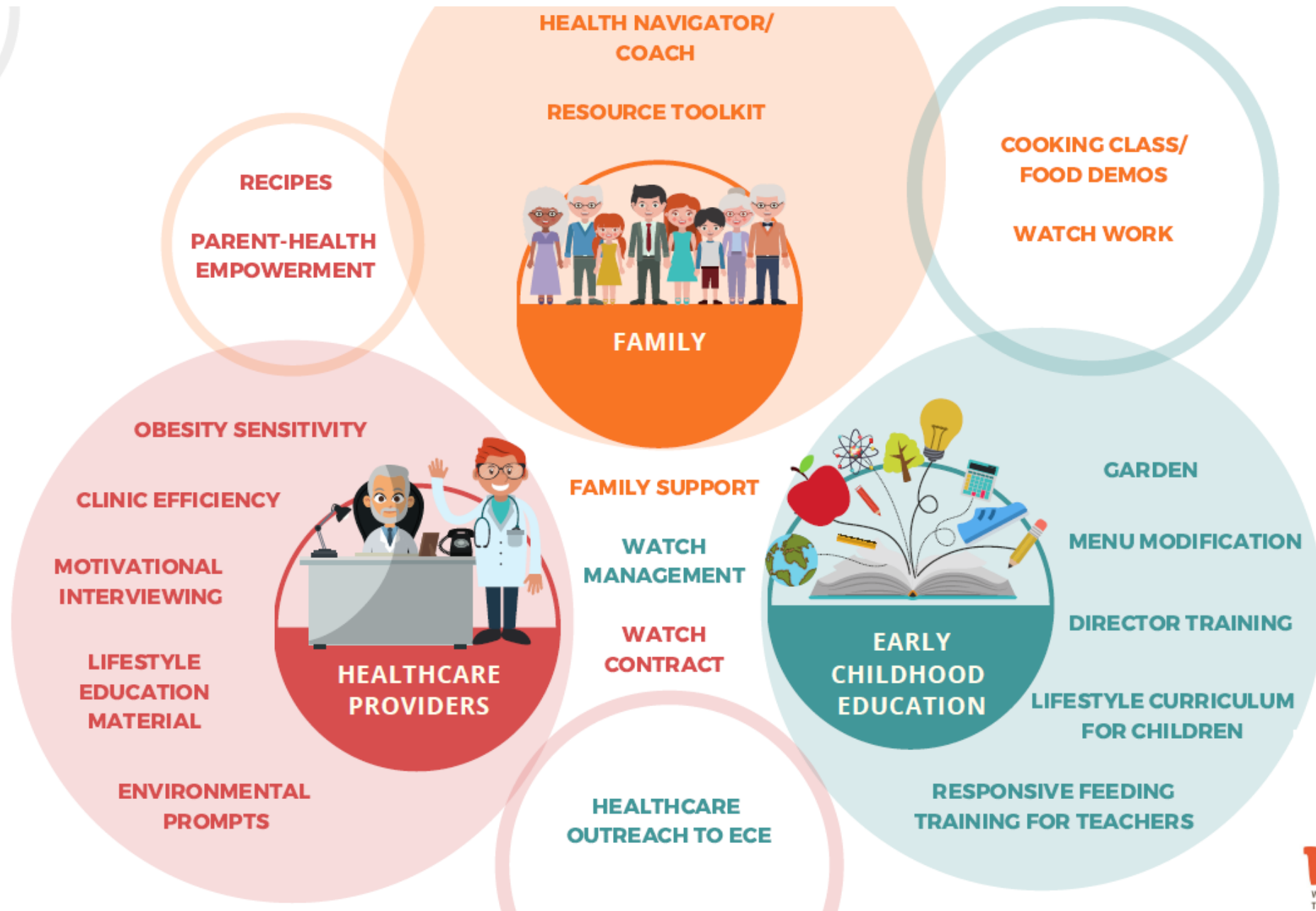
- Acknowledged their importance is creating health for family
- Time and community barriers
- Children already sufficiently active
- Value personal connection
- Distrust for clinic; trust for ECE

(Kracht et al. 2018;  
Kracht et al. 2018;  
Kracht et al. in review)



# Outcome Measures

<b>Early Care and Education Environment</b>	<b>Early Care and Education Practices</b>	<b>Health Care Clinic Practices</b>
Menu nutrient analysis	Self-reported practices	Weight-related laboratory billing
Observed children's dietary intake	Observed obesogenic practices	Documented weight status
Physical activity, nutrition, screen time policies	Self-reported self-efficacy for healthy practices	Documented behavioral counseling
Garden Implementation	Observed opportunity for children's physical activity	Weight-related follow-up scheduling



# Key Components: Early Care Program

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Environmental evaluation and plan for improvement

Menu modification

Classroom curriculum

Responsive feeding training

Family WATCH nights

Garden

# Key Components: Parents

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Menus to complement early care program

Family WATCHwork

Family WATCH night

Body mass index charts and information

Child milestone information

# Key Components: Health Clinic

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Healthy weight sensitivity and referral training

Implementation of same curriculum with handouts and video loop in waiting areas

Lifestyle behavior training and information to give and educate families

Billing and reimbursing for nutrition services

Interaction and involvement with the early care programs



## HEALTHCARE PROVIDERS

### LIFESTYLE TRAINING

Organwise Guys training materials provided to share among families and serve as an entree to discussion for healthier lifestyles to grow strong children.

### SENSITIVITY TRAINING

Strategies to bring up and discuss sensitive subjects with families in a more comfortable and productive way.



## PARENTS + GRANDPARENTS HEALTHCARE PROVIDERS

### mHEALTH

Text reminders with healthy lifestyle prompts.

### QUESTION GUIDE

Healthcare visit question guide for parents, designed to empower them when asking their child's doctor, reminder of both their questions and their right to ask them.

### BMI

Charts and information for parents. Meaning, implications and brief statistics of each BMI category discussed, accompanied with positive messages, means of altering BMI and limitations of BMI as a health indicator.



## EARLY CHILDHOOD EDUCATION

### NAPSACC

Designed to enhance nutrition, PA and education programs in early care. Specifically, nutritional quality of food, amount and quality of PA, provider-child interactions around food and PA, educational opportunities and program policies improved.

### MENU MODIFICATION

The childcare menu modified to reduce processed foods and increase the amount and variety of fresh fruits and vegetables.

### KIDS IN THE KITCHEN

Opportunity for the children to help prepare simple, safe snacks and learn about food and food groups.

### SNACK CENTERS

Learning opportunity for the children to help prepare snacks, log their intake and perceptions of the food they learned about. Each station provides one fruit or vegetable teaching session - a short related story, interesting facts and how the food grows, including an activity or craft project inspired by the food.

### PHYSICAL ACTIVITY STATIONS

Learning opportunity for the children to find out and activity benefits their body, including health benefits, flexibility, balance, muscle strength or endurance improvement. Worksheets with the body parts/items used for the exercise, e.g. jump rope, and for progress tracking provided, including the reminder that an ability to conquer any exercise may require practice over time.

### TEACHER TRAINING

Training on communication: skills to enhance parent teacher connections.

Training on physical activity/diet: nutrition and PA, shift to a healthier lifestyle, influence the children to engage in healthier behaviors.

### CHILD CURRICULUM on PA/diet

Includes Organwise Guys lessons and small space PA, to engage the children in on a regular basis throughout the week.



## EARLY CHILDHOOD EDUCATION HEALTHCARE PROVIDERS

### HEALTHCARE OUTREACH

On a quarterly basis, healthcare providers engage in teaching various health topics to the children. HCP initiate the communication at this training opportunity.



### OUTREACH IN FAMILY & HEALTHCARE

Parent night at childcare or health education fair: this component brings together the families, the health care system and the child care.



## PARENTS + GRANDPARENTS

### FAMILY "HOMEWORK"

Interactive exercises and project ideas would be sent home with the children, to support their ECE curriculum, featuring fun inspired by programs such as Organwise Guys, Eat Play Grow, and farm to preschool tool-kits such as Harvest for Healthy Kids.

### HEALTHY EATING GUIDE

A list of relatively nutritious foods that can be obtained at the gas station, convenience store, or travel plaza. Created with busy working parents in mind, including include recipes for homemade versions of store-bought items, cost estimates and feature readily available ingredients and recipes with seasonal vegetables and fresh herbs.



## PARENTS + GRANDPARENTS EARLY CHILDHOOD EDUCATION

### FAMILY BREAKFAST at childcare

Learning opportunity for parents about the ECE their child spends so much time in, followed by a short discussion and/or activity. For example, children could be excused to play while parents are encouraged to bring up any questions or comments about the ECE and have a group discussion, possibly with a community health worker also present. Alternatively, children and parents may do a fun post-breakfast physical activity to help lower post-meal blood sugar levels.

### TAKE-HOME MEALS

Based on the idea that buying in bulk and cooking from scratch can reduce costs while maintaining quality, the child care could have take-home meals ready when the children are picked up. These meals would complement the school menu rather than repeating lunch offerings.

### RECIPES

Sample dinner menus and meal plans for parents to complement ECE menu and ensure that the children are offered the recommended daily and weekly servings of the various food types.

### GARDEN with elders

Learning opportunity about where the food comes from and to foster mindful eating. While gardening with the children, grandparents share words of wisdom regarding growing your own fresh food and help gain a deeper sense of connection to the land and food.

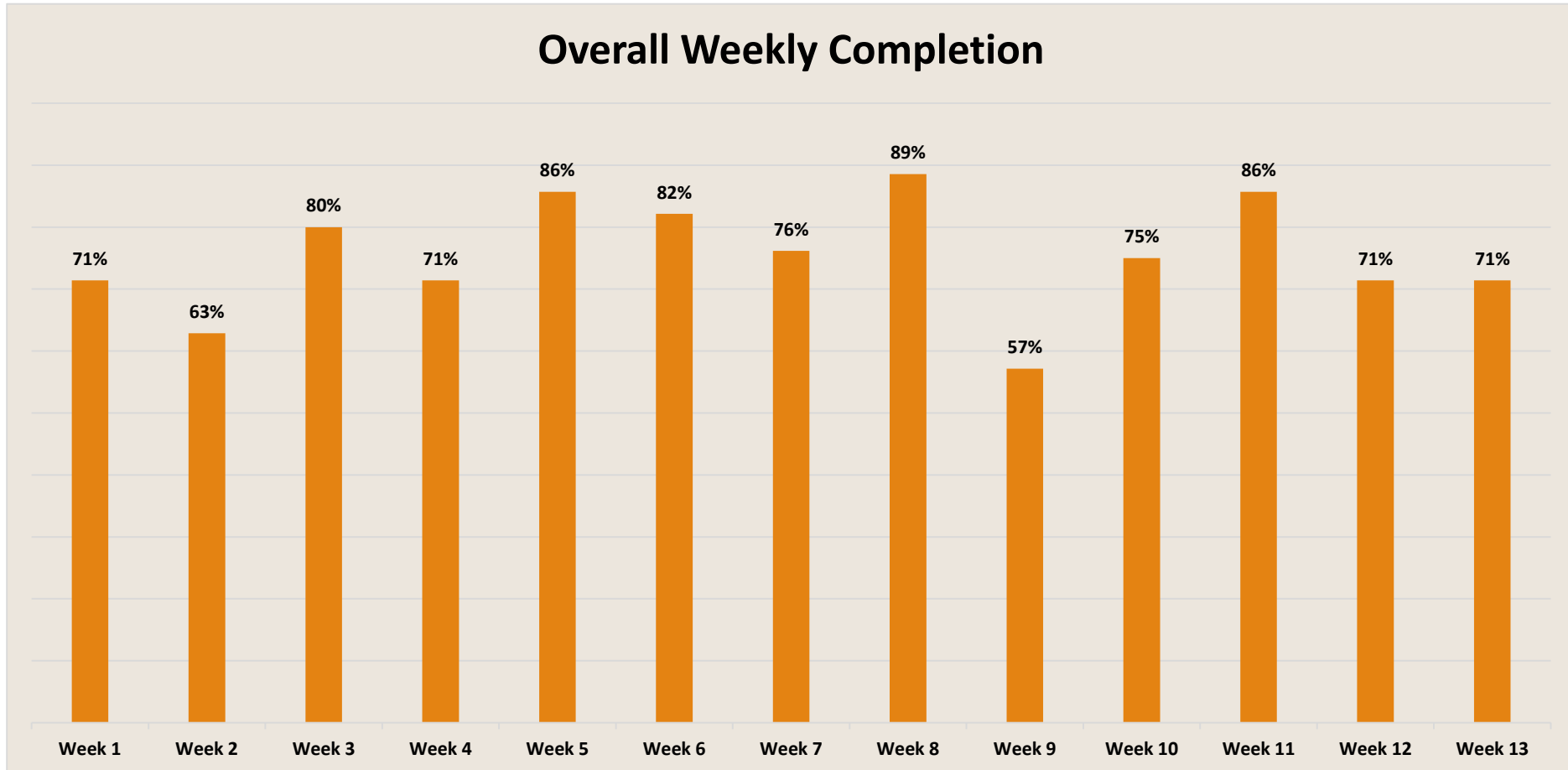
### FOOD DEMONSTRATIONS

Tasting, and meal preparation demonstrations to inspire parents to cook delicious nutritious meals, including special spices cooking methods, and time for parents to ask questions about cooking and nutrition.

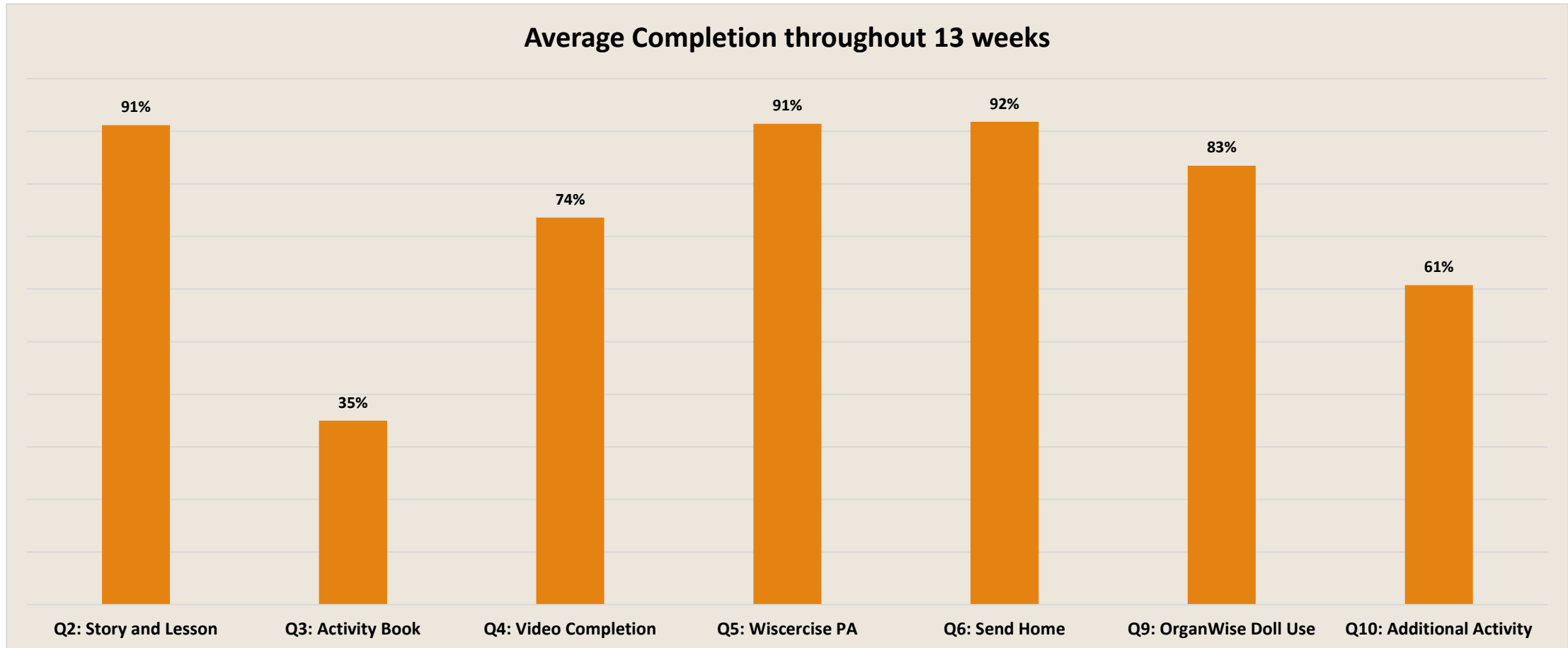


**WATCH**  
WELLNESS AROUND  
TRADITIONAL COMMUNITY HEALTH

# Classroom Curriculum Process Evaluation



# Classroom Curriculum Process Evaluation





# Process Eval Recommendations

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Drop or Modify the Activity Book, it has the lowest reported completion throughout the 13 weeks.

Not all of the instructors are using the same lesson plan on the same week. Some weeks vary greatly while other weeks are consistent.

Q3: Activity Book and Q4: Video Completion have most comments concerning instructors pointing out they could not find or were missing content for the activity.

On average activities take from 13 to 17 minutes to complete.

Lesson Plan: Gardening Kit-Concentrating on Fruits & Veggies was the highest reported comment concerning problems with Comprehension.

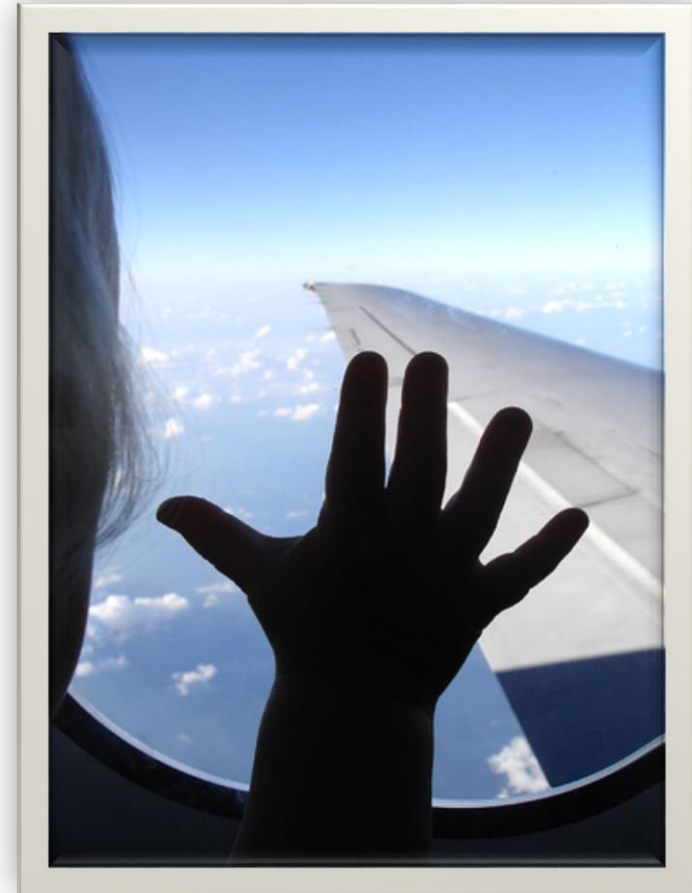
# Overview of Today's Talk

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Wellness Around Traditional Community Health intervention

Discussion Questions



# Discussion Questions

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- Opportunities for strengthening or improving the Extension Educator model in Happy Healthy Homes
- Opportunities for strengthening cultural relevancy or adaptations for WATCH as we expand communities
- Other ideas for integration and expansion of either HAPPY and WATCH
- Opportunity for involving other key personnel and professions



Questions???

[susan-sisson@ouhsc.edu](mailto:susan-sisson@ouhsc.edu)  
[alicia-salvatore@ouhsc.edu](mailto:alicia-salvatore@ouhsc.edu)