

Research and Resources for Feeding Infants in a Child Care Setting

Mimi Wu, MS, RDN

Team Lead/Lead Program Analyst

Nutrition Education and Promotion Branch

Nutrition, Education, Training and Technical Assistance Division

USDA Food and Nutrition Service

Child Nutrition Programs



United States Department of Agriculture

Objectives



- Describe how the USDA's Child and Adult Care Food Program (CACFP) infant meal pattern supports on-demand feeding, the introduction of solid foods when the baby is developmentally ready, and breastfeeding.
- Name two examples of how message framing, language, and images may influence child care providers' and mothers' perceptions and understanding of infant feeding information.
- Identify at least two tools to provide nutrition education and training on feeding infants in a child care setting.

USDA Child Nutrition Programs



<https://www.fns.usda.gov/cn>



United States Department of Agriculture

Program Administration

USDA-Food and Nutrition Service

State Agencies

Program Operators

Participants



The Team Nutrition Initiative

Supports the Child Nutrition Programs by:



1

Providing training and technical assistance to food service professionals

2

Providing technical resources to support healthy school & child care environments

3

Developing nutrition education resources that help children learn about agriculture and make informed food choices

Team Nutrition Resources



CACFP Meal Pattern Update

Support the implementation of the Child and Adult Care Food Program (CACFP) requirements.

- Requirements were updated in April 2016.
- Requirements = “meal patterns”
- Implementation date of October 1, 2017.



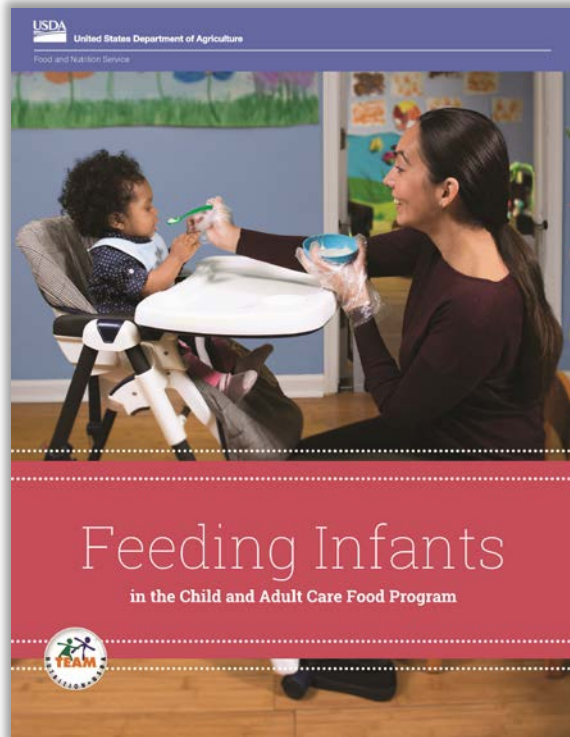
CACFP Infant Meals

- Two age groups
 - 0 through 5 months
 - 6 through 11 months
- Solid foods are allowed when infant is developmentally ready
 - Encourages more vegetables and fruit
 - Ready-to-eat cereals allowed at snack
 - Whole eggs, cheese, cottage cheese, yogurt
- Juice is not allowed
- Meals are reimbursable when mother breastfeeds on-site



Supporting the CACFP Infant Meal Pattern

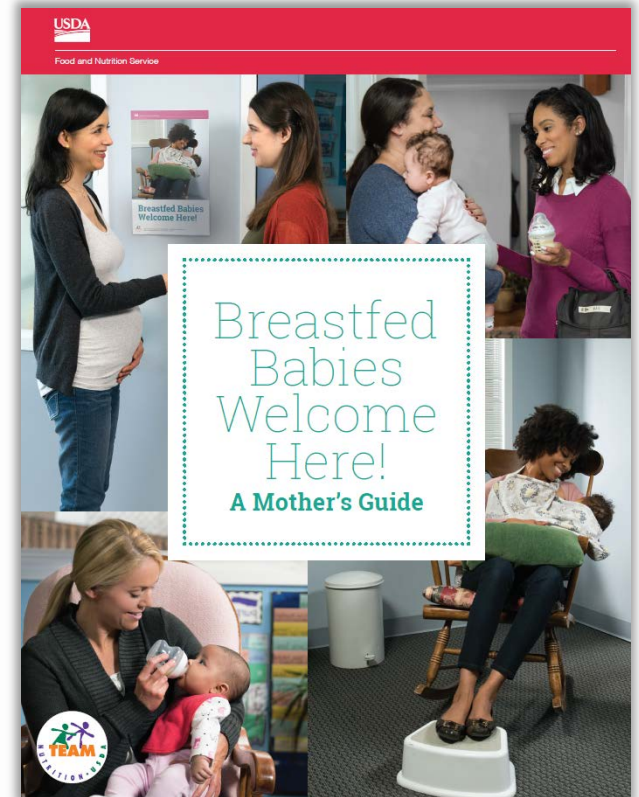
Feeding Infants in the CACFP



A Guide for Child Care Providers

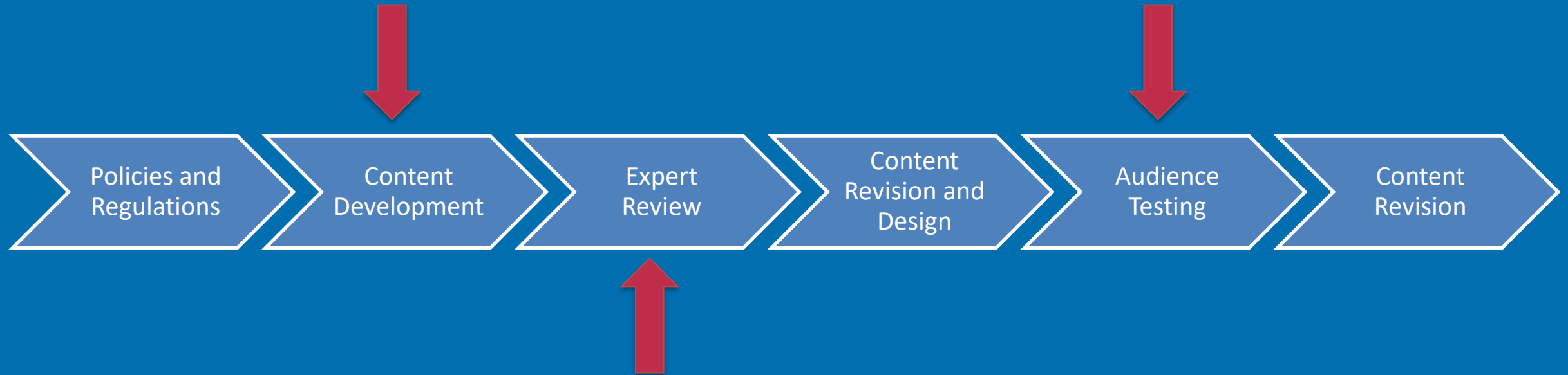
Breastfed Babies Welcome Here! Kit

- A Mother's Guide
- Poster
- Message Graphic / Removable Sticker



- AAP and NAM Recommendations
- WIC Messaging

- Focus Groups with Mothers
- In-Depth Interviews with Providers



- Center for Nutrition Policy and Promotion
- Centers for Disease Control and Prevention
- Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)
- Pediatricians
- Registered Dietitian Nutritionists
- Subject Matter Experts in the CACFP

Objectives of the Formative Research

- Ensure understanding of information, images, and content
- Ensure materials effectively communicate breastfeeding and infant feeding information
- Identify and understand cultural and attitudinal variables
- Understand how guides, poster, and graphics will be used
- Preferences of selected terminology (e.g., “human milk” versus “breastmilk”)



Methodology

Focus groups and in-depth interviews held in Pennsylvania and New Mexico.

- **17 Focus groups with mothers (60 minutes)**
 - Current mothers of infants (n=66)
 - Expecting mothers (n=20)
 - Conducted in both English and Spanish
- **12 In-depth individual interviews (IDIs) with child care providers (45 minutes)**
 - Directors of child care sites (n=5)
 - Child care providers with infants in their direct care (n=7)



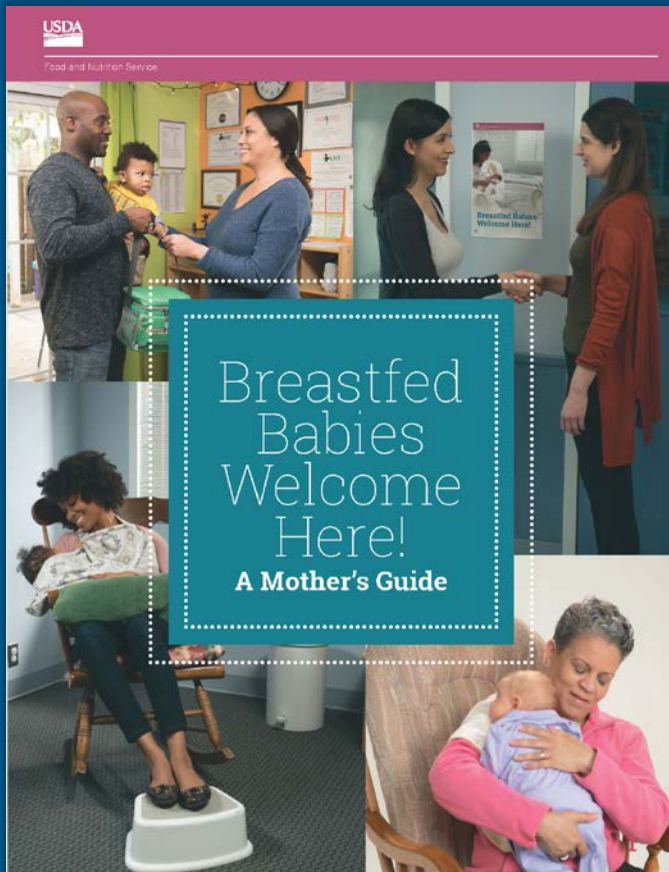
Qualitative Data Analysis

- Transcripts from focus groups and IDIs were analyzed.
- Spanish-language focus groups were translated into English.
- Qualitative coding was conducted using analysis software.
- Analyzed for patterns and themes that would inform modifications to the materials.
- Patterns and themes were compared across groups.



Findings From Focus Groups With Mothers

Mother's Guide



Poster



Message Graphic



Findings From Focus Groups With Mothers

- All groups reported breastfeeding, partially breastfeeding, or planning to partially breastfeed.
- Motivation for choosing and/or continuing to breastfeed included:
 - Benefits to infant's immune system
 - Healthier babies – less sick
 - Infant-mother bonding
 - More intelligent infants
- Mother also reported using formula or planning to use formula.



Findings From Focus Groups With Mothers

Barriers to or Challenges With Breastfeeding

- Physical pain or exhaustion
- Unaccommodating conditions at work or school for pumping
- Producing enough breastmilk
- Hard to know if baby is getting enough to eat
- Formula is more convenient
- Baby's health concerns
- Latching issues
- Baby won't take the breast/breastmilk

“When I hear about mothers who weren’t able to [breastfeed], I think that, many times, it’s because they didn’t get much support. You’re worried that your child isn’t getting full; you don’t know how much you’re giving them...if there were more people to support you, that know what to do and can support you, that would make the whole process [easier].” – Current Mother, Spanish, New Mexico

Sample Activity

What Do You Think Most Moms and Child Care Providers Liked?

A. Clean look of the background

B. Baby is covered up

C. Clear message that breastfed babies are welcome



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Sample Activity

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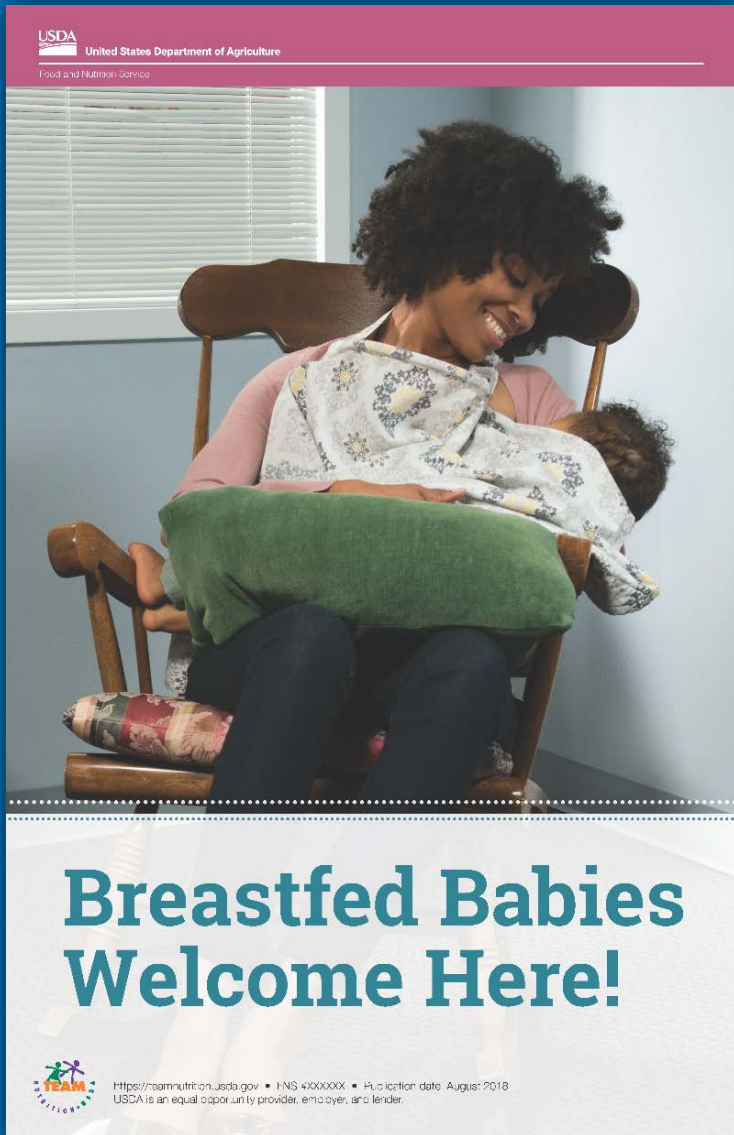
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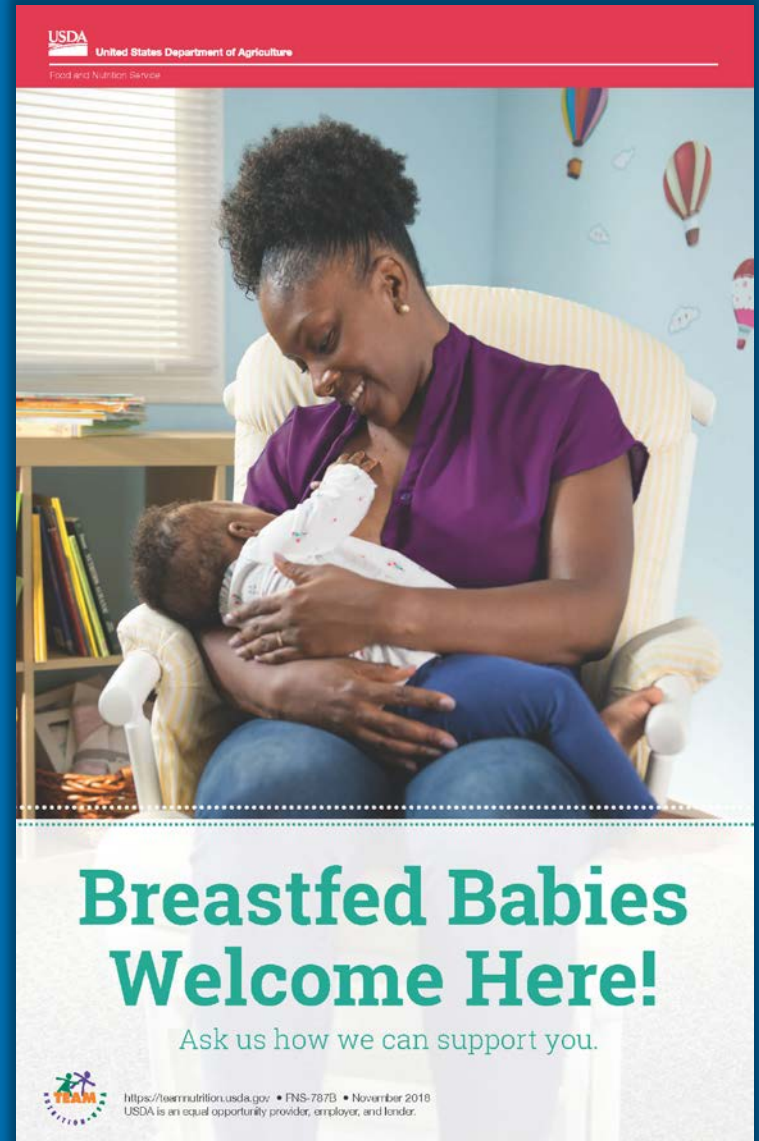
Motivators for Pregnant Women and Parents of Infants to Adopt Specific Nutrition and Health Behaviors

- Mothers favor content that encourages communication between child care providers and themselves.
- Responses revealed a preference for “realistic” content.
 - Photos of real moms
 - Information that applies to real-life scenarios
 - Depictions of breastfeeding that are accurate
- Mothers were sensitive to information that is not consistent with their own experiences
- Prefer a layout that mixes images, brief sections of text, and tip boxes
- Photographs should be used to convey technical information





Before



After



United States Department of Agriculture

Message Graphic



A

B



Before

After



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Pumping your breastmilk helps:

- provide your breastmilk to your baby while in child care.
- keep up your breastmilk supply so you can keep breastfeeding.
- relieve pressure in your breasts so that you can feel more comfortable.
- prevent infections in your breasts.
- reduce breastmilk leaking from your breasts.

If you are not breastfeeding or pumping and feed your baby infant formula instead, your supply of breastmilk will decrease and you may not be able to breastfeed for as long as you and your baby wish.

Contact your WIC clinic, breastfeeding specialist, doctor, or health care provider if you're worried that you're not making enough breastmilk.



How often should I pump my breastmilk?

Keep track of how often your baby eats during the day for a few days before going back to work or school. This will give you a good idea about when you will need to plan to pump your breastmilk while you are away from your baby.



Tip

How many times you pump breastmilk will depend on how long you are away from your baby. Pump your breastmilk as often as you would breastfeed your baby to maintain a good milk supply. In the first few months, this may be 8 to 12 times or more in a 24-hour period. So, it may be 2 to 3 times or more in an 8-hour work day.

Jose's Story

Baby Jose is 3 months old and is breastfeeding. At home, his mom breastfeeds him whenever he is hungry. The week before mom returns to work, she writes down when Jose breastfeeds and finds he eats about every three hours. When she returns to work, mom feeds Jose at the child care center when she drops him off at 8:00 a.m.

In order to stay on the same schedule, she pumps at work at 11:00 a.m. and 2:30 p.m. which are the times when she would feed Jose at home. This may change as Jose gets older and his needs and eating habits change. On some days Jose eats less often at child care or doesn't finish his entire bottle – that's okay! Sometimes baby Jose just misses his mommy and breastfeeding directly so he decides to wait until he can see her again to have a full meal.

Finding Time to Pump

Some mothers have more breastmilk in the morning and find that it is easiest to pump breastmilk then. One way that works well for some mothers is:

- Breastfeed your baby after waking up in the morning.
- Pump breastmilk while nursing or afterward. Store the breastmilk in the refrigerator or freezer.



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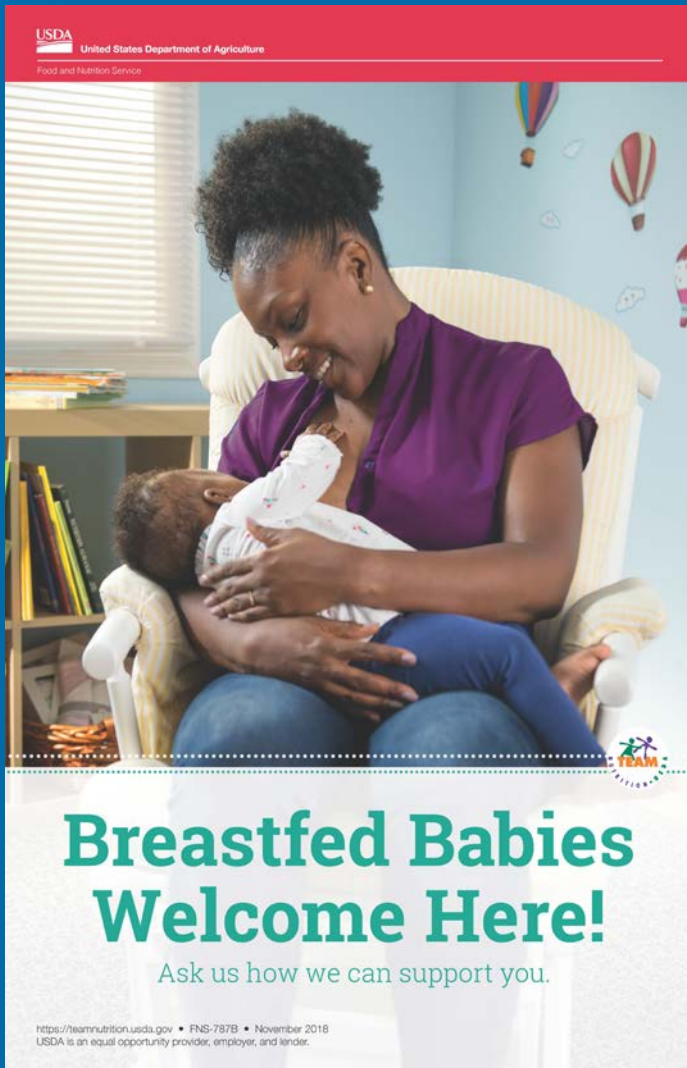


Some mothers have more breastmilk in the morning, and find that it is easiest to pump breastmilk then.

Before

After

Breastfed Babies Welcome Here!



Also available in
Spanish!

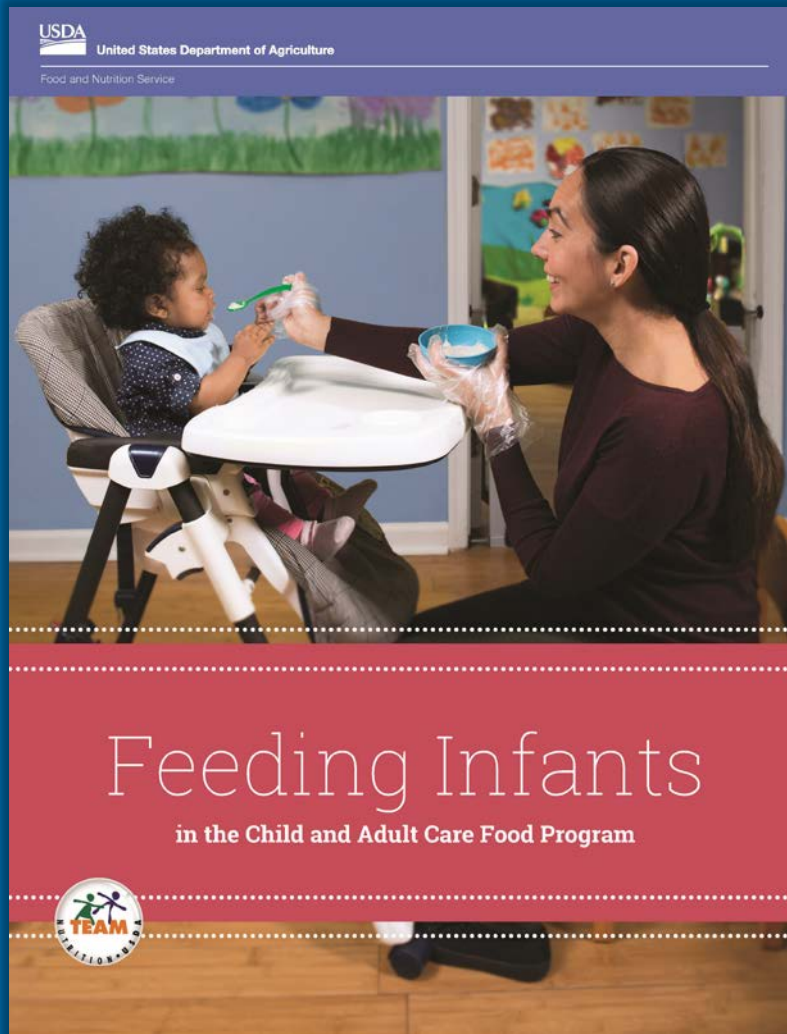
<https://www.fns.usda.gov/tn/breastfed-babies-welcome-here>



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Findings From In-Depth Interviews With Child Care Providers



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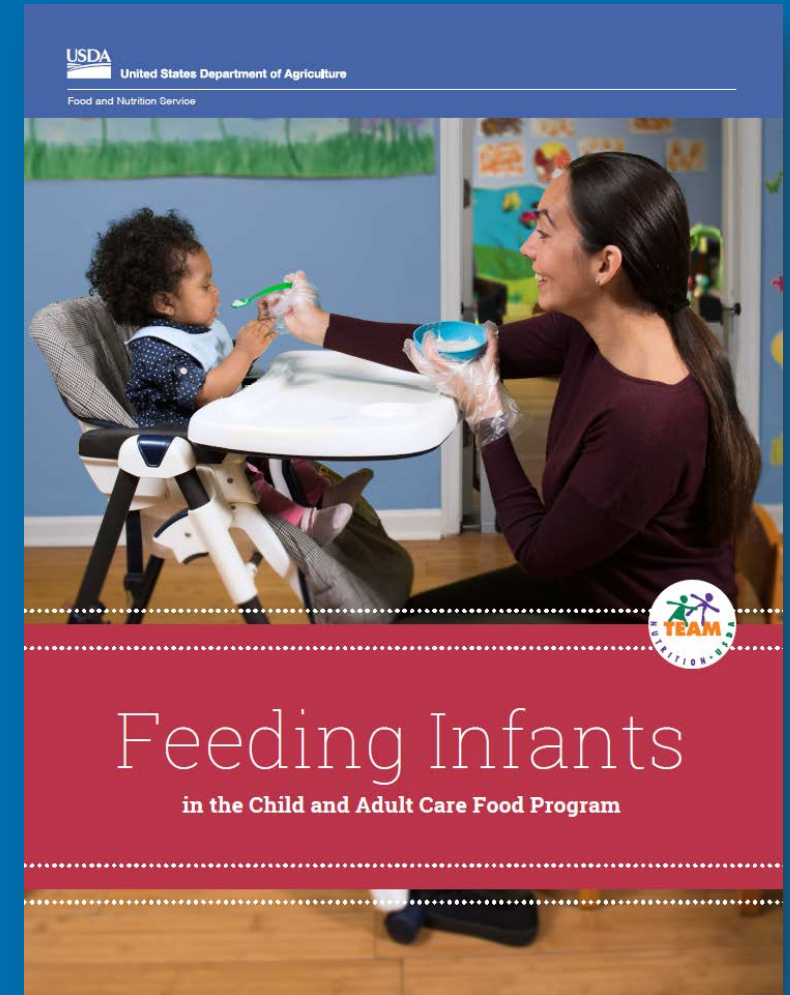
Summary of IDI Findings With Child Care Providers

- Most child care providers reported feeding infants on-demand.
- Child care providers welcome and make accommodations for mothers to comfortably breastfeed on-site.
 - Do not actively encourage breastfeeding
- The term “developmental readiness” was not commonly understood.
- Challenges related to feeding infants included:
 - Effectively communicating with parents
 - Managing the timing of on-demand feedings with groups of children
 - Storing and handling breastmilk



Feeding Infants in the CACFP (Guide)

- Topics:
 - CACFP Infant Meal Pattern
 - Proper handling and storage of breastmilk and infant formula
 - Developmental readiness
 - Hunger and fullness cues
 - Introduction of solid foods
 - Creditable foods in the CACFP
- Parent communication tools
- “Check Your Knowledge” questions



Available in English and Spanish!



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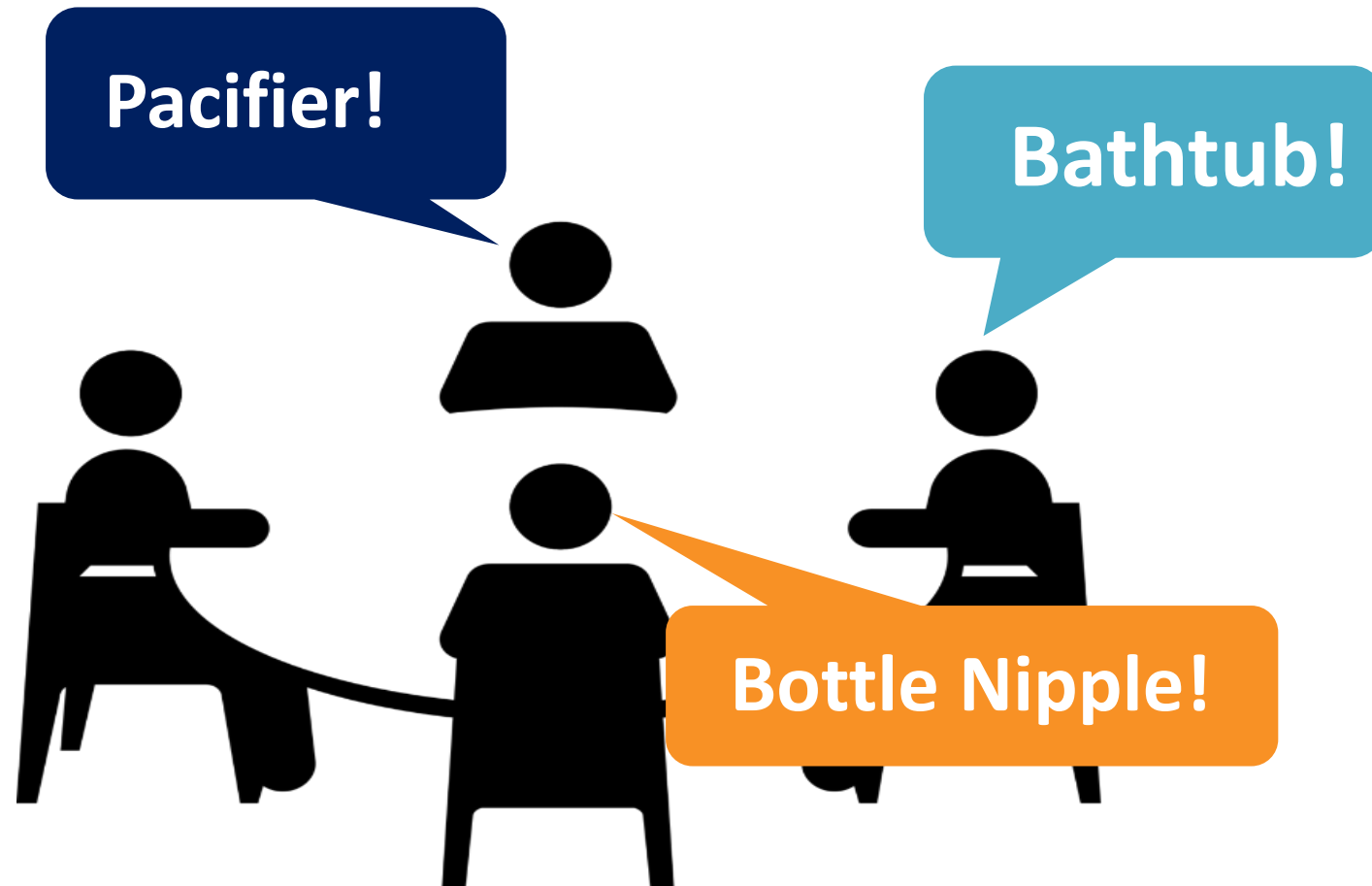
Baby Talk: Who Said It Best?

**“Amamantar”
or
“Lactar”?**

**“Breastmilk”
or
“Human Milk”?**

**“Expressed Milk”
or
“Pumped Milk”?**

Que es “la tetina?”



Overall Findings

- Acknowledge that something, like breastfeeding, is hard.
 - Propose realistic solutions.
- Communication tools to facilitate discussion between mothers and other parties, such as child care providers, are appreciated.
- Use realistic photos, not illustrations, to convey technical information.
- Provide simple and direct messages to clear up misconceptions around infant feeding.
- Be aware of various cultural preferences for communicating different messages.



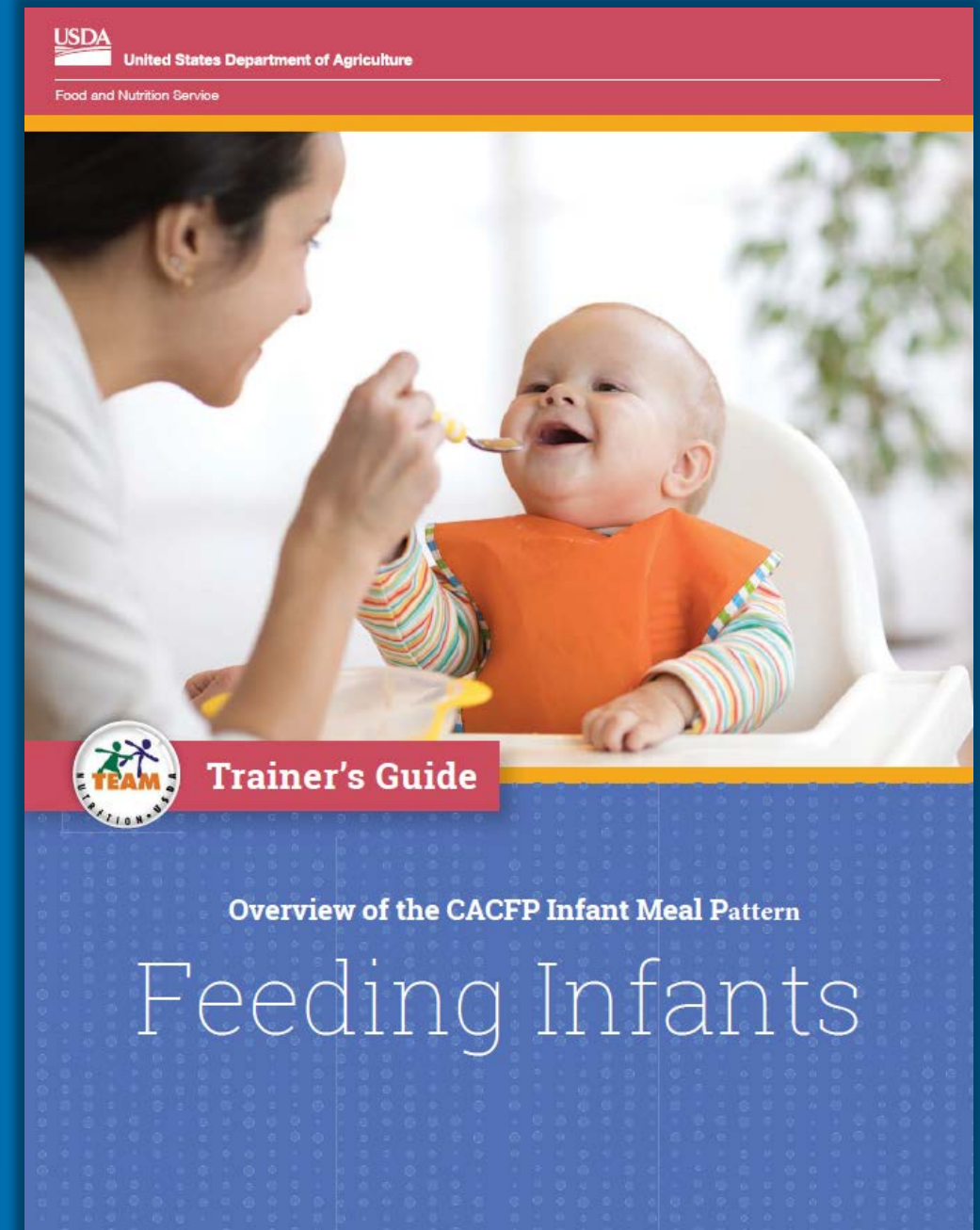
CACFP Trainer's Tools: Feeding Infants

- Training resources include:
- A trainer's guide
- Presentations with trainer notes
 - Lesson include topics, such as:
 - Overview of the CACFP infant meal pattern
 - Developmental readiness
 - Hunger and fullness cues
 - Solid foods, and more!
- Videos
- Game-show style digital interactives
- Pre- and post-tests

<https://www.fns.usda.gov/tn/feeding-infants-cacfp-trainers-tools>

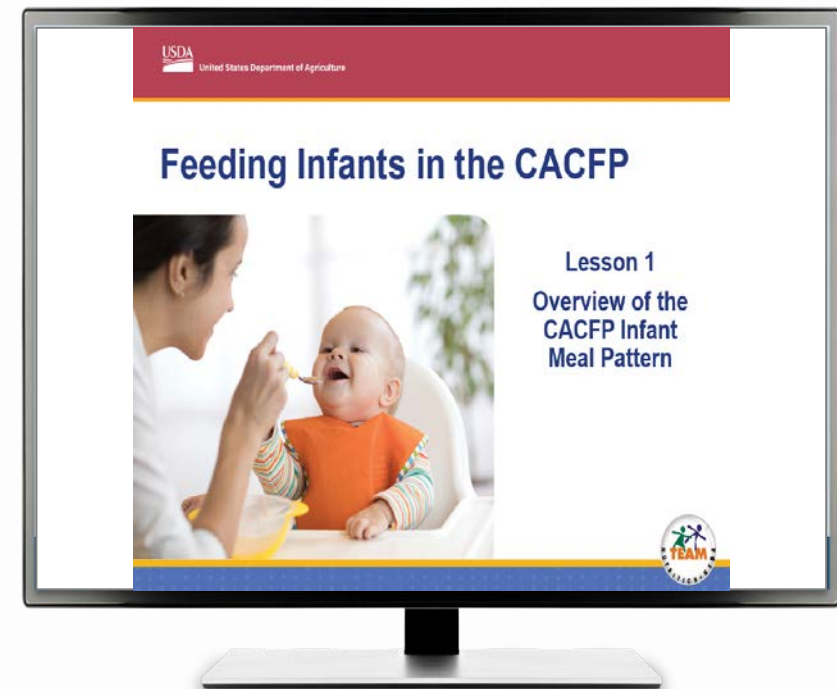


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Presentations With Trainer Notes

1. Overview of the CACFP Infant Meal Pattern
2. Identifying and Responding to Hunger and Fullness Signs
3. Creating a Breastfeeding-Friendly Environment in a Child Care Site
4. Storing and Handling Breastmilk in a Child Care Site
5. Selecting, Storing, and Handling Infant Formula in a Child Care Site
6. Bottle Feeding and Introducing a Cup
7. Developmental Readiness for Solid Foods
8. Infant Feeding Skills and Modifying Food Textures
9. Creditable Infant Foods: Part 1
10. Creditable Infant Foods: Part 2



Lesson Structure

Every lesson contains:

- Pre-test
- Lesson content
- Small group activity
- Post-test

Many lessons also contain:

- Short video
- Large group activity
- Digital interactive game



Pilot Trainings – Early 2019

1. Arizona
2. Kansas
3. Louisiana
4. Maryland
5. Washington, DC
6. Rhode Island
7. North Dakota





State Agency Perspective

INFANT FEEDING in the CACFP

Brittany Celebrano, RDN, CSP

01

Explore Infant Feeding Resources available for providers in centers, preschools, and home day cares.

02

Discover how the USDA Infant Feeding Toolkit and other resources are used by State Agencies and partner organizations.

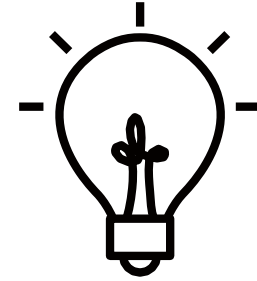
03

Discuss preparation, strategies, and key partners when implementing the workshop.





Pilot Training Toolkit



Arizona was 1 of 7 States to pilot the USDA Infant Feeding Toolkit and provide feedback for final revisions.



Arizona Pilot Training

The pre- and post- tests showed an increase in infant feeding knowledge.

60% PRE-TEST SCORE

84% POST TEST SCORE.

1st Infant training

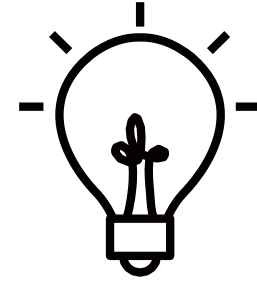
4 Hours

28 Organizations

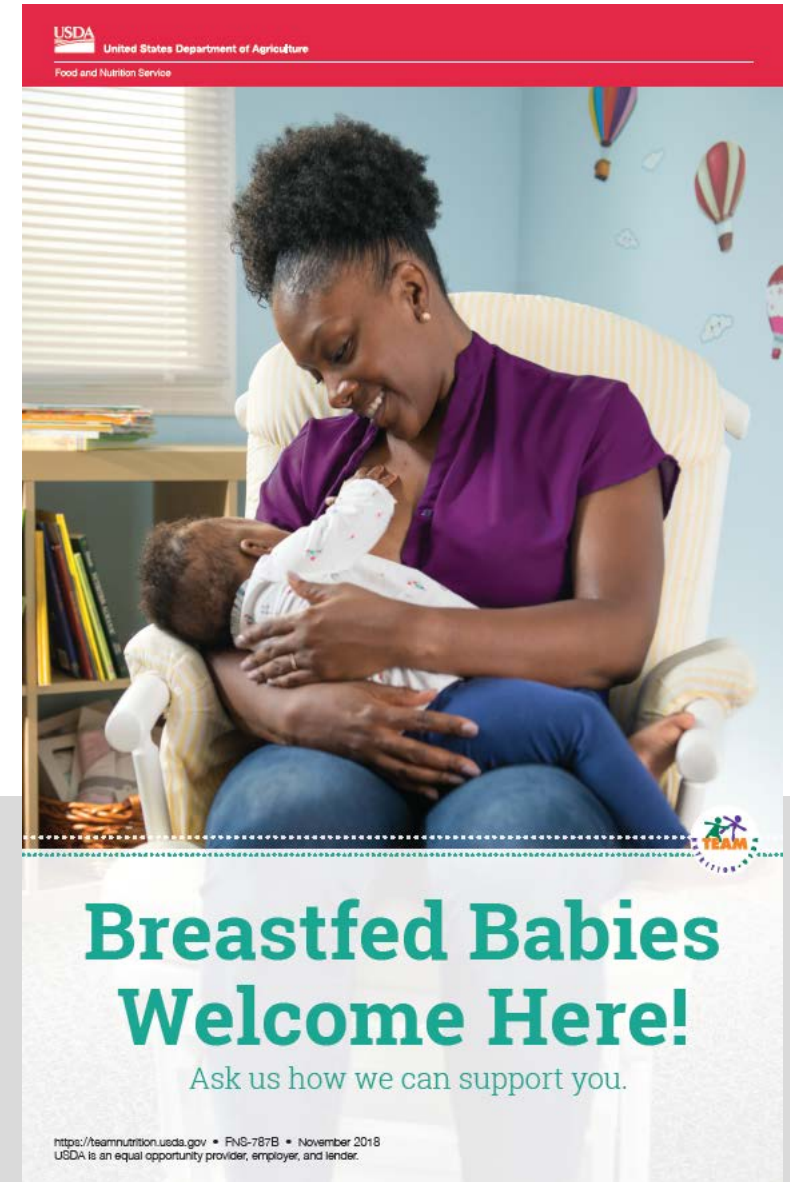
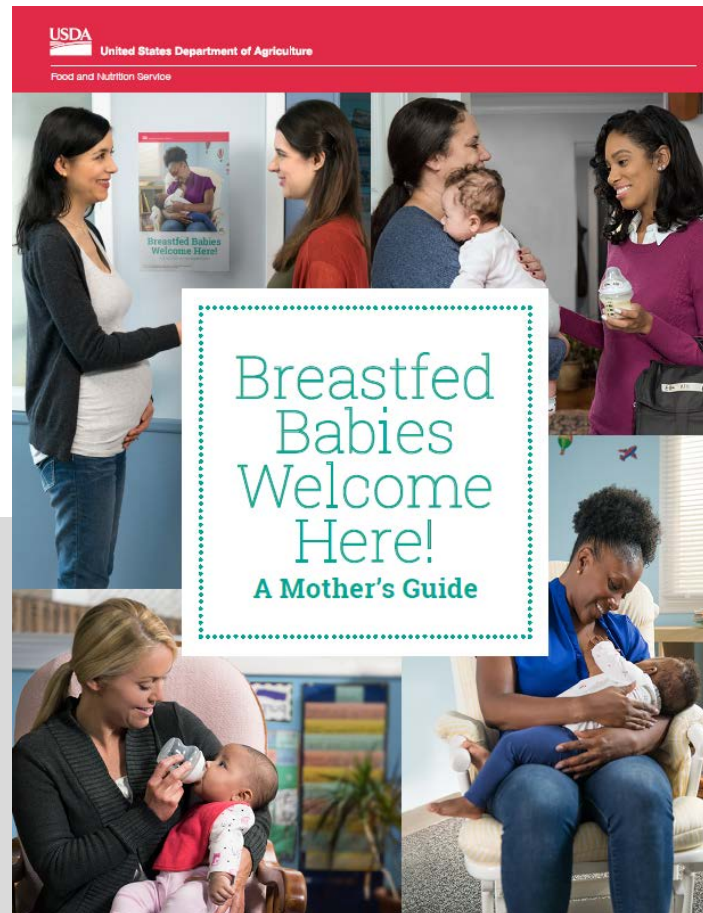


Workshop Preparation

Workshop preparation included reviewing the USDA training toolkit and adding Arizona specific requirements.



USDA Materials

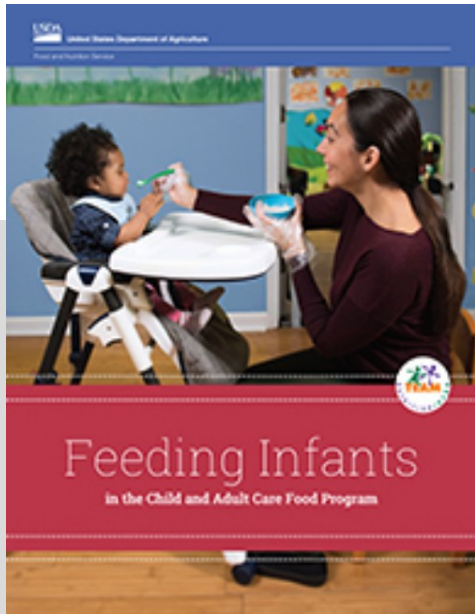


Option 1: Team Nutrition main ordering page for print materials:

<https://pueblo.gpo.gov/TN/TNPubs.php>

Option 2: State Agencies and Sponsoring Organizations can order in bulk by sending an email to:

TeamNutrition@usda.gov

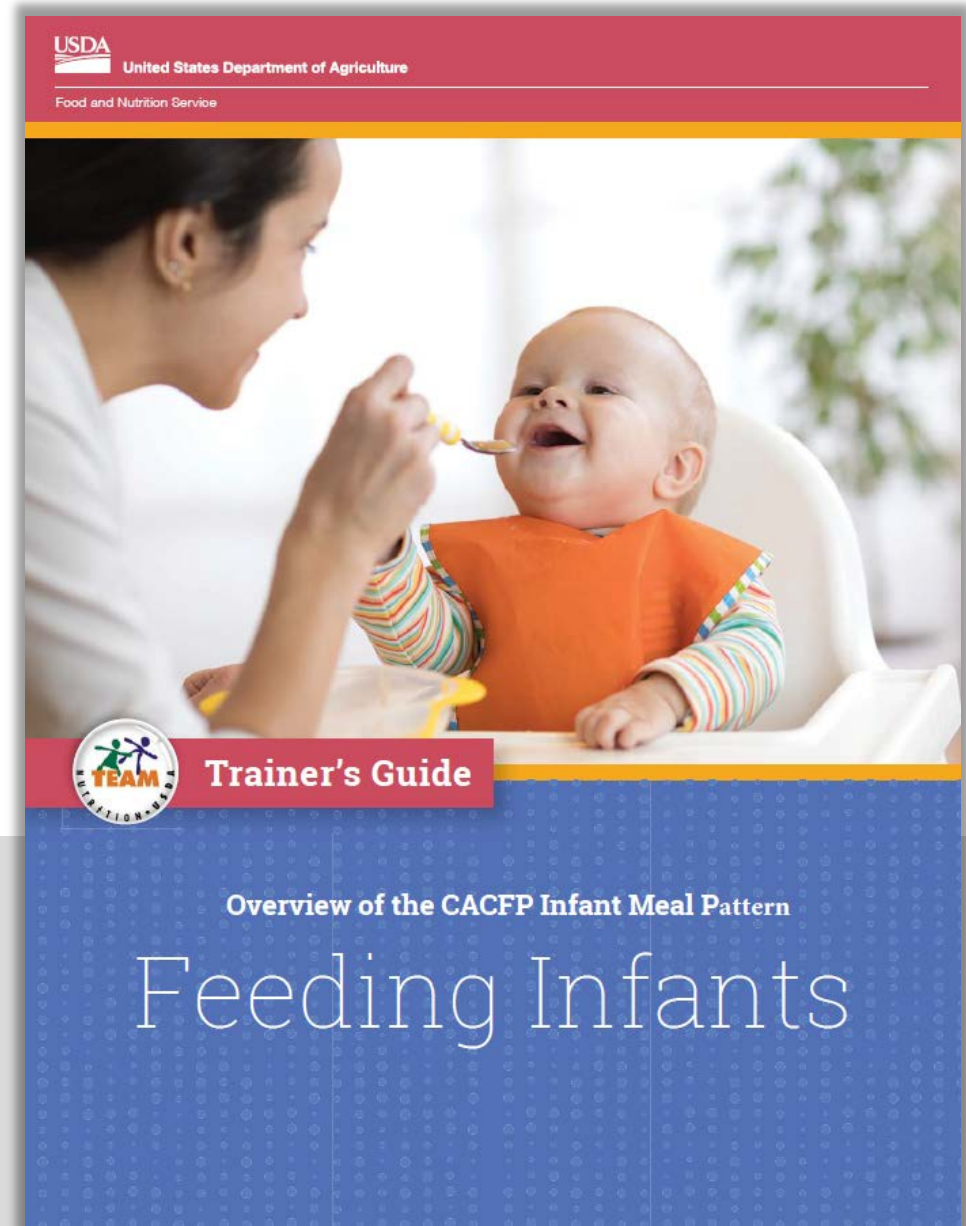


<https://www.fns.usda.gov/tn/feeding-infants-child-and-adult-care-food-program>

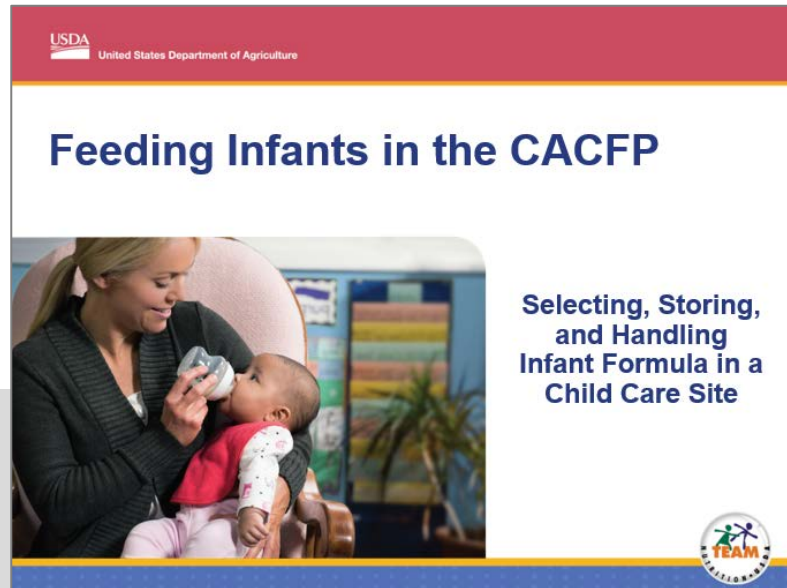


<https://www.fns.usda.gov/tn/breastfed-babies-welcome-here>

Trainer's Guide

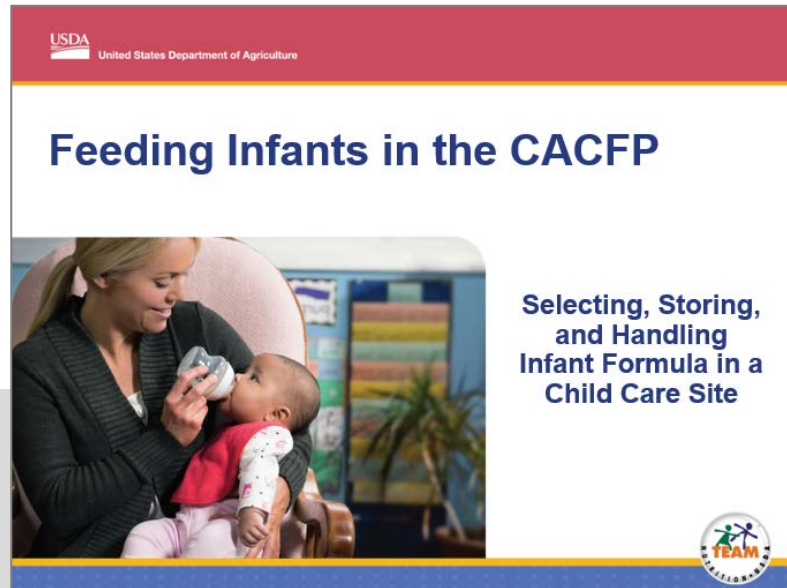


Infant Feeding Toolkit



1. Overview of the CACFP Meal Pattern
2. Identifying/Responding to Hunger/Fullness Signs
3. Creating a Breastfeeding-Friendly Environment
4. Storing and Handling Breastmilk
5. Selecting, Storing, Handling Infant Formula
6. Bottle Feeding and Introducing a Cup
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Workshop Structure

Step 1 - Establish Foundation
8 USDA Lessons
4 Videos & 1 Interactive Game
Handouts + Graphics
Pre- and Post- Tests

Step 2 - Add State Specifics
Infant Meal Count Form
Reimbursable Meals 6-11 months of age
Specify Compliance vs. Best Practice



Infant Feeding - Compliance

Claim only when the meal pattern has been met. This means:

1. Only when breastmilk and/or iron-fortified formula, at minimum has been provided
2. Only when foods (that the infant is developmentally ready for) have been provided
Flexibility during initial introduction but required with established eating patterns
3. Only when all components or all but 1 component are center-provided


Purchase at least one meal per week and all components must be provided.

Feed babies at least once per week.

Document: Use the Infant Point of Service Meal Count Sheet.

Safe handling, proper storage, and sanitation.

Communicate with parents/guardians.



United States Department of Agriculture

ADE Infant Point of Service Meal Count Sheet

Arizona Department of Education
Child and Adult Care Food Program
Infant Point of Service Meal Count Sheet

Date: _____

Completed by: _____

NAMES	Breakfast		AM Snack		Lunch		PM Snack		Supper	
	4-8 oz. Breastmilk or Formula (B/F)	Excess of Early Readiness Specify	4-8 oz. Breastmilk or Formula (B/F)	Excess of Early Readiness Specify	4-8 oz. Breastmilk or Formula (B/F)	Excess of Early Readiness Specify	4-8 oz. Breastmilk or Formula (B/F)	Excess of Early Readiness Specify	4-8 oz. Breastmilk or Formula (B/F)	Excess of Early Readiness Specify
Jade Singer	✓	IFC	✓		✓					
0-11 months										
NAMES	Breakfast		AM Snack		Lunch		PM Snack		Supper	
	8-10 oz. Breastmilk or Formula (B/F)	8-10 oz. Breastmilk or Formula (B/F)	8-10 oz. Breastmilk or Formula (B/F)	8-10 oz. Breastmilk or Formula (B/F)	8-10 oz. Breastmilk or Formula (B/F)	8-10 oz. Breastmilk or Formula (B/F)	8-10 oz. Breastmilk or Formula (B/F)	8-10 oz. Breastmilk or Formula (B/F)	8-10 oz. Breastmilk or Formula (B/F)	8-10 oz. Breastmilk or Formula (B/F)
Tim Larson	✓	Egg, Mushrooms	✓	Crackers, Apple	✓	Yogurt, Berries				
Daily Totals	Breakfast: _____	AM: _____	Lunch: _____	PM: _____	Supper: _____					

Updated: February 2019

This institution is an equal opportunity provider.

What's New?

The launch of the infant workshops paved the path for a new way of CACFP training in Arizona.



Broaden intended audience



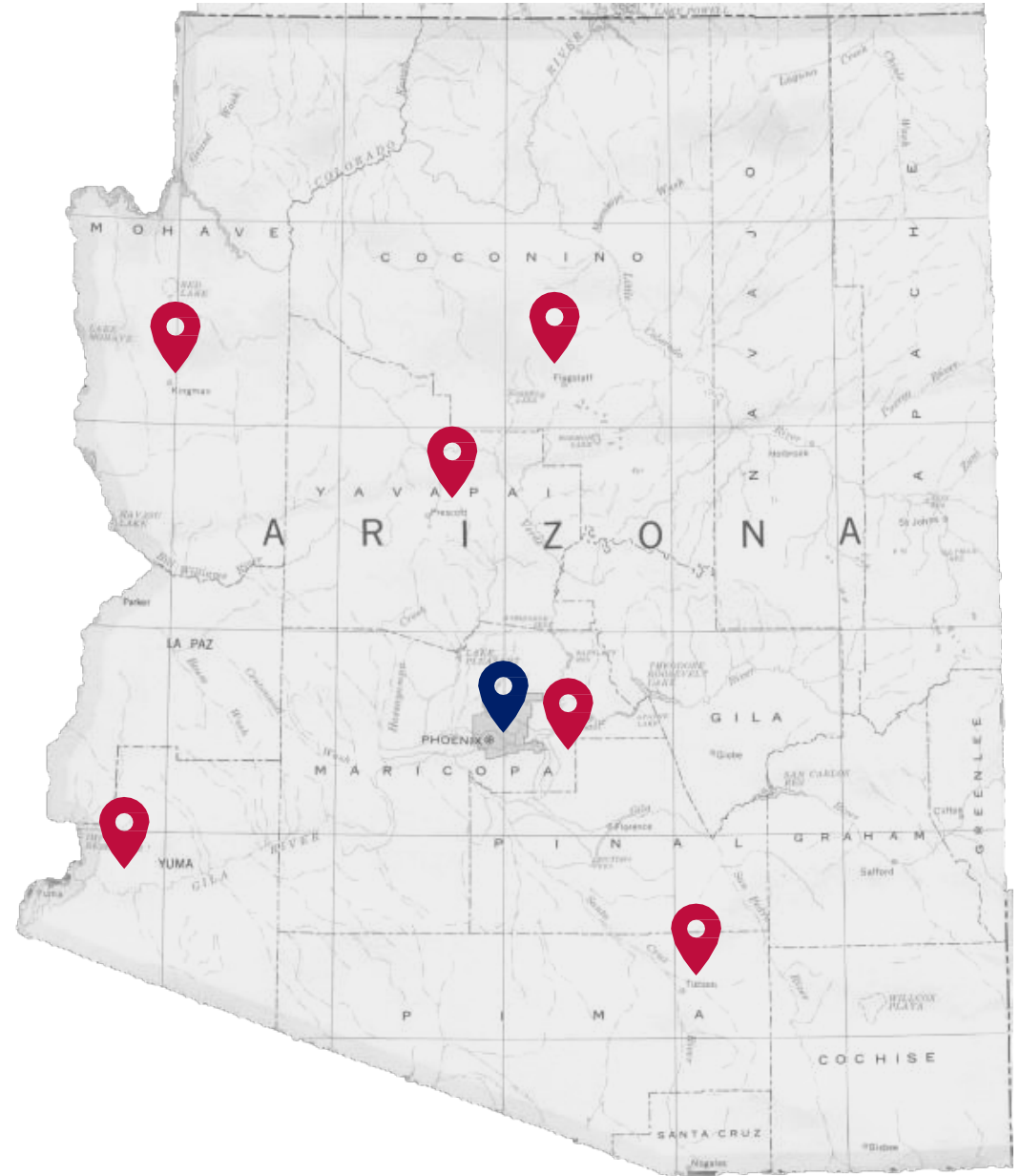
New training locations and days



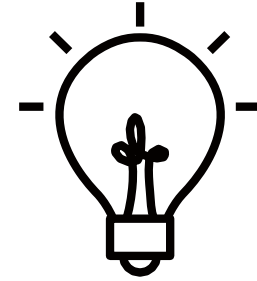
New training topic and format

Workshop Locations

Workshop locations were chosen throughout the State. Of the seven locations, six were new training locations for our department.



Recruitment & Strategies



Recruitment was started and strategies were implemented to encourage participation.



Recruitment



1. Infant Feeding Workshop Flier
2. Collaboration with Arizona Early Childhood Workforce Registry
3. Verbal Announcement at Annual Conference
4. Emails to center directors, owners, and partner organizations

Intentional Approach



Recent changes to infant feeding recommendations



1st Infant Feeding Training for the CACFP audience in Arizona

Workshop tone was rooted in validation, understanding, and a safe space to *ask questions* and *share experiences*.

Strategies

Room Set-Up: 32 total, 8 tables of 4

Ideal Number of Attendees: Not defined

Largest # Attendees: 18 – 23

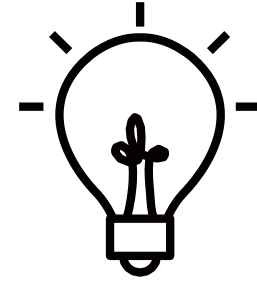
Average # Attendees: 13

Ideal Type of Attendee

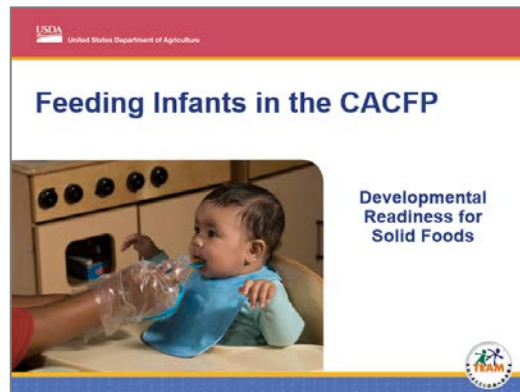
- Many staff positions (infant teacher, director)
- Various levels of experience (knowledge)
- Partner Organizations

Infant Workshops

11 Infant Workshops were held throughout Arizona in the Fall of 2019 for infant teachers, directors, and partner organizations.



Let's Take a Look!



Lessons Description



Videos Description

Games Description



Communication Tools Description



Lessons

Feeding Infants in the CACFP



Developmental Readiness for Solid Foods



Communicating With Parents



- Feeding solid foods **before** a baby is developmentally ready:
 - May **increase** chance of **choking**.
 - Baby may **drink less** breastmilk or formula needed to grow.
 - Baby may be overweight or obese later in life.
- Adding cereal to baby's bottle does **not** help baby:
 - Sleep through the night.
 - Eat fewer times in a day.



72

What Are Solid Foods?

Solid foods are foods that are easy to digest and safe for a baby to eat once he or she is developmentally ready.

Pureed



Finely
Chopped



Mashed



Ground



83

Videos



Dad: I'm thinking she may be ready to try solid foods. What do you think?

Infant Teacher: "I'm glad you asked. She can sit in her high chair by herself, has good head control, which is a sign that she may be ready for solid foods. Have you noticed that?"

Shares safe food introduction tips and discusses signs of readiness with Dad

Dad: Sounds like Cammy might be ready to try solids, I'll give her some this weekend.

Infant Teacher: Great! Let us know how it goes, if she's ready we can start giving her foods in child care.

Communication Tools



Why Does Your Baby Need to Try Solid Foods?

Starting solid foods when your child is developmentally ready is important because:

- Your baby is getting bigger and needs more calories and nutrients that can come from solid foods
- It gives your baby a chance to try different foods so he or she will like them at an early age and will continue to eat them as he or she grows older.



United States Department of Agriculture

Food and Nutrition Service

For Parents: Is Your Baby Ready for Solid Foods?

Feeding your baby the right foods at the right time helps him or her get the nutrition needed for good health. Your baby will grow to enjoy many types and textures (smooth, lumpy, and so on) of food during his or her first year.

How Can You Tell When Your Baby Is Ready To Eat Solid Foods?

Your baby is ready to start solid foods if he or she:



- Opens his or her mouth when foods come his or her way or reaches for food.



- Sits in a high chair with good head control.



- Uses his or her tongue to move food from the spoon into his or her mouth. The tongue does not automatically push the food out of his or her mouth.



Why Does Your Baby Need To Try Solid Foods?

Starting solid foods when your child is developmentally ready is important because:

- Your baby is getting bigger and needs more calories and nutrients that can come from solid foods.
- It gives your baby a chance to try different foods so he or she will like them at an early age and will continue to eat them as he or she gets older.



Tip:

Many, but not all, babies show signs that they are developmentally ready for solid foods at around 6 months.

United States Department of Agriculture

Score: 0

BABY FOOD LINE UP

MEAL 1/4
What can you offer Baby Elizabeth as part of a reimbursable **lunch** in the CACFP?
Select three foods.

g. = grams

fl. oz. = fluid ounce

tblsp. = tablespoons

Fish
0-4 tblsp.

Avocado
0-2 tblsp.

O's Cereal
0-4 tblsp.

Peach Cobbler
Dessert
0-2 tblsp.

Egg (yolk only)
0-4 tblsp.

Breastmilk
6-8 fl. oz.

United States Department of Agriculture

Score: 25

BABY FOOD LINE UP

FEEDBACK
You can offer Baby Elizabeth **breastmilk**, **avocado**, and **fish** as part of a reimbursable lunch. **Egg yolk** alone is not creditable; the **whole egg** (yolk and white) must be offered. **Baby food desserts** are considered a grain-based dessert and are not creditable. Ready-to-eat cereal, like the **O's Cereal**, is only creditable at snack, not lunch. For more information, see Table 3: CACFP Infant Meal Pattern With Food Components and Appendix F: Infant Foods List in the Feeding Infants in the Child and Adult Care Food Program guide.

g. = grams

fl. oz. = fluid ounce

tblsp. = tablespoons

Fish
0-4 tblsp.

Avocado
0-2 tblsp.

Peach Cobbler
Dessert
0-2 tblsp.

O's Cereal
0-4 tblsp.

Egg (yolk only)
0-4 tblsp.

Breastmilk
6-8 fl. oz.

✗

O's Cereal
0-4 tblsp.

✗

Egg (yolk only)
0-4 tblsp.

✓

Breastmilk
6-8 fl. oz.

NEXT

Interactive Games

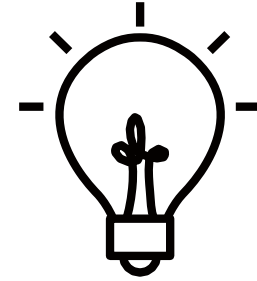
United States Department of Agriculture

BABY FOOD LINE UP

START

Key Takeaways

What was learned and where
do we go from here?



Stats

- 11** # Workshops in Fall 2019
- 7** # Arizona Training Locations
- 136** # Total Attendees
- 83** # Reported Workforce ID
- 13** # Partner Attendees

Key Players

- State Child Care Licensing
- County Health Departments
- Supplemental Nutrition Program for Women, Infants, and Children (WIC)
- State QIRS/QRS Agency (Quality Improvement & Rating System)

Successes



Survey and in-person **positive feedback** on the lessons, resources, information shared, and workshop locations



83 of the 136 attendees (61%) reported their **Workforce Registry ID** and received training hours for the workshop



Strong takeaways of correct infant formula purchasing, storing breastmilk to support nursing mothers, and safe introduction of solid foods

Survey Results (out of 5)

4.82

Overall satisfaction

4.84

Resources were meaningful, relevant and supported learning objectives

4.76

Content organized and easy to follow

4.92

Facilitator displayed sound knowledge of the subject presented

4.75

This session provided information that will help me be more successful in my job.

Thank You!

- **Team Nutrition:** [TeamNutrition.USDA.gov](https://www.fns.usda.gov/tn)
 - **Breastfed Babies Welcome Here!:**
<https://www.fns.usda.gov/tn/breastfed-babies-welcome-here>
 - **Feeding Infants in the CACFP:**
<https://www.fns.usda.gov/tn/feeding-infants-child-and-adult-care-food-program>
 - **CACFP Trainer's Tools: Feeding Infants:**
<https://www.fns.usda.gov/tn/feeding-infants-cacfp-trainers-tools>
- **Twitter:** @TeamNutrition
- **Mimi Wu:** Mimi.Wu@fns.usda.gov
- **Brittany Celebrano:** Brittany.Celebrano@azed.gov

