Getting Started!

• Type your name and institution into the chat box!

• Remember to keep yourself on mute.

• Type your questions into the chat box.
Session 4: Early Childhood
Child and Adult Care Food Program (CACFP): what is it?

- Subsidizes meals and snacks served to infants and children in participating child care programs
  - Emergency shelters, at-risk afterschool programs; also adults who receive day care in participating facilities.
- Basic structure: participating facilities serve meals that align with CACFP meal patterns and receive tiered reimbursements for the meals based on children’s family income
- Breakfast, lunch, snack, and supper (but max 3 meals reimbursed per day)
CACFP: brief history

- Started as a pilot program in 1968 (Special Food Service Program for Children) – focus on low income working mothers for when children not in school
- 1978 – permanently made Child Care Food Program
- 1987 – expand to adult care component
- 1996 – “Personal Responsibility and Work Opportunity Reconciliation Act” – create two-tier reimbursement structure, max reimbursements for 3 meals
- 2017 – updates to the CACFP meal patterns (from HHFKA) implemented to bring in line with current dietary science

Source: IOM, 2011, Aligning Dietary Guidance for All, Table 2-2
Who participates?

- Eligible: Public or private nonprofit child care centers, outside school hours care centers, Head Start programs, and other institutions that are licensed or approved to provide day care services.

- Family child care homes – all are eligible to participate if licensed/meeting state criteria

- But, only about 19% of 2 yr olds and 61% of 4 yr olds even attend a child care program that is eligible
  - Compare to NSLP – about 95% of children attend a school with NSLP meals available

Gordon et al 2011
## Participation in major U.S. nutrition programs (millions), Sept 2020

<table>
<thead>
<tr>
<th>Program</th>
<th>Free/Reduced Price</th>
<th>Full</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNAP</td>
<td>37.6</td>
<td></td>
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<tr>
<td>NSLP</td>
<td>22.1</td>
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</tr>
<tr>
<td>SBP</td>
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<td>SFSP</td>
<td>0</td>
<td>4.7</td>
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<tr>
<td>CACFP</td>
<td>3.88</td>
<td>0.6984</td>
</tr>
<tr>
<td>WIC</td>
<td>6.3</td>
<td></td>
</tr>
</tbody>
</table>

https://www.fns.usda.gov/pd/overview
CACFP and children’s health

- 4 percentage point reduction in household food insecurity (Heflin 2015)
- Participating programs serve healthier menus (Ritchie 2012; Andreyeva 2018; Gurzo 2020)
- Children attending CACFP centers consume fewer sugary drinks, more vegetables, milk (Crepinsek 2004; Korenman 2012; Andreyeva 2018)
- Spillover effects – CACFP programs adhere to more nutrition and physical activity best practices (Cotwright 2018; Erinosho 2018; Liu 2016; Williams 2021)
CACFP and the Healthy, Hunger-Free Kids Act of 2010

Updated Child and Adult Meal Patterns

Greater Variety of Vegetables and Fruits
- The combined fruit and vegetable component is now a separate vegetable component and a separate fruit component; and
- Juice is limited to once per day.

More Whole Grains
- At least one serving of grains per day must be whole grain-rich.
- Grain-based desserts no longer count towards the grain component; and
- Ounce equivalents (oz eq) are used to determine the amount of creditable grains (starting October 1, 2019).

More Protein Options
- Meat and meat alternates may be served in place of the entire grains component at breakfast a maximum of three times per week; and
- Tofu counts as a meat alternate.

Age Appropriate Meals
- A new age group to address the needs of older children 13 through 18 years old.

Less Added Sugar
- Yogurt must contain no more than 23 grams of sugar per 6 ounces; and
- Breakfast cereals must contain no more than 6 grams of sugar per dry ounce.
CACFP and the Healthy, Hunger-Free Kids Act of 2010

Kenney et al 2020

Chriqui et al 2020: centers reported improvements in not serving sugary cereals, serving more whole grains
CACFP and unknowns

- Why aren’t more child care programs participating?
- What impact does CACFP have on weight and growth?
- What is role of CACFP in health equity?
- Could the impact of recent HHFKA changes be boosted?
Special Supplemental Nutrition Program for Women, Infants and Children (WIC)

Sara Olson, ScM, RDN
Policy Branch Chief
Supplemental Food Programs Division
USDA Food and Nutrition Service
WIC provides Federal grants to States for:

- Supplemental nutritious foods
- Nutrition education
- Breastfeeding promotion and support
- Screening and referrals to other health, welfare and social services
- Farmers’ market benefits
WIC Program Overview

- Federal responsibilities
  - Provide grants to State agencies for food and nutrition services and administration costs
  - Set eligibility guidelines
  - Monitor and oversee State agencies

- State and Local responsibilities
  - Determine eligibility and issue benefits
  - Authorize and monitor vendors (stores)
  - Provide program services
Participant Eligibility

Categorical
- Pregnant women
- Breastfeeding and non-breastfeeding postpartum women
- Infants
- Children up to age five

Residential
- Applicant must live in the State in which they apply

Income
- Cannot be more than 185% of the Federal poverty income guidelines
- Can be automatically eligible if participates in SNAP, Medicaid, or other Federal or State programs (per State option)

Nutrition Risk
- Must have a medical-based or dietary-based condition
How Does WIC Help?

WIC Benefits - Healthy Foods

- Whole-wheat Bread and other Whole Grains
- Milk
- Eggs
- Cheese
- Breakfast Cereal
- Peanut Butter
- Fruits and Vegetables
- Yogurt
- Dried and canned beans/peas
- Canned Fish
- Baby Food
- Infant Cereal
- Juice
- Infant Formula
- Soy-based beverage
- Tofu
WIC Benefits – Healthy Foods

- Cash value vouchers/benefits ($9, or $11) for fruits and vegetables for children and women
- Participants may choose from a wide variety of fruits and vegetables
- Fresh, frozen and canned allowed
WIC Benefits – Nutrition Education

• Eat more fruits & vegetables
• Lower saturated fat
• Increase whole grains & fiber
• Drink less sweetened beverages and juice
• Babies are meant to be breastfed
WIC Benefits – Breastfeeding Support

• Receive follow up support through peer counselors

• Can participate in WIC longer

• Receive an enhanced food package if exclusively breastfeeding

• May receive breast pumps, breast shells or other nursing supplements to help support the continuation of breastfeeding
WIC FFCRA & ARPA Funds

• The Families First Coronavirus Response Act of 2020 (FFCRA) provided regulatory and statutory waiver authority plus $500M in funding through September 30, 2021.
• The American Rescue Plan Act of 2021 (ARPA) provided WIC $880 million, including:
  • $490 million for temporary WIC cash-value voucher increase. Implemented via memo on 3/24/21.
  • $390 million for WIC outreach, innovation, and modernization efforts. See memo dated 3/15.
COVID-19 Waivers and Flexibilities

• **Physical Presence**
  USDA is allowing participants to enroll or re-enroll in WIC without visiting a clinic in-person and postpone height/weight measurements and bloodwork requirements.

• **Remote Benefit Issuance**
  USDA is allowing WIC agencies to issue benefits remotely so participants don’t have to pick-up their WIC benefits in-person.

• **Food Package Substitutions**
  USDA is allowing WIC State agencies to substitute certain food package items when availability is limited.
Thank You!
Research on WIC: An Overview of FNS-Funded Studies

Courtney Paolicelli, DrPH, RDN
USDA Food and Nutrition Service
Office of Policy Support
Special Nutrition Research and Analysis Division

The findings and conclusions in this presentation are solely those of the author(s) and should not be construed to represent any official USDA or U.S. Government determination or policy.
WIC Participant and Program Characteristics Study (WIC PC) 2018

WIC Participant and Program Characteristics Study 2018

- Report redesigned
  - New layout, new data tables
  - Updated analyses
  - New breastfeeding indicators
- National and State Agency level information
- Annual trends
- Interactive graphics

FNS Project Officers:
Grant Lovellette (2018) & Amanda Reat (2020)
National- and State-Level Estimates of WIC Eligibility and WIC Program Reach in 2018
Questions?

- FNS OPS website: https://www.fns.usda.gov/research-analysis
- For general information on FNS studies: FNSstudies@usda.gov
- To request publicly available data: OPSDataRequests@usda.gov
Responsive Feeding, Child Growth, and Development

Rafael Pérez-Escamilla, PhD
Professor of Public Health
Director, Maternal Child Health Promotion Program
What is responsive Feeding?

RF refers to ‘feeding practices that encourage the child to eat autonomously and, in response to physiological and developmental needs, which may encourage self-regulation in eating and support cognitive, emotional, and social development’

(adapted from: Pérez-Escamilla, Segura-Pérez, & Hall Moran, 2019)
The First 1000 Days: The Foundation for Growth, Health and Brain Development
The incredible speed in growth in early life illustrates the window of opportunity that the first 1,000 days are and the need to properly meet age-specific food and nutritional requirements.

Van der Beek. *Sight and Life* 2018;32(1):46-52
a unique window of opportunity to nutritionally support growth in the infant and metabolic health of both mother and infant, to reduce the risk of NCDs later in life.
The experience-expectant, experience-dependent human brain
Advancing Early Childhood Development: from Science to Scale

Department of Pediatrics
Yale School of Medicine
October 31, 2018
Nurturing Care
Nurturing care should envelop children since beginning of life

- Comprises all essential elements for a child to grow physically, mentally and socially
  - Health Care
  - Nutrition
  - Responsive Caregiving
  - Protection and Security
  - Opportunities to learn and discover

Requires stable environments where children receive love and stimulation responsive to their developmental stages
Developed by UNICEF, the World Bank and other partners with input from countries worldwide
Launched at the World Health Assembly, May 18, 2018 in Geneva, Switzerland
Crucial for attaining the Sustainable Development Goals (SDGs)
Based on the Lancet Early Childhood Development Series published in 2016
Provides an action roadmap to implement evidence-based policies and deliver services to support parents, families, and other caregivers with the provision of nurturing care to young children in their communities

Components of nurturing care

- Adequate Nutrition
- Good Health
- Responsive Caregiving
- Opportunities for Early Learning
- Security and Safety
Responsive feeding: Key for nurturing care

Feeding Guidelines for Infants and Young Toddlers

A Responsive Parenting Approach

Rafael Pérez-Escamilla, PhD
Sofia Segura-Pérez, MS, RD
Megan Lott, MPH, RD

Responsive parenting is a caregiving style expected to foster the development of self-regulation and promote optimal cognitive, social, and emotional development from the beginning of life. Critical dimensions of responsive parenting include feeding, sleeping, soothing, and play/physical activity; all are highly interconnected with each other. Responsive parenting interventions have been shown to have a beneficial impact on child feeding behaviors and weight outcomes. An expert panel convened by Healthy Eating Research, a national program of the Robert Wood Johnson Foundation, developed evidence-based guidelines for feeding infants and toddlers during the first 2 years of life. These responsive feeding guidelines were developed after an evidence-based consensus methodology. The guidelines address the periods of gestation, birth to 6 months, more than 6 months to 1 year, and more than 1 to 2 years. Fundamental principles of the guidelines include hunger and satiety cues, developmental milestones that indicate readiness for introduction of solids, and responsive approaches to repeatedly expose the young child to a variety of healthy foods and age-appropriate textures in the context of a stable and predictable nurturing environment. Nutr Today. 2017;52(5):223–231

Expert Panel Leadership

Panel Conveners:
Mary Story, PhD, RD
Director, Healthy Eating Research
Professor, Global Health and Community and Family Medicine
Associate Director of Education and Training
Duke Global Health Institute

Megan Lott, MPH, RDN
Senior Associate of Policy and Research, Healthy Eating Research
Duke Global Health Institute

Panel Chair:
Rafael Perez-Escamilla, PhD, MS
Professor of Epidemiology and Public Health
Director, Global Health Concentration
Director, Office of Public Health Practice
Yale School of Public Health

Sofia Segura-Perez, MS, RD (Panel Co-Chair)
Associate Unit Director, Community Nutrition Unit
Hispanic Health Council

Panel Support:
Emily Welker, MPH, RD
Research Associate, Healthy Eating Research
Duke Global Health Institute

Vivien Needham
Program Assistant, Healthy Eating Research
Duke Global Health Institute
Expert Panel Members

Stephanie Anzman-Frasca, PhD
University at Buffalo

Shari Barkin, MD, MSHS
Vanderbilt University School of Medicine

Leann Birch, PhD, MA
University of Georgia

Katrina Holt, MPH, MS, RD, FAND
Georgetown University

Jennifer Orlet Fisher, PhD, MA
Temple University

Rachel K. Johnson, PhD, MPH, RD
University of Vermont

Martha Ann Keels, DDS, PhD
Duke University & UNC School of Dentistry

Angela Odoms-Young, PhD
University of Illinois at Chicago

Ian M. Paul, MD, MSc
Penn State College of Medicine

Lorrenne Ritchie, PhD, RD
University of California

Anna Maria Siega-Riz, PhD
University of Virginia

Madeleine Sigman-Grant, PhD, RD
University of Nevada-Reno

Elsie M. Taveras, MD, MPH
Massachusetts General Hospital for Children

Shannon Whaley, PhD
Public Health Foundation Enterprises WIC Program
Why These Guidelines?

- Early life feeding behaviors play a central role in establishing food preferences
- Prevalence of unhealthy eating patterns and weight outcomes among U.S. infants and toddlers
- Previous comprehensive guidelines were dated
Obesity Prevention Needs to Start Even Before the Offspring is Conceived

Figure 1. Maternal-child life-course obesity framework

Responsive Parenting Framework

RESPONSIVE PARENTING DIMENSIONS

- Feeding
- Soothing
- Sleep
- Physical Activity/Screen Time

OUTCOMES FOR INFANTS AND CHILDREN

- Caloric Intake
- Infant and Toddler Diet
- Caloric Expenditure
- Child's Weight

Note: Original figure developed by authors of this report.
Responsive Feeding Key Dimensions

RF is a multidirectional process grounded upon the following three steps:

1) the child signals hunger and satiety through motor actions, facial expressions, or vocalizations;
2) the caregiver recognizes the cues and responds promptly in a manner that is emotionally supportive, contingent on the signal, and developmentally appropriate; and
3) the child experiences a predictable response to signals.
Familiarization

• Repeatedly offer healthy foods such as vegetables to young children

Associative learning

• Food preferences develop based on the context and psycho-emotional atmosphere in which it’s offered

Observation learning

• Children may also establish food preferences by observing what their caregivers eat
Responsive Parenting/Feeding Works!

• **Responsive Parenting/Feeding Randomized Control Trials**
  • SLIMTIME (Paul et al. 2011) - **U.S.**
  • INSIGHT (Savage et al. 2016, Paul et al. 2016) – **U.S.**
  • NOURISH (Daniels et al. 2012, 2015) - **Australia**
  • Healthy Beginnings (Wen et al. 2012) - **Australia**
  • Prevention of Overweight in Infancy (Fangupo et al. 2015) – **New Zealand**
Responsive Parenting/Feeding Works!

- The RCTs indicate that teaching parents to correctly interpret infant hunger and satiety cues is key for allowing the child to learn to self-regulate food intake properly.
  - Anticipatory guidance
- Also important for caregivers to understand the sleeping patterns of infants and how rapidly they evolve during the first year of life.
Responsive Parenting/Feeding Works!

• RCTs consistently emphasized the importance of allowing the infant and toddler to participate in family meals, and to avoid distractions during meal times.
• Meal times should be a pleasant experience with plenty of verbal and non-verbal interactions between the caregiver and the child.
Responsive Parenting/Feeding Works!

- Responsive parenting/feeding trials that included soothing and/or sleeping components were successful at improving sleeping patterns and feeding behaviors, especially at night.

- Trials highlight the need to respond to infant crying and distress with feedings only when the infant is hungry.

  - They also discourage the use food as a reward as this will condition the infant to expect to be fed when waking up or in distress even when not hungry.
- Flavors passed from mother to fetus through amniotic fluid
- Flavors passed from mother to infant through breast milk
- Breastfed babies accept more easily fruits and vegetables than children who were formula fed.

  • However, formula fed infants can end up accepting food low in sugar, salt and bitter tasting if the mothers are advised on repeatedly exposing the infants to them
  • Promoting the consumption of complementary foods low in salt and sugar is likely to have a positive influence on dietary choices, growth and weight outcomes later on in life
Responsive Feeding Guidelines: English and Spanish

Supporting Healthy Eating

Parents, guardians, and caregivers play an important role in nutrition during this life stage because infants and toddlers are fully reliant on them for their needs. In addition to “what” to feed children, “how” to feed young children also is critical. As noted above, repeated exposure to foods can increase acceptance of new foods. Another important concept is responsive feeding, a feeding style that emphasizes recognizing and responding to the hunger or fullness cues of an infant or young child (see “Responsive Feeding”).

Responsive Feeding

Responsive feeding is a term used to describe a feeding style that emphasizes recognizing and responding to the hunger or fullness cues of an infant or young child. Responsive feeding helps young children learn how to self-regulate their intake.

See Table 2-2 for some examples of signs a child may show for hunger and fullness when he or she is a newborn through age 5 months, and signs a child may start to show between age 6 through 23 months.

It is important to listen to the child’s hunger and fullness cues to build healthy eating habits during this critical age. If parents, guardians, or caregivers have questions or concerns, a conversation with a healthcare provider will be helpful.

For more information on signs a child is hungry or full, see: cdc.gov/nutritioninfantandtoddlernutrition/mealtime/signs-your-child-is-hungry-or-full.html. More information on infant development skills, hunger and satiety cues, and typical daily portion sizes is available at wicworks.fns.usda.gov/sites/default/files/media/document/Infant_Nutrition_and_Feeding_Guide.pdf.
A measurement scale to assess responsive feeding among Cambodian young children

Ndiye S. Sall1 | France Bégin2 | Jérémie B. Dupuis3 | Jimmy Bourque4 | Lydia Menasra1 | Barbara Malm5 | Lenin Yong6 | Vannary Hun7 | David Raminashvili8 | Chhorvann Chea8 | Lucie Chiasson9 | Sonia Blaney3

TABLE 5  Responsive and active feeding measurement final scale

<table>
<thead>
<tr>
<th>Construct</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsive feeding</td>
<td>2. Caregiver serves child first</td>
</tr>
<tr>
<td></td>
<td>3. Child eats with caregiver and family members</td>
</tr>
<tr>
<td></td>
<td>4. Food is served to child on his own plate</td>
</tr>
<tr>
<td></td>
<td>5. Spoon or other utensils is used to feed the child</td>
</tr>
<tr>
<td></td>
<td>15. When child is eating, the caregiver spends time:</td>
</tr>
<tr>
<td></td>
<td>- Eating</td>
</tr>
<tr>
<td></td>
<td>- Taking care of other family members</td>
</tr>
<tr>
<td></td>
<td>- Selling foods</td>
</tr>
<tr>
<td></td>
<td>- Doing household tasks</td>
</tr>
<tr>
<td></td>
<td>- Taking care of child</td>
</tr>
<tr>
<td>Active feeding</td>
<td>9. Caregiver talks to the child, verbally encourage him to eat</td>
</tr>
<tr>
<td></td>
<td>If yes, caregiver uses:</td>
</tr>
<tr>
<td></td>
<td>- Positive wordings</td>
</tr>
<tr>
<td></td>
<td>- Negative wordings</td>
</tr>
<tr>
<td></td>
<td>10. Caregiver encourages the child when he is eating well</td>
</tr>
<tr>
<td></td>
<td>11. Caregiver motivates the child to eat more using gestures/games by demonstrating to him how to eat</td>
</tr>
</tbody>
</table>

Lancet (2020)
About Me

➢ Nurse by training; spent 9 years at the bedside as a pediatric nurse
➢ Received Masters degrees in Public Health and Nursing from Emory University
➢ Started at CDC as an Epidemic Intelligence Service (EIS) officer
➢ Spent the last 10 years in the Division of Nutrition, Physical Activity and Obesity focusing on the prevention and treatment of childhood obesity
➢ Work with CDC funded recipients and other key ECE partners to help improve nutrition, physical activity, breastfeeding support and reduce screen time in Early Care and Education programs
Without Intervention, Over Half of Today’s Children Will Have Obesity as Young Adults

➢ A modeling study using BMI trajectories for youth shows that, by 2050, the majority of today’s children, 57.3% will have obesity by age 35 if our society doesn’t take immediate actions.
Triple Approaches for ECE setting

● Implement and integrate nutrition, physical activity, breastfeeding, and screentime standards and supports into statewide ECE systems

● Improve ECE facility level policies, practices, and environments related to nutrition, breastfeeding support, physical activity and screen time

● Implement provider best practices related to nutrition, physical activity, breastfeeding support and screentime
  - CDC’s framework for TA Strategies for States & Communities called the Spectrum of Opportunities
The Spectrum of Opportunities Framework 2.0

- ECE Funding Streams (Subsidy, Pre-K, Head Start)
- Quality Rating & Improvement System (QRIS)
- Child Care Food Program (CACFP)
- Licensing & Administrative Regulations
- Early Learning Standards
- Pre-service & Professional Development Systems
- Statewide Technical Assistance Networks
- Statewide Recognition and Intervention Programs
- Statewide Access Initiatives (Farm2ACE)

**Improved ECE facility-level policies, practices, and environments (nutrition, breastfeeding, physical activity, screen time)**

**Partnerships**

**Equity**

**Building:** CHILD Center for Early Learning
The Spectrum of Opportunities Framework 2.0

PARTNERSHIPS

Improved ECE facility-level policies, practices, and environments (nutrition, breastfeeding, physical activity, screen time)

Licensing & Administrative Regulations

EQUITY

Licensed by the state of GA
Licensed by the state of GA
Licensed by the state of GA

The Spectrum of Opportunities Framework 2.0

- Improved ECE facility-level policies, practices, and environments (nutrition, breastfeeding, physical activity, screen time)
- Statewide Recognition and Intervention Programs
- Statewide Access Initiatives (Farm2CCE)
- Licensing & Administrative Regulations
- Child Care Food Program (CACFP)

PARTNERSHIPS

EQUITY
Key Components of DNPAO’s ECE Portfolio

➢ Support CDC funded recipients at state and local level
  ● Providing 1:1 TA, networking calls, newsblast with research highlights, create TA documents

➢ Support additional CDC funded work through cooperative agreements
  ● Nemours Health System
    □ TAPS – Technical Assistance Program for system-level change (11 states)
    □ PALS – TA and Training Network for Physical Activity (~7 states)
  ● Association of State Public Health Nutritionists with National Farm to School Network
    □ FIG – Farm to ECE Implementation Grants (10 states and DC)
    □ CABBAGE – Capacity Building Grant (3 localities)
Key Components of DNPAO ECE Portfolio

➢ **Help secure SMEs/support for our recipients**
  ● Physical Activity SME, GIS mapping, using data

➢ **Help advance ECE Surveillance and Research**
  ● Pilot (4 states) – CSAW, COVID related questions, ECE State Licensing Scorecards

➢ **Supporting CDC COVID-19 Response**

➢ **Partnership building**
  ● Engaged with CDC agency-wide ECE Interest Group
  ● Federal Engagement with ACF (Head Start, Office of Child Care), USDA (CACFP and Farm to Summer/Farm to CACFP)
  ● Research and Evaluation Networks like NOPREN/HER
1 piece of advice – make sure you take your research and translate it for real people

ECE Licensing Report Cards + Trends Paper

Thank you!

CDC ECE obesity mailbox: eceobesity@cdc.gov

Email: igb7@cdc.gov