

The WIC Infant and Toddler Feeding Practices Study-2

Presented to the
NOPREN Early Care and Education Workgroup

February 26, 2018

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USDA Food and Nutrition Service



Purpose

The Feeding My Baby Study (WIC ITFPS-2) addresses:

- Infants' and children's feeding practices
- Associations between WIC services and:
 - Feeding practices
 - Health and nutrition outcomes of children receiving WIC.

Comparisons with the 1997 WIC Infant Feeding Practices Study–1 (WIC IFPS-1).

Methodology

- Longitudinal study
- Follows infants enrolled in WIC from birth to age 5
- Enrollment began Fall 2013



Study Participants

Eligibility Requirements

- Pregnant or infant less than 2.5 months old
- First time enrolling in WIC for this pregnancy or child
- At least 16 years old
- Speaks English or Spanish

N=3,777 infants

Data Collection

WIC Site Data

- Site visits
- Key Informant Interviews (State and Local Agency)
- WIC staff survey

WIC Participant Data

- Enrollment on site
- Follow-up telephone interviews
- WIC Administrative Data
- Height/weight data for those off WIC

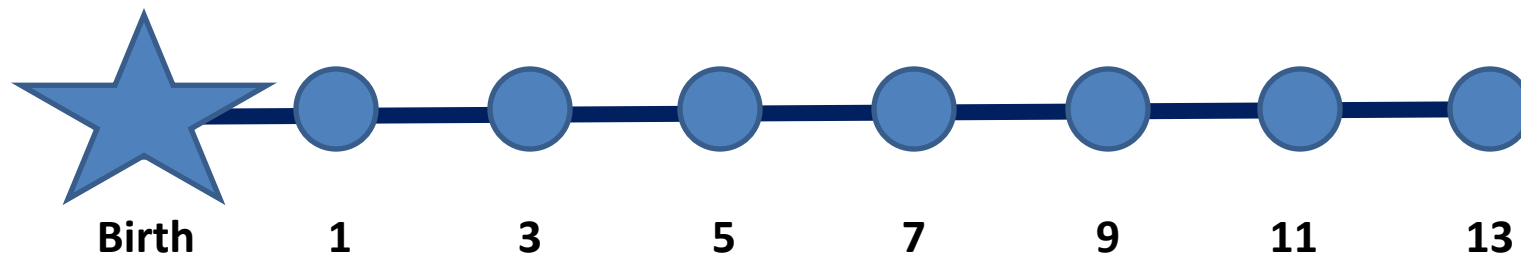
Data Collection

Domain	Screening/ enrollment	WIC participant survey interview									WIC Admin. data	Staff survey/key informant interviews
		Baseline ^a	Prenatal	1 month	3 months	5 months	7 months	9 months	11 months	13 months		
Socio-demographic and background characteristics	✓	✓		✓	✓	✓	✓	✓	✓	✓		
WIC site characteristics and policies												✓
WIC program awareness and utilization			✓		✓		✓			✓		
Maternal health and lifestyle	✓	✓		✓	✓		✓			✓		
Feeding experience, knowledge, attitudes, beliefs, information, advice		✓	✓	✓	✓	✓	✓			✓		
Hospital feeding related practices				✓								
Current feeding practices				✓	✓	✓	✓	✓	✓	✓		
24-Hour dietary recall				✓	✓	✓	✓	✓	✓	✓		
Child health behavior/rearing practices				✓	✓	✓	✓	✓	✓	✓		
Child weight and length											✓	
WIC food package type											✓	

^a Baseline module questions are asked at the first interview (could be prenatal, 1 month, or 3 months).

Infant Data Collection

- Interviews conducted every 2 months
- Incentive for completing telephone interview
- N=3,777 caregivers (completed at least a 1 or 3 month interview)



Examples of Findings on Breastfeeding Beliefs and Intentions

Prenatal Views: Benefits of Breastfeeding

Maternal Attitudes and Beliefs	Percentage of Mothers Agreeing with Statement		Direction of Change
	WIC IFPS-1 (1994-95)	WIC ITFPS-2 (2013-14)	
Benefits of Breastfeeding			
Breastfed babies are healthier than formula-fed babies.	61	79.7	↑
Breastfeeding helps protect the baby from diseases.	77	81.2	↑
Breastfeeding is easier than formula feeding.	50	55.3	↑
Breastfeeding brings a mother closer to her baby.	81	87.9	↑
Breastmilk alone gives a new baby all he/she needs to eat.	71	71.3	↑
Breastfeeding reduces the risk of a child becoming overweight.	Not Asked	50.0	--
Breastfeeding helps women lose weight.	53	74.5	↑ 9

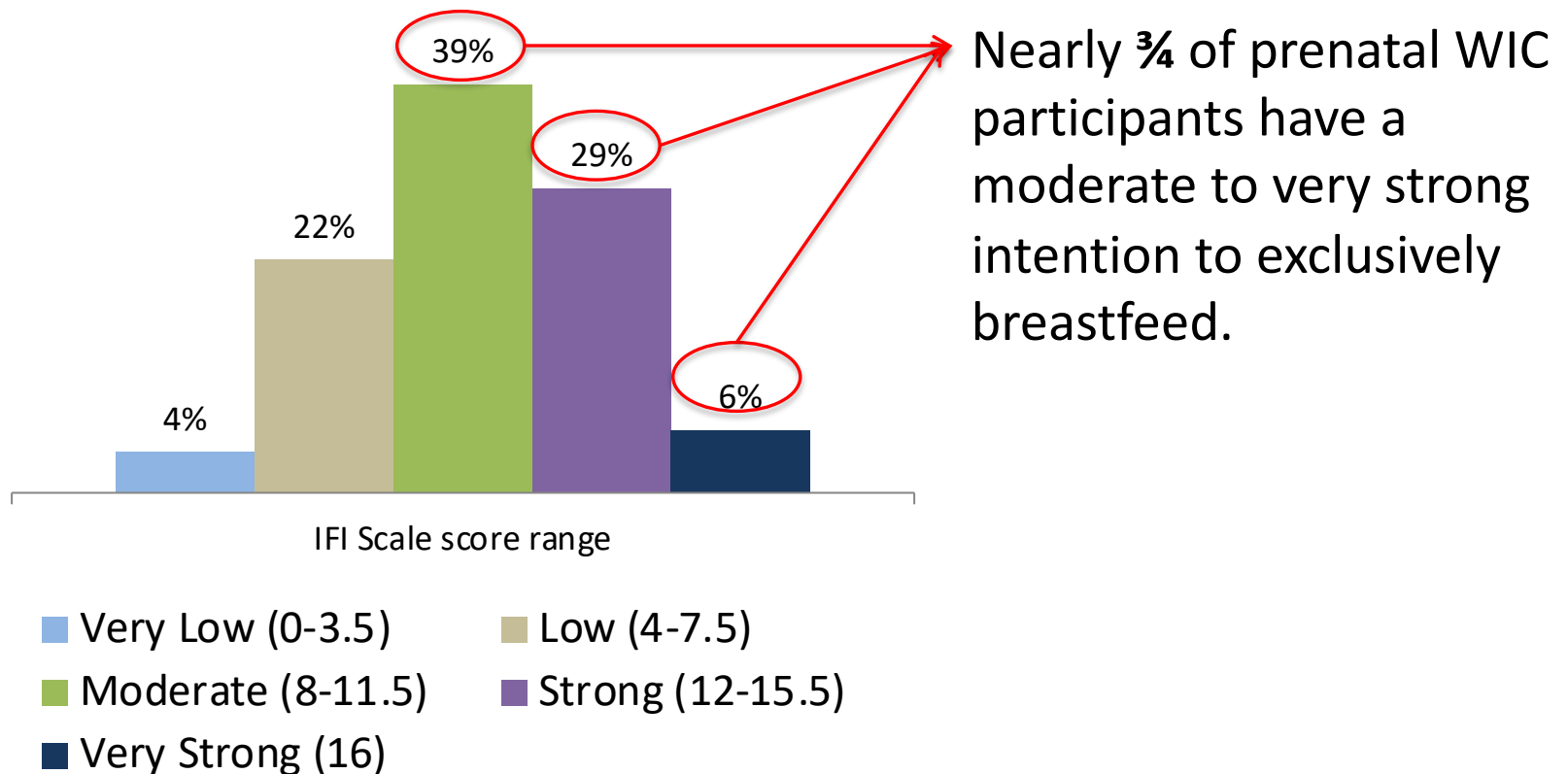
Prenatal Views: Barriers to Breastfeeding

Maternal Attitudes and Beliefs	Percentage of Mothers Agreeing with Statement		Direction of Change
	WIC IFPS-1 (1994-95)	WIC ITFPS-2 (2013-14)	
Barriers to Breastfeeding			
Breastfeeding ties you down.	41	17.3	↓
Breastfeeding takes too much time.	34	14.7	↓
Breastmilk leaking onto your clothes is something that I worry about.	46	27.4	↓
Breastfeeding in public is not something that I want to do.	61	36.9	↓
Breastfeeding is painful.	39	43.6	↑
Breastfeeding means no one else can feed your baby.	48	50.8	↑
With bottle feeding, the mother knows that the baby is getting enough to eat.	76	67.0	↓

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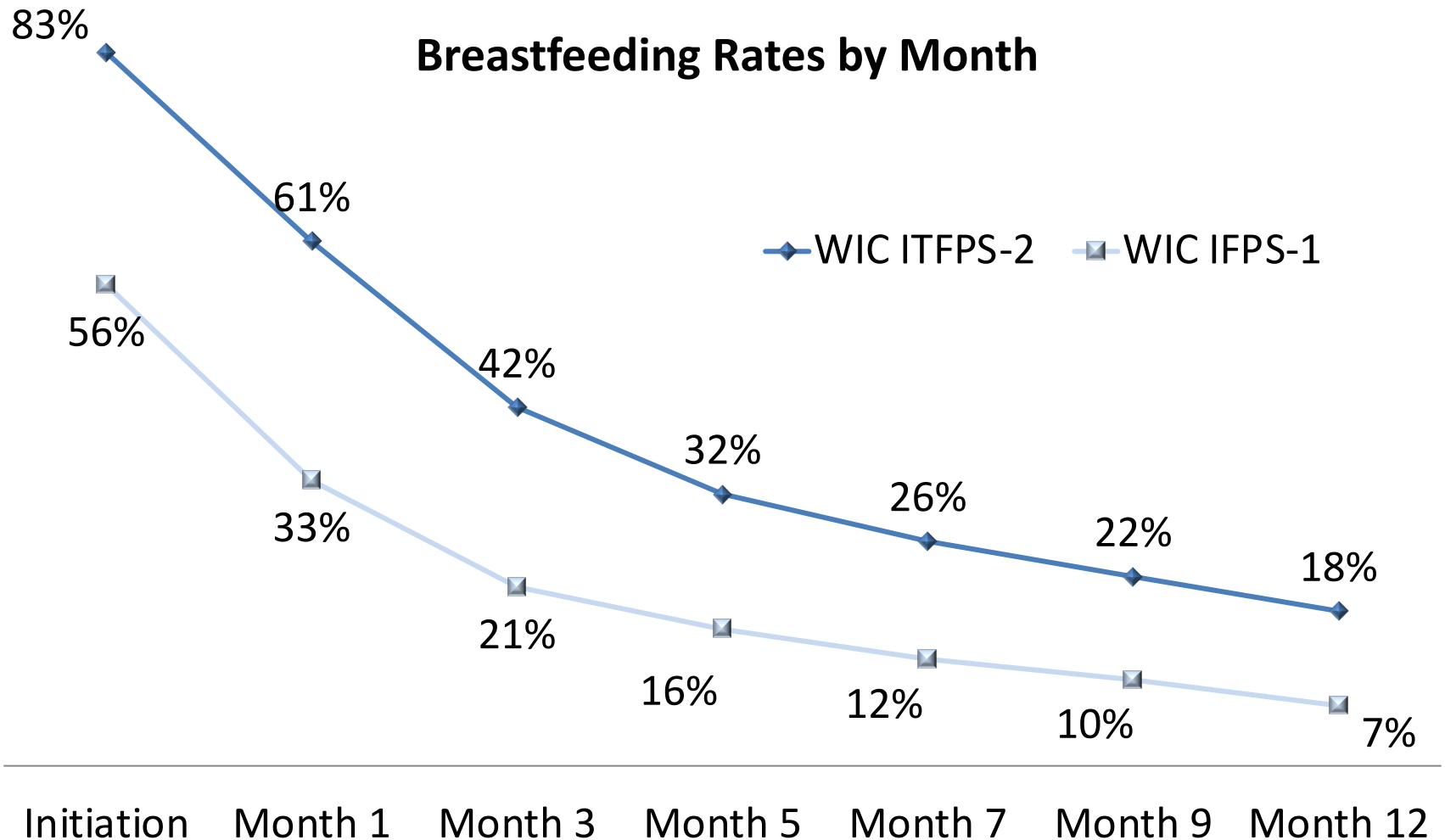
Infant Feeding Intention (IFI) Scale Scores

- 0-16 point scale composed from five questions
- Higher scores = stronger intention to breastfeed



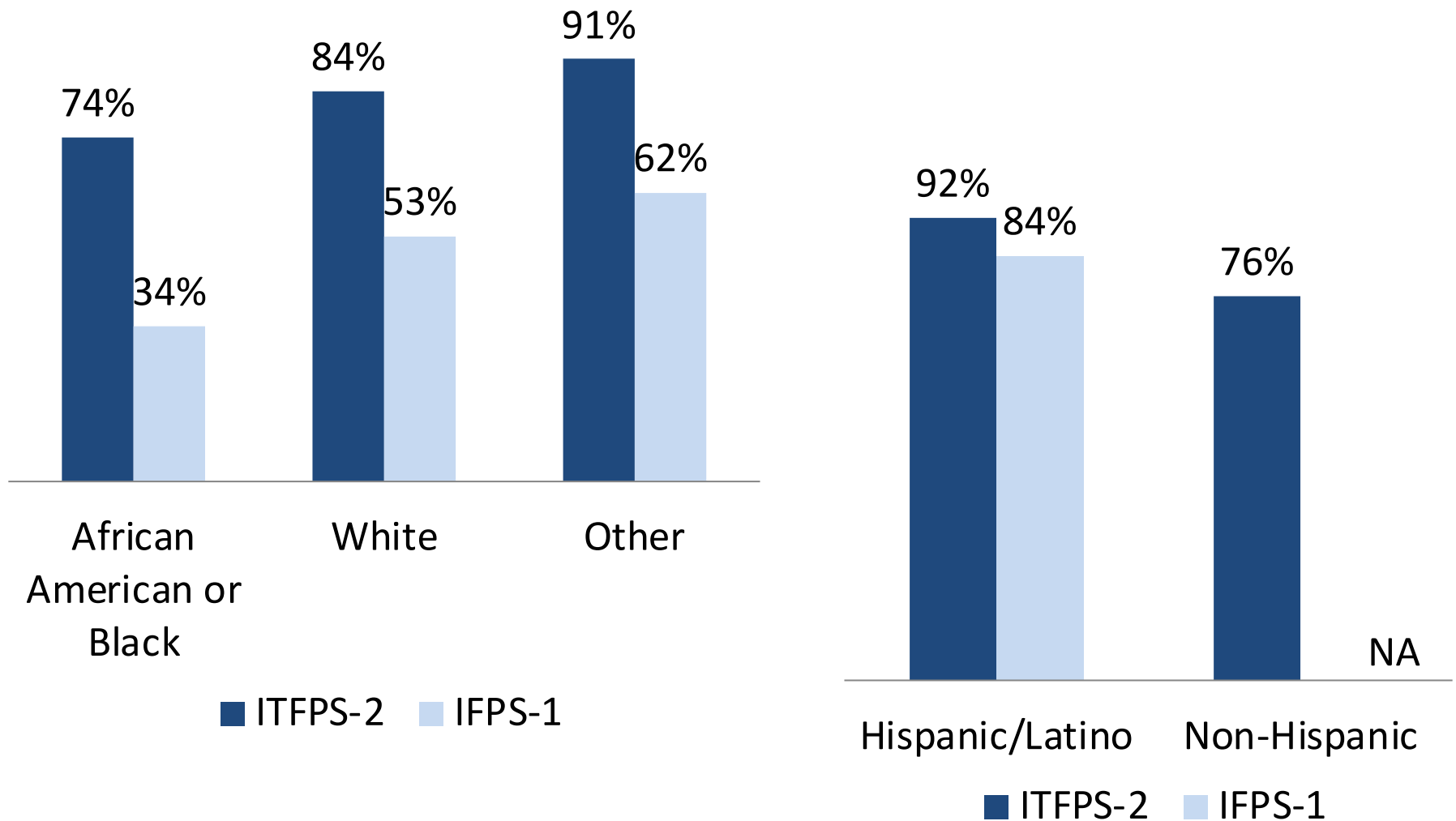
Examples of Findings on Breastfeeding Behaviors

Breastfeeding Rates Increased Since 1994



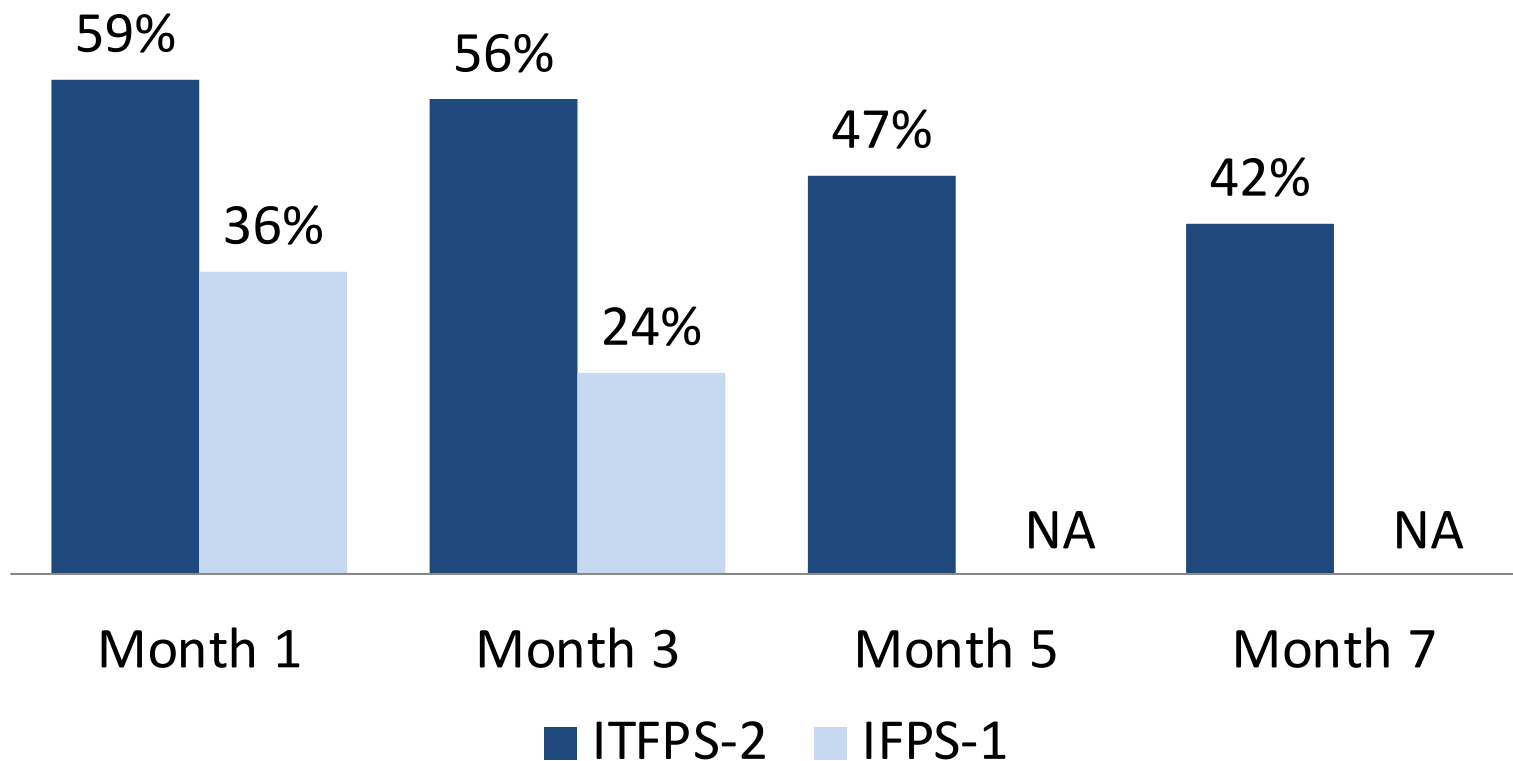
NOTE: Similar slopes in trend lines between studies.

Breastfeeding Initiation by Race and Ethnicity



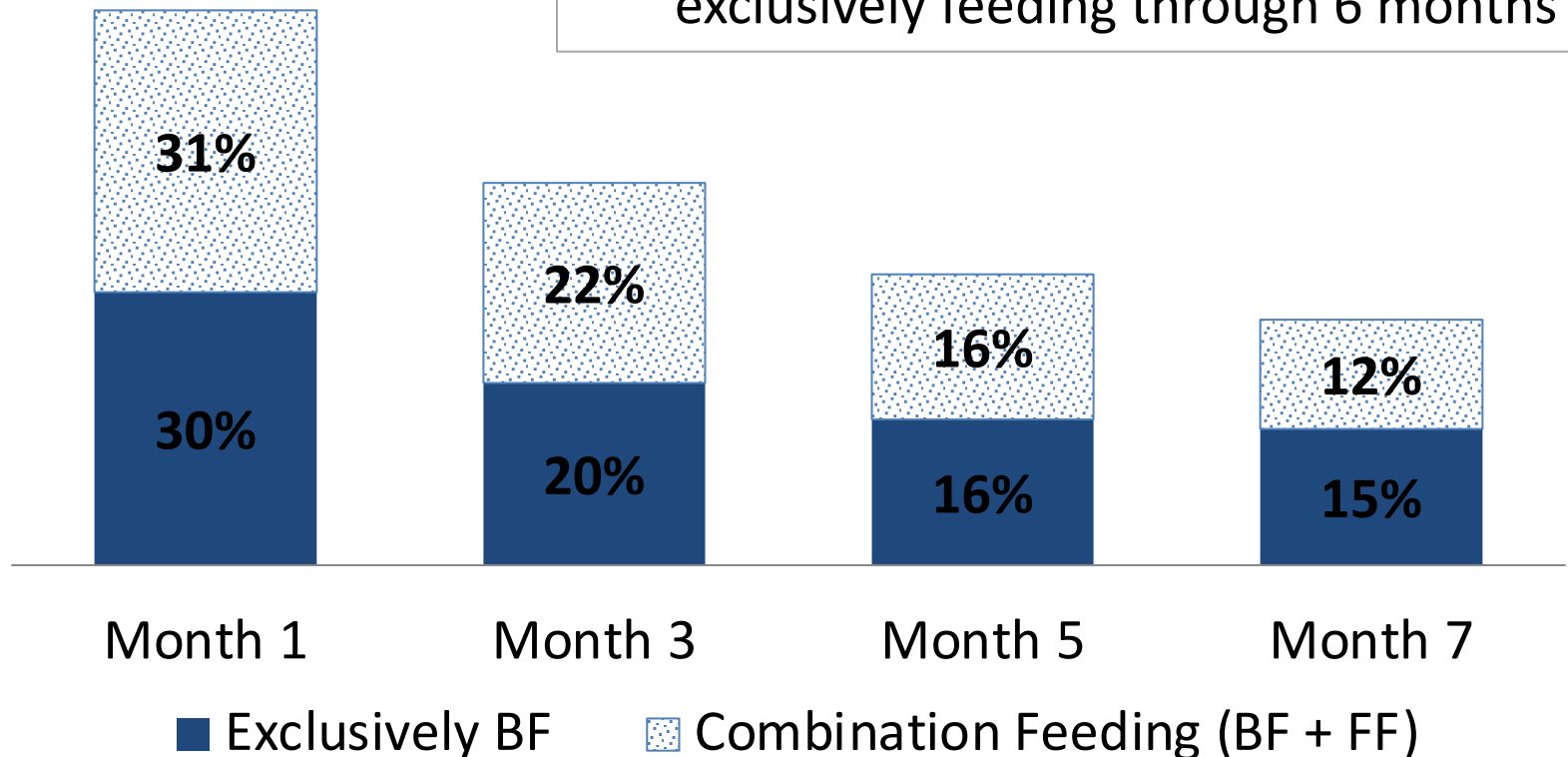
Expressing Breastmilk

Percentage of Breastfeeding Mothers Who Report Expressing Breastmilk During the Past Week



Rates of Exclusive Breastfeeding and Combination Feeding

Healthy People 2020 Goals: 46% exclusively breastfeeding through 3 months; 26% exclusively feeding through 6 months



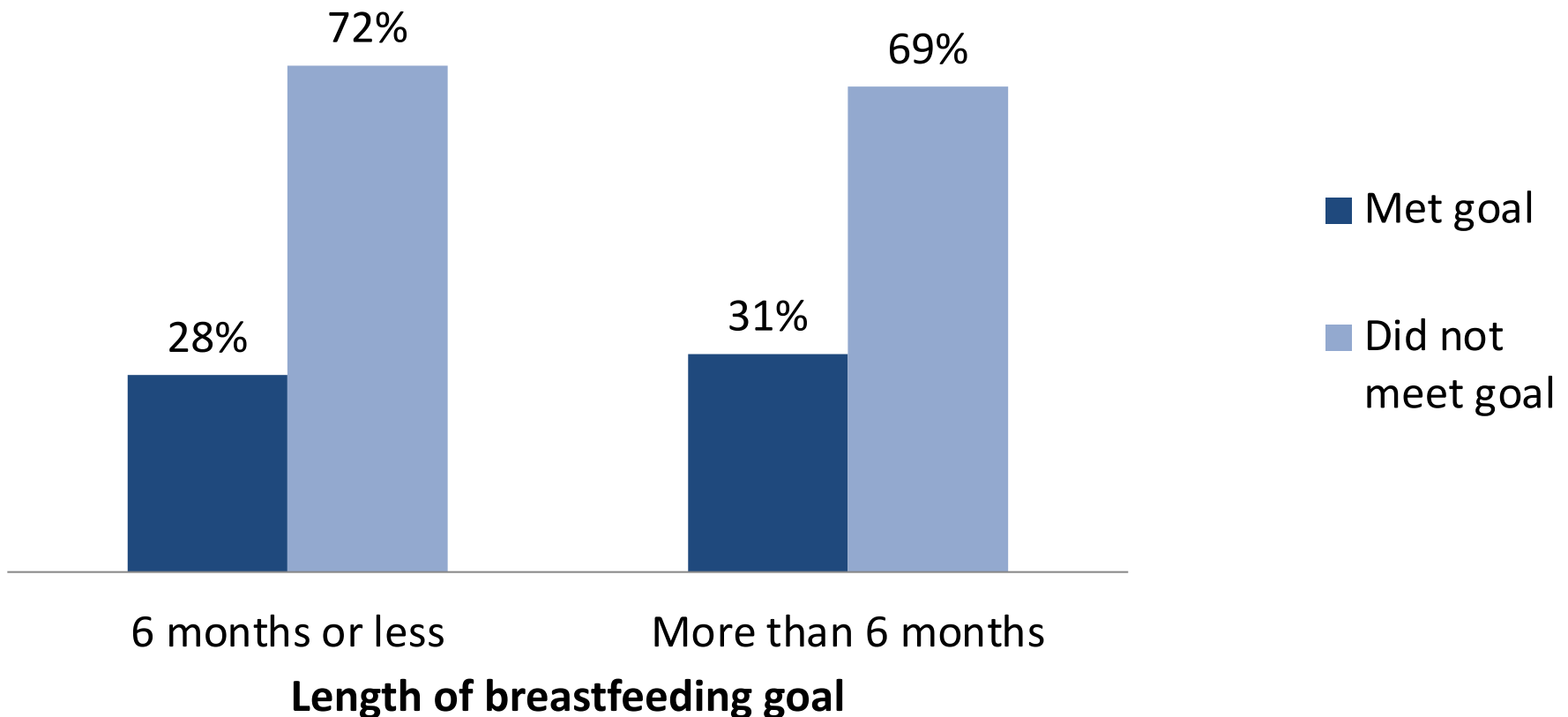
Top Reasons for Breastfeeding Cessation

At 3 months, top reasons why mothers stopped breastfeeding:

1. Breastmilk alone did not satisfy baby (57%)
2. I didn't produce enough breastmilk (56%)
3. Baby lost interest in nursing (34%)

Moms Not Breastfeeding As Long As They Intended

**Percentage of Breastfeeding Mothers Who Met Their
Personal Breastfeeding Goals, by Length of Goal**



Future Directions

Next Steps

- Second Year Report slated for publication in Spring 2018
- Analyzing data through 36 months
- Currently collecting 48 & 54 month interviews



How To Get More Information

USDA Food and Nutrition Service x +

https://www.fns.usda.gov Search

Most Visited Suggested Sites Getting Started Amazon_AFHK WIC Food Pkg Rule IPP AAP Breastfeeding Rec

USDA United States Department of Agriculture Food and Nutrition Service

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Site Map Advanced Search Help Search Tips A to Z Map

Popular Topics

- > How to Apply for SNAP Benefits
- > How to Apply for WIC Benefits
- > Become a SNAP Retailer
- > Community Food Systems
- > Summer Food Service Program
- > Food Safety
- > Child Nutrition
- > Disaster Assistance
- > USDA Foods

Sign up for email updates Go

Nutrition Assistance Response in Flint

USDA's emergency food program in Flint, Michigan, offers a unique response to the city's lead crisis.

2/6

Education Fact Sheets Initiatives

- Team Nutrition
- SNAP-Ed
- WIC Works
- USDA Foods - School Resources



FNS Strategic Priorities

- Help Americans Eat Smart and Maintain a Healthy Weight
- Preserve Public Trust in Our Programs

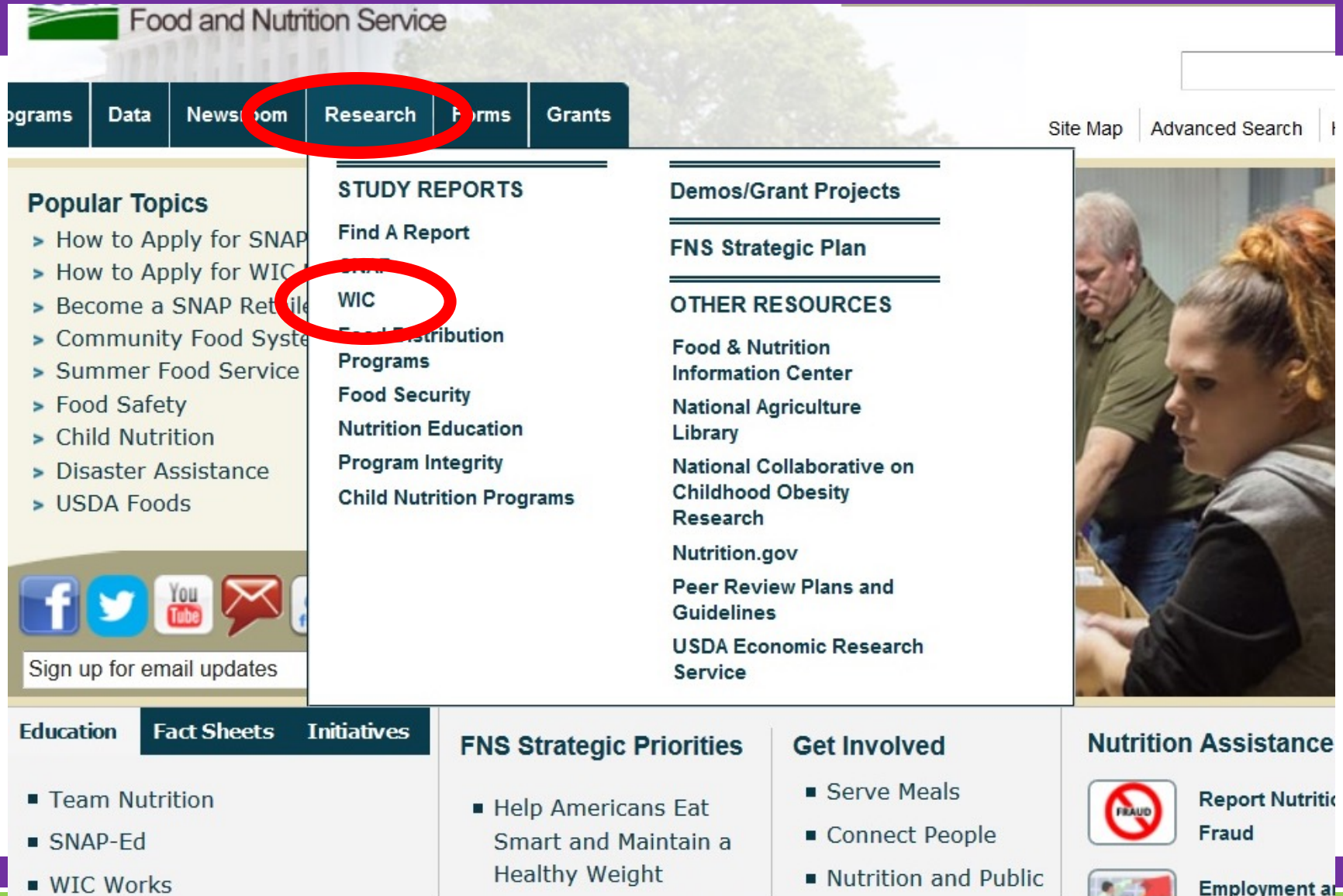
Get Involved

- Serve Meals
- Connect People
- Nutrition and Public Health

Nutrition Assistance Tools

-  Report Nutrition Assistance Fraud
-  Employment and Training Resources

How To Get More Information



The screenshot displays the Food and Nutrition Service website. The top navigation bar includes links for Programs, Data, News, **Research**, Forms, and Grants. The **Research** link is circled in red. Below it, a dropdown menu is visible, listing various research topics. The **WIC** link is also circled in red. To the left of the dropdown, there is a 'Popular Topics' section with a list of links. Below this, there are social media icons for Facebook, Twitter, YouTube, and Email, along with a 'Sign up for email updates' button. To the right of the dropdown, there are sections for 'STUDY REPORTS', 'Demos/Grant Projects', 'FNS Strategic Plan', and 'OTHER RESOURCES'. The bottom of the page features a footer with sections for Education, Fact Sheets, Initiatives, FNS Strategic Priorities, Get Involved, and Nutrition Assistance.

Food and Nutrition Service

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Site Map | Advanced Search

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- > How to Apply for WIC
- > Become a SNAP Retailer
- > Community Food System
- > Summer Food Service
- > Food Safety
- > Child Nutrition
- > Disaster Assistance
- > USDA Foods

STUDY REPORTS

- Find A Report
- WIC**
- Food Distribution Programs
- Food Security
- Nutrition Education
- Program Integrity
- Child Nutrition Programs

Demos/Grant Projects

FNS Strategic Plan

OTHER RESOURCES

- Food & Nutrition Information Center
- National Agriculture Library
- National Collaborative on Childhood Obesity Research
- Nutrition.gov
- Peer Review Plans and Guidelines
- USDA Economic Research Service

Education | **Fact Sheets** | **Initiatives**

- Team Nutrition
- SNAP-Ed
- WIC Works

FNS Strategic Priorities

- Help Americans Eat Smart and Maintain a Healthy Weight

Get Involved

- Serve Meals
- Connect People
- Nutrition and Public

Nutrition Assistance

- Report Nutrition Fraud
- Employment and Training

How To Get More Information

The screenshot shows the USDA WIC Studies website. The browser address bar displays <https://www.fns.usda.gov/ops/wic-studies>. The website header includes the USDA logo and navigation links: About FNS, Ask the Expert, Contact Us, Other Languages, and En Español. A search bar is located on the right. Below the header, a navigation menu contains links for Programs, Data, Newsroom, Research, Forms, and Grants. Social media icons for Facebook, Twitter, YouTube, Email, Flickr, and RSS are also present.

Study Reports

- Find A Report
- SNAP
- WIC
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- FNS Strategic Plan

Other Resources

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- National Agriculture Library
- National Collaborative on

WIC Studies

Date: -Year

Date	Title
09/29/2017	National and State-Level Estimates of Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Eligibles and Program Reach in 2014, and Updated Estimates for 2005-2013
08/08/2017	Review of WIC Food Packages: Improving Balance and Choice
06/01/2017	Planning for Future Data Collection Needs within WIC
05/31/2017	WIC Vendor Peer Group Study
01/05/2017	WIC Infant and Toddler Feeding Practices Study 2: Infant Year Report
08/01/2016	Review of WIC Food Packages: Proposed Framework for Revisions
05/31/2016	WIC Nutrition Education Study: Phase I Report
02/29/2016	WIC Participant and Program Characteristics 2014: Food Package Report
12/17/2015	National and State-Level Estimates of Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Eligibles and Program Reach in 2014, and Updated Estimates for 2005-2013

How To Get More Information



Thank you!

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WIC Program and Participant Characteristics (WIC PC)

Presented to the
NOPREN Early Care and Education Workgroup

February 26, 2018

Anthony D. Panzera, PhD, MPH
USDA Food and Nutrition Service




How does FNS use WIC PC?

- Program monitoring
- Managing WIC information needs, such as:
 - estimating budgets;
 - submitting civil rights reports;
 - identifying research needs; and,
 - reviewing current and proposed WIC policies and procedures.
- SAs also use their own data package that is returned to them for program administration

Method

- Federally required
- **Biennial** collection of program and participant characteristics
- Timeframe is **April** of every even numbered year (... '12, '14...)
- Administrative data from **all 90 WIC State agencies (SA)**
- SA management information system (**MIS**) variables
- Census of program participants certified to receive WIC in April of reference year, including individuals who did not claim a food benefit
- [WIC PC 2014](#) is the most recent published report.
 - Total Enrollment in April 2014 was 9,303,253.

WIC PC Reports Available at FNS site







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WIC Participant and Program Characteristics 2014

Print

WIC Participant and Program Characteristics 2014 (PC 2014) summarizes the demographic characteristics of participants in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) nationwide in April 2014. It includes information on participant income and nutrition risk characteristics, estimates breastfeeding initiation rates for WIC infants, and describes WIC members of migrant farm-worker families. PC 2014 is the most recent in a series of reports generated from WIC State management information system data biennially since 1992.

File Upload:

-  [Summary \(82.21 KB\)](#)
-  [Entire Report \(5.35 MB\)](#)

View Similar Reports:

- [Assessing/Improving Operations](#)
- [Breastfeeding](#)
- [Participation Characteristics](#)

Last Published: 05/11/2017

Process

- Our contractor requests a minimum data set (MDS) and a supplemental data set (SDS) from all 90 WIC SAs
- SA staff submit a data file from their MIS
- What is included in it?
 - Demographic characteristics and income
 - Nutritional risks
 - Health Indicators
 - Breastfeeding initiation rates and duration

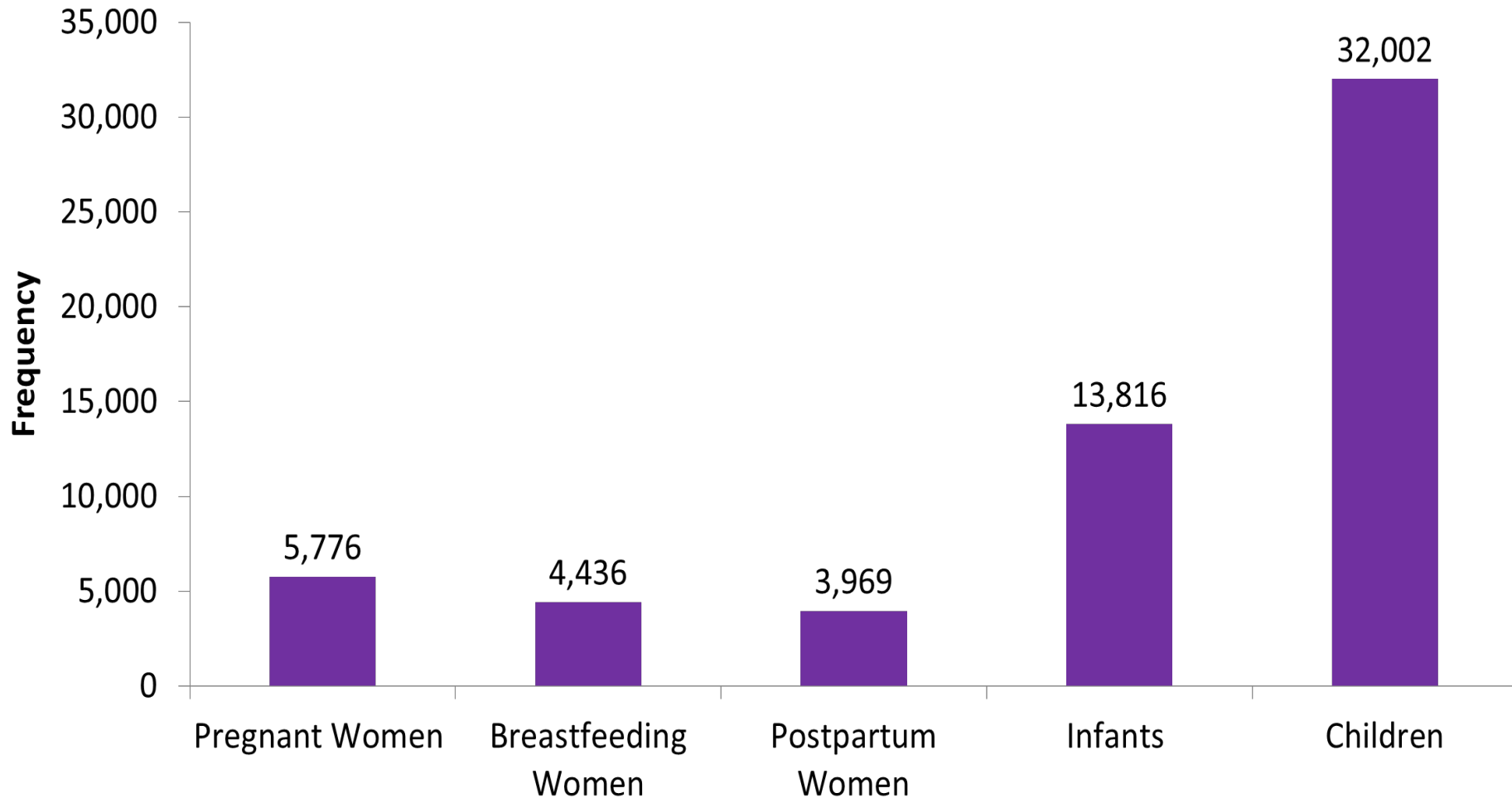
Public Use File

- Nationally representative sample
- Proportionate (or self-weighting) sample was drawn by WIC participant category.
 - Each WIC participant has the same probability of selection across all strata.
 - Sampling weights are not needed when the data are analyzed. In a proportionate stratified sample, the largest stratum accounts for the highest percentage of the analytic sample.
- To protect individual privacy, the public use file does not include State, local agency, or case identification numbers.

2014 Public Use File

- 59,999 sampled participants
- 160 variables
 - MDS variables
 - Sex, Race/Ethnicity, Participation in TANF/SNAP/Medicaid, Nutritional Risks, Hemoglobin or Hematocrit, Weight, Height, Length of Time Breastfed, Currently/Ever Breastfed
 - SDS variables
 - Education Level, Number in Household in WIC, Total Number of Pregnancies/Live Births, Weight Gain During Pregnancy, Birth Weight/Height
 - Constructed variables
 - BMI, Age, Blood measure below FNS Standard

2014 Public Use Data Set: Distribution by Participant Category



2014 Public Use Data Set:

Percent of Poverty by Certification Category

Percent of Poverty Level	Pregnant Women	Breastfeeding Women	Postpartum Women	Infants	Children	Total
0	60	54	31	243	243	631
1-50	1927	1312	1604	5044	10669	20556
51-100	1842	1570	1154	4252	10951	19769
101-130	698	562	396	1426	3729	6811
131-150	328	254	144	607	1651	2984
151-185	362	317	162	703	1943	3487
186-200	36	16	16	52	132	252
201-225	40	16	19	65	142	282
226-250	10	14	7	18	69	118
Over 250	18	12	12	51	110	203
Total	5321	4127	3545	12461	29639	55093

Frequency Missing = 4906

2014 Public Use Data Set: Blood Measures Below FNS Standard, by Certification Category

Blood Measures Below FNS Standard	Pregnant Women	Breastfeeding Women	Postpartu m Women	Infants	Children	Total
	4709	2556	2123	632	23357	33377
	565	1493	1526	0	3998	7582
	502	387	320	13184	4647	19040
Total	5776	4436	3969	13816	32002	59999

A SAS program for WHO Growth Charts (ages 0 to <2 years)

BIV BMI-for-age				
_bivbmi	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-1	43	0.17	43	0.17
0	24876	99.04	24919	99.21
1	198	0.79	25117	100.00
Frequency Missing = 34882				

- Calculates z-scores for BMI, weight, and height based on WHO Growth Charts.
- Uses the z-scores to identify biologically implausible values (BIV).
- Removes BIVs before completing analysis.

Why use this data?

- Learn more about WIC participants at the national level.
- Analyze and monitor trends in health status and behavior over time.
- Inform your research, grant applications, and administrative decisions.

Limitations & Nuances

- Analyses cannot be conducted at the State- or county-level.
- SA Management Information Systems vary.
- Must understand program regulations and practices to understand the data.

Thank You!

- Please contact me if you would like access to the WIC PC Public Use File.
- Form



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