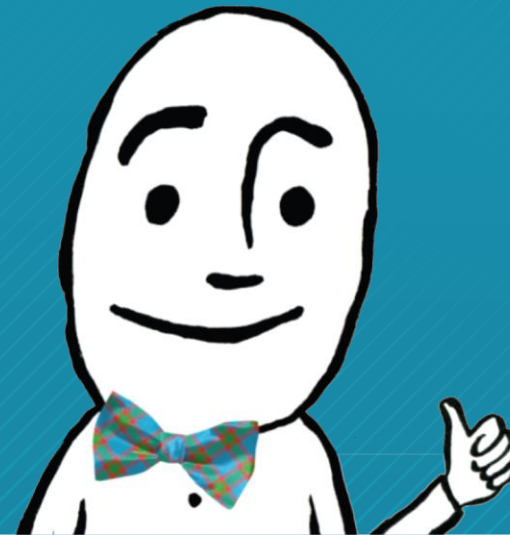


NCCOR

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& EXPLORE

1. Welcome
2. Spotlight: Does Breastfeeding Initiation Vary by WIC Participation and Race/Ethnicity? An Examination of Long-Term Trends from 2009-2017
3. Q&A
4. NCCOR Announcements

TODAY'S PROGRAM



Today's Speakers



Karen Hilyard, PhD
Moderator



Leslie Hodges, PhD, MA
U.S. Department of Agriculture



Marie Elizabeth Thoma, PhD, MHS
University of Maryland



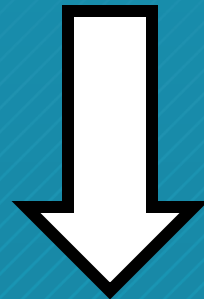
Amanda Reat, PhD, RD
U.S. Department of Agriculture



Joanne Guthrie, PhD, MPH
U.S. Department of Agriculture

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Type your question(s) by clicking the
Q&A icon located below and a
representative will respond shortly.

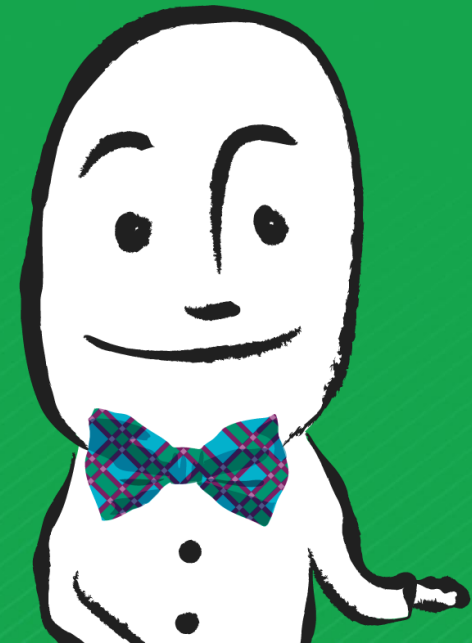




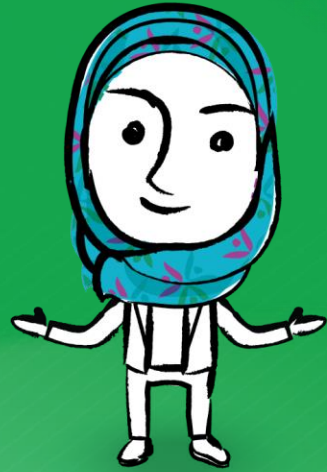
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INTERACTIVE POLL



SPOTLIGHT



BREASTFEEDING INITIATION TRENDS BY WIC PARTICIPATION AND RACE/ETHNICITY

AN ANALYSIS USING U.S. BIRTH CERTIFICATE DATA

Presented by: Marie E. Thoma, PhD

Co-authors:

Dane A. De Silva, PhD

Jinhee Kim, PhD

Leslie Hodges, PhD

Joanne Guthrie, PhD, MPH



The findings and conclusions in this presentation are those of the author and should not be construed to represent any official USDA or U.S. Government determination or policy.



Background

- Numerous benefits of breastfeeding for both mother and child
- Several national efforts to support breastfeeding since 2010
 - Affordable Care Act (2010)
 - U.S. Surgeon General’s Call to Action to Support Breastfeeding (2011)
 - CDC’s Winnable Battles initiative (2011)
 - USDA’s updated rules governing WIC food packages to increase breastfeeding support (October 2009)
- Prior research examining the impact of WIC food package changes were limited
 - Only changes in WIC populations (no comparable comparison group)
 - Short-term trends (~2 years)



Background – Healthy People Objectives

- Healthy People 2020 (HP2020) Objective: Increase the proportion of infants who are ever breastfed in the U.S.
 - By 2014, U.S. exceeded the national target of **81.9%**
 - However, this goal was not necessarily reached by all race/ethnicity groups or populations with lower income
- Statistics on breastfeeding patterns and trends are limited for certain race/ethnicity groups (e.g., AIAN) and among lower SES groups
 - Barriers to breastfeeding are more prevalent
 - Reliance on survey data with limited sample size to assess more detailed demographic groups



Background – National Data

- National birth certificate data are provided **annually** and contain information on **100% of all registered births** in the U.S.
 - More detailed subgroup analyses and long-term trends
 - Geographic (county-level) data
 - Obstetric or neonatal health factors (that may influence breastfeeding)
- In 2003, the birth certificate was revised to include new data items:
 - Prenatal WIC use by the mother
 - Breastfeeding initiation at hospital discharge
 - Source of payment at delivery (e.g., Medicaid insurance)
- Staggered implication of the revised birth certificate by states
 - Revised data items released in 2013 for data years 2009 onward (28 states)
 - National data on all revised data only available by 2016



Objective

- Examine long-term trends (2009-2017) in breastfeeding initiation by WIC participation and race/ethnicity among women whose delivery was paid for by Medicaid



Methods

- Data source: National birth certificate data (2009-2017)
- Analytic sample: Term deliveries paid for by Medicaid from 24 states
 - Approximate WIC eligibility; comparable time to enroll in WIC during pregnancy
- Study measures
 - **Outcome:** Breastfeeding initiation (hospital records)
 - **Demographic variables:** Prenatal WIC participation and race/ethnicity (self-reported)
 - **Covariates:** Sociodemographic, prenatal health, and infant characteristics¹
- Analysis
 - Descriptive comparisons by WIC participation and race/ethnicity over time
 - Predicted probabilities of breastfeeding initiation trends from **adjusted linear probability models (LPM)**¹ with county-specific fixed effects (overall and by race/ethnicity)
 - Differences in trends were assessed by fitting an interaction between WIC and year
 - Sensitivity analyses: Compared LPM with logistic and propensity score models with inverse probability weights

1. Maternal age, education, marital status, prepregnancy BMI, smoking status, timing of prenatal care initiation, route of delivery, birth order, birthweight, NICU admission, infant sex



States Included in Analysis

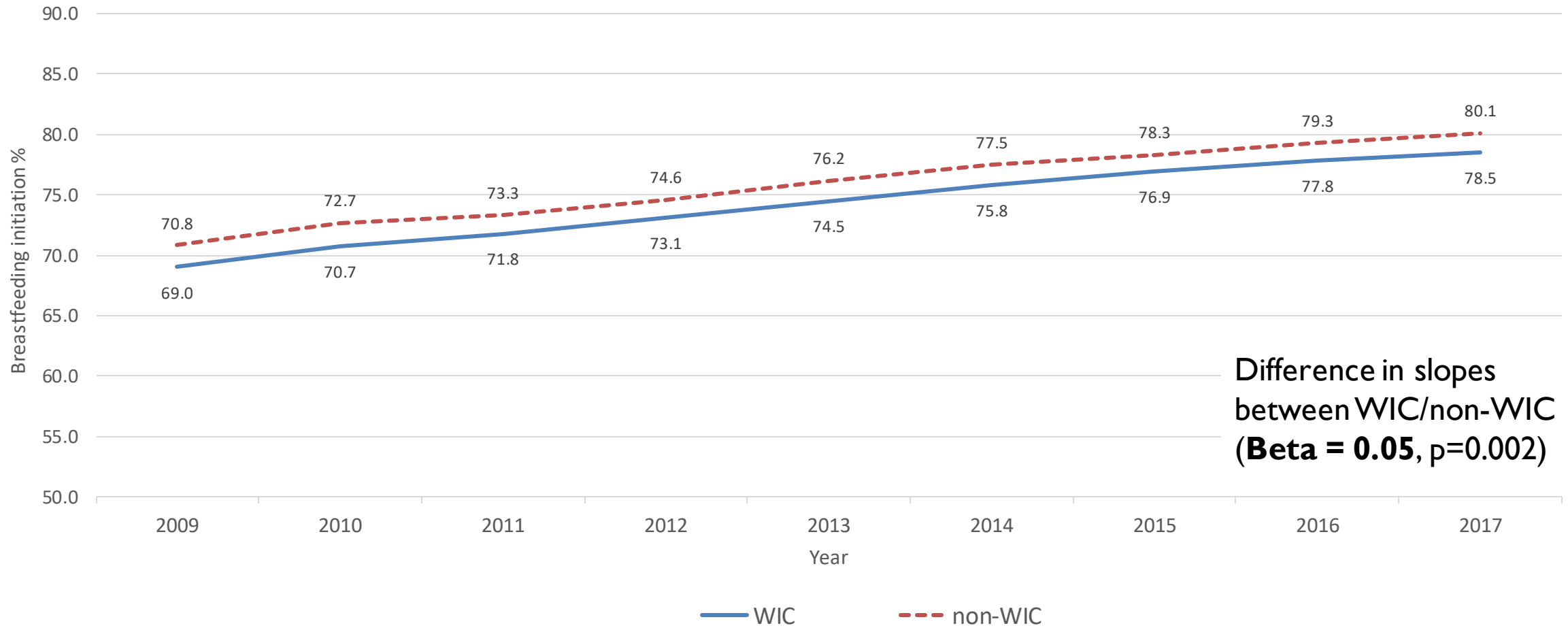
24 states included in analysis



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© GeoNames, Microsoft, TomTom

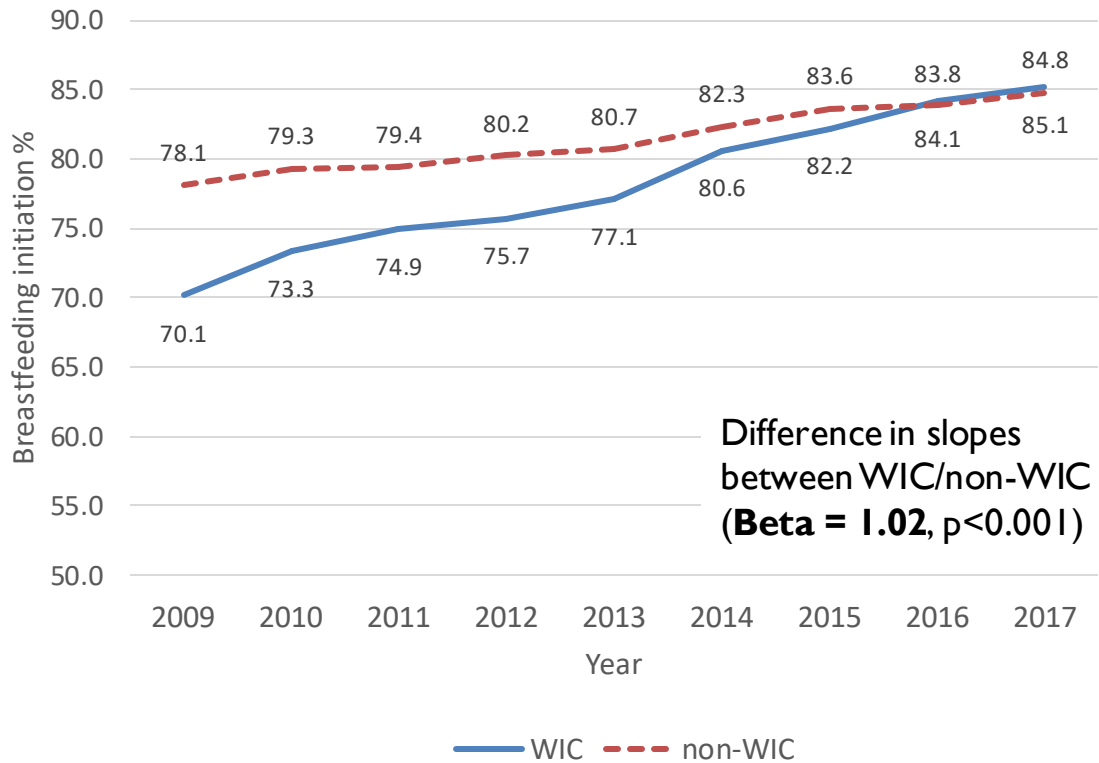


Results: Overall Trends

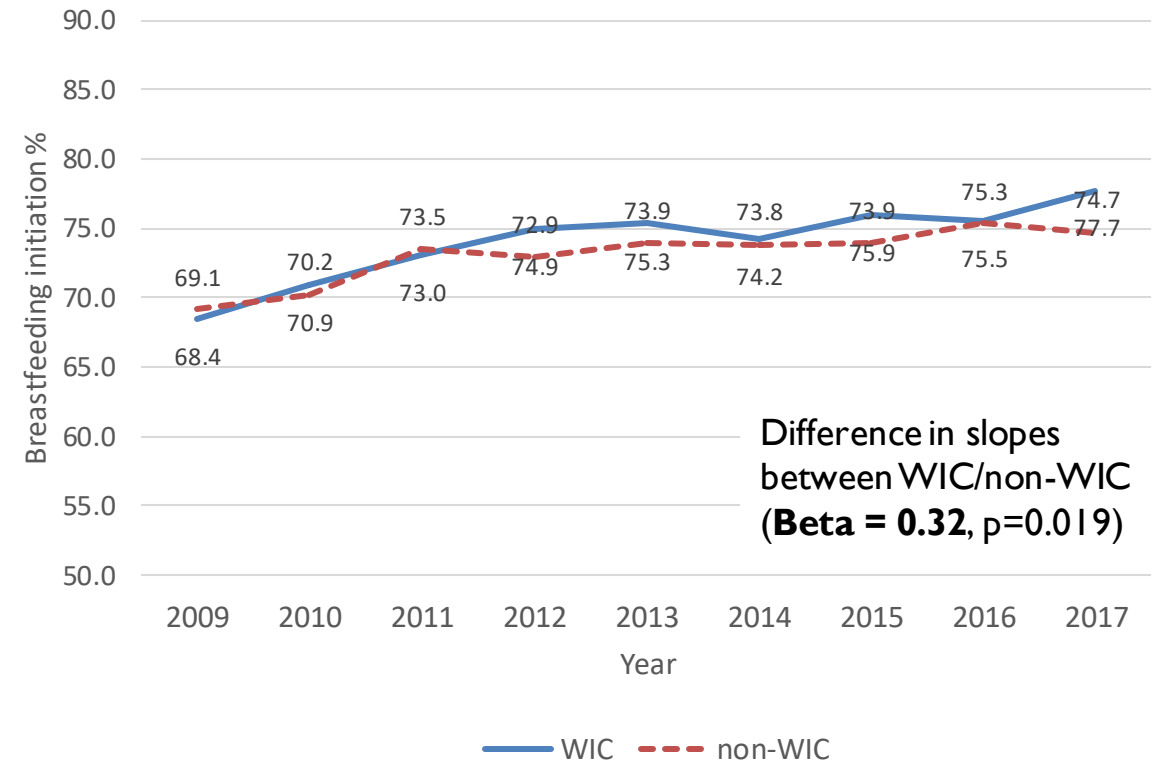


Results: Stratified by Race/Ethnicity

Non-Hispanic Asian/Pacific Islander

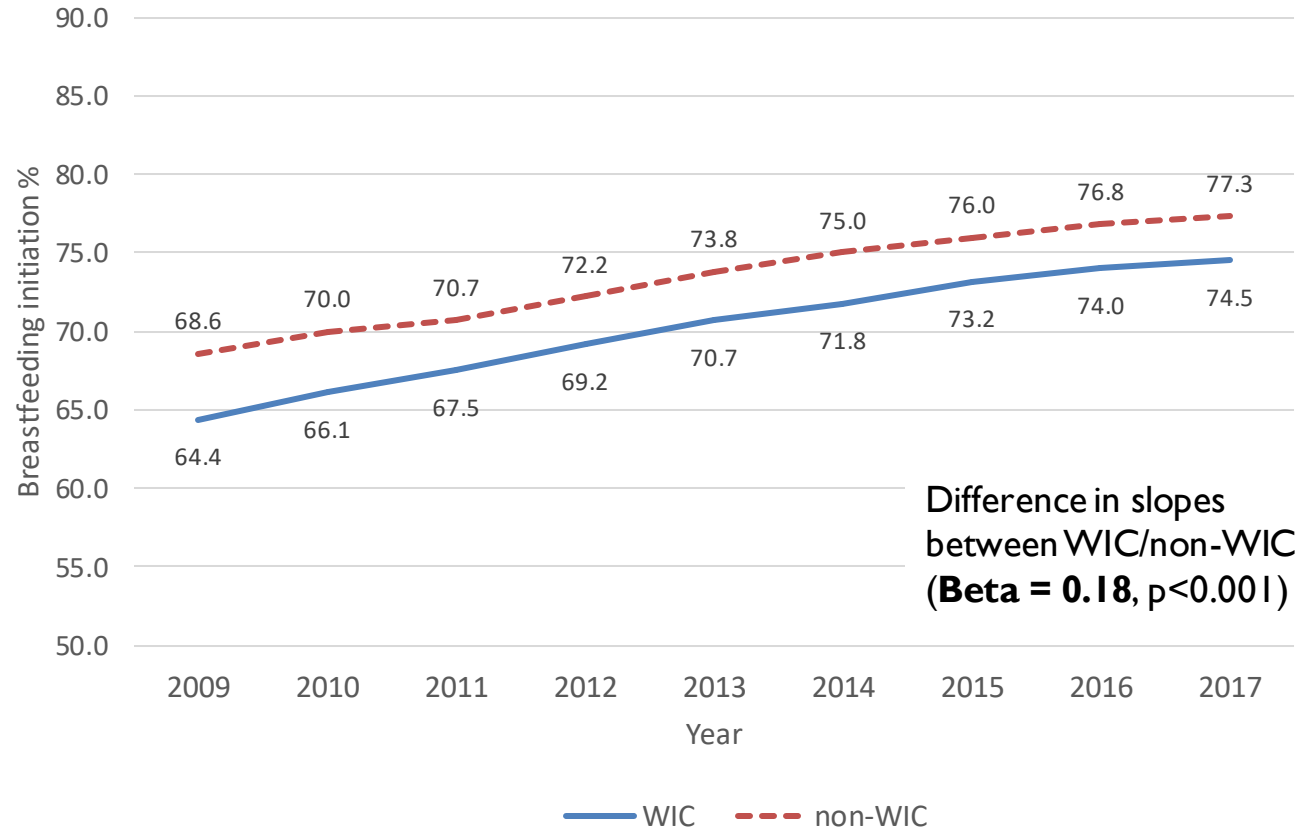


Non-Hispanic American Indian/Alaska Native



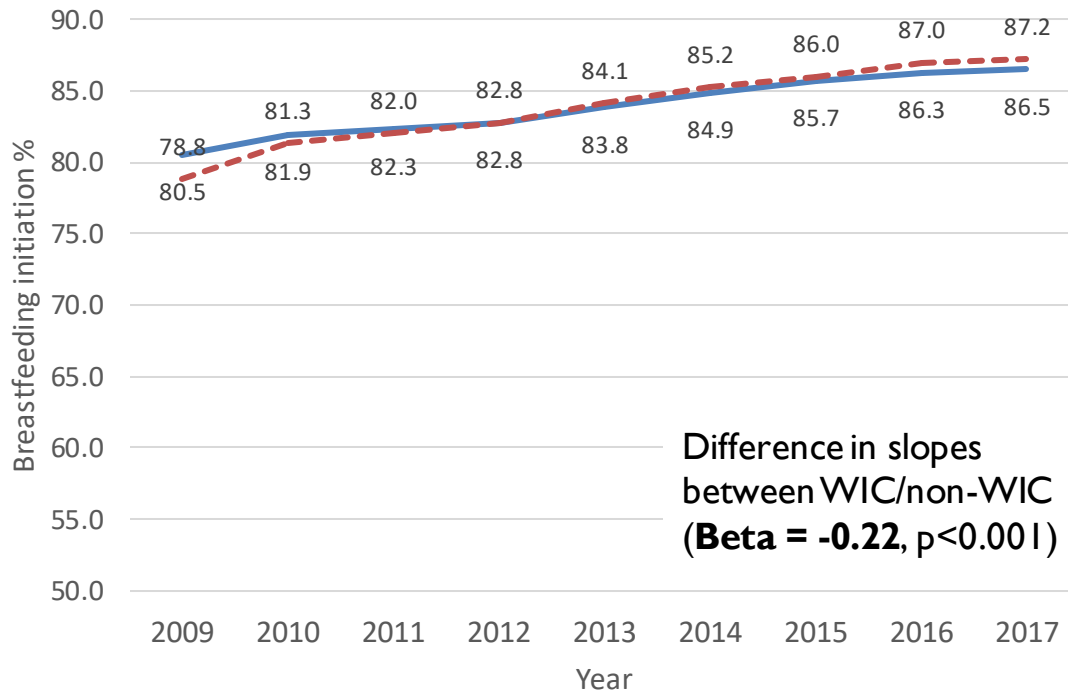
Results: Stratified by Race/Ethnicity

Non-Hispanic White



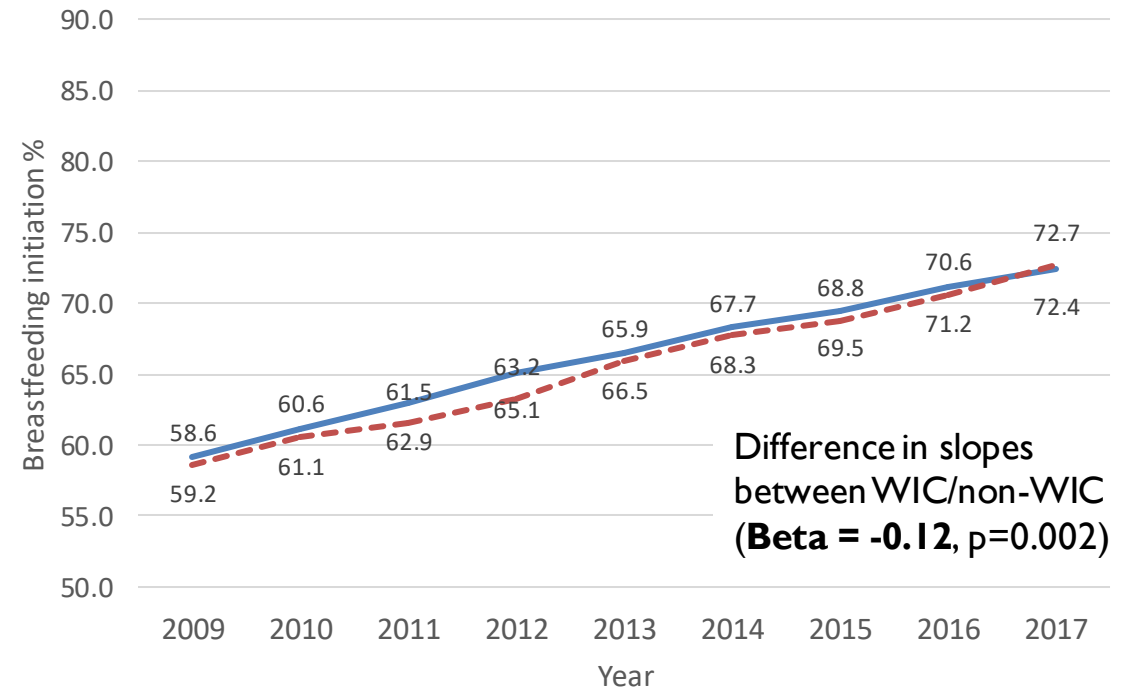
Results: Stratified by Race/Ethnicity

Hispanic/Latina



— WIC - - - non-WIC

Non-Hispanic Black



— WIC - - - non-WIC



Summary: Differences in Breastfeeding Initiation Trends By WIC Participation

Group analyzed	Interaction term (Beta):	P-value
Overall	+0.05	0.002
Non-Hispanic API	+1.02	<0.001
Non-Hispanic AIAN	+0.32	0.019
Non-Hispanic White	+0.18	<0.001
Non-Hispanic Black	-0.12	0.002
Hispanic	-0.22	<0.001

- Breastfeeding rates increased for all race/ethnicity groups and WIC status, but the pace of that change varied
- NH API WIC participants had the largest increase in breastfeeding initiation compared to non-participants, followed by NH AIAN WIC participants
- Increases for NH White WIC participants slightly exceeded non-participants, but were generally comparable between the two groups



Summary: Differences in Breastfeeding Initiation Trends By WIC Participation

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Non-Hispanic Black	-0.12	0.002
Hispanic	-0.22	<0.001

- NH Black women had the lowest rates of breastfeeding initiation and Hispanic women had the highest rates of breastfeeding across all race/ethnicity groups.
- In contrast to other groups, NH Black and Hispanic WIC participants and non-participants were generally comparable, with a slightly greater increase in breastfeeding initiation over time for non-participants.



Conclusion

- Innovative use of birth certificate data
- Inform WIC and maternal child health efforts to promote breastfeeding for low income and racialized groups—underrepresented in breastfeeding studies
 - Specifically, the USDA and WIC state agencies have supported the development of culturally-competent breastfeeding counseling and education
- Findings show that HP2020 breastfeeding initiation goals have not yet been reached for some populations from lower income households
 - Targeted efforts to increase initiation could further reduce disparities and help achieve breastfeeding equity
 - Healthy People 2030 no longer will monitor breastfeeding initiation, only duration



Limitations

- Eligibility for WIC was determined by Medicaid status
- Timing of WIC enrollment during pregnancy was unknown—affect extent of exposure to breastfeeding promotion
 - Restricted analyses to term births—time to enroll in WIC during pregnancy was comparable
- Medicaid expansion over time may have changed the eligible population over time—unmeasured confounding
 - Other data suggest the impact of the expansion on WIC eligibility is limited
 - We adjusted for a number of sociodemographic and geographic factors to account for this
- Analysis was descriptive and not designed to assess the impact of particular breastfeeding promotion programs
 - Difficult to disentangle given several concurrent national efforts



Research and Program Implications

- Further research is needed to understand the local programmatic variation that may explain these trends
- Studies could take advantage of this rich data set to examine the relationship of programmatic changes to breastfeeding and other health outcomes
- Linkages with outside data can expand the range of variables explored



WIC and Breastfeeding

CONGRATULATIONS, MOM!
YOUR BABY IS
THRIVING



#BreastfeedingMoms



AMANDA REAT, PHD, RD

FOOD AND NUTRITION SERVICE
OFFICE OF POLICY SUPPORT

SUPPLEMENTAL NUTRITION AND
SAFETY RESEARCH AND ANALYSIS
DIVISION

WIC Breastfeeding Promotion



Guidance, counseling, and educational materials

A greater quantity and variety of foods

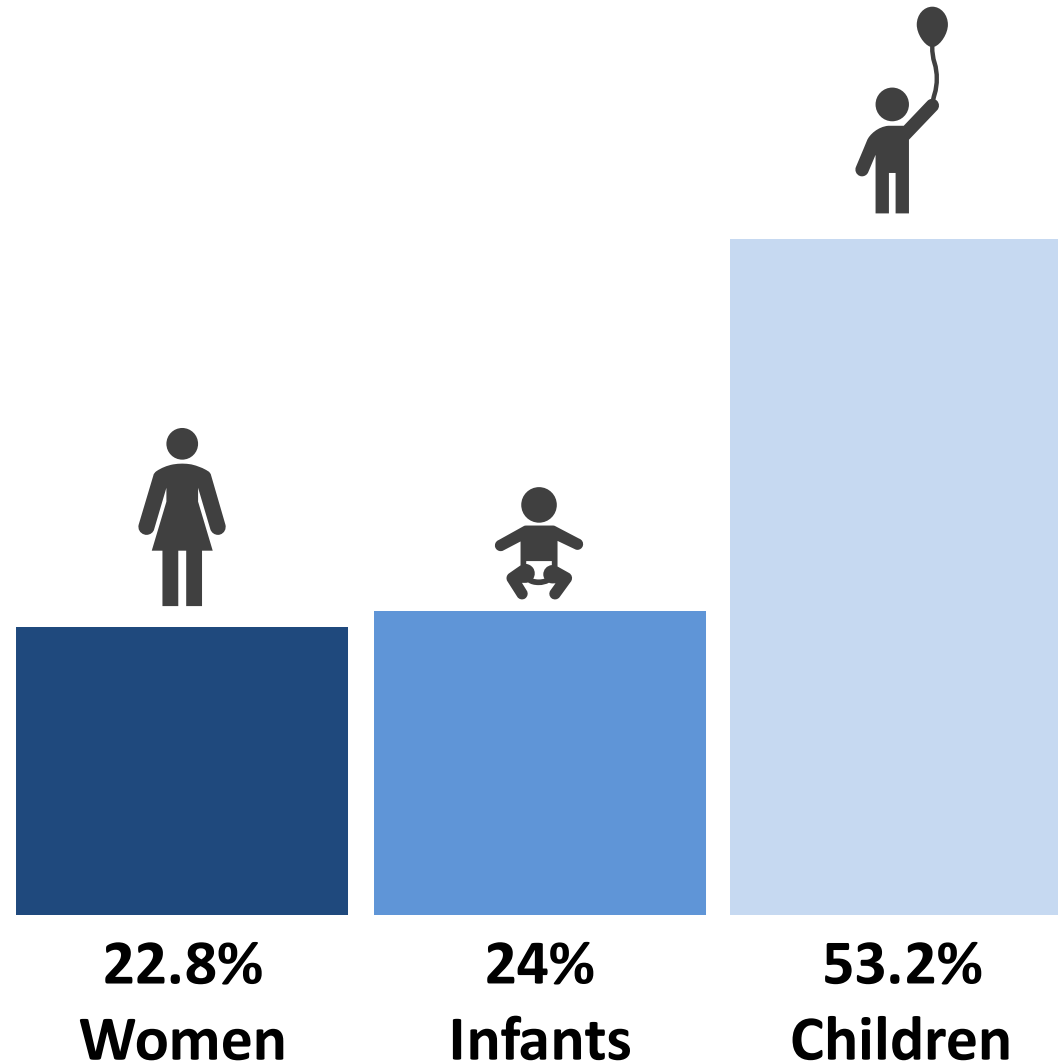
Longer participation in the program

Breast pumps and other aids

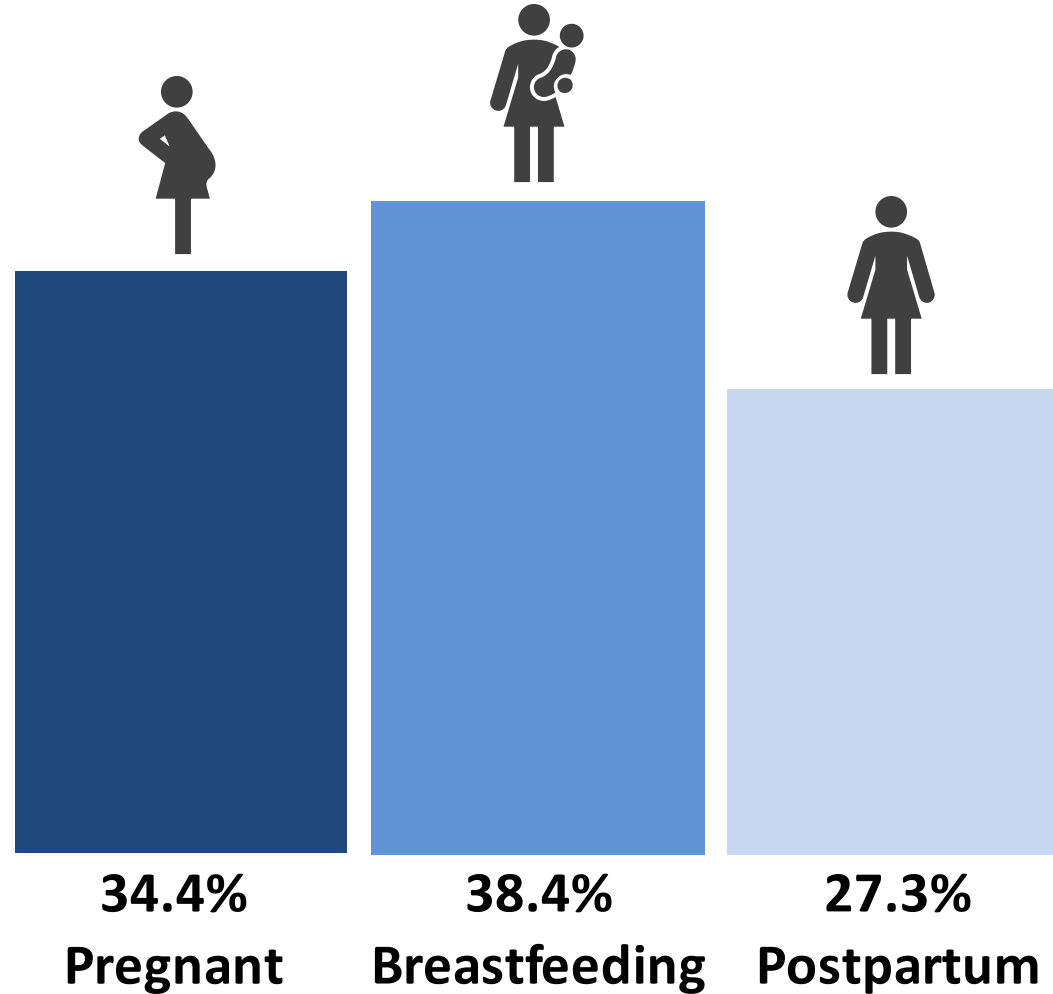
Trained staff

WIC Participants

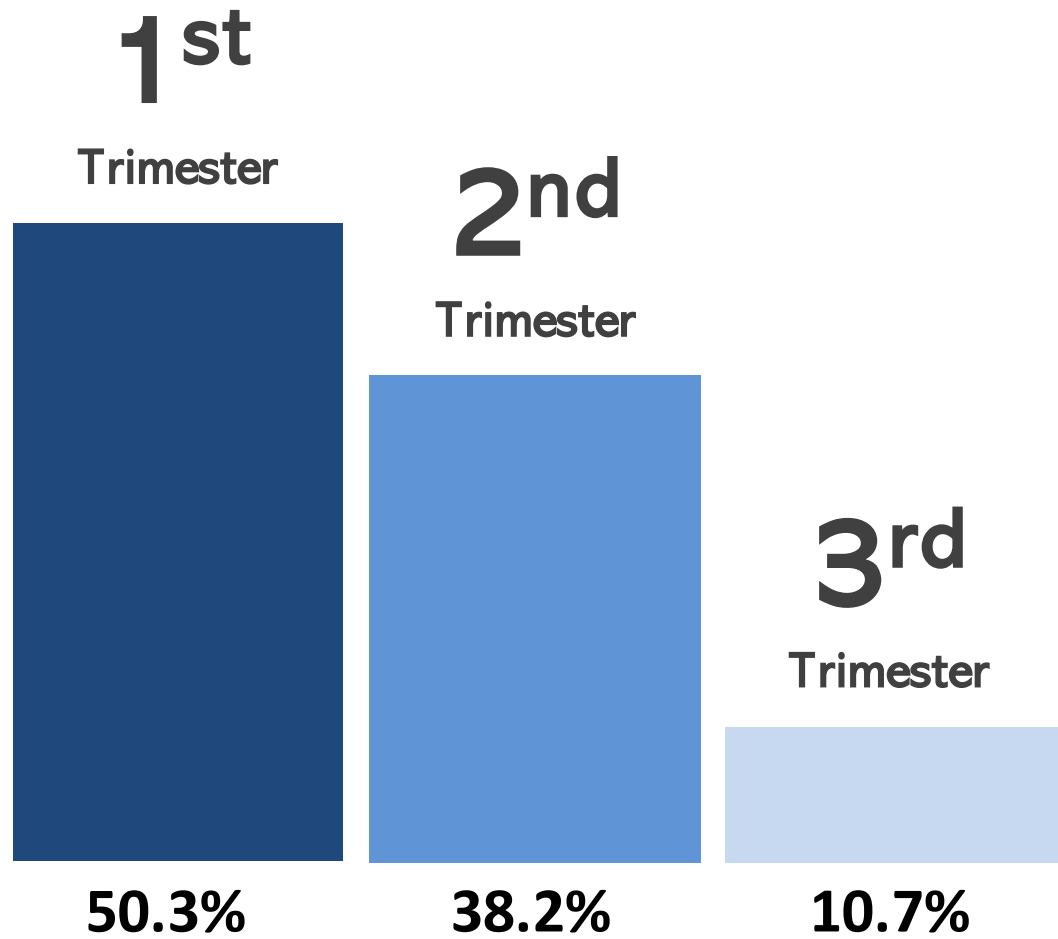
7.1 Million Total Participants in 2020



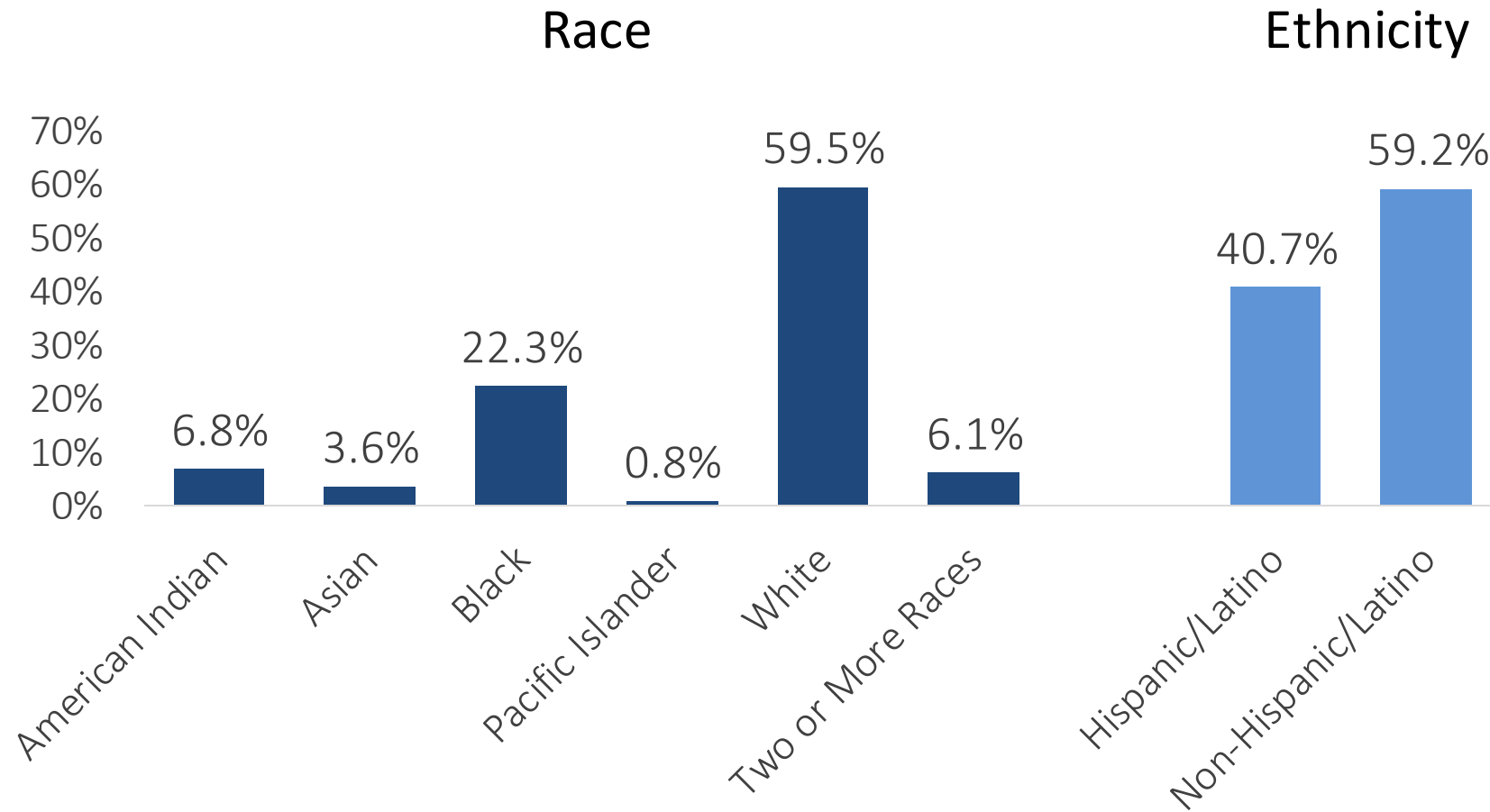
WIC Participant Categories - Women



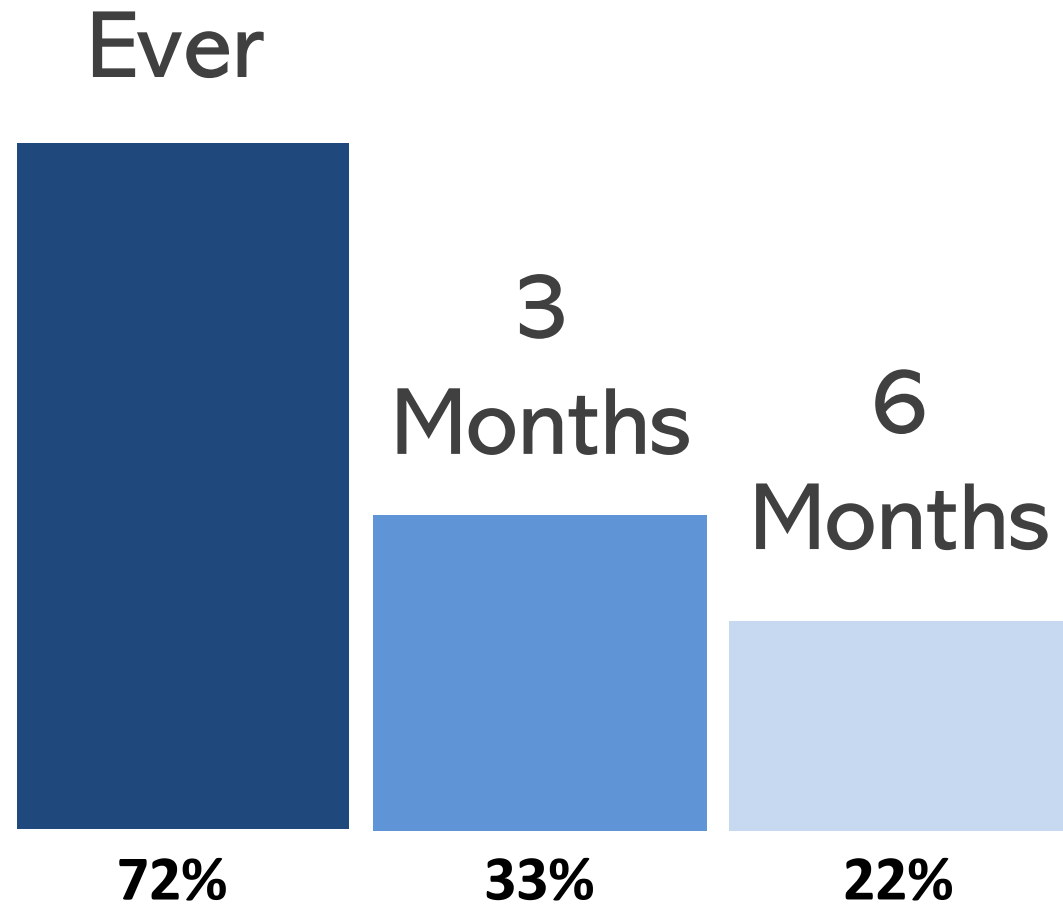
Trimester of Enrollment



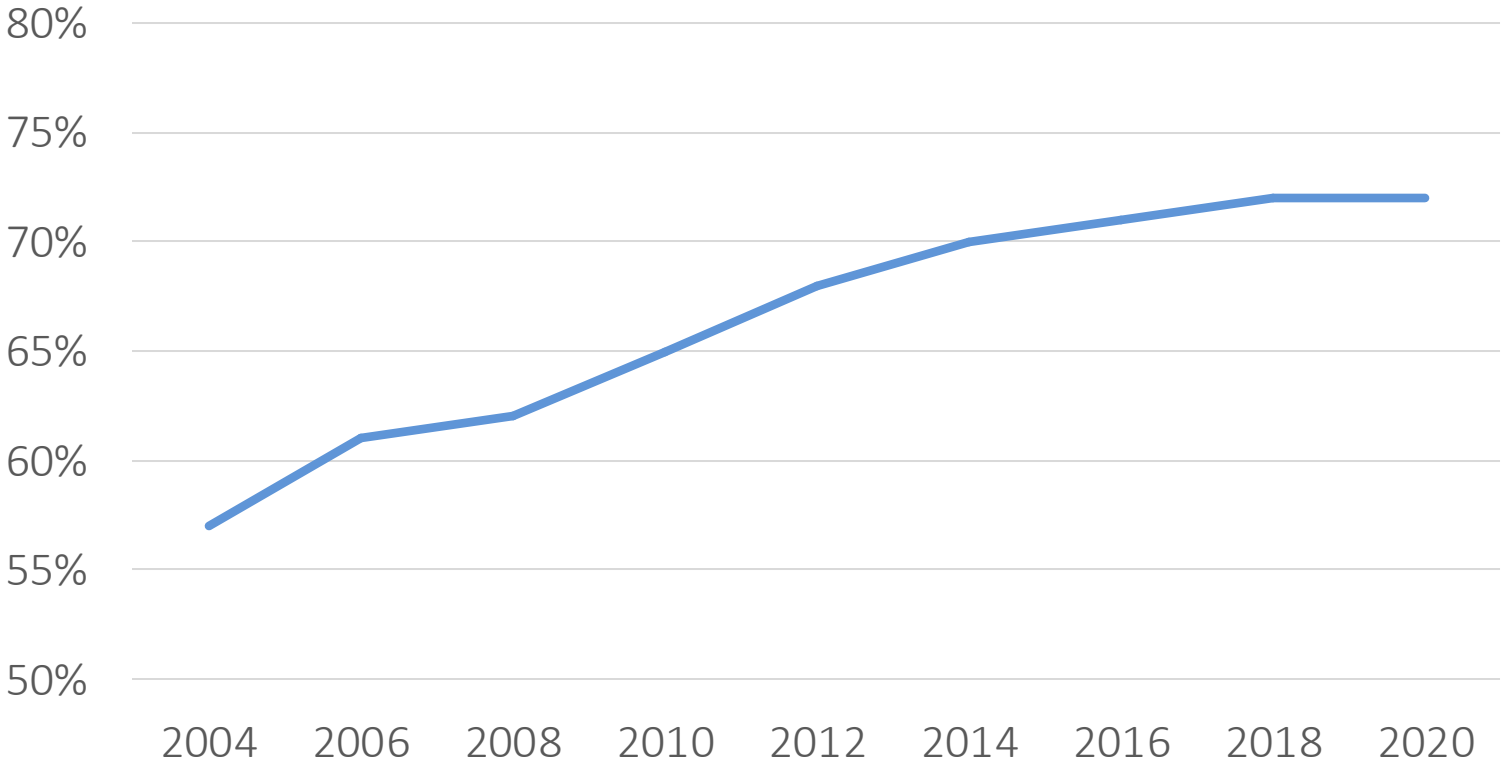
Participant Race and Ethnicity



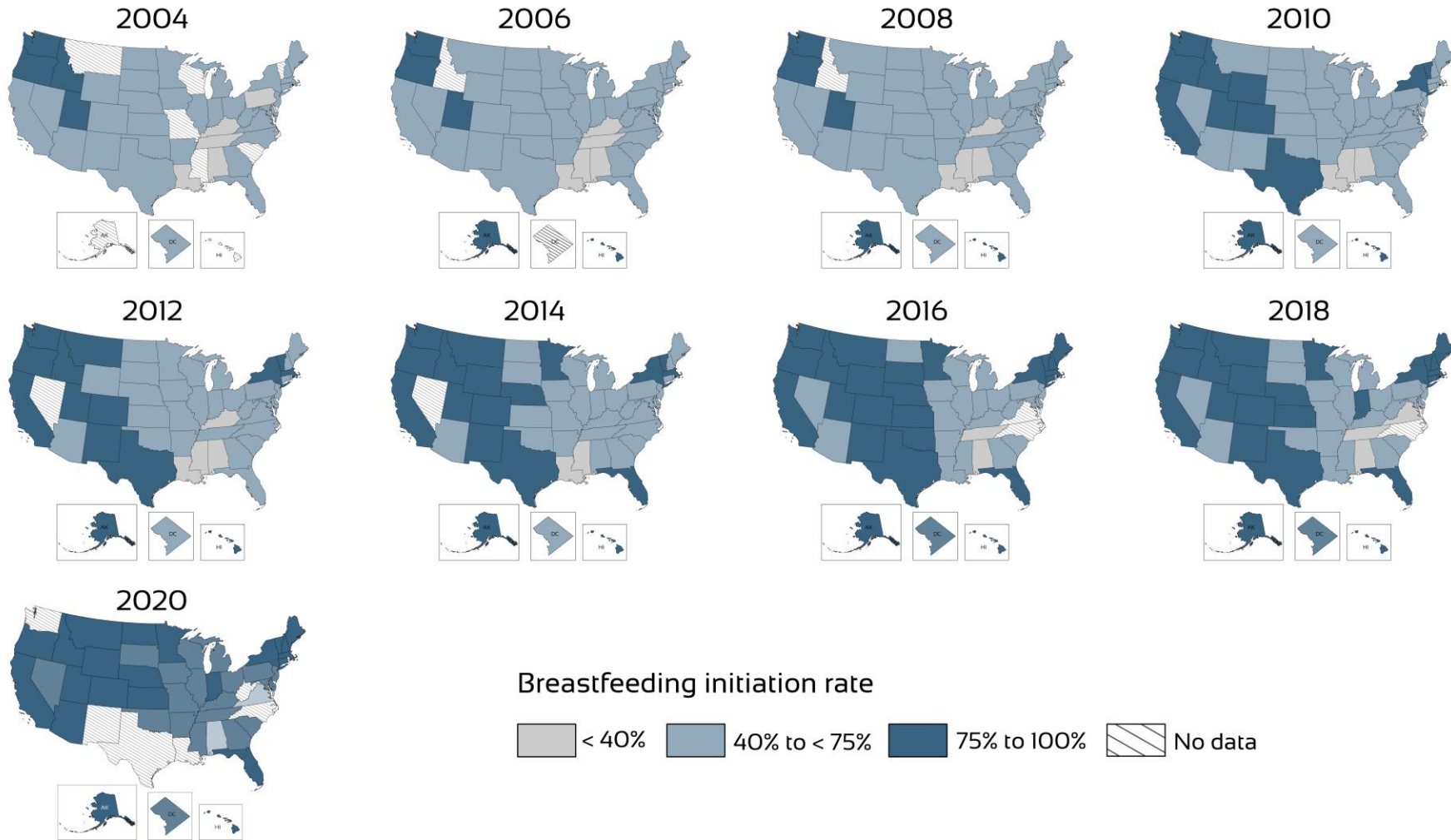
Breastfeeding Initiation & Duration



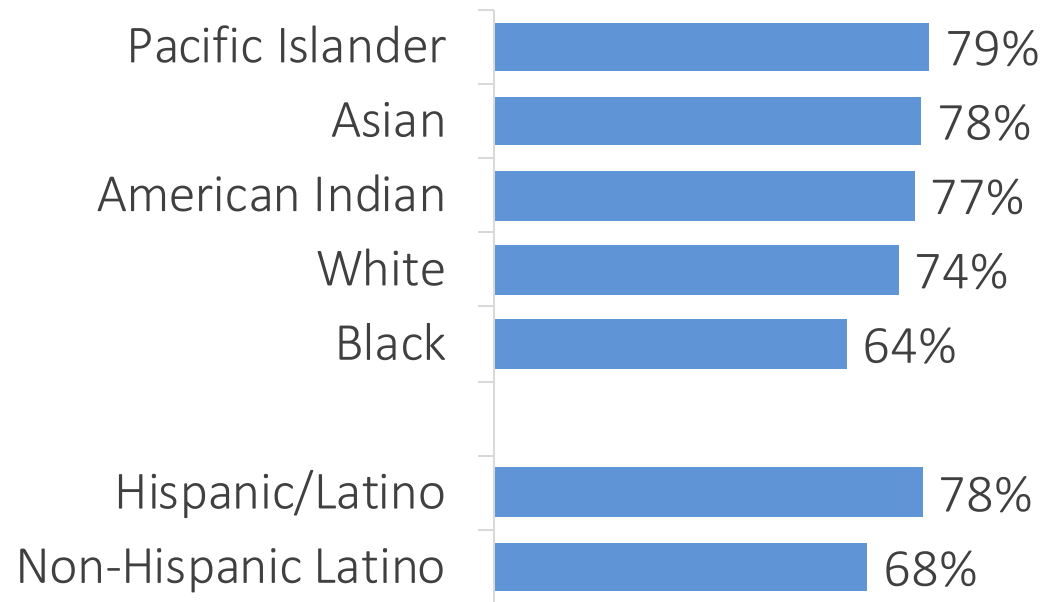
Breastfeeding Initiation Trends



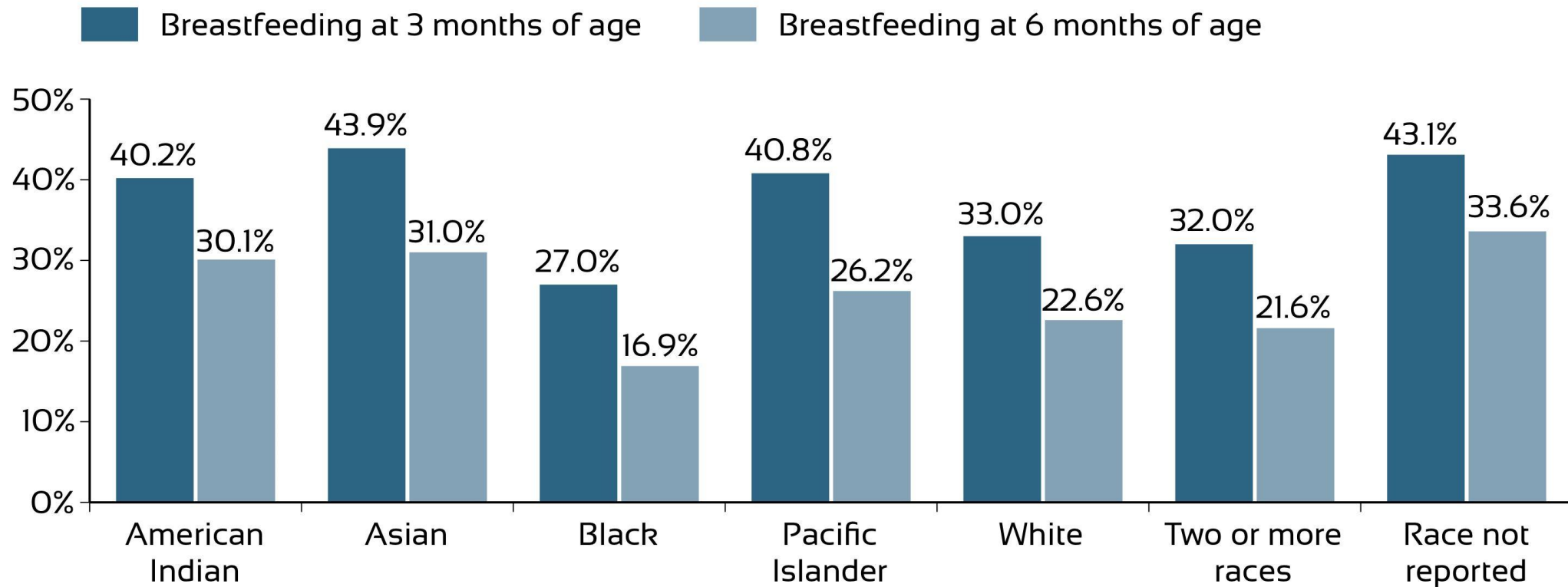
Breastfeeding Initiation Trends



Racial and Ethnic Disparities in Breastfeeding Initiation



Disparities in Breastfeeding Duration



WIC Infant and Toddler Feeding Practices Study – 2 (ITFPS-2):



Prenatal Views: Barriers to Breastfeeding



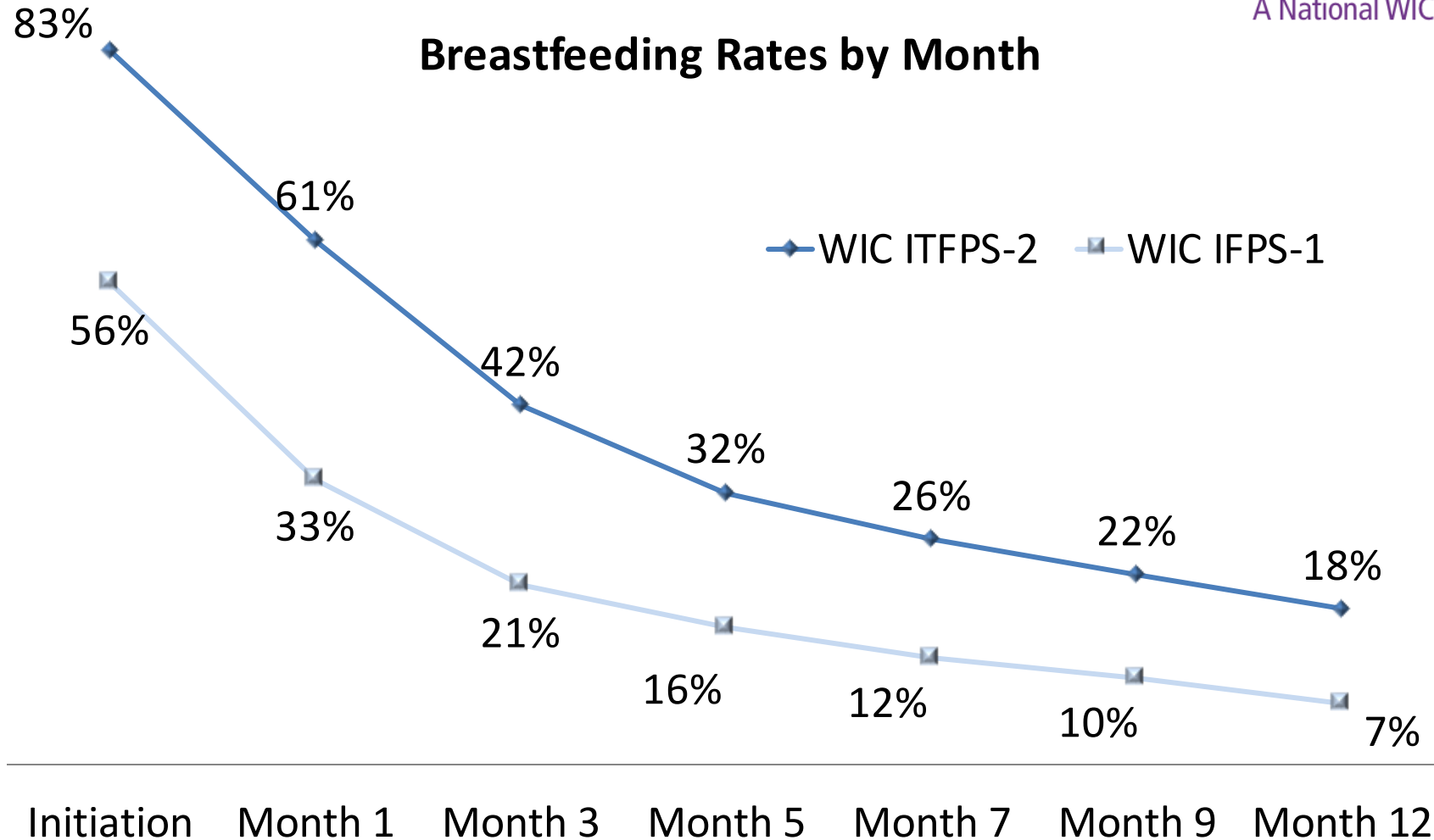
A National WIC Study

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 Rates Increased



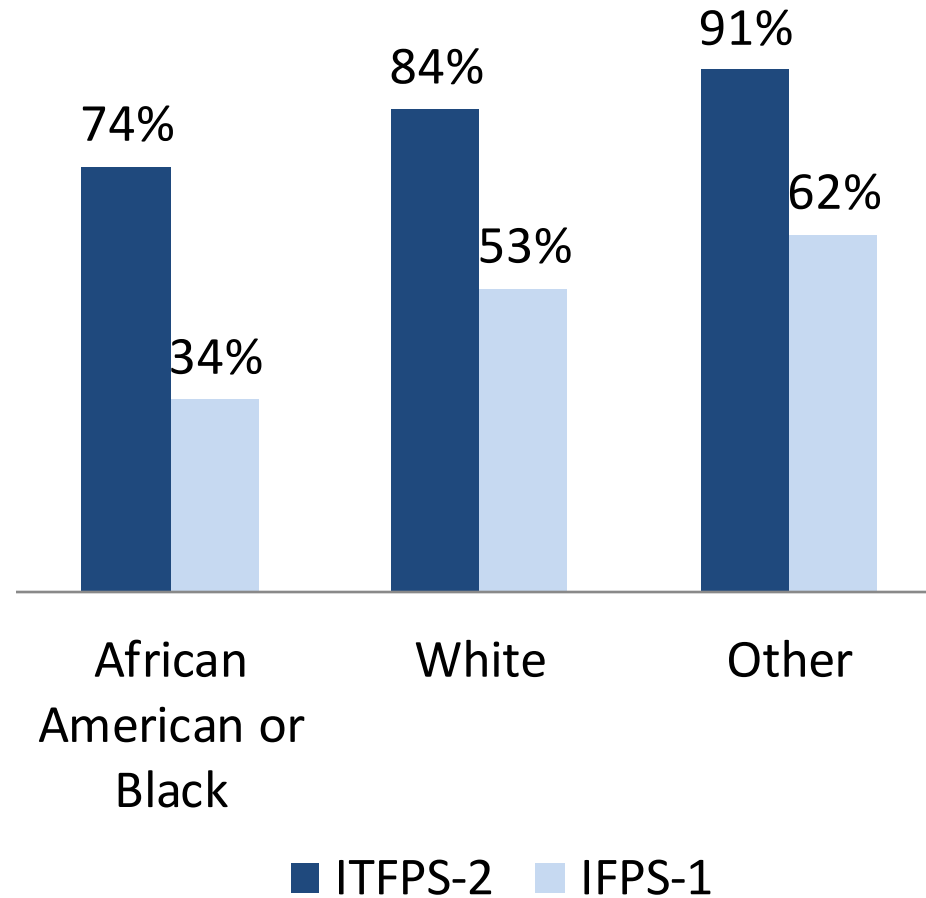
A National WIC Study



Breastfeeding Initiation by Race and Ethnicity



A National WIC Study

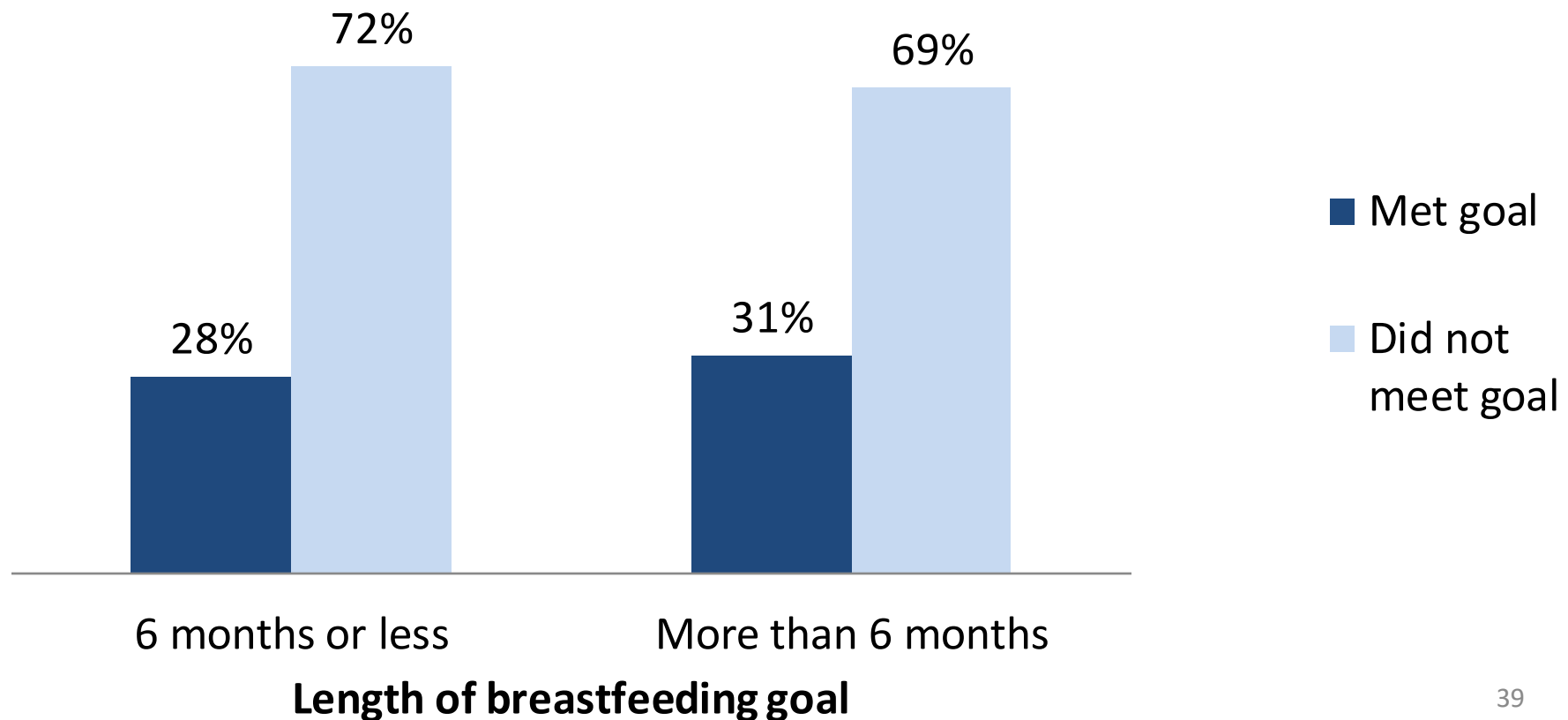


Breastfeeding Goals



A National WIC Study

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



AHRQ Review: Maternal and Child Outcomes Associated With WIC

IN COLLABORATION WITH AGENCY FOR HEALTHCARE RESEARCH AND QUALITY



Agency for Healthcare
Research and Quality

<https://effectivehealthcare.ahrq.gov/sites/default/files/product/pdf/cer-253-maternal-child-outcomes-wic.pdf>

Key Questions For Review

Key question 1

Among women who are eligible to participate in WIC, how is WIC participation during pregnancy associated with maternal and infant birth outcomes?

Key question 2

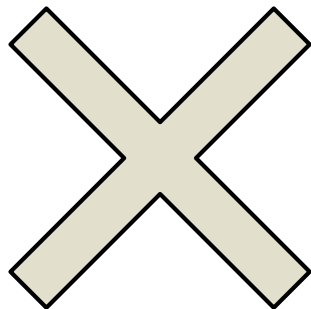
Among infants and children eligible to participate in WIC, how is WIC participation associated with dietary and health outcomes in childhood?

Breastfeeding Outcomes



Moderate Scope of Evidence

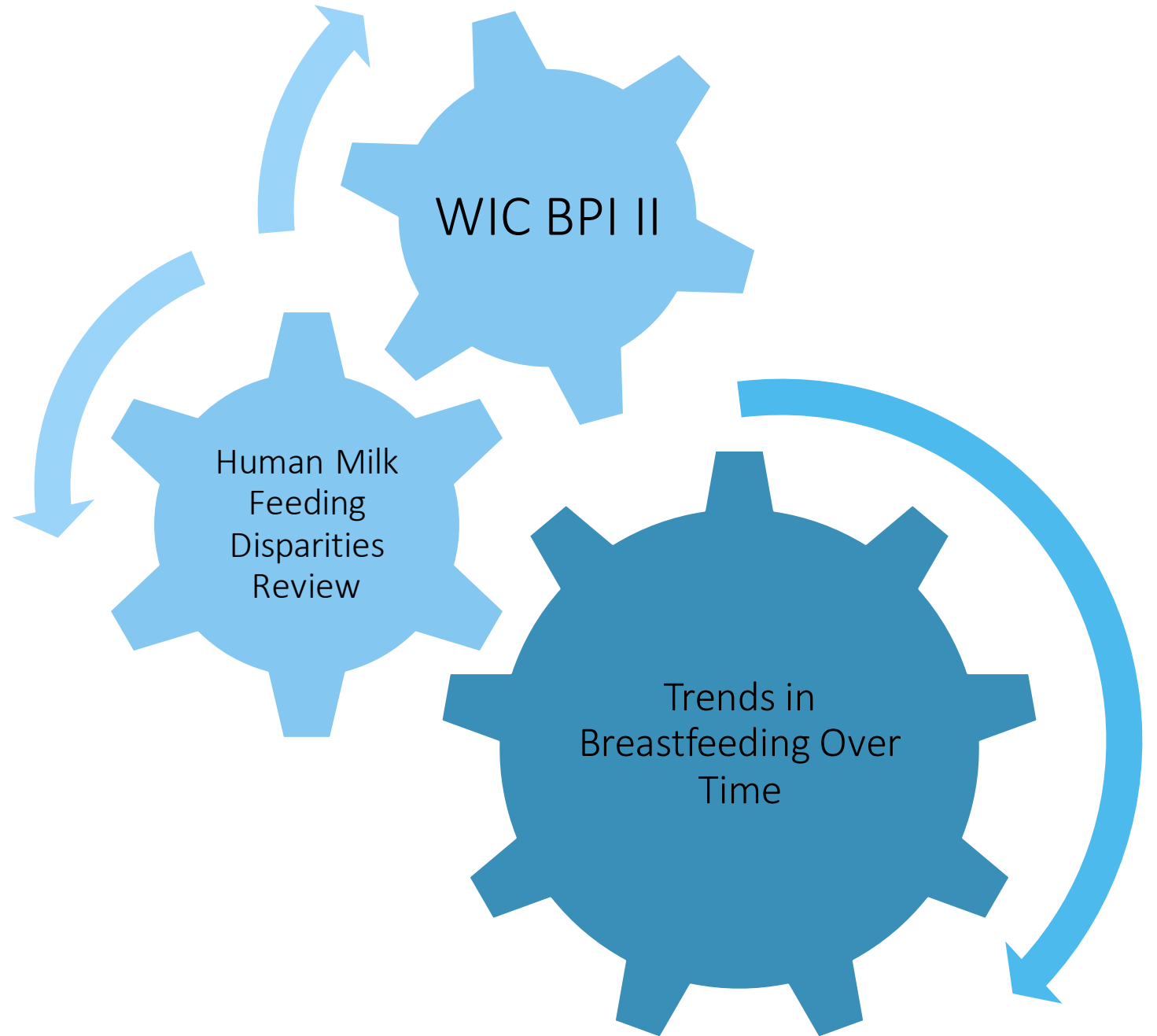
Maternal WIC participation is likely to be associated with no difference in breastfeeding initiation rates



Insufficient Evidence

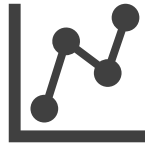
The evidence was insufficient to determine whether maternal or child WIC participation was associated with longer duration of breastfeeding or breastfeeding exclusivity.

Studies in the Works



WIC Breastfeeding Policy Inventory II

Study Objectives



Collect

- Collect information on breastfeeding statistics, practices, and policies



Examine

- Examine equity (race, national origin, gender identity, geography, language, class) in availability of breastfeeding support as a result of policies and practices



Explore

- Explore methods for routine collection of number of WIC designated breastfeeding experts

Research Focus

Breastfeeding
Peer-Counseling
Programs

WIC Breastfeeding
Support: Learn
and Grow
Together

Virtual
Breastfeeding
Services

State Plan
Information and
Policy/Procedure
Manuals

Equity in
Breastfeeding
Support

Breastfeeding
Measures



WIC PC - Breastfeeding Trends Over Time



Study Goals

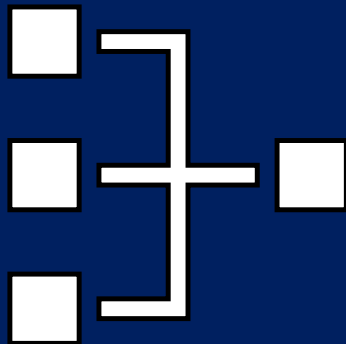
Develop a journal article to further explore and understand racial and ethnic disparities in breastfeeding among WIC participants over time

Methods

Historical trends and changes over time in breastfeeding rates, by race/ethnicity

Logistic regression to estimate the association between breastfeeding initiation rates and race/ethnicity

Racial and Ethnic Disparities in Human Milk Feeding in the U.S. - Rapid Literature Review



Key Questions

What are the racial and/or ethnic disparities in Breastfeeding in the United States?





What factors are associated with racial and/or ethnic disparities in Breastfeeding in the United States?

What interventions, programs, initiatives, and/or policies impact racial and/or ethnic disparities in Breastfeeding in the United States and do impacts vary across different racial and/or ethnic, socioeconomic, and geographic groups?

Review Protocol:

https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=346575

National Institute on Minority Health and Health Disparities (NIMHD) Research Framework

		Levels of Influence*			
		Individual	Interpersonal	Community	Societal
Domains of Influence (Over the Lifecourse)	Biological	Biological Vulnerability and Mechanisms	Caregiver–Child Interaction Family Microbiome	Community Illness Exposure Herd Immunity	Sanitation Immunization Pathogen Exposure
	Behavioral	Health Behaviors Coping Strategies	Family Functioning School/Work Functioning	Community Functioning	Policies and Laws
	Physical/Built Environment	Personal Environment	Household Environment School/Work Environment	Community Environment Community Resources	Societal Structure
	Sociocultural Environment	Sociodemographics Limited English Cultural Identity Response to Discrimination	Social Networks Family/Peer Norms Interpersonal Discrimination	Community Norms Local Structural Discrimination	Social Norms Societal Structural Discrimination
	Health Care System	Insurance Coverage Health Literacy Treatment Preferences	Patient–Clinician Relationship Medical Decision-Making	Availability of Services Safety Net Services	Quality of Care Health Care Policies
Health Outcomes		 Individual Health	 Family/ Organizational Health	 Community Health	 Population Health

Thank You!

WIC PC 2020

- Report: <https://www.fns.usda.gov/wic/participant-program-characteristics-2020>
- Dataset: <https://data.nal.usda.gov/dataset/wic-participant-and-program-characteristics-2020-0>

WIC ITFPS2

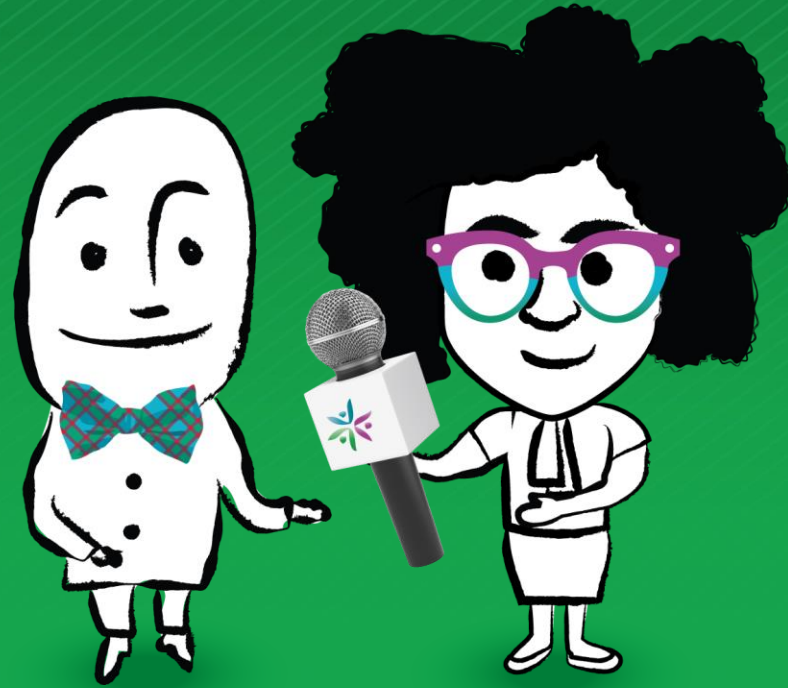
- Reports: https://www.fns.usda.gov/data-research?keywords=itfps&sort_bef_combine=created_1_DESC
- Datasets: <https://data.nal.usda.gov/dataset/wic-infant-and-toddler-feeding-practices-study-2-wic-itfps-2-prenatal-infant-year-second-year-third-year-and-fourth-year-datasets-0>

Maternal and Child Outcomes Associated with WIC AHRQ Review

- Report: <https://effectivehealthcare.ahrq.gov/products/outcomes-nutrition/research>

Human Milk Feeding Disparities Rapid Review

- Protocol: https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=346575

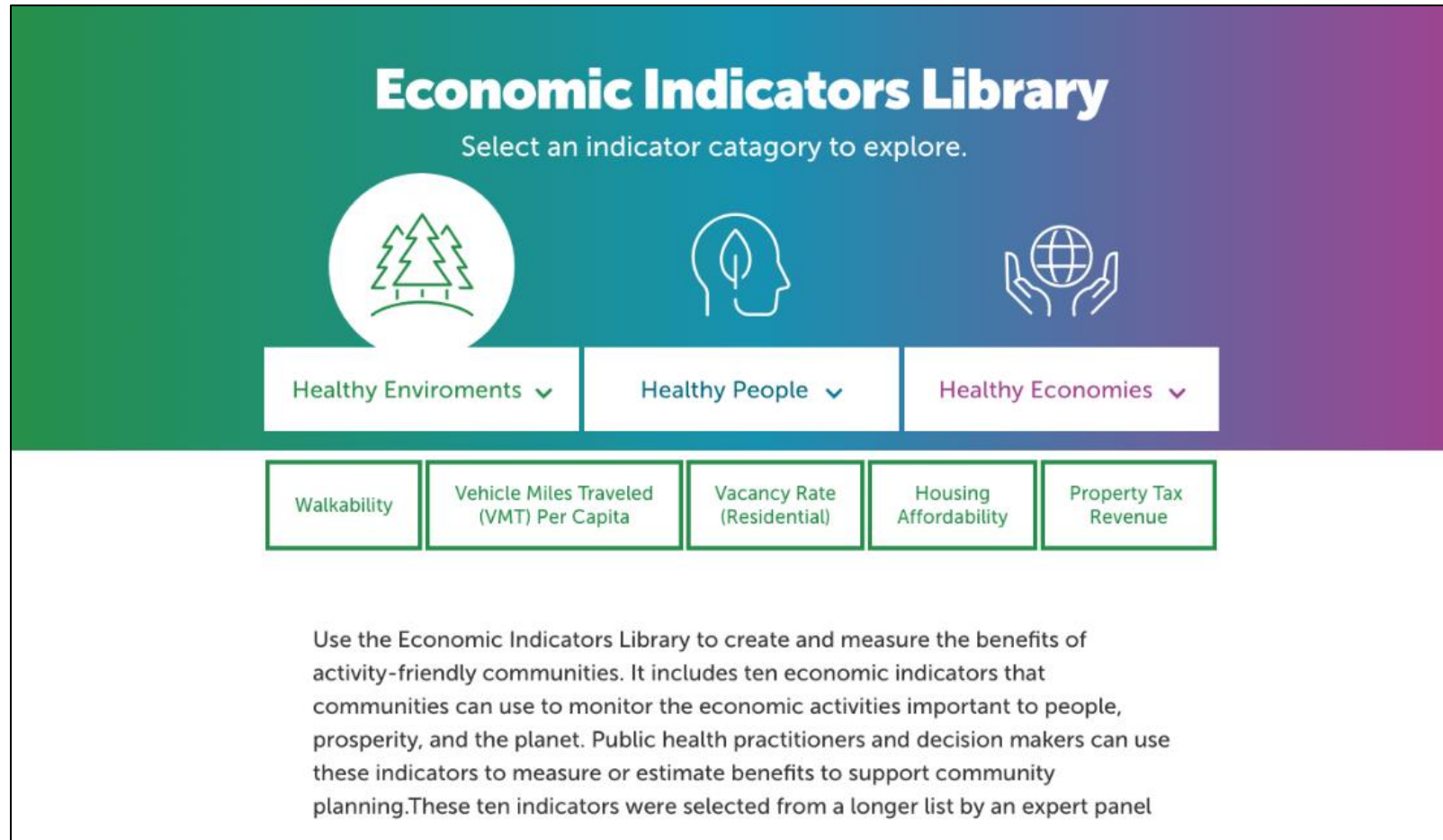


Q & A

ANNOUNCEMENTS



New Tools and Resources



Economic Indicators Library
Select an indicator category to explore.

Healthy Enviroments ▼ Healthy People ▼ Healthy Economies ▼

Walkability Vehicle Miles Traveled (VMT) Per Capita Vacancy Rate (Residential) Housing Affordability Property Tax Revenue

Use the Economic Indicators Library to create and measure the benefits of activity-friendly communities. It includes ten economic indicators that communities can use to monitor the economic activities important to people, prosperity, and the planet. Public health practitioners and decision makers can use these indicators to measure or estimate benefits to support community planning. These ten indicators were selected from a longer list by an expert panel

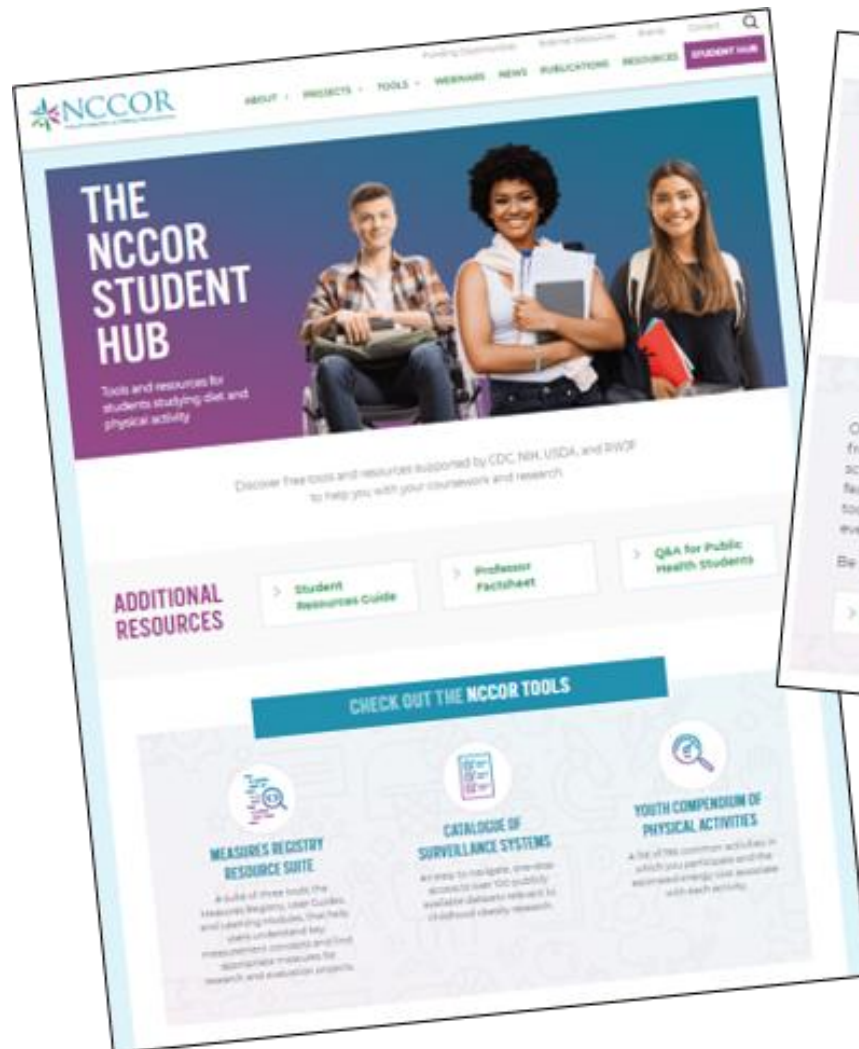




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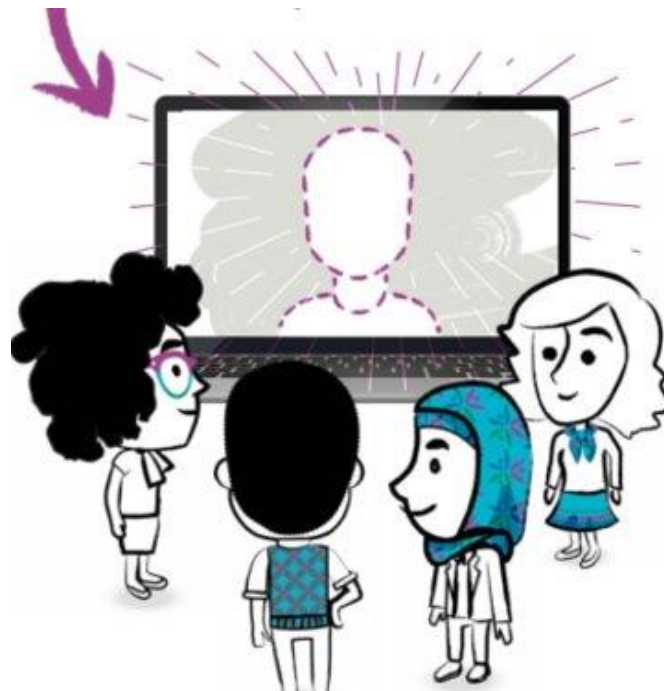
→ nccor.org/e-newsletter

Check out the student hub webpage!



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and we may feature you in our next webinar!



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nccor@fhi360.org

