ITEM # 8

July 26, 2018

SUBJECT **MATERNAL AND INFANT HEALTH ASSESSMENT SURVEY** **Strategic Priority Area 2. System and Network:** Provide leadership to the First 5 movement and the development of a support system serving children prenatal through age 5, their families, and communities that results in sustainable and collective impact. **Goal 2.1. Leadership as a Convener and Partner:** Work with First 5 county commissions, state agencies, and other stakeholders to convene, align, collaborate on, support, and strengthen statewide efforts and initiatives to facilitate the creation of a seamless system of integrated and comprehensive programs and services to improve the status and outcomes for children prenatal through age 5 and their families.	☐ Action ☒ Information

SUMMARY OF THE ISSUE

Researchers from the University of California, San Francisco, will present findings from California's Maternal and Infant Health Assessment (MIHA) survey. Christine Rinki, MPH, is a research specialist for the MIHA survey, with expertise in maternal and child epidemiology and program evaluation. Paula Braveman, MD, MPH, is Professor of Family and Community Medicine and Director of the Center on Social Disparities in Health at the University of California, San Francisco (UCSF). She is internationally known for her expertise in health equity and health disparities, particularly maternal and child health. Kristen Marchi, MPH, is Co-Director of the Center on Social Disparities in Health and the MIHA Project Director, with expertise in survey research and social disparities in maternal and child health.

RECOMMENDATION

This is an information-only item. First 5 California staff is not requesting action at this time.

BACKGROUND OF KEY ISSUES

MIHA is an annual, statewide-representative survey of women with a recent live birth in California. MIHA collects self-reported information about maternal and infant experiences and about maternal attitudes and behaviors before, during, and shortly after pregnancy. The survey is a collaborative effort of the Maternal, Child and Adolescent Health and the Women, Infant & Children Divisions of the California Department of Public Health, and the Center on Social Disparities in Health at UCSF. The presentation will focus on the topics of hardships among women around the time of pregnancy, the impact of childhood hardships on maternal health, and the relationship of preterm birth with racism.

ATTACHMENTS

A. Maternal and Infant Health Assessment: For Healthier Mothers and Babies (Presentation by UCSF)

Maternal and Infant Health Assessment (MIHA)

…for healthier mothers and babies

Christine Rinki, MPH

Kristen Marchi, MPH

Paula Braveman, MD, MPH

First 5 California Commission Meeting

July 26, 2018

California Department of Public Health

CDPH

UCSF University of California San Francisco

What is MIHA?

- Annual survey of California women with a recent live birth
- Unique data resource to support programs and policies that improve the health of California mothers and infants
- Source of otherwise unavailable data around the time of pregnancy, linked to other data sources

MIHA Partners

- Maternal, Child and Adolescent Health Division, California Department of Public Health
- WIC Division, California Department of Public Health
- Center on Social Disparities in Health, University of California, San Francisco
- MIHA is supported by federal funds from the Title V Maternal and Child Health Block Grant.

MIHA methods overview: Sample

- Annual statewide representative sample from birth certificates of resident women with a live birth
- About 6,500 women participate each year
  - Allows for county-level data reporting
- Oversampled subgroups ensures adequate representation
  - Black mothers (since 1999)
  - American Indians/Alaska Native (AIAN) mothers (2012-2015)
  - Preterm births (since 2016)

MIHA methods overview: Data collection

- Multi-mode survey (mail/web/telephone)
- In English or Spanish (no Asian languages yet)
- Incentives and rewards offered to enhance participation
- Most women surveyed between 3 and 6 months postpartum
- 2017 response rate = **64**%

Photo: iStock

MIHA methods overview: Survey Development

- Revised annually to address emerging issues
- Input obtained from MCAH, WIC, CDPH, First 5, CDC/PRAMS and external stakeholders from throughout California
- MIHA Team examines literature, other surveys and consults subject matter experts
- Survey pretested with postpartum women online, in focus groups, on phone (English and Spanish)

MIHA Topics

- Demographics and socioeconomics
- Hardships, social support, IPV, racism
- Mental health conditions, need and access to care
- Alcohol, tobacco, cannabis use
- Health conditions, behaviors, and experiences
- Access to care, utilization and insurance
- Dental care, flu and Tdap vaccination, genetic disease screening
- Pregnancy intention and postpartum birth control
- Linked birth certificate variables (standard)
- Linked patient discharge data variables
- Linked selected census-derived variables

Ongoing collaborations

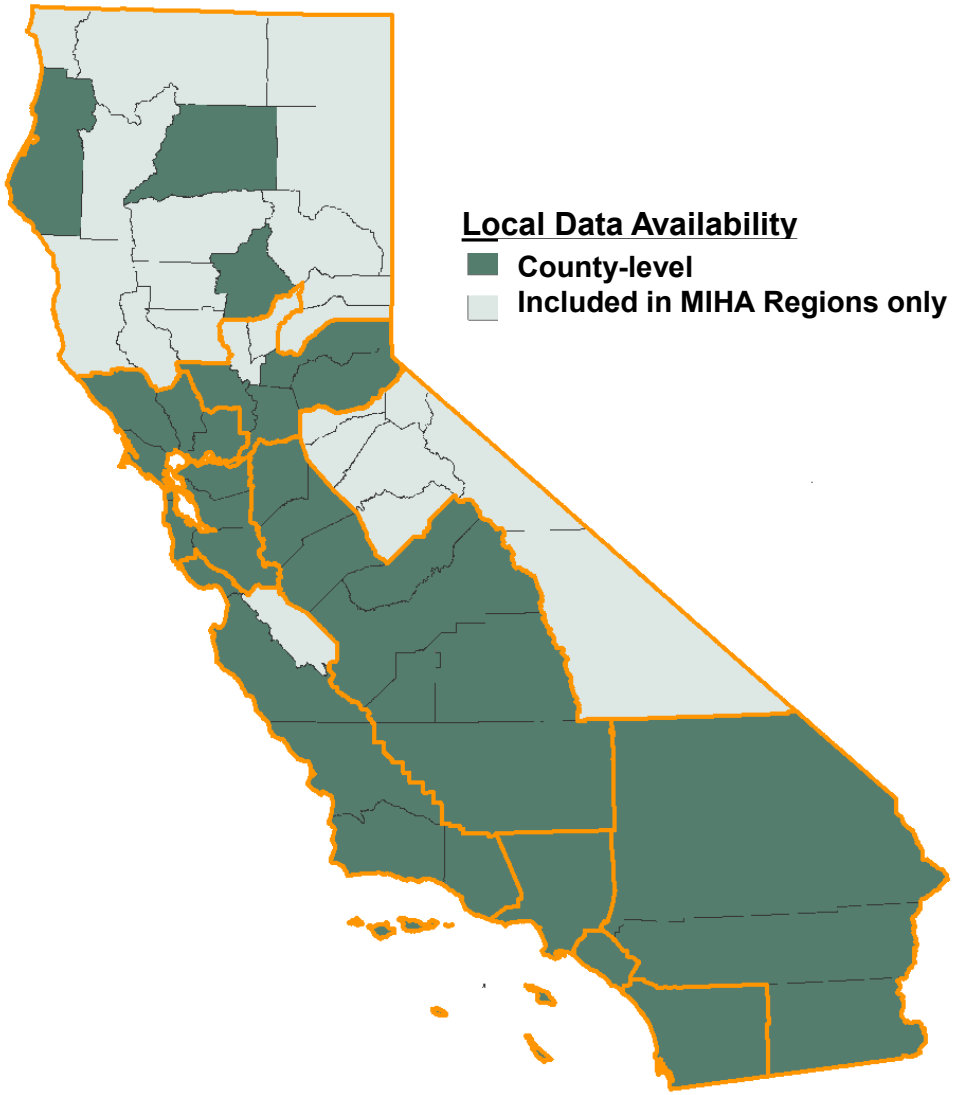
CDPH Partners

- Women, Infants and Children Program (WIC)
- Genetic Disease Screening Program
- Let's Talk Cannabis
- Office of Oral Health
- Immunization Branch

External Partners

- Local Health Jurisdiction MCAH Programs
- Centers for Disease Control/PRAMS
- Kidsdata.org
- National Partnership for Women and Families
- MCH Access

Local data availability



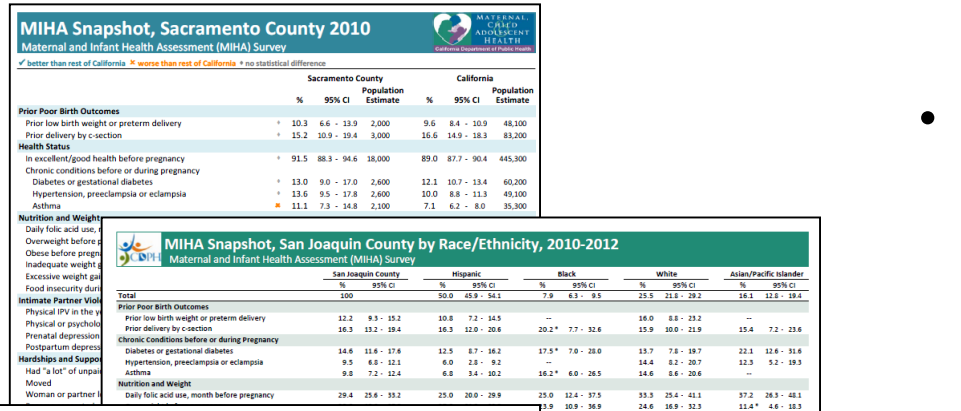
Women residing in all counties are eligible for MIHA

Data at county level is available for 35 counties with largest number of births.

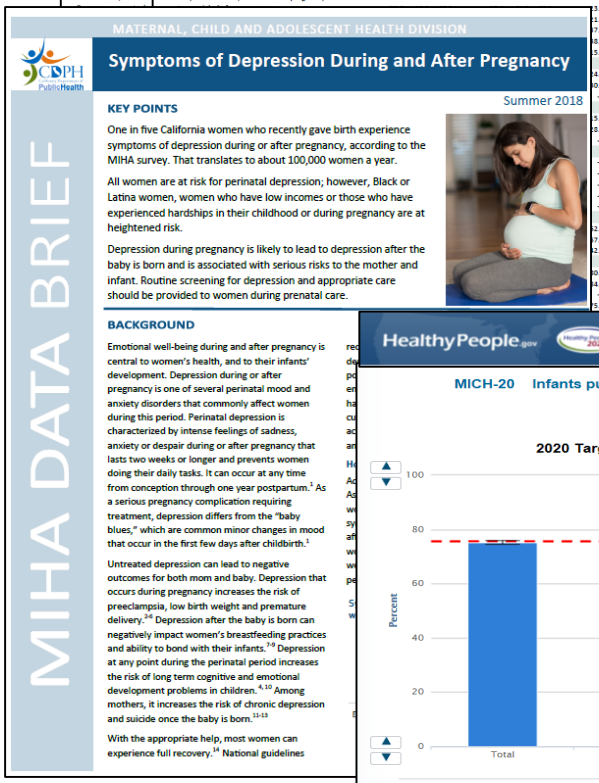
This accounts for 98% of California births

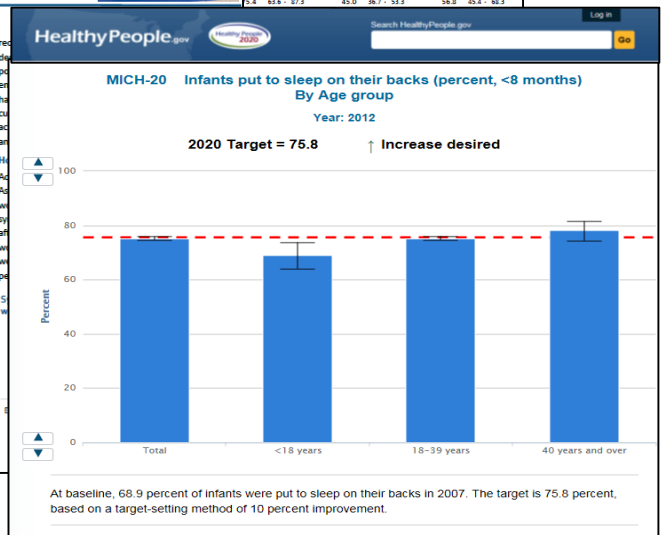
Data for the remaining 23 counties are reported in MIHA regions.

Uses of MIHA data: public health reporting


MIHA Snapshot, Sacramento County 2010
Maternal and Infant Health Assessment (MIHA) Survey

MIHA Snapshot, San Joaquin County by Race/Ethnicity, 2010-2012
Maternal and Infant Health Assessment (MIHA) Survey


MATERNAL, CHILD AND ADOLESCENT HEALTH DIVISION
Symptoms of Depression During and After Pregnancy
Summer 2018
MIHA DATA BRIEF


HealthyPeople.gov
MICH-20 Infants put to sleep on their backs (percent, <8 months)
By Age group
Year: 2012
2020 Target = 75.8 ↑ Increase desired
Total
<18 years
18–39 years
40 years and over
At baseline, 68.9 percent of infants were put to sleep on their backs in 2007. The target is 75.8 percent, based on a target-setting method of 10 percent improvement.

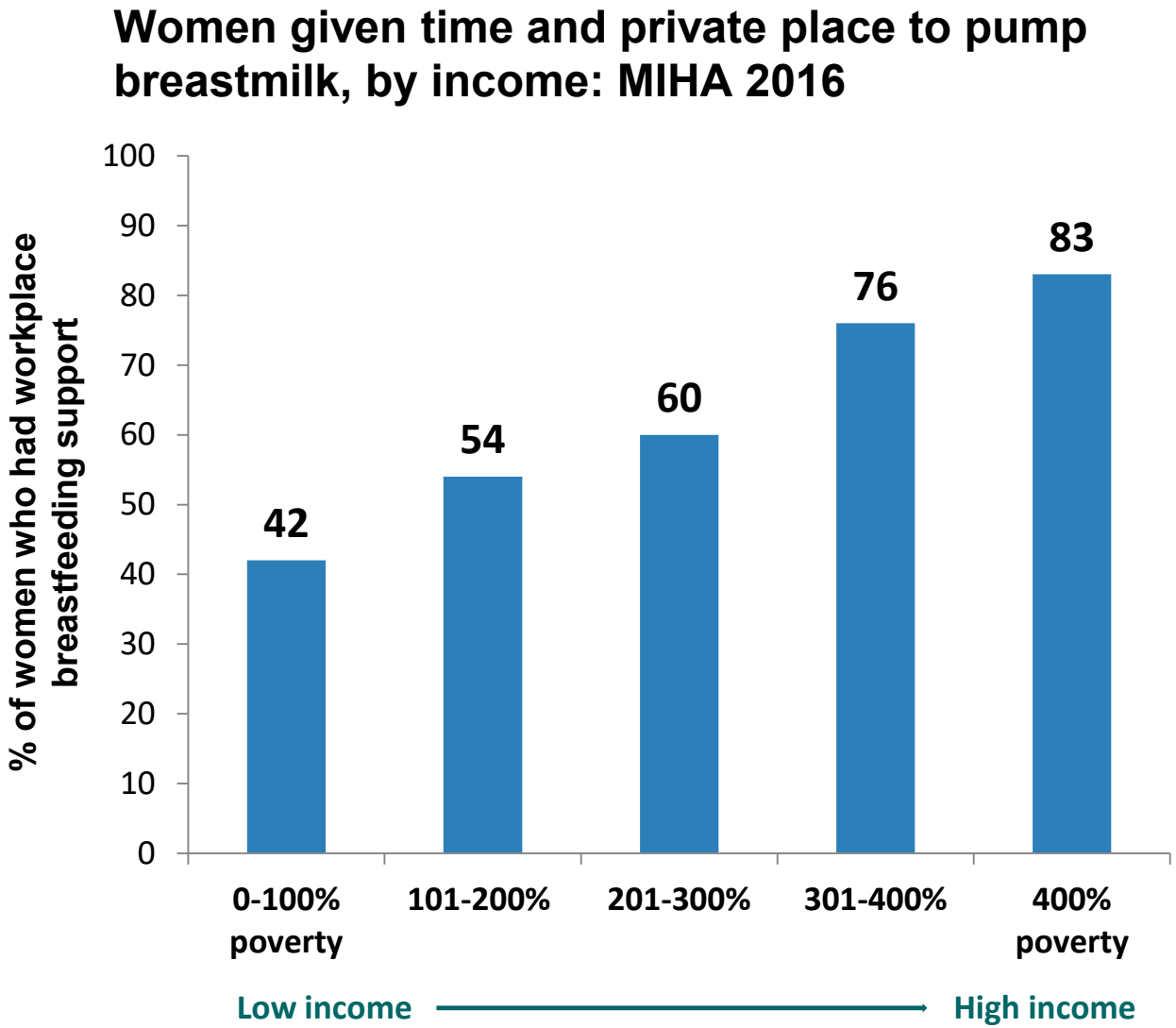
- Statewide, regional and county
  - Data Snapshots
  - Issue briefs
  - Data requests
- National
  - Collaboration with CDC/PRAMS for Healthy People 2020

MIHA Data to Action

California Department of Public Health

CDPH

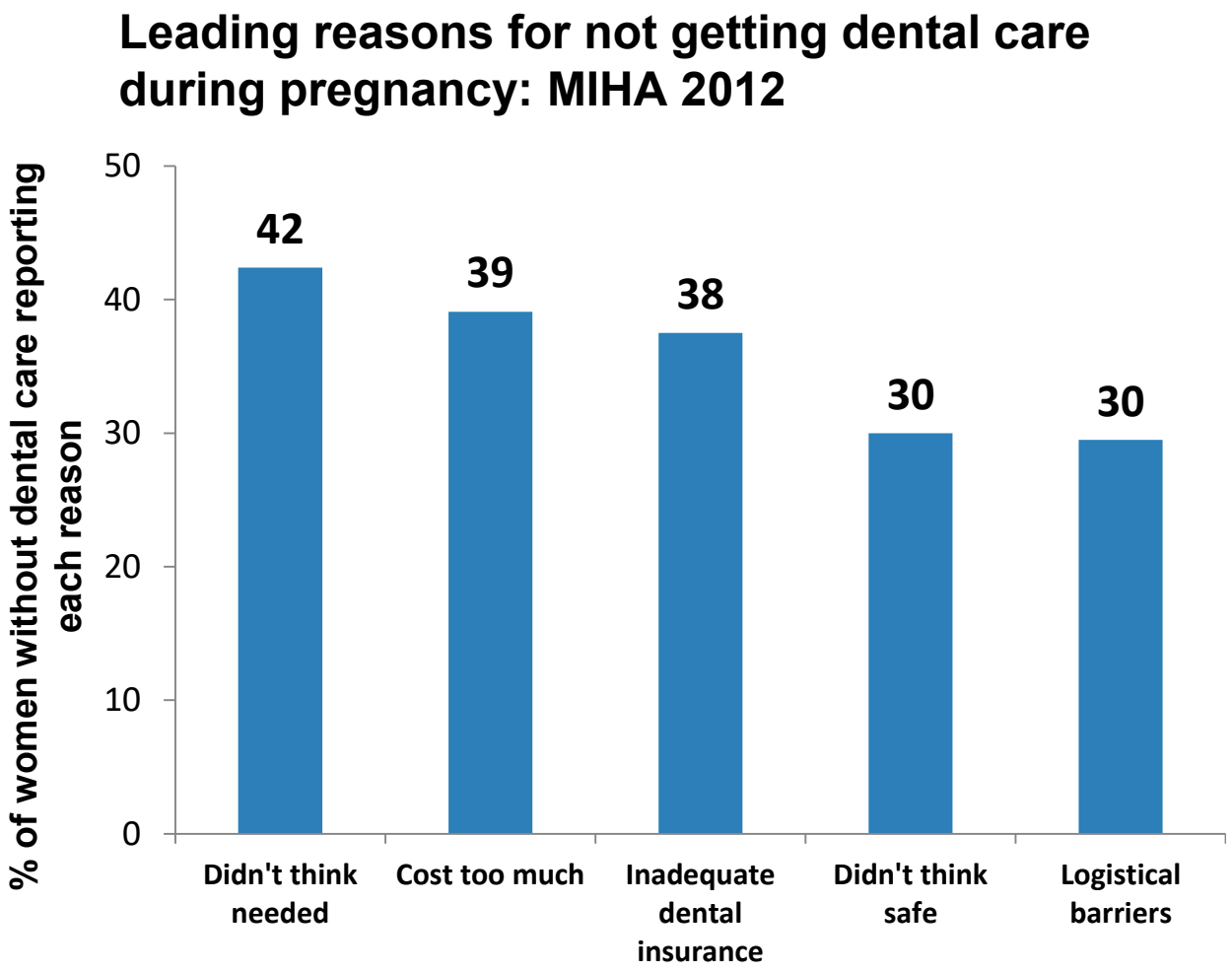
MIHA used to monitor implementation of workplace breastfeeding support legislation



- Workplace breastfeeding support increased from 52% in 2011 to 66% in 2016.
- Low income women continue to lag behind higher income women.

The Maternal and Infant Health Assessment (MIHA) is an annual population based survey of women with a recent live birth with a sample size of n=6,632 in 2016. Percentages are weighted to represent all women with a live birth who intended to breastfeed and return to work.

MIHA identifies barriers to receipt of dental care during pregnancy

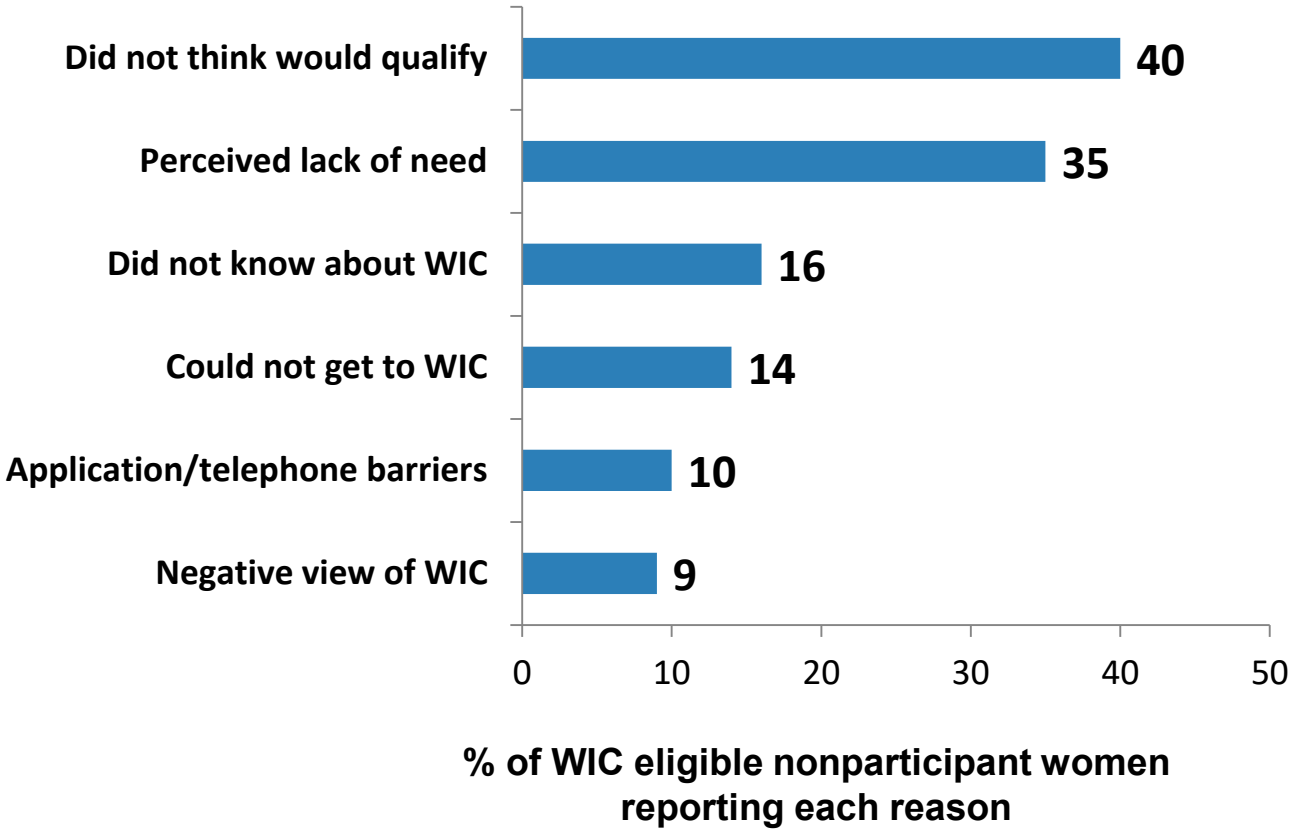


- Fewer than half of California women receive dental care during pregnancy.
- Knowledge, attitudes, and cost are leading barriers.

The Maternal and Infant Health Assessment (MIHA) is an annual population based survey of women with a recent live birth with a sample size of n=6,810 in 2012. Percentages are weighted to represent all women with a live birth in 2012 in California.

MIHA informs recruitment of WIC-eligible pregnant women

Leading reasons for not enrolling in WIC during pregnancy: MIHA 2010-2012

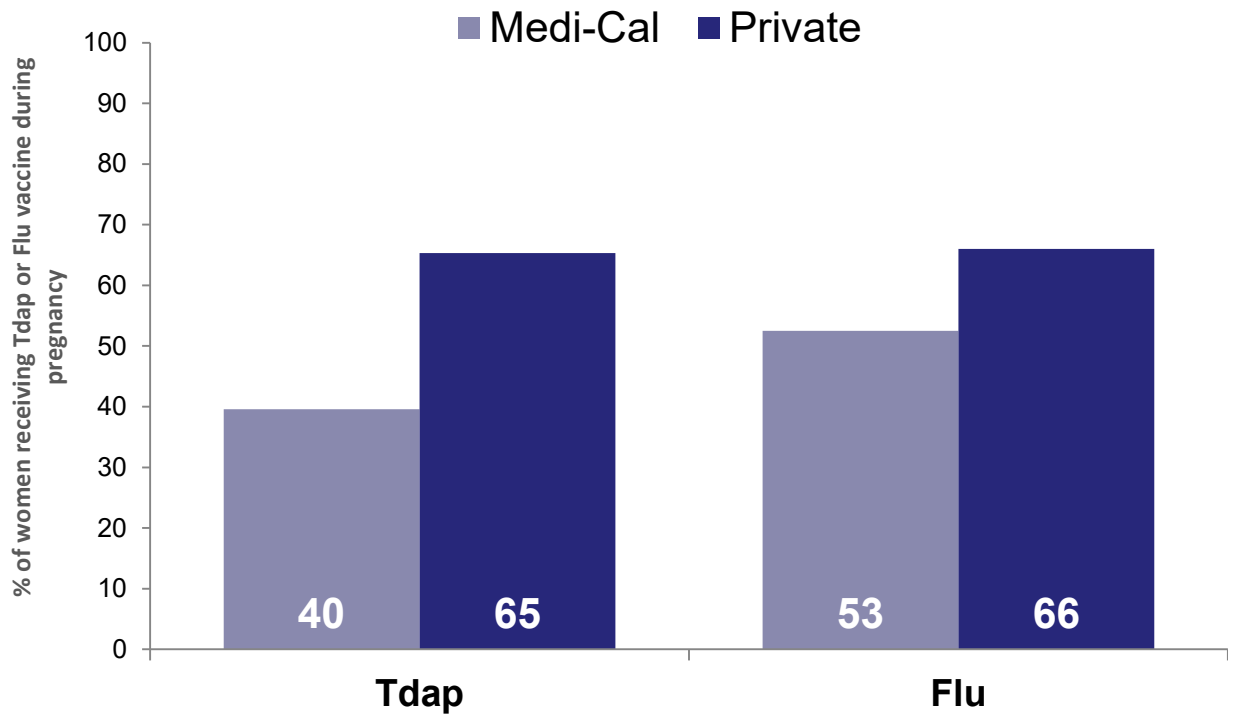


- 53,000 pregnant women per year were eligible for WIC, but did not enroll.
- Analyses identified multiple opportunities to enhance WIC outreach.

The Maternal and Infant Health Assessment (MIHA) is an annual population based survey of women with a recent live birth with a sample size of n=6,810 in 2010-2012. Percentages are weighted to represent all women with a live birth in 2010-2012 in California. WIC eligible nonparticipants are women who had Medi-Cal for prenatal care or delivery, or had income <= 185% FPG, but had no prenatal record in WIC MIS database.

MIHA supports strategies to improve low immunization rates

Immunization receipt during pregnancy: MIHA 2016



- Women should receive Tdap during EACH pregnancy, and seasonal flu vaccine.
- Vaccination rates were low for pregnant women, particularly those with Medi-Cal.

The Maternal and Infant Health Assessment (MIHA) is an annual population based survey of women with a recent live birth with a sample size of n=6,632 in 2016. Percentages are weighted to represent all women with a live birth in 2016 in California.

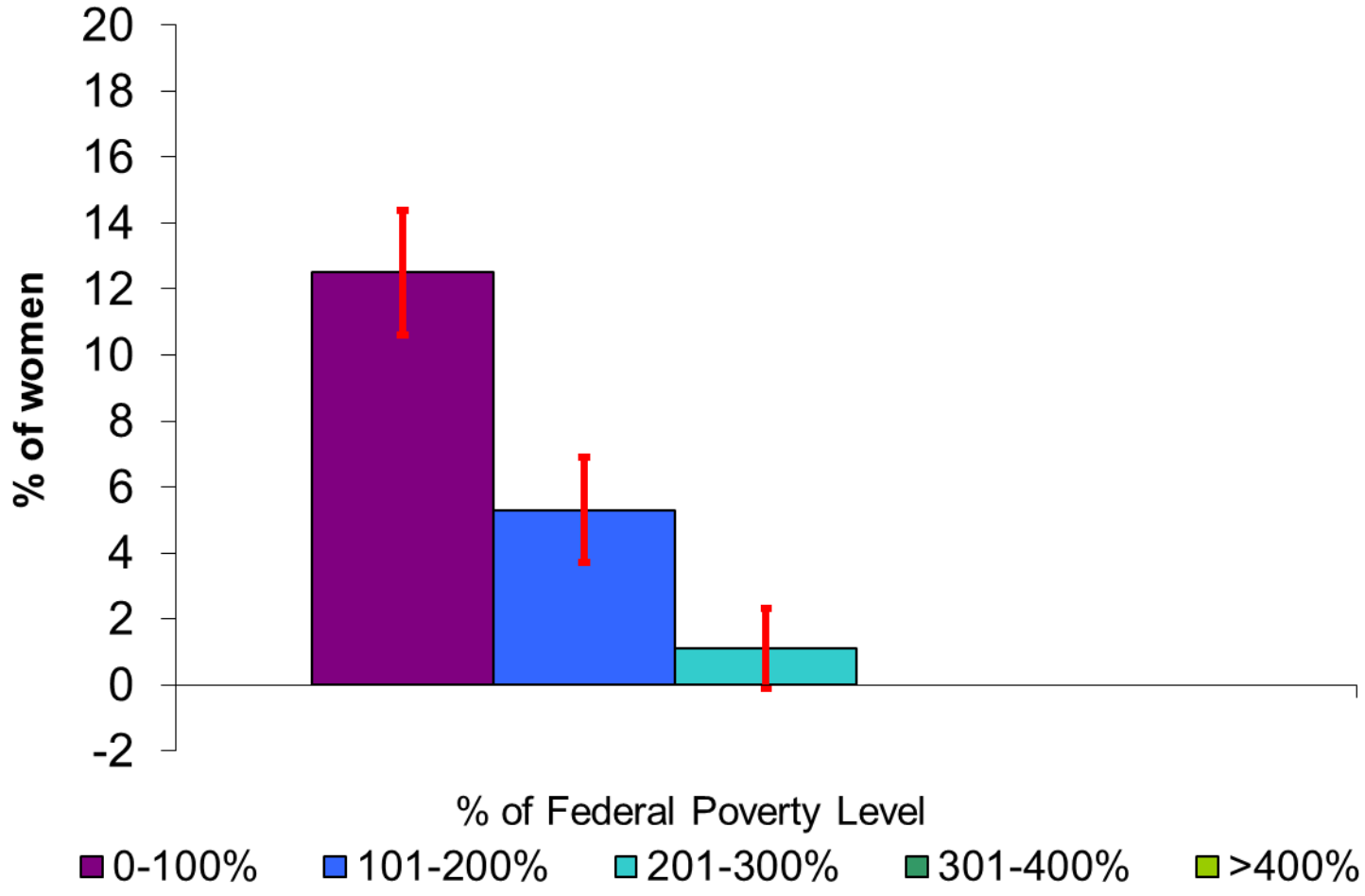
MIHA Research to Inform Policy and Practice

Research using MIHA: a few examples

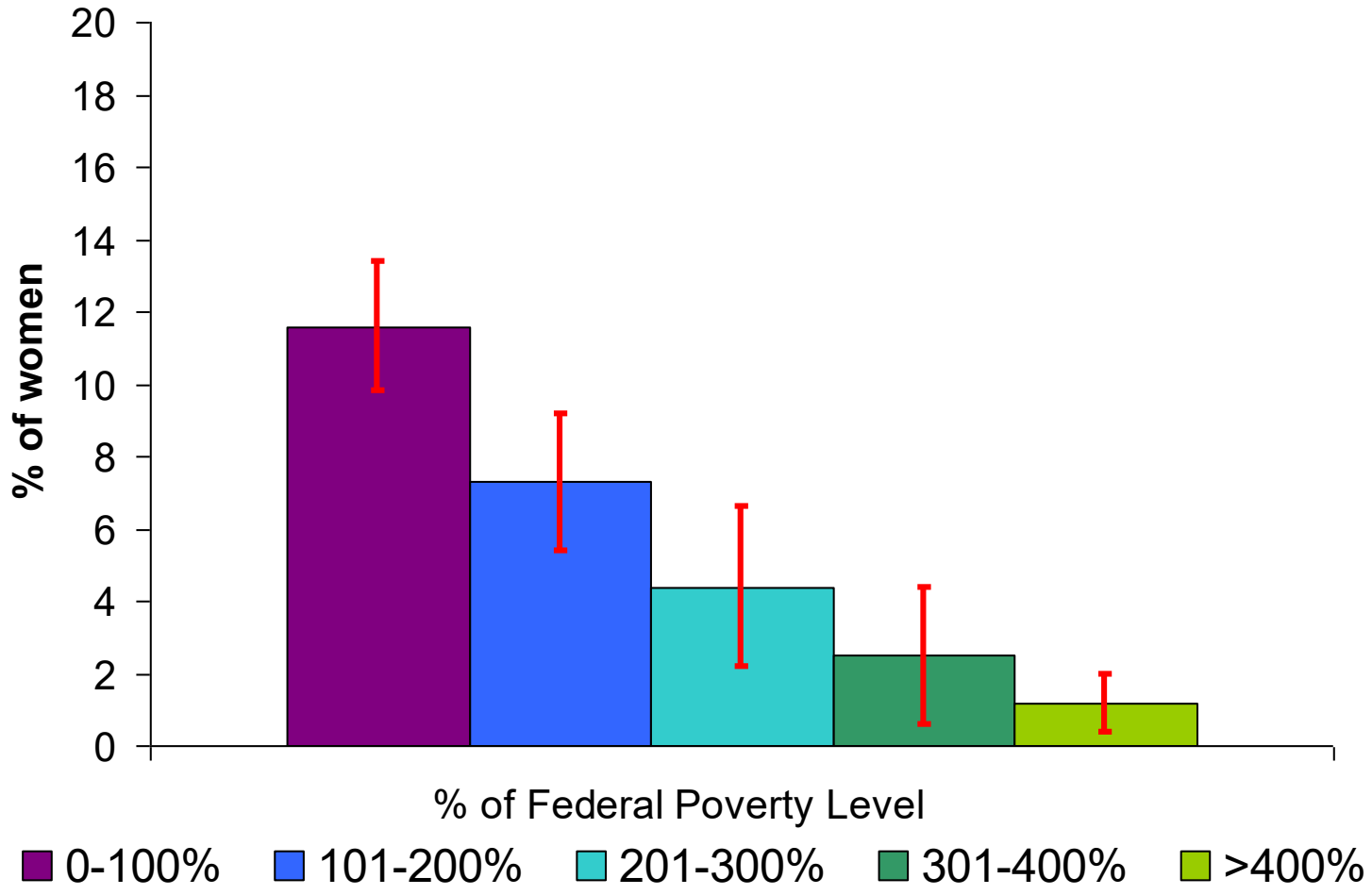
- Half of childbearing women have low incomes and many have serious hardships. (Maternal & Child Health Journal 2010)
- Economic hardships in childhood are common and associated with subsequent risks to maternal health & well-being. (Maternal & Child Health Journal 2017)
- Chronic worry about racism is associated with preterm birth. (PLOS One 2017)
- Greater use of dental care during pregnancy is associated with health-care providers promoting oral health. (under review)
- ACA appears to have improved health insurance coverage before, during and after pregnancy (will submit soon)

Maternal Hardships Around the Time of Pregnancy: The Environment Into Which Babies Are Born

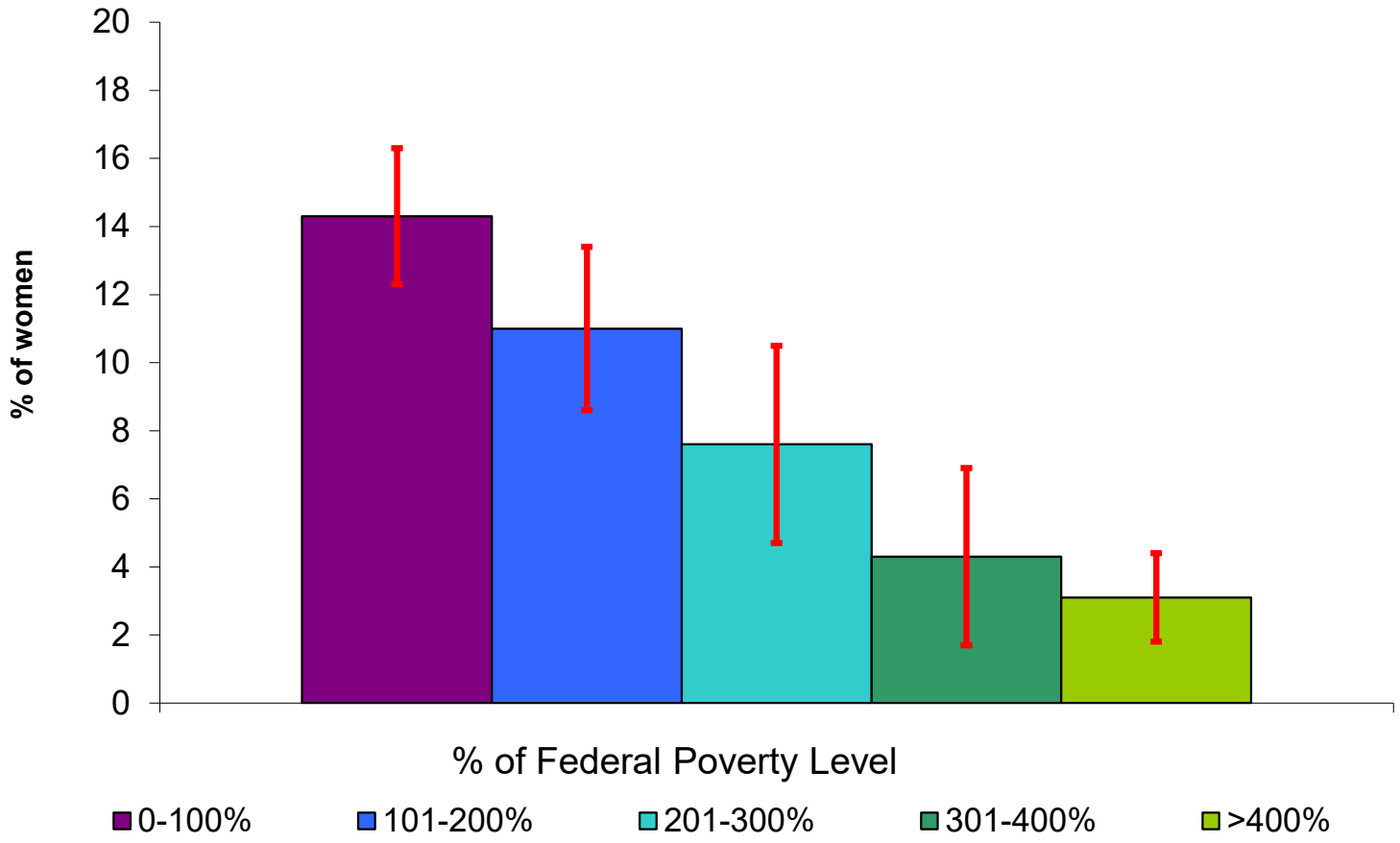
Homeless or no regular place to sleep at some point during her pregnancy



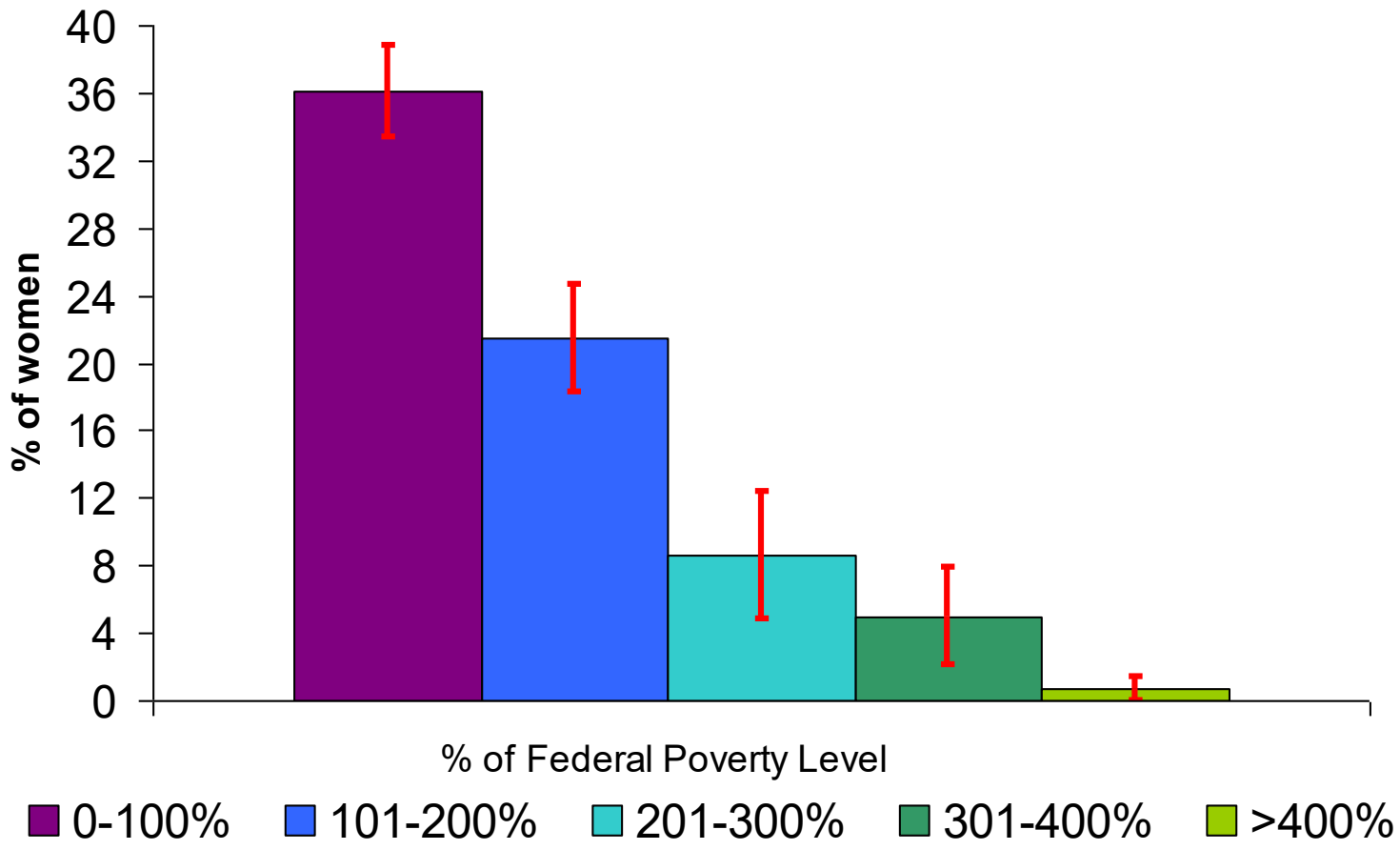
Separated/divorced during her pregnancy



She involuntarily lost her job during her pregnancy



Food insecurity during her pregnancy



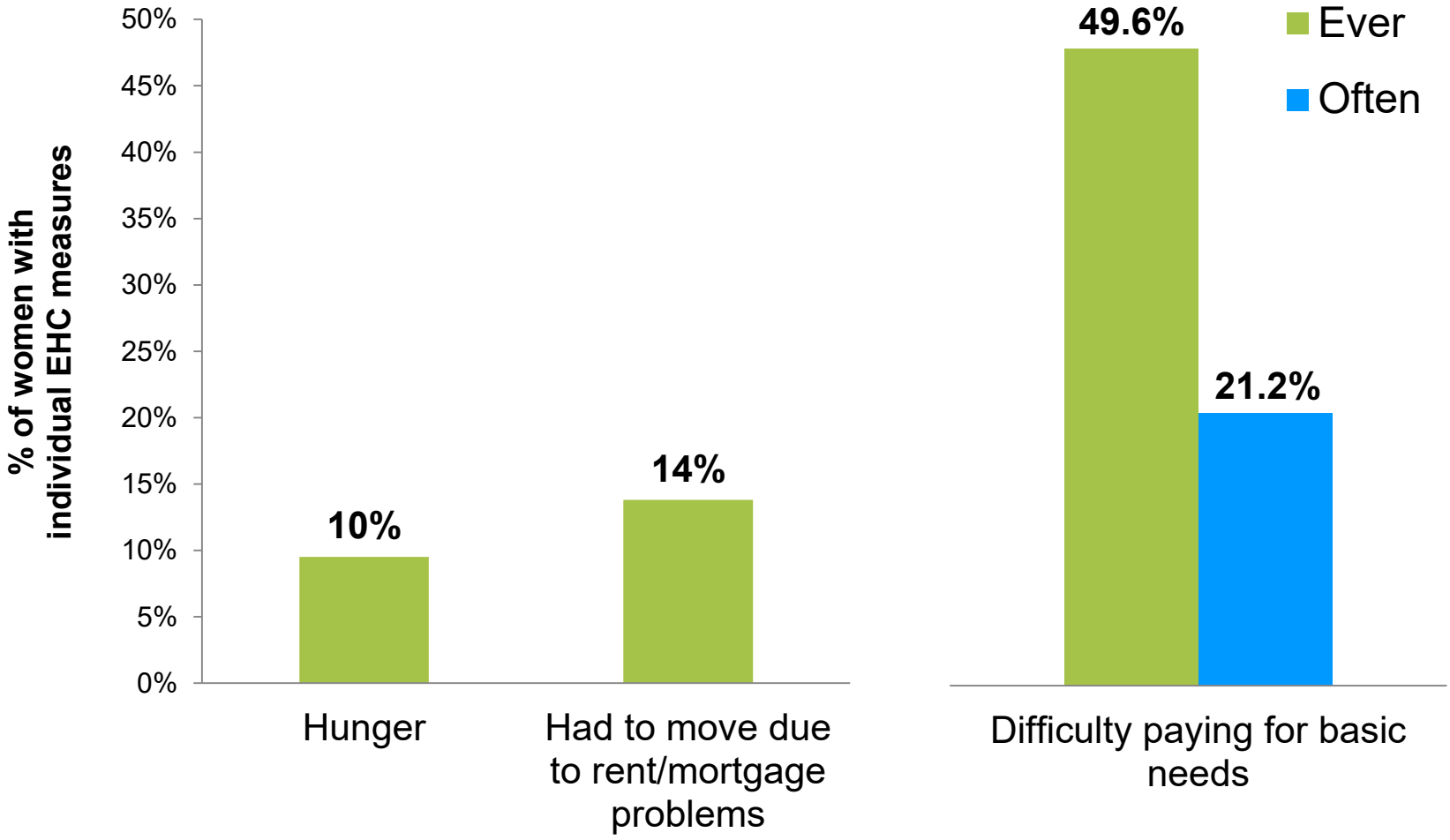
Economic Hardship Should Count as an Adverse Childhood Experience

- Adverse Childhood Experience (ACE) studies
  - Revealed high prevalence of child abuse and other childhood psychosocial trauma with enduring health effects.
  - Demonstrated the link between adverse childhood experiences and ill health in adulthood.
  - Did not focus on root causes of adverse childhood experiences, including economic hardship

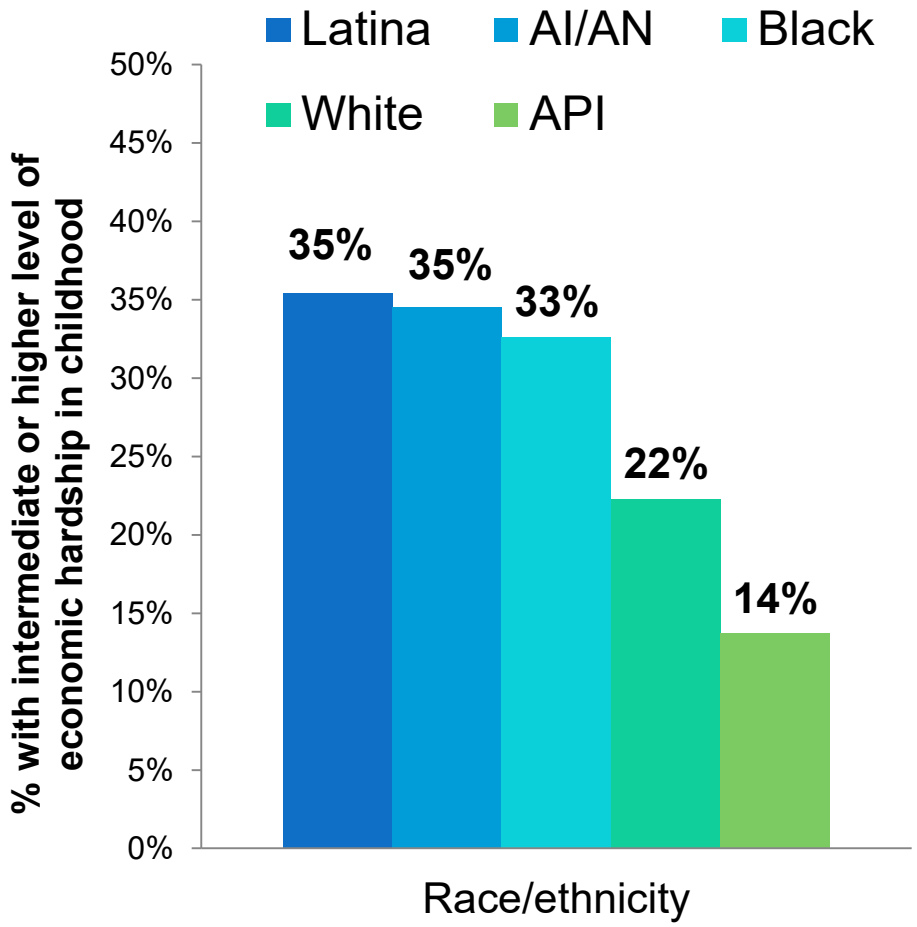
Economic hardship during childhood

- Economic hardship in a woman's childhood could impact her later health in several ways:
  - Physical hazards like poor nutrition, toxic exposures
  - Her parents' stress due to financial strain could → less support & stimulation of children, family dysfunction, child abuse, stressed children
    - Effects on children's cognitive, emotional, behavioral development could lead to low income & unhealthy behaviors in young adulthood
    - Chronic disease

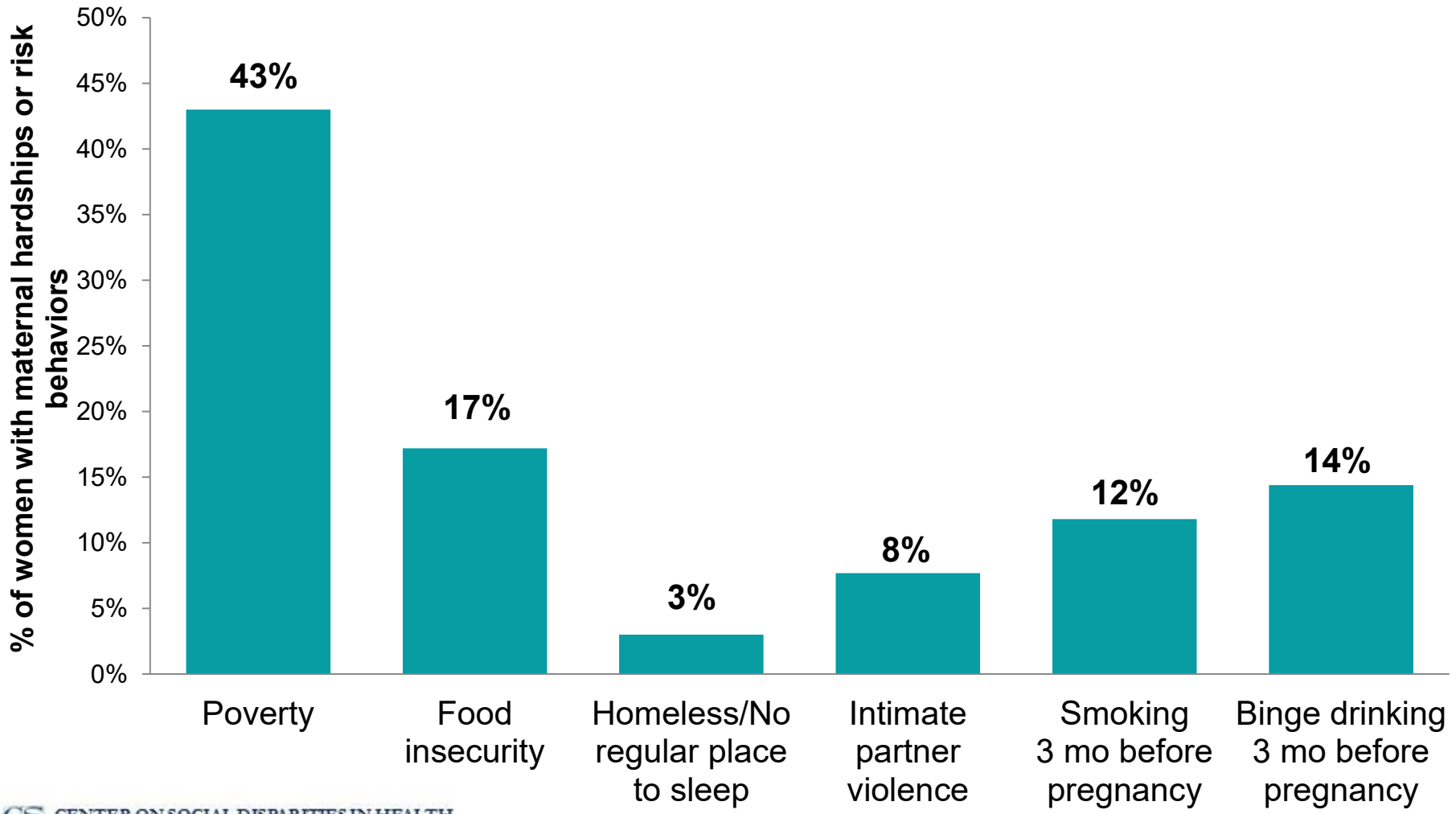
How common are economic hardships in childhood?



Intermediate/higher level of economic hardship in childhood, by race/ethnicity



Maternal health risks around the time of pregnancy were not rare events



Economic hardships in childhood were associated with maternal health risks

- Intermediate or higher levels of economic hardship in childhood were associated with 5 of the 6 threats to maternal health/well-being:
  - Poverty, food insecurity, homelessness/no regular place to sleep, IPV during pregnancy, binge drinking
- Associations with most maternal health risks persisted after controlling for potential confounders
- Higher levels of economic hardship in childhood appeared associated with greater maternal health risks

Economic hardship in childhood: Conclusions

- Common, especially among women of color.
- Linked with maternal (& long-term) health risks.
- Staggering potential impact on child & adult health statewide
- Policies to address ACEs need to address economic hardships in childhood.

Preterm Birth Disparities: Is Chronic Worry About Racism a Missing Piece of the Puzzle?

Race, racism, and birth outcomes

Bloomberg Businessweek

April 02, 2018 6:01 AM

For Black Women, Education Is No Protection Against Infant Mortality

● In contrast to whites, the most educated are the most likely to lose their babies

By Peter Coy

YOU, ME AND THEM: EXPERIENCING DISCRIMINATION IN AMERICA

Scientists Start To Tease Out The Subtler Ways Racism Hurts Health

5:49

+ QUEUE

DOWNLOAD

EMBED

TRANSCRIPT

November 11, 2017 · 8:07 AM ET

Heard on Weekend Edition Saturday

RAE ELLEN BICHELL

YOU, ME AND THEM: EXPERIENCING DISCRIMINATION IN AMERICA

How Racism May Cause Black Mothers To Suffer The Death Of Their Infants

7:02

+ QUEUE

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TRANSCRIPT

December 20, 2017 · 5:01 AM ET

Heard on Morning Edition

RHITU CHATTERJEE

REBECCA DAVIS

Samantha Pierce of Cleveland has a 7-year-old daughter, Camryn. In 2009, Pierce gave premature birth to twins. The babies did not survive. Scientists say black women lead more stressful lives, which makes them more likely to give birth prematurely and puts their babies at risk of dying.

Dustin Franz for NPR

Persistent racial disparities in preterm birth: An unequal start in life

- Preterm birth is the #1 risk factor for infant mortality.
- Strongly predicts childhood developmental disability
- Also linked with adult chronic disease
- Causes unknown (but likely involve preconception factors)

Image: March of Dimes foundation.

Stress could be important, based on epidemiologic evidence and neuro-science

- Stress could result from economic hardship or direct psychological effects of racism
- Studies have identified biological mechanisms through which chronic stress can damage health

  - Inflammation and immune function appear important
  - Can trigger labor

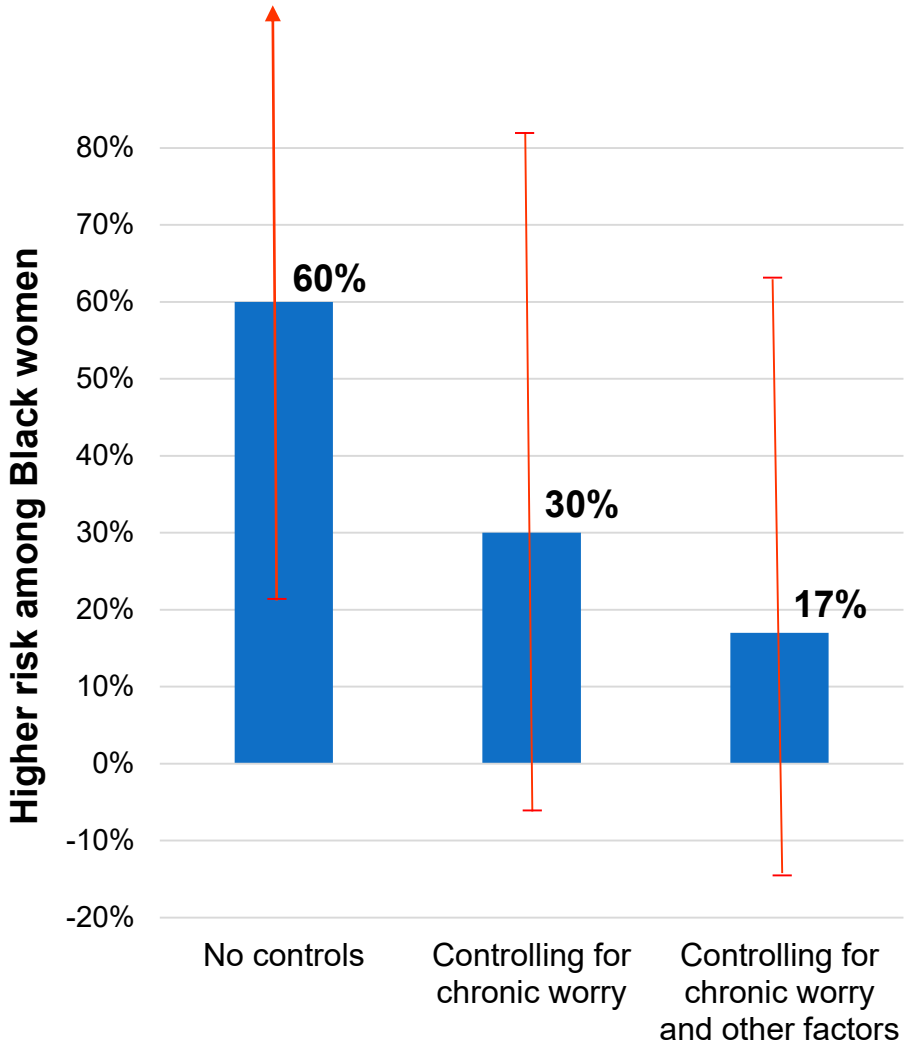
Image: http://news.vanderbilt.edu/2010/07/vanderbilt-university-study-to-be-most-comprehensive-look-at-link-between-stress-and-health-disparities

Does chronic worry about racism contribute to Black/White disparities in preterm birth?

- US-born, non-Hispanic Black (2,201) or White (8,122) women; MIHA 2011-2014
- "…how often have you worried that you might be treated or viewed unfairly because of your race or ethnic group?"
    - "Chronic" = very or somewhat often
- 37% of Black women reported chronic worry about unfair race-based treatment

Chronic worry about racism may contribute to Black women's elevated rates of PTB

- Without considering anything else, the PTB rate was 60% higher among Black women
- After controlling for chronic worry about racism, Black women's increased risk was reduced to 30% and was no longer significant
- After adding relevant variables like age, # births, education, etc., Black women's increased risk was reduced to 17% and was non-significant



Chronic worry about racism: Implications

- Not definitive but warrants further study.
- Racism-related stress is biologically plausible as a contributor to preterm birth disparities.
- Genetic explanations don't fit the data, although gene-environment interactions are possible.
- Reducing racism may be crucial to eliminate racial disparities in preterm birth.

Potential future analyses using MIHA

- Maternal hardships (track over time)
- Maternal mental health: need, access & barriers to care
- Maternity leave
- Infant sleep environment
- Health of African American mothers and newborns in CA
- Maternal and infant oral health care
- ACA effects on maternal & newborn insurance coverage
- Cannabis and opioid use
- Follow-up survey of toddlers

Thank you

More information about MIHA:

www.cdph.ca.gov/MIHA