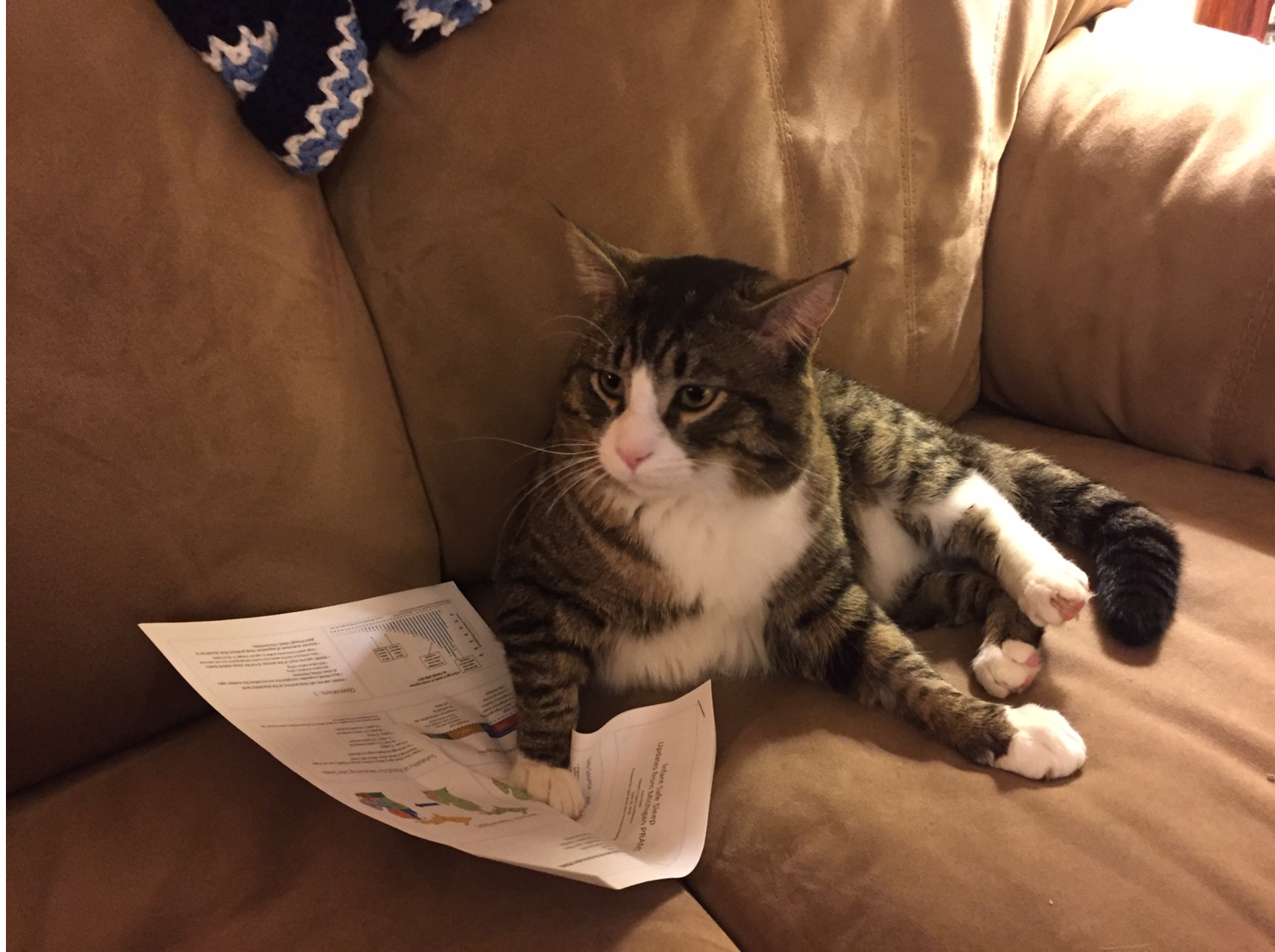


# Safe Sleep Practices Over Time in Michigan: Is Anything Changing?

March 21, 2019

Prepared for Safe Sleep Grantee Meeting

Pete Haak, PRAMS Project Coordinator



**Michigan State Sheep**  
**Updates from Michigan PRAX**

Michigan State University  
Michigan State University  
Michigan State University  
Michigan State University  
Michigan State University  
Michigan State University

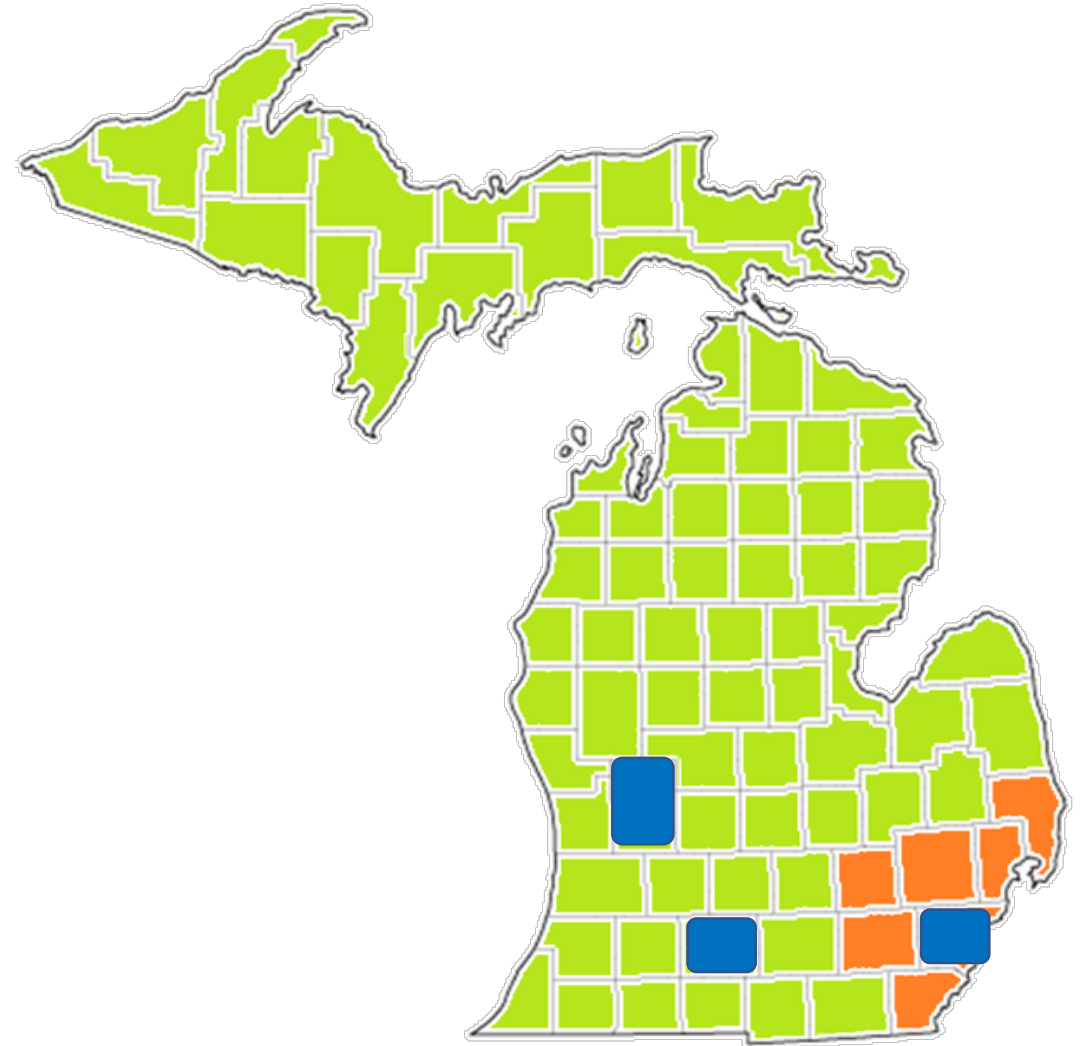
Michigan State University  
Michigan State University  
Michigan State University  
Michigan State University  
Michigan State University  
Michigan State University

# Outline 1

- **What is PRAMS?**
- Sleep Position
- Sleep Space / Objects / Cosleeping
- Cumulative Sleep Hazards
- Latest Safe Sleep Data
- Conclusions
- "Since they pound into mothers head about safety, depression, sleeping on back I wish they would make sure the dad is present and even have just a one-on-one with him!"
- PRAMS mom, 2015

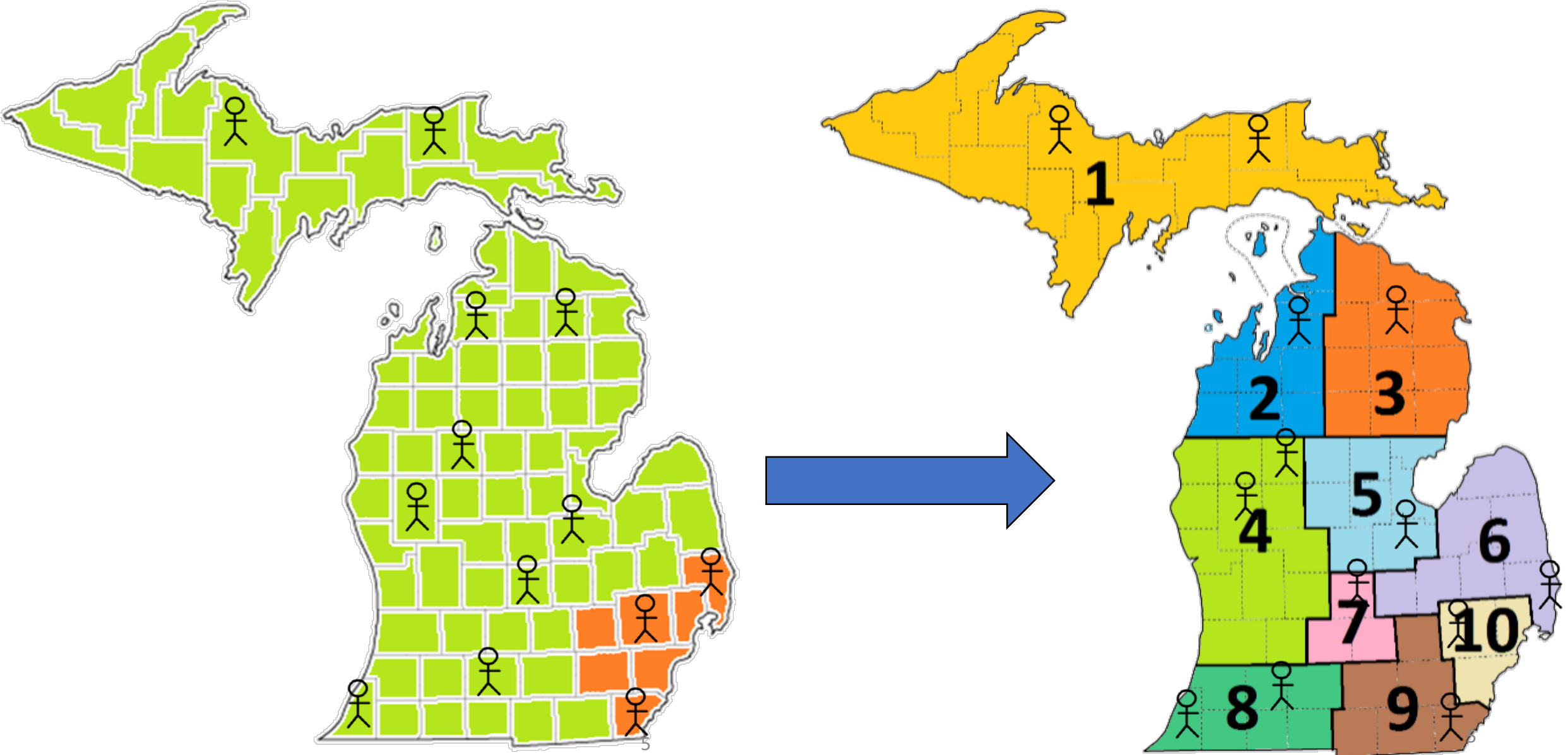
# Data Source - What is PRAMS?

- Pregnancy Risk Assessment Monitoring System
- 2,000 - 3,600 mothers per year sampled
  - 2012-2015 = 14,216
  - 2016-2017 = 7,061
- 50-60% mothers complete
  - 2012-2015 = 7,257
  - 2016-2017 = 3,695
- Oversample:
  - Low birth weight
  - African American
  - Southeast Michigan [ORANGE]
- Kellogg County Oversamples:
  - Black mothers from three counties [BLUE]
  - Calhoun[12-15], Kent[12-13], Wayne[12-13]
- Survey completed 3-9 months post-partum
- Population based survey



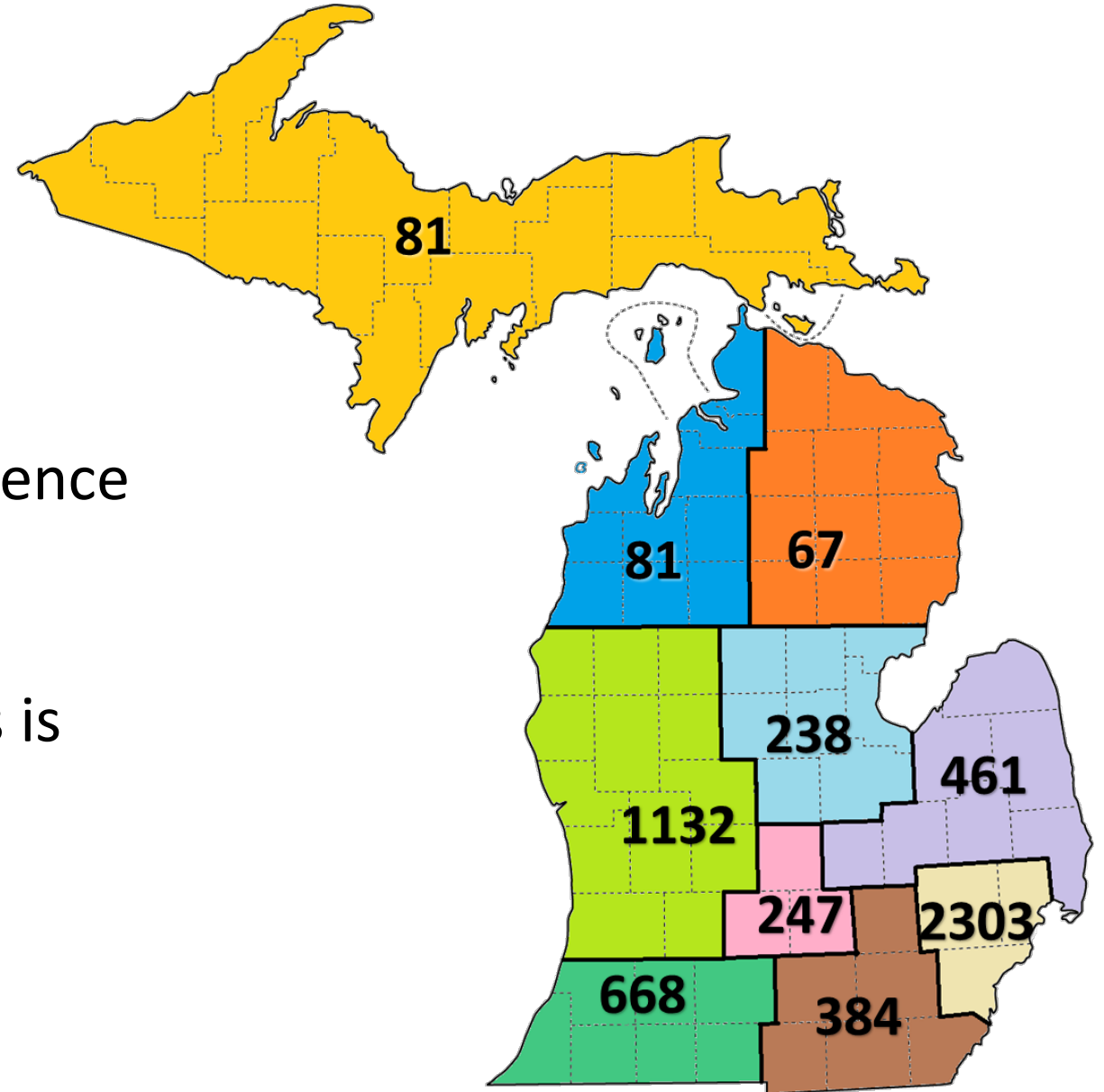


# Data Source - Regional PRAMS



# Data Source - Regional PRAMS

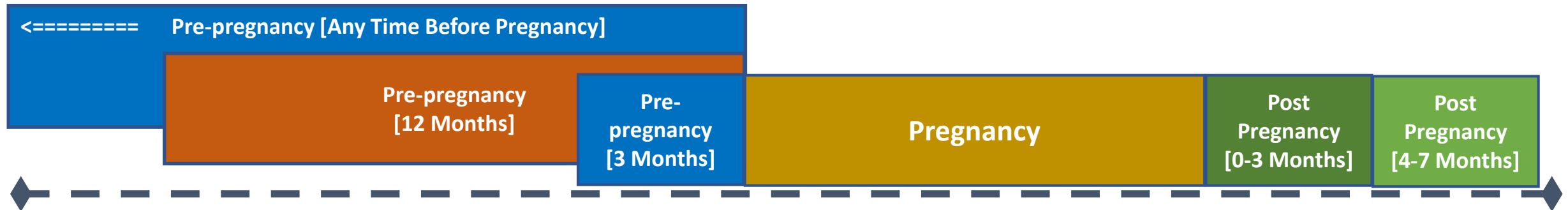
- Survey responders by region
- More responders = more precise estimates
- More precision = narrower confidence intervals, greater ability to see statistically significant differences
- Data representing smaller regions is less able to describe subgroups



# Common Analytic Questions in PRAMS

- **Do we see changes over time?**
  - 2009-2015 in most slides
  - Test for linear trend across years
  - $p < 0.05$  for statistical significance
- **Do we see differences by geography across the state?**
  - 2012-2015
  - Prosperity Regions 1-9
  - Macomb, Oakland, Wayne Counties
  - $p < 0.05$  for statistical significance
- **Are there differences by maternal demographic subgroups?**
  - 2012-2015 in most slides
  - Age
  - Race / ethnicity
  - Education
  - Insurance
    - Before pregnancy
    - Prenatal care
    - Labor and delivery
    - Post-pregnancy
  - Marital status
  - Previous live birth
  - Pre-pregnancy income
- **Test for trends across groups**
- **Test for differences between groups**

# PRAMS Windows of Measurement



- TOPIC MAP
  - [www.michigan.gov/PRAMS](http://www.michigan.gov/PRAMS)
- Pre-pregnancy health
- Pregnancy intention
- Insurance source
- Life stressors

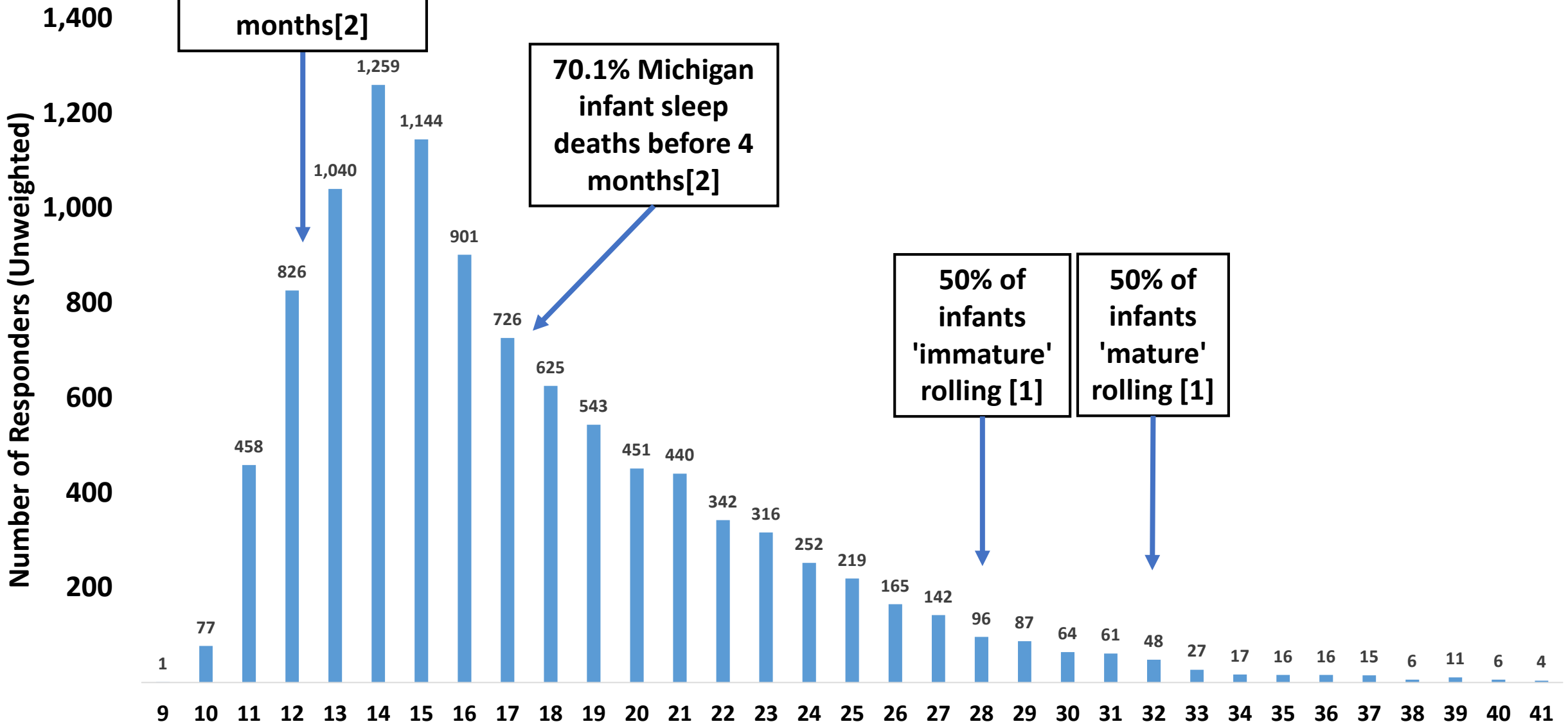
- Prenatal Care
  - Satisfaction with care
  - Source [clinic, hospital, doc]
  - Content of discussions
- Postpartum contraceptive use
- Breastfeeding
- Safe sleep



# Suitability of PRAMS for Measuring Safe Sleep

- Given the infant age at which mothers answer PRAMS, can we make meaningful observations about safe sleep?
- At what age do infants begin to roll over?
- Prone → Supine
  - 28 weeks | 6-7 months (immature)
  - 32 weeks | 7-8 months (mature)
- Supine → Prone
  - 28 weeks | 6-7 months (immature)
  - 32 weeks | 7-8 months (mature)

# Infant age in weeks at survey response MI PRAMS 2009-2014



[1] Darrah J, Bartlett DJ. Infant rolling abilities - the same or different 20 years after the back to sleep campaign? Early Human Development. 2013 May; 89(5):311-4.

[2] Source: 2010-2016 Birth years. CDC SUID Case Registry, MPHI, 2018

# Observations - 1

- PRAMS captures safe sleep practices at the population level
- Most PRAMS responders complete the survey before the median ages of infant rolling milestones
  - 96% before immature rolling
  - 99% before mature rolling
- PRAMS captures much of the window of risk for sleep related deaths
  - Sleep practices in the first weeks and months following birth are not captured
  - Single point-in-time study unable to capture changes in sleep habits
- Accurate assessment of population sleep practices that should be in place through infant's first birthday

# Outline 2

- What is PRAMS?
- **Sleep Position**
  - **Any changes over time?**
  - **Disparity over time?**
- Sleep Space Objects / Cosleeping
- Cumulative Sleep Hazards
- Latest Safe Sleep Data
- Conclusions
- "I know babies should sleep on their backs, this one just wouldn't so... at 10 weeks I started allowing tummy sleeping."
- PRAMS mom, 2012

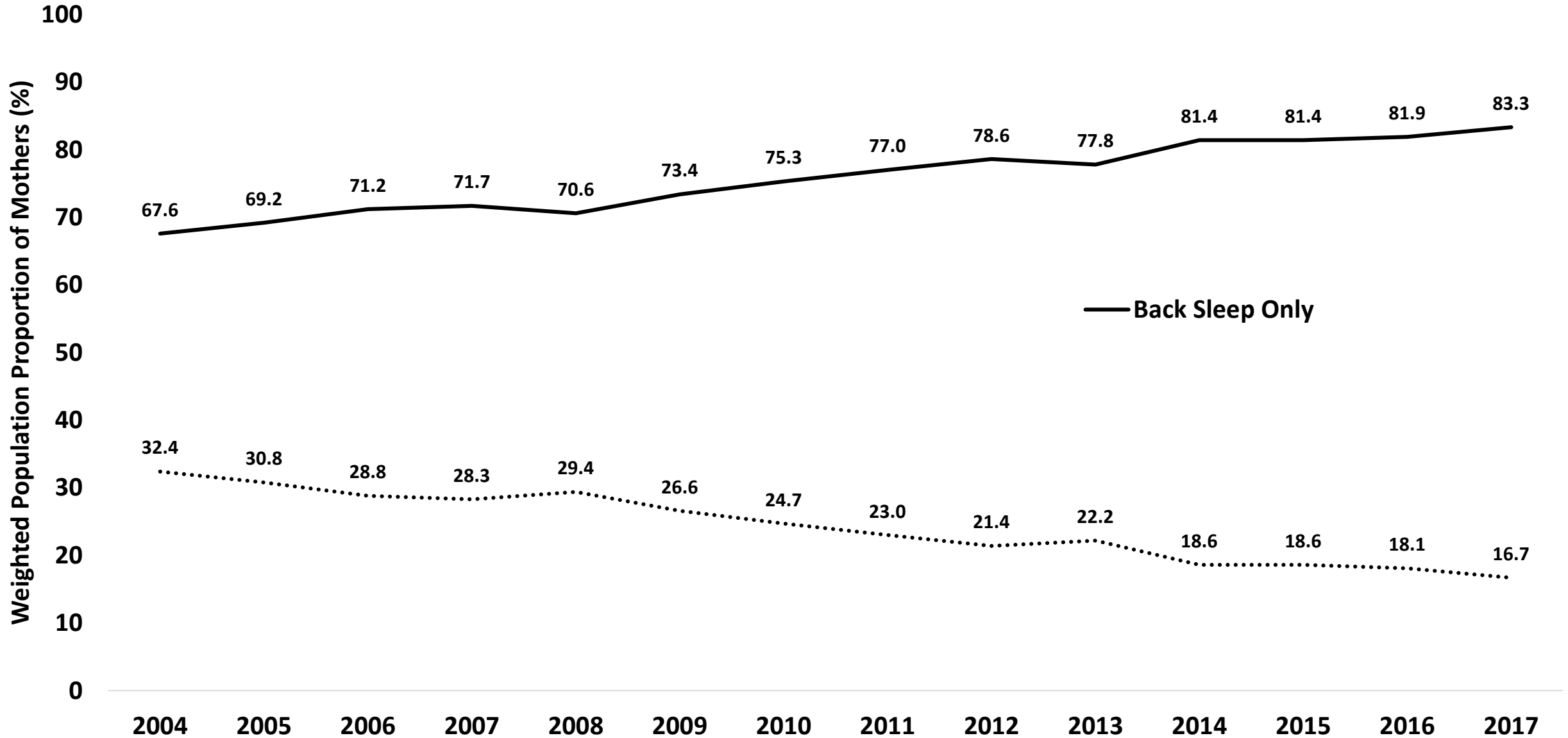
# Sleep Position

60. In which *one* position do you *most often* lay your baby down to sleep now?

**Check ONE answer**

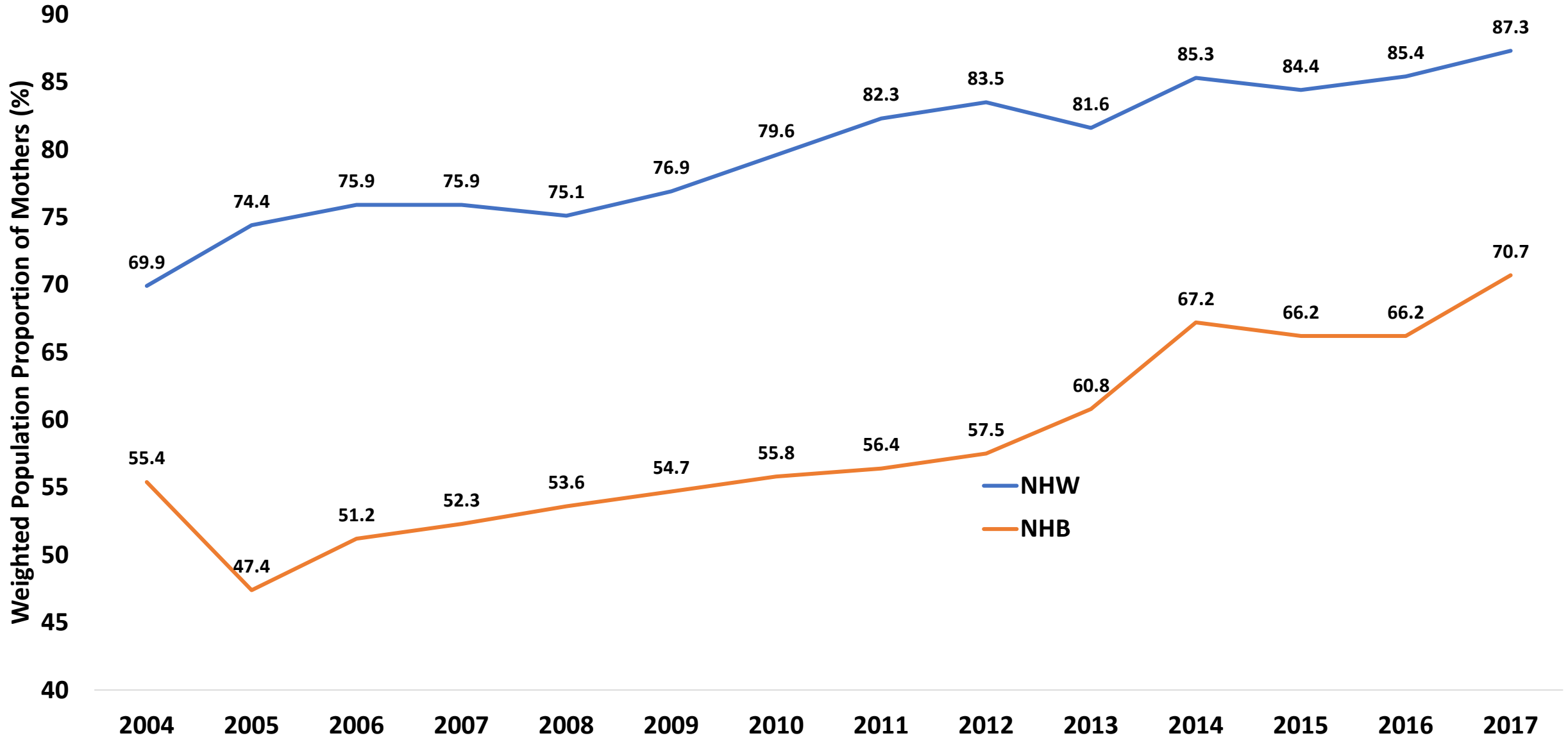
- On his or her side
- On his or her back
- On his or her stomach

# Infant Sleep Position MI PRAMS, 2004 - 2017



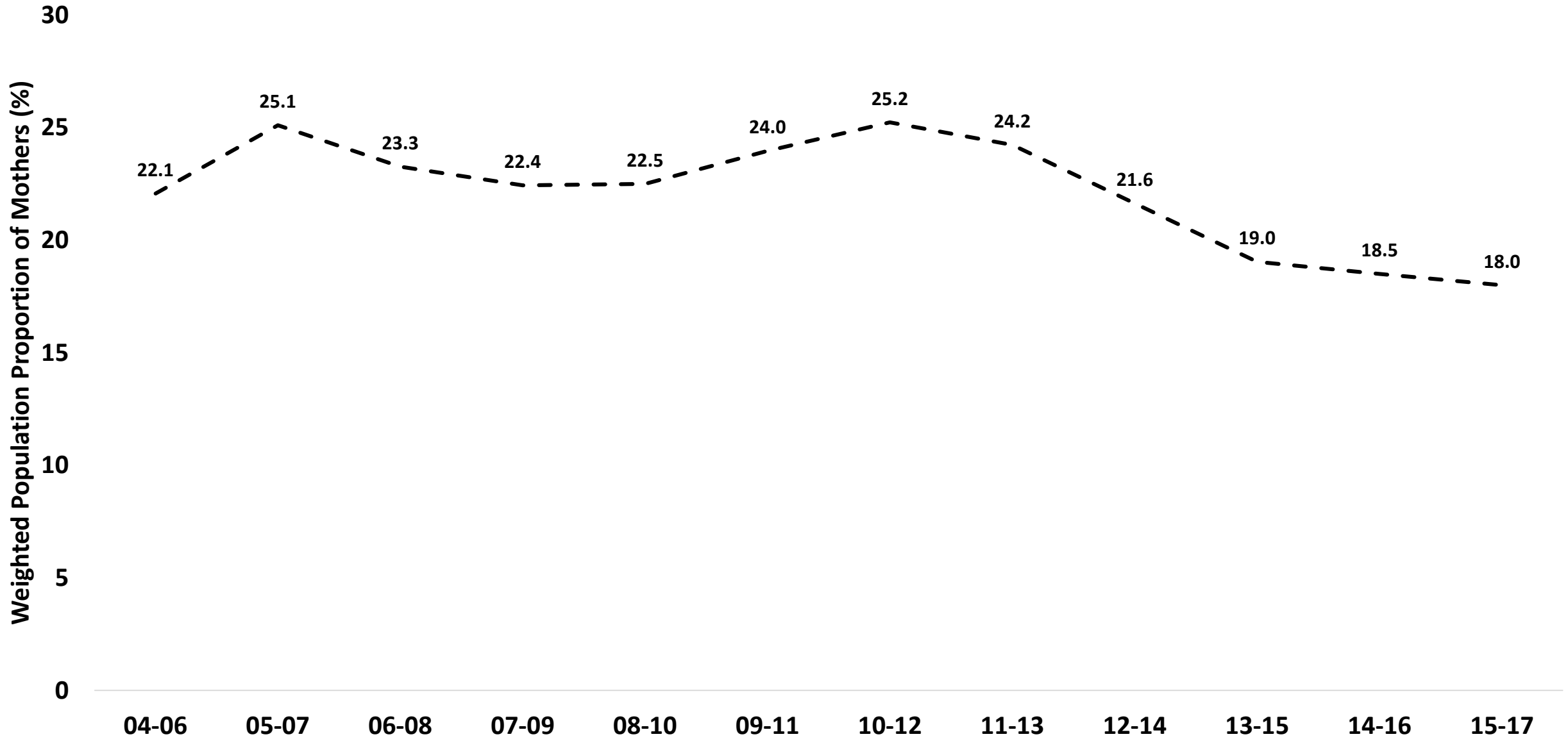


# Infant Back Sleep Position by Maternal Race / Ethnicity MI PRAMS, 2004 - 2017



# NHW - NHB Back Sleep Disparity Gap

## 3-Year Moving Average, MI PRAMS 2004 - 2017



# Back Sleep - Observations

- Back sleep position is generally increasing over time
- No change from 2014-2016
- Improvement for 2017
- NHW - NHB disparity exists
  - Improving!
- "I really appreciate the "Back to Sleep" program."
- PRAMS mom, 2013

# Outline 3

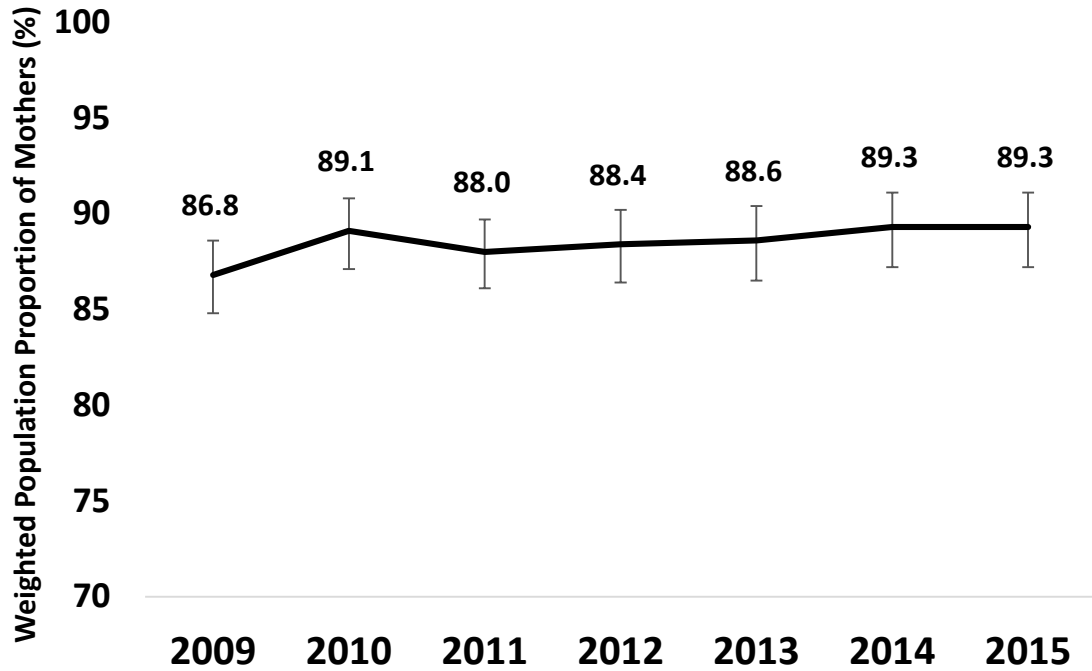
- What is PRAMS?
- Sleep Position
- Sleep Space Objects / Cosleeping
  - Any changes over time?
  - Disparity over time?
- Cumulative Sleep Hazards
- Latest Safe Sleep Data
- Conclusions
- "I tried not to sleep with my baby. But in the first 2 months she would not sleep by herself. she and I slept side by side on couch her to outer edge. this scared me But I had no other option I needed to sleep too."
- PRAMS mom, 2013

# Proportion of Infants Usually Slept in a Crib or Portable Crib

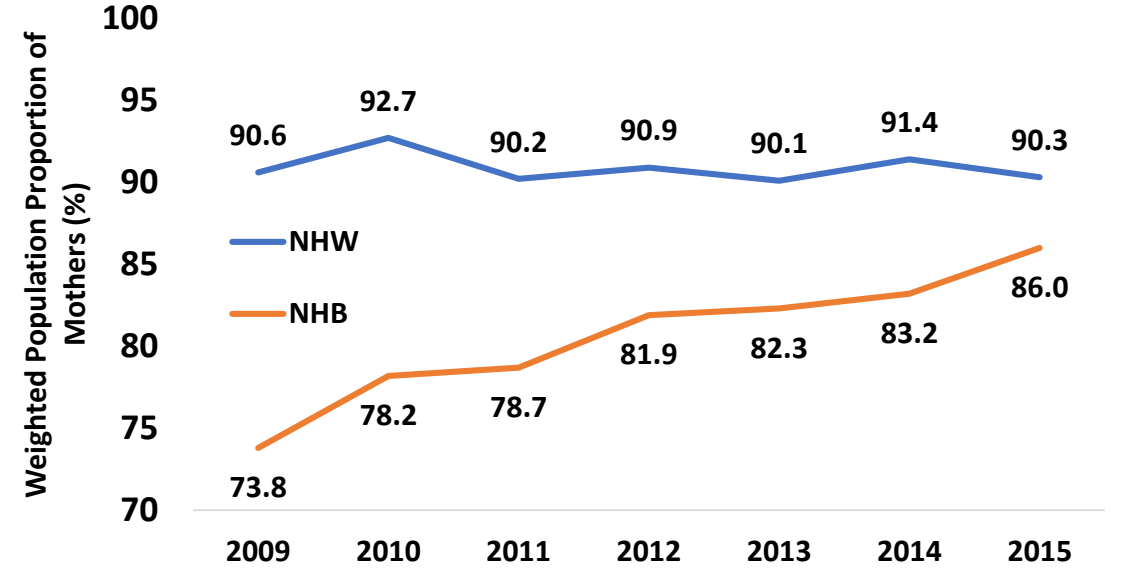
61. Listed below are some things that describe how your new baby *usually* sleeps. For each item, check **No** if it doesn't usually apply to your baby or **Yes** if it usually applies to your baby.

- |  | No                       | Yes                                 |
|--|--------------------------|-------------------------------------|
| a. My new baby sleeps in a crib or portable crib .....   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. My new baby sleeps on a firm or hard mattress .....   | <input type="checkbox"/> | <input type="checkbox"/>            |
| c. My new baby sleeps with pillows.....                  | <input type="checkbox"/> | <input type="checkbox"/>            |
| d. My new baby sleeps with bumper pads .....             | <input type="checkbox"/> | <input type="checkbox"/>            |
| e. My new baby sleeps with plush or thick blankets ..... | <input type="checkbox"/> | <input type="checkbox"/>            |
| f. My new baby sleeps with stuffed toys.....             | <input type="checkbox"/> | <input type="checkbox"/>            |
| g. My new baby sleeps with an infant positioner .....    | <input type="checkbox"/> | <input type="checkbox"/>            |
| h. My new baby sleeps with me or another person.....     | <input type="checkbox"/> | <input type="checkbox"/>            |

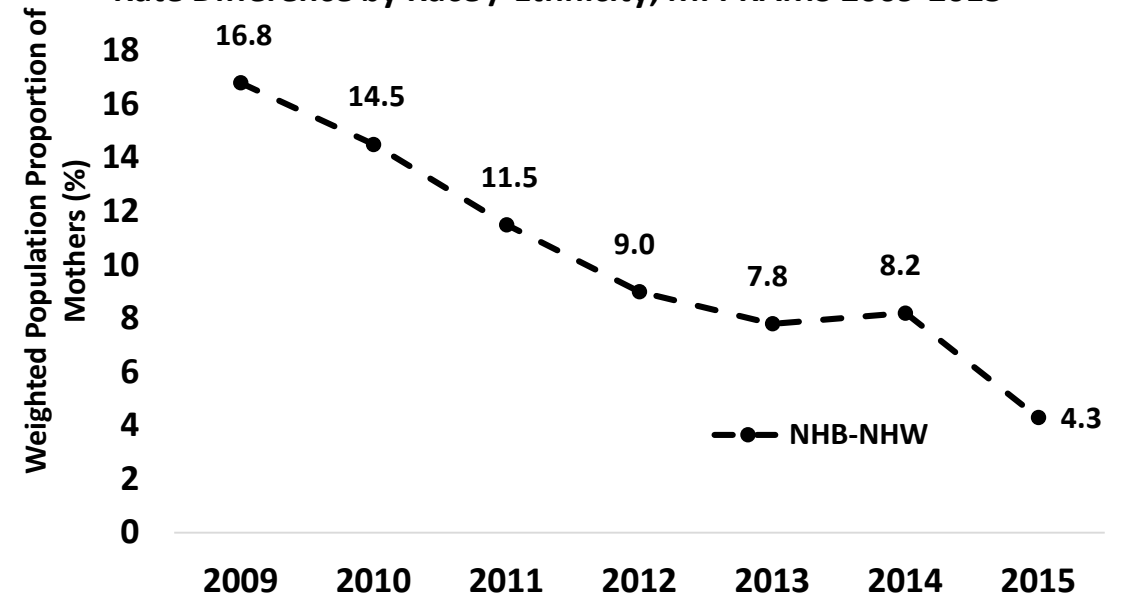
**Infants Sleeping in a Crib  
MI PRAMS 2009-2015**



**Infants Sleeping in a Crib  
by Maternal Race / Ethnicity; MI PRAMS 2009-2015**



**Infants Sleeping in a Crib  
Rate Difference by Race / Ethnicity; MI PRAMS 2009-2015**



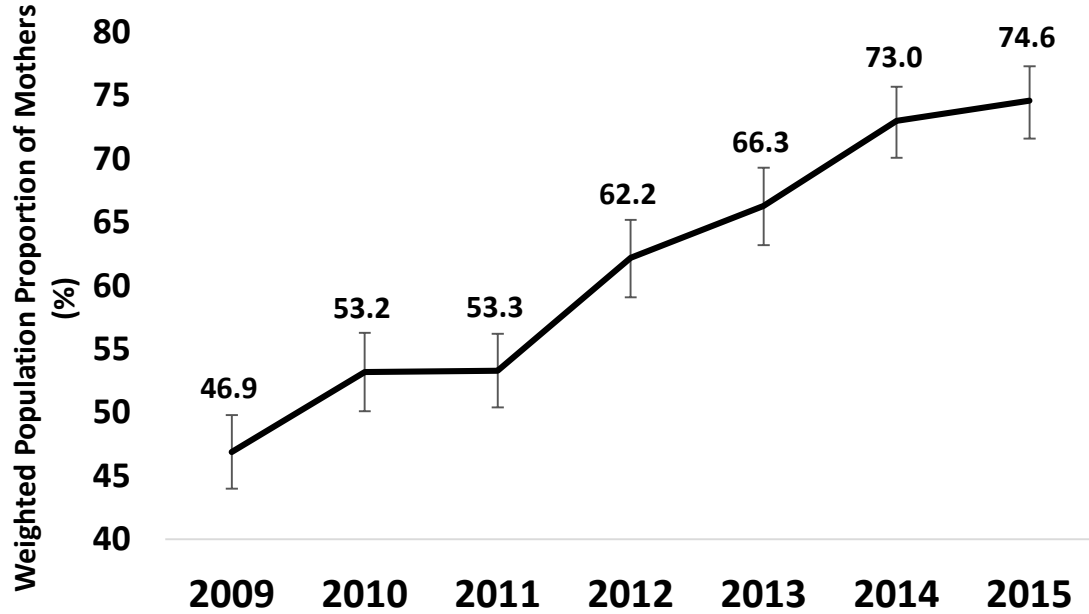


# Proportion of Infants Usually Placed to Sleep Without Soft Objects or Loose Bedding

61. Listed below are some things that describe how your new baby *usually* sleeps. For each item, check **No** if it doesn't usually apply to your baby or **Yes** if it usually applies to your baby.

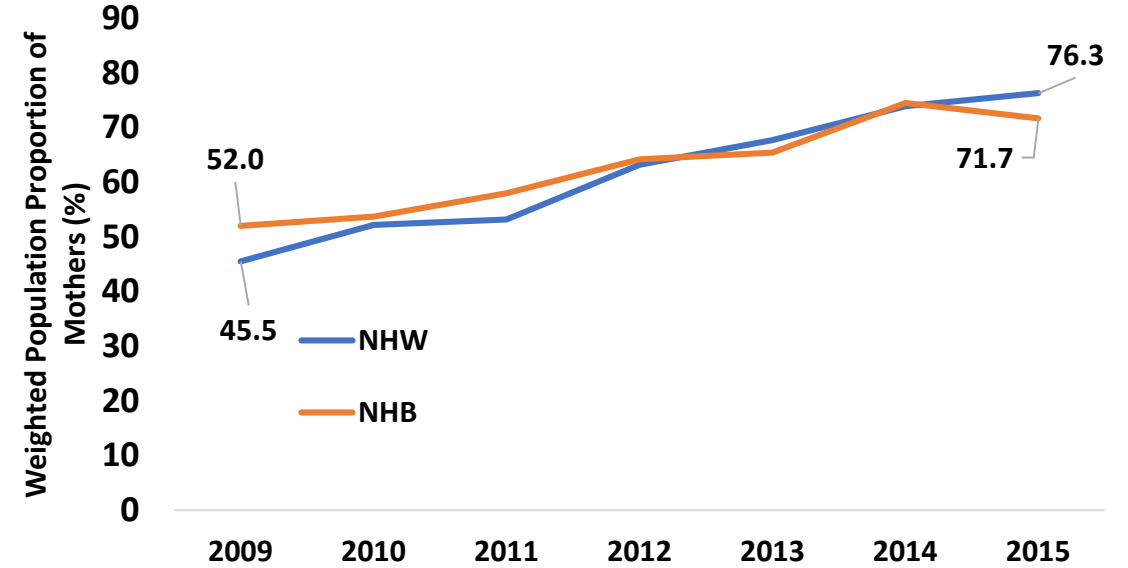
- |  | No                                  | Yes                      |
|--|-------------------------------------|--------------------------|
| a. My new baby sleeps in a crib or portable crib .....   | <input type="checkbox"/>            | <input type="checkbox"/> |
| b. My new baby sleeps on a firm or hard mattress .....   | <input type="checkbox"/>            | <input type="checkbox"/> |
| c. My new baby sleeps with pillows.....                  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. My new baby sleeps with bumper pads .....             | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e. My new baby sleeps with plush or thick blankets ..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f. My new baby sleeps with stuffed toys.....             | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g. My new baby sleeps with an infant positioner .....    | <input type="checkbox"/>            | <input type="checkbox"/> |
| h. My new baby sleeps with me or another person.....     | <input type="checkbox"/>            | <input type="checkbox"/> |

**Infants Sleeping With No Soft / Loose Objects  
MI PRAMS 2009-2015**

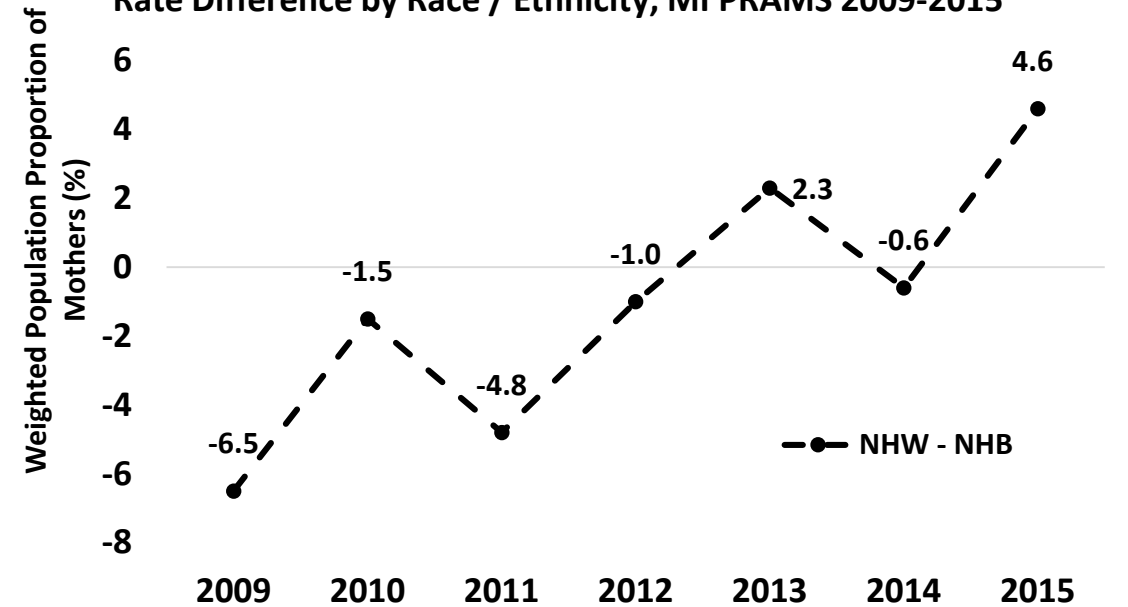


Loose / soft objects = pillows, bumpers, plush or thick blankets, stuffed toys

**Infants Sleeping Without Soft / Loose Objects  
by Maternal Race / Ethnicity; MI PRAMS 2009-2015**



**Infants Sleeping Without Soft / Loose Objects  
Rate Difference by Race / Ethnicity; MI PRAMS 2009-2015**



# Proportion of Infants Usually Sleeping Alone

**61. Listed below are some things that describe how your new baby *usually* sleeps.** For each item, check **No** if it doesn't usually apply to your baby or **Yes** if it usually applies to your baby.

- |  | No                                  | Yes                      |
|--|-------------------------------------|--------------------------|
| a. My new baby sleeps in a crib or portable crib .....   | <input type="checkbox"/>            | <input type="checkbox"/> |
| b. My new baby sleeps on a firm or hard mattress .....   | <input type="checkbox"/>            | <input type="checkbox"/> |
| c. My new baby sleeps with pillows.....                  | <input type="checkbox"/>            | <input type="checkbox"/> |
| d. My new baby sleeps with bumper pads .....             | <input type="checkbox"/>            | <input type="checkbox"/> |
| e. My new baby sleeps with plush or thick blankets ..... | <input type="checkbox"/>            | <input type="checkbox"/> |
| f. My new baby sleeps with stuffed toys.....             | <input type="checkbox"/>            | <input type="checkbox"/> |
| g. My new baby sleeps with an infant positioner .....    | <input type="checkbox"/>            | <input type="checkbox"/> |
| h. My new baby sleeps with me or another person.....     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

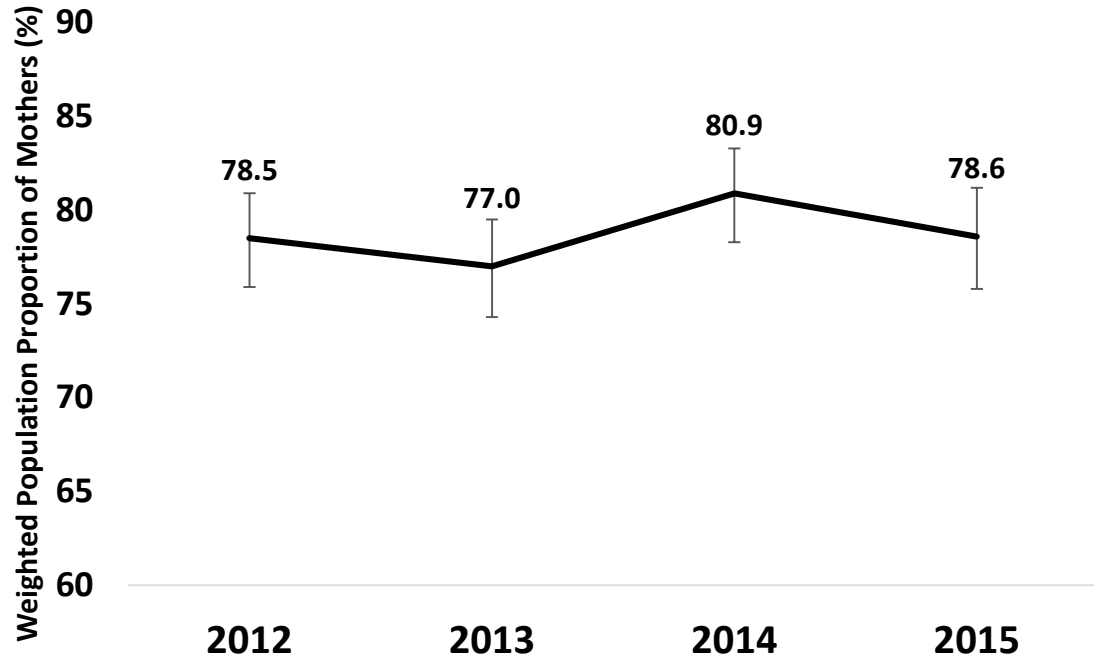
# A Tale of Two Comments - Part 1

- Around the time of my pregnancy, I was vegan exercised daily; I never smoked, never took drugs, and only had very few mixed drinks when I was younger, maybe 5 or 10yrs ago.
- I purposely chose to see a midwife for my prenatal care, and I believe that nature knows what its doing, and to trust it. I don't believe in many interventions, so I only did 2 ultrasounds totals, and never did an internal exam, or vaginal exam while pregnant. I also educated myself a lot about normal pregnancies, and that the baby will arrive when he's ready, between 38 and 42 weeks, or so. This is the reason, I refuse to see an OBGYN because they push women to deliver at 38 weeks or earlier, which leads to complications, unnecessary c-sections, and babies in NICU. I did a natural birth, without any medications. Did skin to skin for at least an our And only breastfed since day 1. I also avoid multiple vaccinations, and doing it later, at only 1 at the time.
- Finally I co-sleep with my baby which me more sleep and my baby is happier- I also baby-wear him all the time. PRAMS mom, 2016

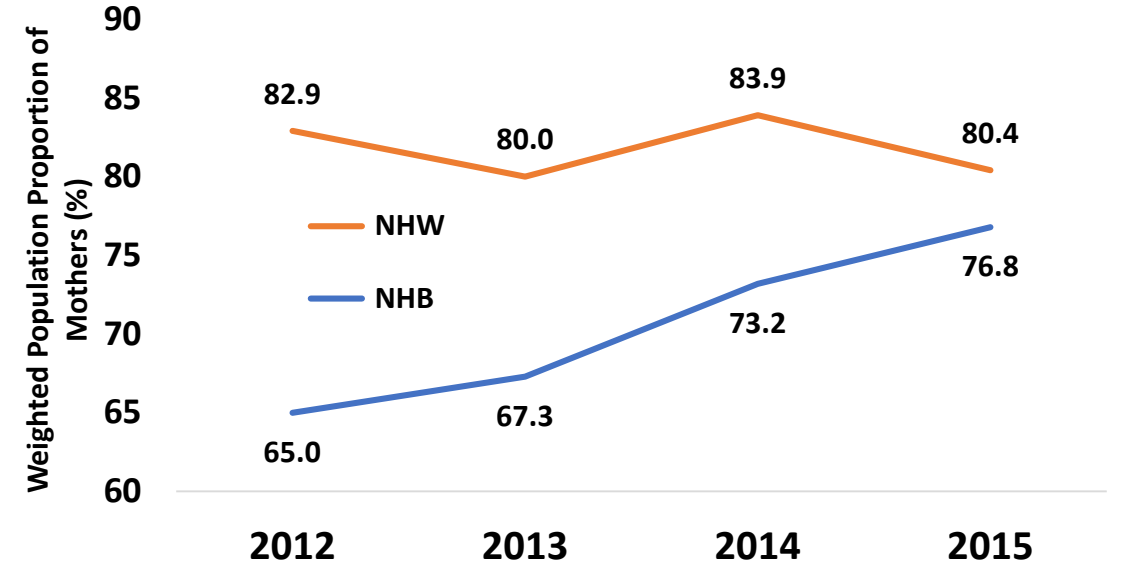
# A Tale of Two Comments - Part 2

- "I just wanted to add that my first child passed away at 13 months she was co sleeping with her father. I didn't know what information you looking for but I have a lot to say about the harms of co sleeping and the pain I went through from loosing my child."
- PRAMS Mom, 2015

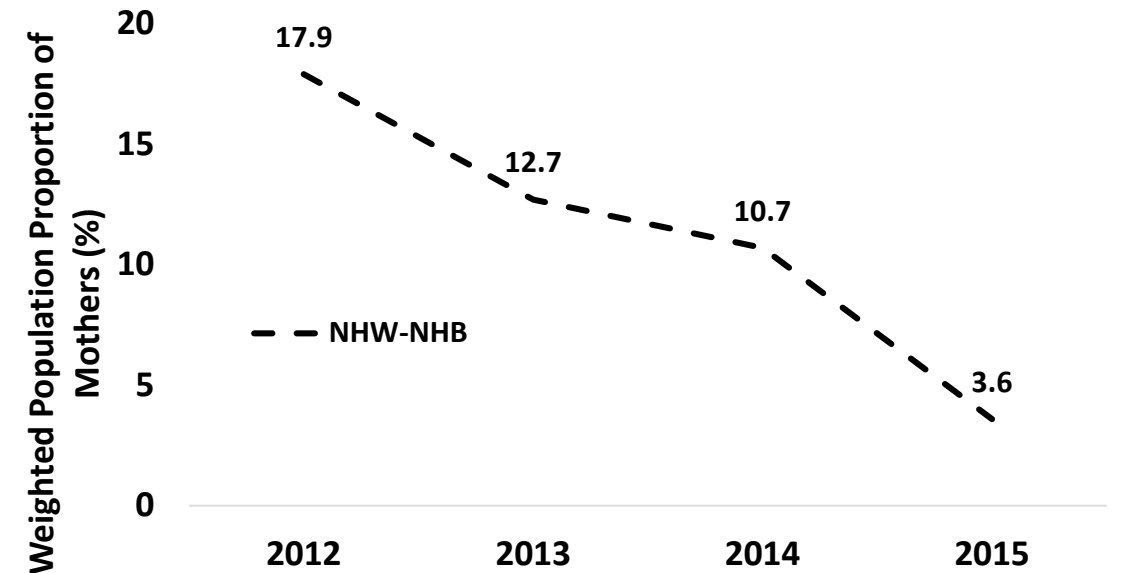
**Infant Sleeping Alone  
MI PRAMS 2012-2015**



**Infant Sleeping Alone  
by Maternal Race / Ethnicity; MI PRAMS 2012-2015**



**Infant Sleeping Alone  
Rate Difference by Race / Ethnicity; MI PRAMS 2012-2015**





# Sleep Space / Objects / Cosleeping Observations

## Non-Hispanic White Mothers

- Back Sleeping
    - Improving
  - Crib sleeping
    - No change
  - Sleeping without objects
    - Improving
  - Co-sleeping
    - Unchanged
- <--Parallel improvements-->
- <--Disparity reducing-->
- <--Disparity increasing-->
- <--Disparity reducing-->
- <--Difference no longer significant-->

## Non-Hispanic Black Mothers

- Back Sleeping
  - Improving
- Crib sleeping
  - Improving
- Sleeping without objects
  - Improving
- Co-sleeping
  - Improving

# Outline 4

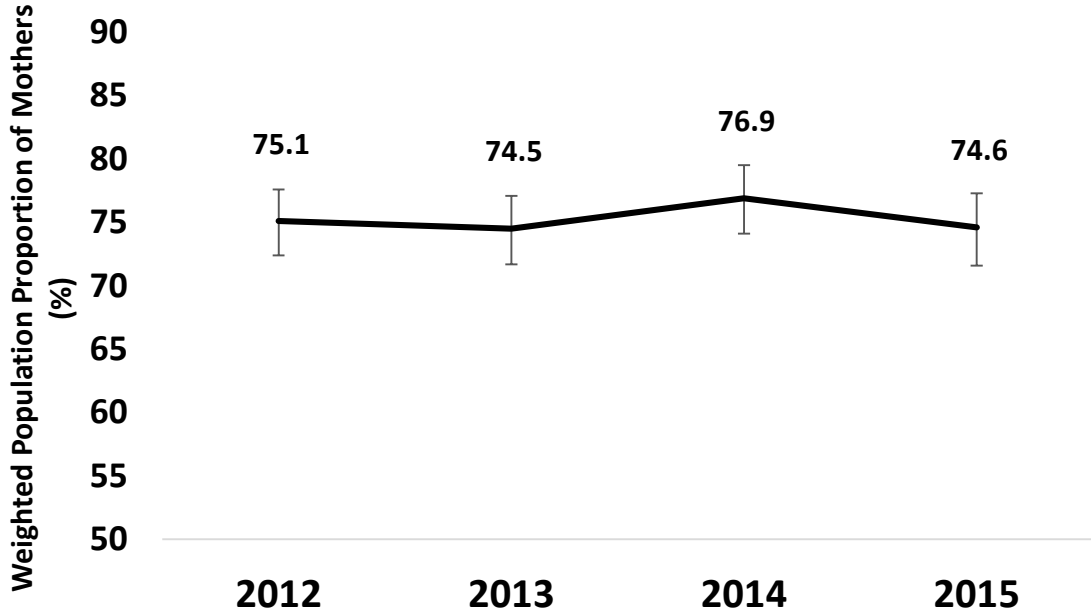
- What is PRAMS?
  - Sleep Position
  - Sleep Space / Objects / Cosleeping
  - Cumulative Sleep Hazards
    - Any changes over time?
    - Disparity over time?
  - Latest Safe Sleep Data
  - Conclusions
- "I work in Forensic Pathology and I deal with the most tragic outcome of unsafe sleep. I went into my pregnancy already knowing how to keep my baby safe while sleeping. However, the information given to me about it in the hospital was not given in a manner or time that was helpful. If I hadn't already known I'm not sure it would have been okay. Bombarding a woman with a plethora of information in the hormonal/exhausting few hours post partum probably isn't the best way to distribute information."
  - PRAMS mom, 2016

Increase percent of infants put to sleep on a separate approved sleep surface  
[CRIB + ALONE]

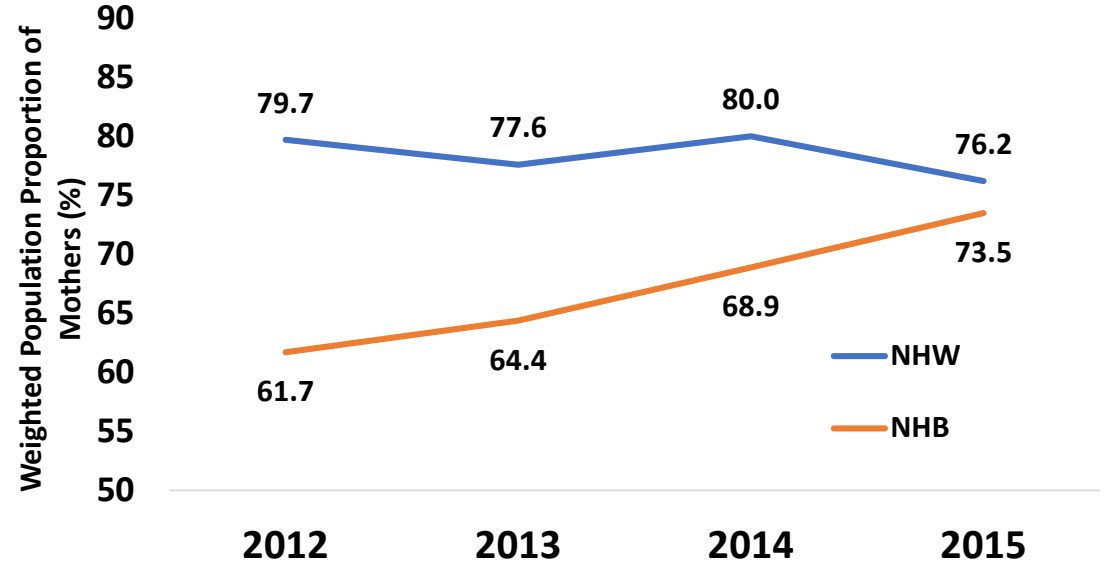
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- |  | No                                  | Yes                                 |
|--|-------------------------------------|-------------------------------------|
| a. My new baby sleeps in a crib or portable crib .....   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b. My new baby sleeps on a firm or hard mattress .....   | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c. My new baby sleeps with pillows.....                  | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d. My new baby sleeps with bumper pads .....             | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e. My new baby sleeps with plush or thick blankets ..... | <input type="checkbox"/>            | <input type="checkbox"/>            |
| f. My new baby sleeps with stuffed toys.....             | <input type="checkbox"/>            | <input type="checkbox"/>            |
| g. My new baby sleeps with an infant positioner .....    | <input type="checkbox"/>            | <input type="checkbox"/>            |
| h. My new baby sleeps with me or another person.....     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

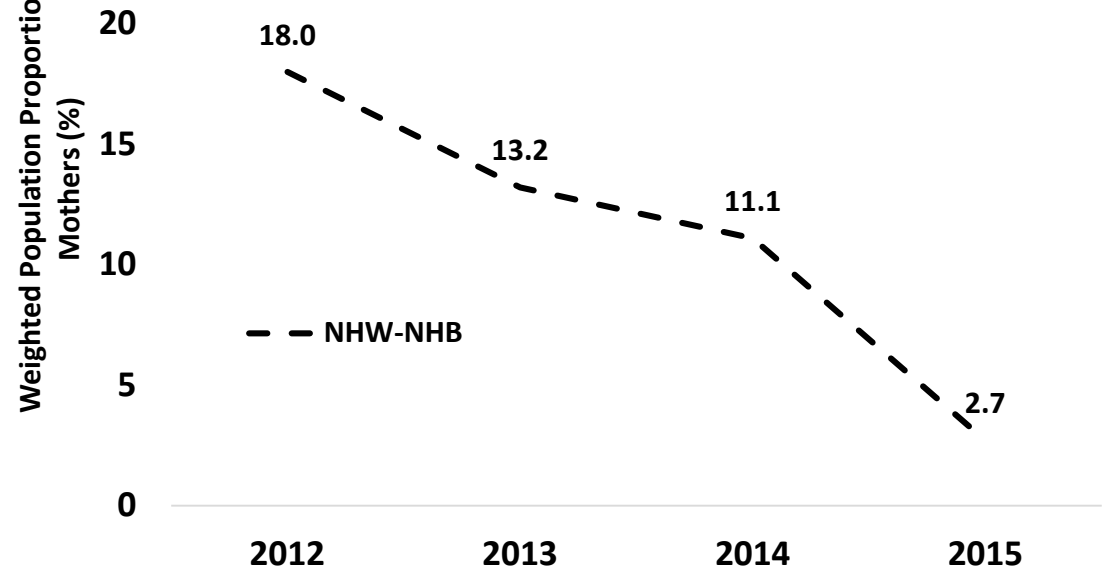
**Infant Sleeping in a Crib With No One Else  
MI PRAMS 2012-2015**



**Infant Sleeping in a Crib With No One Else  
by Maternal Race / Ethnicity; MI PRAMS 2012-2015**



**Infant Sleeping in a Crib with No One Else  
Rate Difference by Race / Ethnicity; MI PRAMS 2012-2015**

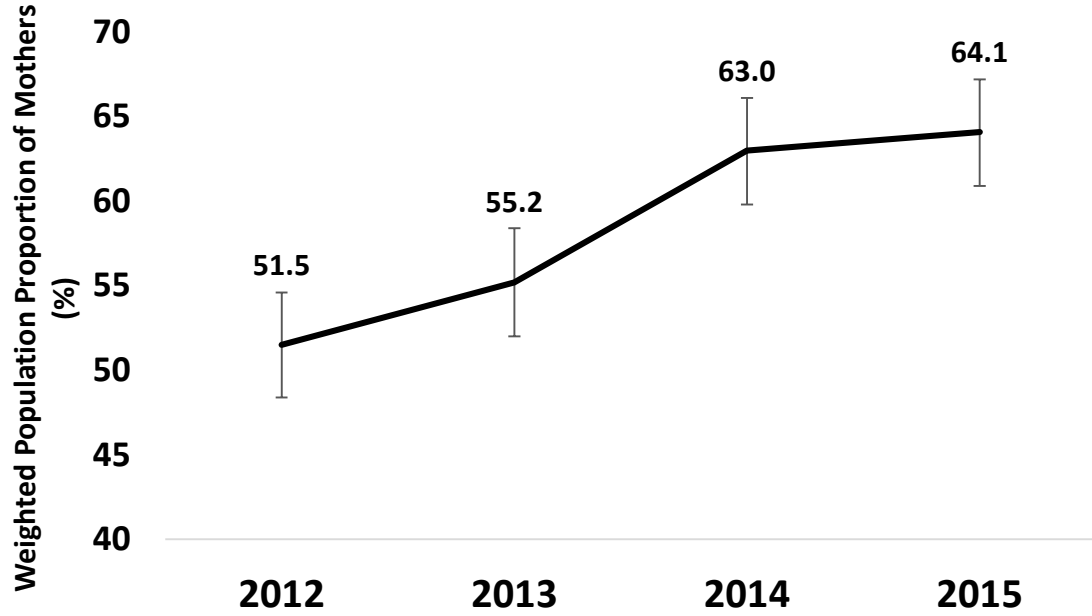


Increase percent of infants placed to sleep without soft objects or loose bedding  
[CRIB + EMPTY]

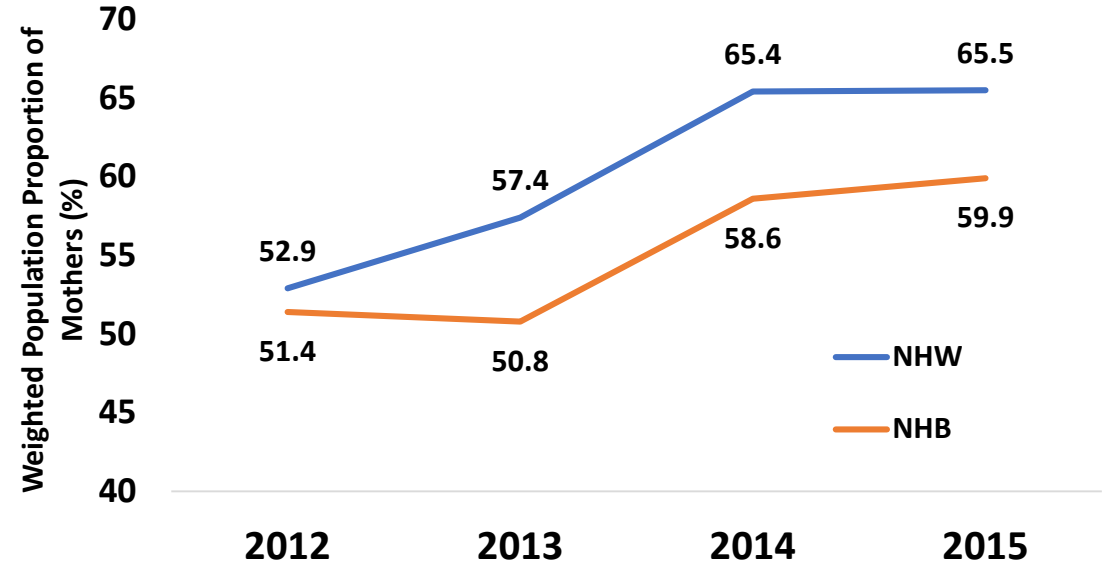
61. Listed below are some things that describe how your new baby *usually* sleeps. For each item, check **No** if it doesn't usually apply to your baby or **Yes** if it usually applies to your baby.

- |  | No                                  | Yes                                 |
|--|-------------------------------------|-------------------------------------|
| a. My new baby sleeps in a crib or portable crib .....   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b. My new baby sleeps on a firm or hard mattress .....   | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c. My new baby sleeps with pillows.....                  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d. My new baby sleeps with bumper pads .....             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e. My new baby sleeps with plush or thick blankets ..... | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| f. My new baby sleeps with stuffed toys.....             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| g. My new baby sleeps with an infant positioner .....    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| h. My new baby sleeps with me or another person.....     | <input type="checkbox"/>            | <input type="checkbox"/>            |

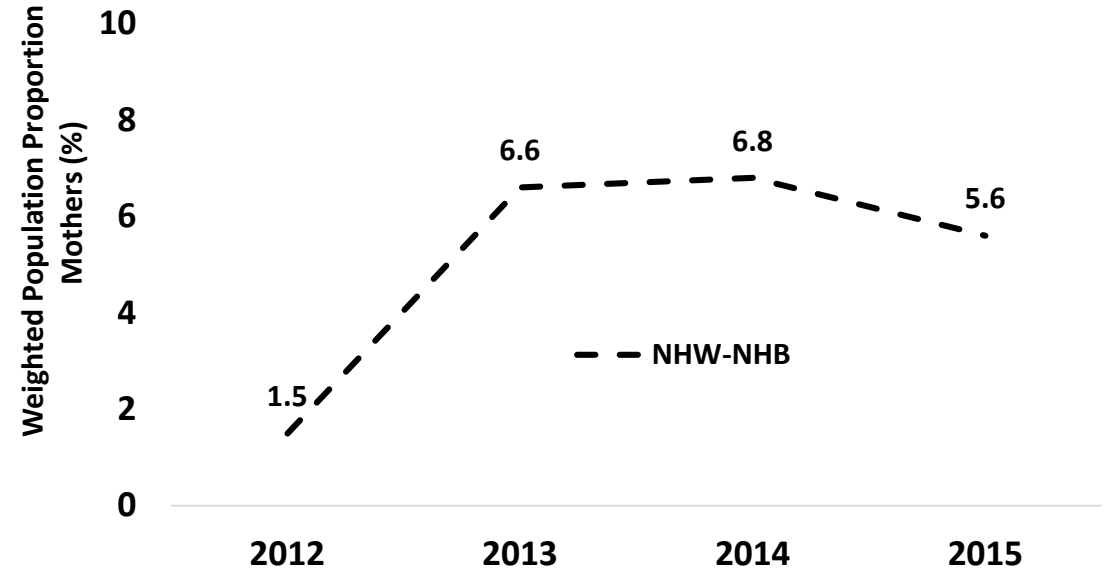
**Infant Sleeping in a Crib With No Objects  
MI PRAMS 2012-2015**



**Infant Sleeping in a Crib With No Objects  
by Maternal Race / Ethnicity; MI PRAMS 2012-2015**



**Infant Sleeping in a Crib with No Objects  
Rate Difference by Race / Ethnicity; MI PRAMS 2012-2015**





# Increase percent of infants being ideally slept

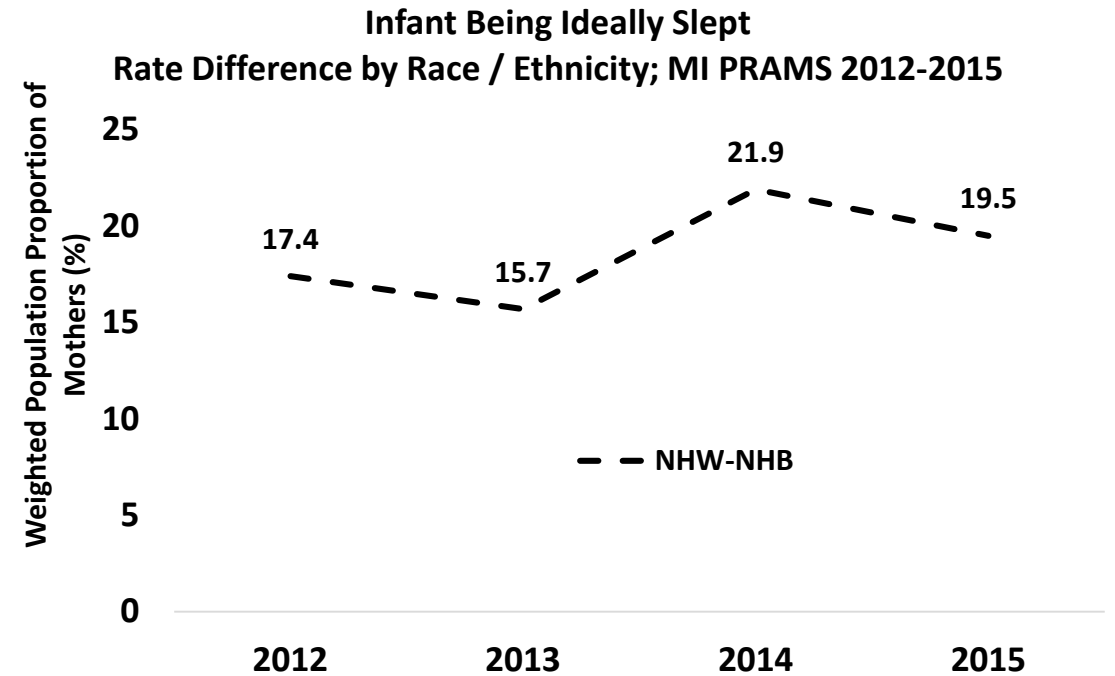
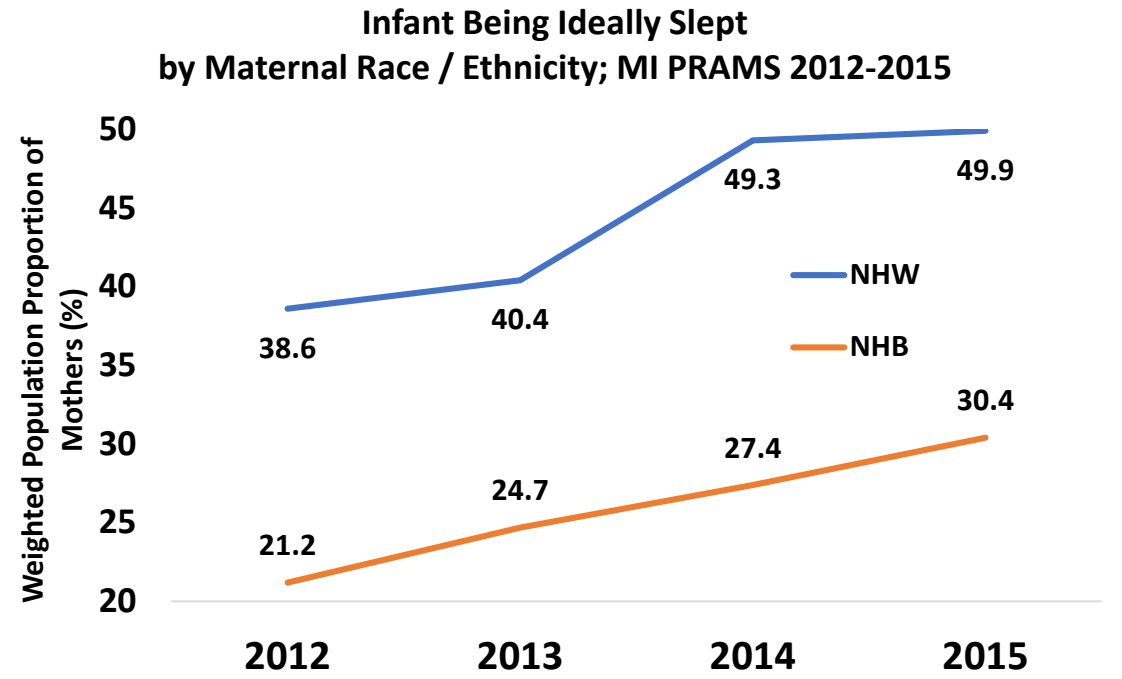
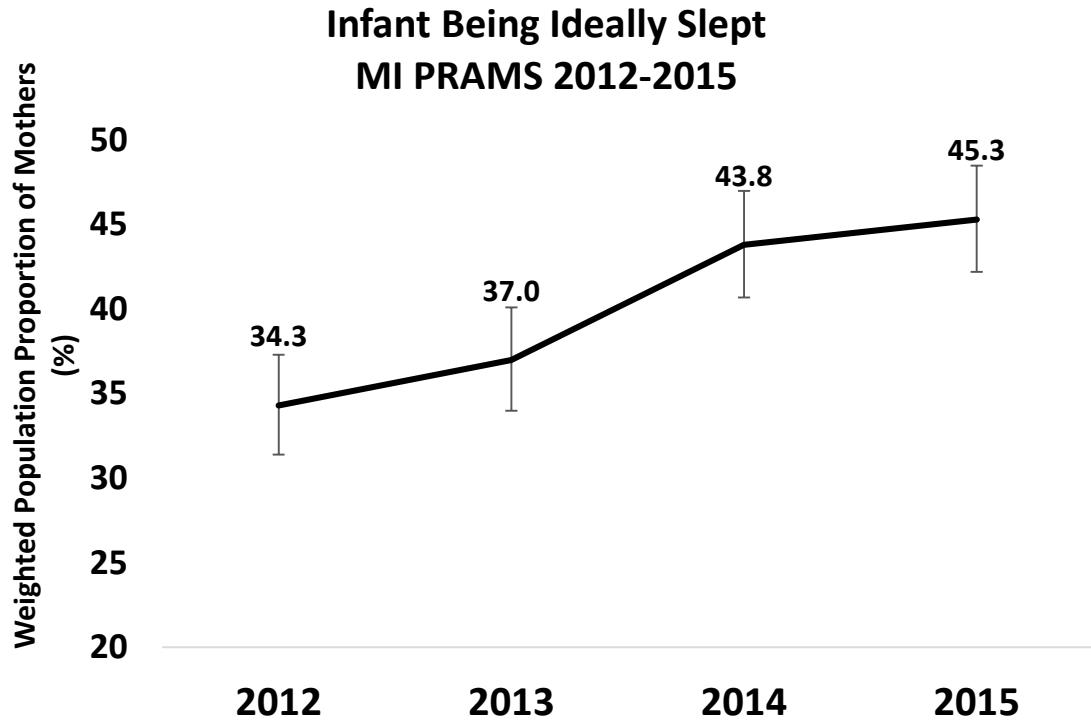
60. In which *one* position do you most often lay your baby down to sleep now?

Check ONE answer

- On his or her side
- On his or her back
- On his or her stomach

61. Listed below are some things that describe how your new baby *usually* sleeps. For each item, check **No** if it doesn't usually apply to your baby or **Yes** if it usually applies to your baby.

- |  | No                                  | Yes                                 |
|--|-------------------------------------|-------------------------------------|
| a. My new baby sleeps in a crib or portable crib .....   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b. My new baby sleeps on a firm or hard mattress .....   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c. My new baby sleeps with pillows.....                  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d. My new baby sleeps with bumper pads .....             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e. My new baby sleeps with plush or thick blankets ..... | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| f. My new baby sleeps with stuffed toys.....             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| g. My new baby sleeps with an infant positioner .....    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| h. My new baby sleeps with me or another person.....     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |



# Cumulative Sleep Hazards - Observations

## Non-Hispanic White Mothers

- Sleeping in crib - alone <--Disparity reducing-->
  - Unchanged <--Difference no longer significant-->
- Sleeping in a crib - empty
  - Improving <--Disparity increasing-->
- Ideal sleep environment
  - Improving (same rate) <--Parallel improvements-->

## Non-Hispanic Black Mothers

- Sleeping in a crib - alone
  - Improving
- Sleeping in a crib - empty
  - Improving
- Ideal sleep environment
  - Improving (same rate)

*These results are pending statistical tests for trend over time*

# Conclusions - Part 1

- Generally speaking, safe sleep practices are increasing for the population of Michigan moms
- More back sleeping
  - Decreasing disparity
- Crib sleeping highly prevalent and stable
  - Decreasing disparity
- Cribs are less cluttered
  - Improvements for NHB and NHW
  - Disparity increasing
- Cumulative safe sleep hazards are decreasing

Is Anything  
Changing?

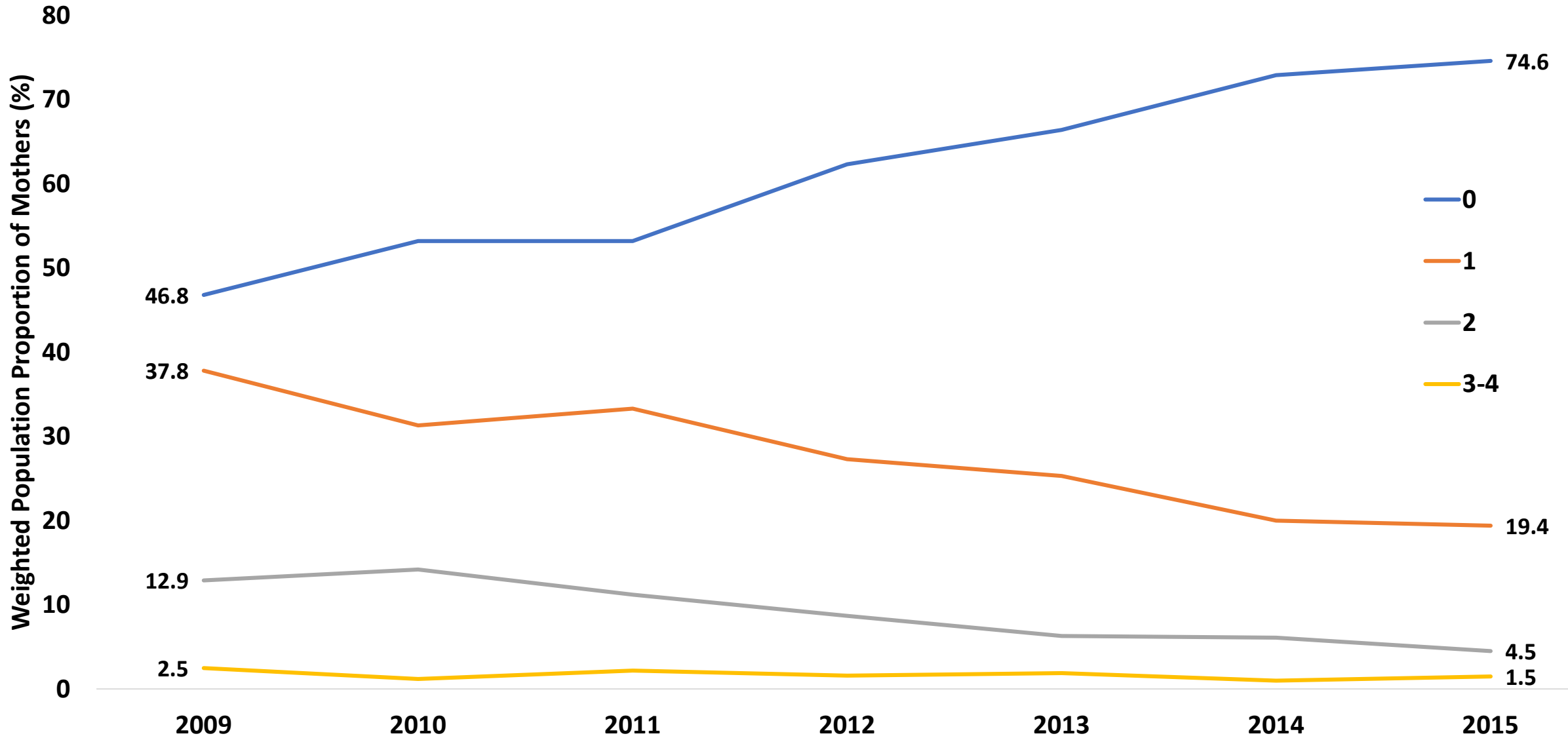
# Conversation Break

- Observation:
- Michigan mothers report many improvements over time
  
- Question:
- Have we seen any decreases in the number of safe sleep deaths each year?

- Observation:
- Narrowing disparity gap for some safe sleep practices
  - Especially crib sleeping, cosleeping
  
- Questions:
- Are we seeing changes in the number / rate of sleep deaths for NHB mothers?
- If no - where is the excess risk for safe sleep deaths?

# Cumulative Number of Sleep Space Objects over Time

## Michigan PRAMS, 2009 - 2015



# Outline 5

- What is PRAMS?
- Sleep Position
- Sleep Space / Objects / Cosleeping
- Cumulative Sleep Hazards
- **Latest Safe Sleep Data!**
- Conclusions

- "I tried not to sleep with my baby. But in the first 2 months she would not sleep by herself. she and I slept side by side on couch her to outer edge. this scared me But I had no other option I needed to sleep too."
- PRAMS mom, 2015

# Sleeping in Own Crib or Bed / Same Room

- "Occasions when baby fell asleep in carseat or swing or bed- but were not there sleeping for the night. We move baby to a bassinet for sleeping."
- PRAMS Mom, 2016

51. In the *past 2 weeks*, how often has your new baby slept alone in his or her own crib or bed?

- Always
- Often
- Sometimes
- Rarely
- Never

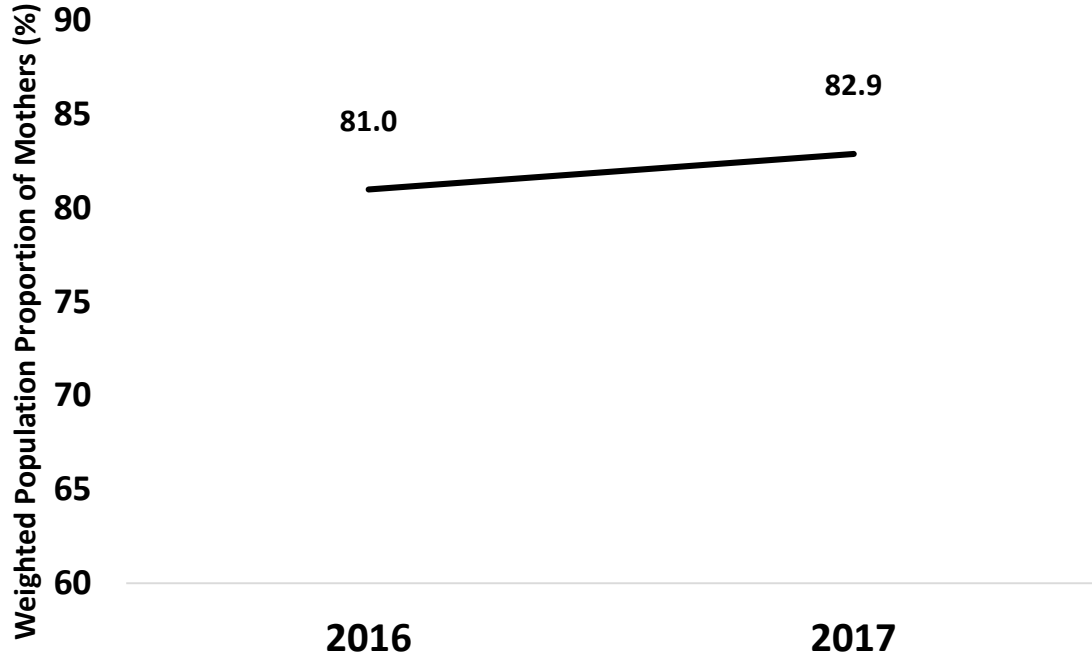
Go to Question 53

52. When your new baby sleeps alone, is his or her crib or bed in the same room where *you* sleep?

- No
- Yes

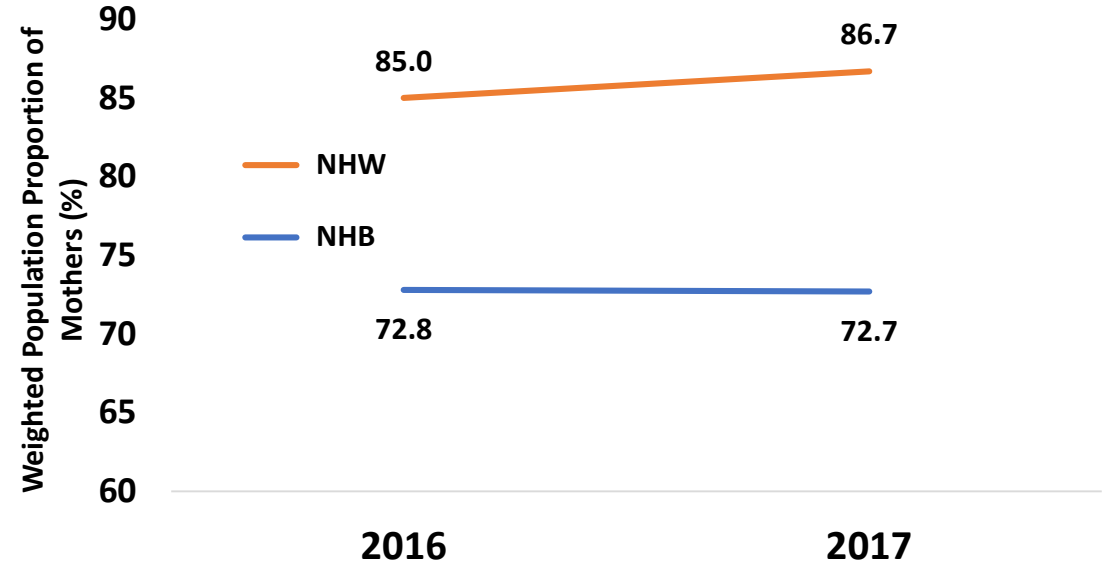


**Infant Sleeps Alone in Own Crib or Bed  
MI PRAMS 2016-2017**

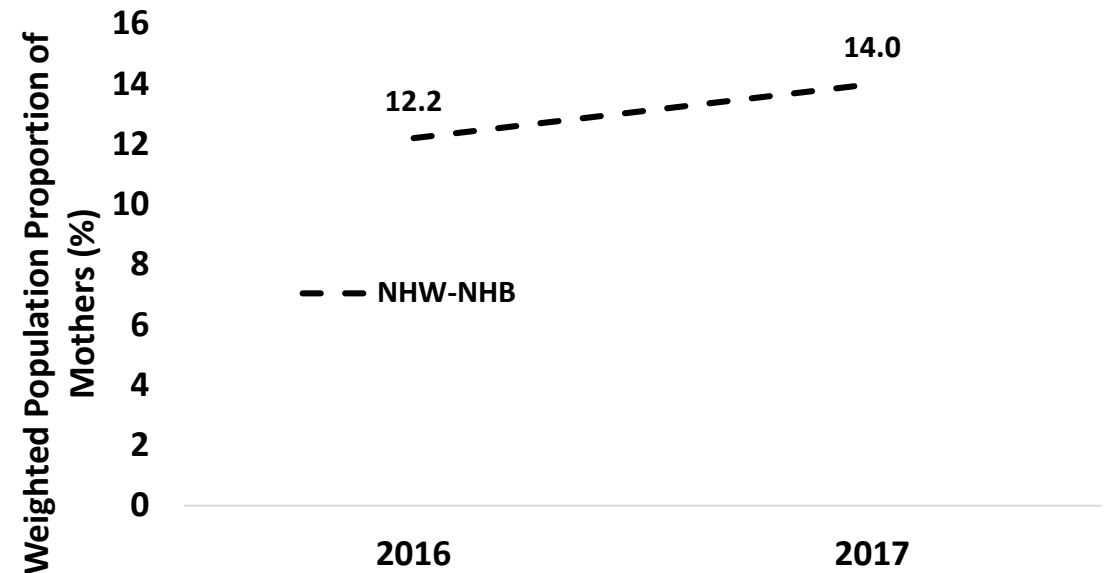


**Response = Always or Almost Always**

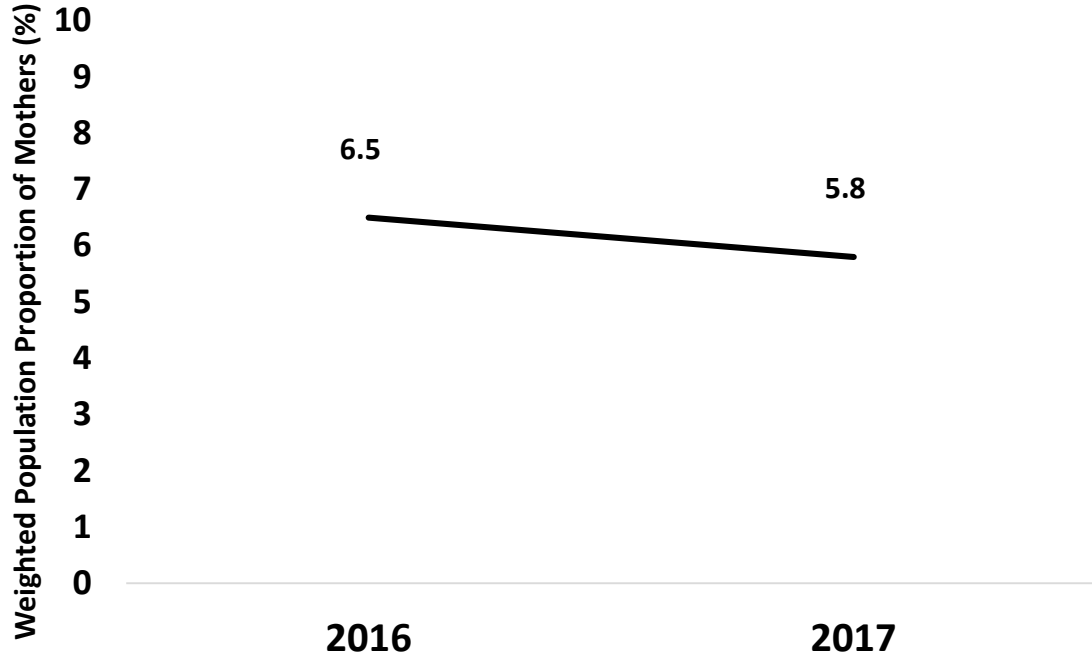
**Infant Sleeps Alone in Own Crib or Bed  
by Maternal Race / Ethnicity; MI PRAMS 2016-2017**



**Infant Sleeps Alone in Own Crib or Bed  
Rate Difference by Race / Ethnicity; MI PRAMS 2016-2017**

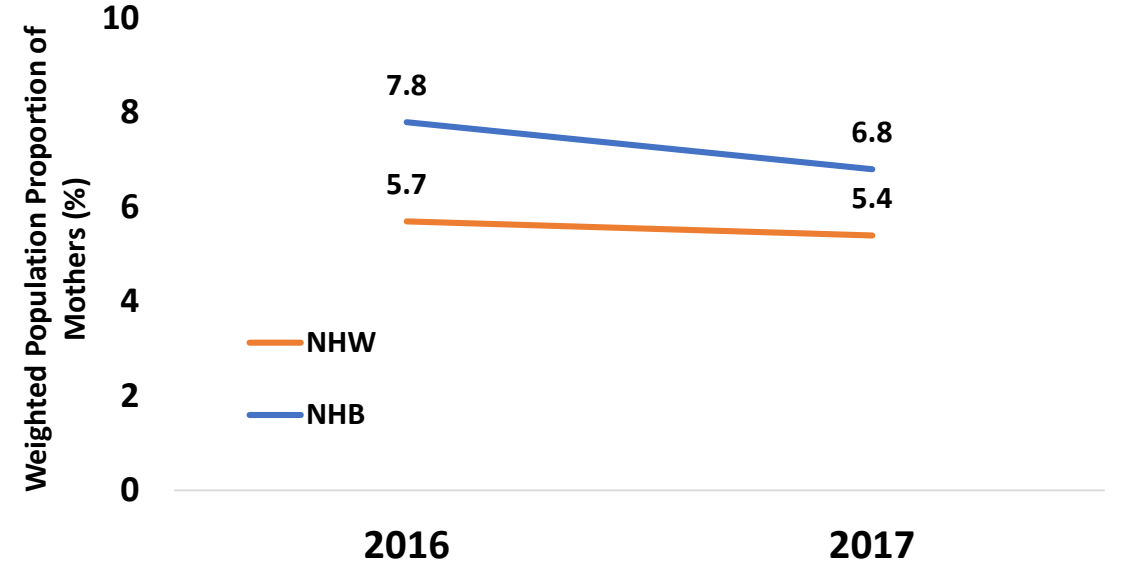


**Infant Never Sleeps Alone in Own Crib or Bed  
MI PRAMS 2016-2017**

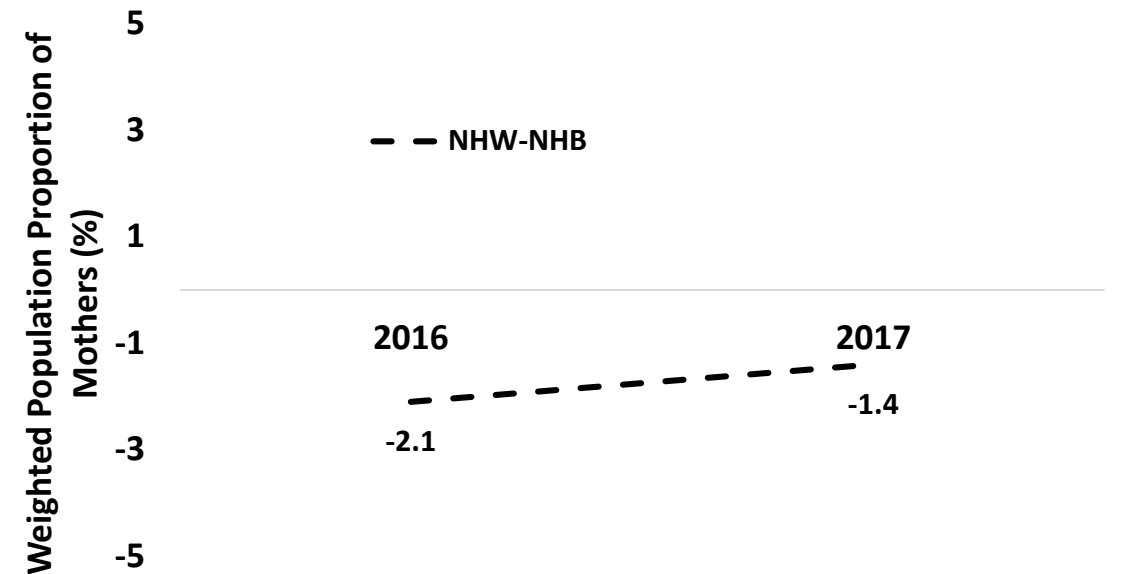


**Response = Never**

**Infant Never Sleeps Alone in Own Crib or Bed  
by Maternal Race / Ethnicity; MI PRAMS 2016-2017**



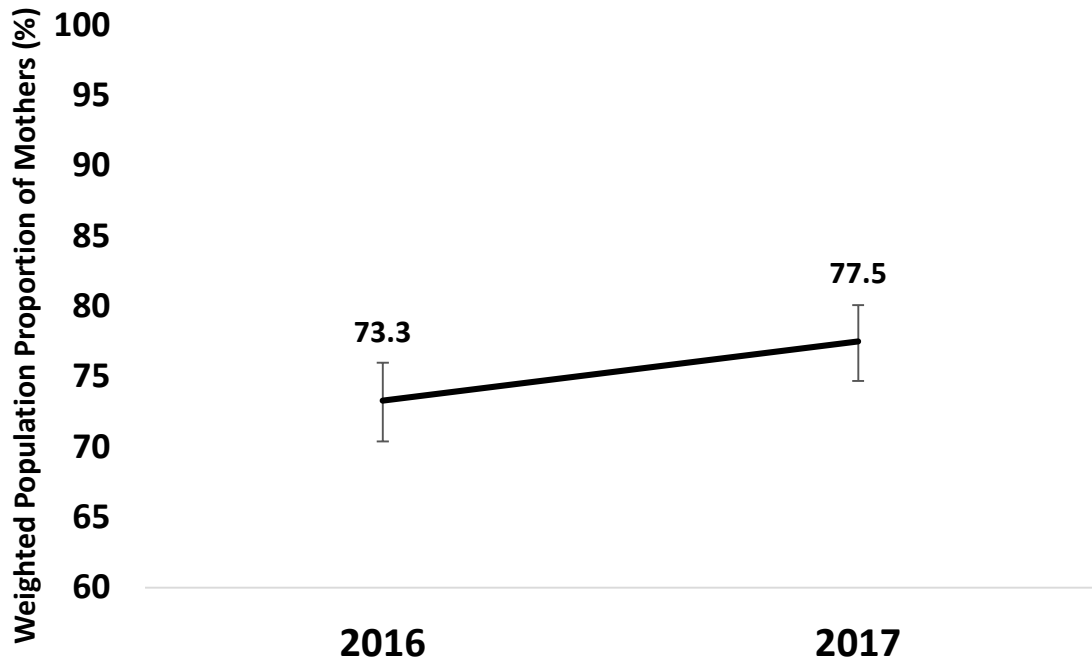
**Infant Never Sleeps Alone in Own Crib or Bed  
Rate Difference by Race / Ethnicity; MI PRAMS 2016-2017**



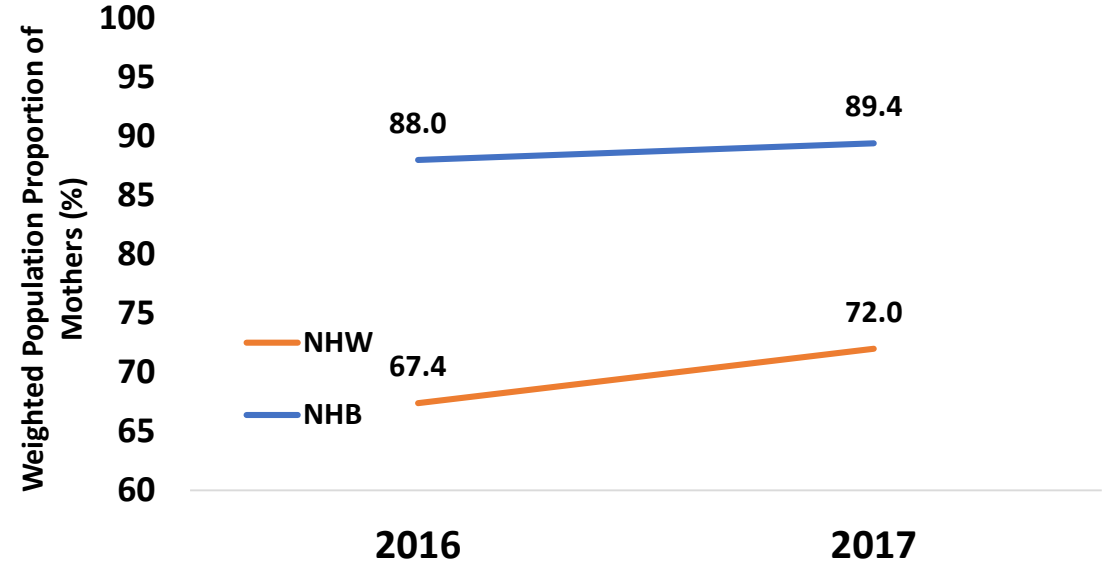
**52. When your new baby sleeps alone, is his or her crib or bed in the same room where you sleep?**

- No
- Yes

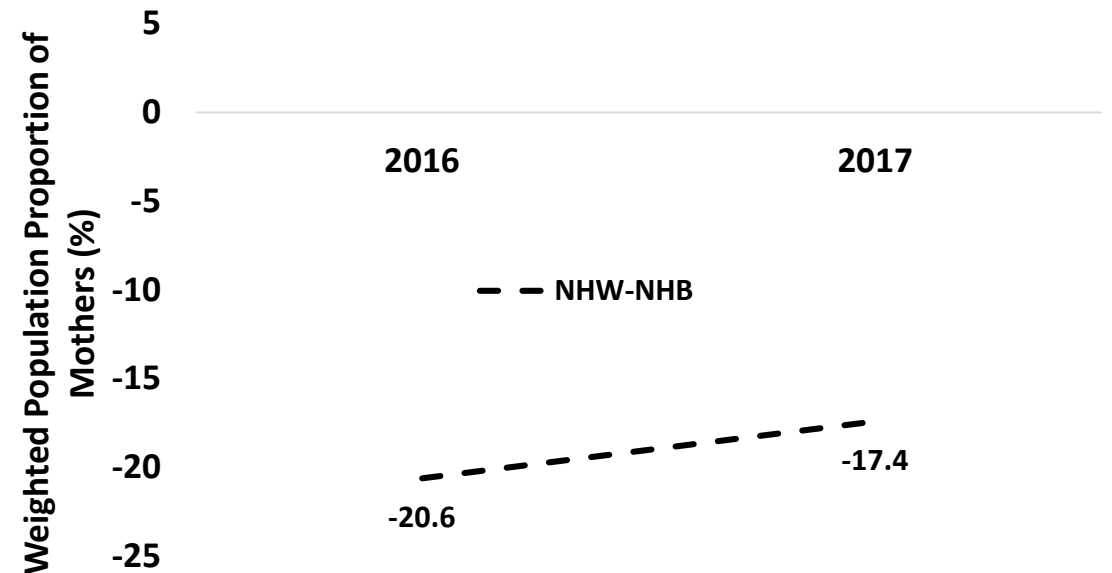
**Infant Crib in Mom's Room  
MI PRAMS 2016-2017**



**Infant Crib in Mom's Room  
by Maternal Race / Ethnicity; MI PRAMS 2016-2017**



**Infant Crib in Mom's Room  
Rate Difference by Race / Ethnicity; MI PRAMS 2016-2017**



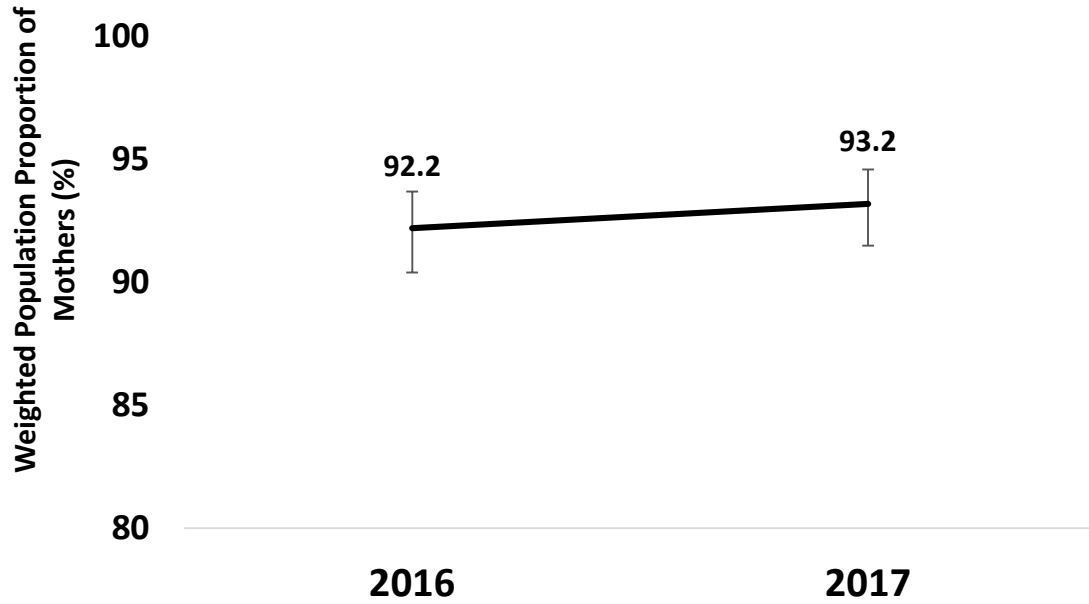
# Everything Else

- "My baby sleeps in the swing or on his belly while someone holds or watches him. He will not sleep on his back. It would be nice if medical professionals helped solve this problem or give ideas rather than just tell you your kid will die of SIDS if you put him on his tummy. Not all babies will sleep on their back."
- PRAMS mom, 2012

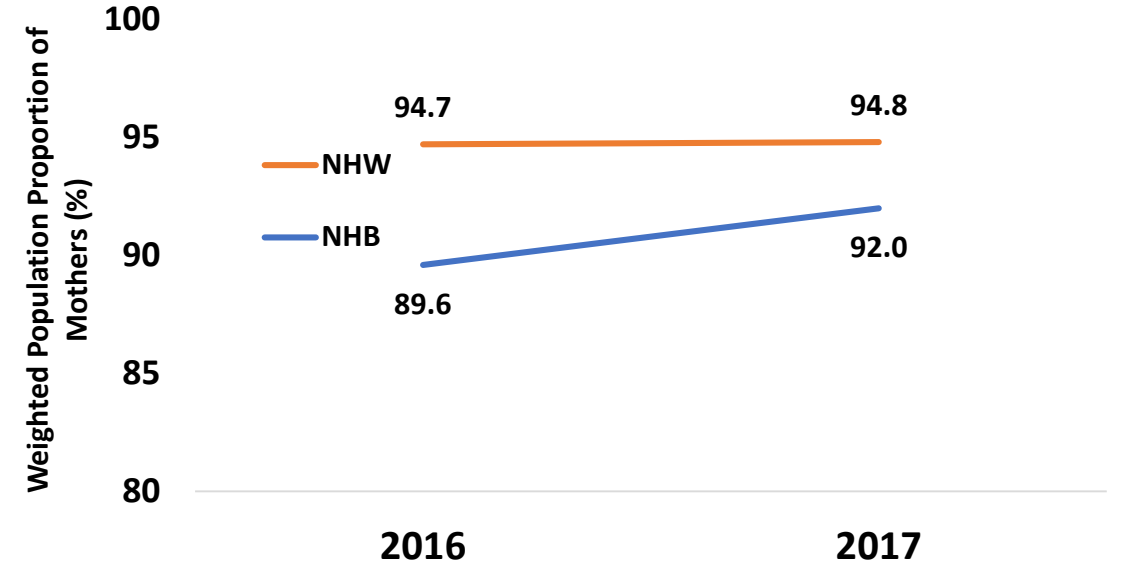
53. Listed below are some more things about how babies sleep. How did your new baby *usually* sleep in the past 2 weeks? For each item, check **No** if your baby did not *usually* sleep like this or **Yes** if he or she did.

- |   | No                       | Yes                      |
|---|--------------------------|--------------------------|
| a. In a crib, bassinet, or pack and play .....                      | <input type="checkbox"/> | <input type="checkbox"/> |
| b. On a twin or larger mattress or bed .....                        | <input type="checkbox"/> | <input type="checkbox"/> |
| c. On a couch, sofa, or armchair .....                              | <input type="checkbox"/> | <input type="checkbox"/> |
| d. In an infant car seat or swing.....                              | <input type="checkbox"/> | <input type="checkbox"/> |
| e. In a sleeping sack or wearable blanket.....                      | <input type="checkbox"/> | <input type="checkbox"/> |
| f. With a blanket.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| g. With toys, cushions, or pillows, including nursing pillows ..... | <input type="checkbox"/> | <input type="checkbox"/> |
| h. With crib bumper pads (mesh or non-mesh) .....                   | <input type="checkbox"/> | <input type="checkbox"/> |

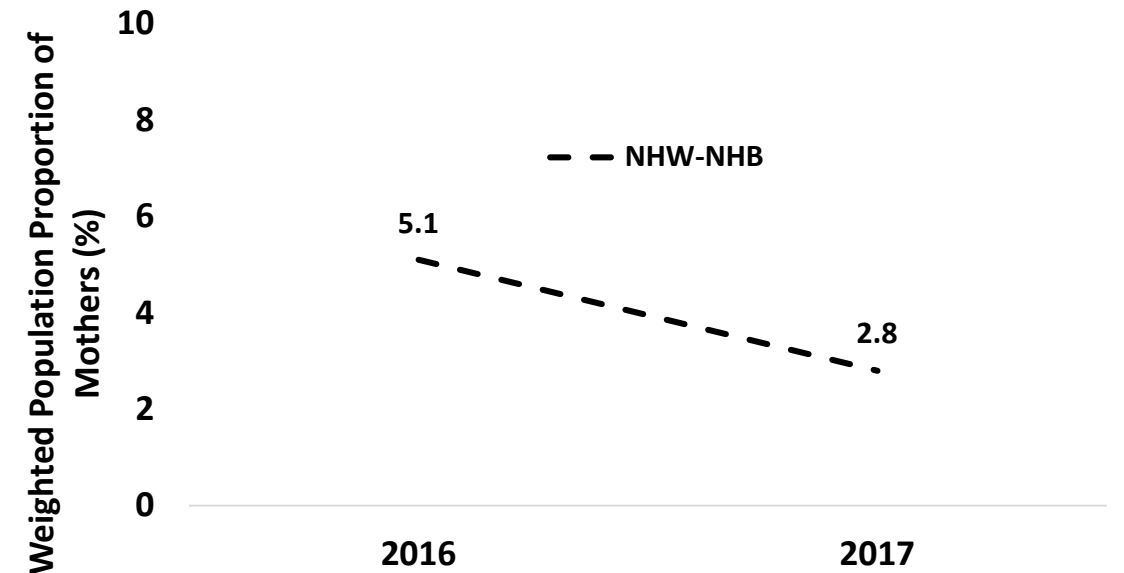
**Infant Sleeps In Crib | Bassinet | PackNPlay  
MI PRAMS 2016-2017**



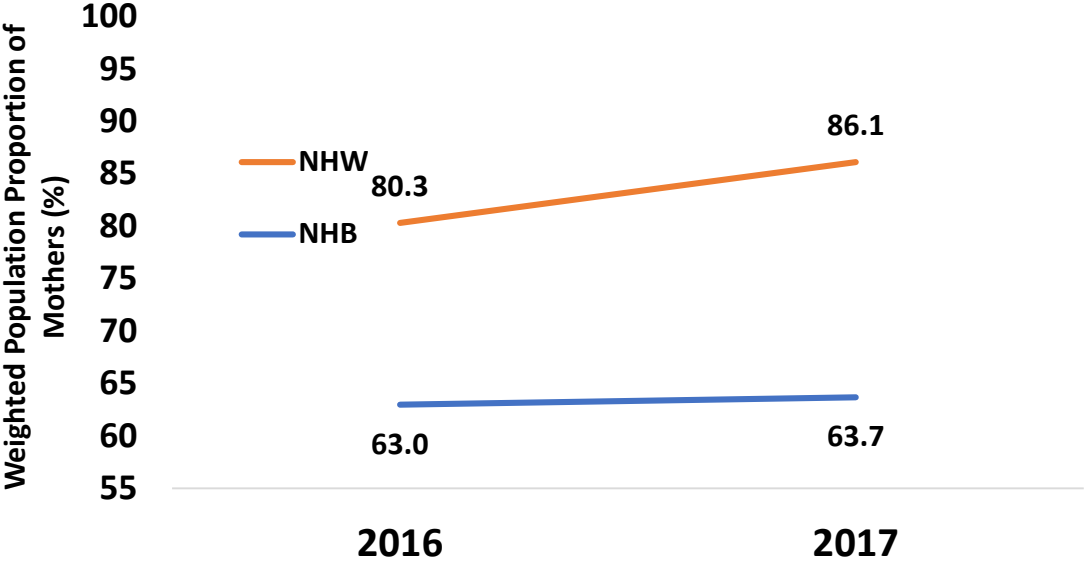
**Infant Sleeps In Crib | Bassinet | PackNPlay  
by Maternal Race / Ethnicity; MI PRAMS 2016-2017**



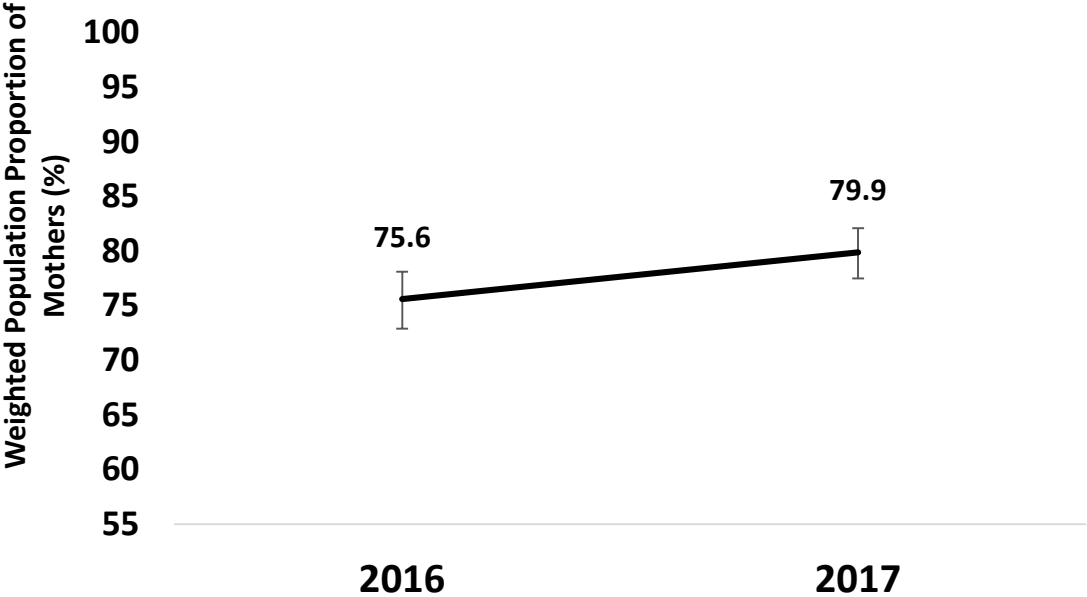
**Infant Sleeps In Crib | Bassinet | PackNPlay  
Rate Difference by Race / Ethnicity; MI PRAMS 2016-2017**



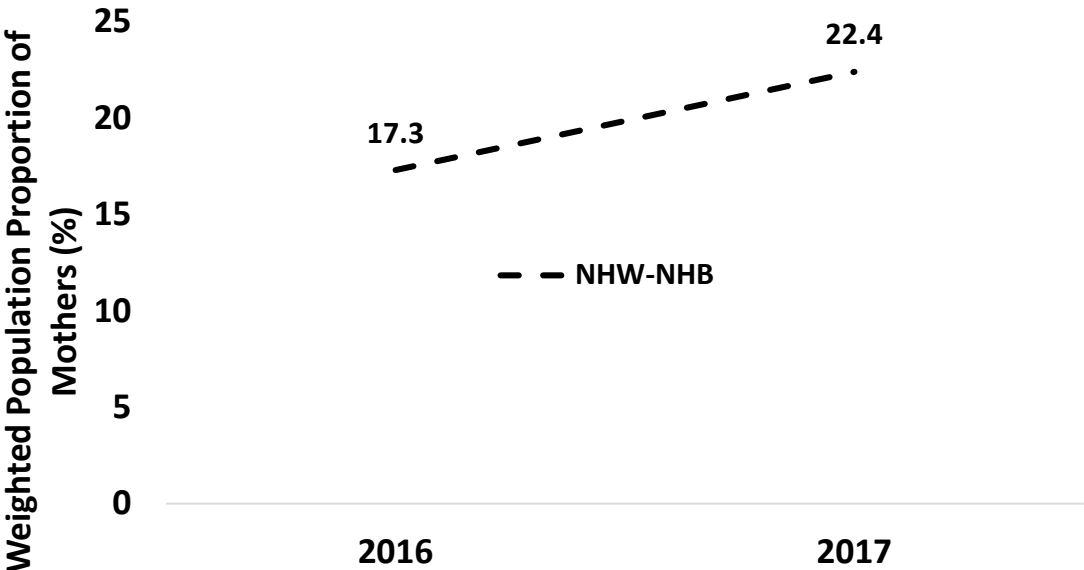
**Infant Does Not Sleep on a Twin or Larger Mattress  
by Maternal Race / Ethnicity; MI PRAMS 2016-2017**



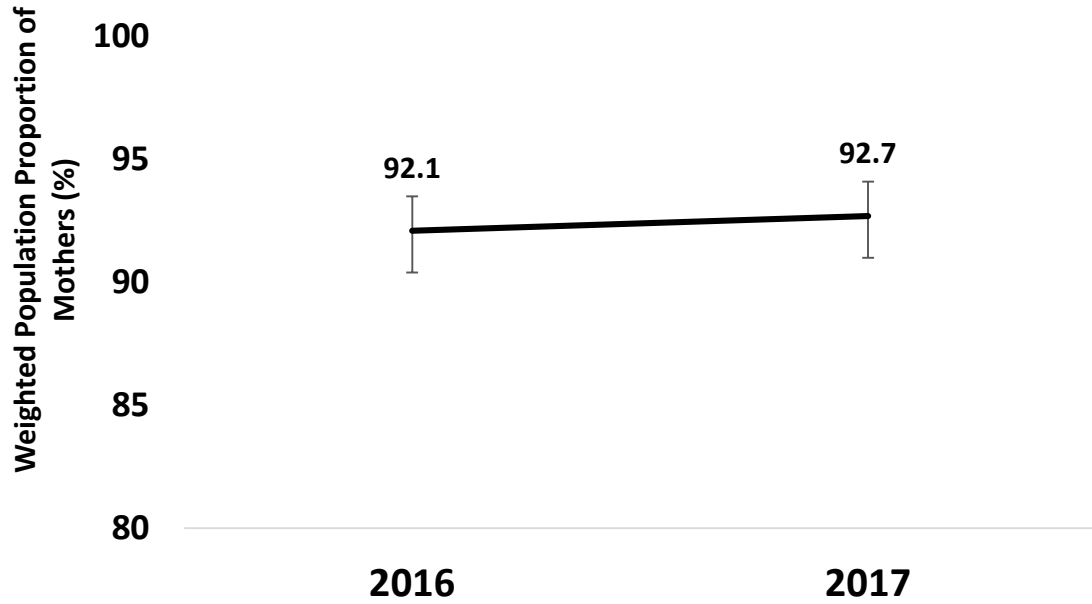
**Infant Does Not Sleep on a Twin or Larger Mattress  
MI PRAMS 2016-2017**



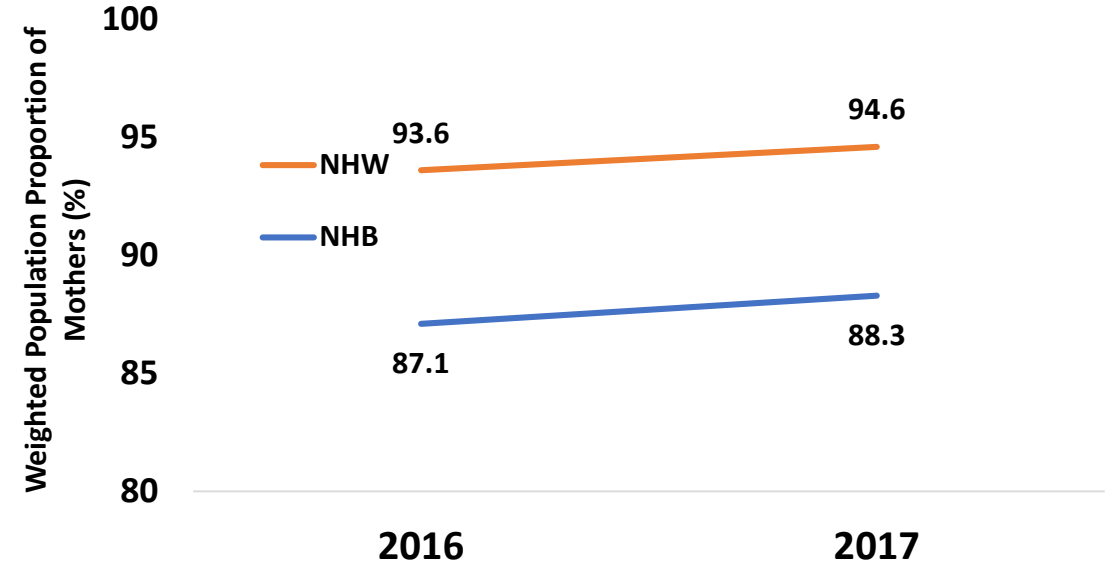
**Infant Does Not Sleep on a Twin or Larger Mattress  
Rate Difference by Race / Ethnicity; MI PRAMS 2016-2017**



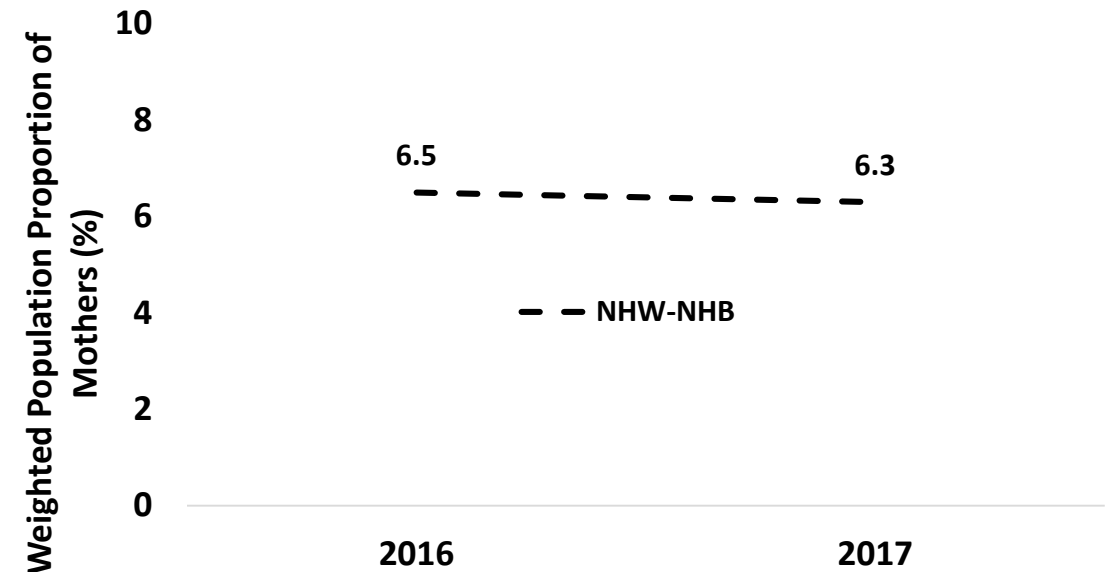
**Infant Does Not Sleep On Couch, Sofa, Armchair  
MI PRAMS 2016-2017**



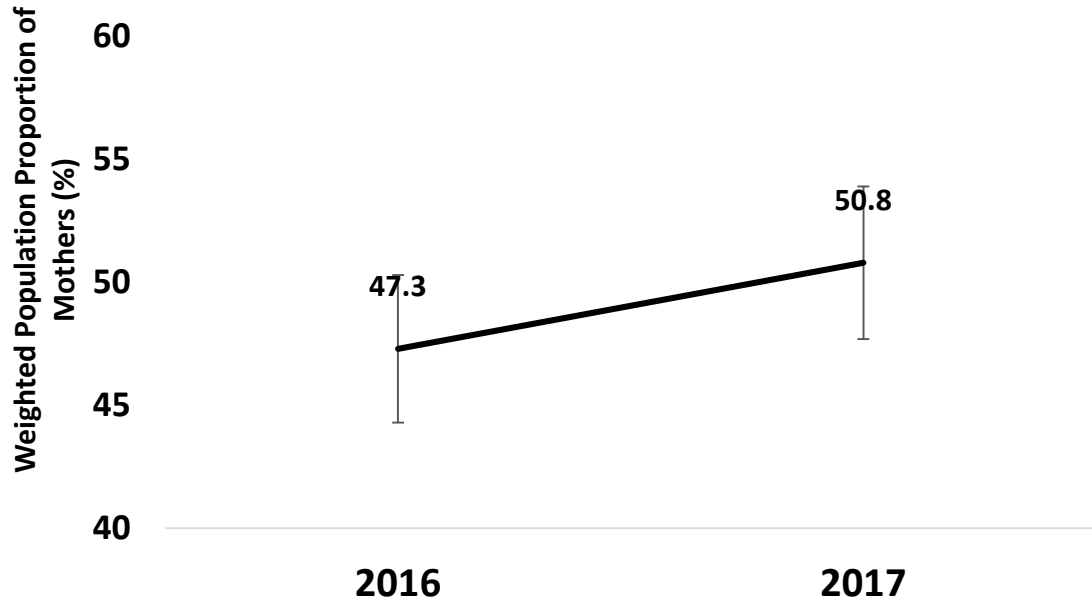
**Infant Does Not Sleep On Couch, Sofa, Armchair  
by Maternal Race / Ethnicity; MI PRAMS 2016-2017**



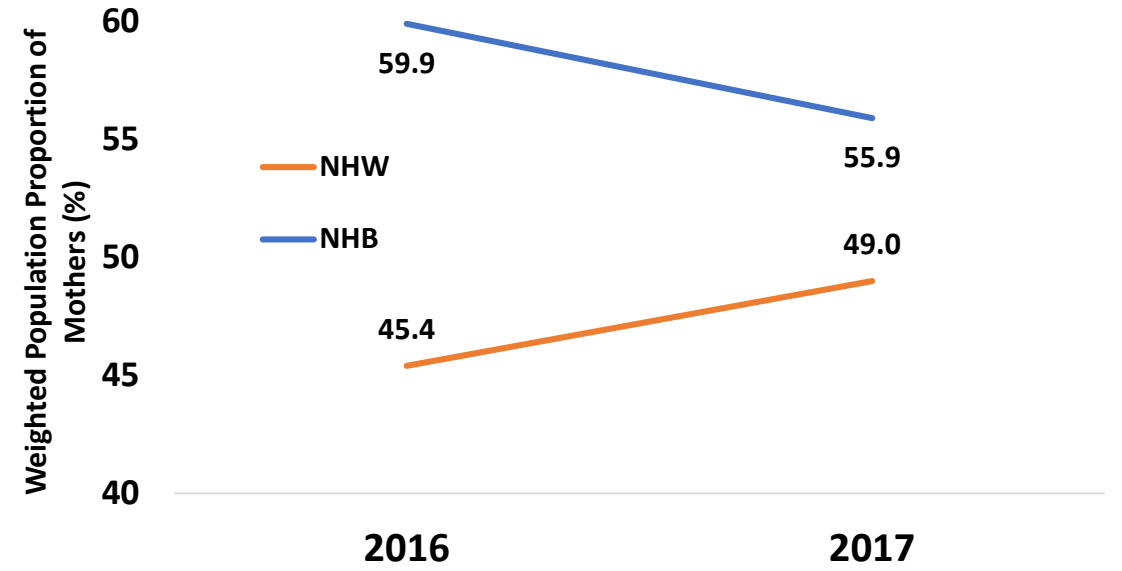
**Infant Does Not Sleep On Couch, Sofa, Armchair  
Rate Difference by Race / Ethnicity; MI PRAMS 2016-2017**



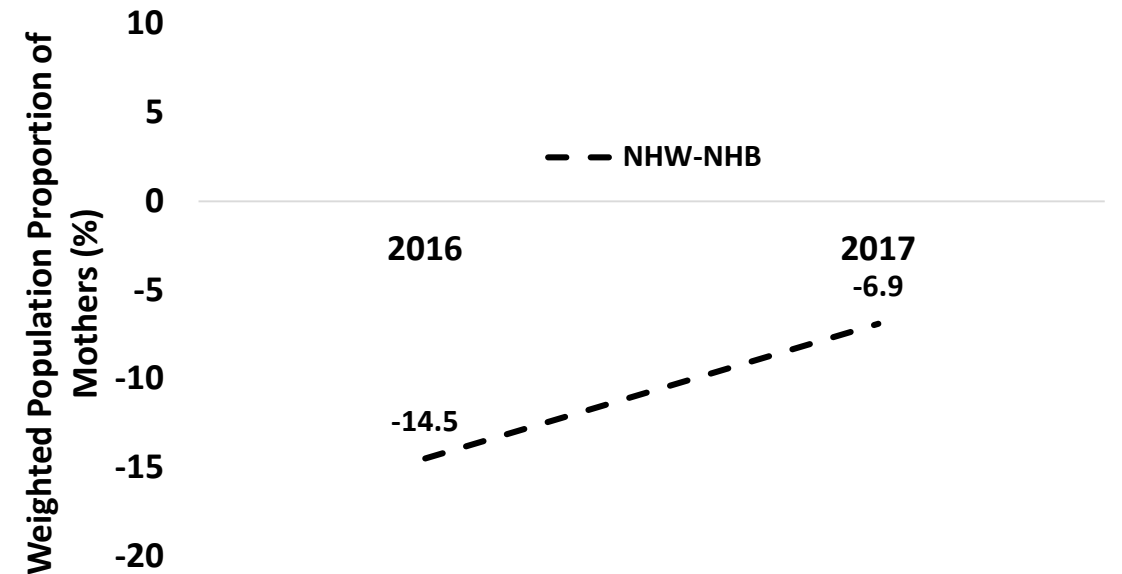
**Infant Does Not Sleep in Carseat or Swing  
MI PRAMS 2016-2017**



**Infant Does Not Sleep in Carseat or Swing  
by Maternal Race / Ethnicity; MI PRAMS 2016-2017**

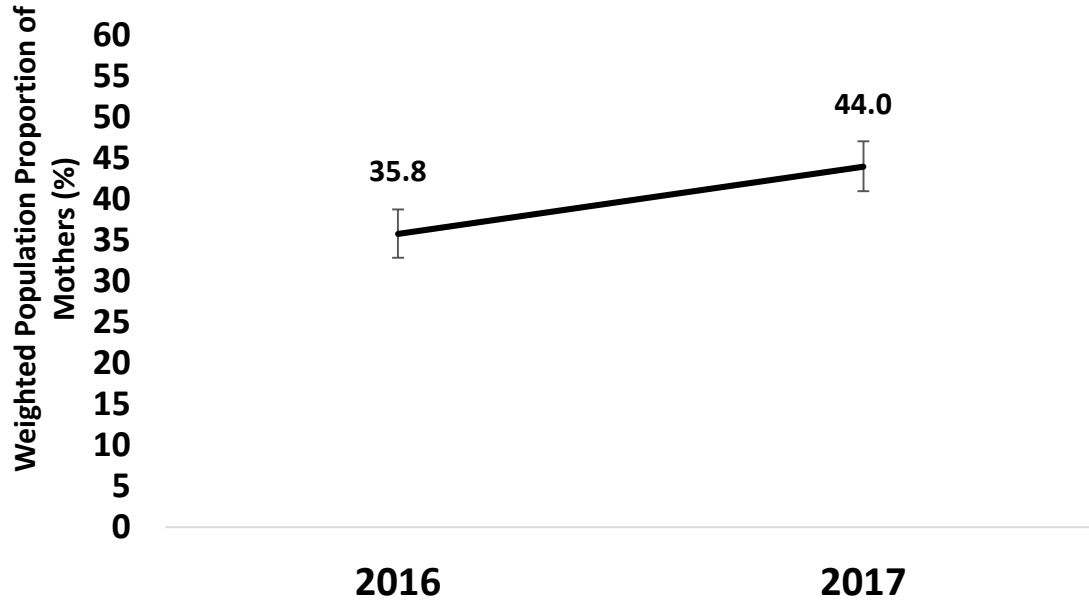


**Infant Does Not Sleep in Carseat or Swing  
Rate Difference by Race / Ethnicity; MI PRAMS 2016-2017**

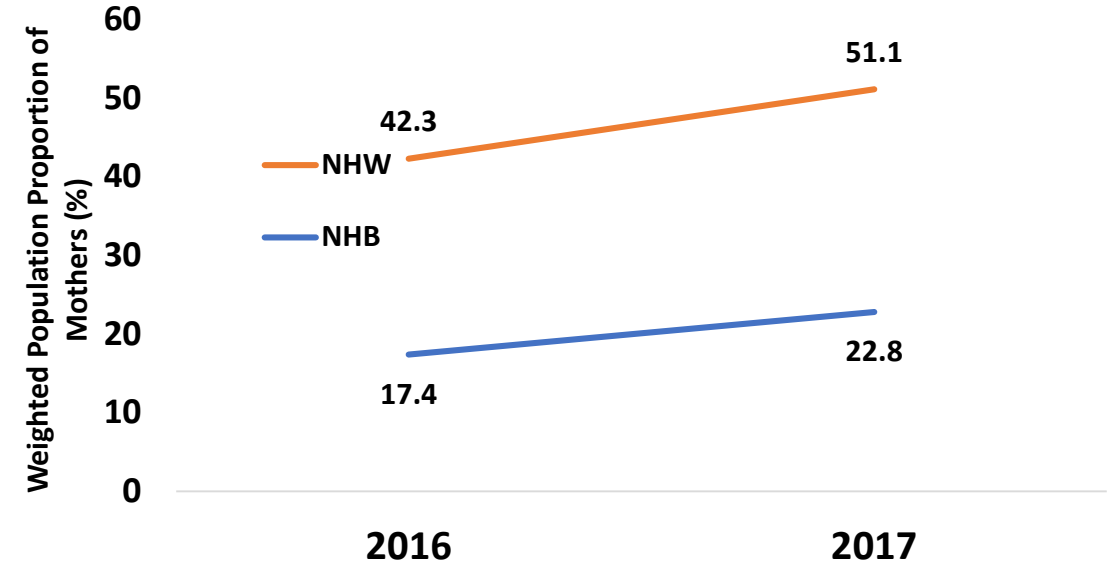




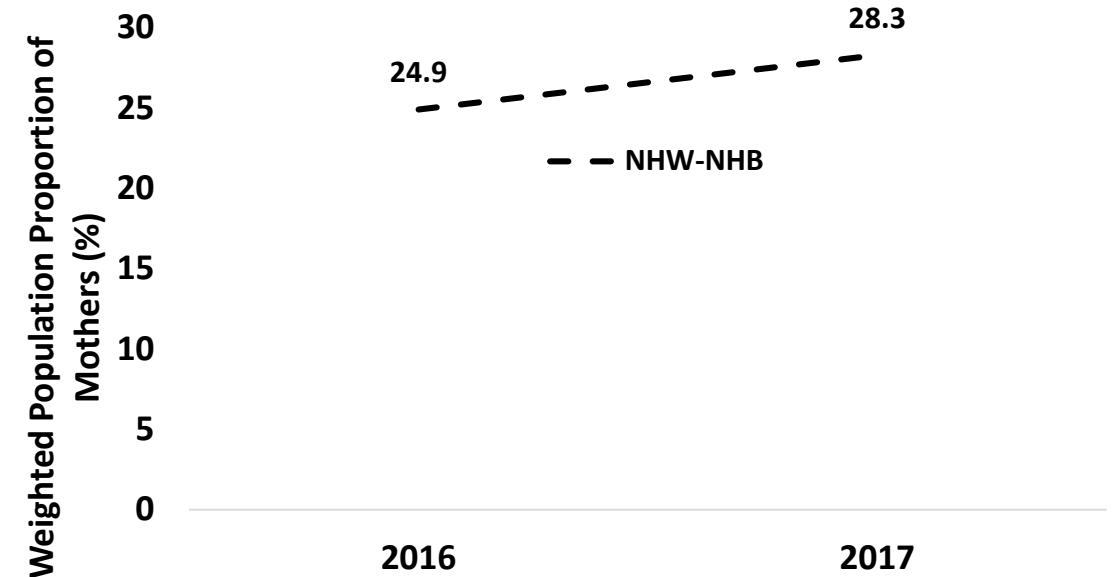
**Infant Sleeps In Sleep Sack or Wearable Blanket  
MI PRAMS 2016-2017**



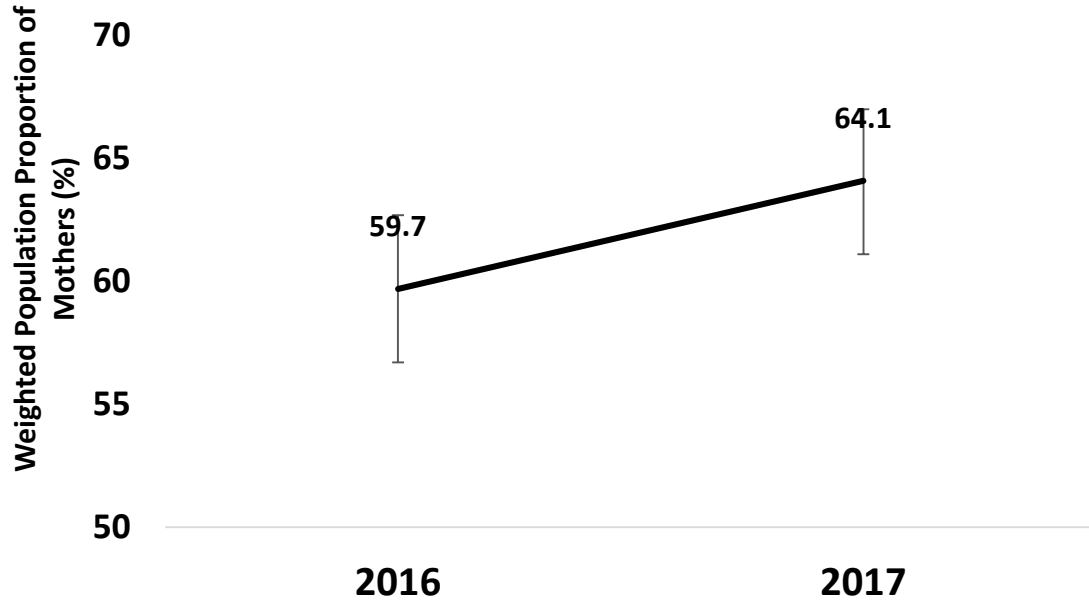
**Infant Sleeps In Sleep Sack or Wearable Blanket  
by Maternal Race / Ethnicity; MI PRAMS 2016-2017**



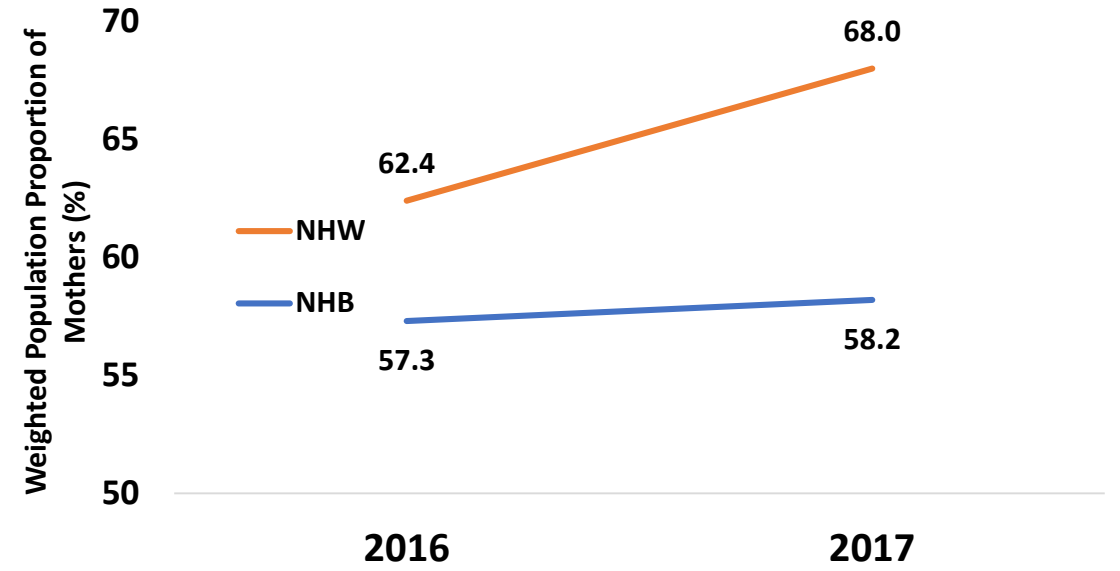
**Infant Sleeps In Sleep Sack or Wearable Blanket  
Rate Difference by Race / Ethnicity; MI PRAMS 2016-2017**



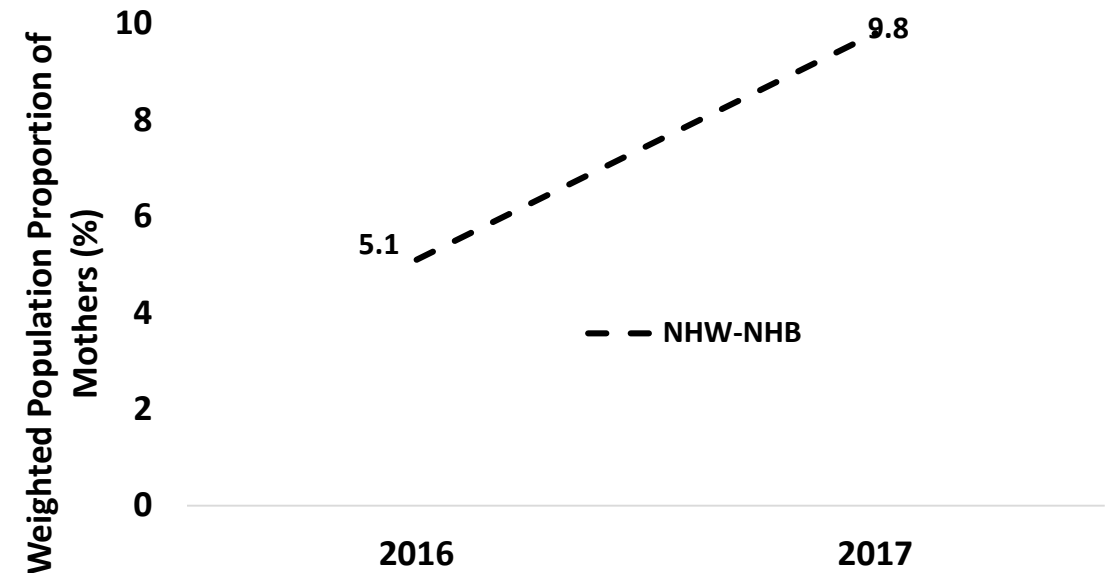
**Infant Does Not Sleep With Blanket  
MI PRAMS 2016-2017**



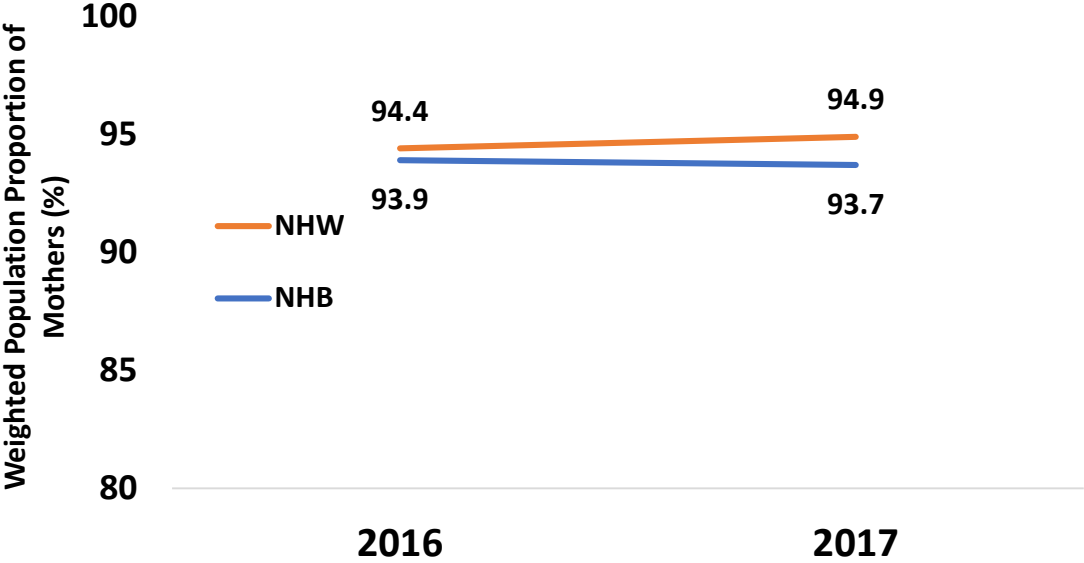
**Infant Does Not Sleep With Blanket  
by Maternal Race / Ethnicity; MI PRAMS 2016-2017**



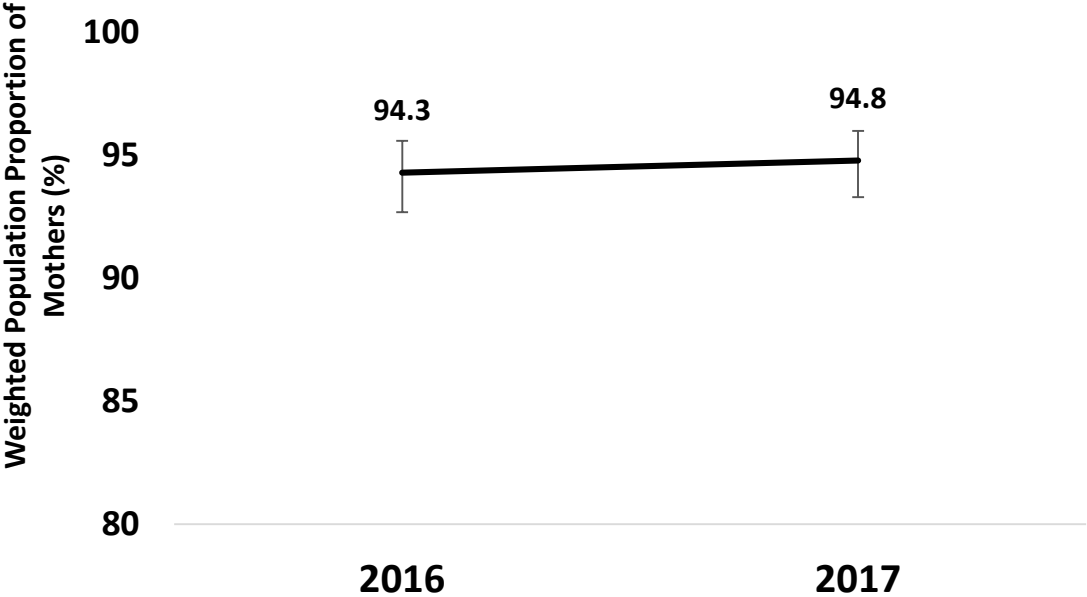
**Infant Does Not Sleep With Blanket  
Rate Difference by Race / Ethnicity; MI PRAMS 2016-2017**



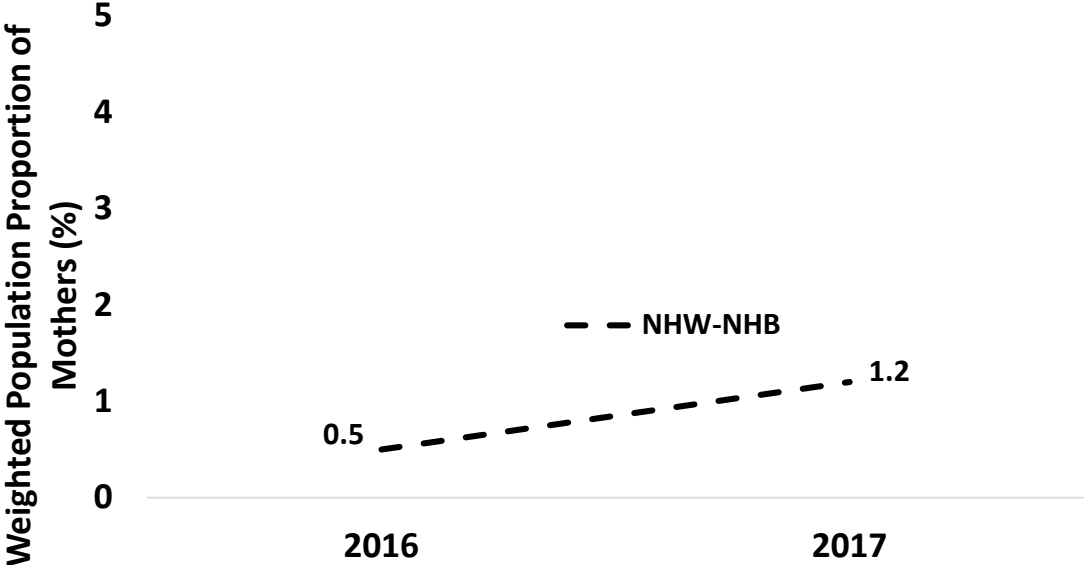
**Infant Does Not Sleep With Toys | Cushions | Pillows  
by Maternal Race / Ethnicity; MI PRAMS 2016-2017**



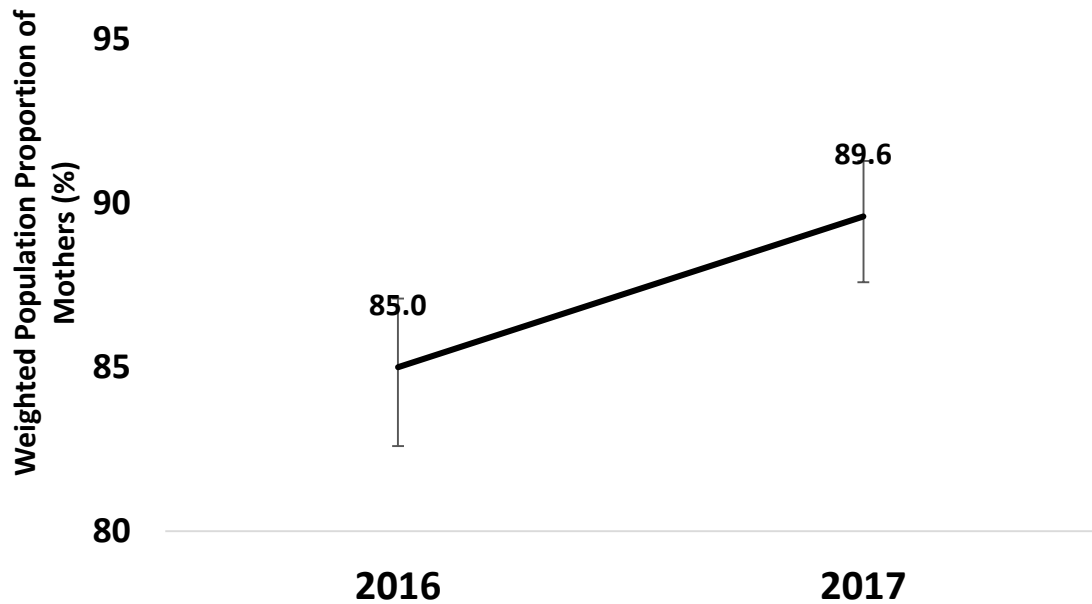
**Infant Does Not Sleep With Toys | Cushions | Pillows  
MI PRAMS 2016-2017**



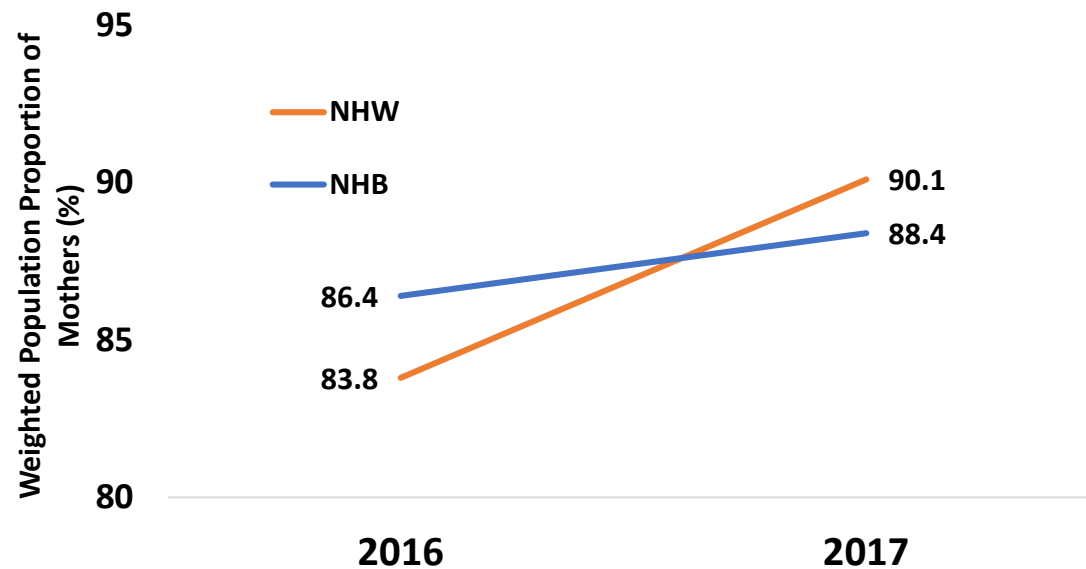
**Infant Does Not Sleep With Toys | Cushions | Pillows  
Rate Difference by Race / Ethnicity; MI PRAMS 2016-2017**



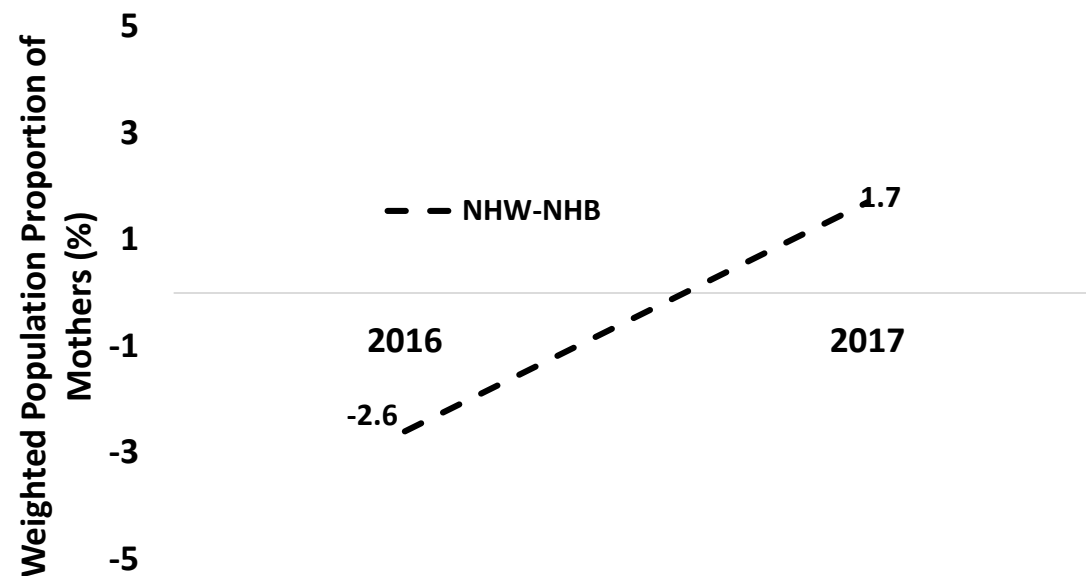
**Infant Does Not Sleep With Crib Bumpers  
MI PRAMS 2016-2017**



**Infant Does Not Sleep With Crib Bumpers  
by Maternal Race / Ethnicity; MI PRAMS 2016-2017**



**Infant Does Not Sleep With Crib Bumpers  
Rate Difference by Race / Ethnicity; MI PRAMS 2016-2017**



# No Time to Run These!

**54. Did a doctor, nurse, or other health care worker tell you any of the following things?**

For each thing, check **No** if they did not tell you or **Yes** if they did.

- |   | No                       | Yes                      |
|---|--------------------------|--------------------------|
| a. Place my baby on his or her back to sleep .....                            | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Place my baby to sleep in a crib, bassinet, or pack and play .....         | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Place my baby's crib or bed in my room ..                                  | <input type="checkbox"/> | <input type="checkbox"/> |
| d. What things should and should not go in bed with my baby .....             | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Place my baby alone to sleep with no other people in the sleep space ..... | <input type="checkbox"/> | <input type="checkbox"/> |

# Outline 6

- What is PRAMS?
- Sleep Position
- Sleep Space / Objects / Cosleeping
- Cumulative Sleep Hazards
- Latest Safe Sleep Data
- **Conclusions**

- "After my baby was born I really wanted some type of home visiting program. My baby had some feeding issues and we struggled with sleep issues. I was desperate for help but nothing was available because we were not low income or working with CPS. We would have been more than happy to pay for services- but that wasn't available. Just because a person has a good income, does not mean they know anything about babies."
- PRAMS mom, 2012

# Strengths and Limitations - General

## Strengths

- Random selection
- Response rate 50-60%
- Weighted
- Consistent methodology
  - Compare over time
  - Compare between states
- Oversample
  - Low-birth weight
  - Black
- Non-responder adjustments
- "Honest" answers

## Limitations

- Sample-based study
- Single point in time
- Live births
- English speakers
- Lower respondents from some at-risk groups
  - Hispanic
  - Non-white, non-black
  - Age <20
- Potential biases:
  - Responders vs non-responders
  - Socially desirable responses
  - Recall bias
  - Unmeasured confounders?

# MI PRAMS People

- **MDHHS**

- Chris Fussman, MS
- Patricia McKane, DVM MPH
- Jill Hardy
  - Abby Wallace
  - Omar Said
- Mei You, MS
- Carol Davis
- Karen Andruszewski

- **Larry Hembroff Survey Consulting**

- **CDC**

- Nan Ruffo MPA
- Tanya Williams MPH

- **Rutgers Bloustein Center for Survey Research (2016 -->)**

- Nancy Wolff
- Vanessa Loyola | Griselda Villanueva

- **Michigan State University Office for Survey Research**

- (1987 - 2015)



# Discussion / Future Directions

64. Which of the following people spend time taking care of your new baby when you are at school, work, or appointments?

**Check ALL that apply**

- My husband or partner
- Baby's grandparent
- Other close family member or relative
- Friend or neighbor
- Babysitter, nanny, or other child care provider
- Staff at day care center
- Other \_\_\_\_\_ → Please tell us:  
\_\_\_\_\_
- My baby is always with me while I am at school, work, or appointments

68. In the *last week*, how much time, on average, did you spend sleeping each night?

- 0-3 hours
- 4-6 hours
- 7-8 hours
- 9+ hours

69. In the *last week*, how many times, on average, did you wake up at night?

- \_\_\_\_\_ Times
- I don't know