



- **Researcher:**
Amy Damashek, PhD
- **Population Health Research Team Project:**
Safe Sleep Practices and Sleep-Related Deaths in Kalamazoo - “Evaluation of the Talking About Safe Sleep Training”
(WMU IRB# 17-02-08)
- **Suggested Citation:**
Damashek A, Dickson C, Lenz D, Lubwama G, Kothari C. Mothers’ Reported Knowledge of, Practices, and Barriers to Engaging in Infant Safe Sleep. Oral Presentation at: Western Michigan Homer Stryker M.D. School of Medicine 37th Annual Kalamazoo Community Medical and Health Sciences Research Day; April 17, 2019; Kalamazoo, MI.

Mothers' Reported Knowledge of, Practices, and Barriers to Engaging in Infant Safe Sleep

Amy Damashek, Ph.D.,¹ Cheryl Dickson, MD, MPH,² Debra Lenz, M.A.,³ Grace Lubwama, Ph.D.,⁴ MPH, and Catherine Kothari, Ph.D.²

Western Michigan University,¹ Western Michigan University Homer Stryker M.D. School of Medicine,² Kalamazoo County Health and Community Services,³ Kalamazoo YWCA⁴



Background

- Infant mortality – serious public health problem in the U.S.
 - Higher than 25 comparably developed nations (MacDorman et al., 2014)
- Significant racial disparity in the U.S.
 - 2:1 for African American versus white infants nationally (MacDorman et al., 2014)
 - Regional variations
 - In Kalamazoo, disparity is approximately 3:1 (MDHHS, 2019)
- Sleep-related deaths – preventable cause of death during infancy (Sleep-Related Infant Deaths in Kalamazoo County Fact Sheet, 2017)
 - Racial and income disparities
 - In Kalamazoo, 75% of sleep-related deaths occur to African-American or multiracial infants
 - 94% of deaths occur to infants with public funded insurance

Background (cont'd)



- American Academy of Pediatrics has published guidelines to prevent sleep-related deaths
 - ABC's – alone, on their back, in a crib or pack and play
- Families experience barriers to following these guidelines
 - Some previous research has found that African American mothers are more likely to co-sleep (Hauck, Signore, Fein, & Raju, 2008; Salm Ward, Robb, & Kanu, 2016).
- Given racial disparity in sleep-related deaths in Kalamazoo,
 - Important to examine:
 - Mothers' knowledge and practices regarding AAP guidelines
 - Whether practices vary by race or other demographics

Study Goals

- Examined community mothers' knowledge of, reported practices, and barriers to following safe sleep guidelines.
- Examined whether safe sleep practices varied by maternal demographics characteristics (i.e., race and insurance status).



Methods: Moms Experiences Survey

- 244 women who gave birth at Bronson or Borgess were recruited during postpartum hospital stay
 - Kalamazoo County resident, spoke English, medically cleared to participate, no significant cognitive impairment
- Race: 63% White, 27% Black, 10% Other
- 5% Hispanic, 95% Non-Hispanic
- 50% Medicaid insurance status
- 17% infants born premature



Methods (cont'd)



- Data abstracted from medical records
 - Demographics, infant prematurity status (y/n), enrollment in home visiting services (y/n)
- 30 minute telephone survey at 2-4 months postpartum
 - Included questions on safe sleep knowledge, practices, and barriers to following AAP safe sleep guidelines
 - Safe sleep practices assessed with 5 yes/no questions
 - Knowledge and barriers assessed via open ended questions that were coded.

Survey Questions



- Yes/No Questions – My baby sleeps...
 - in a crib or portable crib.
 - on a firm or hard mattress.
 - with pillows, a bumper pad, a thick blanket or stuffed toys.
 - with an infant positioner.
 - with me or another person.
- Open-ended questions:
 - Who: “There is a lot of advice these days about how babies should be put to sleep. Who has directly talked to you about this?”
 - Knowledge: “What do you remember them telling you?”
 - Barriers: “The safest way to put your baby to sleep is Alone, On Their Back, In A Crib Or Pack N Play. There are a lot of things that can get in the way of following these recommendations. What is the hardest part for you?”

Results: Safe Sleep Knowledge

- 98% reported someone talked to them about safe sleep.
 - Hospital staff: 71%
 - Pediatricians: 53%
 - Home visitors: 12%
 - OB: 11%
 - Family: 10%
- Safe sleep guidelines recalled:
 - Back to sleep: 90%
 - No objects in sleeping surface: 74%
 - Place baby in crib or pack-n-play: 48%
 - **Baby sleeps alone: 39%**
 - **Firm/flat surface: 32%**



Results: Safe Sleep Practices

- 95% reported that they follow 4/5 safe sleep practices:
 - Back to sleep, no objects in sleeping surface, place baby in crib or pack-n-play, firm/flat surface
- 86% of women reported that their baby does not co-sleep
 - **14% said their infant sleeps with them or another person**



Results: Safe Sleep Practices x Demographics

- Safe sleep practices not associated with:
 - Insurance status (Medicaid or private)
 - Infant prematurity
 - Participation in home visiting services
- Data trends
 - Ethnicity – trend for Hispanic mothers to be less likely to place their infant on a firm/flat surface ($\chi^2 = 3.3, p = .07$).
 - Race - trend for mothers of color to be more likely to co-sleep ($\chi^2 = 3.1, p = .08$)
 - White mothers (12%), African American (13%), Other (32%)

Results: Barriers to Following Safe Sleep Guidelines

- No barriers reported: 42%
- Of those who reported barriers – top 3 barriers:
 - **Baby sleeping alone: 71%**
 - Baby sleeping back: 10%
 - Keeping items out of crib: 7%
- Top 3 Barriers to baby sleeping alone:
 - Difficulty getting baby to sleep: 36%
 - Barriers related to breastfeeding: 19%
 - Exhaustion: 14%



Discussion

- Mothers were least likely to recall guidelines related to refraining from co-sleeping and placing infants on a firm/flat surface
 - More emphasis on these needed in safe sleep education
- Mothers reported that refraining from co-sleeping was the most difficult guideline to follow
 - Most often related to difficulty getting infants to fall asleep
 - Interventions should help mothers problem solve barriers to placing babies to sleep alone

Discussion (cont'd)

- Despite differences in rates of sleep-related deaths by race and income
 - Income and was not significantly associated with safe sleep practices.
 - African American women were not more likely to co-sleep.
 - Mothers of “other” races were more likely to co-sleep.
 - Difficult to interpret given the small numbers of women from different backgrounds in this category.
 - Additional research is needed – perhaps focus groups.
- Limitations
 - Maternal self-report of practices
 - Need larger representation of “other” races

Thank you and Questions?

- United Way of the Kalamazoo and Battle Creek Region
- Survey participants

