

• **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 37<sup>th</sup> 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.,<sup>1</sup> Cheryl Dickson, MD, MPH,<sup>2</sup> Debra Lenz, M.A.,<sup>3</sup> Grace Lubwama, Ph.D.,<sup>4</sup> MPH, and Catherine Kothari, Ph.D.<sup>2</sup>

Western Michigan University,<sup>1</sup> Western Michigan University Homer Stryker M.D. School of Medicine,<sup>2</sup> Kalmazoo County Health and Community Services,<sup>3</sup> Kalamazoo YWCA<sup>4</sup>



# 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 (МDHHS, 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)

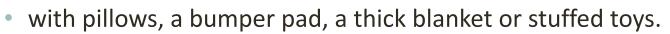


- Data abstracted from medical records
  - Demographics, infant prematurity status (y/n), enrollment in home visiting services (y/n)

- 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 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

