

# HEALTHY START LOCAL EVALUATION REPORT

PROJECT NAME: *Kalamazoo County MI Healthy Babies-Healthy Start*

TITLE OF REPORT: *Mothers' Reported Knowledge of, Practices, and Barriers to Engaging in Infant Safe Sleep*

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## Section I: Introduction

Infant mortality is a serious public health problem in the U.S.; the infant mortality rate in the U.S. is higher than 25 comparably developed nations (MacDorman et al., 2014). In the U.S. there is a significant racial disparity for infant mortality. While there are regional variations, nationally, there is a 2:1 ratio for African Americans versus white infants (MacDorman et al., 2014). In Kalamazoo, this disparity is approximately 3:1 (MDHHS, 2019).

Sleep-related deaths are preventable causes of death during infancy and are one of the most common causes (Sleep-Related Infant Deaths in Kalamazoo County Fact Sheet, 2017). For these deaths, racial and income disparities exist. Infants of color are more likely than are white infants to die as a result of sleep related deaths. In Kalamazoo, 75% of sleep-related deaths occur to African American or multiracial infants and 94% of deaths occur to infants with public funded insurance.

The American Academy of Pediatrics has published guidelines to prevent sleep-related deaths such as the ABC's; alone, on their back, in a crib or pack and play. Despite the publication of these guidelines, families may experience barriers to following them. 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 the racial disparity in sleep-related deaths in Kalamazoo, it is important to examine mothers' knowledge and practices regarding AAP guidelines and whether practices vary by race or other demographics.

The purpose of this study was to examine community mothers' knowledge of, reported practices, and barriers to following safe sleep guidelines in Kalamazoo. Additionally, the study examined whether safe sleep practices varied by maternal demographics characteristics (i.e., race and insurance status).

## Section II: Process

*Design.* For this study, women were recruited from the postpartum floors of two Kalamazoo hospitals. At 2-4 months postpartum, 30-minute telephone surveys about safe sleep knowledge and practices as well as barriers to engaging in safe sleep were conducted. Additional data, such as demographics, were abstracted from medical records.

*Sample.* A total of 272 women were recruited for this study. All participants were Kalamazoo County residents, spoke English, were medically cleared to participate, and had no significant cognitive impairment. Of the 272 women, 63% were White, 27% Black, and 10% classified as Other. The sample population consisted of 95% non-Hispanic women, 5% Hispanic, and 50% had Medicaid insurance status. From the total 272, 17% infants were born premature.

*Measures.* Survey questions were utilized to assess prematurity status, service

## HEALTHY START LOCAL EVALUATION REPORT

enrollment, safe sleep practices, and knowledge and barriers. Yes and no (y/n) formatted questions were used as well as coded open-ended questions.

### Section III: Findings/Discussion

*Results.* Study participants were asked the following yes or no questions, “My baby sleeps; (1) in a crib or portable crib, (2) on a firm or hard mattress, (3) with pillows, a bumper pad, a thick blanket or stuffed toys, (4) with an infant positioner, (5) with me or another person. Participants were then asked these 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?” and, *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?”.

In regard to safe sleep knowledge, 98% of participants reported someone talked to them about safe sleep. In most cases, it was a hospital staff (71%) or pediatrician (53%). The most common guidelines recalled were placing a child on their back (90%) and putting nothing in the sleeping space with the baby (74%). Fewer mothers noted the importance of placing a baby in a crib or pack-and-play (48%), sleeping alone (39%), or lying on a firm flat surface (32%).

Most women (95%) reported following four of five safe sleep practices; back to sleep, no objects in sleeping surface, place baby in crib or pack-n-play, and firm/flat surface. Although 86% of women reported that their baby does not co-sleep, 14% still reported engaging in co-sleeping. The study found that safe sleep practices were not associated with insurance status (Medicaid or private), infant prematurity or participation in home visiting services. Data trends suggest that Hispanic mothers are less likely to place their infant on a firm/flat surface ( $\chi^2 = 3.3$ ,  $p = .07$ ). Trends further suggest that mothers of color, African American 13%, and Other 32%, are more likely to co-sleep than White mothers 12% ( $\chi^2 = 3.1$ ,  $p = .08$ ).

Regarding barriers to following safe sleep guidelines, 42% reported having no barriers. Of those who reported having barriers to engaging in safe sleep (58%), the top 3 barriers were; baby sleeping alone (71%), baby sleeping back (10%), and keeping items out of crib: 7%. The top 3 barriers to baby sleeping alone were as follows; difficulty getting baby to sleep (36%), barriers related to breastfeeding (19%) and exhaustion (14%).

*Discussion.* Mothers were least likely to recall guidelines related to refraining from co-sleeping and placing infants on a firm/flat surface. Mothers reported that refraining from co-sleeping was the most difficult guideline to follow. This was most often related to difficulty getting infants to fall asleep. Despite differences in rates of sleep-related deaths by race and income, income was not significantly associated with safe sleep practices. African American women were not more likely to co-sleep, mothers of “other” races were. This may be difficult to interpret given the small numbers of women from different backgrounds in the “other” category. This study has potential limitations. Measures included maternal self-report of practices which may create bias. Since there was a small representation of “other” races, the study could benefit from a larger representation.

## HEALTHY START LOCAL EVALUATION REPORT

### Section IV: Conclusions & Recommendations

Infant mortality is a serious public health problem in the U.S. Engaging in safe sleep practices is important to help reduce and prevent infant sleep related deaths. Refraining from co-sleeping is the most common safe sleep guideline that mothers have difficulty following in our local community. Interventions should help mother's to problem solve barriers to placing babies to sleep alone. More emphasis on this is needed in safe sleep education. Additional research is needed with women from different backgrounds.