

A Qualitative Evaluation of Infant Safe Sleep Following Free Crib Provision

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Conflict of Interest Disclosure: None.

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ABSTRACT

Introduction. Unsafe sleep practices are a leading cause of infant mortality in the United States. Authors of this qualitative study examined parental perceptions and reported practices related to infant safe sleep among families who received a free portable crib after their infant's birth. Specifically, authors explored whether families used the portable crib to provide a safe sleep environment for their infants.

Methods. Parents of infants aged 2 to 11 months who received a free portable crib were invited to participate in a structured 11-question interview assessing safe sleep perceptions and practices, including crib use. Eleven families participated in the study.

Results. Six themes emerged from the interviews: (1) parents recalled receiving safe sleep counseling, often in considerable detail; (2) many parents initially planned to bed-share before receiving the crib; (3) reported sleep practices frequently differed from established safe sleep recommendations; (4) parents described multiple reasons for not consistently following recommendations; (5) participants supported the continued provision of free cribs and safe sleep counseling; and (6) parents generally found the crib helpful, although it often was used alongside other sleep arrangements.

Conclusion. Although parents recalled receiving safe sleep counseling, reported sleep practices frequently did not align with recommended guidelines. Further research is needed to better understand this gap and to identify strategies that improve adherence to safe sleep recommendations.

INTRODUCTION

To reduce the risk of sleep-related infant death, the American Academy of Pediatrics recommends that infants sleep in the same room as their parents, but on a separate sleep surface such as a crib or bassinet. Infants should be placed in the supine position on a flat, firm mattress with a fitted sheet and no additional objects in the sleep environment. Pacifier use is encouraged when appropriate, and exposure to smoke

should be avoided.¹

Unsafe sleep practices remain a leading cause of infant mortality, contributing to approximately 3,700 Sudden Unexpected Infant Deaths (SUID) annually in the United States. SUID includes Sudden Infant Death Syndrome (SIDS), accidental suffocation and strangulation in bed, and deaths from unknown causes among infants younger than 12 months.² In Kansas, SUID is the second leading cause of infant mortality after congenital anomalies and accounted for 20.8% of infant deaths from 2016 to 2020. Among infants older than 27 days, SUID is the leading cause of death.³

Multiple interventions have been implemented to reduce SUID, most commonly educational initiatives targeting health care professionals and families. Some programs also provide safe sleep resources, including portable cribs, sleep sacks, pacifiers, and fitted sheets.⁴⁻⁶ Prior studies suggest that providing a safe sleep space, particularly for families at high social risk, may increase the use of recommended sleep environments and reduce unsafe practices such as bed-sharing.⁴⁻¹² However, the generalizability of these findings is limited by variation in adoption of safe sleep recommendations across populations.⁴ In addition, studies evaluating hospital-based crib distribution programs have been limited by demographic differences and potential confounding from concurrent public health campaigns.⁸

In this qualitative study, we examined parental perceptions and reported practices related to infant safe sleep among families who received a free portable crib from an academic medical center. Cribs were distributed through the newborn nursery, neonatal intensive care unit, or pediatric clinic between July 2021 and July 2022. Social workers provided cribs to families identified as lacking a safe sleep space and the financial means to obtain one. The purpose of this study was to better understand how parental perceptions and reported safe sleep practices may change following receipt of a portable crib.

METHODS

Design and Procedures

Eligible participants were parents who received a free portable crib through our academic medical center. Parents younger than 18 years who were not emancipated minors were excluded. A total of 114 parents of infants aged 2 to 11 months were identified for recruitment. Using a list pro-

vided by social workers, interviewers (KB, MB) contacted participants by telephone, making up to three attempts per parent using contact information from the infant's medical record. Certified interpreters were used when needed.

Parents who agreed to participate provided verbal consent in accordance with a University of Kansas Medical Center Institutional Review Board-approved protocol (STUDY00147829; flexible review). Interviews were conducted by telephone or Zoom based on participant preference. Participants received \$30 for telephone interviews and \$50 for Zoom interviews; the higher incentive for Zoom participation reflected the study team's interest in visually assessing infant sleep environments.

Author followed the COREQ (Consolidated Criteria for Reporting Qualitative Research) guidelines in conducting this study, with senior researchers (CA, AD) providing oversight to ensure methodological rigor.¹³

Measures

In addition to the structured interview, demographic information; including age, sex, relationship to the infant, preferred language, and crib distribution site, was collected to characterize the study population.

Interviewers (KB, MB) were trained in qualitative interviewing using the Morgan and Krueger framework, which emphasizes probing to elicit detailed responses.¹⁴ Interviews were conducted either during the initial contact or at a later time convenient for participants. All interviews were audio-recorded and transcribed. For Zoom interviews, audio recordings were used for transcription. Transcripts were prepared by Transcription Professionals, and Spanish-language interviews were translated into English when necessary.

Interviews followed a structured 11-question guide designed to assess parental perceptions and practices related to infant safe sleep after receipt of the crib (See Supplemental; only available online at journals.ku.edu/kjm). The interview guide was developed by the study team, including experts in infant safe sleep (KB, CA, CS) and qualitative methods (AD), using the Morgan and Krueger framework.¹⁴ Interviews were conducted between March and November 2022.

Data Analysis

Qualitative data were analyzed using the Morgan and

Krueger framework, which emphasizes thematic analysis.¹⁴ Transcripts were de-identified before analysis. The analytic team included three trained coders (KB, MB, DD) and one qualitative research expert (AD).

Each coder independently reviewed transcripts to develop an initial codebook and subsequently applied codes to the data. The team met iteratively to compare coding, resolve discrepancies, and refine codes through a consensus-based process. As themes were developed and finalized, previously coded transcripts were reviewed and recoded as needed to ensure consistency.

Analysis reached thematic saturation, with no new themes emerging,¹⁴ after which representative quotes were selected to illustrate each theme. Participant demographic data were summarized using descriptive statistics.

RESULTS

Eleven parents who received a portable crib through our academic medical center participated in the study. Participants had a mean age of 37.6 years (range, 28-51 years), and most were female (91%). Ten participants identified their relationship to the infant as mother, and one identified as father.

Most participants were non-English speaking (73%). Seven interviews were conducted in Spanish (six with certified interpreters and one by a bilingual interviewer [KB]), one interview was conducted in Swahili using a certified interpreter, and three were conducted in English. Infants ranged in age from 2 to 9 months (mean, 5.5 months). Most participants received their crib through the hospital's newborn nursery. Additional demographic information is presented in Table 1.

Using the Morgan and Krueger framework,¹⁴ themes were derived inductively from the interview data. Six themes emerged, at which point thematic saturation was achieved.

Theme #1

Parents remembered receiving safe sleep counseling and often recalled it in detail. Parents were able to describe specific safe sleep recommendations and frequently referenced education provided by health care professionals, including pediatricians and nurses. Education was received during both the prenatal and postnatal periods and in inpatient and outpatient settings. One parent recalled:

I remember that what they told me was that...O. needed

Table 1. Participant characteristics.

Measure	n (%)
Parent age [years]	
20-29	1 (9)
30-39	8 (73)
40-49	1 (9)
50-59	1 (9)
Parent sex	
Female	10 (91)
Male	1 (9)
Relation to infant	
Mother	10 (91)
Father	1 (9)
Language	
English	3 (27)
Spanish	7 (64)
Swahili	1 (9)
Infant Age at Time of Interview	
2 months	1 (9)
4 - 6 months	6 (55)
7 - 9 months	4 (36)
Crib Distribution Location	
Newborn nursery	10 (91)
Neonatal intensive care unit	1 (9)

to sleep alone inside his crib and that there shouldn't be any teddy bears, any stuffed animals. There shouldn't be any sheets...any drapes or any other objects like pillows with which he might suffocate himself...They told me he was supposed to sleep...facing up and never facing down.

Parents commonly noted that the crib should contain no additional objects and that the mattress should be firm. However, one parent recalled being told that her infant should sleep “mostly on the side when she can but mostly on her back,” which is inconsistent with current recommendations for infants to sleep supine unless medically contraindicated.

Parents also reported receiving safe sleep advice from family members, friends, social workers, and counselors, although health care professionals were the primary source of recalled guidance. Several parents emphasized that health care workers strongly reinforced safe sleep recommendations. One parent stated health care professionals were “very strict about and very emphatic” about having the infant sleep alone, which influenced her child sleeping in the crib “all the time.” Another parent referenced safe

sleep statistics, noting that “not [only] in the United States but statistically all over the world there are high numbers indicating that the parents themselves can end up suffocating their own babies...and that’s why they need to sleep by themselves.”

Theme #2

Many parents planned to bed-share before receiving the free crib. Before receiving the crib, 7 of the 11 parents reported plans to have their infant sleep in bed with them. One participant stated, “I planned for him pretty much to sleep in the bed with me.” Another recalled, “I was thinking that she was just going to have to sleep with me, but then the nurses told me about [the free crib].”

Theme #3

Parents described sleep practices that often differed from safe sleep guidelines. Parents reported a range of infant sleep practices, several of which were inconsistent with recommended safe sleep guidelines. One parent described both the sleep environment and the involvement of another child in caregiving:

Sometimes if my son is caring for her, he sleeps with her in his bed for a short while...This is a blanket that I put down...so it’s not so hard...I cover her with this [other blanket]. And the ones in the crib are to make it softer.

Another participant stated, “...But mostly he also sleeps with me on my bed.” The use of blankets and pillows in the sleep environment was commonly reported. For example, one parent stated, “No, there are not a lot of things on the bed. It’s just this blanket,” while another explained, “As I said, when she sleeps, it’s her in her crib only with her blanket.”

Theme #4

Parents identified multiple barriers to following safe sleep guidelines. Parents described several reasons for not consistently following safe sleep recommendations, including generational practices, cultural influences, and concerns about infant comfort. One parent explained the use of blankets as a longstanding family tradition: “...They’re fine... Our family’s...done it from generation to generation and...none of the babies got smothered or anything with the blankets.”

Other parents described continuing practices based on

previous experiences caring for infants. Some participants also believed that infants were safer sleeping with another person present to monitor them. One parent stated, “Like I said, every culture has a different way of doing it with babies,” while another summarized the challenge by saying, “old patterns die hard.”

Cultural influences were discussed frequently, particularly among Spanish-speaking participants. One parent explained:

I know that we have a Hispanic culture, and we get to think, well how can we let the baby sleep by themselves? What if something happens to them? When, in reality, something can happen to them if we don’t implement these types of habits to put them to sleep on their own with nothing around them...

Another parent compared practices in her home country, noting that safe sleep recommendations there were not as “strict,” and expressed appreciation for the education she received in the United States.

Three parents also identified infant comfort as a barrier, specifically describing crib mattresses as too firm. To make the sleep surface softer, some participants reported placing blankets or additional mattresses in the crib. One parent stated, “This is a blanket that I put down there so it’s not so hard,” while another commented, “On the crib that she’s sleeping on right now, I think she’s more comfortable because the mattress is softer.”

Theme #5

Parents supported continued crib distribution and safe sleep counseling. Participants strongly supported continued safe sleep education and free crib distribution programs. One parent stated:

I really think that it’s a very good thing that you can get the crib, especially for people like me that don’t have one and aren’t able to provide one at the moment. So that was, I think, that was a really good thing to do. And it’s really helpful.

Regarding education, another parent stated:

Well, basically to keep hammering the idea...because I didn’t know [the guidelines] in the past...I feel that most

parents are going to follow suit...The fact that many people have repeated it over time had made an impact on what I...did.

Another participant added that teaching safe sleep practices to parents with multiple children was “never in vain.”

Theme #6

Parents found the free crib helpful and often used it alongside other sleep arrangements. Parents frequently used the free crib in the home and described it as useful in multiple settings. One parent stated, “She has a daybed in the living room, like a bassinet.” Participants appreciated that the portable crib was lightweight and easy to move throughout the home or position beside the parent’s bed. Parents also reported using the crib to safely supervise infants while performing household tasks such as cooking or cleaning. As one parent explained, “It’s really helpful...the kitchen is upstairs so that’s where I keep the first crib that she used, the first crib that was gifted.”

DISCUSSION

In this qualitative study, we explored parental perceptions and self-reported practices related to infant safe sleep after families received a free portable crib from their infant’s health care team. Six themes emerged from the interviews: (1) parents remembered receiving safe sleep counseling and often recalled it in detail; (2) many parents planned to have their infants sleep in bed with them before receiving the free crib; (3) parents described several sleep practices that did not align with safe sleep guidelines; (4) parents identified multiple reasons for not consistently following the guidelines; (5) parents recommended continued provision of free cribs and safe sleep counseling; and (6) parents generally found the crib helpful and often used it alongside other sleep arrangements. Overall, parents were familiar with safe sleep recommendations and expressed appreciation for receiving a free crib. However, many also described barriers that affected adherence to safe sleep practices at home.

Although parents often remembered and could accurately describe safe sleep recommendations, relatively few consistently reported placing their infants in fully safe sleep environments. This suggests a gap between knowledge and practice. Parents identified several reasons for not follow-

ing guidelines, including cultural and family traditions, prior sleep practices used with older children, beliefs that infants preferred softer bedding, perceptions that loose objects in the crib were not dangerous, and decisions made by other caregivers. Additional research is needed to better understand this disconnect and identify strategies that improve translation of safe sleep knowledge into practice.

Several findings may also inform clinical practice. First, parents strongly supported continued distribution of free portable cribs and valued their portability, which allowed use in multiple areas of the home. Second, parents encouraged health care professionals to continue providing respectful and repeated safe sleep counseling. Third, some parents reported difficulty assembling the crib, suggesting that staff may consider assisting families with setup before discharge. Finally, parents frequently modified sleep environments to make them softer or more comfortable for infants. Increasing provider awareness of these perceptions may help expand counseling to better address why these adaptations may increase risk.

These findings are consistent with a systematic review of 29 infant safe sleep studies showing that most interventions improve self-reported safe sleep behaviors but do not result in full adherence to recommendations.⁶ At our academic medical center, safe sleep education varied across clinical settings, and no standardized educational intervention accompanied crib distribution. Nevertheless, participants commonly recalled safe sleep recommendations and supported ongoing education efforts. This aligns with prior literature demonstrating that education is a core component of most successful safe sleep interventions.^{4,7-12}

This study has several limitations. Findings were based on parent self-report, and infant sleep environments were not observed while infants were sleeping. Although only 11 participants were included, thematic saturation was achieved. However, participant heterogeneity may limit generalizability. Further research is needed to better understand and address the gap between safe sleep knowledge and implementation.

CONCLUSIONS

For many families, the free crib provided a safe sleep option that may not otherwise have been available based on their planned sleep arrangements prior to receiving the crib.

Although parents demonstrated substantial knowledge of and support for safe sleep recommendations, a gap remained between knowledge and reported practice. Parents identified multiple barriers to adherence and strongly encouraged health care professionals to continue counseling families on safe sleep guidelines.

ARTICLE INFORMATION

Received Jan. 15, 2026; Accepted for publication May 15, 2026; Published online June 26, 2026, *Kans J Med* 2026 May-Jun; 19:49-54. <https://doi.org/10.17161/kjm.vol19.25004>.

Acknowledgement: Authors thank the Children’s Miracle Network/KUMC Department of Pediatrics and the Kansas Infant Death and SIDS (KIDS) Network for their support on this project.

Financial Support: Sunflower Pediatric Clinical Trials (NIH UG1OD024943 to A Davis) and Children’s Miracle Network/University of Kansas Medical Center Department of Pediatrics.

Presentations: Presented at the American Academy of Pediatrics National Conference and Exhibition (Washington, DC, October 23, 2023) and the International Society for the Study and Prevention of Perinatal and Infant Death International Congress (Florence, Italy, October 6, 2023).

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Keywords: *infant; sudden infant death/prevention and control; sleep/physiology*