

CTF Safe Sleep Grant Program

Final Evaluation Report

Prepared for:
Children's Trust Fund

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About CRTS

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EXECUTIVE SUMMARY

In Missouri, reducing sleep-related infant injuries and deaths remains a key state goal. Under the direction of the Missouri Department of Social Services (DSS), Children's Division (CD) the Missouri Safe Sleep Coalition was formed in late 2016 consisting of several state and private community agencies and healthcare providers to develop, support and distribute consistent safe-sleep messaging statewide that aligns with the American Academy of Pediatrics (AAP) 2016 Recommendations for Safe Infant Sleeping Environments. As a result of this commitment, Children's Trust Fund (CTF), a member of the Coalition, launched its Safe Sleep Grant Program from July 1, 2021, through June 30, 2025, which funded five regional state grantees to distribute safe sleep surfaces and provide safe sleep education to Missouri communities. This CTF Safe Sleep Grant Program Evaluation Report will provide current understanding of the strengths and impacts of the Safe Sleep Grant Program and future opportunities for safe sleep programming in Missouri.

DESIGN

In collaboration with CTF, the University of Kansas School of Social Welfare (KUSSW), convened with leadership from each of the five regional safe sleep grantee programs, Safe Sleep Safe Babies Community Network (Children's Mercy Hospital), Nap Time, Bedtime, Every Time-Safe Sleep for Babies (The Community Partnerships of Rolla), Southwest Missouri First Birthday Safe Sleep Project (Community Partnerships of the Ozarks), Safe Sleep First (Nurses for Newborns), & Safe Sleep 4 Babies (St. Joseph Youth Alliance). To meet the goals of the Safe Sleep Grant Program Evaluation, KUSSW gathered safe sleep educational materials and resources from each grantee and worked with grantee representatives to develop and administer a standard pre/post training survey to program participants to:

- assess that program materials provided consistent messaging and aligned with AAP 2016 guidelines.
- assess the impact of each grantee program on safe sleep outcomes.
- identify areas of opportunities for ongoing safe sleep education.

The **PURPOSE** of the Safe Sleep Program **EVALUTION REPORT**

- 1 Overview of the five regional Safe Sleep Grant Project grantees
- 2 Understand how each grantee program overlaps with the AAP 2016 Recommendations for a Safe Infant Sleeping Environment (**Process Evaluation**)
- 3 Understand caregiver and provider experiences of the safe sleep programs and if it influenced compliance with AAP safe sleep guidelines (**Impact Evaluation**)
- 4 Determine the extent to which the safe sleep programs achieved its intended outcome of increasing safe sleep knowledge & reducing rates of sleep-related infant injuries and death (**Outcome Evaluation**)

What We Learned

Process Evaluation

Consistent and clear messaging that aligns with AAP safe sleep recommendations are key to ensure caregivers have evidence-based information available to them when establishing safe sleep environments for infants. Safe sleep program grantees shared safe sleep educational materials with their communities and with program participants through multiple sources (e.g., training materials, videos, billboards, placards, social media posts, etc.). KUSSW evaluators reviewed grantee materials and coded materials for consistency, overlap with AAP 2016 recommendations, and cultural responsiveness. Although not required of the grantees, the evaluators also coded if program material content overlapped with the updated AAP 2022 recommendations.

The Safe Sleep Grant Program evaluation found:

- All grantee program materials aligned closely with 2016 AAP safe sleep recommendations.
- Newer program materials incorporated some 2022 AAP safe sleep recommendations.
- Program content was consistently represented across all grantees and across all material sources.
- Safe sleep program materials did not address nuanced challenges related to safe sleep practices or how to navigate cultural or family traditions related to infant sleep.

Process Evaluation Key Findings

1

All grantee safe sleep program materials aligned with 2016 AAP safe sleep recommendations.

2

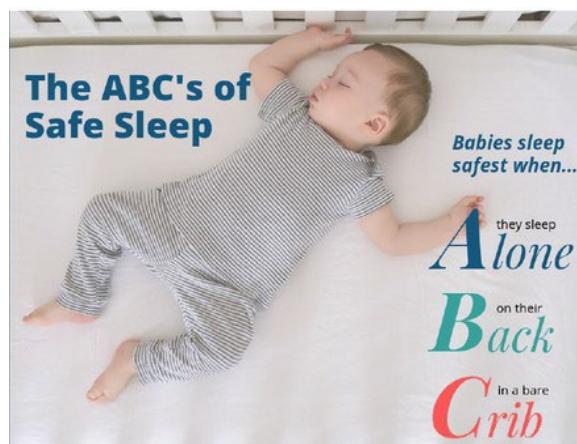
Newer grantee program material incorporated some 2022 AAP safe sleep recommendations.

3

Program content was consistent across grantees and all material sources.

4

Program materials lacked content to address common and nuanced challenges related to safe sleep practices or ways to help navigate cultural and family traditions.



*Example of a Safe Sleep Grant Program grantee's educational material analyzed for the Process Evaluation.

Impact Evaluation

The purpose of the impact evaluation was to understand the general operations and structures of the safe sleep programs and how it impacted caregivers and providers' experiences (e.g., professionals who may facilitate safe sleep trainings or deliver safe sleep information to their communities). KUSSW evaluators examined: 1) the reach of each safe sleep program grantee (e.g., number of caregivers and providers trained, number and types of safe sleep materials, safe sleep surfaces, distributed); 2) caregiver experience and impact receiving safe sleep training; and 3) providers' experience and impact receiving safe sleep training and their self-assessment of their ability to facilitate safe sleep programs to others.

The Safe Sleep Grant Program evaluation found:

- Over 8000 caregivers, 3000 pregnant caregivers, and over 900 providers (e.g., hospital staff, direct service providers, etc.) were cumulatively trained across all the Safe Sleep Grant Program grantee initiatives.
- Over 6000 cribs, 4000 wearable blankets/sleep sacks, and 5000 crib sheets were cumulatively distributed to Missouri families across all safe sleep grantee programs.
- Caregiver and provider safe sleep program participants indicated overall positive experiences and were highly satisfied with the training program they received.

- Most caregiver and provider program participants reported having gained safe sleep knowledge after completing their respective training, and providers indicated the trainings would help them when they facilitated training programs of their own in the future.
- Caregivers recommended that future safe sleep program trainings include more hands-on demonstrations to help address common challenges caregivers anticipated would occur when applying safe sleep recommended practices with their infants.
- Providers recommended including more ways to be more culturally responsive when addressing cultural norms that may be counter to AAP recommended safe sleep practices, and other novel ways to address challenges that caregivers discussed during trainings.

Safe Sleep Grant Program Reach Snapshot

8255	Total caregivers trained
3181	Total pregnant caregivers trained
929	Total providers trained
6337	Total portable cribs distributed
4800	Total wearable blankets/sleep sacks distributed
5546	Total crib sheets distributed

Across all Safe Sleep Grant Program grantee initiatives.

Outcome Evaluation

The outcome evaluation examined the extent to which the Safe Sleep Grant Program grantee initiatives improved caregiver and provider knowledge about safe sleep practices. Caregiver and provider participants responded to a CTF Standard Pre-/Post-Training Survey. Pre-training surveys were administered prior to any safe sleep information was delivered to participants and again after participants completed the training program. Provider participants also responded to self-assessment questions to understand their self-reported rating of their knowledge and confidence about teaching safe sleep recommended practices to others.

The Safe Sleep Grant Program evaluation found:

- All grantee safe sleep programs increased caregiver and provider knowledge.
- Across all grantee programs, most participants scored higher scores on the post-training survey than on the pre-training survey.
- Providers self-reported that they gained knowledge and felt more confident educating others about safe sleep recommended practices after completing a safe sleep training program.

Another goal of the outcome evaluation was to examine if the safe sleep grantee programs reduced sleep-related infant injuries and death rates. Sleep-related infant injuries and death data at the Safe Sleep Grant Program grantee initiative level or county level were not available to examine.

Outcome Evaluation Key Findings

1

Grantee safe sleep programs increased caregiver and provider knowledge

2

Most caregivers and providers scored higher on the post-training survey than on the pre-training survey

3

Provider participants self-reported they gained safe sleep knowledge and more confidence educating other on safe sleep recommended practices

However, the evaluators reviewed the 2023 Missouri Department of Social Services (DSS) Child Fatality Review Program (CFRP) Annual Report, additional historical reports, and CDC data to gain insight on statewide trends in sleep-related infant deaths. This review provided some contextualization of the Safe Sleep Grant Program within the broader state and national trends which revealed opportunities of ways safe sleep interventions could contribute to reductions in sleep-related infant injury and death at the state level in the future.

INTRODUCTION

Across the United States, sleep-related infant deaths remain a persistent public health concern. In 2017, 76% of all Missouri infant fatalities from non-medical causes were related to the infant's sleep environment.¹ These deaths are preventable, yet persistent disparities and inconsistent awareness, engagement, and knowledge about safe sleep practices place families at risk.

Sudden unexpected infant death (SUID) is an umbrella category that includes all sudden, unexpected deaths of a baby aged younger than one year. These deaths often happen during sleep or in the infant's sleep area and include sudden infant death syndrome (SIDS), accidental suffocation in a sleeping environment, and other sleep-related infant fatalities from unknown causes.² SIDS is a subcategory of SUID where the cause of death remains unexplained after a full investigation.³ Although the exact cause of SIDS remains unknown, current research and theories suggest multiple risk factors.⁴

Across the country, states, communities, and organizations have created and applied multiple interventions, programs, and campaigns to spread infant safe sleep guidelines, information, and resources for families and professionals, and a significant amount of research demonstrates success in many of these interventions and practices. In response to persistently high SUID rates in the state, the Missouri Safe Sleep Coalition developed the Missouri Safe Sleep Strategic Plan (SSSP), a 2019 campaign to reduce sleep related fatalities. The Strategic Plan builds upon these national successes, emphasizing unified messaging, cross-sector collaboration, and targeted engagement in communities disproportionately affected by SUID. To advance this work, the Safe Sleep Grant Program was established to equip hospitals and service providers with resources to deliver safe sleep education, outreach, and materials to promote infant safe sleep consistent with the Strategic Plan.

¹ Missouri Department of Social Services. (2017). *Missouri Child Fatality Review Program – 2017 Annual Report*. <https://dss.mo.gov/re/pdf/cfrar/2017-child-fatality-review-program-annual-report.pdf>

² Centers for Disease Control and Prevention. (2024, September 17). *About SUID and SIDS*. <https://www.cdc.gov/sudden-infant-death/about/index.html>

³ National Institute of Child Health and Human Development. (n.d.). *What is SIDS? Safe to Sleep*. <https://safetosleep.nichd.nih.gov/about/sids-definition>

⁴ For more information, see the National Institutes of Health's article on the Triple-Risk Model for describing how a SIDS death may happen, available at: <https://safetosleep.nichd.nih.gov/about/causes#framework>.

PROGRAM AND EVALUATION OVERVIEW

Missouri Children's Trust Fund Safe Sleep Grant Program

The CTF Safe Sleep Grant Program provided funding to community organizations to distribute safe sleep surfaces (e.g., safety approved cribs, bassinet etc.) and deliver safe sleep education to communities across Missouri. The Safe Sleep Grant Program was implemented from July 1, 2021, through June 30th, 2025, with the primary goal of decreasing sleep-related infant injuries and deaths in Missouri and reducing unsafe sleep health equity disparities.

Missouri Children's Trust Fund (CTF) awarded funding to five regional projects to: 1) develop and deliver consistent education, training, and informational messaging content that aligns with the American Academy of Pediatrics (AAP) recommendations for infant safe sleep and the Missouri Safe Sleep Strategic Plan; and 2) enhance access to support through the distribution of safe sleep equipment. Grantees were encouraged to address core focus areas of the Missouri Safe Sleep Strategic Plan, develop projects that were multi-intervention, collaborative, and included equity-driven approaches using evidence-based and/or evidence-informed practices. Awarded grantee projects include:

- **Safe Sleep Safe Babies Community Network** Children's Mercy Hospital, *Kansas City, MO* (Children's Mercy Hospital)
- **Nap Time, Bed Time, Every Time – Safe Sleep for Babies**, The Community Partnership of Rolla, *Rolla, MO* (Community Partnership of Rolla)
- **Southwest Missouri First Birthday Safe Sleep Project**, Community Partnership of the Ozarks, *Springfield, MO* (Community Partnership of the Ozarks)
- **Safe Sleep First**, Nurses for Newborns, *St. Louis, MO* (Nurses for Newborns)
- **Safe Sleep 4 Babies**, St. Joseph Youth Alliance, *St. Joseph, MO* (St. Joseph Youth Alliance)

The University of Kansas Center for Research Inc., on behalf of the University of Kansas School of Social Welfare (KUSSW) served as the lead program evaluator for the CTF Safe Sleep Grant Program. The main goals of the evaluation were to 1) examine changes in rates of sleep-related infant injuries and deaths as it relates to increased knowledge, awareness, and practice by the program grantees; and 2) examine families' experiences with program operations and messaging and their decision-making and compliance behavior towards safe sleep practices.

The evaluation is guided by three main research questions (RQ):

- **RQ1:** How do program initiatives' common measures and metrics overlap with AAP updated 2016 recommendation for safe sleep and environments? Environment (Process Evaluation)

- **RQ2:** What are program operations and structures for each initiative and how does their approach influence families' decision making and compliance to recommended safe sleep practices?
- **RQ3:** How do funded initiatives' interventions impact rates of sleep related infant injuries and deaths?

The purpose of this final evaluation report of the CTF Safe Sleep Grant Program is to 1) provide an overview of the five regional project grantees, 2) understand how each grantees initiative overlaps with the American Academy of Pediatrics (AAP) 2016 Recommendations for a Safe Infant Sleeping Environment (**Process Evaluation**), 3) understand the experiences of caregiver and provider participants with the grantees' programs and whether they influenced family decision-making and behaviors to align with AAP guidelines (**Impact Evaluation**); and 4) determine the extent to which the grantee programs achieved the intended outcome of reducing rates of sleep-related infant injuries and deaths (**Outcome Evaluation**).

OVERVIEW OF THE FIVE REGIONAL GRANTEES

Grantee Safe Sleep Program Components

Children's Trust Fund (CTF) funded five regional project grantees to participate in its Safe Sleep Grant Program: 1) Safe Sleep Safe Babies Community Network, Children's Mercy Hospital, Kansas City, MO (Children's Mercy Hospital); 2) Nap Time, Bed Time, Every Time – Safe Sleep for Babies, The Community Partnership of Rolla, Rolla, MO (Community Partnership of Rolla); 3) Southwest Missouri First Birthday Safe Sleep Project, Community Partnership of the Ozarks, Springfield, MO (Community Partnership of the Ozarks); 4) Safe Sleep First, Nurses for Newborns, St. Louis, MO (Nurses for Newborns); and 5) Safe Sleep 4 Babies, St. Joseph Youth Alliance, St. Joseph, MO (St. Joseph Youth Alliance). Grantees developed safe sleep programs with multiple components. Table 1 indicates which components are included in each grantee's safe sleep program.

Table 1. Grantee Project Components

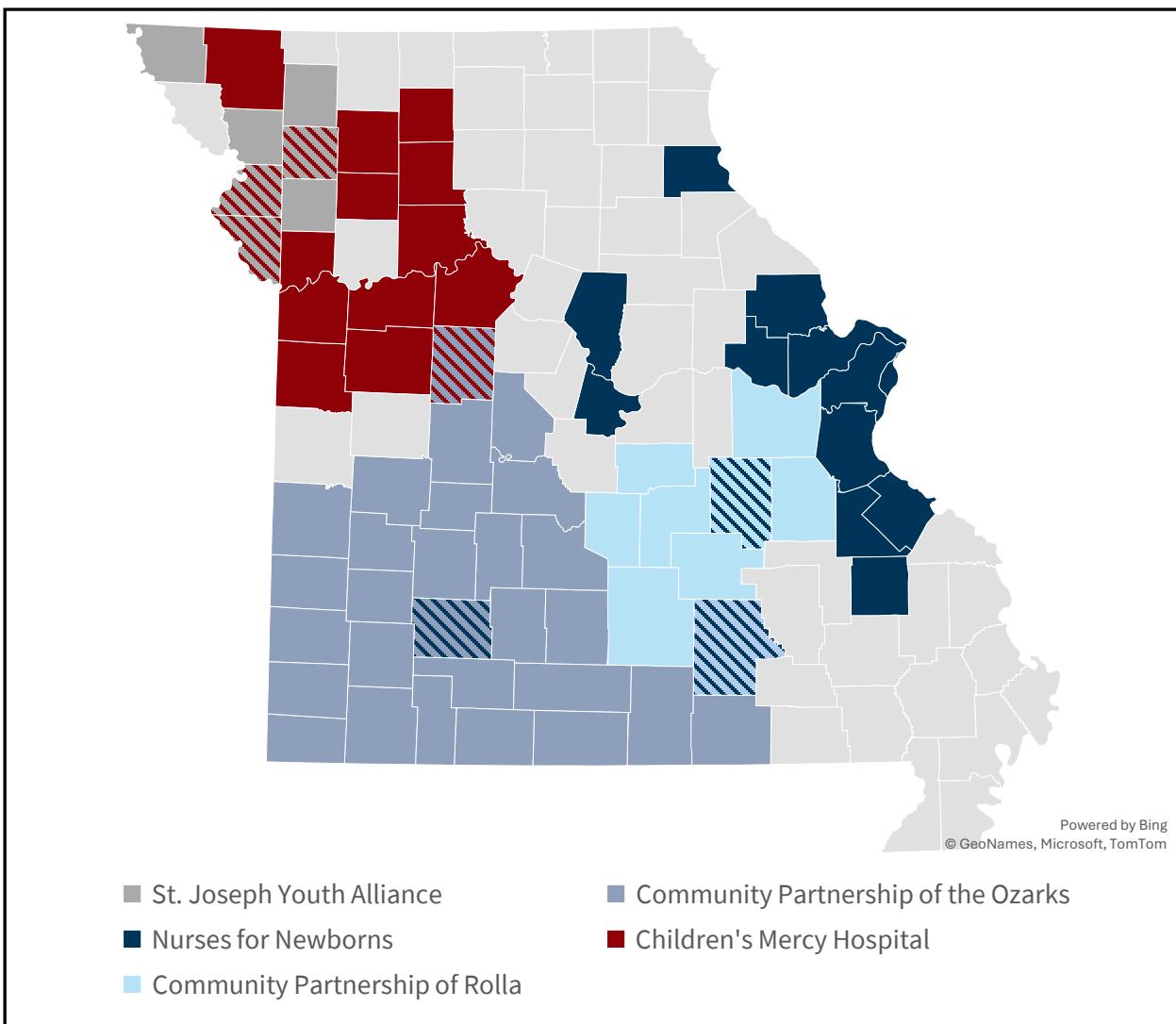
	Children's Mercy Hospital	Community Partnership of Rolla	Community Partnership of the Ozarks	Nurse for Newborns	St. Joseph Youth Alliance
Caregiver Trainings ⁵	✓	✓	✓	✓	✓
Professional Trainings ⁶	✓	✓		✓	
Safe Sleep Materials	✓	✓	✓	✓	✓
Hospital Certification	✓	✓		✓	✓

Counties Served: Cumulative Grant Period

Each grantee chose which counties to deliver their respective safe sleep program. Figure 1 shows a map of all the counties where caregiver and professional trainings were held by each grantee from January 1, 2023 – June 30, 2025.

⁵ Caregiver includes primary caregiver/parent who is pregnant or not pregnant with an infant under 12 months and 31 days and/or any other caregiver who may care for an infant under 12 months and 31 days old (e.g., grandparent, relative/kin, etc.)

⁶ Professionals include any individual who may provide safe sleep information or training to a caregiver or to other professionals (e.g. hospital staff, direct service provider, first responder, community partner etc.).

Figure 1. Service Delivery Map of Counties Served by Grantee

National Safe Sleep Hospital Certification

The Cribs for Kids National Safe Sleep Hospital Certification program recognizes hospitals for their commitment to infant safe sleep. Four of the five Safe Sleep grantees (see Table 1 on page 4) partnered with hospitals and hospital systems to achieve bronze, silver, or gold certification for their commitment in providing infant safe sleep education and modeling infant safe sleep according to current American Academy of Pediatrics (AAP) best practices. By the conclusion of CTF's Safe Sleep Grant Program, June 30, 2025, 16 Missouri hospitals achieved a National Safe Sleep Hospital Certification. Figure 2 shows which counties include at least one hospital with a National Cribs for Kids Safe Sleep Certification. Counties are shaded on a gradient scale based on the 2023 Rural-Urban Continuum Code; the most urban counties are darkest gray and most rural counties are the lightest (See Appendix A for a description of Rural-Urban Continuum Codes 1 through 9). Table 2 includes the hospitals that achieved a certification, the level of certification they achieved, and the county of the hospital.

Figure 2. National Safe Sleep Hospital Certification Achieved

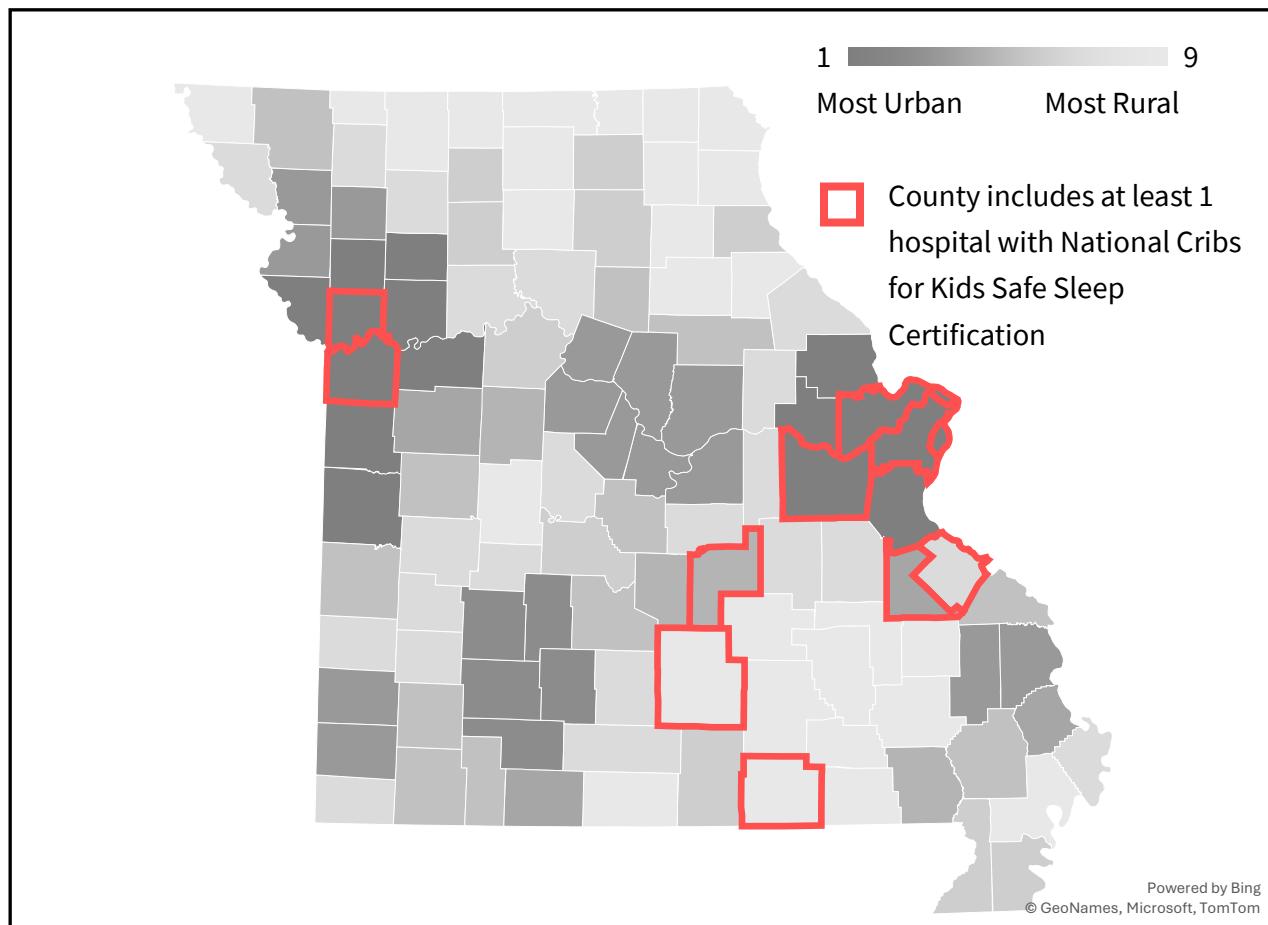


Table 2. Hospitals that Achieved Certification, Level of Certification, & County of Hospital

Gold Certification	Silver Certification	Bronze Certification
<ul style="list-style-type: none"> • Barnes Jewish Hospital (St. Louis County) • Missouri Baptist Medical Center (St. Louis City) • Alton Memorial Hospital, (Oregon County) • Parkland Health Center, St. (Francois County) • St. Louis Children's Hospital, (St. Louis City) • Progress West Hospital, (St. Charles County) • Children's Mercy Hospital, (Jackson County) • Texas County Memorial Hospital, (Texas County) • SSM Cardinal Glennon Children's Hospital, (St. Louis City) • Phelps Health, (Phelps County) 	<ul style="list-style-type: none"> • Liberty Hospital, (Clay County) • North Kansas City Hospital, (Clay County) 	<ul style="list-style-type: none"> • University Health Hospital Hill, (Jackson County) • University Health Lakewood, (Jackson County) • Missouri Baptist Sullivan Hospital, (Franklin County) • Ste. Genevieve County Memorial Hospital, (Ste. Genevieve County)

Note. Parenthesis indicates the county where the hospital is located.

PROCESS EVALUATION

Overview

The main purpose of the process evaluation was to understand how the common measures and metrics of the funded initiatives overlap with the American Academy of Pediatrics' (AAP) 2016 Recommendations for a Safe Infant Sleeping Environment (see Appendix B). Specifically, the process evaluation aimed to answer the question:

RQ1: *How do program initiatives' common measures and metrics overlap with AAP updated 2016 recommendation for safe sleep and environments?*

In addition to reviewing alignment with established AAP safe sleep recommendations, the process evaluation assessed the overall clarity, consistency, and cultural responsiveness of the Safe Sleep Grant Program's educational and marketing materials. This included examining whether materials conveyed key messages accurately, presented information in accessible formats, and reflected the needs and perspectives of diverse families.

Method

Data Sources

Safe Sleep Grant Program grantees provided program materials, including educational materials, such as handouts, brochures, and videos, marketing materials, social media posts, and presentations delivered to caregivers and professionals. Materials were submitted at the beginning of the evaluation period, and any new or updated materials were submitted during the final program year. To supplement the document review and provide contextual understanding of how materials are used and understood in practice, qualitative insights from focus groups with professionals were also incorporated into the process evaluation (for a complete analysis of focus groups with providers/professionals, see the Impact Evaluation Section on page 12)

Data Analysis

Grantee program materials were uploaded to Dedoose, a qualitative data analysis software, and materials were assessed for alignment with the 2016 AAP Recommendations for a Safe Infant Sleeping Environment. The AAP released updated recommendations in 2022, after many of these materials were developed. Most core recommendations (e.g. "back to sleep for every sleep") were largely unchanged when recommendations were updated (see Appendix B), still some materials may not reflect the most current guidance. For the purposes of this evaluation, alignment was

assessed based on 2016 recommendations, with any divergence from or adoption of newer guidance noted.

Materials were also analyzed using a coding framework that focused on degree of clarity, consistency, and cultural responsiveness. Clarity, consistency, and cultural responsiveness were each measured on a four-point scale (“very,” “moderate,” “somewhat,” and “not at all”). Clarity and consistency were evaluated based on the use of plain, action-oriented language, without conflicting or contradictory messaging, while cultural responsiveness was assessed by identifying elements such as images that reflect diverse racial, ethnic, and cultural backgrounds; caregivers of diverse age, gender, and ability; and a range of home environments or caregiving contexts. Cultural responsiveness may also include language accessibility and translation, strengths-based messaging, and information about accessing community resources. Materials were rated as “very” culturally responsive if they demonstrated a clear dedication to cultural representation, including more than four of these elements; “moderate” if they contained three to four; “somewhat” if they included one or two; and “not at all” if no indicators were present.

Key Findings

Alignment with AAP Recommendations

All program materials aligned with the 2016 AAP safe sleep recommendations, and some newer materials incorporated elements of the updated 2022 guidance. For example, one social media post included a video highlighting a key update that “weighted blankets, weighted sleepers, weighted swaddles, or other weighted objects should not be placed on or near the sleeping infant.” Across brochures, videos, and handouts, core AAP recommendations were presented and consistently reinforced.

However, while written materials displayed the primary recommendations with fidelity, they did not always address the kinds of nuanced, real-world questions raised by families and caregivers, such as what to do when presented with extreme fatigue, how to navigate cultural or family traditions, or concerns with soothing the infant. During focus groups with professionals, program educators shared that these gaps required them to respond to caregiver questions not formally addressed in the materials and acknowledge situations in which adherence to AAP recommendations were challenging. While program materials were highly aligned with formal AAP guidance, the real-time conversations between trainers and caregivers often extended beyond the scope of the written materials and videos.

Clarity and Consistency of Messaging

Overall, safe sleep program materials provided very clear and consistent information. Messages were generally concise, easy to understand, and used direct, action-oriented phrasing (e.g. “Always place your baby on his or her back to sleep, for naps and at night.”). Clarity and consistency were high across grantee programs, as many grantees used standard videos, handouts, and other educational resources developed by Cribs for Kids, Children’s Trust Fund, and/or Missouri state departments. This shared use of standardized materials helped ensure families received clear and consistent information, regardless of the program or community they engaged with.

Cultural Responsiveness

Most safe sleep program materials were coded as “moderately” to “somewhat” culturally responsive. Several educational videos exhibited “high” cultural responsiveness, as well as a small number of marketing materials and table-top displays. Many materials included text that was paired with infographics or imagery depicting the related recommendation. This approach supported comprehension for families with limited English proficiency or varying literacy levels and was viewed as helpful for communicating core safe sleep recommendations without relying heavily on written language.

While many materials were available in English and Spanish, availability of additional translations was not reflected in the materials reviewed. Grantees and trainers reported that they had made attempts to translate and present safe sleep materials in additional languages; however, for some communities, the gap between the safe sleep materials or recommendations and the families’ lived experiences was too great. For these communities, grantees and program educators felt that even accurate translations were insufficient to fully convey the intended message or recommendation.

Future Opportunities Based on Process Evaluation Findings

- **Strengthen alignment with evolving AAP guidance.** Create a system for routine review and updating of safe sleep educational materials to ensure they are aligned with evolving AAP guidelines for infant safe sleep and support caregivers and professionals in receiving clear and up to date information.
- **Address real-world, nuanced caregiving scenarios.** Develop materials that explicitly address common caregiver challenges, such as extreme fatigue or infant soothing strategies. Include scenario-based guidance or “real-life examples” to help trainers and caregivers’ problem-solve situations where perfect adherence may not feel feasible. Consider developing tools to support consistent trainer responses to nuanced questions and conversations.
- **Enhance cultural responsiveness.** Co-create materials with diverse community members to ensure cultural relevance, expand languages offered, and adapt visuals and messaging to reflect families’ lived experiences. Pair translated materials with trusted messengers from the same culture or community who can contextualize recommendations and bridge cultural nuances that materials alone may not fully capture.
- **Standardize core materials.** Continue refining and standardizing core educational materials to ensure families across communities receive consistent, accurate safe sleep information, regardless of region or program.
- **Implement ongoing feedback and update processes:** Establish routine mechanisms, such as trainer feedback loops or community input, to continuously update materials in response to emerging community needs.

IMPACT EVALUATION

Overview

The purpose of the impact evaluation was to understand the operations and structures of each of the grantees' programs and how the programs influenced caregivers' decision-making and adherence to AAP-recommended safe sleep practices. The impact evaluation also explored how programs impacted professionals, including their ability to provide safe sleep education that aligned with AAP guidance. The evaluation aimed to answer the question:

RQ2: *What are program operations and structures for each initiative, and how does their approach influence families' decision-making and compliance with recommended safe sleep practices?*

The KUSSW evaluation team examined, 1) the reach of each grantees program – indicators included caregivers trained, professionals trained, and materials distributed; 2) caregiver experience and impact receiving safe sleep training; and 3) professionals experience and impact receiving safe sleep training and their self-assessment of administering safe sleep programming to others. Caregiver and provider experience included whether the participants perceived their respective safe sleep program delivered clear and consistent content, and if they reported an overall positive experience receiving the safe sleep program.

Method

Survey Development

The KUSSW evaluation team was tasked by CTF to evaluate the performance of each grantee's safe sleep program. We utilized a mixed-methods (qualitative and quantitative) approach to access the development, structure and delivery of each grantee's safe sleep program. To ensure that program outputs and outcomes for each grantee was tracked and collected, KUSSW utilized a participatory engaged approach with each grantee team and the CTF Safe Sleep Grant Program coordinator to develop two CTF Standard Surveys that could be administered across all grantees with their target caregiver and provider populations.

KUSSW evaluation team members met collectively with the grantees over several sessions to understand each of their program's implementation activities, goals, intended outputs, and anticipated outcomes. This collaborative approach was important because grantees had already designed and begun implementation of their programs before the KUSSW evaluation team

partnered with CTF to conduct the evaluation. Thus, it was important to ensure that the standard surveys for caregiver and provider participant groups accurately measured the impact and outcomes of each grantee's safe sleep program.

After identifying the common outputs and intended outcomes, KUSSW evaluators drafted a *CTF Caregiver Standard Pre/Post Survey* and a *CTF Provider Standard Pre/Post Survey* that incorporated questions to measure the key indicators across grantee programs and relevant to both the *impact evaluation* and *outcome evaluation*. Grantees reviewed the survey drafts, provided feedback, and suggested revisions to ensure the surveys accurately measured their programs' intended impacts. Because the CTF Standard Pre/Post Surveys focused on shared outputs and outcomes, grantees could administer additional surveys as appropriate to participants of their individual program. All grantees were required to administer the appropriate CTF Standard Pre/Post Survey to their caregiver and provider participant populations after the collaboratively developed tool was vetted and finalized by grantees and the CTF Safe Sleep Grant Program coordinator.

Beginning April 1, 2023, the CTF Caregiver and Provider Standard Pre/Post Surveys were regularly administered by each grantee to program participants prior to (pre-training survey) and following completion (post-training survey) of safe sleep programming. For the purposes of this final evaluation, only key findings from the CTF Standard Pre/Post Surveys are reported (see Appendix C for the CTF Caregiver Standard Pre/Post Survey tool and Appendix D for the CTF Provider Standard Pre/Post Survey tool.)

Participants

Caregiver and provider safe sleep program recruitment and eligibility for both the impact and outcome evaluations was determined by each grantee and/or the community partners they collaborated with. These activities and criteria were not part of the scope of this evaluation and, thus, not included in this final report. The participant demographic information provided in the following subsections was collected as part of the standard pre-surveys.

Caregiver Target Population. Across all five grantees from April 1, 2023, through June 30, 2025, between 2,869 and 3,054 caregiver participants responded to at least one of the demographic questions. Demographic data was calculated even if a caregiver did not respond to all the questions. Fifty-six percent of caregivers' age ranged from 20 – 29 years old, and over 90% of caregivers identified as a mother. Approximately half of the caregivers were pregnant at the time of their safe sleep training program. Most caregivers self-identified as white (65%) and non-Hispanic (72%). Approximately 38% of participants reported an annual income of less than

\$20,000 (median annual income = \$14,400), and 44% reported having graduated high school or completed their GED. A caregiver demographic infographic is included in Appendix E.

Provider Target Population. Only three out of five of the grantees (see Table 1, page. 4) included a provider training component as part of their safe sleep program. Across the three grantees from April 1, 2023, through June 30, 2025, between 479 and 497 providers responded to at least one demographic question. Over 50% of providers who participated in a safe sleep program identified as a nurse, and 61% stated they had been in their occupational role for less than one year. Most providers self-identified as female (91%), white (71%), and non-Hispanic (96%). Forty-seven percent of providers earned a 4-year college degree. A provider demographic infographic is included in Appendix F.

Focus Group Target Population. KUSSW evaluators conducted several focus groups with a convenience sample, or a subsample, of both caregiver and provider participants from all grantees who completed a safe sleep program. Informational flyers were created to recruit both caregiver and provider participants, and each grantee shared the flyers with past and current participants. Prospective participants completed an online interest form via a REDCap link, which included a request for their contact information. The evaluation team emailed all prospective participants to share additional information and scheduled them for a focus group session. Focus groups consisted of peer groups (e.g., caregivers with other caregivers, providers with other providers), and participants may have participated in the same or different grantee safe sleep programs. Focus groups lasted approximately 60-75 minutes, and participants were compensated \$50 per hour for their participation. Twenty-nine caregivers (four out of five grantee programs were represented) participated in the focus groups, and 16 providers (all five grantee groups were represented) participated in the focus groups.

Impact Evaluation Indicators

Caregiver and provider experience were collected using a mixed methods approach where grantees provided: a) the number of participants reached and safe sleep materials distributed, caregivers and providers responded to b) pre/post survey questions indicating their level of satisfaction with the safe sleep program; c) open-ended questions about their overall experience with the safe sleep program; and d) a subset of caregivers and providers who volunteered to participate in focus groups where they shared more about their experiences with the safe sleep program they attended.

Caregiver and Provider Reach. KUSSW evaluators sent grantees a quarterly survey via a REDCap link to collect the number of participants served and the type and amount of safe sleep

materials (e.g., safety-approved cribs, bassinets etc.) distributed (see Appendix G for a copy of the Reach Survey).

Caregiver Pre/Post Survey Items. Select quantitative survey questions were scored and analyzed to measure caregiver experience (e.g. satisfaction, recommendation and general experience with training program, and confidence and agreement with safe sleep practices) for the impact evaluation (see Appendix C for all survey questions). Participants responded to the extent to which they agreed with each question on a scale from 1, *strongly disagree*, to 5, *strongly agree*. Additionally, two open-ended survey questions (see Appendix C) asked caregivers what they gained from the safe sleep program and any challenges they experienced.

Provider Pre/Post Survey Items. Select quantitative questions were scored and analyzed to measure provider experience (e.g. satisfaction, program recommendation) for the impact evaluation, including two open-ended survey questions that asked providers what the gain from and any challenges they experienced with the safe sleep program (see Appendix D for survey questions).

Focus Group Questions. KUSSW evaluators created a focus group protocol for the caregiver and provider sessions. Evaluators gathered feedback on the questions from each grantee to ensure the right questions of interest were prioritized across programs, and the protocols were updated to reflect requested changes. The purpose of the caregiver focus groups was to learn about participants' experiences in receiving safe sleep training, the strengths of the training, and any recommendations they had for improving the training (see Appendix H for the full caregiver focus group protocol). The purpose of the provider focus groups was similar, with the addition of learning more about their experience with conducting safe sleep training with families and/or community partners and their confidence and understanding of providing safe sleep information (see Appendix I for the full provider focus group protocol).

Data Analysis

Program Reach. Aggregate program data was collected quarterly from each grantee from January 1, 2023, through December 31, 2024, and for a final time at the end of the grant period covering January 1, 2025 – June 30, 2025. All aggregate program data is cumulative and self-reported by each grantee unless otherwise indicated.

Pre/Post Survey. Caregiver and provider experience was calculated by combining all relevant survey responses across programs from April 1, 2023 – June 30, 2025, and calculating the percentage of each response type (e.g. number of strongly agree responses/total number of

participants who responded to the question). The denominators for each question may vary due to missing data. T-tests were conducted on items that appeared on both the pre- and post-surveys to compare if there was a statistically significant difference in participant responses before and after they received safe sleep education.

Focus groups. Content analysis with inductive coding was utilized to identify common themes and subthemes for both the caregiver and provider focus groups. All focus group sessions were professionally transcribed. To gain inter-rater reliability and consensus on the coding scheme, two KUSSW evaluators coded one caregiver and one provider focus group session collaboratively. Next, the evaluators individually coded the same content to ensure consistency with coding and worked through any discrepancies to gain consensus. Finally, the evaluators coded the remainder of the focus group transcripts individually and discussed discrepancies as needed.

KEY FINDINGS

Reach

Table 3 presents aggregate counts of caregivers and professionals trained, infants reached, and materials distributed by fiscal year, with data combined across all grantees. Totals reflect cumulative counts across fiscal years.

Table 3. *Number of Caregivers & Professionals Trained, Infants Reached & Materials Distributed by Fiscal Year with Grantees Combined*

	FY 2022 - FY 2023	FY 2024	FY 2025	TOTAL
Total Caregivers ⁷ Trained	3807	2231	2217	8255
Pregnant Caregivers ⁸ Trained	1282*	875	1024	3181
Total Number Infants ⁹ Reached	850*	2338	2358	5546
Total Professionals Trained**	467	226	236	929
Hospital Staff	14	20	6	42
Direct Service Providers	89	135	110	334
First Responders	-	-	-	-
Other Community Members	15	40	105	160
Portable cribs	3264	1715	1358	6337
Wearable blankets/sleep sacks	3300	172	1328	4800
Crib sheets***	2448	1557	1541	5546

Note. **" indicates data was not collected by all grantees prior to January 2023. Data does not include count for all grantees. ***" indicates category of professionals trained (Hospital Staff, Direct Service Provider, First Responder, Other Community Member) is not collected by all grantees. Sum of category of professional columns is less than Total Professionals Trained." ***" Indicates crib sheets are distributed by 4 of 5 grantees.

Reach and Outputs by Grantee

Tables 4-9 present the number of caregivers and providers trained, infants reached, and safe sleep materials distributed by each grantee from April 1, 2023 – June 30, 2025. Any notable activities related to a grantee's safe sleep program that were shared with the evaluation team are also included.

⁷ Total Caregivers Trained is defined as the total number of caregivers trained, whether pregnant or the caregiver of an infant under 12 months and 31 days of age.

⁸ Pregnant Caregivers Trained is defined as the number of caregivers who were pregnant when they received Safe Sleep education.

⁹ Total Number of Infants Reached is defined as the number of infants less than 12 months and 31 days of age associated with the total number of caregivers trained

Table 4. Children's Mercy Reach and Outputs by Fiscal Year

	FY 2022 – FY 2023	FY 2024	FY 2025	Total
Total Caregivers Trained	849	546	661	2056
Pregnant Caregivers Trained	567	377	464	1408
Total Number of Infants Reached	925	584	720	2229
Total Professionals Trained*	119	11	2	132
Hospital Staff	-	-	-	-
Direct Service Providers	-	11	2	13
First Responders	-	-	-	-
Other Community Members	-	-	-	-
Pack 'n Plays**	868	517	707	2092
Wearable Blankets/Sleep Sacks**	868	517	707	2092
Crib Sheets**	868	517	707	2092

Note. “**” indicates category of professionals trained (Hospital Staff, Direct Service Provider, First Responder, Other Community Member) was not collected until April 2023 via completed CTF Professional pre- and post-surveys. Sum of category of professional columns does not equal Total Professionals Trained column. Note: “***” indicates that Safe Sleep Safe Babies ran out of dollars to purchase safe sleep materials for caregivers as of March 1, 2024. Partners who had inventory could continue to provide materials to families, but additional materials were not ordered.

Table 5. Community Partnerships of the Ozarks Reach and Outputs by Fiscal Year

	FY 2022 – FY 2023	FY 2024	FY 2025	Total
Total Caregivers Trained	219	254	171	644
Pregnant Caregivers Trained	84*	170	86	340
Total Number of Infants Reached	33*	254	176	463
Pack 'n Plays	231	254	143	628
Wearable Blankets/Sleep Sacks	211	254	143	608
Crib Sheets	211	254	143	608

Note. “*” indicates data was not collected until April 2023. Community Partnership of the Ozarks does not train community providers/professionals to deliver safe sleep education to caregivers.

Table 6. *Community Partnership of Rolla Reach and Output by Fiscal Year*

	FY 2022 – FY 2023	FY 2024	FY 2025	Total
Total Caregivers Trained	1115	674	533	2322
Pregnant Caregivers Trained	-	14	31	45
Total Number of Infants Reached	1115	728	588	2431
Total Professionals Trained	192	70	58	320
Hospital Staff	146	37	58	241
Direct Service Providers	44	9	-	53
First Responders	-	-	-	-
Other Community Members	2	24	-	26
Portable Cribs	697	192	130	1019
Wearable Blankets/Sleep Sacks	740	265	472	1477
Crib Sheets	NA	NA	NA	NA

Note. Empty cells indicate data were not collected for reporting period. NA indicates that material was not distributed as part of grantee program.

Table 7. *Additional Materials Distributed by Community Partnership of Rolla*

	FY 2023 – FY 2024	FY 2025
Charlie's Kids Foundation: Safe Baby Sleep Baby Safe & Snug board books	443	-
"This Side Up" onesies to PAT programs and area Health Departments	215	-
ABC cookies to PAT programs, hospitals, and area Health Departments	270	-
ABCs of Safe Sleep pamphlets and magnets	160	-
Cribs for Kids® pamphlets	38	-
Safe Baby Sleep Baby Safe & Snug board books	-	408

Note. Empty cells indicate data were not collected for reporting period.

Other Notable Events. Community Partnerships of Rolla program leadership provided additional notable events which included: 1) Phelps Health advertised safe sleep educational information on their Interstate 44 electronic billboard where approximately 35,000 cars pass daily (October, 2024); 2) Texas County Memorial advertised safe sleep educational information on Highway 63 South electronic billboard where approximately 3,500 – 4,200 cars pass daily (October, 2024); 3) Meetings occurred between the program safe sleep coordinator and four physicians at Texas County Memorial Hospital (Texas County) and with five lead clinic staff and nurses at Phelps Health (Phelps County) to discuss incorporating safe sleep educational information into prenatal care videos for expectant parents (January – April 2024); and 4) Safe Sleep Coordinator attended a community event in Phelps County to provide safe sleep education (May 2025). Below are a few excerpts from the Community Partnerships of Rolla Program leadership:

“Since FY22, our Safe Sleep initiative has made steady progress in promoting safe infant sleep across our region. Both partner hospitals earned Gold Level Cribs for Kids® certification, and we successfully worked with hospital staff to embed prenatal safe sleep education into clinic workflows. This was done by collaborating directly with physicians and lead nurses to determine when prenatal patients would watch the educational videos and how completion would be tracked.”

“The goal is for all patients to complete the safe sleep education before delivery; however, if that doesn't occur, the videos are shown after delivery. All families receive a Snoozzzette wearable blanket and a Sleep Baby Safe and Snug book after receiving safe sleep education, and those in need are also provided with a Cribbette portable crib. We are encouraged to see both hospitals continuing to promote safe sleep practices independently, even after our Safe Sleep Coordinator's direct involvement ended on June 30th, 2025.”

“Another impactful moment reported by our Safe Sleep Coordinator was regarding how our emphasis on safe sleep with hospital staff led to a subtle but important shift toward hospital staff asking caregivers the open-ended question, "Where is your baby going to sleep?" rather than the more common, "Do you have a place for your baby to sleep?" This simple change in language resulted in more meaningful and productive conversations about safe sleep practices, allowing staff to better understand each family's situation and offer targeted support. Hospital staff were motivated to continue using this approach after hearing unexpected responses, such as babies sleeping in dresser drawers or young children sharing a crib with a newborn. We also observed that some families, especially those with prior involvement in child welfare services, were hesitant to discuss their infant's sleep environment. Hospital staff focused on building trust and emphasized that the program's goal is to support families in creating safe sleep spaces moving forward. Being able to provide tangible support to families alongside education further strengthened our efforts.”

Table 8. *Nurses for Newborns Reach and Output by Fiscal Year*

	FY 2022 – FY 2023	FY 2024	FY 2025	Total
Total Caregivers Trained	1309	649	750	2708
Pregnant Caregivers Trained	447	263	377	1087
Total Number of Infants Reached	226*	660	757	1643
Total Professionals Trained	142**	123	36	301
Hospital Staff	7**	8	3	18
Direct Service Providers	75**	64	19	158
First Responders	-	3	0	3
Other Community Members	13**	48	1	62
Pack 'n' Plays	1312	658	801	2771
Wearable Blankets/Sleep Sacks	1234	658	797	2689
Crib Sheets	1195	658	796	2649

Note. “*” indicates data was not collected until January 2023. “**” indicates category of professionals trained (Hospital Staff, Direct Service Provider, First Responder, Other Community Member) was not collected by grantees until January 2023. Sum of category of professional columns does not equal Total Professionals Trained column.

Table 9. *St. Joseph Youth Alliance Reach and Outputs by Fiscal Year*

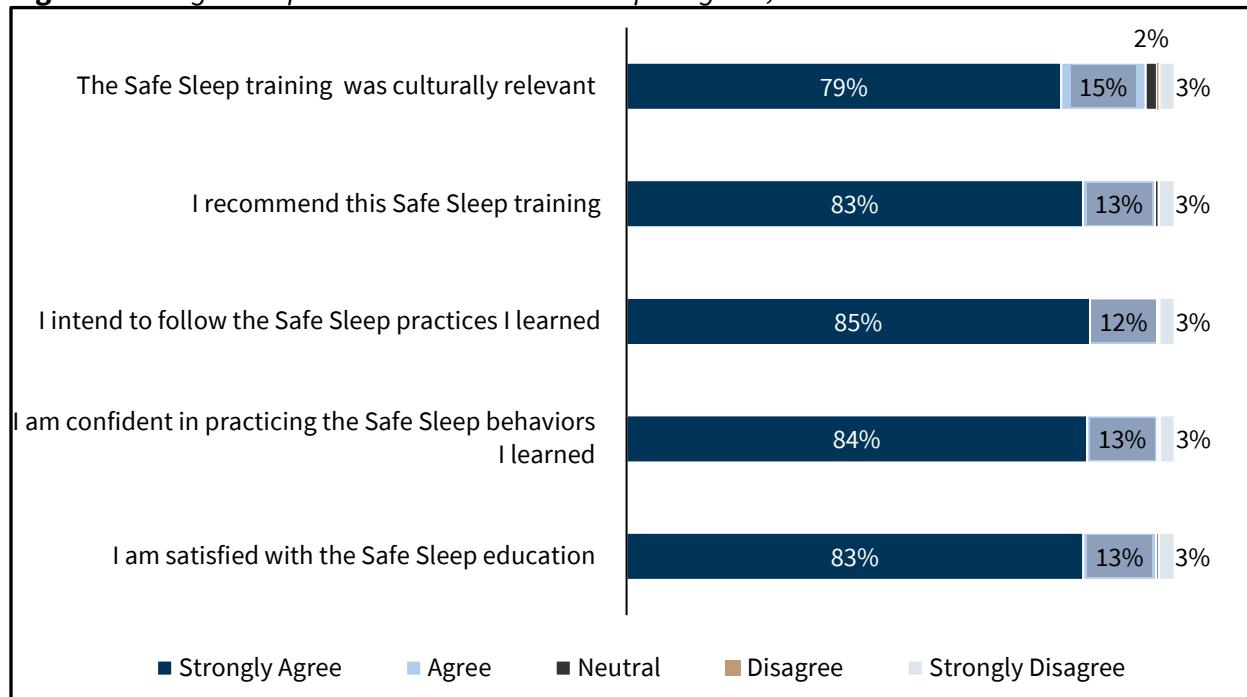
	FY 2022 – FY 2023	FY 2024	FY 2025	Total
Total Caregivers Trained	315	104	102	521
Pregnant Caregivers Trained	184	46	66	296
Total Number of Infants Reached	352	107	110	569
Total Professionals Trained	14	-	204	218
Hospital Staff	-	-	-	-
Direct Service Providers	14	-	100	114
First Responders	-	-	-	-
Other Community Members	-	-	104	104
Pack 'n' Plays	174	91	118	383
Wearable Blankets/Sleep Sacks	176	80	110	366
Crib Sheets	174	125	117	416

Note. SJYA does not regularly lead professional trainings.

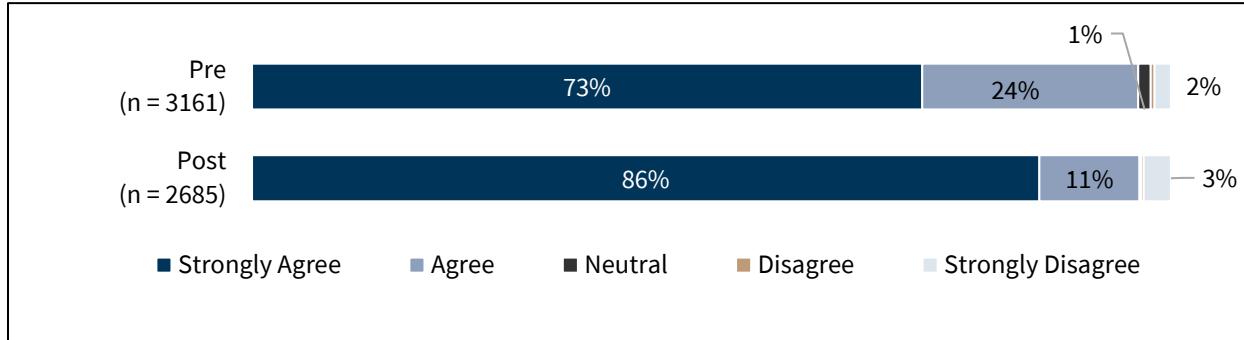
Caregiver Experience

Program Satisfaction and Impact on Compliance with AAP Safe Sleep Practices. Figure 3 summarizes caregiver experiences with the grantee safe sleep programs, combining response from all grantees from April 1, 2023 – June 2025. Percentages reflect the proportion of respondents who agreed or strongly agreed with statements about satisfaction, confidence, recommendation, and cultural relevance of the training from. The total post-survey response sample sizes ranged from 2197 to 2204.

Figure 3. Caregiver Experiences with the Safe Sleep Program, Across All Grantees



Caregiver Agreement with Safe Sleep Practices. Figure 4 illustrates a statistically significant increase in the proportion of participants who strongly agreed that the safest sleep practice is for a baby to sleep alone on their backs in an empty crib (or bassinet) with a firm mattress, fitted sheet and no loose blankets, clothing, or toys. Data combined across grantees show a significant effect, $t(5844) = 5.79, p < .001$, indicating that all safe sleep grantee improved caregiver agreement with recommended safe sleep practices.

Figure 4. Improved Caregiver Agreement w/Safe Sleep Practices After Safe Sleep Program

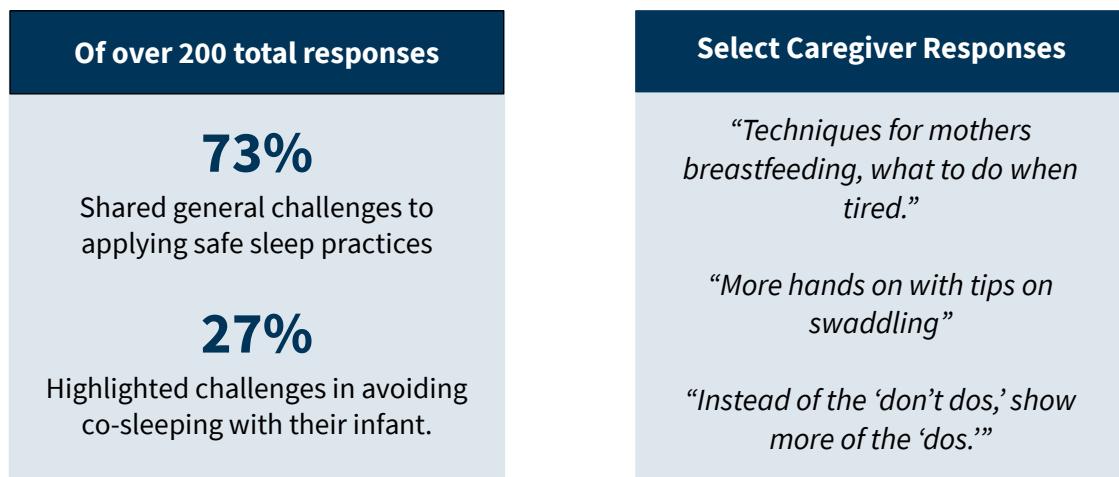
Key Takeaways: Caregiver Satisfaction, Program Impact on Safe Sleep Practices, & Agreement with Safe Sleep Recommendations

The results show that over 95% of participants strongly agree or agree the training was culturally relevant, that they would recommend the training to other caregivers, intend to follow safe sleep practices, are confident in practicing safe sleep behaviors, and that they were satisfied with the overall safe sleep education they received. Finally, an increase of caregivers indicated they strongly agreed with safe sleep practices after they completed a safe sleep program compared to before completing the program.

Main Gains from Safe Sleep Training. Caregiver responses to open-ended questions on the CTF Standard Caregiver Post Survey were coded and analyzed combined across all grantees. Caregivers reported that general knowledge and education about safe sleep was the most they gained from the safe sleep programs. One topic highlighted by a quarter of the responses was the “ABCs” of Safe Sleep – babies should sleep alone, on their back, and in a crib with blankets or toys.” Thus, not only did caregivers report that they gained knowledge, but many specified the information they learned. Caregivers also reported more confidence in practicing safe sleep practices after having completed one of the training programs, they were aware of sleep practices not to do, and they understood broad importance of safe sleep practices.

Of over 800 total responses	Select Caregiver Responses
<p>60% Said they gained general safe sleep knowledge.</p> <p>25% Reported that they learned the “ABCs” of safe sleep.</p> <p>15% Noted other knowledge gains, like, “what not to do”, recognizing importance, confidence, and safe sleep materials.</p>	<p><i>“Education and resources for safe sleep.”</i></p> <p><i>“Always keep baby...alone, back, and crib with no blankets and no toys.”</i></p> <p><i>“Do not let your baby sleep in a car seat.”</i></p>

Challenges Applying Safe Sleep Practices. Caregiver open-ended survey responses about challenges to applying safe sleep practices were also coded and analyzed across all grantees. Caregivers shared concerns in applying safe sleep practices when they felt over-tired or if the infant had little sleep. Other challenges they shared were related to avoiding co-sleeping with their infants. Some participants shared that they felt breastfeeding and fatigue may be reasons for co-sleeping, and in some situations, this may be a major obstacle. In sharing their challenges, caregivers also suggested topics to include in future safe sleep programs to help expand discussion about challenges and provide further support to applying safe sleep practices when faced with difficult situations.



Key Takeaways: Gains and Challenges of Safe Sleep Training

Most responses to the survey open-ended questions indicated that caregivers gained general knowledge about safe sleep practices after participating in any safe sleep grantee program. Other responses about knowledge gain highlighted specific topics learned, such as the ABCs of safe sleep, and indicated that caregivers felt confident in applying safe sleep practices after completing a safe sleep program. Although caregivers reported having gained knowledge, they also reported challenges with consistently applying safe sleep practices while they juggle life with a new infant (e.g., breastfeeding, tiredness etc.). Some respondents suggested spending more time during training to discuss challenges and learning tips and techniques to overcome challenges related to applying safe sleep practices.

Caregiver Focus Groups. A full report of results from the caregiver focus groups was submitted and reviewed with all the safe sleep program grantees and the CTF Safe Sleep Grant Program Director in April 2024. For the purposes of this final evaluation report, Table 10 includes the key takeaways from the original focus group summary report.

Table 10. Key Takeaway from Caregiver Focus Groups on Safe Sleep Program Experience

Across all the grantee programs the *strengths* of the safe sleep programs included:

- Overall positive experiences with each of their respective safe sleep programs and with the trainers of the program.
- Easy to follow program materials and content and increased caregiver knowledge about safe sleep recommendations
- Ability to share their gained knowledge with other family members to teach them about current safe sleep recommendations.
- Access to other needed resources (e.g., WIC, Medicaid enrollment, etc.), and safe sleep materials (e.g., safe sleep surfaces, sleep sacks etc.), which reduced the financial burden of purchasing these items and preparing them to adhere to safe sleep recommendations.

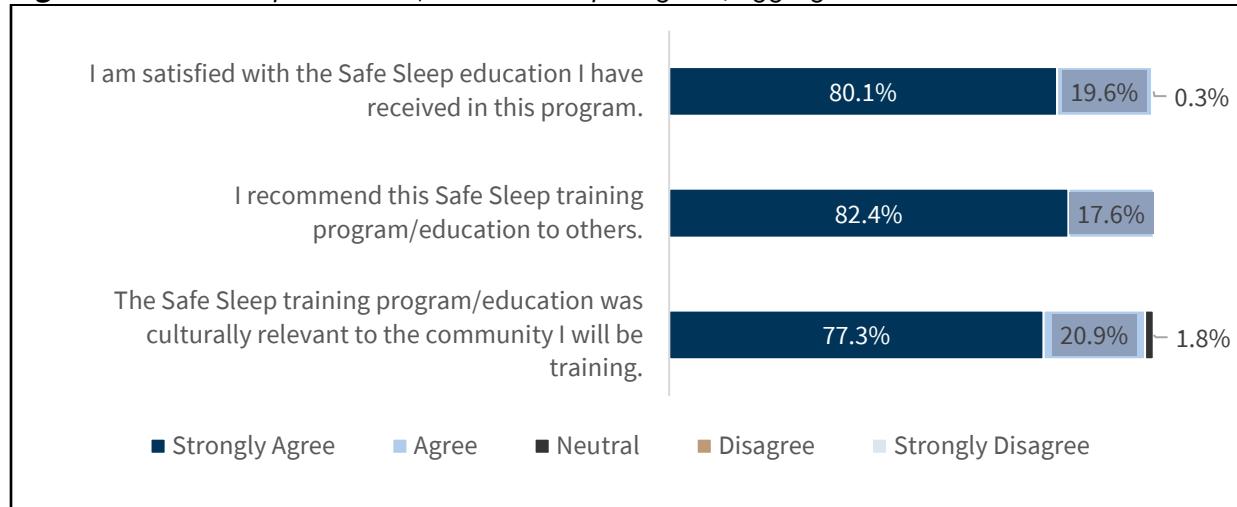
Some of the main *challenges or barriers* that caregivers reported across all grantees were:

- Larger classes made it less likely for participants to ask questions, although they reported the trainers did leave time for questions.
- Minimal discussion around how to navigate the impact of fatigue, breastfeeding, night feedings, and single parenting on adhering to safe sleep recommendations.
- Caregivers produced their own alternatives and solutions to alleviate the above impacts but felt guilty that they were engaging in unsafe practices and therefore did not feel like they could discuss or inquire about these behaviors.
- Older generation family members were more likely set in their beliefs about infant sleep practices, despite caregivers feeling like they could share current recommendations.

Provider Experience

Provider Satisfaction with Safe Sleep Program. Figure 5 summarizes provider experiences with the Safe Sleep program, combining responses from all grantees from April 1, 2023 – June 30, 2025. Percentages reflect the proportion of respondents who agreed or strongly agreed with statements about satisfaction, recommendation, and cultural relevance of the training. The total post-survey response sample sizes ranged from 333 to 342.

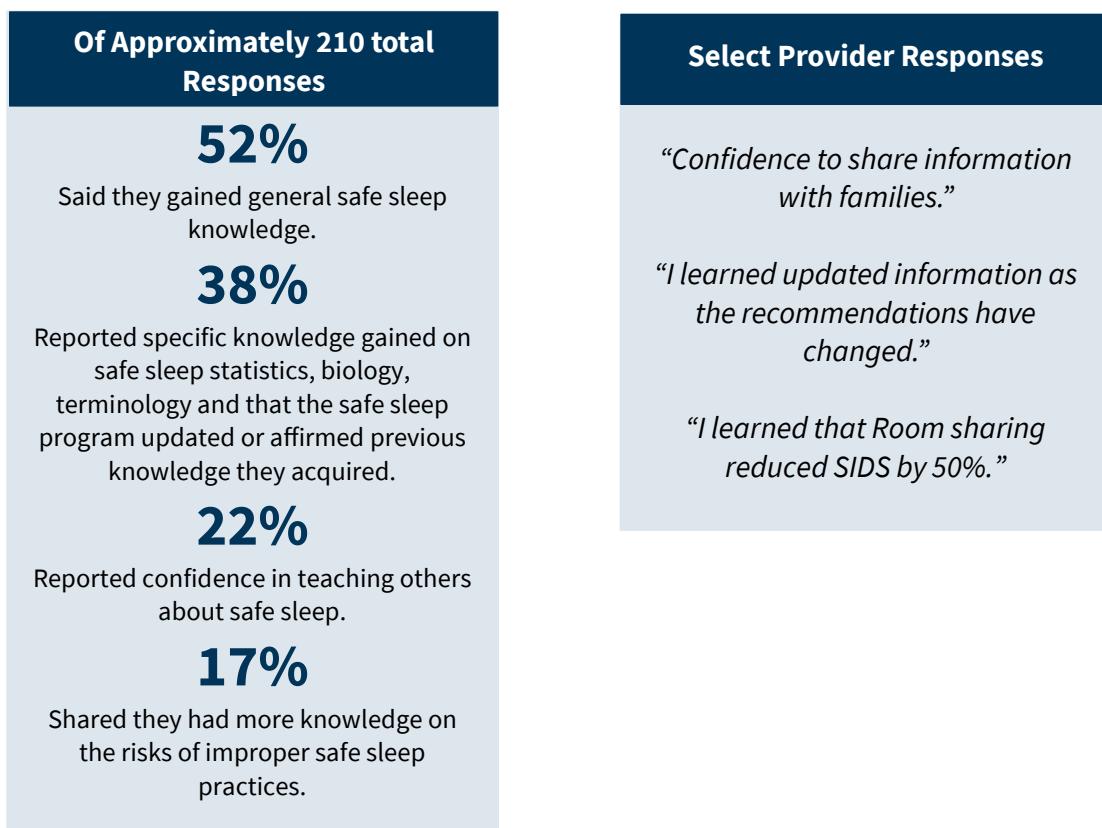
Figure 5. Provider Experiences w/the Safe Sleep Program, Aggregated Across All Grantees



Key Takeaways: Overall Provider Satisfaction

The results show that greater than 99% of providers surveyed strongly agree or agree that they were satisfied with the safe sleep education and would recommend it to others. Additionally, 98% of providers surveyed strongly agreed or agreed that the training was culturally relevant to the community they will train.

Provider Main Gains from Safe Sleep Training. Most open-ended responses indicated that providers gained general knowledge about safe sleep from attending a safe sleep program. A related theme that emerged indicated specific knowledge gains such as safe sleep statistics, terminology, and other details about safe sleep. Almost a quarter of the responses indicated that providers felt confidence in conducting future safe sleep trainings with their clients after having attended a safe sleep program.



Challenges Applying to Training Sessions. The most common challenge that emerged from provider responses was the possible lack of caregiver receptiveness to safe sleep practices. Some providers shared that they were concerned about answering caregivers' questions accurately, especially if caregiver receptiveness was already an issue. Other providers added they expected to have to dispel older generational advice on co-sleeping and other aspects of infant care. Finally, providers anticipated challenges with cultural responsiveness and addressing caregiver cultural norms and insufficient examples of strategies and/or tips on ways to address caregivers' challenges with applying safe sleep practices when nursing.

Of Approximately 210 total Responses	Select Provider Responses
<p>64%</p> <p>Said they thought caregiver receptiveness to safe sleep practices would be challenging</p>	<p><i>“Many families are open about the fact that they do co-sleep or do place babies on their bellies to sleep.”</i></p>
<p>21%</p> <p>Reported uncertainty with implementing safe sleep trainings with fidelity</p>	<p><i>“Being able to answer all of their questions accurately.”</i></p>
<p>18%</p> <p>Shared that older generations who engaged in other non-safe sleep practices may be a challenge to newer generations of parents who want to practice current safe sleep practices.</p>	<p><i>“Considering/respecting cultural beliefs and still reminding families of back is best and alone in a crib.”</i></p>
<p>16%</p> <p>Indicated other challenges related to cultural responsiveness of the training, addressing cultural norms, and providing support to nursing caregivers.</p>	<p><i>“I would like to hear more about breastfeeding and ways to make co-sleeping with a breastfeeding baby safer.”</i></p>

Key Takeaways: Provider Gains and Challenges of Safe Sleep Program

Most responses to the open-ended survey questions indicated providers gained general knowledge about safe sleep practices across all grantee safe sleep programs. Providers highlighted some of the specific information they learned from the programs and shared they felt confident in facilitating future safe sleep trainings with caregivers. However, providers also shared they believed caregiver receptiveness may be a challenge. This main challenge extended into other perceived challenges, such as feeling uncertain with answering questions accurately, dispelling outdated and unsafe sleep practices, and making sure they delivered safe sleep trainings that were culturally relevant and considered caregivers' cultural norms.

Provider Focus Groups. A full report of results from the provider focus groups was submitted and reviewed with all the safe sleep grantees and the CTF Safe Sleep Grant Program coordinator in October 2025. For the purposes of this final evaluation report, Table 11 includes the key takeaways from the original focus group summary report.

Table 11. *Key Takeaways from Provider Focus Groups of Safe Sleep Program Experience*

Across all the grantee programs the strengths providers shared:

- Overall positive experiences the training content and materials. The content they used during their trainings were straight forward and easy to follow.
- The videos in the training content were the most useful resources in teaching safe sleep information with caregivers and other attendees.
- Providers perceived that caregivers experienced positive gains from the safe sleep trainings. They believed that caregivers understood the recommendations and most were going to make their best effort to follow the recommendations.
- Access to safe sleep materials (e.g., pack 'n plays, sleep sacks, etc.) was one of the biggest strengths of the training. Providers shared that caregivers having access to items that are recommended for safe sleep helped to avoid caregivers from purchasing or being given materials that are not recommended (e.g., sleep incline and lounger products, etc.).

Some of the main challenges or barriers that providers reported across all grantees were:

- Training content lacked ways to address most common challenges caregivers faced with following safe sleep recommendations consistently, such as;
 - Bed-sharing
 - Use of inclined or lounger sleep products
 - Addressing family practices and/or cultural practices
 - How to balance or handle tiredness and safe sleep
 - Tips and solutions in soothing baby as to avoid resorting to bed-sharing

Providers identified their own alternative approaches in addressing caregiver common challenges but would have felt more confident in sharing these if they knew they were vetted:

- Use of storytelling
- Sharing “safe alternatives”
- Demonstrations
- Facts and statistics

Key Takeaways & Recommendations/Opportunities of Impact Evaluation	
Key Findings	
<p>The grantees' safe sleep programs had a general positive impact on caregivers and providers with most participants indicating they were satisfied with the program they attended and reported they gained knowledge after completing the program.</p> <p>Future opportunities include</p> <ol style="list-style-type: none">1. Enhancing safe sleep programs to include more time to discuss challenges and provide hands-on demonstrations to help caregivers and providers alike address challenges to	<p>applying safe sleep practices (for caregivers) and teaching safe sleep practices (for providers).</p> <ol style="list-style-type: none">2. For providers, include additional information on ways to be culturally responsive when facilitating safe sleep programs to respectfully address caregivers' cultural norms that may be counter to AAP recommended safe sleep practices.

OUTCOME EVALUATION

The purpose of the outcome evaluation is to understand if the grantee programs improved participant knowledge, awareness and safe sleep practices among participants. A secondary purpose was to examine available state level administrative data to see if the grantee programs had an impact on reducing safe-related infant injuries and deaths in the counties served. The evaluation aimed to answer the question:

RQ3: *How do funded initiatives' interventions impact rates of sleep related infant injuries and deaths?*

The following section will provide: 1) a comprehensive summary of the outcomes achieved by the CTF Standard pre-/post-surveys across the safe sleep program grantees; and 2) the impact of CTF Safe Sleep Program initiatives on sleep related infant injuries and death outcomes.

Method

Participants

As with the impact evaluation, recruitment and eligibility for the caregiver and provider programs were determined by each grantee and/or by the individual community partners who grantees collaborated with as part of their safe sleep program. Because the CTF Standard Caregiver and Provider pre- and post-surveys were used to measure both impact and outcome evaluation objectives, the outcome evaluation included the same participants as the impact evaluation (see Appendix E and F for demographic infographics, and pages 13-14 for a detailed description of the participant characteristics).

Outcome Evaluation Indicators

Caregiver Items. The following select survey questions from the CTF Standard Caregiver Pre/Post-Survey were scored and analyzed to measure whether the grantee safe sleep programs improved participant knowledge about safe sleep practices (see Appendix C for CTF Standard Caregiver Pre/Post Survey):

1. Where should your baby of age 0-12 months sleep during nap time and nighttime?
2. What sleeping position is the safest for your baby of age 0-12 months? How will you lay your baby to sleep safely?
3. Select all the items you feel are safe to be with your sleeping baby in their crib or sleeping area? (*blanket, toys, pillow, pacifier, etc.*)
4. It is safe for my baby aged 0-12 months to sleep with... (*parents, siblings, pets, alone, etc.*)

5. Do you know the ABCs of Baby Safe Sleep? If yes, please specify.

Provider Items. The following select survey questions from the CTF Standard Provider Pre/Post-survey were scored and analyzed to measure whether the grantee safe sleep programs improved providers' knowledge about safe sleep practices. Additional questions examined provider self-assessed knowledge and confidence in teaching others about safe sleep practices (see Appendix D for CTF Caregiver Pre/Post Survey).

3. According to the American Academy of Pediatrics (AAP), the safest position for a baby to sleep is on their:
4. Babies are likely to choke if they sleep on their back, true or false?
5. According to the American Academy of Pediatrics (AAP), the safest place for a baby to sleep is:
6. Babies do not die from SIDS or suffocation in cribs, true or false?
7. According to the American Academy of Pediatrics (AAP), the safest environment for a baby to sleep can include which of the following items:
8. Which of the following is an AAP recommended practice to reduce infant sleep-related death?
9. SIDS (Sudden Infant Death Syndrome) is a sub-category of SUID (Sudden Unexpected Infant Death).

Data Analysis

Completion Rates. While most caregiver and provider participants completed both pre and post surveys, there was some attrition across projects. Completion rates were calculated as the number of pre-training surveys completed divided by the total number of pre-training surveys administered. Post-training surveys were calculated similarly to the number of post-training surveys completed divided by the total number of post-training surveys administered. Completion rates include cumulative summaries across all grantees for all fiscal years (April 1, 2023 – June 30, 2025) and by each grantee across the same fiscal year period.

Caregiver and Provider Survey Scoring. Summary statistics for measuring knowledge gained by both caregiver and provider participants is included for all pre- and post-surveys, even if participants did not complete both surveys. Responses to each question were scored—a correct response to each question was awarded 1 point, for a maximum pre- and post-training score of 5 points on the caregiver surveys and a maximum pre- and post-training score of 7 points on the provider surveys. A two-sample t-test was performed to measure a change in knowledge from pre-training survey to post-training survey. Results include cumulative survey pre/post survey *t*-test analyses, and *t*-test analyses for each question both across all grantees and by individual grantees for the same time from April 1, 2023 – June 30, 2025.

Key Findings

Caregiver Outcome Evaluation Summary

Completion Rates. Figure 6 below shows the completion rates of caregiver pre- and post-surveys across all grantees' safe sleep projects, and Figures 7 – 10 and Table 12 show completion rates by individual grantees from April 1, 2023 – June 30, 2025.

Figure 6. Caregiver Surveys Completed Across all Grantee Projects

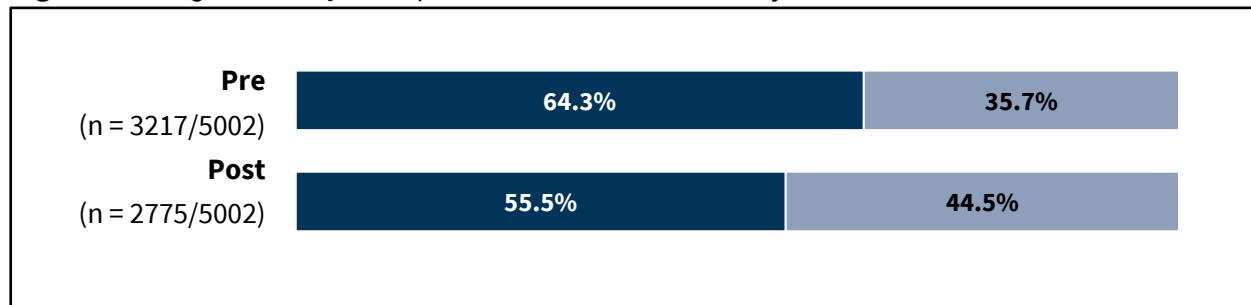


Figure 7. Children's Mercy Hospital Caregiver Surveys Completed

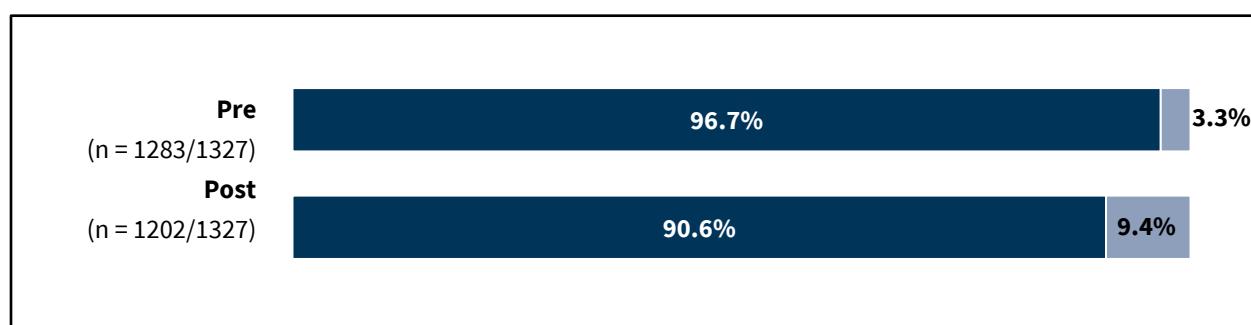


Figure 8. Community Partnerships of Ozarks Caregiver Surveys Completed

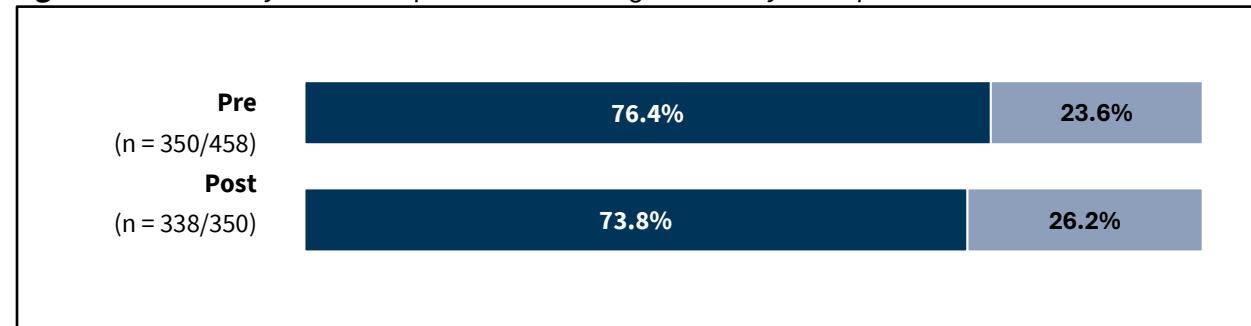
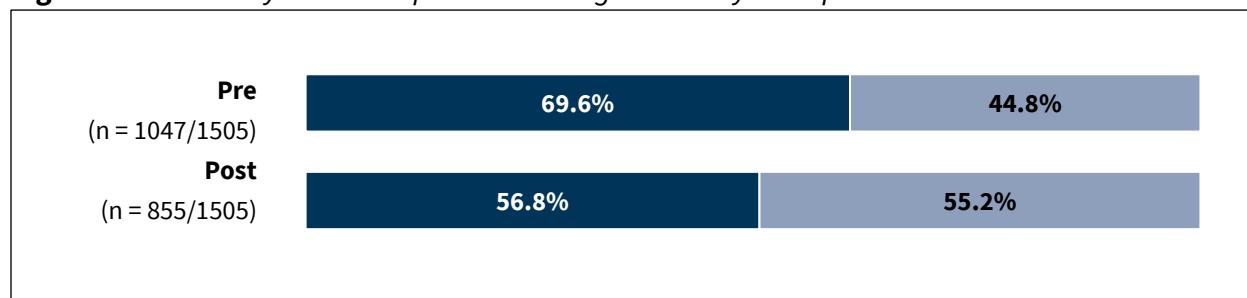
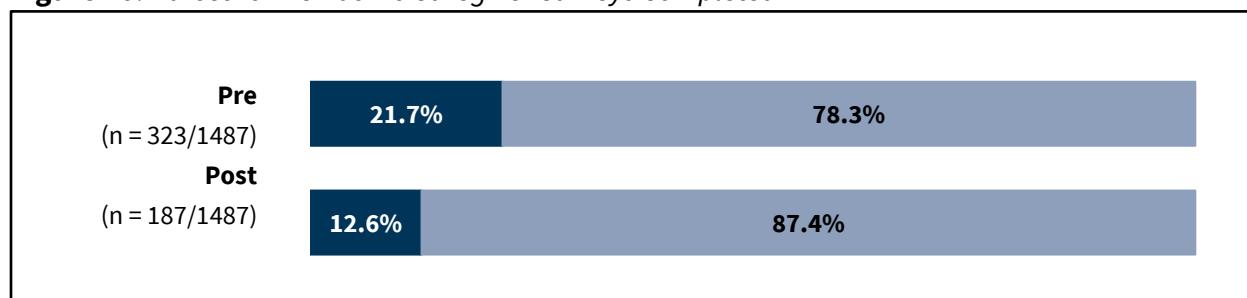


Figure 9. Community Partnership of Rolla Caregiver Surveys Completed**Figure 10.** Nurses for Newborns Caregiver Surveys Completed

St. Joseph Youth Alliance. The number of completed surveys by St. Joseph Youth Alliance exceeds number of reported caregivers trained (reported caregivers served in FY 2024 and FY 2025 is 206. Two hundred and fourteen caregiver pre-training surveys were received). Completion data cannot be calculated.

Table 12. St. Joseph Youth Alliance Caregiver Surveys Completed by Fiscal Year

	Pre-Training Surveys	Post-Training Surveys
FY 2024	103	94
FY 2025	111	97
Total	214	191

Pre/Post Survey Outcome Key Findings. Table 13 below shows the knowledge gained by caregivers across all grantee safe sleep programs. Results showed statistically significant higher scores on the post-test ($M = 4.52$, $SD = 0.69$) than on the pre-test ($M = 3.69$, $SD = 1.05$), indicating an increase in knowledge in these five areas of safe sleep following the training, $t(5612) = 36.77$, $p < .001$. Analysis of individual questions showed that participants scored higher on the post-test on each measure, indicating an increase in knowledge in each of the five areas of safe sleep, $ts(5321) = 7.79$, $ps < .001$

Table 13. Program Outcome Summary Combined Grantees - Caregivers

	Pre (n = 3217)		Post (n = 2774)		<i>t</i>
	M	SD	M	SD	
Total Survey Score	3.69	1.05	4.52	0.69	36.77***
Q1	0.96	0.17	0.99	0.10	7.79***
Q2	0.60	0.33	0.72	0.28	15.33***
Q3	0.86	0.39	0.96	0.21	12.45***
Q4	0.91	0.26	0.97	0.15	10.64***
Q5	0.35	0.47	0.88	0.32	51.33***

Note. *** $p < .001$. Total Survey Score indicates cumulative pre/post survey scores.

Children's Mercy Hospital. Overall, Children's Mercy Hospital participants scored higher on the post-test ($M = 4.54$, $SD = 0.75$) than on the pre-test ($M = 3.42$, $SD = 1.27$), indicating an increase in knowledge in these five areas of safe sleep following the trainings, $t(2103) = 26.90$, $p < .001$. The results also show that these participants scored statistically significant higher scores on individual questions after receiving the Safe Sleep Safe Babies training, indicating an increase in knowledge in each area of safe sleep, $ts(1969) > 5.45$, $ps < .001$ (see Table 14).

Table 14. Children's Mercy Hospital Program Outcome Summary

	Pre (n = 1283)		Post (n = 1202)		<i>t</i>
	M	SD	M	SD	
Total Survey Score	3.42	1.27	4.54	0.75	26.90***
Q1	0.96	0.19	0.99	0.10	5.45***
Q2	0.55	0.39	0.77	0.29	16.28***
Q3	0.74	0.52	0.95	0.27	12.32***
Q4	0.88	0.30	0.97	0.14	9.25***
Q5	0.30	0.46	0.87	0.33	35.94***

Note. *** $p < .001$. Total Survey Score indicates cumulative pre/post survey scores.

Community Partnership of the Ozarks. Overall, Community Partnership of the Ozarks participants scored higher on the post-test ($M = 4.60$, $SD = 0.67$) than on the pre-test ($M = 3.81$, $SD = 0.97$), indicating an increase in knowledge following the trainings, $t(622) = 12.51$, $p < .001$. The

results also show that these participants scored statistically significant higher scores on individual questions after receiving the Community Partnership of the Ozarks training, $t(619) > 2.24$, $ps < .03$ (see Table 15), indicating the training program helped improve their knowledge on all five survey topics.

Table 15. *Community Partnerships of the Ozarks Program Outcome Summary*

	Pre (n = 350)		Post (n = 339)		<i>t</i>
	M	SD	M	SD	
Total Survey Score	3.81	0.97	4.60	0.67	12.51***
Q1	0.95	0.19	0.98	0.13	2.24*
Q2	0.66	0.29	0.76	0.25	4.78***
Q3	0.92	0.27	0.98	0.13	3.85***
Q4	0.86	0.32	0.94	0.24	3.68***
Q5	0.41	0.49	0.93	0.24	17.90***

Note. *** $p < .001$; * $p < .05$. Total Survey Score indicates cumulative pre/post survey scores.

Community Partnership of Rolla. Community Partnership of Rolla participants scored higher on the post-survey ($M = 4.60$, $SD = 0.46$) than on the pre-survey ($M = 4.02$, $SD = 0.74$), indicating an increase in knowledge following the training, $t(1319) = 20.97$, $p < .001$. The results also show participants scored statistically significant higher scores on questions 1, 3, 4, and 5, indicating an increase in knowledge primarily in these areas of safe sleep, $t(1353) > 2.79$, $ps < .005$. Results indicate participants may not consistently respond that the safest position to lay an infant 0-12 months of age is on their back (see Table 16).

Table 16. *Community Partnership of Rolla Program Outcome Summary*

	Pre (n = 1047)		Post (n= 855)		<i>t</i>
	M	SD	M	SD	
Total Survey Score	4.02	0.74	4.60	0.46	20.97***
Q1	0.96	0.15	0.99	0.08	4.99***
Q2	0.68	0.26	0.70	0.25	1.87
Q3	0.98	0.15	0.99	0.09	2.79***
Q4	0.96	0.17	0.99	0.08	6.11***

	Pre (n = 1047)	Post (n= 855)
Q5	0.45	0.49

Note. *** $p < .001$. Q2 = $t(1850) = 1.87, p = .06$. Total Survey Score indicates cumulative pre/post survey scores.

Nurses for Newborns. Nurses for Newborns program participants scored higher on the post-survey ($M = 4.45, SD = 0.56$) than on the pre-survey ($M = 3.67, SD = 0.73$), indicating an overall increase in knowledge following the training, $t(470) = 13.59, p < .001$. The results also show these participants scored statistically significant higher scores on questions 1-3 and 5, indicating an increase in knowledge on most survey topics, $t(501) > 2.07, p = 0.04$. There was not a statistically significant knowledge increase for question 4, which may indicate that participants had prior knowledge about the recommendation that infants should sleep alone.

Table 17. *Nurses for Newborns Program Outcome Summary*

	Pre (n = 323)		Post (n = 187)		<i>t</i>
	M	SD	M	SD	
Total Survey Score	3.67	0.73	4.45	0.56	13.59***
Q1	0.97	0.16	0.99	0.07	2.41*
Q2	0.58	0.27	0.64	0.25	2.72**
Q3	0.94	0.23	0.98	0.15	2.07*
Q4	0.94	0.22	0.97	0.17	1.73
Q5	0.25	0.43	0.87	0.33	18.38***

Note. *** $p < .001$; ** $p < .01$; $p < .05$. Q4 = $t(468) = 1.73, p = .83$. Total Survey Score indicates cumulative pre/post survey scores.

St. Joseph Youth Alliance. Overall, St. Joseph Youth Alliance participants scored higher on the post-survey ($M = 4.04, SD = 1.04$) than on the pre-survey ($M = 3.53, SD = 0.98$), indicating an increase in knowledge following the training, $t(391) = 5.05, p < .001$ (see Table 18). The results also show these participants scored statistically significant higher scores only on question 5, indicating an increase in knowledge primarily on identifying the ABCs of safe sleep, $t(393) > 8.52, p < .001$. Results indicate participants may have either had prior knowledge of the topics covered in questions 1 through 4.

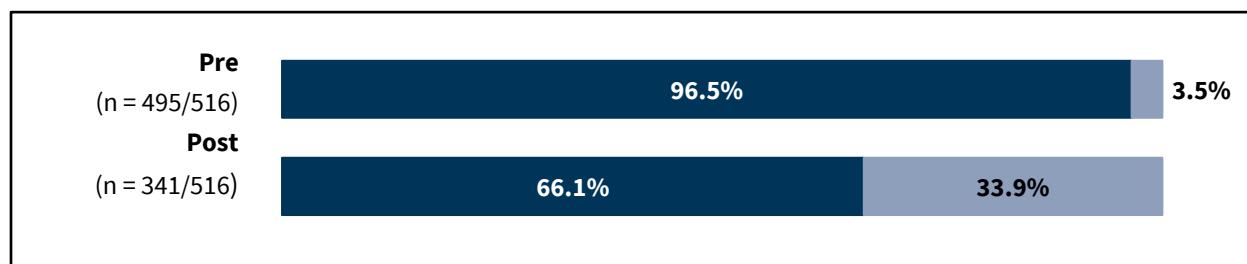
Table 18. St. Joseph Youth Alliance Program Outcome Summary

	Pre (n = 214)		Post (n = 191)		<i>t</i>
	M	SD	M	SD	
Total Survey Score	3.53	0.98	4.04	1.04	5.05***
Q1	0.95	0.20	0.97	0.15	1.21
Q2	0.55	0.28	0.57	0.28	0.74
Q3	0.82	0.42	0.89	0.35	1.86
Q4	0.93	0.24	0.93	0.24	0.57
Q5	0.28	0.44	0.66	0.46	8.52***

Note. *** $p < .001$. Total Survey Score indicates cumulative pre/post survey scores.

Provider Outcome Evaluation Summary

Pre/Post Survey Completion Rates. Figure 11 below shows the completion rates of provider pre/post surveys across all grantee safe sleep projects from April 1, 2023 – June 30, 2025. Due to the small sample size at an individual grantee level, only combined completion rates are presented.

Figure 11. Provider CTF Standard Pre/Post Surveys Completed by all Grantees

Pre/Post Survey Outcome Key Findings. Table 19 below shows the knowledge gained by providers across all grantee safe sleep programs that included a provider training component (see Table 1). Results show statistically significant higher scores on the post-test ($M = 6.13$, $SD = 0.75$) than on the pre-test ($M = 5.67$, $SD = 0.97$), *indicating an increase in knowledge in these seven topic areas of safe sleep following the training, $t(804) = 7.61, p < .001$* . The results also show that these participants scored statistically significant higher scores on questions 1, 2, 3, 5, 6, and 7 after receiving the safe sleep training, $t(804) > 2.99, ps < .003$, suggesting that the participants had prior knowledge about infant deaths related to SIDS.

Table 19. Program Outcome Summary Combined Grantees - Providers

	Pre (n = 487)		Post (n = 332)		<i>t</i>
	M	SD	M	SD	
Total Survey Score	5.67	0.97	6.13	0.75	7.61***
Q1	0.97	0.16	1.00	0.05	2.99**
Q2	0.86	0.34	0.97	0.18	5.66***
Q3	0.46	0.50	0.61	0.49	4.25***
Q4	0.96	0.19	0.96	0.19	0.21
Q5	0.97	0.16	0.99	0.08	2.44**
Q6	0.85	0.36	0.94	0.24	4.30***
Q7	0.59	0.28	0.66	0.25	3.79***

Note. *** $p < .001$. ** $p < .01$. Total Survey Score indicates cumulative pre/post survey scores.

Providers were asked to assess their personal knowledge of safe sleep and confidence in providing safe sleep education to caregivers. Results show that they rated themselves higher on the post-survey in both questions. These results were statistically significant, indicating providers reported they gained more knowledge and confidence in delivering safe sleep education after completing the training.

Table 20. Cumulative Provider Self-Assessment of Knowledge & Confidence

Self-Assessment Questions	Pre (n = 487)		Post (n = 332)		<i>t</i>
	M	SD	M	SD	
How would you rate your current safe sleep knowledge? (1 = low to 10 = high)	6.98	1.80	8.49	1.50	13.03***
How would you rate your current confidence level in educating parents and caregivers about safe sleep (1 – Low; 10 = High)	6.73	1.93	8.39	1.51	13.82***

Note. *** $p < .001$.

Key Takeaways & Opportunities Based on Caregiver and Provider CTF Standard Pre-/Post-Survey Outcome Key Findings

Key Takeaways

- The CTF Standard Pre/Post Survey for both caregivers and providers indicated that caregivers and providers gained knowledge about safe sleep practices and recommendations because of participating in one of the safe sleep grantee programs. Although statistically significant differences between the pre and post survey may not have been found for the individual questions for all grantees, the safe sleep programs had an overall impact on safe sleep knowledge making them highly important resources for caregivers and providers.
- One limitation was that there was no available data to support whether any grantees' safe sleep program had a direct impact on reducing infant sleep related injuries or deaths, which was one of the inquires of the outcome evaluation.

Opportunities and Recommendations

- **Expand** safe sleep trainings and programs to more communities to continue to increase knowledge on recommended safe sleep practices.
- **Access** to local data on infant sleep related deaths or injuries may be useful to grantees to identify other impacts of their safe sleep programs.
- **Provide** similar trainings to more regions of the state to help increase knowledge on recommended safe sleep practices more widely.

Grantee Program Impact on Rates of Sleep-Related Infant Injuries and Deaths

This component of the outcome evaluation examines statewide administrative data to assess trends in sleep-related infant injuries and deaths during the Safe Sleep Grant Program period. The purpose of this analysis is not to attribute population-level changes to any single grantee program or activity, but rather to situate safe sleep programming within the broader landscape. Countless safe sleep interventions have been applied at community, state, and national levels to spread the AAP guidelines to families and professionals, and many of these interventions and practices have demonstrated success when used both individually and collectively. Successes documented in the literature are accumulating to build the evidence base for these interventions and practices, highlighting the importance of multi-level coordinated approaches to reductions in sleep-related infant deaths.¹⁰

Within this context, the Safe Sleep Grant Program represents one component of these broader efforts that address education and messaging around safe sleep, establish partnerships between healthcare systems and state and community agencies, and advocate for legislation and policy initiatives related to regulation and reporting. Given the complexity of factors that influence sleep related infant mortality, it is not expected or feasible that activities from a small cohort of five grantees would independently produce measurable change in statewide sleep-related infant injuries and death within the grant period. Instead, their contributions should be understood as strengthening the broader safe sleep system by enhancing local caregiver and provider education, increasing access to material resources and supports, and reinforcing safe sleep messaging at the community level.

Methodology and Data Sources

This section draws on state-level data to provide context for sleep-related infant death and injury in Missouri. Ideally, this evaluation would involve comparing county-level rates of sleep-related infant injury and death where programs were implemented and statewide. A county-level analysis would allow for a better assessment of the grantees' potential contribution to reducing SUID. However, the data available for this evaluation did not include county- or even region-level breakdowns, which would be necessary for localized comparison.

¹⁰ Moon RY, Hauck FR, Colson ER. Safe Infant Sleep Interventions: What is the Evidence for Successful Behavior Change? *Curr Pediatr Rev.* 2016;12(1):67-75. doi: 10.2174/1573396311666151026110148. PMID: 26496723; PMCID: PMC4997961.

The primary data source used in this analysis is the 2023 Missouri Department of Social Services (DSS) Child Fatality Review Program (CFRP) Annual Report, which offers a comprehensive statewide perspective on sleep-related infant deaths. Secondary sources include the Center for Disease Control and Prevention (CDC) Division of Reproductive Health's (DRH) data resources for SUID and SIDS for national comparisons.

The evaluation team was provided with Missouri critical event data as a part of the evaluation/data use agreement. Critical event data capture child abuse and neglect (CA/N) fatalities, near fatalities, and serious bodily injuries and all Non-CA/N fatalities, near fatalities, and serious bodily injuries that meet the following criteria: 1. Victim child is in the legal custody of the Children's Division AT TIME of (not as a result of) the critical event; 2. Active Agency Involvement at the time of Critical Event (e.g., investigation, assessment, referral, FCS/IIS); and 3. Prior Children's Division involvement with the family of concern within the last five (5) years OR if the child is under five (5) years old, ANY prior involvement. Because of this inclusion criteria, the critical event dataset does not capture all sleep-related infant deaths in Missouri and is not fully aligned with the intended purpose of the administrative data review.

It is important to note that the Child Fatality Review Program Annual Report is limited to aggregate statewide findings, yet historical reports in combination with CDC data provides a valuable longitudinal perspective on statewide trends in sleep-related infant deaths.¹¹ These data allow some contextualization of the Safe Sleep Grant Program within the broader state and national trends and suggest how similar interventions could contribute to reductions in sleep-related infant injury and death.

¹¹ Child Fatality Review Program historical reports are available online at <https://dss.mo.gov/re/cfrar.htm>

Missouri Safe Sleep Data

SUID Rates

The SUID rate includes infant deaths by SIDS, unknown causes, and accidental suffocation and strangulation in bed.

Nationally, SUID rates have remained steady since the late 1990s, with rates fluctuating between a low of 86.1 per 100,000 live births in 2011 and 99.0 in 2008. In 2022, the National SUID rate was 100.9 per 100,000 live births, the highest it has been since 1996.

From 2018 to 2022, the SUID rate in Missouri was higher than the National rate at 104.5 per 100,000 live births. Missouri has the 22nd highest SUID rate among the 50 states and the District of Columbia for the time period. Annual SUID rates are not available due to instability in death rates from limited data.

SUID in Missouri

2018 to 2022

104.5

per 100,000 live births

National Rate, 2022: 100.9

22nd

**Highest SUID rate
among the 50 states and
D.C.**

Sleep-related Infant Fatalities by Race

While the National SUID rate in 2022 was 100.9 per 100,000 live births, the rate among American Indian/Alaska Native and Black/African American infants was much higher. In 2022, the SUID rate for American Indian/Alaska Native infants was 229.4 per 100,000 live births, and 244.0 for Black/African American infants.¹² There is not enough data to calculate SUID rates by race and ethnicity in Missouri, but Black/African American infants are consistently overrepresented in the



**Black/African American
infants are
overrepresented in the
population of sleep-related infant
deaths in Missouri.**

number of sleep-related infant deaths annually. Of the 89 sleep-related infant deaths in Missouri in 2023, 1 (1%) was Asian or Pacific Islander, 31 (35%) were Black/African

¹² Centers for Disease Control and Prevention. (2024, September 17). *SUID rates by race and ethnicity, 2017–2022*. <https://www.cdc.gov/sudden-infant-death/data-research/data/suid-rates-by-race-ethnicity.html>

American, 50 (56%) were White, and 7 (8%) were multi-racial.¹³ In comparison, among the infant population in Missouri, 2% are Asian or Pacific Islander, 13% are Black/African American, 77% are White, and 9% are multi-racial.¹⁴

In 2023, Black/African American infants were overrepresented in the population of sleep-related infant deaths at a rate 3 times their

representation of the Missouri infant population. This overrepresentation has remained largely unchanged since 2017 (DI = 2.8). While ethnicity of the population of sleep-related infant deaths in Missouri was not available, nationally, the SUID rate of Latino/a/x infants falls below the overall rate.

Table 21. 2023 Missouri Sleep-related Infant Deaths by Race

	% (#) of sleep-related infant deaths	% in Missouri infant population	Disproportionality Index (DI)*
Asian/Pacific Islander	1% (n = 1)	2%	0.5
Black/African American	35% (n = 31)	12%	3.0
White	56% (n = 50)	77%	0.7
Multi Race	8% (n = 7)	9%	0.9

Note. A disproportionality index (DI) measures the degree to which a group is overrepresented or underrepresented in a system or process compared to its representation in a reference population, with a DI of 1.0 indicating proportional representation, a value greater than 1.0 indicating overrepresentation, and a value less than 1.0 indicating underrepresentation.

Key Missouri Sleep-Related Infant Mortality Findings

The Missouri Child Fatality Review Program Annual Report provides important insight into the characteristics and circumstances surrounding infant deaths in the state, including details about infant demographics, location, and caregiver factors at time of death. Despite some decrease in sleep-related infant deaths due to suffocation and co-sleeping since 2017, these causes remain significant contributors to overall infant mortality and underscore the ongoing need for prevention and education efforts in the state. Additional statistics from the 2023 Annual Report include:

¹³ Missouri Department of Social Services. (2023). *Missouri Child Fatality Review Program – 2023 Annual Report*. <https://dss.mo.gov/re/pdf/cfrar/2023-eliminating-child-abuse-and-neglect.pdf>

¹⁴ March of Dimes. (n.d.). *Percentage of births by race/ethnicity: Missouri, 2021–2023 average*. PeriStats. Retrieved December 16, 2025, from <https://www.marchofdimes.org/peristats/data?reg=99&top=2&stop=10&lev=1&slev=4&obj=3&sreg=29>

Key Statistics

3 months	Median age of infant when sleep-related death occurred. (Most frequent age was 2 months)
57% <i>84% in 2017</i>	Percent of sleep-related infant deaths determined to be due to suffocation. (25% Undetermined, 1% SIDS, 15% Other reason)
58% <i>65% in 2017</i>	Percent of sleep-related infant deaths that occurred when the infant was sleeping with an adult, child, or animal.
18% <i>10% in 2017</i>	Percent of sleep-related infant deaths that occurred when the infant was being watched by someone other than their parent.
83% <i>71% in 2017</i>	Percent of infants who died from a sleep-related cause and were covered by Medicaid.

Key Takeaways from Missouri Data

The available data provide a foundation for understanding Missouri's progress and ongoing challenges in promoting safe sleep practices in the state. State and national comparisons indicate Missouri's sleep-related infant death rate remains high and with notable racial disparities. While some improvements have occurred in recent years, particularly in a reduction of deaths related to co-sleeping and suffocation, the persistence of these preventable fatalities points to the ongoing need for sustained prevention efforts. Limitations in data availability, particularly the lack of county-level or case-specific information, constrains the ability to examine program impact in greater depth. Nonetheless, this data offers context for interpreting program outcomes and identifying education and outreach efforts where safe sleep initiatives may have the greatest benefit.

Future Opportunities

Improve access to localized data: Advocate for county- or region-level reporting of sleep-related infant injuries and death to enable more precise understanding of program impact and gaps in services.

Expand demographic reporting: Expand availability of demographic reporting of sleep-related infant injuries and death to target programs and messaging for high-risk communities.

Engage with community-based organizations serving disproportionately affected populations: Co-create culturally relevant materials and outreach approaches for communities most impacted by sleep-related infant injuries and death.

Strengthen cross-sector partnerships: Deepen collaboration between healthcare systems, community organizations, local health departments, early childhood programs, and statewide advocacy groups to ensure consistent safe sleep messaging, improve data sharing, and coordinate culturally responsive outreach to families most at risk.

Incorporate ongoing evaluation of program reach and impact: Establish consistent tracking of safe sleep program activities statewide. Link data to local trends to better understand how and where safe sleep education efforts are influencing caregiver behaviors and community-level outcomes.

APPENDICES

Appendix A

Rural-Urban Continuum Codes

The Rural-Urban Continuum Codes (2023) are a U.S. Department of Agriculture (ERS) classification of U.S. counties into nine categories, from most urban to most rural. These codes distinguish counties based on population size and degree of urbanization and adjacency to a metropolitan area, using the Office of Management and Budget's (OMB) metropolitan area definitions.

Counties are shaded on a gradient scale, based on the 2023 Rural-Urban Continuum Code, where the largest metropolitan counties are darkest gray, and smaller, more rural counties are the lightest. (For a description of Rural-Urban Continuum Codes 1 through 9, see Appendix.)

- 1 Counties in metro areas of 1 million population or more
- 2 Counties in metro areas of 250,000 to 1 million population
- 3 Counties in metro areas of fewer than 250,000 population
- 4 Urban population of 20,000 or more, adjacent to a metro area
- 5 Urban population of 20,000 or more, not adjacent to a metro area
- 6 Urban population of 5,000 to 20,000, adjacent to a metro area
- 7 Urban population of 5,000 to 20,000, not adjacent to a metro area
- 8 Urban population of fewer than 5,000, adjacent to a metro area
- 9 Urban population of fewer than 5,000, not adjacent to a metro area

Source: U.S. Department of Agriculture, Economic Research Service. (2025, January 7). *Rural-Urban Continuum Codes*. <https://www.ers.usda.gov/data-products/rural-urban-continuum-codes>

Appendix B

Summary of Recommendations with Strength of Recommendation

A level recommendations:
Back to sleep for every sleep.
Use a firm, flat, non-inclined sleep surface to reduce the risk of suffocation or wedging/entrapment.
Feeding of human milk is recommended because it is associated with a reduced risk of SIDS.
It is recommended that infants sleep in the parents' room, close to the parents' bed, but on a separate surface designed for infants, ideally for at least the first 6 mo.
Keep soft objects, such as pillows, pillow-like toys, quilts, comforters, mattress toppers, fur-like materials, and loose bedding, such as blankets and nonfitted sheets, away from the infant's sleep area to reduce the risk of SIDS, suffocation, entrapment/wedging, and strangulation.
Offering a pacifier at naptime and bedtime is recommended to reduce the risk of SIDS.
Avoid smoke and nicotine exposure during pregnancy and after birth.
Avoid alcohol, marijuana, opioids, and illicit drug use during pregnancy and after birth.
Avoid overheating and head covering in infants.
It is recommended that pregnant people obtain regular prenatal care.
It is recommended that infants be immunized in accordance with guidelines from the AAP and CDC.
Do not use home cardiorespiratory monitors as a strategy to reduce the risk of SIDS.
Supervised, awake tummy time is recommended to facilitate development and to minimize the risk of positional plagiocephaly. Parents are encouraged to place the infant in tummy time while awake and supervised for short periods of time beginning soon after hospital discharge, increasing incrementally to at least 15 to 30 min total daily by age 7 wk.
It is essential that physicians, nonphysician clinicians, hospital staff, and childcare providers endorse and model safe infant sleep guidelines from the beginning of pregnancy.
It is advised that media and manufacturers follow safe sleep guidelines in their messaging and advertising to promote safe sleep practices as the social norm.
Continue the NICHD "Safe to Sleep" campaign, focusing on ways to reduce the risk of all sleep-related deaths. Pediatricians and other maternal and child health providers can serve as key promoters of the campaign messages.

B level recommendations:

Avoid the use of commercial devices that are inconsistent with safe sleep recommendations.

C level recommendations:

There is no evidence to recommend swaddling as a strategy to reduce the risk of SIDS.

Continue research and surveillance on the risk factors, causes, and pathophysiological mechanisms of sleep-related deaths, with the ultimate goal of eliminating these deaths entirely.

Safe Sleep Guidelines That Have Been Substantially Revised Since 2016

Topic	2016 Guidelines	Revised 2022 Guidelines
Sleep surface	Use a firm sleep surface.	Use a firm, flat, non-inclined sleep surface.
		Sleep surfaces with inclines of >10 degrees are unsafe for infant sleep.
		Some American Indian/Alaska Native communities have promoted the use of cradleboards as an infant sleep surface. There are no data regarding the safety of cradleboards for sleep, but the NICHD suggests cradleboards as a culturally appropriate infant sleep surface. Care should be taken so that infants do not overheat (because of over bundling) in the cradleboard.
		At a minimum, to be considered a safe option, any alternative sleep surface should adhere to the June 2021 CPSC rule that any infant sleep product must meet existing federal safety standards for cribs, bassinets, play yards, and bedside sleepers. This includes inclined sleep products, hammocks, baby boxes, in-bed sleepers, baby nests and pods, compact bassinets without a stand or legs, travel bassinets, and baby tents. Products that do not meet the federal safety standard are likely not safe for infant sleep, and their use is not recommended.
		In an emergency, an alternative device with a firm, flat, non-inclined

Topic	2016 Guidelines	Revised 2022 Guidelines
		surface (eg, box, basket, or dresser drawer) with thin, firm padding may be used temporarily. However, this alternative device should be replaced as soon as a CPSC-approved surface is available.
Breastfeeding	Breastfeeding is associated with a reduced risk of SIDS. Unless contraindicated, mothers should breastfeed exclusively or feed with expressed milk (i.e., not offer any formula or other nonhuman milk-based supplements) for 6 months, in alignment with recommendations of the AAP.	Feeding of human milk is recommended because it is associated with a reduced risk of SIDS. Unless it is contraindicated or the parent is unable to do so, it is recommended that infants be fed with human milk (ie, not offered any formula or other nonhuman milk-based supplements) exclusively for ~6 months, with continuation of human milk feeding for 1 y or longer as mutually desired by parent and infant, in alignment with recommendations of the AAP.
		Because preterm and low birth weight infants are at higher risk of dying from SIDS, it is particularly important to emphasize the benefits of human milk, engage with families to understand the barriers and facilitators to provision of human milk, and provide more intensive assistance during prolonged NICU hospitalization for these groups.
		Some parents are unable to or choose not to feed human milk. When discussing breastfeeding, culturally appropriate, respectful, and nonjudgmental communication

Topic	2016 Guidelines	Revised 2022 Guidelines
		between health care professionals and parents is recommended. These families should still be counseled on the importance of following the other safe sleep recommendations.
Sleep location	It is recommended that infants sleep in the parents' room, close to the parents' bed, but on a separate surface designed for infants, ideally for the first year of life, but at least for the first 6 mo.	It is recommended that infants sleep in the parents' room, close to the parents' bed, but on a separate surface designed for infants, ideally for at least the first 6 mo.
	<p>There are specific circumstances that, in case-control studies and case series, have been shown to substantially increase the risk of SIDS or unintentional injury or death while bed sharing, and these should be avoided at all times:</p> <ul style="list-style-type: none"> • Bed sharing with a term normal weight infant aged <4 months and infants born preterm and/or with low birth weight, regardless of parental smoking status. Even for breastfed infants, there is an increased risk of SIDS when bed sharing if aged <4 mo. This appears to be a particularly vulnerable time, so if parents choose to feed their infants aged <4 months in bed, they should be especially vigilant to not fall asleep. • Bed sharing with a current smoker (even if he or she does not smoke in bed) or if the mother smoked during pregnancy. 	<p>The AAP understands and respects that many parents choose to routinely bed share for a variety of reasons, including facilitation of breastfeeding, cultural preferences, and belief that it is better and safer for their infant. However, based on the evidence, we are unable to recommend bed sharing under any circumstances. Having the infant close by their bedside in a crib or bassinet will allow parents to feed, comfort, and respond to their infant's needs. It is also important for parents, pediatricians, other physicians, and nonphysician clinicians to know that the following factors increase the magnitude of risk when bed sharing or surface sharing:</p> <p>More than 10 times the baseline risk of parent-infant bed sharing:</p> <ul style="list-style-type: none"> • Bed sharing with someone who is impaired in their alertness or ability to arouse because of fatigue or use of

Topic	2016 Guidelines	Revised 2022 Guidelines
	<ul style="list-style-type: none"> • Bed sharing with someone who is impaired in his or her alertness or ability to arouse because of fatigue or use of sedating medications (eg, certain antidepressants, pain medications) or substances (eg, alcohol, illicit drugs). • Bed sharing with anyone who is not the infant's parent, including nonparental caregivers and other children. • Bed sharing on a soft surface, such as a waterbed, old mattress, sofa, couch, or armchair. • Bed sharing with soft bedding accessories, such as pillows or blankets. 	<p>sedating medications (eg, certain antidepressants, pain medications) or substances (eg, alcohol, illicit drugs).</p> <ul style="list-style-type: none"> • Bed sharing with a current smoker (even if the smoker does not smoke in bed) or if the pregnant parent smoked during pregnancy. • Bed sharing on a soft surface, such as a waterbed, old mattress, sofa, couch, or armchair. <p>5–10 times the baseline risk of parent–infant bed sharing:</p> <ul style="list-style-type: none"> • Term, normal weight infant aged <4 mo, even if neither parent smokes and even if the infant is breastfed. This is a particularly vulnerable time, so parents who choose to feed their infants aged <4 mo in bed need to be especially vigilant to avoid falling asleep. • Bed sharing with anyone who is not the infant's parent, including nonparental caregivers and other children. <p>2–5 times the baseline risk of parent–infant bed sharing:</p> <ul style="list-style-type: none"> • Preterm or low birth weight infant, even if neither parent smokes. • Bed sharing with soft bedding accessories, such as pillows or blankets.
	<p>The safest place for a baby to sleep is on a separate sleep surface designed for infants close to the</p>	<p>Bed sharing can occur unintentionally if parents fall asleep while feeding their infant, or at times</p>

Topic	2016 Guidelines	Revised 2022 Guidelines
	<p>parents' bed. However, the AAP acknowledges that parents frequently fall asleep while feeding the infant. Evidence suggests that it is less hazardous to fall asleep with the infant in the adult bed than on a sofa or armchair, should the parent fall asleep.</p>	<p>when parents are particularly tired or infants are fussy. Evidence suggests that it is relatively less hazardous (but still not recommended) to fall asleep with the infant in the adult bed than on a sofa or armchair, should the parent fall asleep.</p>
	<p>The safety and benefits of co-bedding for twins and higher-order multiples have not been established.</p>	<p>Any potential benefits of co-bedding for twins and higher-order multiples are outweighed by the risk of co-bedding.</p>
Soft bedding		<p>It is recommended that weighted blankets, weighted sleepers, weighted swaddles, or other weighted objects not be placed on or near the sleeping infant.</p>
	<p>Infant sleep clothing, such as a wearable blanket, is preferable to blankets and other coverings to keep the infant warm while reducing the chance of head covering or entrapment that could result from blanket use.</p>	<p>Dressing the infant with layers of clothing is preferable to blankets and other coverings to keep the infant warm while reducing the chance of head covering or entrapment that could result from blanket use. Wearable blankets can also be used.</p>
Pacifier use	<p>For breastfed infants, pacifier introduction should be delayed until breastfeeding is firmly established.</p>	<p>For breastfed infants, delay pacifier introduction until breastfeeding is firmly established. This is defined as having sufficient milk supply; consistent, comfortable, and effective latch for milk transfer; and appropriate infant weight gain as defined by established normative growth curves. The time required to establish breastfeeding is variable.</p>

Topic	2016 Guidelines	Revised 2022 Guidelines
Prenatal and postnatal exposure to tobacco, alcohol, and other substances	Avoid smoke exposure during pregnancy and after birth.	Avoid smoke and nicotine exposure during pregnancy and after birth.
	Avoid alcohol and illicit drug use during pregnancy and after birth.	Avoid alcohol, marijuana, opioids, and illicit drug use during pregnancy and after birth.
Overheating and head covering		Given the questionable benefit of hat use for the prevention of hypothermia and the risk of overheating, it is advised not to place hats on infants when indoors except in the first hours of life or in the NICU.
Use of home cardiorespiratory monitors	There are no data that other commercial devices that are designed to monitor infant vital signs reduce the risk of SIDS.	Direct-to-consumer heart rate and pulse oximetry monitoring devices, including wearable monitors, are sold as consumer wellness devices. A consumer wellness device is defined by the FDA as one intended “for maintaining or encouraging a healthy lifestyle and is unrelated to the diagnosis, cure, mitigation, prevention, or treatment of a disease or condition.” Thus, these devices are not required to meet the same regulatory requirements as medical devices and, by the nature of their FDA designation, are not to be used to prevent sleep-related deaths. Although use of these monitors may give parents peace of mind, and there is no contraindication to using these monitors, data are lacking that would

Topic	2016 Guidelines	Revised 2022 Guidelines
		support their use to reduce the risk of these deaths. There is also concern that use of these monitors will lead to parent complacency and decreased adherence to safe sleep guidelines. A family's decision to use monitors at home should not be considered a substitute for following AAP safe sleep guidelines.
Tummy time	Although there are no data to make specific recommendations as to how often and how long it should be undertaken, the AAP reiterates its previous recommendation that "a certain amount of prone positioning, or 'tummy time,' while the infant is awake and being observed is recommended to help prevent the development of flattening of the occiput and to facilitate development of the upper shoulder girdle strength necessary for timely attainment of certain motor milestones."	Parents are encouraged to place the infant in tummy time while awake and supervised for short periods of time beginning soon after hospital discharge, increasing incrementally to at least 15–30 min total daily by age 7 wk.
Swaddling		Weighted swaddle clothing or weighted objects within swaddles are not safe and therefore not recommended.
	When an infant exhibits signs of attempting to roll, swaddling should no longer be used.	When an infant exhibits signs of attempting to roll (which usually occurs at 3–4 months but may occur earlier), swaddling is no longer appropriate because it could increase the risk of suffocation if the swaddled infant rolls to the prone position

Topic	2016 Guidelines	Revised 2022 Guidelines
Health professionals and childcare providers	Health care professionals, staff in newborn nurseries, and childcare providers should endorse and model the SIDS risk reduction recommendations from birth.	It is essential that physicians, nonphysician clinicians, hospital staff, and childcare providers endorse and model safe infant sleep guidelines from the beginning of pregnancy.
Media and manufacturers	Media and manufacturers should follow safe sleep guidelines in their messaging and advertising.	It is advised that media and manufacturers follow safe sleep guidelines in their messaging, advertising, production, and sales to promote safe sleep practices as the social norm.
Education		Culturally appropriate, respectful, and nonjudgmental communication between clinicians and parents is important when discussing safe infant sleep. Language interpreters should be used as needed. Education that is integrated with other health messaging, such as discussion of the risk of falls and potential skull fractures if infants fall from an adult's arms or a sleep surface, can be helpful. Strategies to avoid inadvertent bed sharing could include setting off alarms or alternative activities (books, television shows, etc.) to avoid falling asleep.
		Education campaigns need to be well funded, strategically implemented, and evaluated, and innovative, socio-culturally appropriate intervention methods need to be encouraged and funded.

Topic	2016 Guidelines	Revised 2022 Guidelines
Research and surveillance		Research on the social determinants of health, health care delivery system inequalities, and the impact of structural racism and implicit bias as related to health care access, education, and outcomes that contribute to health disparities, and understanding how to best address these disparities in a socio-culturally appropriate manner, should be continued and funded.
		It is important to provide training for hospital personnel in the evaluation and response when an infant who has been found unresponsive and has potentially died suddenly and unexpectedly is brought for medical attention in the emergency department or other medical facilities, as well as information about how to support families during this difficult time.

Note. This table does not reflect all the safe sleep guidelines but only those portions of the guidelines that have been substantially revised. NICHD, Eunice Kennedy Shriver National Institute of Health and Human Development.

Appendix C

CTF Standard CAREGIVER Safe Sleep Pre-Survey

Family/Parent/Caregiver PRE-SURVEY Questionnaire for the Safe Sleep Program (Pre-survey to be completed at the first visit before the caregiver receives any safe sleep education or training information)

Today's Date: _____

Instructions: Thank you for completing this questionnaire to the best of your knowledge! This survey will ask you questions about how you feel a baby aged 0-12 months should sleep during naps and nighttime sleep.

Demographic Questions:

1. Are you pregnant? If yes, what is the due date? _____
If no, what is the infant's age in months? _____

2. Caregiver Relationship to Infant:
 Mother Other related Kin
 Father Foster parent
 Grandparent Adoptive parent
 Parent Other (please specify) _____
 Stepparent

3. Caregiver Age: _____

4. Caregiver Annual Household Income: _____

5. Caregiver Racial and Ethnic Identification Categories. *Please select all the nearest options to your identity:*

<input type="checkbox"/> American Indian or Indigenous American or Alaskan Native	<input type="checkbox"/> Black or African American
<input type="checkbox"/> Asian or Southeast Asian or East Asian/South Asian (of any race)	<input type="checkbox"/> Latinx or Hispanic
<input type="checkbox"/> Middle Eastern or North African	<input type="checkbox"/> Multiracial or Multiple Ethnicities
<input type="checkbox"/> Native Hawaiian or Other Pacific Islander European Descent)	<input type="checkbox"/> White (Non-Hispanic)

Prefer to self-identify. Please specify _____

Prefer not to answer

6. Caregiver Highest Educational Level Completed:

<input type="checkbox"/> Elementary School	<input type="checkbox"/> Some High School	<input type="checkbox"/> High School Graduate/GED
<input type="checkbox"/> 2-year Community College/Trade School Graduate		<input type="checkbox"/> 4-year College
Graduate/Bachelors		
<input type="checkbox"/> Some Graduate School/Graduate School Graduate		<input type="checkbox"/> Other, please
specify _____		

7. Caregiver Sex, Gender Identity, and Sexual Orientation Identification. *Please select all that apply to you:*

Bisexual Heterosexual or Straight Lesbian or Gay Man, or Male
 Transgender Two-Spirit or Intersex Woman or Female Non-binary/Gender non-conforming
 Prefer to self-identify. Please specify _____ -

Prefer not to answer

Safe Sleep Questions:

1.) Where should your baby of age 0-12 months sleep during nap time and nighttime? *Please, select **all the options you know are safe** for the baby.*

- Alone in a Crib, Bassinet, or Portable Crib (Park and Play)
- With another child, toddler, or pet in a Crib, Bassinet, or Portable Crib (Park and Play)
- On a larger mattress and bed
- On a twin/larger bed with an adult
- On a twin/larger bed without an adult
- On a couch, sofa, armchair, or recliner
- On a bouncy seat or swing
- In a car seat when not riding in the car
- On the floor
- On a toddler bed
- Another place, please specify _____
- Not Sure/Don't know

2.) What sleeping position is the safest for your baby of age 0-12 months? *How will you lay your baby to sleep safely?*

- On their tummy/stomach
- On their back
- On their side
- Not Sure

3.) Select all the items you feel are safe to be with your sleeping baby in their crib or sleeping area?

- Firm and flat mattress
- Fitted sheet
- Wearable blanket (worn by the baby)
- Sleeping sac
- Loose blanket, quilt, throw, or other loose bedding and clothing
- Pillow or pillows or cushions
- Stuffed animals or toys of any kind (small or large)
- Crib bumpers or pads
- Pacifier
- Sleep positioner or wedges
- Other items, please specify _____

4.) It is safe for my baby aged 0-12 months to sleep with... *Please, select all the options you feel are safe for the baby.*

- With parents on the same bed (co-sleeping)
- With siblings on the same bed (co-sleeping)
- With another relative or adult in the same bed (co-sleeping)
- With another toddler or child or person in the same bed (co-sleeping)
- With a pet or animal on the same bed (co-sleeping)
- Alone (in their own crib by themselves)
- With their mother on the same bed if they are breastfeeding

5.) Thinking about the past three months (90 days), how often did you or other caregivers practice the following behaviors during your baby's sleeping time? ***If you are currently expecting and your infant is not born or not home, please select n/a as your response choice***

a) Laying your baby to sleep on their back

Never Rarely Sometimes Often Always N/A infant not born/not home

b) Having baby sleep in your room, but in a separate crib, portable crib, or bassinet

Never Rarely Sometimes Often Always N/A infant not born/not home

c) Keeping loose blankets, clothing, toys, or other items away from the baby crib or sleeping space

Never Rarely Sometimes Often Always N/A infant not born/not home

d) Followed Safe Sleep recommendations even when people gave different advice

Never Rarely Sometimes Often Always N/A infant not born/not home

e) Breastfed

Never Rarely Sometimes Often Always N/A infant not born/not home

f) Avoided smoking or tobacco products, including e-cigarettes, around your baby (secondhand smoke)

Never Rarely Sometimes Often Always N/A infant not born/not home

6.) Do you know the ABCs of Baby Safe Sleep?

No

Yes. Please specify them (A) _____, (B) _____, and (C)

7.) Have there been situations in the past when someone did not follow Safe Sleep practices when assisting with your baby's nap time or nighttime sleep (e.g., not following the ABCs of Baby Safe Sleep)? ***If you are currently expecting and your infant is not born or not home, please select n/a as your response choice.***

No

Yes

Don't know/Not Sure

N/A infant not born/not home

If you responded **yes**, and feel comfortable sharing, please briefly share the past situation where someone did not follow safe sleep practices:

8.) It is important to discuss Safe Sleep practices, positions, and behavior with anyone who might assist with my baby's nap time or nighttime sleep routine. Do you agree or disagree?

- Disagree
- Agree

9.) Do you have at least one household member or another caregiver who will support Safe Sleep for your baby if you are not present?

- No
- Yes
- Not Sure

10.) Do you or other caregivers for your baby smoke or use tobacco products (including e-cigarettes)?

- No
- Yes
- Not sure

11.) Please indicate your level of agreement with the following statement: The safest sleeping practice for my baby is when they sleep alone on their back in an empty crib (or bassinet) with a safe, firm mattress with a fitted sheet and no loose blankets, clothing, or toys

Strongly Disagree Disagree Undecided Agree Strongly Agree

12.) What questions do you have about Safe Sleep?

CTF Standard CAREGIVER Safe Sleep Post-Survey

Family/Parent/Caregiver Follow-up Assessment Questionnaire for the Safe Sleep Program (Post-survey to be completed at the follow-up visit with the Safe Sleep provider)

Today's Date: _____

Instructions: Thank you for completing this questionnaire to the best of your knowledge! This survey will ask you questions about how you feel a baby aged 0-12 months should sleep during naps and nighttime sleep.

Safe Sleep Questions:

13.) Where should your baby of age 0-12 months sleep during nap time and nighttime? *Please, select all the options you know are safe for the baby.*

- Alone in a Crib, Bassinet, or Portable Crib (Park and Play)
- With another child, toddler, or pet in a Crib, Bassinet, or Portable Crib (Park and Play)
- On a larger mattress and bed
- On a twin/larger bed with an adult
- On a twin/larger bed without an adult
- On a couch, sofa, armchair, or recliner
- On a bouncy seat or swing
- In a car seat when not riding in the car
- On the floor
- On a toddler bed
- Another place, please specify _____
- Not Sure/Don't know

14.) What sleeping position is safe for your baby of age 0-12 months? *How will you lay your baby to sleep safely?*

- On their tummy/stomach
- On their back
- On their side
- Not Sure

15.) Select all the items you feel are safe to be with your sleeping baby in their crib or sleeping area?

- Firm and flat mattress
- Fitted sheet
- Wearable blanket (worn by the baby)
- Sleeping sac

- Loose blanket, quilt, throw, or other loose bedding and clothing
- Pillow or pillows or cushions
- Stuffed animals or toys of any kind (small or large)
- Crib bumpers or pads
- Pacifier
- Sleep positioner or wedges
- Other items, please specify _____

16.) It is safe for my baby of age 0-12 months to sleep with... *Please, select all the options you feel are safe for the baby.*

- With parents on the same bed (co-sleeping)
- With siblings on the same bed (co-sleeping)
- With another relative or adult in the same bed (co-sleeping)
- With another toddler or child or person in the same bed (co-sleeping)
- With a pet or animal on the same bed (co-sleeping)
- Alone (in their own crib by themselves)
- With their mother on the same bed if they are breastfeeding

17.) Do you know the ABCs of Baby Safe Sleep?

- No
- Yes. Please specify them (A) _____, (B) _____, and (C) _____

18.) It is important to discuss Safe Sleep practices, positions, and behavior with anyone who might assist with my baby's nap time or nighttime sleep routine. Do you agree or disagree?

- Disagree
- Agree

19.) Please indicate your level of agreement with the following statements:

- a) The safest sleeping practice for my baby is when they sleep alone on their back in an empty crib (or bassinet) with a safe, firm mattress with a fitted sheet and no loose blankets, clothing, or toys
 - Strongly Disagree
 - Disagree
 - Undecided
 - Agree
 - Strongly Agree

- b) I am satisfied with the Safe Sleep education I have received in this program
 - Strongly Disagree
 - Disagree
 - Undecided
 - Agree
 - Strongly Agree

c) I am confident in practicing the Safe Sleep behaviors I learned in this program with my baby
 Strongly Disagree Disagree Undecided Agree Strongly Agree

d) I intend to keep following the Safe Sleep practices I learned in this program with my baby
 Strongly Disagree Disagree Undecided Agree Strongly Agree

e) I recommend this Safe Sleep training program/education to other caregivers
 Strongly Disagree Disagree Undecided Agree Strongly Agree

f) The Safe Sleep training program/education was culturally relevant to my family and me
 Strongly Disagree Disagree Undecided Agree Strongly Agree

20.) Did you receive any of the following from the Safe Sleep program before your baby's first birthday? *Please, select all that apply.*

- Cribs for Kids Portable Crib or Park N Play
- Safe Sleep Educational Materials (e.g., ABCs of sleep flyers, posters, books, promotional materials)
- Safe Sleep Education or Training (e.g., speaking about infant Safe Sleep practices with a trainer, medical provider, Safe Sleep instructor, specialist ambassador, community champion, advocate, or any other person)
- Safe Sleep Videos (e.g., ABCs of Safe Sleep)
- A follow-up encounter regarding Safe Sleep education from a home visitor, your healthcare provider, or elsewhere in the community (within 90 days of the initial visit)
- Information about Safe Sleep from the TV, radio, social media, license plates, car stickers, and other sources within your community

21.) What questions do you have about Safe Sleep?

22.) What challenges or reservations do you have about practicing the Safe Sleep recommendations provided in this program?

23.) What did you gain from this Safe Sleep program and training?

24.) What did you like **least** about this Safe Sleep program and training? Or what suggestions do you have to help improve the Safe Sleep program and training?

Appendix D

CTF PROVIDER Standard Safe Sleep Pre-Survey

Safe Sleep Provider Pre-Survey for the Safe Sleep Program (Pre-survey to be completed before beginning safe sleep training for providers)

Today's Date: _____

Your Name: _____

Instructions: Thank you for the willingness to speak with parents and caregivers about the importance of Safe Sleep practices for their babies. Your effort will make a difference in the lives of babies, new or expecting parents, continuing parents, grandparents, and other caregivers. The information and education you will be providing may even save a life.

Before we begin, this pre-training questionnaire will ask you questions about how you feel a baby aged 0-12 months should sleep during naps and nighttime sleep.

Demographic Questions:

1. Profession: *Please, select the option that best describes you*

Early Childhood Professional Emergency Medical Services (EMS) Community Advocate
 Fire Department Worker Law Enforcement Nurse Physician
 Safe Sleep Champion/Instructor/Ambassador Social Worker Healthcare Professional
 Other. Please, specify

2. How many years have you been working in your current position?

less than 1 year 3-5 years
 1-3 years longer than 5 years

3. Racial and Ethnic Identification Categories. *Please select all the nearest options to your identity:*

American Indian or Indigenous American or Alaskan Native Black or African American
 Asian or East Asian/South Asian Latinx or Hispanic
 Southeast Asian Multiracial or
(of any race)
 Middle Eastern or North African
Multiple Ethnicities

Native Hawaiian or Other Pacific Islander European Descent)
 Prefer to self-identify. Please specify

Prefer not to answer

4. Highest Educational Level Completed:

Elementary School Some High School High School Graduate/GED
 2-year Community College/Trade School Graduate
Graduate/Bachelors 4-year College
 Some Graduate School/Graduate School Graduate Other, please specify

5. Sex, Gender Identity, and Sexual Orientation Identification. *Please select all that apply to you:*

Bisexual Heterosexual or Straight Lesbian or Gay Man, or Male
 Transgender Two-Spirit or Intersex Woman or Female Non-binary/Gender non-conforming
 Prefer to self-identify. Please specify _____

Prefer not to answer

Safe Sleep Questions:

25.) According to the American Academy of Pediatrics (AAP), the safest position for a baby to sleep is on their:

a) Back
b) Side
c) Stomach
d) All of the Above

26.) Babies are likely to choke if they sleep on their back, true or false?

a) True
b) False
c) Don't Know
d) Unsure

27.) According to the American Academy of Pediatrics (AAP), the safest place for a baby to sleep is:

a) Alone in a crib/bassinet/portable crib in the baby's room
b) Alone in a crib/bassinet/portable crib in the parent(s) room (room sharing)

- c) In the adult bed
- d) Both A and B are equally safe

28.) Babies do not die from SIDS or suffocation in cribs, true or false?

- a) True
- b) False
- c) Don't Know
- d) Unsure

29.) According to the American Academy of Pediatrics (AAP), the safest environment for a baby to sleep can include which of the following items:

- a) A firm mattress with a fitted sheet
- b) A loose blanket, bedding, comforter, or clothing
- c) A bumper pad, sleeping positioner, or wedge
- d) A pillow, stuffed animal, or other toys

30.) Which of the following is an AAP recommended practice to reduce infant sleep-related death?

- a) Babies should sleep in youth/adult-sized beds and on toddler beds
- b) Babies should sleep in the same bed with other babies, siblings, toddlers, adults, or pets
- c) Families should have smoke-free homes and cars to eliminate babies inhaling secondhand smoke
- d) Wrap babies in loose blankets to swaddle and keep them warm

31.) SIDS (Sudden Infant Death Syndrome) is a sub-category of SUID (Sudden Unexpected Infant Death).

Which of the following statements about SIDS is **true**? *Check all statements that are true.*

- a) Sleep-related infant deaths are almost entirely preventable; true SIDS deaths are not
- b) Many infant deaths that would have previously been identified as SIDS are now being determined as sleep-related deaths caused by ASSB (accidental suffocation and strangulation in bed).
- c) Immunization causes SIDS
- d) SIDS is preventable
- e) SIDS is determined *only* after an autopsy, an examination of the death scene, and a review of the infant's clinical history
- f)

32.) How would you rate your current safe sleep knowledge? (*Circle the appropriate number*)

Low ----- High

1 2 3 4 5 6 7 8 9 10

33.) How would you rate your current confidence level in educating parents and caregivers about safe sleep? (*Circle the appropriate number*)



CTF Standard PROVIDER Safe Sleep Post-Survey

Safe Sleep Provider Follow-up Assessment Questionnaire for the Safe Sleep Program (Post-survey to be completed after the safe sleep training for providers)

Today's Date: _____

Your Name: _____

Instructions: Thank you for the willingness to speak with parents and caregivers about the importance of Safe Sleep practices for their babies. Your effort will make a difference in the lives of babies, new or expecting parents, continuing parents, grandparents, and other caregivers. The information and education you will be providing may even save a life.

This post-training questionnaire will ask you questions about how you feel a baby of age 0-12 months should sleep during naps and nighttime sleep.

Safe Sleep Questions:

- 34.) According to the American Academy of Pediatrics (AAP), the safest position for a baby to sleep is on their:
 - e) Back
 - f) Side
 - g) Stomach
 - h) All of the Above

- 35.) Babies are likely to choke if they sleep on their back, true or false?
 - e) True
 - f) False
 - g) Don't Know
 - h) Unsure

- 36.) According to the American Academy of Pediatrics (AAP), the safest place for a baby to sleep is:
 - e) Alone in a crib/bassinet/portable crib in the baby's room
 - f) Alone in a crib//bassinet/portable crib in the parent(s) room (room sharing)
 - g) In the adult bed
 - h) Both A and B are equally safe

- 37.) Babies do not die from SIDS or suffocation in cribs, true or false?
 - e) True
 - f) False
 - g) Don't Know
 - h) Unsure

38.) According to the American Academy of Pediatrics (AAP), the safest environment for a baby to sleep can include which of the following items:

- e) A firm mattress with a fitted sheet
- f) A loose blanket, bedding, comforter, or clothing
- g) A bumper pad, sleeping positioner, or wedge
- h) A pillow, stuffed animal, or other toys

39.) Which of the following is an AAP recommended practice to reduce infant sleep-related death?

- e) Babies should sleep in youth/adult-sized beds and on toddler beds
- f) Babies should sleep in the same bed with other babies, siblings, toddlers, adults, or pets
- g) Families should have smoke-free homes and cars to eliminate babies inhaling secondhand smoke
- h) Wrap babies in loose blankets to swaddle and keep them warm

40.) SIDS (Sudden Infant Death Syndrome) is a sub-category of SUID (Sudden Unexpected Infant Death).

Which of the following statements about SIDs is true? *Check all statements that are true.*

- g) Sleep-related infant deaths are almost entirely preventable; true SIDS deaths are not.
- h) Many infant deaths that would have previously been identified as SIDS are now being determined as sleep-related deaths caused by ASSB (accidental suffocation and strangulation in bed).
- i) Immunization causes SIDS.
- j) SIDS is preventable.
- k) SIDS is determined *only* after an autopsy, an examination of the death scene, and a review of the infant's clinical history.

41.) How would you rate your current safe sleep knowledge? (*Circle the appropriate number*)

Low ----- High

1 2 3 4 5 6 7 8 9 10

42.) How would you rate your current confidence level in educating parents and caregivers about safe sleep? (*Circle the appropriate number*)

Low ----- High

1 2 3 4 5 6 7 8 9 10

43.) How did this training affect your beliefs about infant sleep?

- a) My beliefs have not changed; I already agreed with all the AAP recommendations before the training.
- b) My beliefs have changed; I now agree with all the AAP recommendations.
- c) My beliefs have changed; I now agree with more of the AAP recommendations.
- d) My beliefs have changed; I now question more of the AAP recommendations.
- e) My beliefs have not changed; I still question the AAP recommendations that I questioned before the training.

44.) Please indicate your level of agreement with the following statements:

- g) I am satisfied with the Safe Sleep education I have received in this program
 - Strongly Disagree
 - Disagree
 - Undecided
 - Agree
 - Strongly Agree
- h) I recommend this Safe Sleep training program/education to others
 - Strongly Disagree
 - Disagree
 - Undecided
 - Agree
 - Strongly Agree
- i) The Safe Sleep training program/education was culturally relevant to the community I will be training
 - Strongly Disagree
 - Disagree
 - Undecided
 - Agree
 - Strongly Agree

45.) What challenges or reservations do you have about educating others regarding the Safe Sleep recommendations provided in this program?

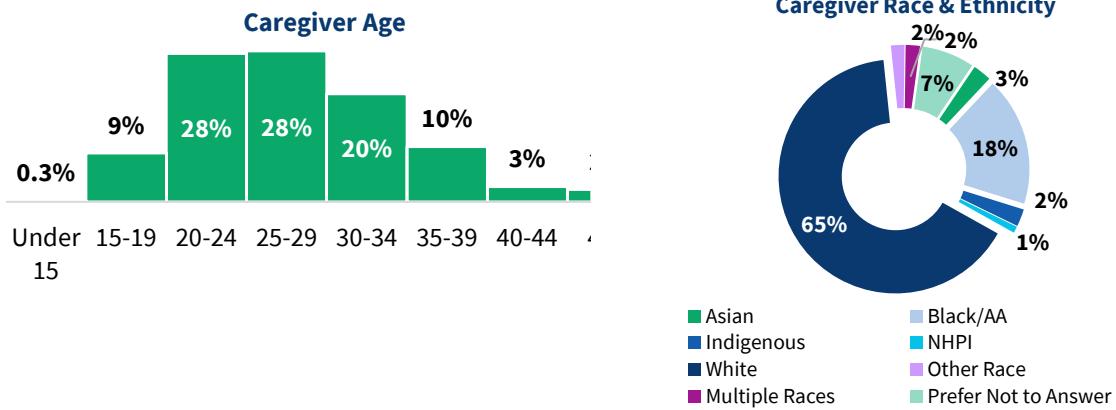
46.) What questions do you have about Safe Sleep?

47.) What did you gain from this Safe Sleep program and training?

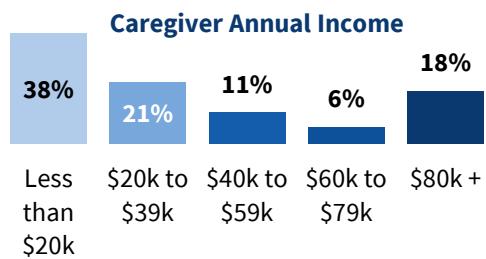
48.) What did you like **least** about this Safe Sleep program and training? Or what suggestions do you have to help improve the Safe Sleep program and training?

Appendix E

Caregiver Demographic Infographic



Fifty percent of caregivers who identified as “mother” were pregnant at the time of their safe sleep education

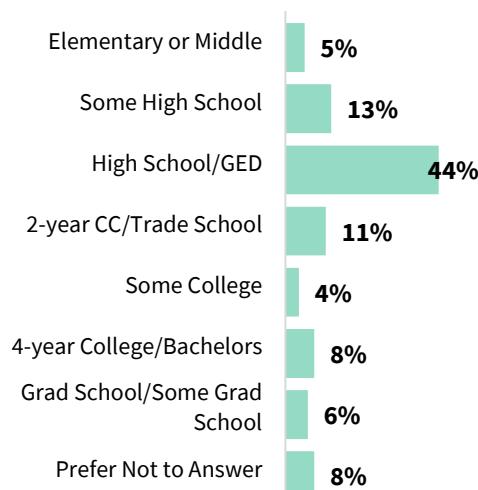


The Median reported annual income was \$14,400. **38%** of respondents reported \$0 income annually, and **6%** did not provide an annual income.

Caregiver Ethnicity

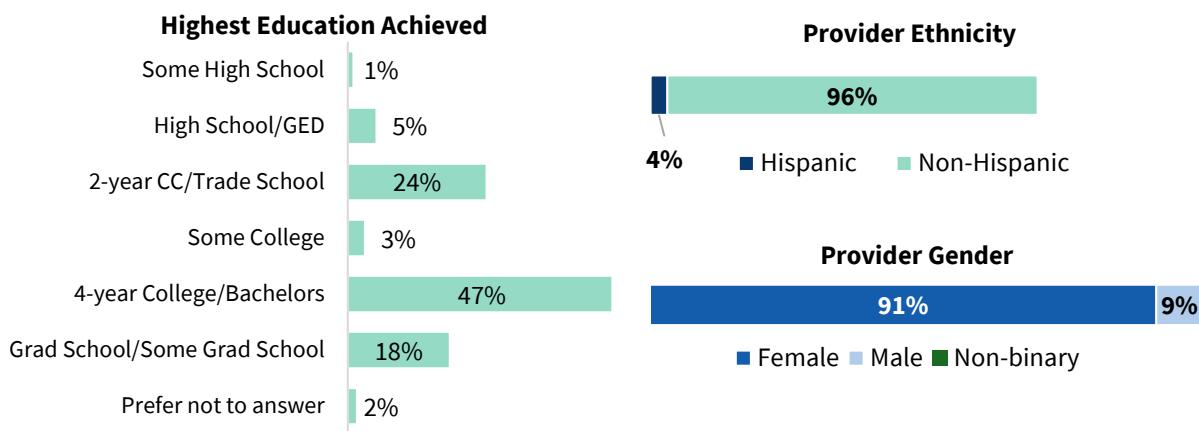
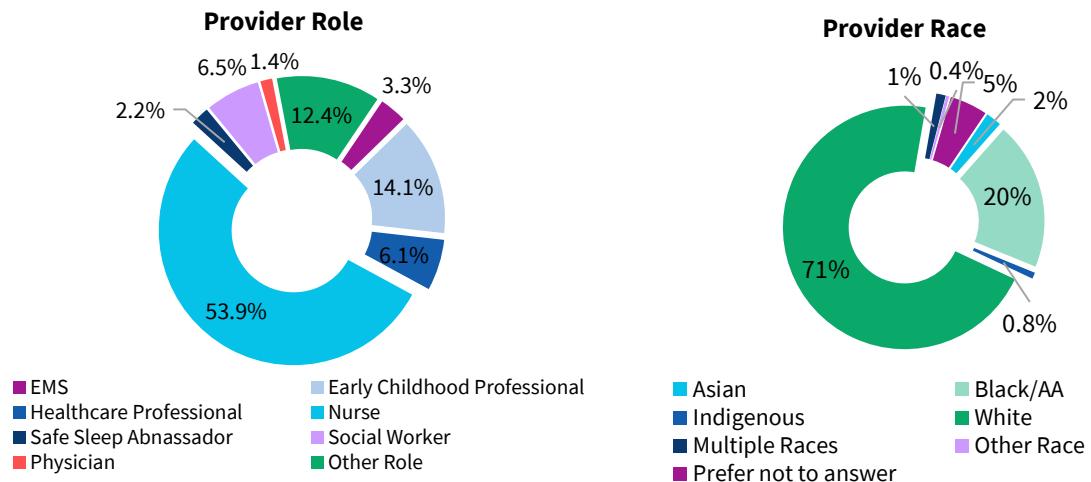


Highest Education Achieved

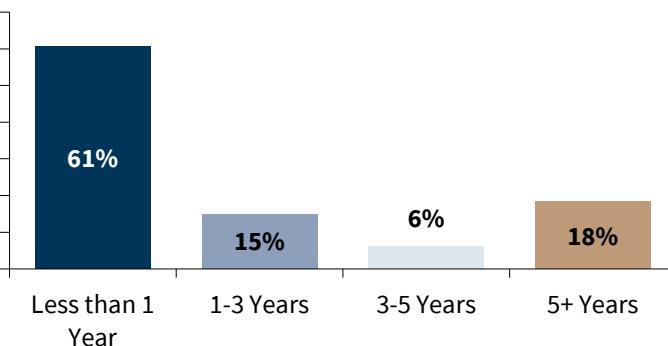


Appendix F

Provider Demographic Infographic



Provider Experience in Current Role



Appendix G

Safe Sleep Grantee Program Reach Survey

Confidential

Page I

CTF Safe Sleep Aggregate Data Collection

Please note, the first couple pages of this form should allow you to go back and edit previous responses. However, after completion of the Materials Distributed section, you will not be able to return to the previous screen. If you have any notes about your data submission or realized some data entry error, please include this information in the "Notes" section at the end of the survey or just send me an email.

Thank you!

Grantee Organization:

- Children's Mercy Hospital - Safe Sleep Safe Babies
- Community Partnership - Rolla
- Community Partnership of the Ozarks
- Nurses for Newborns Collaborative
- St. Joseph's Youth Alliance

Name of person entering data:

Email

PROFESSIONAL TRAININGS Please enter total PROFESSIONAL trainings completed across all counties and all organizations/partners in the Safe Sleep Initiative for each data point during the reporting period. If your organization regularly administers professional trainings, but none were completed during the reporting period, enter "0". If your organization does not administer professional trainings, select "n/a".

Counties where PROFESSIONAL trainings were held during above date range. If collected, please also include any counties represented by attendees. (select all that apply)

Kansas City Region St. Louis Region Southeast Region (continued)

Central Region Northeast Region Northwest Region Southwest Region

Hospital staff trained (includes anyone who works at a hospital)

Direct service providers trained _____

First responders trained (e.g., law enforcement, fire department) _____

Other community members trained (please describe below) _____

Notes, if any:

CAREGIVER TRAININGS Please enter total CAREGIVER trainings completed across all counties and all organizations/partners in the Safe Sleep Initiative for each data point during the reporting period. If your organization regularly administers caregiver trainings, but none were completed during the reporting period, enter "0". If your organization does not administer caregiver trainings, select "n/a".

Counties where CAREGIVER trainings were held in above date range. If collected, please include any counties represented by attendees. (select all that apply)

Kansas City Region St. Louis Region Southeast Region (continued)

Central Region Northeast Region Northwest Region Southwest Region

Total # caregivers trained (include # of caregivers who are pregnant and # caring for an infant < 12 months)

Of total # trained, how many were pregnant? _____
Total # infants < 12 months associated with caregiver (eg. if twins, multiples, etc.) _____

Notes, if any:

MATERIALS DISTRIBUTED In this section, please enter data for Safe Sleep equipment distributed across all counties and all organizations/partners in the Safe Sleep Initiative during the reporting period.

Cribs distributed _____
Pack 'n' plays distributed _____
Bassinets distributed _____
Other safe sleep surfaces distributed _____
Wearable blankets/sleep sacks distributed _____
Crib sheets distributed _____

Notes, if any:

MATERIALS DISTRIBUTED In this section, please enter data for Safe Sleep equipment distributed across all counties and all organizations/partners in the Safe Sleep Initiative during the reporting period.

Cribs distributed _____
Pack 'n' plays distributed _____
Bassinets distributed _____
Other safe sleep surfaces distributed _____
Wearable blankets/sleep sacks distributed _____
Crib sheets distributed _____

Notes, if any:

Hospital Certification Data

In this section, please enter data for hospitals that received National Safe Sleep Hospital Certifications during the reporting period and those with pending certifications: April 1, 2024 to June 30, 2024.

n/a, No hospital certification data to report

Hospital Name

Hospital County

Level of Certification

- Bronze
- Silver
- Gold
- Pending certification

Date Certification Received

Date of Expiration

Notes: If any:

Appendix H

CTF Safe Sleep Family Focus Group Guide

We are interested in learning about your experience participating in (enter grantee organization family is affiliated with here) safe sleep program. I'm going to ask questions about your experiences with safe sleep education materials, the strengths and barriers to implementing safe sleep best-practices, and ideas and recommendations for strengthening safe sleep program and resources for families.

Preparation

First, let's discuss your first impressions of safe sleep practice.

1. How did you learn about safe sleep?
2. What was your first impression of safe sleep?

Program participation

Next, let's move to questions about your experiences participating in the safe sleep program:

A. Family participants

1. **Overall, tell me about your experience participating in the safe sleep training services?**
 - a. *Prompt:* How did the training session feel?
 - b. *Prompt:* What was your experience of the educational videos?
 - c. *Prompt:* What did you learn during the training about safe sleep?
2. How has participating in safe sleep benefitted you and your family? What types of changes have you observed or made since learning about safe sleep best practices?
3. How has using safe sleep practices impacted the ways you interact with your child?
4. **Tell us about any success stories you have encountered from participating in safe sleep program.**
5. What resources/referrals were helpful as a result of the safe sleep program?
6. Did you connect to the community service provider you were referred to as a result of the safe sleep program? If yes, tell me about your experience with the community service provider?
 - a. Did they meet your needs?
 - b. What were some barriers in connecting to the referred service or needed safe sleep items?
 - c. What benefits did you experience from connecting to or using the referred services?
7. **Tell me about how your provider was successful in helping you implement safe sleep practices?**
 - a. Did you feel like your provider provided good explanations as to why these safe sleep practices were important?
 - b. Did you feel you could ask them questions?

- c. Did you feel you could be honest about your experience with practicing safe sleep best practices? (ask about feelings of judgment)

B. Family Behavior post training

- 8. How often has the child slept in a crib or other safe sleep recommended furniture (e.g., bassinet, pack'n'play etc.) in the past 30 days? 90 days?**
- 9. How often have you practiced safe infant sleep in the past 30 days? 90 days?**
- 10. What barriers to practicing safe sleep have you encountered?**
- 11. How do safe sleep guidelines align or not with your cultural beliefs and practices?**
 - a. If different, do you feel your cultural needs were taken into consideration when receiving safe sleep education and materials? How? How not?
 - b. Did the training have space for you to ask questions related to safe sleep and your culture?
 - c. Do you feel the training was a safe space for you to ask culturally relevant questions? Do you think you'd be heard if you asked these questions?
- 12. Would you recommend the safe sleep program to other families? Why or why not?**
- 13. What changes or improvements would you recommend to the safe sleep program around:**
 - a. Getting started and enrolled
 - b. The facilitation or training process
 - c. Getting connected to community service providers
 - d. Implementing safe sleep practices
 - e. The survey process after the completion of the safe sleep program

Is there anything else you would like us to know about your experience with safe sleep programming?

Appendix I

CTF Safe Sleep Provider Focus Group Guide

We are interested in learning about your experience participating in (enter grantee organization family is affiliated with here) safe sleep program. I'm going to ask questions about your experiences with safe sleep training materials, the strengths and barriers you had when implementing safe sleep training to others, and ideas and recommendations for strengthening safe sleep program materials and implementation.

Preparation

First, let's discuss your first impressions of safe sleep practice.

3. How did you learn about the safe sleep program and training opportunity?
4. Why did you choose to learn about safe sleep best-practices to then train others in your community?
5. Were you provided with any preparation materials by the safe sleep grantees to prepare your training sessions?

Implementation

Next, let's move to questions about your experiences training families or community partners on safe sleep practices:

14. How supported do you feel in training on safe sleep practices at your agency or organization?
 - a. *Prompt:* How did the safe sleep grantees support you when you implemented training sessions with others in your community?
 - b. How did the grantee support you in sharing safe sleep information and trainings with those you serve?
 - c. *Prompt:* What were some barriers that impacted your ability to share safe sleep information and trainings with those you serve?
15. What was your experience working with the grantee?
 - a. *Prompt:* What worked well?
 - b. *Prompt:* Was there anything that could have been improved?
16. How has safe sleep training benefitted families and other community partners in your community? What types of changes have you observed/heard?
17. What is your experience implementing safe sleep information and training with families and community partners?
18. Tell us what barriers you have heard from families about implementing safe sleep best-practices?
19. How has using safe sleep training materials helped or hindered the ways you work with the families?
20. Tell us about an experience when a family shared a behavior or cultural practice, they implement that is not one of the safe sleep best-practices. How did you respond to the family about this?
21. Tell us about any success stories you have encountered when training families in your community on safe sleep practices.

22. Tell us about some of the challenges you experience in sharing and training on safe-sleep best practices? What additional supports of resources would be helpful to help you with these challenges in the future?
23. What resources are currently unavailable but would help increase successful implementation of safe sleep practices for families?
24. What training resources are currently unavailable but would help disseminate safe sleep information to families?
25. How do you see safe sleep training and programming helping to decrease the number of sleep-related infant death and injury?

Is there anything else you would like us to know about your experience with the safe sleep program?