



INCREASING SAFE SLEEP EDUCATION THROUGH CERTIFIED SAFE SLEEP INSTRUCTORS

PRESENTERS



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The presenters have no conflicts to disclose.

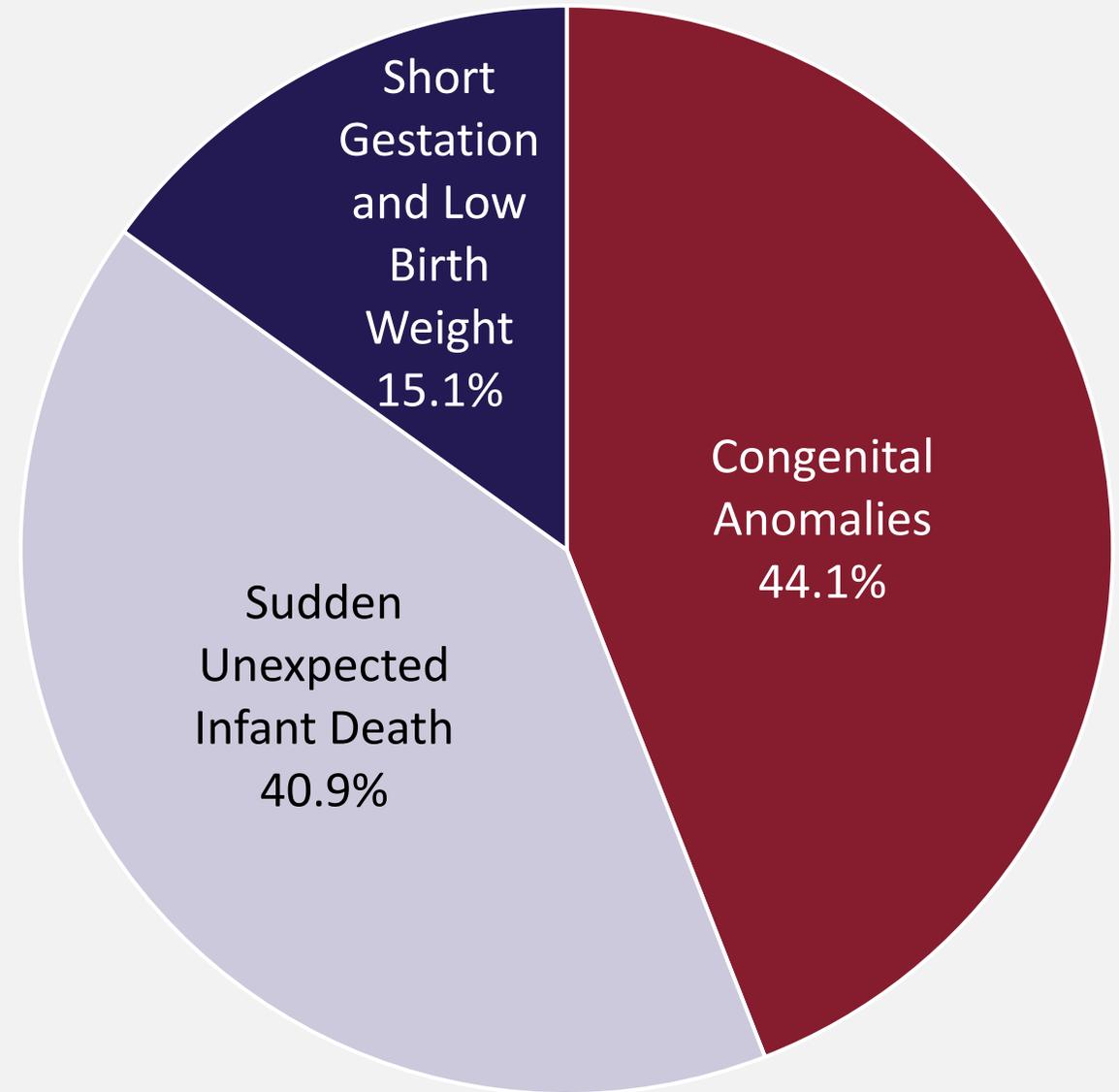
INFANT MORTALITY DATA ALASKA IN 2022

9,361 infants born
62 died before their 1st birthday

Source: <https://wonder.cdc.gov>
Alaska Department of Health
Division of Public Health
Health Analytics and Vital Records

Alaska Infant Mortality 2021-2023

Source:
Alaska Department of Health,
Division of Public Health,
Health Analytics and Vital Records



Alaska Infant Mortality Data

2019-2023 Sleep-Related Deaths = 51

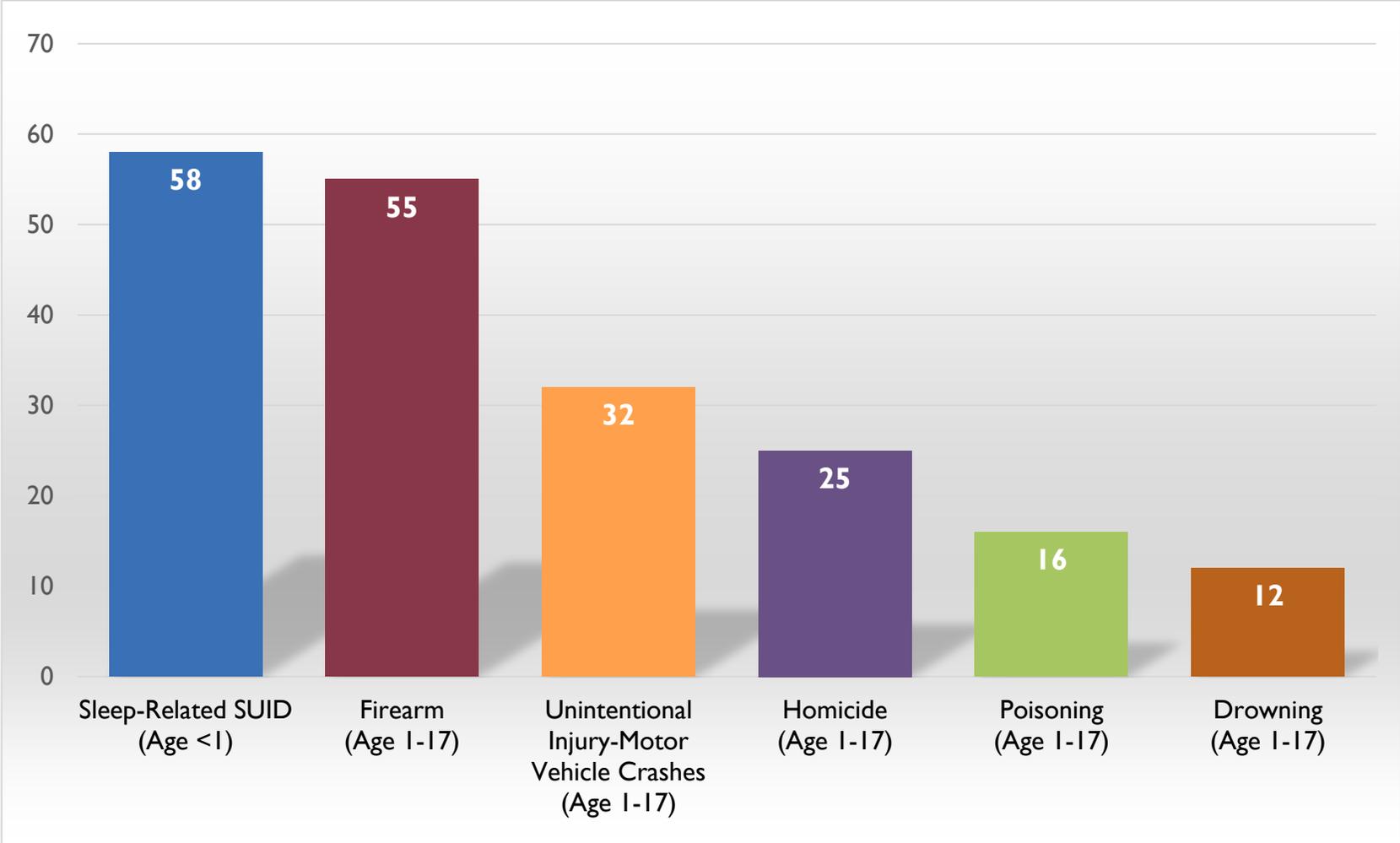
- 76% (n = 31) post neonates (28 days+)
- 61% (n=31) prenatal substance exposure
- 55% parent who gave birth was an Intimate Partner Violence survivor
- 45% prenatal tobacco exposure
- 39% (n=20) rural residence without road system access
- 33% (n=17) barriers to perinatal care

2018-2022 Sleep-Related Deaths

- 90% were not in a safety approved crib/bassinet
- 65% were sharing a sleep surface
- 41% were found in position other than back

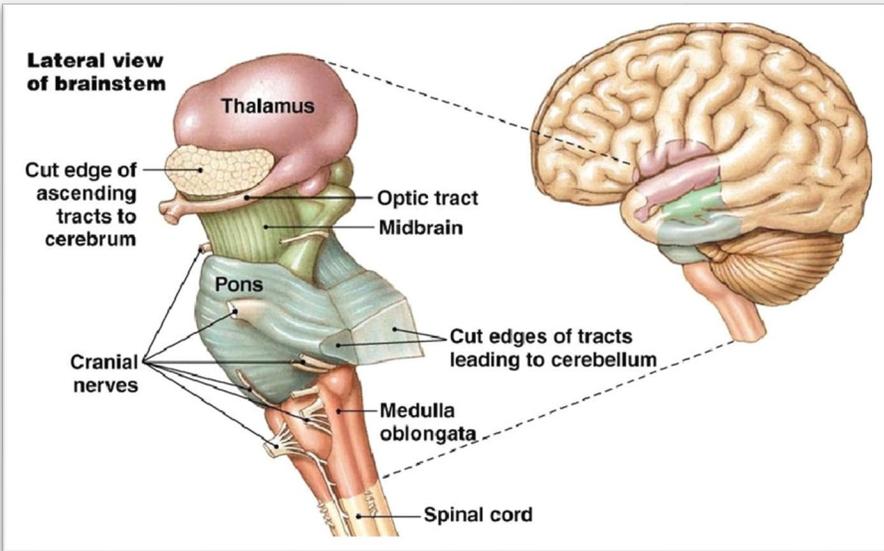
Source: Maternal and Child Health Services Title V Block Grant Alaska FY2025 Application/ FY2023 Annual Report, p. 106.

Comparison of Alaska Numbers of Sleep-Related SUIDS with Other Categories of Child Death, 2019-2023



Source: Centers for Disease Control and Prevention (2025). *Web-based Injury Statistics Query and Reporting System (WISQARS)*. Atlanta, GA: US Department of Health and Human Services, CDC; Accessed March 21, 2025.

Research Triple Risk SIDS Theory

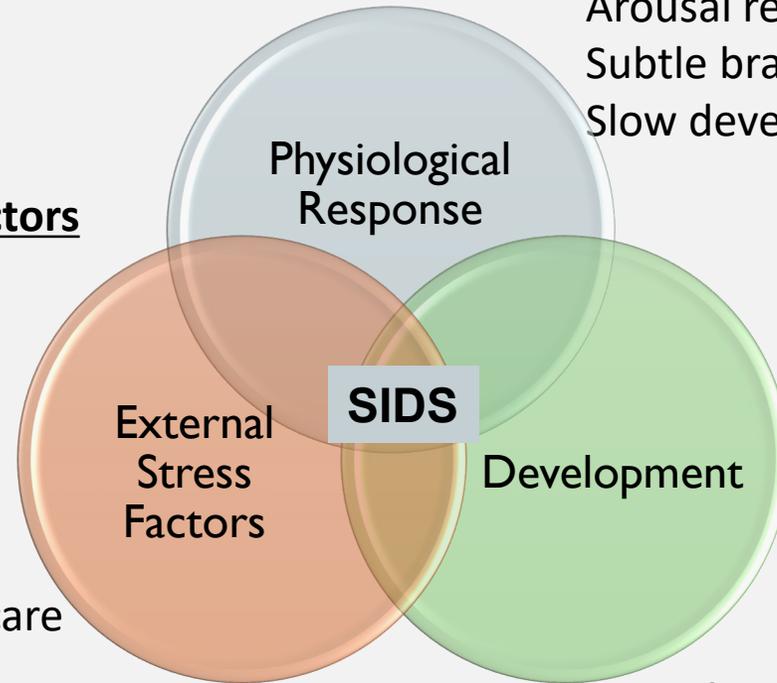


Infant Physiologic Responses

Arousal response deficit
Subtle brainstem dysfunction
Slow development

External Stress Factors

- Sleep position
- Bedding
- Temperature
- Season
- Swaddling
- Poverty
- Limited prenatal care
- Smoking
- Drug use
- Minor respiratory symptoms



Development

(autonomic nervous system)
2-4 months – most unstable
4-6 months – decreasing instability

Source: Hannah C. Kinney, Harvard Medical School, Boston

AMERICAN ACADEMY OF PEDIATRICS SAFE SLEEP RECOMMENDATIONS

Back to sleep for every sleep
Use a firm, flat, **noninclined** sleep surface to reduce the risk of suffocation or wedging/entrapment

Feeding of **human** milk is recommended to reduce SIDS
Room-share with the infant on separate sleep surface x 6 mo

Keep soft objects and loose bedding out of the infant sleep area

Offer a pacifier at naptime and nighttime

Avoid smoke and nicotine exposure, alcohol , **marijuana**, opioids & illicit drugs
Avoid overheating and head coverings



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AMERICAN ACADEMY OF PEDIATRICS SAFE SLEEP RECOMMENDATIONS

Pregnant people should seek and obtain regular prenatal care.

Infants should be immunized in accordance with AAP and CDC guidelines.

Do not use home cardiorespiratory monitors as a strategy to reduce the risk of SIDS.

Supervised, awake tummy time is necessary

Health care providers, newborn nursery/NICUs staff, & childcare providers should endorse and model the safe sleep recommendations from birth.

Media and manufacturers should follow safe sleep guidelines in their messaging and advertising.



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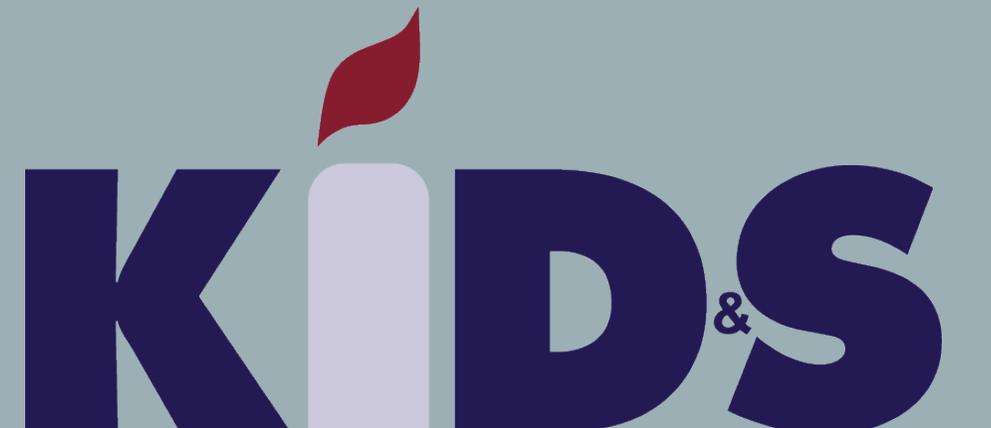


- Objective:
 - Enhance safe sleep promotion by building capacity to disseminate education strategically to priority audiences, including families, communities, and professionals
- Hypothesis:
 - Culturally sensitive education, coupled with easy implementation strategies, can build on the communities' current work to significantly increase the number of caregivers using safe sleep practices
- Strategy:
 - The SSI Certification Project builds community infrastructure to promote consistent infant safe sleep messages
 - This in turn, facilitates a safe sleep culture to reduce sleep-related deaths

SAFE SLEEP INSTRUCTOR CERTIFICATION

- Safe Sleep Instructor Training
 - Instructors attend a 2-day training designed to build the skills necessary to implement established, evidence-supported safe sleep programs
- This train-the-trainer model provides the foundation for sustainability and expansion of the Kansas safe sleep campaign and created the vehicle for delivery of the following:
 - KIDS Network Professional and Caregiver Trainings
 - KIDS Network Safe Sleep Community Baby Showers
 - KIDS Network Safe Sleep Crib Clinics



The logo features the word "KIDS" in a bold, dark blue font. The letter "I" is replaced by a light purple vertical bar with a red leaf-like shape above it. To the right of "KIDS" is a small ampersand "&" followed by a large "S". Below this is the word "SAFEsleep" in a dark blue font, with a red heart icon above the "A". A "TM" trademark symbol is to the right of "SAFEsleep".

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TRAINING

- 2-day training, including:
 - diagnosis of sudden unexpected infant deaths, including sudden infant death syndrome (SIDS)
 - data trends and disparities in sleep-related infant deaths
 - American Academy of Pediatrics safe sleep recommendations
 - messaging strategies for professionals and caregivers
 - how to do a crib demonstration
 - how to conduct a Safe Sleep Crib Clinic (individual education)
 - how to host a Safe Sleep Community Baby Shower (group education)
 - other related topics, such as maternal mental health, secondary trauma, how to handle push-back



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SAFE SLEEP INSTRUCTOR CERTIFICATION

CERTIFICATION REQUIREMENTS

- Attend 2-day training
- Pass a 10-question multiple choice test with a score of 90% or higher
- Pass a Safe Sleep Crib Demonstration with a score of 90% or higher
- Those who score <90% receive remediation and are re-assessed

POST-TRAINING REQUIREMENTS

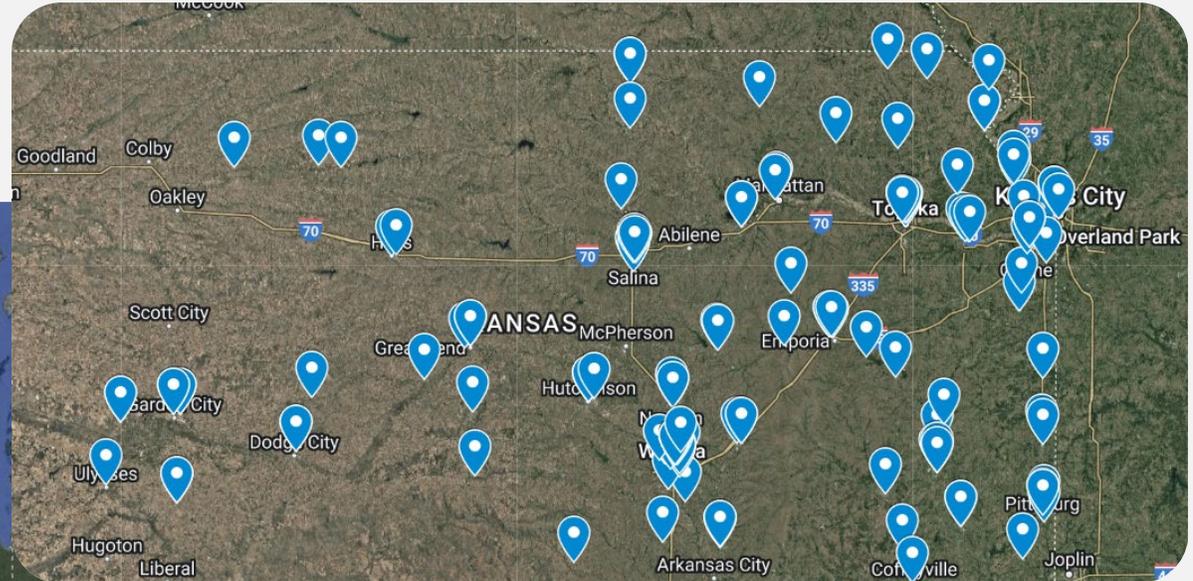
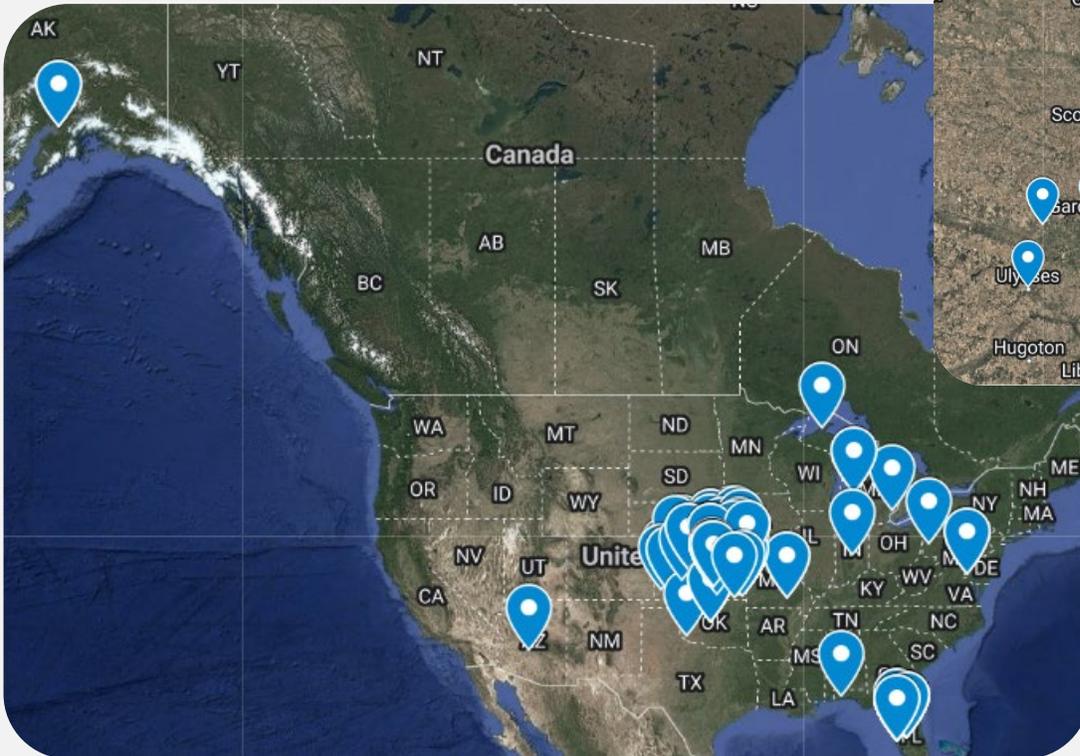
- Within 1 year of training:
 - Train 10 professionals or caregivers
 - Host 1 Safe Sleep Community Baby Shower or 10 Safe Sleep CRIB Clinics
- Attend annual recertifications



SAFE SLEEP INSTRUCTOR NEAR YOU

Safe Sleep Instructors

- Certified since 2015 = 418
- Active = 201



SAFE SLEEP INSTRUCTOR RE-AIM EVALUATION

- To better assess the effectiveness of the SSI program, a dissemination and implementation science framework was used for evaluation in Fiscal Year 2022
- RE-AIM Framework
 - Reach (R) - number and characteristics of participants
 - Effectiveness (E) – SSI knowledge change from pre- to post-test
 - Adoption (A) - who SSIs trained post-certification (professionals, parent/caregivers) and whether they facilitated a CBS or CCs
 - Implementation (I) - change in knowledge/intentions of those trained by SSIs pre- to post-training
 - Maintenance (M) – annual recertification



SSI TRAINING EVALUATION USING RE-AIM FRAMEWORK: SSI CONFERENCE OUTPUTS

	Evaluation Question	Indicator
REACH	Did the # of certified SSIs increase?	49 new SSIs certified
	Did the conference expand to support other states?	4 states have new certified SSIs - Kansas (n=43), Nebraska (n=4), Mississippi (n=1), and Missouri (n=1)
	Were participants from a variety of professions?	9 factions represented by SSIs (e.g., nurse, home visitor)
EFFECTIVENESS	Did knowledge of AAP safe sleep recommendations improve?	Mean Knowledge Change (p<0.001) Self-assessed Knowledge Change (p<0.001)
	Could trainees conduct a Safe Sleep Crib Demonstration?	100% (49/49) of SSI trainees passed the crib demonstration with score \geq 90%

SSI TRAINING EVALUATION USING RE-AIM FRAMEWORK: POST-CERTIFICATION OUTPUTS

	Evaluation Question	Indicator
ADOPTION	Did SSIs train professionals after the conference?	41 professional trainings conducted 24 of the 49 (49%) SSIs conducted professional trainings
	Did SSIs train parents/caregivers after the conference?	28 parent/caregiver trainings conducted 6 of the 49 (27%) SSIs conducted parent/caregiver trainings
	Did SSIs hold Baby Showers or Crib Clinics?	47 Baby Showers/Crib Clinics were conducted 24 of the 49 (49%) SSIs conducted Baby Showers/Crib Clinics
IMPLEMENTATION	Did trainee knowledge and intentions of professionals and/or caregivers change after being trained by an SSI? (Professional and Parent/Caregiver data – mean pre score (SD) vs mean post score (SD))	<p>Professionals (n=338): 10-item test Knowledge: 7.2 (1.7) vs 9.2 (1.1); t=20.2, p<0.001 Self-assessed Knowledge: 6.4 (2.2) vs 9.2 (1.0); t=27.5, p<0.001</p> <p>Parent and Caregivers (n=180): 5-item test Knowledge: 2.6 (1.0) vs 3.6 (0.6); t=-11.0, p<0.001</p> <p>Community Baby Shower/Crib Clinic (n=386): Back only (81% vs 95%, p<0.001), only safe sleep surface (88% vs 97%, p<0.001), and only safe items (73% vs 92%, p<0.001)</p>

SSI TRAINING EVALUATION USING RE-AIM FRAMEWORK: MAINTENANCE

	Evaluation Question	Indicator
MAINTENANCE	Do SSIs maintain certification?	45 (92%) SSIs recertified for FY23



CONCLUSIONS

- The SSI certification was successful in terms of Reach, Effectiveness, Implementation and Maintenance
- Adoption was less than expected. COVID-19 resulted in restrictions on trainings and community events for pregnant participants, which impacted the SSIs' required tasks
- Infrastructure is being developed to provide additional post-conference support. In addition, funding is being sought to conduct interviews with SSIs regarding facilitators and barriers to completing dissemination at required levels





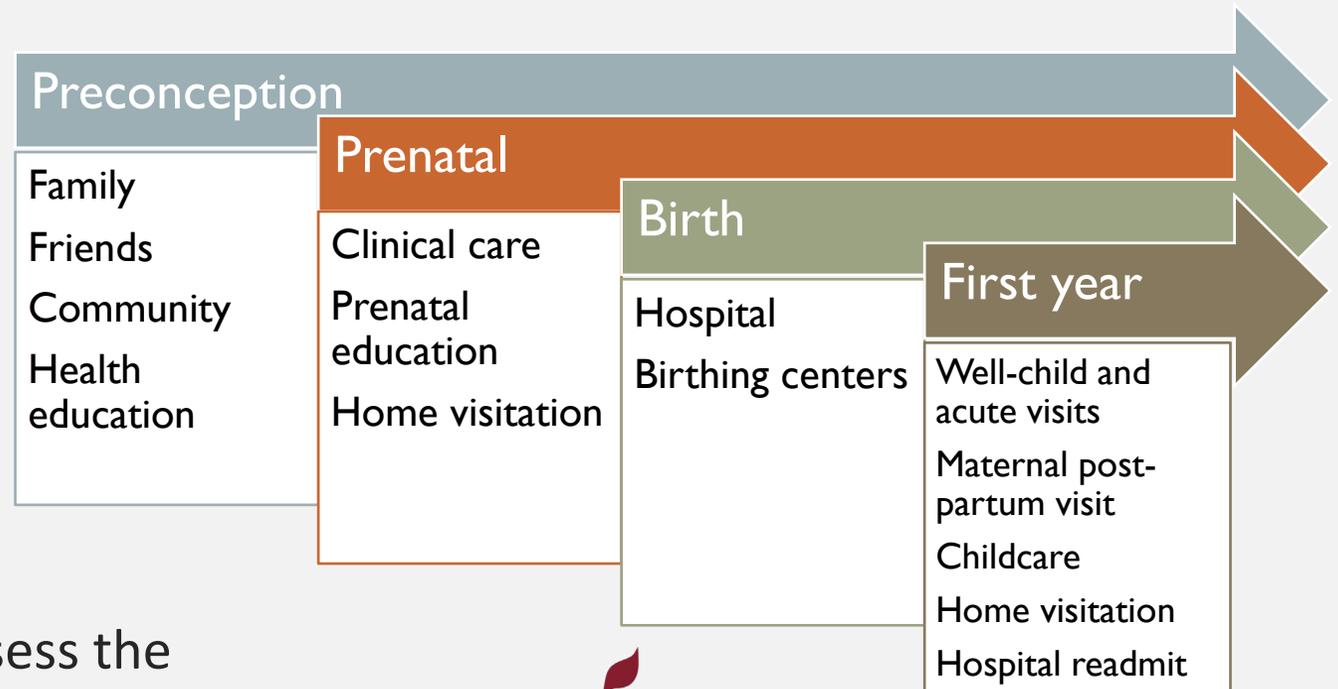
PROFESSIONAL AND CAREGIVER TRAININGS

- SSI post-certification requirement:
 - Provide safe sleep training to at least 10 professionals
 - If unable to train professionals, provide safe sleep training to at least 10 parents or caregivers



PROFESSIONAL/CAREGIVER TRAINING

- Evidence suggests receiving safe sleep counseling from healthcare professionals influences caregiver behaviors
- Further, this enhances consistent safe sleep message across the continuum of care
- The purpose of this project was to assess the knowledge of professionals and parent/caregivers who received safe sleep education from a certified SSI on the 2022 AAP Safe Sleep Recommendations



PROFESSIONAL/CAREGIVER TRAINING: METHODS

- Both professional and caregiver trainings use a standardized slide deck and last about 1 hour
- Pre- and post-training data are collected and entered into a research database by certified SSIs
 - Professional Training – 10 multiple-choice items
 - Caregiver Training – 5 multiple-choice items
- All reported data were collected November 1, 2022 to May 31, 2023
- Paired samples t-test for comparisons



PROFESSIONAL/CAREGIVER TRAINING: RESULTS

PROFESSIONAL TRAININGS

- 56 SSIs
- 547 professionals trained
- Mean pre-test score = 7.4 (SD = 1.7)
- Mean post-test score = 9.3 (SD = 1.0)
- $t=26.76, p<0.001$

CAREGIVER TRAININGS

- 21 SSIs
- 187 parents/caregivers trained
- Mean pre-test score = 3.2 (SD = 1.5)
- Mean post-test score = 4.7 (SD = 0.5)
- $t=13.01, p<0.001$



CONCLUSIONS

- This project further shows that SSIs are able to educate professionals and parent/caregivers on the new recommendations
- Future research is needed to assess whether professionals trained by SSIs utilize the knowledge gained to educate families on safe infant sleep





SSI post-certification requirement:

- Host one Safe Sleep Community Baby Shower (group education)
- Or, host 10 Safe Sleep Crib Clinics (individual education)



SAFE SLEEP COMMUNITY BABY SHOWERS

A Healthy Baby Begins with You



Community Baby Shower for Safe Sleep
Kansas babies are dying too soon and too often.
Here is what we can do about it.

- The Black Nurses Association will educate pregnant women and their support systems on safe sleep.
- The event is presented in English.
- Provide, based upon availability, a safety-approved pack-n-play crib and Sleepsack™ wearable blanket to pregnant women who attend and receive the training.
- Saturday, October 21, 2017
Hour sessions begin every 15 minutes between 11am & 12:15pm
Boys & Girls Club
2400 N. Opportunity Dr., Wichita, KS 67219
No RSVP or pre-registration necessary-Just show up!

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- Safe Sleep Community Baby Showers promote the AAP guidelines to high-risk and hard-to-reach groups (e.g., Black/African American, low-income)
- Also address breastfeeding, tobacco free environments, maternal mental health and substance use
- Anticipated outcomes include increased knowledge, intentions and behaviors; access to tools (crib)

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WICHITA BLACK NURSES ASSOCIATION

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SAFE SLEEP COMMUNITY BABY SHOWERS

- Crib demonstration offers hands-on opportunity for participants to learn how to create a safe sleep space
- Often include information or presentations from other perinatal programs or programs addressing social determinants of health



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SAFE SLEEP CRIB CLINICS



- Due to our rural nature, much of the state experiences low numbers of births making hosting large community events challenging
- Safe Sleep Crib Clinics provide the same education, but to one or two families at a time

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SAFE SLEEP COMMUNITY BABY SHOWER AND CRIB CLINIC: METHODS

- English or Spanish-speaking pregnant or recently delivered persons
- Participated in an in-person or virtual Safe Sleep CBS/CC between June 2022 to May 2023
- Univariate comparisons were made using McNemar's test for paired dichotomous variables.
- During this same time frame, recently delivered persons who attended a Kansas CBS completed a postpartum follow-up interview



SAFE SLEEP CBS AND CC: PRE- AND POST-TEST RESULTS

COMMUNITY BABY SHOWERS

- 33 Safe Sleep Instructors
- 19 in-person events
- 436 participants
 - 87% English; 13% Spanish

CRIB CLINICS

- 18 Safe Sleep Instructors
- 32 events
 - 69% in-person; 31% virtual
- 49 participants
 - 76% in-person; 24% virtual
 - 88% English; 12% Spanish



SAFE SLEEP CBS AND CC: PRE- AND POST-TEST RESULTS

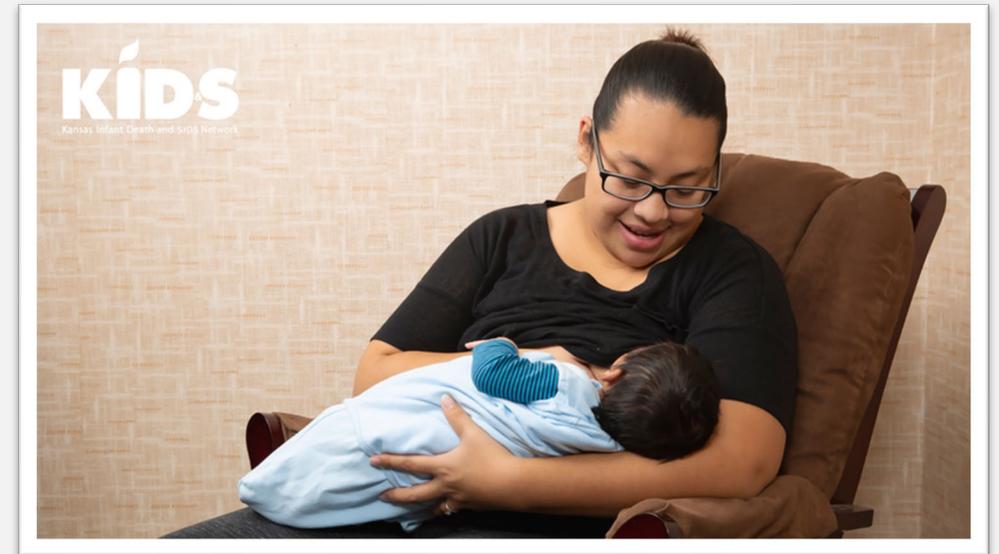


- Infant Sleep Intentions
 - Back only: 80% vs 96%, $p < 0.001$
 - Only safe sleep surface: 88% vs 97%, $p < 0.001$
 - Only safe items: 67% vs 90%, $p < 0.001$



SAFE SLEEP CBS AND CC: PRE- AND POST-TEST RESULTS

- Other Outcomes
 - Knowledge of three local resources relate to:
 - Tobacco cessation: 18% vs 41%, $p < 0.001$
 - Breastfeeding: 30% vs 58%, $p < 0.001$
 - Perinatal mental health: 36% vs 53%, $p < 0.001$
 - Substance use: 29% vs 41%, $p < 0.001$



SAFE SLEEP COMMUNITY BABY SHOWER: INTERVIEW RESULTS

- 31 recently delivered English-speaking persons who attended a Kansas CBS completed a postpartum follow-up interview
 - 29 interviews were included in the analysis
 - 1 participant did not receive a portable crib at the event
 - 1 had an infant > 1 year at time of interview



SAFE SLEEP COMMUNITY BABY SHOWER: INTERVIEW RESULTS

- 62% reported the crib was currently set up
- 92% found it easy/very easy to find space for the crib
- 92% found it easy/very easy to set up the crib
- 93% reported it was easy/very easy to stay calm if baby cried when placed in crib

- 28% infants would not have a safe surface without the crib



SAFE SLEEP COMMUNITY BABY SHOWER: INTERVIEW RESULTS

- 79% used the crib every night in the past week
- 72% practiced safe sleep the previous night
 - 100% only back position for last time put baby to sleep
 - 93% only safe surface for most of last night
 - 76% only safe items in sleep environment
- 69% reported using a wearable blanket to keep baby warm during sleep



SAFE SLEEP COMMUNITY BABY SHOWER: INTERVIEW RESULTS

SAME ROOM SEPARATE BED: BENEFITS

- Proximity to see/hear infant
- Feels safer
- Easy to soothe infant
- Learning to sleep alone
- Bonding
- Better quality sleep for parent(s)

SAME ROOM SEPARATE BED: BARRIERS

- Infant noises keep parent(s) awake
- Infant does not like crib
- Infant wakes more frequently



SAFE SLEEP COMMUNITY BABY SHOWER: INTERVIEW RESULTS

- Other SUID risk reduction behaviors
 - 93% tobacco free environment
 - 65% breastfeeding
 - 63% of those, exclusive breastfeeding
- 89% have identified supports to reduce postpartum depression/anxiety



CONCLUSIONS

- After updating the events to reflect current AAP Safe Sleep Recommendations, participants continued to demonstrate significant increases in knowledge and intentions in line with previous evidence.
- Post-event interviews suggested most self-reported practicing at least some aspects of safe sleep.
- Future research should focus on behavioral impact of these events in specific high-risk populations (e.g., non-Hispanic Black) and addressing barriers to practicing safe sleep.



OVERALL CONCLUSIONS

SSI CERTIFICATION: LIMITATIONS

- All studies
 - Midwestern US state
 - Only English and Spanish-speaking participants
 - Lack of randomization or control group
- Safe Sleep Community Baby Showers and Crib Clinics
 - Social desirability response bias
 - Lack of behavioral observations
- Interviews
 - Social desirability response bias
 - Lack of behavioral observations
 - Small sample size



SSI CERTIFICATION CONCLUSIONS

- Certified SSIs can increase safe sleep:
 - knowledge of professionals and caregivers through trainings
 - knowledge and intentions of pregnant or recently delivered persons through Safe Sleep Community Baby Showers and Crib Clinics
- This infrastructure has built the capacity for safe sleep education
 - across Kansas and into additional states
 - across various professions/factions to enhance consistent safe sleep message throughout the continuum of care
- Additional research on Adoption in the post-COVID era is needed



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QUESTIONS

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