ESTABLISHING AND MODELING SAFE SLEEP ENVIRONMENTS IN HEALTH CARE SETTINGS:

Guidance to Support Reduction of SIDS/SUID in Missouri

JULY 2023

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Executive Summary

Unsafe sleep circumstances are the leading cause of infant deaths up to one year old, accounting for **81% of nonmedical-related deaths.** While the incidence of sudden infant death syndrome (SIDS) has leveled off in recent years, the incidence of sudden unexpected infant deaths (SUID) that occur during sleep, including suffocation, asphyxia and entrapment, has increased. These deaths are largely preventable. The American Academy of Pediatrics has long espoused back sleeping position for infants but now has expanded its recommendations to include ensuring a safe sleep environment, which reduces the risk of all sleep-related infant deaths. Research has shown that SIDS/SUID is not caused by vomiting, choking or immunizations.

Sudden Unexpected Infant Death (SUID):

The death of an infant younger than one year of age that occurs suddenly and unexpectedly. After a full investigation, these deaths may be diagnosed as:

- **Suffocation:** When no air reaches a baby's lungs, usually caused by a block in the airway.
- **Entrapment:** When a baby gets trapped between two objects, such as a mattress and wall, and can't breathe.
- **Infection:** When a baby has a cold or other infection caused by a virus or bacteria that makes breathing difficult.
- **Ingestion:** When a baby takes something into the mouth that blocks the airway or causes choking.
- **Metabolic diseases:** Conditions related to how the body functions that can lead to problems with breathing.
- **Cardiac arrhythmias:** When a baby's heart beats too fast or too slow and affects breathing.
- **Trauma (accidental or non-accidental):** When a baby experiences an injury.
- **SIDS**

Sudden Infant Death Syndrome (SIDS):

One type of SUID, SIDS is the sudden death of an infant younger than one year of age that cannot be explained, even after a full investigation that includes a complete autopsy, examination of the death scene and review of the clinical history.

Accidental Suffocation and Strangulation in Bed (ASSB):

One type of SUID, ASSB, is a cause-of-death code used for vital statistics purposes. This code is used to identify infant deaths caused by suffocation or asphyxia (blockage of the infant's airway) in a sleeping environment. For example:

- **Suffocation by soft bedding:** When soft bedding, a pillow or a waterbed mattress blocks the infant's airway.
- **Overlay:** When another person shares the sleep surface with the infant and lays on or rolls on top of or against the infant while sleeping, blocking the infant's airway.
- **Wedging or entrapment:** When an infant gets trapped between two objects, such as a mattress and wall, bed frame, or furniture, blocking the infant's airway.

Source: National Institutes of Health

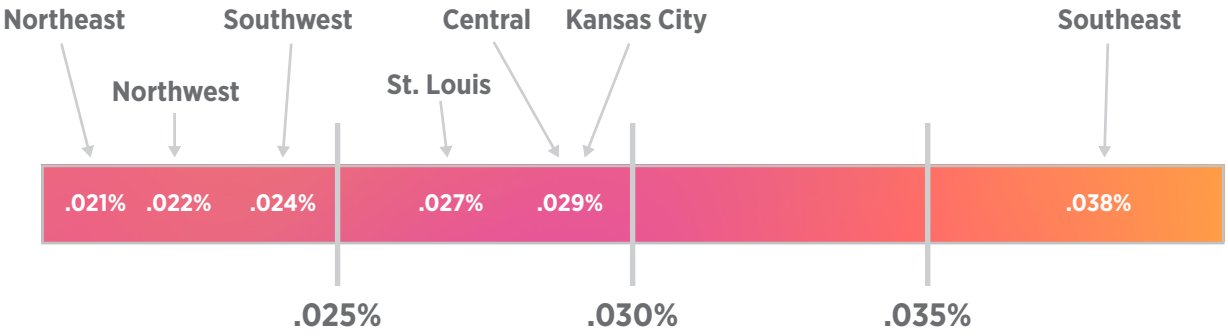
Black babies are disproportionately dying due to unsafe sleep environments, a disparity that should and can be alleviated. In Missouri, Black children die 2.75 times more often than white children. In St. Louis, Black children die nearly five times more often than white children. Deaths are preventable if parents and caregivers receive education on safe sleep, follow evidence-based guidelines and have access to resources that support safe sleep settings. Communities and health care settings also may play a role in reducing deaths from unsafe sleep.[iii]

Health care providers that establish a culture of safe sleep and model the practice serve as credible educators to help families prioritize and understand the importance of safe sleep, as outlined in the Missouri Safe Sleep Coalition's literature review and action plan.

Removing barriers to safe sleep by assessing, recognizing, and mitigating family and home environmental circumstances is key to improving outcomes. Culturally congruent messaging and education help to build family trust in safe sleep teaching.

Figure 1:

Circumstances and Demographics of Unsafe Sleep in Missouri, MO DHSS, 2019



The southeast region not only has the worst sleep death rate, it is **MUCH** worse than other regions.

Results from Missouri statistics on infant sleep-related deaths (2014-2019) indicate the Southeast region has the worst death rates compared to all other regions (Figure 1).

- Children on Medicaid die 2.5 times more often than non-Medicaid children and the rate is more than six times higher in the St. Louis region.
- Children with younger mothers die more often.
- In nearly half of all deaths, children sleep in a parent's bed.
- In nearly half of all deaths, children are sleep surface sharing.
- Children are only on their backs 20.85% of the time.

Missouri Child Fatality Review Data updated for 2021 noted 102 infant sleep-related deaths.

- 89% of unsafe sleep deaths occurred in families with Medicaid coverage.
- 65% of unsafe sleep deaths resulted from sharing a sleep surface with an adult, another child or a pet.
- White Missourians comprise 82.6% of the total state population and experienced 51% of infant sleep-related deaths (n = 52).
- Black Missourians comprise 11.8% of the total state population and experienced 40% of infant sleep-related deaths (n = 41).

Smoking tobacco and other products exacerbates sleep-related deaths. **SIDS deaths are three times higher for babies born to mothers who smoked during or after pregnancy.** Missouri smoking rates are significantly higher than the U.S. average in all categories, including before, during and after pregnancy. **In the U.S., approximately 5.5% of birthing persons smoke while pregnant on average compared to birthing persons in Missouri, with a nearly 12% rate of smoking while pregnant.**

This guidance is intended to prompt all health care settings that care for neonates and infants to implement standards of care and policies that model safe sleep practices, assess the home environment to create safe sleep settings, provide standardized education to families and extended caregivers, and refer to additional community services. Specifically, hospitals that implement the elements outlined in this guidance will be positioned to apply for Bronze Level Certification with Cribs for Kids.

The AAP recommendations for safe sleep should be included in the policy.

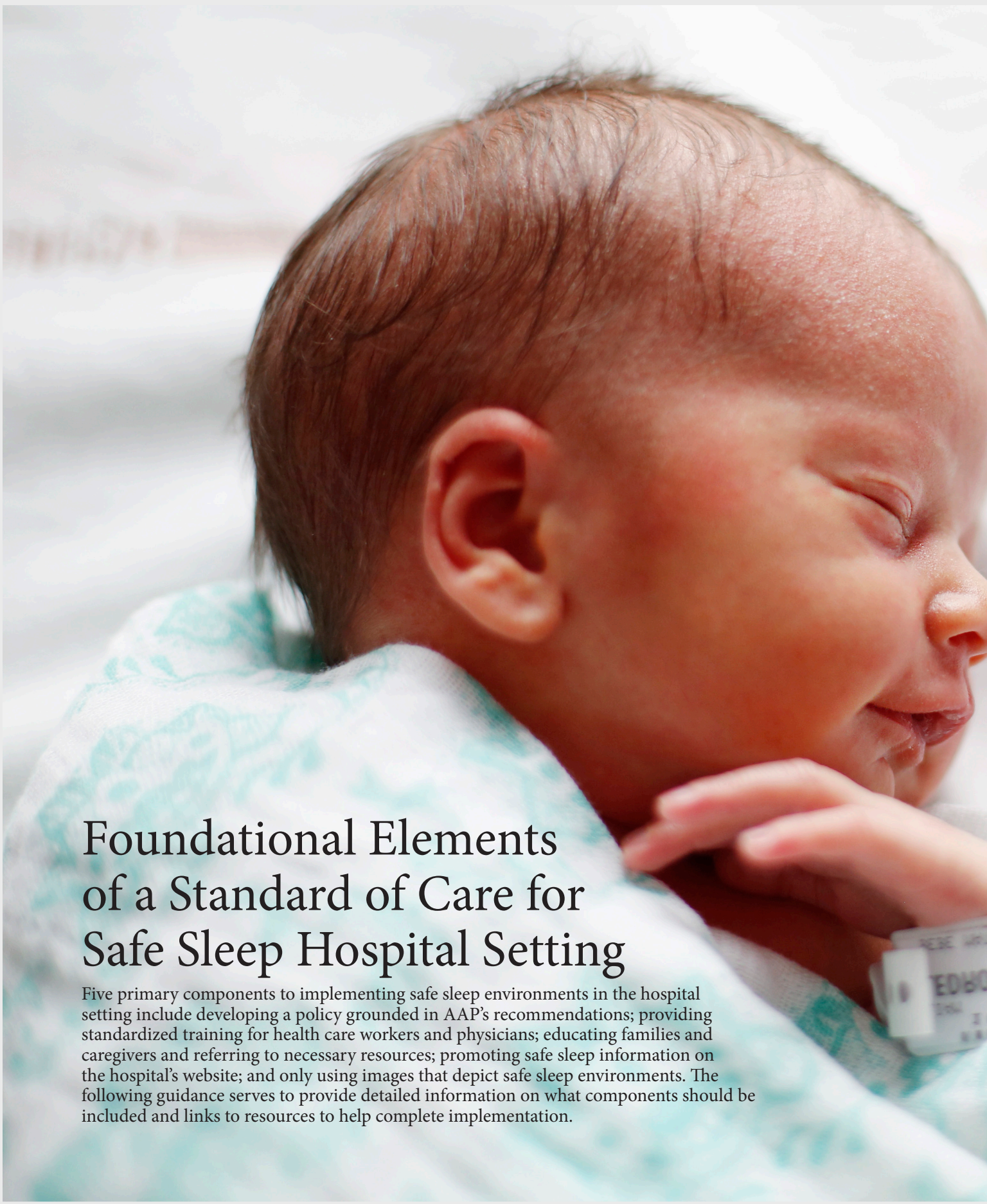
- Back to sleep for every sleep.
- Use a firm, flat, non-inclined sleep surface to reduce the risk of suffocation or wedging/entrapment.
- Feeding human milk is associated with a reduced risk of SIDS. Promote any human milk feeding for at least two months, and exclusively for at least six months to one year or beyond if both infant and parent mutually desire.
- It is recommended that infants sleep in the parent's room, close to the parents bed, but on a separate surface designed for infants, ideally for at least the first six months.
- 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.
    - Avoid weighted blankets.
    - Avoid ANY additional objects in the crib.
- Offering a pacifier at naptime and bedtime is recommended to reduce the risk of SIDS, ideally once breastfeeding is established.
- 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 once the infant is thermodynamically stable, typically achieved after the first hours of life.
- 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 Centers for Disease Control and Prevention.
- 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 beginning soon after hospital discharge, increased incrementally to at least 15 to 30 minutes daily by age seven weeks.

Take Caution

- Do not use home cardiorespiratory monitors as a strategy to reduce the risk of SIDS.
- Avoid the use of commercial devices that are inconsistent with safe sleep recommendations.
- There is no evidence to recommend swaddling as a strategy to reduce the risk of SIDS.
    - Proper swaddling technique should allow the hips to be flexed and abducted to reduce the risk of exacerbating development dysplasia of the hip.
    - Discontinue swaddling once the infant shows signs of rolling.

- Skin-to-skin directions
    - Infant's face can be seen.
    - Infant's head is in the "sniffling" position.
    - Infant's nose and mouth is not covered.
    - Infant's head is turned to one side.
    - Infant's neck is straight, not bent.
    - Infant's shoulders and chest face parent's.
    - Infant's legs are flexed.
    - Infant's back is covered with blanket.

Source: AAP Recommendations



Foundational Elements of a Standard of Care for Safe Sleep Hospital Setting

Five primary components to implementing safe sleep environments in the hospital setting include developing a policy grounded in AAP's recommendations; providing standardized training for health care workers and physicians; educating families and caregivers and referring to necessary resources; promoting safe sleep information on the hospital's website; and only using images that depict safe sleep environments. The following guidance serves to provide detailed information on what components should be included and links to resources to help complete implementation.

Task #1: Develop a Health Care Setting Safe Sleep Policy

Policy elements should include, but are not limited to, the following.

- Address safe sleep in the hospital setting for well-newborn, special care and neonatal intensive care settings individually, as neonatal positioning and medical care needs may change depending on the setting.
- For infants not medically ready for a "Home Sleep Environment" (HSE), discuss exceptions while in the hospital setting, such as positional changes in the NICU for medical treatments, and require an order to be documented. Parents of infants discharged from the NICU may require a more intensive safe sleep plan outlined in a recommendation from AAP.
- Standardize parent/caregiver education on safe sleep practices in the health care setting and at home. The use of visual aids is recommended. Educate parents/caregivers on reasons for the use of a non-HSE environment within the health care setting for medical care needs.
- Monitor the parent-infant dyad continuously post-delivery and regularly in the postpartum environment.
- Address infant safe sleep when parents want to sleep — the infant is placed in a bassinet or with another support person who is awake and alert.
- Support skin-to-skin contact post-birth and throughout the postpartum stay.
- Prior to discharge, the parents will watch the safe sleep DVD, and then provide modeling and review of how they will provide an appropriate HSE.
- Assess the infant's proposed sleeping environment for barriers, challenges and opportunities for early intervention and referral to social and community services.
- Order a social work consult to support referral to safe sleep resources if indicated.

Resources

- Example policy

Task #2: Train All Staff and Providers on Safe Sleep Education

- All staff on units caring for infants less than one year old should receive initial and ongoing training and competency development on safe sleep practices.
- Crib audits are recommended at feasible frequencies to assess safe sleep practices and identify ongoing training, education and systems-level changes needed to improve.
- Supporting breastfeeding and safe sleep practices should be included, as well as knowledge of how to assess a family's HSE plans and access to referral options if needed.
- Infants with neonatal abstinence syndrome are at high risk for SUID-related deaths. Intensive education and follow-up should be individualized to this patient population to support safe sleep environment practices coupled with use of the Eat, Sleep, Console model to support the mother-infant dyad affected by substance use disorder.

Resources

- Introduction to Safe Sleep Training
- Safe Sleep for Healthcare Providers
- Experiencing Racial Bias in Health Care
- Healthy Native Babies Project Workbook Packet
- Q/As for Health Care Providers: SIDS and Other Sleep-Related Causes of Infant Death
- Reducing the Risk for SIDS and SUID: Continuing Education for Nurses

Task #3: Provide Parent/Caregiver Education Prior to Discharge and Refer to Community Services

- Standardize parent/caregiver education on safe sleep practices in the health care setting and at home. Use of visual aids is recommended.
- Prior to discharge, ensure parents/caregivers watch the safe sleep DVD/video and then provide modeling and review of the appropriate HSE.
- Assess the family's cultural practices related to infant sleep, and provide culturally appropriate and individualized education to support achieving a safe sleep environment at home.
- Assess the infant's proposed sleeping environment for barriers, challenges and opportunities for early intervention and referral to social and community-services.
- Order a social work consult, if indicated, to support referral to safe sleep resources.

Resources

- ABCs of Safe Sleep video *(available in English, Spanish, Arabic, Pashto, and Swahili)*
- National Institutes of Health Safe to Sleep pamphlet
- Children's Trust Fund ABC's of Safe Sleep card
- What does a safe sleep environment look like?
- Safe Sleep Heroes Toolkit
- Safe Cribs for Missouri Program

Task #4: Include Safe Sleep Information on the Hospital Website

- Promote community education and access to safe sleep resources by including information on the hospital website.

Resources

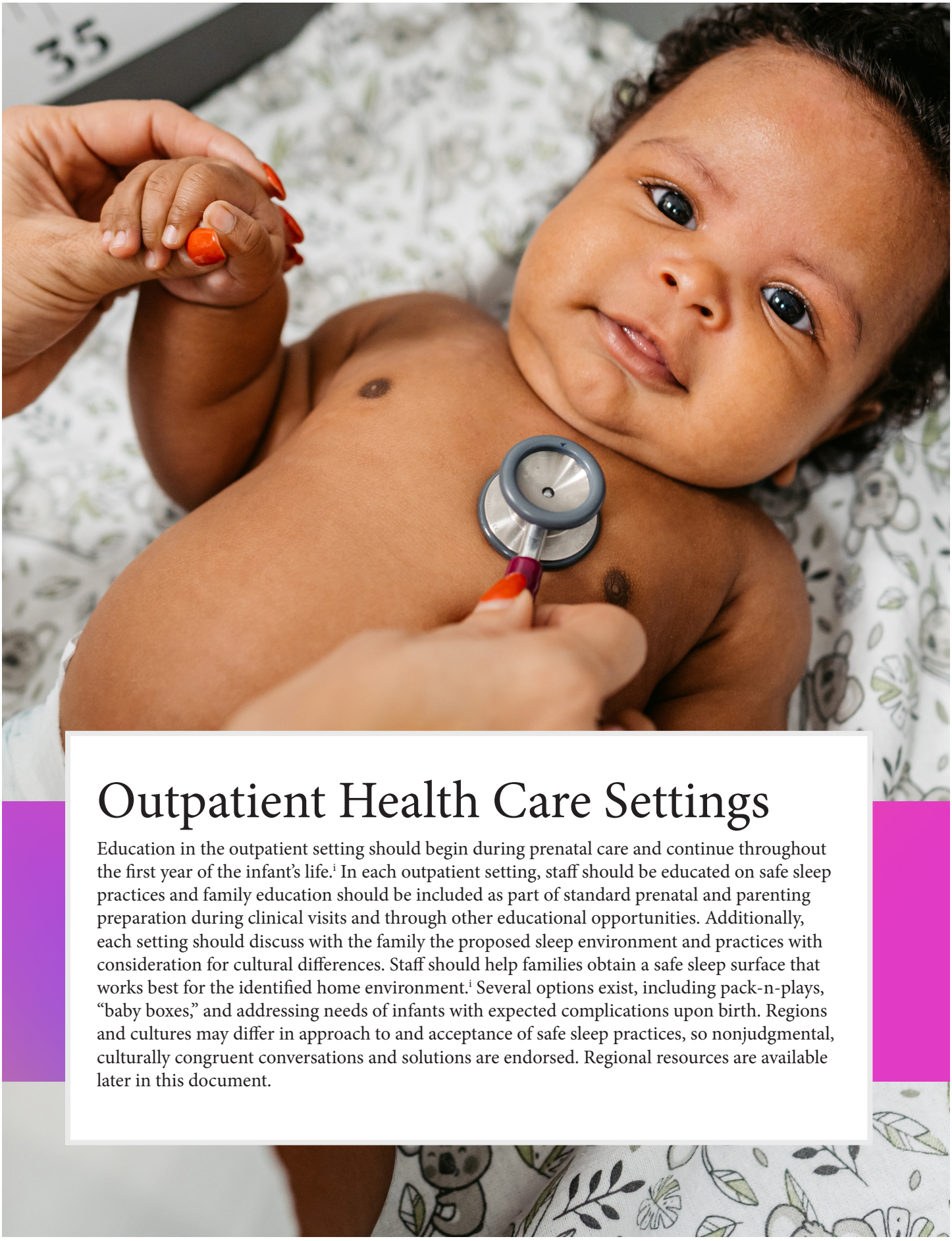
- ABCs of Safe Sleep video
- National Institutes of Health Safe to Sleep education

Task #5: Only Use Photos/Images that Portray Safe Sleep

- Visual aids support understanding of what a safe sleep environment looks like and support adult learning needs.
- Post education on the outside of bassinets and throughout the birthing, nursery and pediatric departments that includes pictures and supports the rationale of safe sleep.

Resources

- Cribs for Kids Lifestyle
- NIH Safe to Sleep Downloadable Media



Outpatient Health Care Settings

Education in the outpatient setting should begin during prenatal care and continue throughout the first year of the infant's life.[i] In each outpatient setting, staff should be educated on safe sleep practices and family education should be included as part of standard prenatal and parenting preparation during clinical visits and through other educational opportunities. Additionally, each setting should discuss with the family the proposed sleep environment and practices with consideration for cultural differences. Staff should help families obtain a safe sleep surface that works best for the identified home environment.[i] Several options exist, including pack-n-plays, "baby boxes," and addressing needs of infants with expected complications upon birth. Regions and cultures may differ in approach to and acceptance of safe sleep practices, so nonjudgmental, culturally congruent conversations and solutions are endorsed. Regional resources are available later in this document.

OBGYN/Prenatal Care Setting

» Education can be provided by physician, nurse, OB navigator, social worker or community health worker (CHW).
» Identify partners and other provides for resource and education referrals as needed. Documentation of having a safe sleep surface available should be completed prior to delivery of the infant.

Resources

» Collaborating with Obstetrical Providers to Promote Infant Safe Sleep Guidelines
» Fireside Chat with Dr. Sam—Why Is Practicing Safe Sleep So Hard, and How Dads Can Help, hosted by Charlie's Kids
» The First 90 Days—What Every Parent Must Know About Safe Sleep, co-hosted by First Candle, Regal Lager® and Love to Dream™
» Caregiver Confidence— Safe Sleep in a Caregiving Setting, Cribs for Kids®

Pediatric Care Setting

» Education can be provided by physician, nurse, OB navigator, social worker or CHW.
» Each visit documentation should be completed to demonstrate understanding of the importance of safe sleep and to identify any barriers to practicing safe sleep, along with agreed upon solutions.

Resources

» Enhancing Safe Sleep Counseling by Pediatricians through a Quality Improvement Learning Collaborative
» Doctor's Tips for Breastfeeding Mamas—Let's Talk About Safe Infant Sleep, co-hosted by NICHD/Safe to Sleep® and Children's National Hospital

Nonmedical Community Support (Doulas/CHWs/WIC Clinics)

» Education should begin with the first interaction and continue until the first birthday of the infant.
» Home visiting services may provide an essential assessment and intervention opportunity. One of the many benefits of home visitors is they have the ability to assess the sleep area and provide real-time education and feedback to parents and caregivers.

Resources

» NIH Building Relationships With Trusted Community Members
» NIH Tailored Training for Specific Populations
» The Maternal, Infant, and Early Childhood Home Visiting Program

Appendix

» Sample Health Care Setting Policy
» Missouri Department of Health and Senior Services Maternal Child Resources, TEL-LINK 800-835-5465
» Cribs for Kids Hospital Certification Manual
» Sleep surface resource pages
» Cribs for Kids
» MO State Funded Safe Sleep Programs

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Missouri Safe Sleep video QR Code for quick access

Citation: Campbell, K., Russell, T., & Williams, A. (2023). Establishing and Modeling Safe Sleep Environments in Health Care Settings: Guidance to Support Reduction of SIDS/SUID in Missouri. Missouri Perinatal Quality Collaborative, Missouri Hospital Association. https://www.mhanet.com/mhaimages/SQI/Maternal_Health/23_SafeSleepGuidance.pdf.