Guidance for Local Health Jurisdictions and Communities
Addressing Infant Safe Sleep Environments

Sudden Infant Death Syndrome (SIDS) is the sudden death of an infant under one year of age, which remains unexplained after a complete postmortem investigation, including autopsy, examination of the death scene, and review of the clinical history. Since the 1992 American Academy of Pediatrics (AAP) recommendation to place infants to sleep in a non-prone position, a major decrease in the rate of SIDS has occurred. However, the decline in SIDS rates has slowed in recent years and increases have been noted in other causes of sudden unexpected infant death that occur during sleep (sleep-related infant deaths). Sleep-related infant deaths include suffocation, asphyxia, entrapment, and ill-defined or unspecified causes of death. As a result, in 2011, the AAP released the policy statement, *SIDS and Other Sleep-Related Infant Deaths: Expansion of Recommendations for a Safe Infant Sleeping Environment*[1], and an accompanying technical report.[2] The 2011 AAP recommendations reinforce those originally published in 2005, add a number of important guidelines, and clarify some existing guidelines such as the recommendation regarding room-sharing without bed-sharing.

The California Department of Public Health, (CDPH) Maternal, Child and Adolescent Health (MCAH) Division and the California SIDS Advisory Council endorse the use of the 2011 AAP recommendations for educational activities in California. The expanded 2011 AAP recommendations for infant safe sleep and the sleep environment, supported by scientific studies, for infant's first year are summarized below:

- Always place infants on their backs to sleep for every sleep.
- Use a firm sleep surface for infants. A firm crib mattress covered by a fitted sheet is the recommended sleeping surface.
- Room-sharing without bed-sharing is recommended. The infant's crib, portable crib, play yard, or bassinet should be placed in the parents' bedroom close to the parents' bed.
- Keep soft objects and loose bedding out of the crib to reduce the risk of SIDS, suffocation, entrapment, and strangulation. Bumper pads are not recommended to be used in cribs.
- Pregnant women should receive regular prenatal care; this has been substantially shown to reduce the risk of SIDS.
- Avoid smoke exposure during pregnancy and after birth.
- Avoid alcohol and illicit drug use during pregnancy and after birth.
- Breastfeeding is recommended and is associated with a reduced risk of SIDS.
- Consider offering a pacifier at nap time and bedtime. For breastfed infants, delay pacifier introduction until breastfeeding has been firmly established, usually by 3 to 4 weeks of age.
- Avoid overheating, overbundling and covering the infant's face and head.
- Infants should be immunized in accordance with recommendations of the AAP and the Centers for Disease Control and Prevention. Infants should be seen for regular well-child checks in accordance with AAP recommendations.
- Avoid commercial devices marketed to reduce the risk of SIDS.

- 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 development of positional plagiocephaly.
- Health care professionals, staff in newborn nurseries and neonatal intensive care nurseries, and child care providers should endorse the SIDS risk reduction recommendations from birth.
- Media and manufacturers should follow safe-sleep guidelines in their messaging and advertising.
- Expand the national campaign to reduce the risk of SIDS to include a major focus on the safe sleep environment and ways to reduce the risks of all sleep-related infant deaths.
- Continue research and surveillance on the risk factors, causes and pathophysiological mechanisms of SIDS and other sleep-related infant deaths.

Risk Factors and Risk Reduction Messages

Although the cause(s) of SIDS remain unknown, risk factors for SIDS and sleep-related infant deaths are similar. In April 2012, the Journal of Pediatrics published a study, *Risk Factor Changes for Sudden Infant Death Syndrome After Initiation of Back to Sleep Campaign*.[3] This study analyzed data from 568 SIDS deaths in San Diego County between 1991 and 2008. The study identified intrinsic and extrinsic risk factors for SIDS, all of which contribute to the vulnerability for SIDS. Intrinsic risk factors include: male gender, prematurity, genetic differences, and a child's prenatal exposure to cigarettes and/or alcohol. Extrinsic risk factors include: prone or side sleep position, bed-sharing, overbundling, soft bedding and a child's face being covered.

This study concluded that risk factors for SIDS in San Diego have changed since the Back to Sleep Campaign. The peak incidence for SIDS remains between 2 to 4 months of age and the number of babies placed on their stomach for sleep has declined. However, the number of infants found in an adult bed increased from 23 percent to 45 percent. Also, the percent of infants sharing a bed when they died increased from 19 percent to 38 percent. The increases in these risk factors need to be addressed in risk reduction messages.

Bed-sharing appears to be a widespread practice in California. In 2007, the Los Angeles Mommy and Baby (LAMB) Project asked mothers “how often their new baby sleeps in the same bed with them or anyone else”. Survey respondents reported that 79 percent of infants bed-share “always, frequently, or sometimes”.[4] People may bed-share for many reasons. Sometimes they may bed-share out of necessity or parents may feel they are being vigilant and protective.[5] Mothers may find that bed-sharing is conducive to continued breastfeeding and may contribute to attachment and bonding.[6] Sometimes bed-sharing is not planned. Some parents, possibly in an attempt to avoid bed-sharing, feed their infants and fall asleep in much more dangerous locations such as chairs and sofas.[7]

Some research shows additional benefits for babies who bed-share. These findings apply to unimpaired, non-smoking parents, and benefits include: improved breastfeeding duration rates, improved settling with reduced crying, more infant arousals, and improved maternal sleep.[8] Many studies have demonstrated the benefits of skin-to-skin contact between mother and infant in the early postpartum period.[9] Mother-infant sleep contact over the first few months of life has consequences for the development of infant sleep biology and maternal feeding

physiology.[10,11] However, skin-to-skin contact can be done more safely when the mother or father is awake and can observe the baby.

The reality is that there is little research about the reasons that such a large proportion of families bed-share and even less discussion about the unintended consequences that may occur if there is a major shift in bed-sharing behavior. Most studies showing an increased risk of bed-sharing do not attempt to factor out whether it is the bed-sharing which is harmful, or whether it is the associated risk factors, such as soft blankets and pillows, which increase the risk.

Because of the high prevalence of bed-sharing, public health professionals should be sensitive to the practice. Universal condemnation could encounter outright backlash or underground resistance to change or parental denial of the practice due to fear of repercussions. For risk and harm reduction, parent-centered counseling is a good approach. Utilizing parent-centered counseling allows the counselor/provider to develop rapport with the mother, listen to her views and feelings and work with her to develop an individualized sleeping and feeding plan for her baby. In a parent-centered counseling model, it is recommended to include information on bed-sharing and dangerous situations for bed-sharing as outlined below.

Bed-Sharing

In some studies parents reported not being influenced by recommendations against bed-sharing but felt risk reduction messages helpful. Utilizing research from the Survey of Mothers' Sleep and Fatigue, parents often provide information about where their infant sleeps based upon where they believe the baby "should" sleep.[7] Thus, it is prudent to educate all parents on a safe sleep environment. The following bed-sharing guidelines will help to reduce the risk of SIDS and other sleep-related infant deaths.[1, 5, 11]

- Put baby to sleep on his or her back and not his or her tummy or side.
- Put baby to sleep on a clean, firm, non-quilted surface in a smoke-free environment. The bed should conform to Consumer Product Safety Commissions standards for a safe, firm mattress. A mattress on the floor in the middle of the room, away from the wall and furniture, without a frame is ideal, and should be covered with a tight-fitting sheet.
- Keep soft objects and loose bedding away from the baby's face.
- Do not overheat the baby, or wrap the baby in blankets. Avoid using thick polyester blankets.
- No children, pets or stuffed animals should be in bed with the baby. Also, there should be no pillows, quilts, comforters in bed with the baby.
- Do not leave a baby alone on an adult bed.
- Avoid strings, ties or anything else that may pose a strangulation risk for the baby.
- Sleep sacks are recommended.
- Consider offering a pacifier at nap time and bedtime. For breastfed infants, delay pacifier introduction until breastfeeding has been firmly established, usually by 3 to 4 weeks of age.

- Have an alternative safe place for the baby to sleep in case of illness, parental fatigue, or if alcohol, drugs or medications are impairing the parents' ability to respond to their baby.

Dangerous Bed-Sharing

Because research shows that bed-sharing is more dangerous for babies younger than three months [12], families should pay careful attention to infant sleep environments. According to the 2011 AAP recommendations, parents should be educated about the following dangerous bed-sharing conditions. Infants should:

- Never bed-share with someone who smokes.
- Never bed-share with siblings, pets, or anyone who is not a parent.
- Never bed-share when an infant is younger than 3 months of age.
- Never bed-share with someone who is sleep deprived (defined as less than 4-hours of sleep the night before) or someone who is excessively tired. This includes a parent who is ill or tired to the point where it would be difficult to respond to the baby.
- Never bed-share with someone who is impaired due to use of medications, alcohol or drugs which reduces their ability to arouse or respond to the baby.
- Never bed-share on an unsafe surface with soft bedding including pillows, heavy blankets, quilts, comforters or stuffed toys.
- Never bed-share on soft surfaces, such as couches, sofas, armchairs, recliners or beanbags. These are not beds and should never be used for infant sleeping.

In addition to the above AAP recommendations, McKenna [5] recommends never bedsharing if parents ever smoked. There are no data which show that even if we remove all other known risks, that bed-sharing is as safe as room-sharing without bed-sharing. A safer option to reduce dangerous bed-sharing is to place the baby in an infant bassinet or portable crib with a firm surface in the same room as the parents' bed.

Conclusions

CDPH endorses the 2011 AAP recommendations, including that parents room-share with their infants rather than bed-share. Bed-sharing is a complex issue and a proactive approach designed to reduce risk factors is essential and the parents' decision to bed-share must be made carefully. While one may be able to reduce the risk of bedsharing by addressing other risks, we do not know if we can make it as low as room-sharing without bed-sharing. If parents are considering bed-sharing, health professionals should recognize the parents' beliefs and provide parent-centered guidance on known bed-sharing practices to reduce the risk of SIDS and other sleep-related infant deaths.

When communities are promoting a safe sleep campaign, educational efforts needed to ensure infant safety should be included as part of the campaign. As resources allow, agencies should track outcomes of their efforts to support safe sleep environments in terms of the impact on infant health, infant mortality, child development, and family health.

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