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Hazardous Bedding Still Commonly Used for Infants

Soft bedding was first identified as a modifiable risk factor for sudden infant death syndrome (SIDS) in 1993.¹ The American Academy of Pediatrics (AAP) advised in 1996 that infants sleep in an environment free of soft surfaces and gas-trapping objects.² In 1999, a safety alert was issued by the Consumer Product Safety Commission, the National Institute of Child Health and Human Development and the AAP task force. They recommended that infants “be placed to sleep on their backs on a firm, tight-fitting mattress in a crib that meets current safety standards and that pillows, quilts comforters, sheepskins and other pillow-like soft products be removed from the crib.”³ These recommendations were reaffirmed by the AAP in 2000, 2005 and again in 2011 in their most recent guidelines for reducing the risk of SIDS and other sleep-related infant deaths.⁴⁻⁶ Loose bedding or soft items placed under or around sleeping infants are potentially hazardous as they pose a risk for suffocation.

In the US, rates of infant mortality due to SIDS have declined slowly since 2000 from 66.3 to 52.7 per 100,000 live births in 2010.⁷ However, during the same time period (2000-2010) deaths from unintentional sleep-related suffocation have increased more than twofold from 7.0 to 15.9 per 100,000 live births. Bedding practices are likely a factor in this increase. Until now, the proportion of US infants placed to sleep in environments with bedding is unknown. Studies that look at trends in infant care may help us better understand the choices that parents make and guide us in our efforts to provide more focused education regarding safe sleep practices.

Iowa Perspective

Iowa’s Child Death Review Team (CDRT), a multidisciplinary group of experts from health care, public safety and social services, meets 4 to 5 times a year to review the circumstances and events associated with the death of Iowa children aged 17 years and under. In their 2011 *Annual Report to the Governor and General Assembly*⁸ they provided a summary of the sleep-related infant deaths that occurred from 2006 to 2011. They found that the most common risk factor in these cases was a blanket in the sleeping

space with the infant, which comprised 42% of the deaths. The second most common risk factor for sleep-related infant death was bed sharing.

New Study Reveals Alarming Trends

Earlier this month, Shapiro-Mendoza and colleagues⁹ published an important study in *Pediatrics* regarding trends in the use of potentially hazardous bedding in the infant sleep environment. Investigators used data from the National Infant Sleep Position (NISP) study to estimate the prevalence of certain types of bedding and examine trends in reported bedding use. The NISP was an annual, cross-sectional telephone survey conducted from 1993 to 2010. A random sample of households with infants aged < 8 months was chosen to provide feedback. Nighttime caregivers answered questions about infant sleeping practices, including sleep position, location for sleep and use of potentially hazardous bedding. The annual sample size ranged from 1,012 to 1,188, and the total sample size from 1993-2010 was 18,952 caregivers. Results from the NISP have been reported previously with regards to bed sharing.¹⁰⁻¹¹

For this analysis, investigators looked at the *reported usual use of certain types of bedding under the infant or covering the infant while sleeping in the last 2 weeks*. They examined the prevalence of bedding use in the sleeping environment for each survey year and the frequency of use according to type of bedding, race and ethnicity. The AAP had not yet recommended removal of thin blankets from the sleep surface during the study period. So, the definition of “blanket” was restricted to coverings thicker than a receiving blanket. Respondents reported that thick blankets, quilts and comforters were the most common types of bedding used to cover infants. Blankets and pillows were most commonly placed under the infant. To understand the most recent bedding practices, the survey data from 2007 to 2010 was examined.

Several concerning trends were noted in the final analysis. Despite consistent declines in bedding use from 1993 to 2010, in the most recent study period (2007-2010) approximately 50% (average 54.2%) of US caregivers continue to use thick blankets, cushions, pillows and other potentially hazardous soft bedding under the infant or covering him for sleep. This practice ranged from 46% to 77% depending on socio-demographic characteristics. The prevalence of bedding use was lowest among college-educated mothers and highest with teenaged mothers and with those who had less than a high school education. Racial and ethnic differences in bedding use were also reported. Infants with black or Hispanic mothers had higher rates of bedding use than infants with white mothers. Bedding use was most prevalent among infants sleeping in adult beds (71.5%), infants sleeping on their sides (66.1%) and infants sharing a sleep surface (70.0%). It is interesting to note that from 2007 to 2010, 74.2% of respondents reported that their infant slept in a crib or bassinet and 72.6% of infants were placed supine to sleep. The increasing rates of accidental suffocation for sleeping infants in this country warrants a closer look at what’s in the crib.

Why Do Parents Use Bedding?

The results of this report lead us to ask the question, “Why do parents feel the need to use soft bedding in their baby’s sleep environment?” One qualitative study of black parents from Washington DC and Maryland¹² suggests that parents choose to use soft bedding for 2 main reasons: comfort and safety. Parents worry that their infant will be cold or

otherwise uncomfortable if they don't use bedding. Some understand that blankets pose a suffocation risk but believe that they can be used safely as long as they are placed away from the infant's head or neck. Others believe that blankets with breathing holes (eg, crocheted) are safe for infants. Parents may extrapolate from their own experiences: "I'm not comfortable without a pillow for sleep, so my baby must have one." They worry that the sleep surface (crib mattress) is too hard and uncomfortable, so they use cushions and blankets to make it softer. Of note, Shapiro-Mendoza and colleagues⁹ found *no decline* in the use of bedding under the infant since the beginning of the NISP survey in 1993. Moon and colleagues¹³ discovered in focus groups that some parents misinterpret the recommendation for a "firm sleep surface" and instead try to create a taut sleep surface. They use cushions and blankets to soften the sleeping area then cover these bedding items "tightly" with a sheet. Some parents also believe that a softer sleep area is safer for baby. They use pillows, cushions and blankets as barricades to prevent infants from falling off of adult beds and other surfaces (sofas). They don't understand that softness does not equate safety. And, if infants roll into these objects they are at risk to suffocate because they may not be able to roll back out. It is for this reason that the AAP recommends that all soft objects and loose bedding be kept out of the crib from birth to one year of age. Researchers in 2009¹⁴ evaluated images from popular magazines targeted toward pregnant women and mothers of infants. About two-thirds of these images showed infants sleeping with potentially hazardous bedding (eg, blankets, pillows). Mixed messages from the media may lead parents to believe that soft bedding in the infant's sleeping environment is the norm and something to be desired.

Opportunities for Education

The use of bedding under and over infants for sleep is still a common practice in about half of the families we encounter as perinatal healthcare providers. Understanding the concerns and misgivings that parents may have regarding safe sleep recommendations is crucial to influencing behavior and reducing the incidence of sleep-related infant death due to accidental suffocation. We can suggest that parents use sleeper clothing and sleep sacks instead of blankets to keep their baby warm. We can ensure that their understanding of a "firm sleep surface" means a firm crib mattress covered only with a tight-fitting sheet. We must emphasize that 'nothing in the crib' means no bedding over, around *or* under the infant. We can and should evaluate the elements of our discharge teaching regarding safe sleep and update this information to include *all* of the current recommendations for providing a safe infant sleep environment.⁶ And, we should make every effort to model safe sleep practices as we care for newborns and their families in the hospital, including the recommendation for no loose blankets in the crib or bassinet. We are pleased to report that many Iowa hospitals are currently using sleep sacks instead of blankets in their nurseries. For more information on how to obtain sleep sacks for newborns in your hospital, please contact us at the Statewide Perinatal Care Program.

In 2012, the original NICHD, "Back to Sleep" campaign was revised and renamed the "Safe to Sleep" campaign.¹⁵ This new campaign has a broader message that emphasizes safety in the entire sleep environment. The campaign provides excellent teaching tools and a continuing education program for healthcare providers. All of the "Safe to Sleep" educational materials are available free of charge. For more information, visit the website at: www.nichd.nih.gov/sts/Pages/default.aspx .

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