EDUCATION AND RESEARCH UPDATE

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DEATH AND INJURIES ATTRIBUTED TO INFANT CRIB BUMPER PADS

Bradley T. Thach, MD, George W. Rutherford Jr., MS, and Kathleen Harris

Excerpted from Journal of Pediatrics 2007; 151:271-4

The objective of this study was to look at deaths that were attributed to use of bumper pads in infant cribs and to determine if any of the deaths were potentially preventable. Data were obtained from Consumer Product Safety Commission (CPSC) files on deaths related to crib bumpers from January 1, 1985 through December 31, 2005.

Twenty-two different bumpers were examined and graded for softness, potential space between bottom of bumper and mattress, bumper width, and length of fabric fasteners that attach the bumper to the crib.

The results of a search found 27 cases of infant death reported by medical examiners or coroners that involved bumper pads or similarly padded bassinets (4 of the 27 cases). The mechanism of death included suffocation and strangulation by bumper ties. Twenty-five non-fatal injuries were identified, and most consisted of minor contusions. All retail bumpers had hazardous properties.

These findings suggest that crib and bassinet bumpers are dangerous. Their use prevents only minor injuries. Because bumpers can cause death, we conclude that they should not be used.

INFANT SLEEP POSITION, HEAD SHAPE CONCERNS, AND SLEEP POSITIONING DEVICES.

L. Hutchinson, A. Stewart, E. Mitchell

J Paediatr Child Health. 2007 Apr;43(4):243-8

Aim: The *Back To Sleep* campaign has successfully promoted the use of the supine (back) sleep position for infants, with a corresponding decrease in sudden infant death syndrome death rates around the world. The aim of this study was to survey current infant sleep position practices, concerns about plagiocephaly, and the use of sleep positioning devices.

Methods: A postal survey of 400 mothers of infants aged 6 weeks to 4 months was carried out in Auckland, New Zealand. Results: Of the 278 (69.5%) respondents, the supine position was usually used in 64.8%, the prone (tummy) position in 2.9%, with 32.3% using the side position or a combination of side and back positions. Approximately one-third had a concern about their infant's head shape, and 80% described practices to help prevent head deformation. Thirty percent reported they had changed their infant's sleep position because of head shape concerns. A third of the mothers used some sort of positioning system to maintain the infant's sleep position.

Conclusions: Anxieties about plagiocephaly, aspiration of vomit, and poor quality sleep are the main concerns that parents have about sleeping their infants on their backs. Further education is needed to inform mothers about these issues and to alleviate their fears.

Hispanic women in Chicago have a fertility rate nearly a third greater than African American women, while the infant mortality rate (IMR) of African American women is twice that of Hispanic women.

— Chapin Hall 1990-2010 Report

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RISK FACTORS, DIAGNOSIS AND PREVENTION OF SUDDEN UNEXPECTED INFANT DEATH

Takatsu A., Shigeta A., Sakai K., Abe S.

Leg Med Tokyo, Jan 31, 2007

The diagnosis of the cause of sudden unexpected infant death (SUID) is often difficult for forensic pathologists. Its misdiagnosis or misclassification is the cause of crucial epidemiological and medicolegal problems. During the sudden infant death syndrome (SIDS) epidemic, many reports described the risk factors of SIDS as well as mechanical suffocation during sleep. Meadow s report has invited worldwide debate over whether the cause of SUID is attributable to SIDS or suffocation. On the basis of this background, the problems concerning causal diagnosis and risk factors, particularly the accidental suffocation of infants during sleep, and the specific pattern of suffocation, was reviewed from the forensic pathological point of view. The following tasks remain to be done for the future: (1) to avoid preventable SUIDs, the most effective measure worldwide is to identify high-risk factors for all SUIDs, including SIDS, accidental suffocation and undetermined causes and then transmit this information to the public. (2) SIDS should be uniformly defined and diagnosed as strictly as possible to gain its reliability in the public health community and in a legal framework.

ASSOCIATION OF POVERTY WITH SUDDEN INFANT DEATH SYNDROME IN METROPOLITAN COUNTIES OF THE UNITED STATES IN THE YEARS 1990 AND 2000.

Mallow MH., Eschbach K.

Douth Med J. 2007 Nov; 100(11):1107-13

SIDS has been associated with poverty indirectly in the United States with the use of vital statistics data by using proxies of socioeconomic status such as maternal education. The percentage of each U.S. county s population below established federal poverty index was obtained from U.S. Census data for 1990 and 2000 by race. These data were merged by year of birth, county, and race with US Vital Statistics Linked Birth and Death Certificate data. The analysis showed that there was a significant association between poverty and Sudden Infant Death Syndrome (SIDS) at the metropolitan county level for non-Hispanic Black and non-Hispanic White families. Hispanics do not demonstrate this association.

Delayed Death in SIDS: A San Diego SIDS/SUDC Research Project 15 Year Population-based Report.

Krous HF, Haas EA, Chadwick AE, Masoumi H, Mhoyan A, Stanley C.

Forensic Sci Int. 2007 Nov 5, (E-pub)

A fraction of SIDS cases have death delayed by successful CPR, yet they have not been compared to SIDS cases which were found dead or not successfully resuscitated. In examining the database of the San Diego SIDS Research Project, authors looked to;

- determine the percent of SIDS cases for whom death was delayed by CPR and subsequent life support:
- compare demographics and circumstances of death and autopsy findings of delayed SIDS deaths with those whose deaths were not delayed;
- and to examine the evolution of pathologic changes in delayed SIDS as a function of survival interval.

A retrospective 15-year study revealed that of the delayed SIDS cases (Group I) and non-delayed SIDS deaths (Group II), Group I cases were significantly older than the Group II cases. Group I cases were more often found away from home than Group II infants. There were no differences between groups with regard to gender, gestational age, type of delivery, bed sharing, upper respiratory infection (URI) within 48 hours of death, ALTE (Apparent Life Threatening Event), a history of referral to Child Protective Services (CPS), body position when placed or found, or position of face when found. Anoxic-ischemic brain injury was the immediate cause of death in all delayed SIDS cases. Aspiration of gastric contents was identified in Group I cases surviving less than 48 hours and was the likely etiology of acute bronchopneumonia occurring in 83% of Group I cases.

Efficacy of a SIDS Risk Factor Education Methodology at a Native American and Caucasian Site

Burd L, Peterson M, Face GC, Face FC, Shervold D, Klug MG

Maternal Child Health Journal February 2007

The objective was to complete a community based efficacy study of a SIDS risk reduction methodology. The authors utilized two community sites for the study: 1) Native American home visiting program for pregnant and young mothers; and 2) an obstetrics department in a community hospital. Pre and post tests were used to measure learning. The risk reduction intervention was delivered by hospital nurses or the home visiting staff and required about 20 minutes. Each of the nine risk factors was discussed.

Results: The authors completed paired pre and post-testing with 341 women. The pre tests found substantial knowledge deficits about SIDS risk factors in both groups. The pre and post-test changes for the nine risk factors ranged from 5% to 74%. Participants from both groups demonstrated nearly equivalent rates of learning for all nine of the risk concepts.

Conclusion: This study demonstrated the efficacy of this brief intervention program. The program was effective in increasing parental knowledge of the risk factors targeted by this study in both settings. The magnitude of change supports additional research with this program in other settings and with additional populations.

TUMMY TIME TIPS AND TOOLS

Interactive and fun activities parents and caregivers can do with their babies to help achieve appropriate developmental milestones.

CARRYING YOUR BABY

- Carry your baby over your shoulder. Gently support his/her head in the midline position. By changing shoulders often you are encouraging baby to turn to both sides. Less support is needed as baby develops strength, head and trunk control.
- Hold baby out in front of you facing out. Gently support head in middle. This position encourages baby to explore environment and look around to increase visual tracking skills.
- Carry baby belly down with your arm supporting underneath the chest. Younger babies will still need to have the head, neck and chest supported, but as baby gains strength and muscle tone, less support is needed. As baby becomes stronger, you can play "superman" and pretend baby is flying as you carry him/her look around to increase visual tracking skills.
- Frequently alternate the arm you hold baby in so the baby looks and turns to both sides. Also, alternate the hip baby straddles to encourage looking, turning and balancing in both directions.

CORRECT POSITIONING OF INFANT EQUIPMENT

- Stabilize baby s head in their car seats, infant carrier, swing, bouncy seat and strollers with an approved head support. This is especially important for LBW infants, preemies or babies with low muscle tone so that they don t push their chins to chest or stay in an off center head position for too long.
- To increase time spent lying on both sides of head equally, you can alternate the location of the car seat to encourage baby to look out both sides of the car.
- Place stimulating mobiles and safe crib attached toys to both sides of the crib. Change baby s position in crib every time you place baby down to sleep. Example – put baby s head at head of crib; next sleep time put baby with head at foot of crib; and so on. Baby will typically look towards the door, so switching his/her crib position will encourage baby to look both ways. This will also help prevent flat spots on baby s head.

FEEDING BABY

- Change the arm the baby is being held in for bottle fed babies. This will limit the pressure of your arm on the back or side of baby s head.
- Sit with your back supported and knees bent. Position baby against legs facing you. Feed baby with his/her head positioned in the middle.
- Try placing baby belly down on your lap when burping. When baby lifts his/her head, align and support it in a midline position as needed.
- Position the high chair for older infants so that the baby has stimulating people and things to look at.
- Spoon feed baby in the midline position to encourage the baby to develop symmetrical lip and mouth movements.

DIAPERING, DRESSING AND BATHING

- Alternate the position of baby on changing table.
- Roll baby from side to side as you fasten diaper tabs.
- Roll baby to belly before picking him/her up.
- Towel dry and change baby while on his/her belly and gently roll baby from side to side as you dress him/her.
- Massage baby on his/her belly from head to toe after diapering and bathing.

IMPORTANT TUMMY TIME TIPS

- Give baby as much **supervised** floor time experience as possible. Babies like to play and engage with toys and people at eye level.
- Whenever possible, limit their time in car seats, bouncy chairs, swings and strollers.
- Slings, front carriers and backpacks are also available to provide alternatives to rigid carriers and seating systems.
- While awake and supervised, lay baby on floor with a towel propping up baby on his/her side. Place toys out in front and to the sides of him/her to encourage reaching in all directions.
- Encourage siblings to play on floor with baby while being supervised.
- When baby is on the floor or other clean, firm surfaces he/she will learn to move and figure out how to get in and out of the positions he/she finds most comfortable. Babies need this open space time to explore and get to know their environments and bodies.

For more information on tummy time activities or to schedule a training, please contact Nancy at 630-305-7300

The number of children raised by single mothers more than tripled between 1960-2000; from 5.1 million to 16.2 million.

FATHER S DATA – HEAD START

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MISSION STATEMENT

Sudden Infant Death Services of Illinois, Inc. is a not-for-profit organization dedicated to the elimination of Sudden Infant Death Syndrome (SIDS) and other infant deaths, serving the State of Illinois since 1968.

VISION STATEMENT

Sudden Infant Death Services of Illinois, Inc. is a statewide not-for-profit organization dedicated to:

- Supporting family members and others who have been touched by the tragedy of Sudden Infant Death Syndrome (SIDS) or other infant death;
- Educating both the public and professionals about bereavement support and infant mortality reduction;
- Creating community awareness on the subject of SIDS and other infant death; and
- Eliminating SIDS and other infant death through the support and implementation of appropriate research.

PROS AND CONS OF PACIFIER USE

PROS

- Can calm some distressed infants, especially during/after painful procedures at the doctors office such as vaccinations.
- Can assist some infants to settle into sleep.
- Can be used to satisfy non-nutritive sucking.
- Can be used to differentiate between a hungry infant or a fussy infant.
- Pacifiers are recommended by the AAP and SIDS of Illinois to reduce the risk of SIDS when used at sleeptime. Remember to wait until breastfeeding is established before offering a pacifier. Pacifiers should be discontinued around age 1 year.

CONS

- Pacifier use prior to establishing breastfeeding can interfere with mother s milk supply during the first month.
- Some breastfed infants can have nipple confusion if pacifiers are used.
- Some infants who use pacifiers are more prone to ear infections.
- Speech problems can affect some infants who use pacifiers.
- Using a pacifier over the age of four (4) can cause misalignment of teeth and affect the child s bite.

WEANING CHILD FROM PACIFIER

- Slowly decrease use of pacifier daily until eventually it is not needed at all.
- Offer another toy or “lovey” to move away from the pacifier and towards another self-soothing item.
- Pack up all the pacifiers to “send” them to a new baby.
- Puncture a hole in the pacifier to make the nipple flat. There will not be any suction and will be easier to get child to give it up.

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