

Implementation of Safe Sleep Practices in the NICU

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Introduction

- ❖ Present current AAP recommendations to health care providers on the topic of the prevention of Sudden Infant Death Syndrome (SIDS)
- ❖ Provide safe sleep practice nursing guidelines to be modeled by caregivers to parents prior to and following discharge from the NICU
- ❖ Discuss the implementation of Safe Sleep modeling in the NICU and the use of HALO sleepsacks

What is Sudden Infant Death Syndrome (SIDS)?

According to the Centers for Disease Control & Prevention (CDC), Sudden Infant Death Syndrome is:

“The sudden death of an infant less than one year of age that cannot be explained after a thorough investigation is conducted, including a complete autopsy, examination of the death scene, and review of the clinical history.”

(as cited in McMullen, Lipke, & Lemura, 2009)

What do we know about SIDS?

- ❖ Unpredictable and non-discriminating
- ❖ The leading cause of infant death in the United States and claims approximately 5,000 lives each year
- ❖ More common among boys than girls
- ❖ Most common between the ages of 2 and 4 months

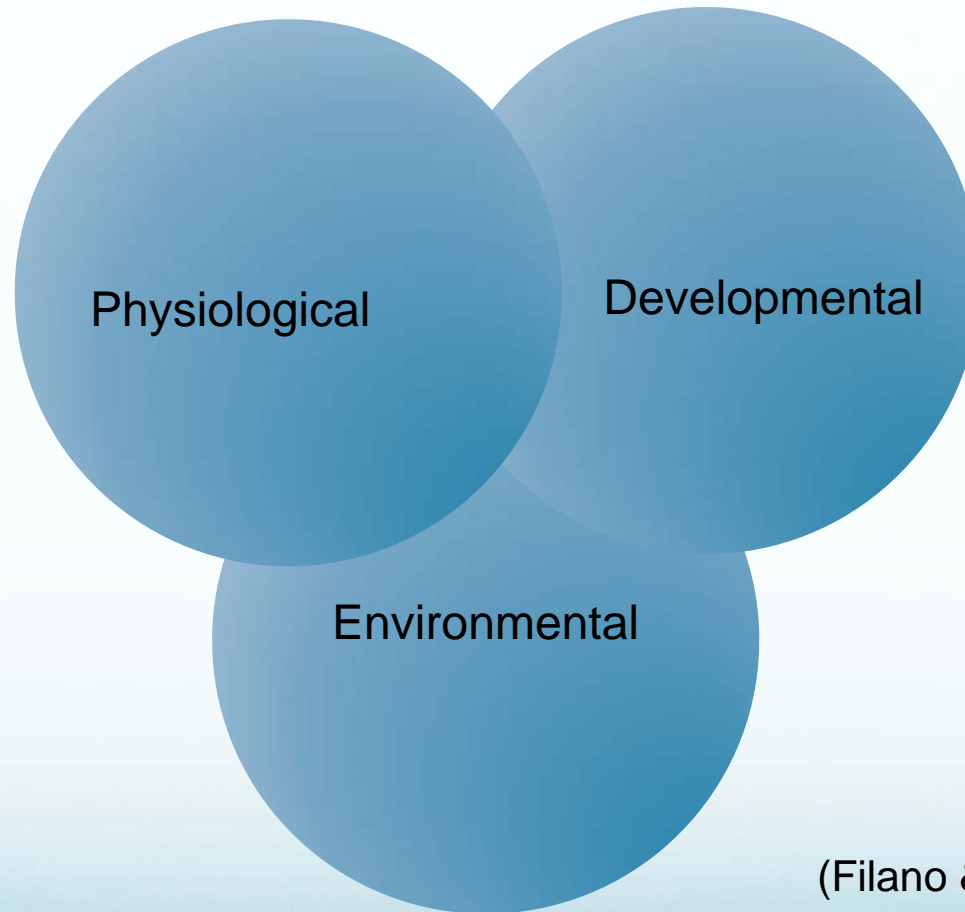
(Maindonald, 2005)

Who is most at risk?

- ❖ Premature and low birth weight babies who have required hospitalization in the NICU
- ❖ African American and American Indian babies are 2-3 times more likely than Caucasian babies to die from SIDS
- ❖ Babies of young mothers, lower socioeconomic groups, and mothers who have received minimal or no prenatal care
- ❖ Babies exposed to nicotine in utero and/or after birth
- ❖ Infants of parents who lack education about SIDS or choose not to follow recommended sleep guidelines

(Maindonald,2005)

“Triple Risk Model”



(Filano & Kinney, 1994)

Triple Risk Model

❖ Physiological:

The region of the brain which helps regulate autonomic respiratory function can become vulnerable, affecting the ability to be aroused and respond to hypoxia, asphyxia, or hypercarbia.

❖ Environmental:

Stressors such as smoke, infection, and prematurity make the baby more vulnerable to autonomic respiratory function failure.

Triple Risk Model

❖ Developmental:

Between the ages of 2 and 4 months, arousal cycle control and autonomic respiratory function are undergoing a great amount of change. The prone sleep position increases the baby's re-breathing of air which is trapped in bedding and low in oxygen.

(Esposito, et al., 2007)

What has been done to promote SIDS prevention?

❖ 1987

Several SIDS related organizations joined together to form the SIDS Alliance, whose goal was to work towards the elimination of SIDS and provide grief support to those affected by a SIDS death

❖ 1992

The American Academy of Pediatrics published the first recommendation for placing infants in a non-prone position to sleep, increasing awareness of the issue and hopefully decreasing deaths related to SIDS

What has been done to promote SIDS prevention?

❖ 1994

The National Institute of Child Health and Human Development, joined by the SIDS Alliance, the U.S. Public Health Service, the American Academy of Pediatrics, and the Association of SIDS and Infant Mortality Programs initiated the “Back to Sleep” campaign to promote supine positioning while sleeping

Bill Schmid founded HALO Innovations, Inc. to create products that promote healthy and safe sleep after losing his first child to SIDS

What has been done to promote SIDS prevention?

❖ 2002

The SIDS Alliance expanded their mission to address other causes of infant death, including stillbirth and miscarriage, and changed their name to First Candle – Helping Babies Survive and Thrive

❖ 2005

The AAP published a policy statement stating that infants should sleep supine only and specifically outlined a safe sleeping environment

What has been done to promote SIDS prevention?

❖ 2011

The AAP published an expansion of recommendations from focusing only on SIDS related deaths to all Sudden Unexpected Infant Deaths (SUID) reiterating the necessity of supine positioning and a safe sleeping environment as well as a reduction in avoidable risk factors found to be associated with such types of deaths in infants

Recommendations from the American Academy of Pediatrics

❖ Back to Sleep

Placing an infant on his or her back to sleep helps decrease factors believed to contribute to SIDS such as colic, ear infections, nasal congestion, and fever. The supine position also prevents a baby from burying his or her head in the bedding and suffocating from a lack of oxygen.



Pearson, 2011

Recommendations from the American Academy of Pediatrics

- ❖ Use cribs, bassinets, or cradles which meet safety standards set by the Consumer Product Safety Commission.



- ❖ Bed sharing or co-sleeping with an infant should be avoided. Parents should place the crib or bassinet next to their bed to ensure close, yet safe, proximity to the infant. Remember: “Room sharing, not bed sharing!”

Recommendations from the American Academy of Pediatrics

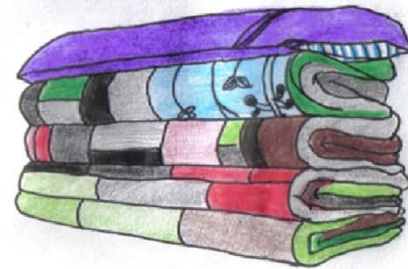
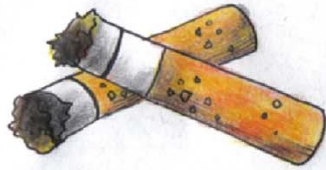
- ❖ Avoid any soft surface in which a baby could smother if placed in a prone position.
 - Soft materials including pillows, loose blankets, quilts, bumper pads, and positioning aids should not be used in the sleeping environment.
 - Sleep surfaces should be firm. Infants should never be placed on a waterbed, sofa, chair, soft mattress, or other soft surfaces to sleep.
 - Stuffed animals or soft toys should not be placed in the crib, bassinet, or sleeping environment.

Recommendations from the American Academy of Pediatrics

❖ No Smoking!

- Smoking is a known risk factor for SIDS since exposure to tobacco smoke is associated with respiratory tract infections and hypoxia in babies.
- Autopsies on SIDS babies have shown evidence of pulmonary congestion and edema, airway inflammation, and intrathoracic petechiae, suggesting upper airway obstruction from exposure to smoke.

Increases Risk for SIDS



Other Recommendations

❖ Breastfeeding

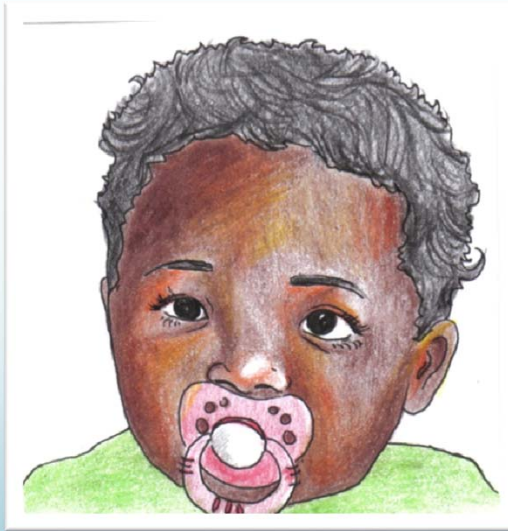
- Helps reduce susceptibility to respiratory and gastrointestinal problems which make babies more prone to SIDS
- Before taking any over-the-counter, herbal, or prescribed medications which may suppress a baby's respiratory mechanism, a nursing mother should first be advised by her physician.



Other Recommendations

❖ Pacifier Use

- When putting a baby down to sleep, offer him/her a pacifier. A pacifier can help keep the baby's oral airway open for oxygen exchange and reduce the risk of suffocation.



Implementation of Safe Sleep Modeling in the NICU

❖ Modeling safe sleep is particularly important as the infant progresses closer to discharge. Research shows that parents do what we do, not what we say.

What does a safe sleep environment look like?

Lower the risk of sudden infant death syndrome (SIDS).

Don't forget Tummy Time when the baby is awake and is being watched.



Use a firm mattress in a safety-approved* crib covered by a fitted sheet.



Make sure nothing covers the baby's head.

Place your baby on his or her back to sleep for naps and at night.

Use sleep clothing, such as a one-piece sleeper, instead of a blanket.

Do not use pillows, blankets, sheepskins, or pillow-like bumpers in your baby's sleep area.

Do not let anyone smoke near your baby.

Keep soft objects, stuffed toys, and loose bedding out of your baby's sleep area.

Implementation of Safe Sleep Modeling in the NICU

❖ Staff education:

- Unit published article
- Powerpoint about SIDS prevention and modeling of safe sleep practices
- CEU module from NICHD
 - ❖ <http://www.nichd.nih.gov/SIDS/nursececourse/Welcome.aspx>

Implementation of Safe Sleep Modeling in the NICU

- ❖ While infants should sleep supine as soon as tolerated, most infants make this transition as they are placed in an open crib.
- ❖ Infants are transferred in an open crib when the ability to maintain core temp WNL is achieved, usually ~ 1800 gm.
- ❖ All infants in an open crib must be positioned supine for correct modeling of safe sleep practices for parents.

Implementation of Safe Sleep Modeling in the NICU

- ❖ If the infant is still receiving bolus feeds via OGT/NGT, the HOB may be elevated with a positioning device at the bottom of the bed or under the buttocks to keep the infant from sliding down in the crib. This is the only “support” allowed in the crib with the infant.
- ❖ When the infant is receiving all feeds PO, the HOB is to be positioned flat, and all “support” devices should be removed.

HALO Sleepsack Swaddle

- ❖ The HALO company was founded by Bill Schmid and his wife after they lost their first baby to SIDS. The HALO mission is to “Help Babies Sleep Safely”.
- ❖ UAMS NICU has joined in this mission and uses the HALO sleepsack swaddle in an effort to provide good sleep practices for parents to follow once discharged home with their babies.

HALO Sleepsack Swaddle

- ❖ The HALO sleepsack is a wearable blanket swaddle which will replace blankets currently used for swaddling.
- ❖ It is available in various sizes, including preemie, for infants under 5lbs, Newborn 6-10 lbs and Newborn Small 10-18 lbs.
- ❖ It is available in 100% cotton and microfleece fabrics.

HALO Sleepsack Swaddle

- ❖ The HALO sleepsack was designed with temperature regulation in mind.
- ❖ Each sack is sleeveless and designed to be worn over a light-weight sleeper or pajamas to prevent overheating, a SIDS risk factor.
- ❖ The front is designed with a zipper which zips from the top to the bottom, allowing EKG wiring and Pulse Ox cords to exit from the bottom of the sack.

HALO Sleepsack Swaddle

- ❖ HALO sleepsack swaddles have “wings” attached to the sleepsack which are designed to encircle the infant when securely positioned and create extra warmth and comfort while sleeping.



Place infant in sack and zip
(Pearson,2011)



Velcro secure one wing
(Pearson, 2011)



Velcro secure second wing
(Pearson, 2011)

HALO Sleepsack Swaddle

- ❖ The option to swaddle infants is particularly important for newborns and for infants born premature.
- ❖ Swaddling and containment is part of the developmental care of the preterm infant.
- ❖ Swaddling promotes comfort and reduces the expression of pain during procedures.

Caregiver Education

- ❖ It is imperative that while modeling safe sleep practices, nurses engage parents/caregivers in conversations about sleeping environments at home.
- ❖ Where will your baby sleep when he/she goes home?
- ❖ Do you know about SIDS?
- ❖ Does anyone in your home smoke?
- ❖ Can you describe your crib to me?

Evaluation

❖ Linen

An unexpected benefit of the use of the wearable blankets was the decrease in linen charges incurred by our unit.

Evaluation

❖ Audits

A tool was created to audit nurse compliance with the new safe sleep practices. Measured criteria include supine positioning, whether or not a wearable blanket is in use, if there are other blankets in use, and if there are other positioning aids in use. Nurses are considered 100% compliant if infants are positioned supine, have the infant in a wearable blanket, and no other blankets or positioning aids are in use. Audits are completed once a month on both AM and PM shifts.

Evaluation

❖ Audits



Evaluation

❖ Nursing Survey

Nursing perceptions of their knowledge regarding SIDS and safe sleep practices as well as their perceptions of the wearable blankets was measured by anonymous survey 6 months post implementation.

Results showed overwhelming support for use of the Sleepsack to help model safe sleep practices in the NICU.

Also received suggestions for how to improve the process.

References

American Academy of Pediatrics. (2011). SIDS and other sleep-related infant deaths: expansion of recommendations for a safe infant sleeping environment. *Pediatrics*, 128 (5), 1030-1039.

Esposito, L., Hegyi, T., & Ostfeld, B. (2007). Educating parents about the risk factors of sudden infant death syndrome: the role of the neonatal intensive care unit and well baby nursery nurses. *Journal of Neonatal Nursing*, 21 (2), 158-164.

Maindonald, E. (2005). Risk of sids. *Nursing*, 35 (7), 51-52. Retrieved from EBSCOhost.

McMullen, S.L., Lipke, B., & LeMura, C. (2009). Sudden infant death syndrome prevention: a model program for nicus. *Neonatal Network*, 28 (1), 7-12.

Ongoing education about safe sleep practices to prevent sids. 2008. *Patient Education Management*, 15 (9), 97-99. Retrieved from EBSCOhost.

Thompson, D.G. (2005). Safe sleep practices for hospitalized infants. *Pediatric Nursing*, 31 (5), 400-409. Retrieved from EBSCOhost.

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