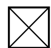
Children’s Hospital and Health System, Inc.
Patient Care Policy and Procedure

This policy applies to the following entity(s):

 Children’s Hospital of Wisconsin Children’s Hospital of WI-Fox Valley

SUBJECT: Infant Safe Sleep

Definitions

1. An infant (for this policy and procedure) is defined as a child less than one year of age.

2. SIDS is defined as the sudden death of an infant younger than one year of age that remains unexplained even after a complete autopsy, a death scene investigation and a thorough review of the clinical history are conducted (as cited by Esposito, 2007, 158).
   - SIDS is the leading cause of death for infants between 1 month and 12 months of age. SIDS is most common among infants that are 2-4 months old.
   - The risk of SIDS is increased by factors such as premature birth, exposure to tobacco smoke in utero or during infancy, or prone sleeping (as cited by Esposito, 2007).

3. Suffocation refers generally to the death of an infant caused by obstruction of the breathing passages (i.e. the infant who slips down between the crib rail and mattress and has the face pushed against the mattress leading to suffocation). (http://www.sids-network.org/experts/carroll2.htm).

4. Asphyxia is a physiology/pathology term referring to breathing insufficiency leading to inadequate intake of oxygen and inadequate exhalation of carbon dioxide. It can be caused by a variety of factors, some of which may be related to sleeping position and/or bedding materials. (http://www.sids-network.org/experts/carroll2.htm).

5. Three conditions that may lead to the death of the infant with SIDS include:
   a. Vulnerable infant: An underlying defect or brain abnormality makes the baby vulnerable. Defects in parts of the brain that control respiration or heart rate or genetic mutations, confer vulnerability.
   b. Critical Developmental Period: During the infant’s first six months of life, rapid growth phases and changes in homeostatic controls occur. These changes may be evident (e.g. sleeping and waking patterns), or they may be subtle (e. g. variations in breathing, heart rate blood pressure and

body temperature). Some of these changes may temporarily or periodically destabilize the infant's internal systems.

c. Outside stressors may influence whether an infant develops SIDS. These factors include sleep environment (bed sharing, soft bedding, stuffed animals, bumper pads, etc. that could increase carbon dioxide retention or overheating, prone positioning, secondhand smoke, and upper respiratory infection. (Filiano, & Kinney, 1994).

Purpose:

1. Implement the American Academy of Pediatrics (AAP) recommendations regarding supine sleeping position. The American Academy of Pediatrics (AAP) recommends supine sleeping as an intervention to decrease the risk of sudden infant death syndrome (SIDS) in healthy, term infants (≥ 37 weeks). Supine sleeping is also recommend for Preterm infants (<37weeks) who have recovered from respiratory distress syndrome (RDS) and who are asymptomatic (without tachypnea, apnea, bradycardia requiring intervention). Refer to **Safe Sleep Practices** on page 3 of this policy.

2. Model and ensure understanding of recommended techniques by parents and caregivers (AAP, 2005).

3. Promote developmentally appropriate care to hospitalized premature infants as well as acutely ill term infants.

4. Identify exclusions to supine positioning.

5. Identify suffocation risks that impact infant mortality.

POLICY

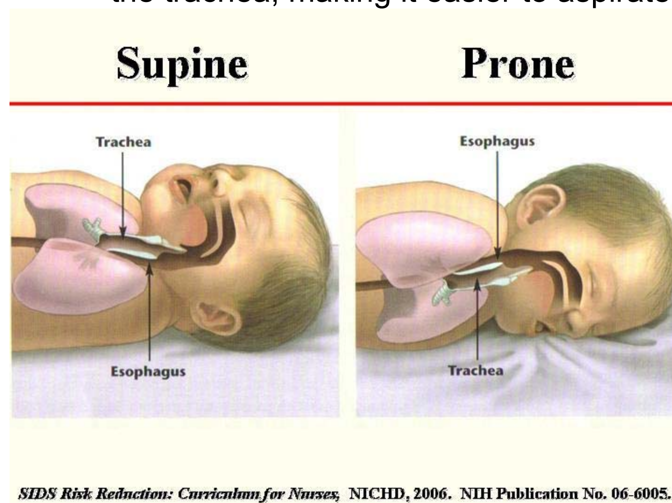
1. All parents, guardians and caregivers of hospitalized infants will be screened for safe sleep practices both at the time of admission and shortly before discharge. Caregivers unable to provide a safe sleep environment for their infant will be referred to social work or other appropriate resources. See Cribs for Kids policy and procedure. NOTE for JCPC: Admission assessment and screening form pending Lauren G updating.
2. **While hospitalized,** infants must be
   a. Placed in the supine position for sleep or must transition to the supine position before discharge (barring any medical contraindications-see exceptions in 1b on page 5).
   b. Offered alternative positions when awake to reduce the risk for developing plagiocephaly include:
      i. Encourage tummy time when awake and supervised.
      ii. Encourage the use of upright cuddle time.
      iii. Shift the direction the infant faces while asleep.
3. Parents or legal guardians of hospitalized infants will be taught rationale for and techniques to support appropriate positioning for sleep including information regarding tummy to play.
4. When sleeping, every infant must be placed alone in the crib (NOTE: ED and PACU do not use cribs for their patients).
5. **No one** may sleep with an infant in a chair or bed. Caregivers must be awake when holding an infant. If the parent/legal guardian or caregiver is noted to be sleeping, the infant must be returned to his or her age appropriate crib and explanation provided to the parent/legal guardian or caregiver as to why this practice is unsafe (i.e. risk of falling, suffocation, entrapment or injury). This does not apply to kangaroo care provided in the NICU or end of life care.
   a. Parents or legal guardians who express concerns or resist complying with this policy should receive additional education about the policy. (See page 8). This education should focus on the benefits of safe sleep and the risks of bed sharing. If the parents or legal guardians continue to be noncompliant with this policy, additional interventions may include; discussion with patient representative, risk management staff or other CHHS representatives, behavioral contracts or supervised visits. Any such interventions should be documented in the medical record.
6. Soft bedding such as pillows, bumper pads and stuffed animals must not be in a sleeping infant's incubator, warmer, bassinet or crib.

PROCEDURE

NOTE: For infants <37 weeks gestation or physiologically compromised monitored infants, see Addendum A for developmentally supportive positioning.

Infants who have not been home from the hospital will start transitioning to back to sleep without supportive devices as soon as the infant is medically stable. Babies should be transitioned to back position early enough (ideally 1-2 weeks) before discharge to adjust to the supine position.

1. **Sleep Position:** Position all healthy infants, including asymptomatic premature infants that have recovered from RDS, supine (back to sleep) during sleep with the head of bed (HOB) flat.
   NOTE: Side sleeping is not as safe as supine sleeping and is not advised.
   a. Continue supine positioning during sleep until infants are developmentally able to roll out of supine by themselves. At this point, put infants to sleep in a supine position but allow them to assume a preferred sleep position.
      i. Infants who are prone and cannot roll out of supine by themselves need to be on a medically provided physiologic monitor.
      ii. Rationale for supine sleep:
         1. When a baby is supine, the trachea lies on top of the esophagus. Anything regurgitated or refluxed from the esophagus must work against gravity to be aspirated into the trachea.
         2. Conversely, when baby is in the stomach sleeping position, anything regurgitated or refluxed will pool at the opening of the trachea, making it easier to aspirate.



SIDS Risk Reduction: Curriculum for Nurses, NICHD, 2006. NIH Publication No. 06-6005.

   b. **Exceptions to supine (NOTE: Monitor required):**

i. Some infants may benefit clinically from prone positioning during sleep. These include but are not limited to:
   1. Supine position causes medical or neurobehavioral instability.
   2. Any symptomatic preterm infant with signs of respiratory distress (increased work of breathing, apnea or tachypnea) for whom prone positioning is clearly beneficial clinically.
   3. Asymptomatic, very low birth weight preterm infants (<1250 grams) for whom prone positioning provides a respiratory and developmental advantage.
   4. Infants with known or suspected airway obstruction.
   5. Infants on assisted ventilation who benefit from prone positioning.
   6. Infants with severe gastroesophageal reflux who respond positively to prone positioning.
   7. Infants with birth defects for whom the supine position would be contraindicated (such as children with neural tube defects or Pierre Robin sequence).
   8. Other infants as deemed necessary by the licensed independent practitioner (LIP).

2. Sleep Environment

a. **Alone in the crib:** Infants will be placed alone in the crib. No one may sleep with the infant in a chair or bed. Mom may breastfeed awake infants in a bed but cannot sleep with the infant in the bed. (See Visiting and Guest Policy and Procedure).

b. **Prevent overheating:** Dress infant for sleep to provide warmth but prevent overheating.
   i. Dress infant when medically stable.
   ii. Fleece bedding or blankets or sacks should not be used. Fleece blankets may be used to cover an incubator or warmer.
   iii. Swaddling with a cotton blanket is recommended for infants who do not demonstrate physiologic flexion.
   iv. Sleep sacs, if used in the hospital, are recommended to be cotton (L'Hoir).
      1. Fleece sleep sacs can be considered in the community as long as the infant does not overheat.
      2. Fleece is susceptible to damage from high temperature washing, tumble drying or ironing (as occurs with hospital laundering). Lower quality fleece is prone to pilling.
      3. Velcro sleep sacks should be adjusted to allow the arms to be midline in order to promote self regulation.
   v. Room temperature should feel comfortable to a lightly clothed adult.
   vi. Use hats only as infant condition warrants. Hats should not be used in the home environment due to the risks of overheating and suffocation (potential loose object in the bed).

c. **Firm Sleep Surface:** Position infant on a firm flat mattress covered only with a single sheet tucked securely around the mattress and a single blanket can be put on top of the sheet if it can be securely tucked under the mattress.
    - Sheepskin should not be used under a sleeping infant.
    - Quilts should not be used in the bed.

    i. Exceptions
        1. If an infant is monitored, a cloth diaper can be placed under the head.
        2. Sheepskin can be used for low birth weight infants < 1500 grams or immobilized patients as an intervention to prevent skin breakdown. Sheep skin can be used with dermatologic conditions (e. g. Epidermolysis bullosa, hemiangiomas).
        3. Quilts can be used over an incubator to shield light. Quilts can be used for tummy time on the floor after discharge home.
        4. Gel pillows and gel mattresses can be used for in the hospital for monitored infants, ventilated infants, infants with plagiocephaly, or dolichocephaly and infants with limited mobility. These devices are not to be used in the home environment.

d. **Keep soft objects and loose bedding out of the crib:**
    i. Soft bedding such as pillows, bumper pads and stuffed animals must not be in a sleeping infant's incubator, warmer, bassinet or crib. NOTE: Seizure pads are an exception.
        1. **Exception:** If mom of a premature infant is unable to visit immediately post-partum, a small blanket that mom has had with her may be placed in the monitored infant's incubator or warmer to promote bonding (Nishitani et al, 2009, 66).

    ii. A lightweight preferably cotton blanket can be used to bundle the infant as long as the blanket is not above the shoulders and the arms are free. Swaddling must be discontinued once the infant can roll in order to prevent any suffocation risk.
        1. Blankets can be used for nesting, bundling and positioning for infants with a corrected gestational age of less than 37 weeks or medically compromised infants who are monitored (e.g. to promote a flexed, tucked, midline, symmetrical position of trunk and extremities for developmental support).
            a. Monitored infants in the NICU/NPCU who cannot turn may need an additional blanket to maintain temperature in the hospital environment (if the room temperature cannot be well controlled). Hyperthermia should be avoided.

b. The blanket should be tucked at the foot of the mattress and not reach beyond the infant's chest so that the infant's face is protected from being covered. <u>Do not use this method if the infant has the ability to move under the blanket.</u>

2. Premature infants will need developmentally supportive positioning devices. (van Sleuwen, 2007)
   a. Positioning devices (snuggly, bendy bumpers and frogs) may be used in the hospital to support developmental care and prevent muscular skeletal problems.

   b. Positioning devices from the hospital or commercially made products are not to be used in the home environment unless medically indicated.

iii. A covered face, even in the supine position is considered a risk factor for SIDS.

e. **Pacifiers:** Pacifiers may reduce the risk of SIDS and are recommended for all sleep time. Pacifier should be offered at time of sleep and not reinserted if the pacifier falls out during sleep. Non-nutritive sucking is used for calming as part of the Cue-based feeding guideline at CHW. AAP states that pacifiers should not be introduced until breastfeeding is established (approximately 3-4 weeks). (AAP, 2005, 1248). However, hospitalized patient's need or diagnosis may not align with this recommendation.
f. Evidence does not support the use of **commercial devices** marketed to decrease the risk of SIDS.
g. Evidence does not support the use of **home monitors** to decrease the risk of SIDS (AAP, 2005, 1250). Medically fragile infants sent home in the prone position require medically provided home physiologic monitoring.

3. Parent/Guardian Teaching
    a. During the hospital stay:
        i. Educate on Safe Sleep practices and deviations from Safe Sleep including principles of developmental care.
        ii. Explain use of monitors when applicable.
        iii. Incorporate all sleep environment practices during the hospital stay and explain any exclusion.
        iv. Explain goal of supine sleep without assistive devices within 1-2 weeks of discharge (depending on developmental and medical needs).
    b. Prior to discharge:
        i. Safe Sleep materials available include:
            1. Handout "Safe Sleep for your Baby" (National Institute of Child Health and Human Development NIH Pub. No. 05-7040).
            2. "Sleep Position for Infants" (Health facts for you #2010).
            3. TIPS to prevent flatheads in infants (#1220)
            4. ABCs of Safe Sleep (# pending)
            5. WAPC crib card
        ii. Discuss the importance that parents/guardians will need to remind every caregiver of their child to use the Back to Sleep position and sleep environment during every sleep period, especially when the infant is accustomed to the supine sleep position.
        iii. **Positioning devices cannot go home with the infant (unless a medical necessity).**
        iv. Discuss any medical positioning requirements.
        v. If a sleep sacs will be used at home review:
            1. Cotton versus fleece indications
            2. How to place infant in the sleep sac
            3. Developmental milestones to monitor related to the supine position.
            4. How to encourage tummy time.
    c. All CHHS-affiliated educational courses, lectures, handouts, and other materials, whether targeted at medical personnel, parents/caregivers, or other audiences, must be compliant with this policy although the exact content and focus may vary. All materials should be approved by the Safe Sleep Working Group and Educational Services.
    d. Document education and materials provided on the Interdisciplinary teaching sheet.

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Reviewed and approved by the Safe Sleep Working Group 12-10-2010

Approved by the NICU Clinical Practice Council 12-8-10

Approved by the Joint Clinical Practice Council 12 20 2010

Addendum A

Developmentally Supportive Positioning: for infants < 37weeks gestation or physiologically compromised monitored infants

1. Monitored infants requiring intensive care should be positioned with appropriate developmental and positional support in supine, side lying or prone position depending on gestational age, acuity of illness and medical diagnosis.
    a. All immobilized, sedated, or paralyzed, infants need to be repositioned to prevent skin breakdown.
2. Principles of developmental supportive positioning:
    a. Neonatal positioning is used to position high risk, preterm or medically unstable neonates in a manner that promotes physiologic, neuromuscular and neurobehavioral development.
    b. Premature infants have an inability to change static posture which may result in muscle imbalance and positional deformities.
    c. In addition, medically unstable near-term and full-term neonates with hypotonia caused by illness severity or sedation are at risk for positioning deformities, muscle shortening, and contractures of the muscles.
    d. Possible complications stemming from developmental immaturity and restricted movement include frog legs, W position of the arms, neck extension, arching postures, head molding and torticollis. (Kenner & McGrath, 2004, McManus & Capistran 2008).
    e. All positioning (correct and incorrect) has an ongoing impact on the developing neuromotor, physiologic, and neurological status of the preterm and/or compromised infant (Sweeney & Gutierrez, 2002).
    f. Every positioning option (supine, prone, side lying) has both medical and developmental advantages and disadvantages.
    g. Always turn head and entire body as a unit.
    h. To avoid neck flexion use small neck roll under the shoulders.
    i. Handle infant gently, avoiding sudden changes in posture.
    j. Developmentally supportive positioning:
        i. Promotes physiologic flexion through positioning of infant and provision of supportive equipment and boundaries. Containment touch- boundaries are provided using positional devices and support such as bendy bumper, snuggly, and frogs.
        ii. Maintains head, trunk and pelvic alignment in all positions.
        iii. Promotes midline forward positioning of arms and legs. Arms, legs and feet are flexed and tucked toward midline of trunk in all positions.
        iv. Promotes infant's self regulatory efforts (to stay calm and steady) such as hands to mouth, flexed and tucked trunk and extremities.
        v. Supports respiratory stability.