

Safe sleep: Proper transition of NICU patients begins before discharge

by Michael H. Goodstein M.D., FAAP



The baby was extremely premature and weighed 600 grams but was doing well on high-frequency ventilation. Yet the young mother appeared upset. "Why are you trying to kill my baby?" she blurted out. When asked why she thought that, she said the baby should be sleeping on her back. Her point was well-taken. She had not been given the education and reassurance that her baby's medical needs were being provided in the safety of the highly specialized neonatal intensive care unit (NICU) environment and that the baby would be transitioned to sleep on her back closer to hospital discharge.

Ill and preterm infants in the NICU often need to be positioned on their side or stomach for medical reasons. For years, the AAP Committee on Fetus and Newborn and Task Force on Sudden Infant Death Syndrome have recommended transitioning these infants to the supine position by 32 weeks' postmenstrual age or as soon as they are medically stable and significantly before the anticipated discharge from the hospital.

However, studies have shown NICU providers often struggle with the recommendation. Many questions remain regarding the conflict between the complex medical and developmental needs of the NICU infant and the goal of modeling the safe home sleep environment in a timely fashion.

A new clinical report and supporting technical report from the committee and task force aim to address these issues. Both reports are titled *Transition to a Safe Home Sleep Environment for the NICU Patient*. They are available at https://doi.org/10.1542/peds.2021-052045 and https://doi.org/10.1542/peds.2021-052046 and will be published in the July issue of *Pediatrics*.

Every year, approximately 3,600 U.S. infants die from sudden unexpected infant death (SUID), including sudden infant death syndrome (SIDS), unknown and undetermined causes, and accidental suffocation and strangulation in an unsafe sleep environment. Preterm and low birthweight infants are two to three times more likely than healthy term infants to die suddenly and unexpectedly.

Thus, it is important that health care professionals prepare families with guidance regarding the safe sleep



recommendations from the Task Force on SIDS.

The clinical report revolves around how safe sleep recommendations interact with different clinical issues, while the technical report focuses on specific clinical issues (respiratory distress, apnea, hyperbilirubinemia) and how care impacts infant sleep safety. The reports pull together information from a number of other reports (apnea, gastroesophageal reflux, skin-to-skin care) and are a comprehensive source of information on infant sleep safety at home.

Developing standardized approach

The use of nonsupine positioning in the NICU for medical reasons is referred to as "therapeutic positioning." When it is used, medical personnel have a critical opportunity to educate families on the safe home sleep environment.

The clinical report offers instruction on how to develop a consistent approach to transitioning NICU patients to a home sleep environment. Numerous programs have been successful in both the newborn nursery and the NICU. These programs typically include standardized policies for infant sleep safety consistent with AAP recommendations, education for staff and families, visible educational prompts, modeling of safe sleep and audits for quality improvement.

One NICU study demonstrated maintenance of improvement at six-month audits after intervention, with 98% of infants lying supine in open cribs, 93% in a wearable blanket and 88% of bassinets with a visible safe sleep card (McMullen SL, et al. *Neonatal Netw.* 2009;28:7-12). Standardized programs also have been associated with higher rates of supine sleep and other safe sleep behaviors in the home.

Algorithms have been developed based on literature review, expert opinion and unit consensus. Quality improvement programs using these algorithms have demonstrated more consistent modeling in the NICU and improved parental adherence with safe sleep practices after hospital discharge.

A study of two Massachusetts community NICUs showed overall adherence with safe sleep practices improved from 25.9% to 79.7% (P<0.001) (Hwang SS, et al. *J Perinatol.* 2015;35:862-866). All NICUs in the state have adopted this standardized approach to integrating safe sleep practices into routine NICU care.

Recommendations

Following are among the key recommendations in the clinical report:

- NICUs should develop a policy on transitioning infants to a safe home sleep environment consistent with recommendations of the AAP Task Force on SIDS.
- The NICU should utilize an algorithm for routine and repeated evaluation of each infant for safe home sleep readiness.
- All NICU staff should receive education on and maintain expertise in infant sleep safety, including the AAP recommendations, hospital policy and transitional algorithm.
- Crib audits should be an integral component of a NICU safe sleep program to monitor success or identify areas for improvement.
- Family education regarding infant sleep safety should be provided throughout the hospital course.
- Prior to hospital discharge, all NICU families should be queried about a safe home sleep environment



followed by applicable counseling.

• Families who can't afford safe cribs or portable play yards should be referred to social work and/or other resources that can provide assistance.

Dr. Goodstein is a lead author of the clinical and technical reports and a member of the AAP Task Force on Sudden Infant Death Syndrome.