Cobedding of Twins or Higher-Order Multiples

Position Statement
#3045

NANN Board of Directors
December 2008

Multiple-birth infants represent a significant proportion of the total daily census in many neonatal intensive care units. Neonatal nurses are in a unique position to develop clinical protocols to address the care needs of this growing population. As the voice of neonatal nursing, the National Association of Neonatal Nurses (NANN) is issuing this position statement to enhance professional nursing practice and to encourage optimal care delivery to our tiny patients.

National
Association of
Neonatal
Nurses

Association Position

The existing scientific data are insufficient to either support or refute the practice of cobedding multiple-birth infants in the hospital setting. It is the position of the National Association of Neonatal Nurses (NANN) that cobedding hospitalized multiple-birth infants cannot be endorsed or refuted until further research is available. NANN also believes that neonatal units that choose to implement cobedding should do so after developing a clinical evaluation protocol to be used in collecting data on the safety and benefits of the practice. Furthermore, parents should be encouraged to follow established national guidelines for safe sleep environment in the home. Nurse researchers should continue building a body of knowledge on the short- and long-term effects of cobedding multiple-birth infants.

Background and Significance

Cobedding is the placement of two or more multiple-birth infants in the same crib, bed, or incubator. The close proximity of a multiple sibling is thought to replicate the intrauterine environment and ease extrauterine transition. Reports of twins sharing a bed in the neonatal intensive care unit (NICU) first appeared in the lay literature more than 10 years ago (Elliot, 1996; Sheehan, 1995). An unstable premature twin showed signs of improvement in heart rate, breathing, and sleeping when placed close to her sibling in the same incubator (Sheehan, 1995, 1996). Since its introduction in the United States, the bedding of multiples together in a single crib has been widely accepted as part of developmental care practice in the NICU (Byers, 2003).

Limited scientific evidence supports cobedding for hospitalized multiple-birth infants. The majority of articles appearing in the medical literature are case reports (Altimier & Sherrod, 2001; Swinth, Nelson, Hadeed, & Anderson, 2000), commentaries (Bingham, 1997; Gannon, 1999; Lutes, 1996), small observational studies (Longobucco, Bernstein, & Rossi, 2002; Lutes & Altimier, 2001; Nygvist & Lutes, 1998), guidelines (Dellaporta, Alforismo, & Butler-O'Hara, 1998), and literature reviews (Boyd, 2001; Hayward, 2003; Tomashek, Wallman, & the Committee on the Fetus and Newborn, American Academy of Pediatrics [AAP], 2007). The most recent comprehensive review of the literature examined published studies from 2000 to 2006, including findings from two descriptive studies and eight analytic studies (Tomashek et al.).

Outcome measures identified in the cobedding literature include length of stay (Longobucco et al., 2002; Polizzi, Byers, & Kiehl, 2003), incidence of infection (LaMar & Dowling, 2006; LaMar & Taylor, 2004), physiologic and/or behavioral changes (Byers, Yoviash, Lowman, & Francis, 2003; Chin, Hope, & Christos, 2006; Longobucco et al., 2002; Orlando, 2007; Stainton, Jozsa, & Fethney, 2005), weight gain and growth (Byers et al.; Chin et al.; Longobucco et al.; Lutes & Altimier, 2001), sleep and respiratory patterns (Touch, Epstein, Pohl, & Greenspan, 2002), and parent satisfaction (Byers et al.; Polizzi et al.; Stainton et al.). Major limitations of these studies include small sample size and nonexperimental design.

Infant safety and risk of sudden infant death syndrome (SIDS) is a major concern among healthcare providers. The relationship between cobedding of multiples in the NICU and SIDS has not been established. However, preterm infants are known to be at an increased risk of SIDS (Thompson & Mitchell, 2006). When gestational age and birth weight are considered, the risk increases for multiple-birth infants who are often born preterm and small for gestational age (Getahun, Demissie, Lu, & Rhoads, 2004; Malloy & Freeman, 1999). No studies examine cobedding in the hospital setting in association with later occurrence of SIDS.

A significant association exists between hospital-based and home sleeping practices (Colson, Bergman, Shapiro, & Levanthal, 2001; Polizzi et al., 2003). There is concern that parents will model nonsupine sleep positions and cobedding practices observed in the NICU when their infants are in the home environment. No studies conducted in the United States have examined cobedding of multiple-birth infants in the home environment. Ball (2006, 2007) examined postdischarge sleeping arrangements of healthy full-term twins less than 3 months of age in England. The two-phase study included home cobedding and sleep lab conditions. Healthy full-term twins were supine for the majority of sleep time and showed no detrimental effects during monitoring in the sleep lab phase. Australian parents reported continuation of cobedding at home from 3 weeks to 9 months following cobedding in the hospital (Stainton et al., 2005).

Bed sharing between an infant and an adult (also known as cosleeping) and SIDS is controversial (AAP, 2005; Hauck et al., 2003; Horsley et al., 2007). The current literature regarding this relationship was also researched during the preparation of this position statement.

Recommendations

Further research on cobedding hospitalized multiple-birth infants is needed to examine the short- and long-term effects of cobedding as an intervention in the NICU. Data collection and evaluation should be an integral part of cobedding protocols to determine infant response. Parents' input should be considered in the decision to implement cobedding for their hospitalized infants.

Nurses have a professional responsibility to know the latest national guidelines (AAP, 2005) for care of NICU graduates and educate parents about recommended postdischarge practices for safe sleep environments. Neonatal nurses are in a unique position to teach parents how to reduce the risk of SIDS in the home environment by modeling safe sleep practices (Aris et al., 2006). Modeling safe sleep begins before hospital discharge as preterm infants are transitioned to the recommended sleep position (on their backs). Protocols must include safe sleep positioning with infants back-lying while cobedding.

Conclusions

From the standpoint of developmental theory, the underlying principles of cobedding may be reasonable. Few studies on cobedding hospitalized multiple-birth infants have been conducted since publication of NANN's previous position statement in 2006. Research on the short-term benefits of cobedding is limited. No studies examine long-term effects. Reported benefits have not been substantiated by controlled clinical studies. The majority of published studies are limited by small sample size and lack of experimental design. The current body of knowledge remains insufficient to endorse or refute the practice of cobedding hospitalized multiple-birth infants. Questions remain to be answered about the timing and duration of cobedding and the circumstances under which cobedding should be practiced in the NICU.

There is continued interest in determining best practice for care of multiple-birth infants in the NICU environment. Multicenter trials are in progress to address the impact of cobedding on the family and coregulation of the infant and to measure infant stress by examining salivary cortisol levels (Hayward et al., 2007; K. Hayward, personal communication, October 9, 2008). Neonatal nurse researchers should continue to focus on conducting well-designed studies that will produce evidence needed to guide best practice in the care of multiple-birth infants.

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