A Team Approach to Developmentally Supportive, Home-Based Therapy for Premature and Medically Fragile Newborns and their Families

Presented by
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Objectives

1. Understand why specialized training of Early Intervention (EI) providers is necessary in working with the fragile NICU graduate population and their caregivers based on Newborn Individualized Developmental Care and Assessment Program (NIDCAP) model.

2. Understand what is required to train a team of professionals in this family-centered, developmentally supportive care model.
Early Intervention

• It is important to provide EI to vulnerable infants/families discharged from the NICU.

• Traditional EI model serves children 0-3 with specific diagnoses; majority of children between 18 mos. and 3 years.
Typically, infants referred through Child Find were not found eligible because assessment tools were not geared to finding areas of need in this population.

Anecdotally, our team found infants missed early on reappeared for services between 18 mos. and 3 years with significant delays.
NIDCAP Supports Early Intervention

There is a relationship between developmentally supportive, family-centered care and fewer behavioral stress cues, reduced parental anxiety, reduced parenting stress, and increased comfort level and confidence [Cooper, LG, 2007; Byers et al, 2006].
In a Cochrane review of developmental care including 36 randomized clinical trials (RCTs) of both general and individualized developmental care, some benefits and no harmful effects were reported from neonatal developmental care to infants born prematurely [Sweeney et al, 2010].
NIDCAP Approach
Transferred to EI Environment

- Working with these vulnerable infants with complex medical, physiological, and behavioral conditions requires a pediatric (physical therapist) with advanced and expanded training [Sweeney et al. 2009].
The “fourth trimester,” is a time when newborns are both recovering from medical interventions and are developing a basic foundation of regulatory skills on which to build more typically defined developmental milestones [Browne & Talmi, 2012].
Regulation!

STRAIGHT JACKET: SOMETHING YOU WRAP A CRAZY PERSON IN.

BABY SWADDLE: DITTO.
A recent survey of educational needs of Colorado professionals working with fragile newborns and young infants revealed that many EI providers felt only slightly prepared to evaluate newborns and young infants and that most felt they could benefit from more training on assessment and intervention with this population [Browne & Talmi, 2012].
There was a particular need for providers to understand the mental health of the family and support the parent-child relationship.

Family-centered care in the neonatal environment is the active partnership of the parents in the infant's care plan and delivery of care supporting the integrity of the family to promote infant and parent health [Byers et al., 2003].
NICU and Stress

- Parents of infants who require hospitalization in the NICU experience a great deal of stress largely due to the change in the anticipated relationship with their infant [Browne et al, 2004; Cooper, LG, 2007].
North Metro NICU Task Force

• Task Force began meeting in February 2009.

• Purpose: To address ways to improve care to infants and their families coming out of the NICU.

• Community partners represented:
  North Metro Community Services
  Tri-County Health Department
  Early Intervention Contract Service Providers
  (PTs, OTs, speech therapists, infant mental health specialists, nurses)
  Community Reach Center
  Child Find
  Judicial District 17
Vision: All infants who begin their lives in the NICU will grow and develop to their maximum developmental, cognitive, and social-emotional potential.

- Preterm infants are at increased risk of persistent difficulties across all developmental domains [van Baar, van Wassenaer, Briet, Dekker, & Kor, 2005].
- Deprivation of developmentally appropriate experience may reduce neural activity resulting in profound abnormalities in brain organization and structure [Anda et al, 2006].
- There is often a delay or even a absence in the delivery of service [Pineda et al, 2013].
Mission: To improve long-term outcomes for newborns and young infants discharged from the NICU.

- Marked improvement in the survival rates among very preterm infants born less than 30 wks gestation over past decades [Holsti et al, 2002; Saigal et al, 2008].
- Starting therapy earlier, prior to 9 months of age, yields greater developmental progress [Sharkey et al, 1990].
NICU Task Force Values and Beliefs

1. Parent-infant interaction is one of the most important building blocks for development.
2. Infants depend on their caregivers to grow and develop.
3. Parents and families play the most important role in an infant’s development.
4. Parents know their infants best.
5. Parents and families who receive early support are able to better provide for their infant’s needs.
Creating the Adams County NICU Team

- The Task Force wrote a grant to provide funding for training in the BABIES Model.
- Funding was acquired through the Rose Community Foundation and Temple Hoyne Buell Foundation.
- Task Force chose a team of EI providers from different disciplines who were also trans-disciplinary to work directly with infants discharged from the NICU and their parents.
- Training lasted for about 18 months. Included didactic training, observation of many premature babies, and case consultation within a learning collaborative.
Creating the Adams County NICU Team, cont.

- Collected data as pilot project to determine if team goals and objectives were being met.
- Initial visit: Interdisciplinary team of 2-3 providers meet with primary caregiver and infant shortly after discharge to assess infant, caregiver, and infant-caregiver interaction. Primary provider assigned.
- At each visit provider assesses the infant using the BABIES model and provides ongoing information and support to caregiver on how to identify and respond to infant’s cues and needs (Browne et al, 2009).
- Providers conduct regular home visits with infants and parents until around 12 months adjusted age or until 12 months of receiving services.
Team Goals

- To strengthen parents’ abilities to provide consistent, developmentally-supportive care to their infants.

- To support the development of a secure parent-infant relationship.
Team Objectives

1. To increase the number of infants less than 6 months corrected age who are receiving EI services.

2. To increase EI providers' knowledge about the unique needs of premature and medically-fragile infants.

3. To increase EI providers' skills working with babies and families.

4. To increase parents' knowledge of their infant's development.

5. To increase parents' ability to support and enhance their infant's development.

6. To increase parents' confidence in their parenting skills.

7. To increase parents' use of healthy coping skills in dealing with stress.
NICU Team Today

- Team has been functioning for almost 3 years. Consists of PTs, OTs, SLPs, IMH specialists, an RD, an RN, and EI service coordinators. Several providers are bilingual.
- Goals and objectives have been met as evidenced by evaluations using the PSI and pre- and post-retrospective surveys.
- Providers have found a change in practice since being trained in this model and have seen improved outcomes.
Findings

• In 3 years, percent of referrals who actually received services almost doubled.
• All providers reported an increase in knowledge; greatest improvement was in *Eating* subset.
• Caregivers reported re: Team Objectives –
  1. Knowledge of how to care for infant more than doubled.
  2. Ability to read infant communication increased by 2/3.
  3. Ability to encourage development more than doubled.
  4. Closeness between parent-infant increased by a 1/3.
  5. Confidence in parenting increased by more than 2/3.
  6. Ability to handle stress improved by more than half.
Case Studies

Baby N.

Baby E.

Baby K.
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REFERENCES


