Focus of this Issue:
It all starts with Trauma
Preterm birth is defined as an infant being born less than 37 weeks gestation. According to the March of Dimes (2014), more than a million babies are born prematurely each year in the United States. Being born early places an infant at increased risk for developing short and long-term difficulties with their physical, social, cognitive and emotional health and well-being. The experience of an unexpected or early delivery is likely traumatic for both mother and child. Having a child born prematurely also places a great deal of stress on a family and their ability to cope. This undue stress of being separated from their child due to hospitalization and having to care for a child that often has some complex medical needs can also have a significant impact on the child-parent relationship.

NICU Stay as Traumatic for Baby

A growing body of evidence has documented the potentially negative effects of being born prematurely and staying in the NICU for an extended period of time. It has been argued that the long-term impacts of being in the NICU are synonymous with behaviors seen in children who have experienced complex trauma. Although there has been little written about the potentially traumatic effects the NICU can have on an infant, documented findings are similar to studies of older child admitted to the pediatric intensive care unit (PICU). Children admitted to the PICU may experience changes in the parent-child relationship and traumatic reactions to the various medical procedures conducted (Kazak, Kassam-Adams, Schneider, Zeltovosski, Alderfer, Roulee, 2006).

When humans are faced with a situation that is threatening, or overwhelms our capacity to cope, our stress response system becomes activated. The stress response system is the body’s way of protecting itself from danger or threat and is essential for survival. There are several factors about routine NICU procedures and structure that could activate the infant’s stress response system and be potentially traumatic for babies. Such circumstances include: maternal separation, pain and stress associated with routine medical procedures, isolation, loss of trust, and bright lights and loud sounds (Coughlin, 2013). Repeated exposure to severe, chronic stressors such as those that occur in the NICU, results in the baby’s stress response system continuously being activated. Prolonged activation of the stress response system has been shown to lead to long-term changes/alterations in brain structure and overall neurobiology of the child. These changes can result in impairments in learning, memory, and the ability to regulate emotions and behaviors (National Scientific Council on the Developing Child, 2010; 2005/2014, Shonkoff, Boyce, McElwen, 2009).

Infants born prematurely have been found to have a maladaptive stress response system that disrupts normal brain growth and development compared to babies born full-term (Haifa, McGrath, Webhe, Clapper, 2012). The time period between birth and five years old is a critical time for growth and development of the brain.

Having a child in the NICU and thereby experiencing a prolonged separation from a child can impact the attachment relationship in several ways. Parents of a newborn do not expect to leave the hospital without their child. When a baby is born prematurely and has moderate to severe medical issues that a parent needs to tend to, the parents’ hopes and dreams of the child that-could-have-been get shattered and need to be reconfigured. The idealized child versus the actualized child can be a source of major conflict and stress for the parents. When a child is born full-term, parents adapt their perception, but when a child is born prematurely, and parents often need to care for a medically fragile child, it likely impacts the parent-child pattern of behavioral and emotional interactions (Shah, Clements, Poehlmann, 2011).

Impact on Parent-Child Relationship

Children thrive and develop in the context of positive, nurturing relationships with significant caretaking adults. One of the most important and pivotal relationships is that between a parent and child. This attachment, or emotional bond, influences and lays the foundation for all future relationships that the child will have throughout his or her life. Indeed, the young infant’s physical and emotional well-being is dependent upon the development of healthy attachment with parental figures and consistent caregivers. When healthy attachment is present, the child views the parent as a secure base they can use to explore their environment and draw cues about safety and danger. Attachment relationships are based on the child’s need for safety, security and protection. Strong, healthy attachments are created when mutual reciprocity occurs between a baby and parent figure, and the child feels safe, secure and protected. Individuals typically think of abuse and neglect, witnessing acts of terrorism or intimate partner violence as potentially traumatic for children. While, being separated from a caregiver for a significant amount of time, such as what happens when an infant has to stay in the NICU, is often not thought of as traumatic, its potential impact on healthy attachment and development cannot be overstated.

Not only is the brain developing rapidly during this period, it is also most impressionable to adverse experiences. Prolonged activation of the stress system during this stage of development may influence the expression of genes in the brain and body. Dysregulation of the stress response system may result in children overreacting to sensory stimuli and make it difficult for them to distinguish between an actual threat and a safe situation and further exacerbate risk. (Shonkoff, Boyce, McElwen, 2009; National Scientific Council on the Developing Child, 2010; 2005/2014; Hartfield, Meyers, Messing, 2013).

Recommendations for Practice

1. NICU environments and discharge plans that support the development of attachment and the child-parent relationship are critical. Healthy, nurturing relationships with caring adults can serve as a buffer for early adverse experiences and can help support optimal stress regulation, development and overall wellbeing (Chu & Lieberman, 2010; National Scientific Council on the Developing Child, 2005/2014). Including attachment as a goal in the medical plan can help hospitals proactively develop protocols, systems and environments that do not inadvertently undermine successful attachment. Programs that support the transition home and anticipated needs post-discharge may prevent anxiety and
Empower parents to play an active role in decision-making. Routine updates on health status and anticipated problems as well as regular multidisciplinary meetings help forge a therapeutic alliance; this should include taking the families culture and parenting beliefs into consideration.

Provide ongoing professional development and education of all members of the healthcare team and staff, mental health, social service providers, and educators on the unique short and long-term needs of premature infants.

References
- Coughlin, M. 2013. Trauma-informed care: A new paradigm for the NICU.

Neena McConnico, B.Ed, Ph.D., LMHC, a licensed mental health counselor, currently serves as the Program Director for the Child Witness to Violence Project. She is also a faculty and clinical consultant on the Boston Defending Childhood Initiative. She has a keen interest in the impact of NICU stays on attachment as well as how the impacts of trauma interface with children’s academic and social development. Her clinical and research interests also lay in creating developmentally appropriate trauma-informed approaches to early childhood care and elementary school systems. Trained in the art of dance she is intrigued by how dance and movement can be as a therapeutic outlet for children impacted by trauma.

Renée Boynton-Jarrett, AB, MD, ScD, is a practicing primary care pediatrician at Boston Medical Center, a social epidemiologist and the founding director of the Vital Village Community Engagement Network. Through the Vital Village Network, she is supporting the development of community-based strategies to promote child well-being in three Boston neighborhoods. She joined the faculty at Boston University School of Medicine in 2007 and is currently an Associate Professor of Pediatrics. Her work focuses on the role of early-life adversities as life course social determinants of health. She has a specific interest in the intersection of community violence, intimate partner violence, and child abuse and neglect and neighborhood characteristics that influence these patterns.
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