

The Newborn Behavioral Observations (NBO) system

What is the NBO system?

The NBO is a structured set of observations designed to help the clinician and parent together, to observe the infant's behavioral capacities and identify the kind of support the infant needs for his successful growth and development. The NBO system consists of a set of 18 neurobehavioral observations, which describe the newborn's capacities and behavioral adaptation from birth to the third month of life. While it describes the infant's capacities, the NBO provides parents with individualized information about their infant's behavior, so that they can appreciate their baby's unique competencies and vulnerabilities and thereby understand and respond to their baby, in a way that meets her/his developmental needs. The 18 NBO items include observations of the infant's

- * capacity to habituate to external light and sound stimuli (sleep protection)
- * the quality of motor tone and activity level
- * capacity for self-regulation (including crying and consolability)
- * response to stress (indices of the infant's threshold for stimulation)
- * visual, auditory and social-interactive capacities (degree of alertness and response to both human and non-human stimuli)

While the NBO attempts to reveal the full richness of the newborn's behavioral repertoire, the clinical focus is on the infant's individuality, on the aspects of behavior that make the baby unique and different. In other words, the NBO provides the baby with a "voice", with a "signature". It gives the baby an opportunity to tell the caregiver who he or she is, if you will, what her preferences are and what her vulnerabilities might be and in what areas she may need support. By providing this behavioral profile of the infant's strengths and challenges, the NBO can provide clinicians with the kind of individualized guidance that can help parents meet their baby's needs. This, in turn, will help the parents develop the kind of confidence they need to support their baby's development and enjoy the experience of being a new parent.

While the NBO was developed to meet the needs of parents, it is designed in its ease of use to be a helpful tool for pediatric professionals who work with parents during the perinatal period. It is flexible and can easily be integrated into routine home visits. The NBO was also designed to meet the needs of pediatric professionals who want a more relational or family-centered model of care to replace the traditional pathology-seeking biomedical model of care (Brazelton and Cramer, 1990; Stewart et. al. 1995). The NBO, therefore, was designed as a relationship-building method that can be flexibly administered and that offers individualized information to parents about their baby, with a view to promoting a positive bond between parent and child and between themselves and the parents and family. For that reason, the NBO is best understood as a relationship-building tool. It is inherently interactive and family-centered, because parents are involved as partners in the NBO session throughout. So, while the NBO aims at fostering

positive parent-infant interaction, it also aims at promoting a positive relationship - a partnership - between clinician and parents.

Background

The development of the NBO is based on over twenty-five years of research and clinical practice with the Neonatal Behavioral Assessment Scale (NBAS) and was shaped by our clinical work in a variety of clinical settings, working with infants and families. It was also inspired by the formative influence of T. Berry Brazelton, whose teaching and mentoring has informed our understanding and appreciation of newborn behavior, on the one hand, and has molded our clinical stance towards parents and families, on the other. His pioneering work with the NBAS on the nature of individual differences in newborn behavior and his respectful non-judgmental clinical stance towards parents in his clinical teaching, influenced both the content and clinical approach of the NBO.

With the growing recognition of the importance of the newborn period as a unique opportunity for preventative intervention with families, Nugent developed a manual for clinicians, with guidelines on how to utilize the NBAS as a teaching tool for use in clinical settings (Nugent, 1985). The approach itself and the manual can be said to be the precursor or the first iteration of the NBO system. A series of studies, summarized in Brazelton and Nugent (1995) and Nugent and Brazelton (1989, 2000), have shown that demonstrating the newborn infant's behavioral capacities to parents can serve as a mechanism for helping parents learn about their new baby, thereby strengthening the relationship between parent and child and supporting the family adjustment. Specifically, a number of studies have consistently reported positive effects of exposure to the Neonatal Behavioral Assessment Scale on variables such as maternal confidence and self-esteem, paternal attitudes toward and involvement in caretaking, parent-infant interaction, and developmental outcome. Parker, Zahr, Cole et al. (1992), for example, invited mothers to actively participate in the behavioral assessment of the infant in the NICU setting, while Rauh et al. (1988) used the NBAS serially in the NICU as a teaching tool with mothers of low birthweight infants. Studies by Widmayer and Field, 1981; Worobey and Belsky, 1982; Myers, 1982; Anderson and Sawin, 1983; Rauh et al. 1988; Hawthorne-Amick, 1989; Beeghly et al., 1995, Gomes-Pedro et al., 1995; and the meta analysis by Das Eisen and Reifman (1996), all report positive effects of the NBAS on different outcomes.

The Newborn Behavioral Observations (NBO) system, initially known as the Clinical Neonatal Behavioral Assessment Scale (CLNBAS), comes from this tradition and grew from our desire to provide clinicians with a scale that retained the conceptual richness of the NBAS but shifted the focus from assessment and diagnosis to observation and relationship-building. The concepts underlying newborn behavior are, therefore, complemented by theoretical principles describing the transition to parenthood and the nature of the parent-infant relationship and by clinical principles describing the nature of relationship-building in clinical practice. Moreover, the NBO was designed to be flexible and easy to use so that it could be easily integrated into the care of newborn families,

whether on hospital, clinic or home settings. We created the NBO to sensitize parents to their baby's competencies, in order to foster positive parent-infant interactions between parents and their new infant and thus contribute to the development of a positive parent-infant relationship. It is conceived of as an interactive system, one in which parents play an active role in both the observations of their baby's behavior and in the identification of appropriate caregiving strategies. Therefore, while the theoretical principles guiding the use of the NBO and the accompanying training program, include many of the conceptual themes that informed the NBAS, they are informed by theoretical and clinical principles from the fields of child development, behavioral pediatrics, nursing, early intervention and infant mental health.

NBO system Training Evaluation

In a national trial, 222 pediatric professionals from ten settings around the United States, representing inner-city, suburban, and small city sites, were trained to use the NBO. Pre- and post-training evaluations, conducted by the Philliber Research Associates, showed that 98% of the trainees agreed that the NBO was excellent or good in helping parents learn about their newborns and that it fostered parents' interest in their baby, while 97% of the trainees believed that the NBO could enhance the clinician's partnership with parents. One month after the training, trainees (n=102) continued to rate the NBO as excellent or good in providing information to parents, and a comparison of pre-training and one month responses (n=72) revealed that parents became better observers of their infants ($p<.001$), learned new information about their infants ($p<.01$) and practitioners were more "connected to" or "tuned in" to parents as a result of the NBO ($p<.05$). Parents themselves (n=31) reported that their understanding of their infant increased significantly as a result of the NBO ($p<.001$).

Book required for NBO training:

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