The Evolution of Occupational Therapy Practice for Infants in the Neonatal Intensive Care Unit

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An approach to prevent or minimize physical disability and developmental problems of infants within the context of the family.

Historical Perspective

The practice of occupational therapy for infants hospitalized in an NICU is gradually evolving as a body of knowledge grows about the characteristics of neonates (Dargassies, 1977; Dubowitz, Dubowitz, Morante, & Verghote, 1980; Field, Dempsey, Hatch, Ting, & Clifton, 1979; Gorski, Davidson, & Brazelton, 1979), their intensive care environment (Gottfried, Wallace-Lande, Sherman-Brown, King, & Coen, 1981; Lawson, Daum, & Turkewitz, 1977), and their developmental outcome (Blackman, 1991; McCormick, 1989). With the advent of technological and medical advances that resulted in increased survival of smaller and sicker infants (Hack et al., 1991; Msall et al., 1991; Resnick et al., 1989), occupational therapists and other professionals became interested in prevention of disabilities and facilitation of normal growth and development (Wolke, 1990). The spotlight turned to this arena of practice in the 1970s as the recognition of the developmental needs of these infants grew and therapists who were equipped with knowledge of infant development and intervention began to apply infant treatment approaches in the NICU.

The initial application of those evaluation and treatment approaches (i.e., early intervention approaches) already used with medically stable infants with developmental disabilities and their families has been described (Anderson, 1986; Anderson & Auster-Liebhaber, 1984; Holloway, 1985; Sehnal & Palmeri, 1989; Semmler, 1990). As occupational therapists began their involvement in neonatal units in the late 1970s, studies in psychology, nursing, and medicine focused on the sensory needs of premature infants (Holmes, Reich, & Pasternak, 1984). They postulated that these infants were deprived of the usual experiences of full-term infants. Supplemental stimulation should be given to compensate for the missing elements of either the intrauterine or home environment (Field, 1980). Occupational therapists did provide supplemental stimulation to some infants and some continue to do so. However, some therapists pro-
vided an approach that differed from the described program. Treatment was individualized and based on the specific needs of an infant who displayed a delay in development (Anderson & Auster-Liebhaber, 1984). It was not a one-size-fits-all approach.

Therapists began to question the appropriateness of previously used approaches with infants (i.e., early intervention approaches). Further studies showed the possible adverse effect of stimulation, handling, and interactions on the infant’s physiological and behavioral state (Field et al., 1979; Linn, Horowitz, & Fox, 1985; Long, Lucey, & Philip, 1980; Masterson, Zucker, & Schulze, 1987; Oehler, 1985; Peltzman, Kitterman, Oswalt, Manchester, & Heath, 1970). During this period in the 1980s, studies described the environment of the NICU as one that is inadequate in the amount and pattern of stimulation (Gottfried et al., 1981; Lawson et al., 1977). Gottfried and others proposed intervention approaches that would change the environment to reduce the infant’s stress, a factor that may interfere with recovery (Cole, 1985; Gottfried & Gatter, 1985; Wolke, 1987).

Knowledge of these findings led therapists to critically inspect their practice patterns when it became clear that seemingly innocuous interaction could be damaging. Although some advocated a less aggressive, hands-off intervention approach (Vergara & Angley, 1992), the extent to which it was adopted by therapists during this period is unknown.

One of the most pervasive influences on the developmental care of premature infants was the work of Als (1986) on the development and application of synactive theory. As a result of her research, occupational individualized developmental care plans were incorporated into the nursing care of premature infants in some NICUs (Grunwald & Becker, 1991; Lawhon & Melzer, 1988). Occupational therapists began to modify their practice in keeping with care plan guidelines. The critical challenge was to examine the purpose of handling, with which infants, and in what amounts. Therapy could be integrated into the nursing care plan only if its benefits outweighed the risks, if the changes in the infant were measurable, and if these changes contributed to beneficial outcome.

Occupational therapy practice in the NICU was not only infant focused but parent oriented. Parents were taught specific skills, such as feeding, to facilitate a smooth transition from the NICU to the home setting (Vergara & Angley, 1990). Toward the end of the 1980s and in the early 1990s, parents’ special needs began to be recognized (Bass, 1991; Hummel & Eastman, 1991; Perelman et al., 1991; Vergara & Angley, 1992). In the early intervention literature, expansion of the therapist-parent dyad was described as moving toward a collaborative interchange or partnership (Anderson & Hinojosa, 1984). The legislation on Family Centered Care, Part H of the Education of the Handicapped Act Amendments of 1986 (Public Law 99-457), spurred efforts toward empowering families and the development of collaborative relationships (Hanft, 1988). The extent to which the concepts of collaboration, partnership, and empowerment are applied in the neonatal practice area is unclear, but it may be the direction of the near future.

About This Special Issue

I invite you to absorb the contents of this publication and examine the issues before us: How can occupational therapy best serve infants who are hospitalized in the NICU? What methods can be used to continue to delineate our roles and functions? How should occupational therapists prepare to work in the neonatal intensive care setting? How can they continue to maintain their competency? What is the direction of clinical investigations on the NICU by occupational therapists?

The articles by Olson and Baltman and by Holloway illustrate the direction of occupational therapy practice with a parent focus. They propose alternative intervention strategies and a change in the formulation of the parent-therapist relationship.

The articles by Glass and Wolf, Matthews; Hunter, Mullen, and Dallas; and Miller and Quinn-Hurst focus on a specific knowledge base including feeding, medical technology, and assessment. Embedded in these four articles is the strong message concerning the medical fragility of the neonate, the physiological and behavioral signals that neonates use to caution the therapist, and the need for sound judgment to plan appropriate assessment and intervention.

A natural outgrowth of the development of occupational therapy practice is research and training efforts. The articles by Einarsson-Backes, Deitz, Price, Glass, and Hays, and Mouradian and Als represent current clinical investigations on specific assessment and intervention strategies. Continued systematic documentation is essential for development of occupational therapy practice in this area.

Hyde and Jonkey suggest a training model as one method to develop skill in neonatal therapy. Finally, Anzalone raises the issue of specialization for the direction of neonatal occupational therapy.

I hope the contents of this issue will stimulate others to consolidate their thoughts about occupational therapy for neonates in the NICU and communicate in writing in the future. It is a powerful vehicle to propel change and contribute to progress in the field.

References


