From the Japan Association of Research on Developmental Care

The review article titled “NIDCAP: A Systematic Review and Meta-analyses of Randomized Controlled Trials,” by Arne Ohlsson and Susan E. Jacobs (Pediatrics 131[3], March 2013, e881–e893), encouraged us to pursue our efforts to introduce the Newborn Individualized Developmental Care and Assessment Program (NIDCAP) to Japan, despite their misleading conclusion, because their data show better outcomes in several respects for infants cared for by NIDCAP, without ill effects. Japanese statistics on survival rates and long-term outcomes of premature infants, especially extremely low birth weight infants, are better than those of North America and of European countries. But we are concerned about the high incidence of ADHD, autism, and learning disorders among those who avoid major neurologic handicaps. These disorders are known to be related to high-level brain function impairment and are speculated to result from continuous, excessive stress to these infants during their stay in the NICU. Therefore, we are switching from aggressive medical treatments to save lives and lower major neurologic sequelae to gentle, nurturing care. There are also substantial basic research studies to support this approach, such as increment of apoptosis of neurons in the frontal lobe. We know statistics often obscure the reality behind the clinical data, especially those on multifactorial clinical outcomes. Because their article shows that NIDCAP does not compromise the outcomes of premature infants, we continue to provide gentle care to our most vulnerable infants while improving our modalities and skills.

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None declared
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NIDCAP Federation
International Response

Ohlsson and Jacobs1 have again examined the NIDCAP and the research on its efficacy. The Board of Directors of the NIDCAP Federation International (NFI) deems their report an invalid and misleading evaluation of a well-established and demonstrably effective program. In fact, they summarize an array of impressive results, most from randomized controlled trials in which NIDCAP treatment of premature infants produced statistically significant effects (tables, figure, and findings all from Ohlsson & Jacobs, 2013),1 including reduced hospitalization (Table 3); earlier (younger postmenstrual age) hospital discharges (Table 3); increased weight gain (Table 4); improved neurologic markers, seen on both electroencephalography and MRI; and improvements on several standard assessment tools, including the Bayley Mental Development Index, Bayley Psychomotor Development Index, and Assessment of Preterm Infants’ Behavior (Table 2 and Fig 3).1

By applying inappropriate criteria to measure success, the authors dismiss the substantive, impressive, and clinically significant findings summarized in the report. Specifically the authors set the bar for “effectiveness of NIDCAP” in terms of “the composite of death or major sensorineural disability at 18 months” and secondary, short-term outcomes such as “in hospital deaths, chronic lung disease . . . necrotizing enterocolitis, [and] intraventricular hemorrhage.” In contrast, NIDCAP is aimed at a different array of important targets. Heidelise Als, who designed and founded NIDCAP more than 30 years ago, states, “NIDCAP’s goal is to prevent unexpected sensory overload and pain, and enhance strength and competence” of infants born prematurely.2 Such pathways are guided by a combination of observation, assessment, and nursery interactions. These guide regimens of holding, positioning and movement, environmental modification, parental involvement, and staff education that improve developmental trajectories. This is where the bar for NIDCAP should be placed. These are the standards by which NIDCAP is evaluated appropriately, with significant results in both medical and developmental parameters.

NIDCAP rests on a large body of neurodevelopmental data and evidence-based principles, particularly in areas involving sensory system development, relations between stress hormones and autonomic development, regulation of infant sleep and attention states, and the emergence of parent–infant interactions. These core areas were overlooked or even ignored in the meta-analysis. As NIDCAP professionals representing a range of relevant disciplines, along with parents who have experienced the developmental challenges of prematurely born infants, we seek to understand how NIDCAP works and the parameters affecting each of its elements. Among the research questions explicitly identified by Als et al (2004)2 and ignored by Ohlsson and Jacobs (2013)1 are “neuropsychological and brain structural outcomes,” “effects on parents,” and “effects on staff and systems.” Perhaps Ohlsson and Jacobs’ resistance to evaluating NIDCAP on relevant dimensions reflects their own resistance to system change. NIDCAP has already changed NICU practice, contributed to novel environmental features, increased parental involvement, and improved the experiences and developmental outcomes of premature infants worldwide. We look...
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