



Developmental Observer

The Official Newsletter of the NIDCAP® Federation International

The NIDCAP Federation International (NFI)

Founded in 2001, the NFI is an international, non-profit professional membership organization. The NFI encourages the implementation of developmental care and assures the quality of the Newborn Individualized Developmental Care and Assessment Program (NIDCAP) approach in all intensive and special care nurseries around the world. The NFI serves as the authoritative leader for research, development, and dissemination of NIDCAP, and for the certification of trainers, health care professionals, and nurseries in the NIDCAP approach.

“Never doubt that a small group of committed [individuals] can change the world: Indeed, it is the only thing that ever has.”

MARGARET MEAD, 1901-1978

Table of Contents

Seventeenth Annual NIDCAP Trainers Meeting.....	3
NIDCAP Profile.....	4
Family Voices.....	6
Supporting Families.....	8
NIDCAP Reflections.....	9
NFI Training Developments.....	10
Current Developmental Research.....	12
Developmental Resources.....	13

Message from the NFI President

Looking Back to the Future



It has been more than 35 years since my fascination with the amazing behavior of the preterm infant began and the seeds for NIDCAP took shape. As a graduate student at the University of Pennsylvania I had the good fortune to visit one of the earliest and largest newborn intensive care units (NICUs) at the time, at the Philadelphia General Hospital. Margaret (Peggy) Williams, MD a pioneer neonatologist not only concerned with the survival of

these tiny infants but also with their cognitive and emotional wellbeing and that of their inner city mothers, collaborated with my advisor, Sandra Scarr, PhD a psychologist and behavioral geneticist convinced of the remarkable resilience of humans. As optimistic American women in ‘academia’ would, they developed the first preterm stimulation program: tiny colorful musical butterfly mobiles moved gently above the infants within the incubators; sun-umbrellas shielded their faces from bright overhead lights; and skilled social workers supported their mothers’ wellbeing --the last of these turning out to be perhaps the most effective ingredient in the preterms’ caregiving.¹⁻³ I ‘blindly’ collected the outcome data, which meant home visits in Mantua, Belmont, Carroll Park, Cobbs Creek, Haddington/Dunlap, and Parkside, West Philadelphia’s housing project neighborhoods, where even taxis refused to go. I met amazing young women, grandmothers, and tough young men, all proud of their tiny babies, who had ‘made it’. Aside from the many strengths I witnessed, I ‘diagnosed’ developmental delays, cerebral palsies, rickets, malnutrition, hearing and vision impairments, skin and chronic respiratory infections, and even some pneumonias, and all that with just a Bayley kit and the chutzpah of a graduate student! I made referrals, set up meetings, consults, found rides, cooked, cleaned and in general learned a

Continued on page 2

tremendous amount. I experienced first hand the effects of the hardship of poverty, lack of housing, starvation, prejudice and ostracism, of mental illness and devastating drug effects, and in the face of it all the spirit to fight and overcome.

These events made me more eager to learn about the essence of these immature infants, who catalyzed the will of their parents to succeed for them and who so clearly were determined to get on with their lives against all odds. Just a few years later, when Maria Delivoria-Papadopoulos, MD invited me into the NICU at the Hospital of the University of Pennsylvania, where I was studying the first interactions of fullterm newborn infants with their adolescent inner-city mothers, I jumped at the opportunity to be with these remarkable infants first hand. Never mind that I was the 'bagger' of the infants, trying to help them breath, and the 'dabber' of the neonatologists' brows as they attempted to exchange poorly oxygenated blood with fresh blood in a valiant effort to combat dreaded lung disease.⁴ My fascination and awe was for the determination of the tiny infants themselves, who curled up, fought against the hands that tried to hold them down and keep them still, and swiped against anything that came towards them. They flailed, arched and gave their all to get back to and continue with

what they had been doing all along in the womb, sucking on their hands and fingers, tucking themselves up into little curled up balls, and cradling and hugging themselves into cozy comfortable positions. Nilsson published his first incredible fetal fiber-optic photographs of the fetus⁵, and all I saw was how competent and simultaneously misunderstood these babies were. This is when I resolved to learn about these infants, to understand them in their own right, to do justice to their competence and to warrant their trust and confidence.

To be continued.



HEIDELISE ALS, PhD

Notes:

1. Williams ML, Scarr S. Effects of short-term intervention on performance in low-birthweight, disadvantaged children. *Pediatrics* 1971; 47: 289-298.
2. Scarr-Salapatek S, Williams ML. A stimulation program for low birth weight infants. *Am J Public Health* 1972; 62: 662-667.
3. Scarr-Salapatek S, Williams ML. The effect of early stimulation on low-birthweight infants. *Child Dev* 1973; 44: 94-101.
4. Delivoria-Papadopoulos M, Morrow G, Oski FA. Exchange transfusion in the newborn infant with fresh and "old" blood: the role of storage on 2, 3-diphosphoglycerate, hemoglobin-oxygen affinity, and oxygen release. *Peds* 1971; 79: 898-903.
5. Nilsson L. *Behold Man*. Boston: Little, Brown and Company; 1973.

Developmental Observer

A semi-annual publication of NIDCAP Federation International.
© 2007 NIDCAP Federation International.

Articles from *Developmental Observer*, duly acknowledged, may be reprinted with permission.

Please contact us at: developmentalobserver@nidcap.org

Senior Editor Rodd Hedlund, MEd
Associate Editors Deborah Buehler, PhD
gretchen Lawhon, RN, PhD

Printed on recycled paper



nidcap

The NIDCAP Federation
International (NFI)

Contributions

We would like to thank the following foundations for their generous support of the NFI and its continuing work:

A.L. Mailman Family Foundation
Bella Vista Foundation
Pritzker Early Childhood Foundation

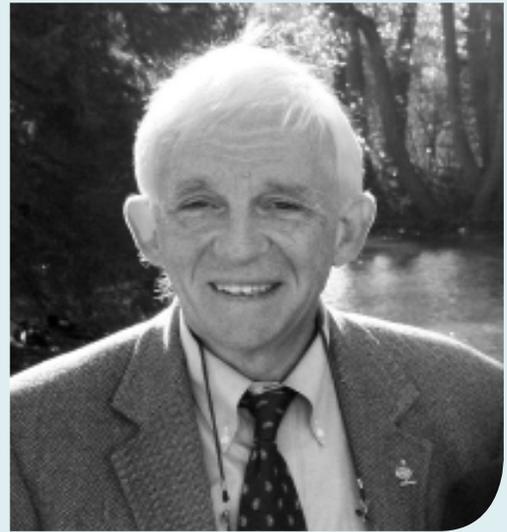
Seventeenth Annual NIDCAP Trainers Meeting

gretchen Lawhon, RN, PhD

The 17th Annual NIDCAP Trainers Meeting was hosted by the St. Luke's NIDCAP Training Center of Boise, Idaho and was held October 28 – 31, 2006 at the Sun Valley Resort in Idaho. This year there were over sixty participants representing at least seven different professional disciplines from twelve countries. Our overall theme of “Windows on the Developing Brain” began with individual introductions in which each participant shared a unique window onto themselves.

The highlight of this year's meeting was the scientific presentation “Windows on the Developing Brain: Behavior, EEG and MRI” presented by Dr. Frank H. Duffy of Children's Hospital, Boston, MA. Dr. Duffy reviewed the contribution of several research studies explaining how NIDCAP intervention alters brain anatomy and function. He demonstrated the manner in which preterm infants differ in white matter and brain volume as well as its effect on cortical – cortical connectivity. As we grasped the concept of spectral coherence, he helped us to understand, through discriminant analysis, the correlations between medical risk factors and neurobehavioral functioning. Through Dr. Duffy's presentation we were reminded that NIDCAP is an adaptive rather than prescriptive approach that works in many specific infant situations, but an approach which, when analyzed with a combination of groups, may enlarge variance and obscure significant findings. Dr. Duffy concluded: “Given that caveat, it is clear that the NIDCAP approach works and can be proven by MRI and EEG data to those who foolishly take issues with behavioral research.”

There were nine research/abstract presentations this year representing work from eight different countries concentrating on developmental care with infants and families. Four presentations focused upon the parent-



Dr. Frank H. Duffy of Children's Hospital Boston presented at this year's meeting.

infant relationship; three presentations discussed aspects of developmental support and stress or pain responses in the premature infant; one presentation focused on the sleep-wake cycle of the premature infant; and another presentation reviewed the developmental care practices in European units. Given that both APIB and NIDCAP training are moving into their third decade, we devoted a work session to each, and a work session was also devoted to NIDCAP center development. One of the unique aspects of the Trainers Meeting is our devotion to the reflective process. This process was utilized to assist us to share the emotional aspects of the NIDCAP work. In addition, we took time to continue our small group work to support our efforts to complete a NIDCAP Nursery Certification Program.

There was little time left for sleep with our late night sessions. Saturday evening was dedicated to the celebration of our recently departed friend and colleague Cathy Daguio, MEd, MPH, OTR/L, University of Connecticut NIDCAP Center. Sunday evening was filled with relaxation and friendship as we took full advantage of the local “Roosevelt” restaurant

Continued on page 5



Kathleen A. Vandenberg, PhD

Dorothy Vittner, RN, MSNc

This column has been designed to highlight individuals who have been involved with NIDCAP and to share their experiences. Dr. Kathleen Vandenberg, PhD has been involved in facilitating the emerging competence of infants, families, and professionals in newborn intensive care for over three decades. She is a fourth generation San Franciscan native who greatly appreciates family. Her own family is a source of renewal that enables her to provide the emotionally intensive support to families in the NICU.

In 1974, during the first phase of her professional NIDCAP work, Kathy entered the NICU through the portal of the newly founded Child Development Center at Oakland Children's Hospital. As an early childhood educator working with severely disabled children and their families, Kathy brought a unique view to the acute care perspective of the NICU. The premature and sick newborns presented a unique challenge and sparked many questions in her mind. Kathy spent five years reading, attending case conferences and daily medical rounds and asking numerous questions to acquire a basic understanding of the medical conditions of preterm infants, the needs of parents and staff, and the cultures of the newborn intensive care nursery. Kathy recognizes her work with Dr. Richard Umansky, a Developmental Pediatrician and leader of the Child Development Center, as an incredibly valuable learning experience. During this time she learned clinical assessment skills and guided professionals through interactions with families. Kathy and Bette Flushman, MA shared a position as a Developmental Specialist in the Child Development Center. They were both challenged to clearly define and articulate the role of the Developmental Specialist in the NICU.

Kathy notes that her most altering professional experience came from learning how to administer the Assessment of Preterm Infant Behavior (APIB). This provided her with a deeper understanding of each individual infant. The APIB also assisted her to peer into the inner functioning of the premature infant and recognize the infant's competence while simultaneously becoming aware of the infant's sensitivities. Both Peter Gorski, MD and Heidelise Als, PhD provided encouragement and opportunities to expand and validate the role of the developmental specialist within the intensive care nursery. In 1990, the NICU team at Oakland Children's Hospital was offered an opportunity to be a site for the National Collaborative Research Institute (NCRI), a U. S. Department of Education funded intervention study to demonstrate the efficacy of the NIDCAP approach. Kathy began articulating her observations and insights and describing what she had learned from Dr. Als to the NICU staff. This supported and confirmed the value of the Developmental Specialist's role within the nursery. During the course of the NCRI study, Kathy saw first hand what the premature infant was capable of. The infant's competence was supported and enhanced: 1) when care was provided by a caregiver

that recognized the infant as an active structurer of his/her own developmental trajectory; and 2) when the caregiver supported the ongoing co-regulatory process of the parent-infant relationship. This work was making an impressive difference in the outcomes of infants cared for in the intensive care nursery. Kathy describes this early foundation of her professional journey as the period in which she learned to teach.

Kathy's five year experience with the NCRI concluded a twenty year commitment to the infants and families at Oakland Children's Hospital. In 1996 Kathy, with the support of Dr. Barry Fleisher, her supervisor and mentor, moved the West Coast NIDCAP Center to the Lucile Packard Children's Hospital at Stanford University. During this time she provided training to the staff to assist them to better understand the NIDCAP model while simultaneously continuing to work directly with infants and their families. Kathy developed supportive relationships with the multidisciplinary staff which opened many pathways for the NIDCAP program to

successfully emerge. Her training focus also broadened as she began to provide NIDCAP training to NICUs in Europe, Canada, the Pacific Rim, and across the United States.

In 2004, Kathy officially entered the current phase of her professional journey in which she delights in the joy of sharing her own learning. As a Master NIDCAP Trainer, she guides and supports other professionals within the context of their complex NICU systems, to become NIDCAP Trainers. Kathy is a lifelong student and learner. She recently earned a doctoral degree in Human Development and Organization from Fielding Graduate Institute. Interwoven throughout Kathy's incredible journey has been her sense of wonder and respect for the courage and strength shown by the infants and families within the environment of the NICU. Kathy feels honored and privileged to continue her work as a NIDCAP Master Trainer as she trains professionals and supports infants and their families along their individual developmental trajectories.

Seventeenth Annual NIDCAP Trainers Meeting

Continued from page 3

in downtown Ketchum, which included much dancing and laughter by all. On our last evening together, we partook in a local custom by bundling up for a hay ride to the Trail Creek restaurant for yet another memorable evening. Each of us leaves the annual Trainers Meeting having been reenergized and renewed through our relationship-based dedication to one another and our NIDCAP work.

Next year's NIDCAP Trainers Meeting, September 29 – October 2, 2007, will be hosted by the French NIDCAP Center. It promises us another unique setting in which we are able to come together and immerse ourselves in the NIDCAP work while sharing our successes, as well as working together to face our challenges. The overall theme of this meeting will be "Understanding Pain, Stress and Comfort in the Developing Newborn."

A special note: Invited participants to next year's NIDCAP Trainers Meeting should begin to consider topics for the Research Abstract presentations.



The Sun Valley Resort in Idaho.

Kathy Keller

While I sat at my son's bedside in the NICU, the follow-up clinic director came in the room to sit with me and told me to think about coming back someday to help other NICU parents. Andrew was our second child and our second NICU experience; Caroline was born 10 weeks early two years prior, and Andrew was 7 weeks early. My husband, Eric, and I spent about 10 weeks total in Toledo Children's Hospital NICU.

Five years later, I decided it was time to get back to the NICU and do whatever I could to help families. Initially, I became a volunteer and went into the unit, usually in the evening and talked with families. With no job description and little staff support, I didn't feel very useful but did what I could. A year later, I was invited to join the Family Advisory Council. The council helped me to work 'behind the scenes' by collaborating with staff, enabling me to gain credibility, and therefore, the ability to create programs to support families. I am now the Family Advisory Council Chairperson and have been for the past four years. I am also a member of the NICU family centered care committee. Through a grant, we created parent resource binders, providing organized, essential information to every parent. And as important, sections of the binder give families the opportunity to 'journal' and keep records of their babies' milestones and progress. I remember receiving a baby book as a shower



Kathy and her husband, Eric, share their parenting journey.

gift and realizing how little relevance it had for me as a NICU parent.

For the past six years, I have been co-facilitating a weekly NICU parent group along with a unit social worker. We present a topic of interest to families each week, such as "Supporting Your Baby's Development", "Protecting Your Baby in the NICU and at Home" (infection control issues), and "Taking Your Baby Home". The topics are presented by NICU professionals. If the speaker isn't a nurse, we also include one of the bedside nurses in the group. The focus is education which is the reason the parents attend. Parents want to know everything they can do for their babies. Since the meetings are at lunch time, we provide soup, which is a bonus for parents, because they can have lunch without leaving the unit. More importantly, they get the chance to openly talk about their experiences with other parents. The educational piece is always very helpful but many times, the parents want to discuss other issues, which we encourage. The forum is theirs. Most of the time, I don't say very much. I listen. But sometimes, I am the expert in the room. Every experience is different, every family is unique, but the commonality of situations and fears almost always arise. Parents will talk about their fears: for example - the apnea monitor. There is fear of taking one home or the fear of not having one at home. For many there is the fear of taking care of their baby alone at home. I encourage them to do as much care as possible while in the hospital, and their confidence level will elevate and many fears will dissipate by simply being a parent of a newborn.

The work that I do is satisfying and frustrating at the same time. The more I do, the more there is to do. And there is so much to do. I would like to do more for NICU fathers to ensure their inclusion. I'd like to provide an evening parent group as we do during the daytime. I see many NICU mothers with delayed postpartum feelings and would like to have some type

of an educational program about this issue. Right now, we are looking to create a weekly scrapbooking workshop for families. But overall, my goal is to create a complete environment of family centered care.

In 2002, I was inducted into the Toledo Children's Hospital Distinguished Fellows' Society for my volunteer work with families. To say the least, it was a huge surprise since I don't write checks and there are no initials after my name. To be acknowledged was a tremendous honor. The aftermath of the NICU experience is life-altering, from simple tasks like washing one's hands, to the huge issues like a child's developmental milestones. We see through different eyes. Many times, I tell parents that they have gained an education that others do not have. Even though they didn't register or sign-up for this experience, they will carry it with them forever.

Developmental Care in the Moment



Handswaddling containment provided by the infant's mother during an attending neonatologist's IV insertion procedure.

From the Editors

Dear Readers,

It is our pleasure to present this first issue of the *Developmental Observer*, the official newsletter of the NIDCAP Federation International (NFI). We hope that it provides information about our organization and furthers understanding of our NIDCAP work. Some of our columns will be constant from issue to issue, while others will feature different aspects of the NFI's efforts. We invite you to write us with your comments regarding the content of any of the columns presented in this newsletter. We are also interested in any suggestions that you have with regard to future topics that you would like to see addressed in the *Developmental Observer*.

Please contact us at: developmentalobserver@nidcap.org

Developmentally yours,

Rodd Hedlund, MEd, SENIOR EDITOR

Deborah Buehler, PhD, ASSOCIATE EDITOR

gretchen Lawhon, RN, PhD, ASSOCIATE EDITOR

Melissa R. Johnson, PhD

Gabrielle had been born weighing 550 grams and had needed the assistance of the oscillating ventilator for over a month, but was now much more stable medically. The neonatologist had just spent an hour carefully reviewing her medical history and current plan with her young parents, and asked again what questions they had at this point. Her parents looked thoughtful and glanced at the three-page medical summary in their hands, before her mother said “We just want to know more things we can do to feel like her parents.”

This vignette, in a setting where developmental care and family support is highly valued, pinpoints one of the key goals of developmentally supportive, family centered care, and how important it is to constantly evaluate how we are doing in helping parents ‘feel like parents’. No matter how successful we are at providing excellent newborn care and mindful developmental support, the challenge of supporting each parent to feel capable, connected and increasingly autonomous as parents remains crucial. NIDCAP-based practice offers many tools, as well as a strong theoretical underpinning for success in meeting this challenge. In the nursery and in newborn intensive care follow-up, both clinical observation and research support the absolutely central role of family support in ensuring an optimal outcome for each infant.



As the Developmental Care Guidelines for Use in the NICU* state: “The parent looks to and depends on the professional caregivers to be the parent’s and the infant’s best advocate and champion. The unconditional emotional allegiance to the parent in support of their infant’s best care fosters the parent’s confidence, competence and trust, which are key to developmental care.”

This column will focus on successful approaches to family support, share current research and emerging clinical practices with articles by guest columnists, and provide a forum for exploring and encouraging efforts by NIDCAP professionals in this central domain of our work in the NICU. From time to time, it will also reflect on the strong foundation of this work in fields such as psychology, anthropology, parent and infant development, family systems, and care systems as they support our efforts. Readers are invited to share ideas, questions, cases, and suggestions for topics with the editors as we support each other to support families to take their infants home with confidence and joy.

Reference

* Als H, McAnulty G. Developmental care guidelines for use in the newborn intensive care unit (NICU). NIDCAP Federation International Document, 2006, p. 2.



Jean Powlesland, RN, MS

Einstein said he could never understand it all. Nine years ago, we embarked on a remarkable journey to understand infant behavior. As NIDCAP Trainers-in-Training, we have been mentored by supportive and passionate leaders in this growing field, in an effort to 'understand it all'.

This is how Tammy Casper, RN and Linda Lacina, RN from Cincinnati Children's Hospital began their reflection on their NIDCAP work. This column will be a regular feature in this newsletter. It will draw upon the varied and vast experiences of NIDCAP professionals, inviting individuals from all over the world, and all levels of experience, to share memorable moments of NIDCAP work. While the experiences recounted will be personal moments of success and perhaps of struggle, my hope is that these thoughtful reflections will resonate with you and support you in your own journey to care for infants and families in a family centered, developmentally supportive manner.

Linda and Tammy continue:

NIDCAP has taught us concepts conveyed in the following example. Carson was born at 25 weeks gestation, and was acutely ill. Carson's father took a quiet back seat until he was present for a NIDCAP observation. His bedside nurse, also a NIDCAP professional, was beginning to feed Carson his bottle. She took the lead by identifying and explaining each gesture and expression revealed by Carson. Carson's father responded to his son with gentle patience and soft touches. As Carson responded to his father's touch, his nurse again explained his son's behavior. The guidance provided by Carson's nurse opened up his father's eyes and heart to his baby. As observers, we witnessed Carson's nurse helping his dad to 'understand it all.' We felt that Carson had what he had longed for—someone to see his strengths, partner with his vulnerabilities, and accept him as a whole person. Above everything else, NIDCAP helps us see infants in a new way, a way that honors where they are at any particular point in time.

A relative newcomer to NIDCAP, Minhui Zhao, RN, BS nurse manager of the Children's Hospital of Fudan University in China also writes:

Our NICU is one of the best and biggest units in Shanghai, perhaps in all of China. In July 2006, we spent a meaningful two weeks participating in the introductory NIDCAP training at the Mid-Atlantic NIDCAP Center and learned so much. Although we cannot change our current NICU very much now because we will move to a new hospital in the near future, we will put into the design of the new NICU many concepts we have learned about (e.g., larger spaces for parents, and the big room will be divided into several smaller individualized family rooms). The most remarkable change in our NICU is that our nurses pay more attention to infants' cues. We find babies give us so much information that we have ignored before. We think much more about how to provide individualized care to reduce negative stimulation and provide positive experiences. We welcome parents to be with their babies which we found does indeed help infants grow. In the meantime we have encountered many difficulties running the NIDCAP program. The most important thing is how to use the ideas of NIDCAP to care for individual infants in different situations. We believe we have had a good start and we are moving ahead in the right direction.

Tammy and Linda concluded their reflection:

NIDCAP has taught us that (like Einstein) we do not have to 'understand it all'; we just have to pull the pieces together to better understand the developing human infant in the NICU.

By sharing with each other, we will better understand developing humans at all levels: infants, families and professionals.

Rodd Hedlund, MEd

It is with great pleasure and pride that the NFI has welcomed the addition of two new NIDCAP Training Centers: the UK NIDCAP Training Center at St. Mary's, London, England, and the NIDCAP Training Center at the University of Illinois at Chicago Medical Center. Inga Warren, Dip COT, MSc, NIDCAP Director/Trainer at St. Mary's Hospital and Jean Powlesland, RN, MS, NIDCAP Trainer at the University of Illinois at Chicago Medical Center, share their stories of the development, certification, and current and future plans for their respective Training Centers below.

As Inga Warren reports:

St Mary's Hospital, famous for Alexander Fleming's discovery of penicillin, is the base for the UK's NIDCAP Training Center. A young psychologist, Heidelise Als, PhD once worked in our maternity unit, which was also one of the first maternity units to use the Neonatal Behavioral Assessment Scale[®] for research. So it is hardly surprising that St. Mary's adopted the Newborn Individualized Developmental Care and Assessment Program (NIDCAP) developed by Dr. Als (1984).

While attending a conference in London, a chance meeting with Kathy VandenBerg, MEd felt like a moment of opportunity meeting a lifetime of preparation. When Kathy came for a brief visit to the Winnicott Baby Unit, a Level III newborn intensive care unit at St Mary's Hospital, little did she know she was laying the foundations for a NIDCAP Training Center.

After NIDCAP reliability (1994), dreams of a NIDCAP Training Center were made real by the Winnicott Foundation, a charity funded by parents that has consistently supported NIDCAP. With the guidance of my treasured friend and colleague, Agneta Kleberg, RN, PhD, NIDCAP Master Trainer, I was certified as a NIDCAP Trainer in March of 2006.

In 2003 and 2005, with the help of the European Science Foundation (ESF), conferences and workshops in London were organized to bring people together from around the world to discuss developmental care. This boosted serious interest in NIDCAP, and as a result, thirty

professionals (doctors, nurses, and therapists) from seven hospital NICUs were accepted for NIDCAP training by our NIDCAP Training Center. We try to satisfy the hunger for information with study days and workshops at our own or other centers in the United Kingdom and Ireland. Our plans for the future include more research, focusing on the sensitivity of care during medical/nursing procedures, and working toward NIDCAP nursery certification.

There are many people to thank, including: parents who understood the value of NIDCAP and raised money for our center through the Winnicott Foundation; colleagues who opened the door to change; astute, creative managers who moved mountains; the inspiring NIDCAP Trainers Group; the ESF project team that gave weight to the cause; and the Trainers and Master Trainers who have spurred us on and nurtured us all the way.

As Jean Powlesland reflects:

The journey to becoming a NIDCAP Training Center began in 1998 when the Harris Foundation, a philanthropic organization founded by the late Irving B. Harris, invited Chicago area hospitals to sponsor a NIDCAP Training Center. The chosen hospital would dedicate staff to NIDCAP training, and support the time of those identified to become NIDCAP Trainers. In exchange, the Harris Foundation would provide funding for the founder of NIDCAP, Dr. Heidelise Als, to mentor these future trainers and guide the creation of the Chicago center.

NIDCAP training began with seven members of our staff in 1999. The two prospective NIDCAP Trainers, Jennifer Hofherr, OTR/L and I completed our NIDCAP and Assessment of Preterm Infants' Behavior (APIB) certification and began training four staff in the unit in 2004. Three nurses and one physical therapist now have dedicated time for NIDCAP work along with their regular nursing and therapy duties.

University of Illinois Medical Center Chicago (UIMCC) was inaugurated as a NIDCAP Training Center on June 15, 2006, becoming the 16th NIDCAP Training Center. This recognition was celebrated with a half day conference entitled "NIDCAP: The Earliest Intervention." The key note speaker was Dr. Als, with the two new Trainers also presenting. Afterwards, a gala dinner was held at the university, attended by 80 staff, university faculty, and friends.

As NIDCAP Trainers we provide training and education for the UIMCC NIDCAP Training Center, while also working as developmental specialists on the unit. Our role is to provide developmental assessments to high risk infants, as well as to educate staff and support parents in their relationship with their hospitalized infant. The NIDCAP Center Director, Beena Peters,

RN, MS was the head nurse of the NICU when the Harris Foundation grant was accepted, and is now an associate director of nursing, overseeing all the maternal child-parent care units as well as nursing finance and informatics. She has been an enthusiastic and strong advocate at the administrative level for this care that is so supportive of infants and families. The Medical Director of the NIDCAP Center, Dr. Dharmapuri Vidyasagar, is an internationally renowned and respected contributor in the field of neonatology, and until recently had been the Director of the Neonatology Division at UIMCC.

While our NIDCAP Center staff is focused now on the inpatient developmental program, in the future we will explore the research opportunities that the synactive theory offers in using infant behavior to guide care decisions in the NICU, such as nipple feeding or the weaning of specific medical supports.

Reference

- * Brazelton TB. *Neonatal Behavioral Assessment Scale*. London: Spastics International Medical Publications, 1984.

The Newborn Individualized Developmental Care and Assessment Program (NIDCAP)

The Newborn Individualized Developmental Care and Assessment Program (NIDCAP), originated in 1984 by Heidelise Als, PhD, is a developmental, family centered, and evidence-based care approach. NIDCAP focuses on adapting the newborn intensive care nursery, including all care and treatment and the physical environment, to the unique neurodevelopmental strengths and goals of each high risk newborn and his or her family, the infant's most important nurturers and supporters. For a complete description of training centers and the training process please visit our website: www.nidcap.org.

The Assessment of Preterm Infants' Behavior (APIB)

The Assessment of Preterm Infants' Behavior (APIB) is a comprehensive and systematic neurobehavioral assessment of preterm and fullterm newborns developed by Heidelise Als, PhD and her colleagues (published in 1982, see www.nidcap.org for details). The APIB requires in-depth training and provides a highly valuable resource in support of developmental care provision by professionals and families.



Inga Warren, Dip COT, MSc

In the research column, we will look at current topics that are relevant to NIDCAP. In each edition we will focus on a different theme. Our initial topic, newborn pain, was widely reported and debated in 2006.

The debate about whether preterm infants are aware of pain when they react to a painful stimulus moved forward with two groundbreaking studies that demonstrated cortical activity in response to painful procedures.^{1,2}

Uncertainty continues to be expressed about pain scales based on behavioral and physiological signs. According to *Nature*³, Fitzgerald's team in London is now studying the relationship between cortical activity and more subjective pain assessment.

Acute/procedural pain dominated the debate and non-pharmacological strategies were widely recommended. NIDCAP has a part to play in assessing pain and actively contributes to management. Holsti and colleagues⁴ used NIDCAP observations alongside the Neonatal Facial Coding System to evaluate stress and pain in an investigation of the impact of prior pain on clustered care. This study showed heightened biobehavioral reactivity in preterm infants during tactile procedures following a painful intervention and also concluded that clustering care is particularly stressful for infants born at earlier gestational ages.

Several presentations at the 2006 NIDCAP Trainers Meeting in Idaho addressed pain/stress. Kleberg⁵ reported on the impact of strategic elements of NIDCAP on response to ROP screening, generally regarded as a painful experience. Compared with infants receiving conventional care, NIDCAP intervention infants had

significantly lower physiological and biological markers of stress after the exam. Over time the "conventional care" increasingly mimicked the NIDCAP intervention style, a spill over effect that is a probable confounder in NIDCAP studies; nevertheless the intervention effect was measurable.

In France, the NIDCAP group⁶ extended their work on the responses of premature infants to nursing care that generates pain response behaviors, such as nappy change. The latest study involved three newborn intensive care units with different developmental care experience. When developmental care strategies were implemented babies fared better than controls.

Research on ongoing pain/stress is sparse. Leslie and Marlow⁷ stated that: "Appropriate support and facilitation of the infant in this situation (e.g. ventilation) has perhaps a much greater potential to improve important outcomes for the child than simple interventions during procedures." The NIDCAP team in London⁸ reported on a quality improvement initiative with ventilated infants that involved a formal pain management tool (N-PASS, Neonatal Pain Agitation and Sedation Scale) to supplement the observations of NIDCAP-educated staff. According to the scores, a structured problem solving pathway was used to identify and rectify possible sources of stress/discomfort/pain. An audit showed a significant reduction in the use of morphine and inotropes after this approach was introduced.

All authors writing about newborn pain/stress are calling for more research and we are bound to hear more about this key area of newborn practice over the coming years.

References:

1. Slater R, Cantarella A, Gallella S, Worley A, Boyd S, Meek J, Fitzgerald M. Cortical pain response in human infants. *Journal of Neuroscience* 2006; 26(14): 362-366.
2. Bartocci M, Bergqvist LL, Lagercrantz H, Anand KJ. Pain activates cortical areas in the preterm newborn brain. *Pain* 2006; 122(1-2): 109-117.
3. Qiu J. Infant pain. Does it hurt? *Nature* 2006; 444: 143-145.
4. Holsti L, Grunau RE, Whiffeld MF, Oberlander TF, Lindh V. Behavioral responses to pain are heightened after clustered care in preterm infants born between 30 and 32 weeks of age. *Clinical Journal of Pain* 2006; 22(9): 757-764.
5. Kleberg A, Warren I, Norman E, Mörelius E, Berg A-C, Ali E, Holm K, Fielder A, Nelson N, Hellström-Westas L. Lower stress response after developmental care intervention during eye examination for retinopathy of prematurity, a randomized study. *Paediatrics*, in preparation.
6. Dubourg M, Pierrat V, Browne J, Laudenslager M, Ansquer H, Oger E, Sizon J. Impact of developmental care on behavioural, physiologic, and biological pain response in preterm neonates; a multisite trial. *NIDCAP Trainers Meeting* 2006; Sun Valley, Idaho. (Presented by Sizon J).
7. Leslie A, Marlow N. Non-pharmacological pain relief. *Seminars in Fetal and Neonatal Medicine* 2006; 11: 246-250.
8. Warren I, Godambe S, Banerjee J, Chow P. Managing infant pain while rationalising the use of morphine – an observational study with retrospective data. *NIDCAP Trainers Meeting* 2006; Sun Valley, Idaho.



Kathleen A. VandenBerg, PhD

This section provides our readers with current information regarding developmental resources related to NIDCAP and developmental care. We invite you to send in information that you encounter, such as upcoming conferences, websites, books, journals, articles, videos, etc., which can be shared with our readers. The following are resources which are currently available for information and education.

DVD Series

Vida Health Communications, Inc. has released a new DVD series entitled “Focus on the Brain,” a staff training program presenting a practical overview of recent science and research illuminating the process of fetal and neonatal development. Using state-of-the-art animations and commentary from leading experts in the field, the DVD conveys what is now known about the impact of early birth on the brain. The program also presents clear evidence about interventions to support optimal brain growth and development in preterm infants. “Focus on the Brain” gives professionals who work in special care nurseries practical strategies proven to support optimal brain development in preterm infants. The third DVD “No Matter How Small,” is a parents’ guide to preterm infant behavior and development. Based on current research and featuring real parents and caregivers, this program shows parents ways in which they can help support the normal growth and development of their baby’s brain. “Focus on the Brain” received the C. Everett Koop Surgeon General’s Award for best professional education program in November at the International Health and Medical Media Festival, where “No Matter How Small” was a finalist.

Vida would like to recognize Dr. Als’ longstanding, unflagging commitment to children and families. So, before official distribution of the programs begins, in honor of Dr. Als, Vida offers introductory special pricing

to NFI members. If purchased before April 15, 2007, Vida’s entire media “Toolkit” for supporting preterm development will cost NFI members \$545.00. This represents a savings of over \$150.00. For more information about the programs, please visit www.vidahealth.com (or call Elizabeth Hamlin at 800-550-7047).

Conferences

Fragile Infant Feeding Conference: June 19-23, 2007. A five day intensive study of feeding and nutrition for high risk infants in the relaxing setting of the Rocky Mountains. Clinical and research offerings have been designed to expand the expertise of professionals who work with infants and families with feeding challenges. For more information contact Adrienn A. Hollonds at 303-861-6298 or by email at: alberthollonds.adrienn@tchden.org.

Several upcoming Contemporary Forums conferences:

- » **The Young Child with Special Needs**, March 26-30, 2007, Chicago, Illinois;
- » **The National Conference of Neonatal Nursing**, April 24-28, New Orleans, Louisiana; and
- » **Neonatal Pharmacology**, May 16-19, 2007, La Jolla, California.

For further information go to: www.contemporaryforums.com.

Recent Publications

1. Als H and Butler S. Neurobehavioral development of the preterm infant. Martin R, Fanaroff A, Walsh M, editors. In: Fanaroff and Martin's Neonatal-Perinatal Medicine: *Diseases of the Fetus and Infant* 2005; 8th ed. St. Louis: Mosby: 1051-1068.
2. Browne JV and Talmi A. Family-based intervention to enhance infant-parent relationships in the neonatal intensive care unit. *Journal of Pediatric Psychology* 2005; 30(8): 1-11.
3. Ferber SG. With sorrow you will have sons: the constructive consequence of maternity blues. *Psychoanalytic Review* 2006; 93(1): 117-130.
4. Lowman L, Stone LL, Cole JG. Using developmental assessments in the NICU to empower families. *Journal of Neonatal Network* 2006; 25(3): 177-185.
5. Mewes AUJ, Huppi PS, Als H, Rybicki FJ, Inder TE, McAnulty GB, Mulkern RV, Robertson RL, Rivkin MJ, Warfield SK. Regional brain development in serial magnetic resonance imaging of low-risk preterm infants. *Pediatrics* 2006; 118: 23-33.
6. Wielenga JM, Smit BJ, UNK LK. How satisfied are parents supported by nurses with the NIDCAP model of care for their preterm infant? *Journal of Nursing Care Quality* 2006; 21(1): 41-48.
7. Wielenga JM. Implementatie van "Newborn Individualized Developmental Care and Assessment Program" (NIDCAP) in de zorg voor zeer vroeggeboren kinderen. *verpleegkunde* 2006; 21(1): 62-69.

Please send items for inclusion in Developmental Resources to Kathleen VandenBerg, PhD, email: kvandenb@mills.edu.

NIDCAP Federation International Board Officers, Members and Staff

PRESIDENT

Heidelise Als, PhD

NIDCAP Senior Master Trainer
APIB Master Trainer
Director, National NIDCAP
Training Center
email: heidelise.als@childrens.harvard.edu

VICE PRESIDENT

gretchen Lawhon, RN, PhD

NIDCAP Master Trainer
Director, Mid-Atlantic NIDCAP
Center
email: Lawhon-gretchen@cooperhealth.edu

SECRETARY

Deborah Buehler, PhD

NIDCAP Master Trainer
APIB Trainer
West Coast NIDCAP & APIB
Training Center
email: deborahbuehler@comcast.net

TREASURER

Gloria McAnulty, PhD

National NIDCAP Training Center
email: gloria.mcanulty@childrens.harvard.edu

ASSISTANT SECRETARY

Sandra Kosta, BA

National NIDCAP Training Center
email: sandra.kosta@childrens.harvard.edu

James M. Helm, PhD

NIDCAP Senior Trainer
Director, Carolina NIDCAP Training
Center
email: jimhelm@med.unc.edu

Roger Sheldon, MD

Co-Director, Sooner NIDCAP
Training Center
email: roger-sheldon@ouhsc.edu

Karen Smith, RNC, MEd

NIDCAP Senior Trainer
St. Luke's Regional Medical Center
email: smithka@slrmc.org

Kathleen VandenBerg, PhD

NIDCAP Master Trainer
Director, West Coast NIDCAP &
APIB Training Center
email: kavandenberg@yahoo.com

Björn Westrup MD, PhD

Director, Scandinavian NIDCAP
Center
email: bjorn.westrup@karolinksa.se

Martha Hopewell, MSc

NFI Executive Director
email: nfidirector@nidcap.org



by order of establishment

National NIDCAP Training Center

Children's Hospital Boston,
Boston, Massachusetts USA
CONTACT: Sandra M. Kosta, BA
EMAIL: sandra.kosta@childrens.harvard.edu

Sooner NIDCAP Training Center

University of Oklahoma Health Sciences Center,
Oklahoma City, Oklahoma USA
CO-DIRECTOR AND CONTACT: Laurie Mouradian, ScD, OTR/L
EMAIL: laurie-mouradian@ouhsc.edu

Carolina NIDCAP Training Center

WakeMed, Division of Neonatology,
Raleigh, North Carolina USA
DIRECTOR AND CONTACT: James M. Helm, PhD
EMAIL: jimhelm@med.unc.edu or jhelm@wakemed.org

Colorado NIDCAP Center

The Children's Hospital,
Denver, Colorado USA
DIRECTOR AND CONTACT: Joy V. Browne, PhD, RN
EMAIL: browne.joy@tchden.org

West Coast NIDCAP Training Center

Mills College, Department of Education,
Oakland, California USA
DIRECTOR AND CONTACT: Kathleen VandenBerg, PhD
EMAIL: kvandenb@mills.edu

St. Luke's NIDCAP Training Center

St. Luke's Regional Medical Center, Boise, Idaho USA
CONTACT: Karen M. Smith, RNC, BSN, MEd
EMAIL: smithka@slrmc.org

Mid-Atlantic NIDCAP Center

The Children's Regional Hospital at Cooper University
Hospital, Camden, New Jersey USA
DIRECTOR AND CONTACT: gretchen Lawhon, RN, PhD
EMAIL: lawhon-gretchen@cooperhealth.edu

The NIDCAP Training Center of Milwaukee

Aurora Sinai Medical Center, Milwaukee, Wisconsin USA
DIRECTOR AND CONTACT: Laura Robison, RN, MSN
EMAIL: laura_robison@charter.net

Scandinavian NIDCAP Center

Astrid Lindgren Children's & Karolinska University
Hospital, Stockholm, Sweden
CONTACT: Ann-Sofie Gustafsson, RN, BSN
EMAIL: nidcap@karolinska.se

French NIDCAP Center

University Hospital,
Brest, France
CO-DIRECTOR AND CONTACT: Nathalie Ratynski, MD
EMAIL: nathalie.ratynski@chu-brest.fr

The Dutch NIDCAP Training Center of Leiden

Leiden University Medical Center,
Leiden, The Netherlands
DIRECTOR AND CONTACT: Celeste Maguire, RN, MS
EMAIL: NIDCAP@lumc.nl or C.M.Maguire@lumc.nl

Sophia NIDCAP Training Center

ErasmusMC-Sophia, Children's Hospital,
Rotterdam, The Netherlands
CO-DIRECTOR AND CONTACT: Monique Oude Reimer, RN
EMAIL: m.oudereimer-vankilsdonk@erasmusmc.nl

Centro Latinoamericano NIDCAP Otamendi

Santorio Otamendi, Buenos Aires, Argentina
DIRECTOR AND CONTACT: Graciela Basso MD, PhD
EMAIL: grbasso@fibertel.com.ar

UK NIDCAP Training Centre at St. Mary's

St. Mary's NHS Trust, London, England
DIRECTOR AND CONTACT: Inga Warren, Dip COT, MSc
EMAIL: inga.warren@st-marys.nhs.uk

University of Illinois Medical Center at Chicago (UIMCC) NIDCAP Training Center

University of Illinois Medical Center at Chicago,
Chicago, Illinois USA
CONTACT: Jean Powlesland, RN, MS
EMAIL: jpowlesl@uic.edu



Developmental Observer - How to Subscribe

Developmental Observer, the official newsletter of the NIDCAP Federation International, is produced as a benefit to its professional membership semi-annually in the Spring and Fall. Others who have an interest in the NIDCAP approach and developmental care are encouraged to subscribe. The annual subscription rate is \$15.00 USD.

We invite you to subscribe by going to www.nidcap.org and selecting *Subscribe* on the NFI website.

You may also subscribe by providing the information below and enclosing a check.

Name: _____

Address: _____

Professional Affiliation: _____

Subscription Period: 1 Year (\$15) 2 Years (\$25) 3 Years (\$35) (*Please Check One*)

Please make your check out to NIDCAP Federation International and send to:

NIDCAP Federation International
Administrative Office
PO Box 761112
Melrose, MA 02176
USA

Become a Member of the NFI

The NFI has expanded opportunities for membership to Certified NIDCAP Professionals and NIDCAP Trainees. Please join us! For more information and the online application form, visit our website at: www.nidcap.org/become.html



The NIDCAP Federation
International (NFI)
www.nidcap.org