

Developmental Observer

The Official Newsletter of the NIDCAP® Federation International

ABSTRACT EDITION

NIDCAP Federation International (NFI)

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

**“All things are bound together.
All things connect.”**

CHIEF SEATTLE

Suquamish and Duwamish First Nation Chief

Table of Contents

Editorial	1
Abstracts	2
Little Readers Read-A-Thon.....	10
Global Perspectives	12
Family Voices	14
NIDCAP Training Centers Around the World	18
Poet's Corner	20
NIDCAP on the Web	22

Greetings from the Editor

DOI: 10.14434/do.v14i1.31807

Welcome to our first issue for 2021. Let us hope that this year will be kinder, and we may start to move forward and heal together. Looking back on 2020 several themes have emerged from the impact of the Pandemic.

First, during the challenges of COVID-19 restrictions the strength of families and staff are demonstrated through several abstracts from the 31st NIDCAP Trainers Meeting. The group from Modena showed if staff feel offering kangaroo care is safe then parents become involved with less stress. The team from Beirut revealed that despite restrictions of COVID-19 kangaroo sessions can increase. The group from Rimini nicely demonstrated that if staff are supported, they in turn support parents to be involved in their baby's care.

The second theme focussed on how we strive to improve what we do. The Graven's group presented the important Standards for Infant and Family Developmental Care to guide our practice, and we heard about how the Plan-Do-Study-Act (PDSA) quality cycle can be used to change practice by Inga Warren and her team.

Lindsay Gilmore, a mother, in her insightful article *Heartbreak and Hope during the Pandemic* gives us an understanding of the stress families experience. We learn about the success of innovation through the Little Readers Read-a-Thon from Therese Gisondi. And Julia Giesen returns with another perceptive poem in Poets Corner.

Despite the challenges we have all encountered this past year, The UK NIDCAP Centre demonstrates how COVID-19 impacted on the work of their Centre and how they adapted to ensure their goals were met.

Inga Warren, Senior NIDCAP Trainer received a Commander of the British Empire (CBE) in recognition of her work with premature infants and training. We learn about the amazing work in Serbia in giving NIDCAP and developmental care a focus. We can learn from these interesting articles and the innovative ways we all strive to improve the care and experiences of the babies and their families.



Kaye Spence AM
Senior Editor – Developmental Observer
Adjunct Associate Professor/
Clinical Nurse Consultant
Australasian NIDCAP Training Centre / Sydney Children's Hospitals Network/Western Sydney University/Australia



Kaye Spence, AM

NIDCAP Care in the Moment



Connecting through challenges

Early Kangaroo Mother Care in Preterm Infants: Is it Safe?

Bedetti L¹, Bertoncelli N², Lugli L², Spaggiari E², Cuomo G², Cosimo AC², Di Giuseppe M², Ierardi G², Lelli T², Muzzi V², Paglia M², Pezzuti L², Piccolo A², Sabbioni F², Torcetta F², Torelli P², Lucaccioni L², Ferrari F³, Berardi A³

¹ PhD in Clinical and Experimental Medicine, University of Modena and Reggio Emilia – Italy

² Department of Mother's and Child's Health, Neonatal Intensive Care Unit, AOU Modena – Italy

³ University of Modena and Reggio Emilia - Italy

DOI: 10.14434/do.v14i1.31808

Aims

Kangaroo mother care (KMC) was first described in 1978 by Dr. Edgar Rey Sanabria as an alternative to the incubator in low-resource countries. Over time this practice has been extended to high income countries because it is effective in improving infant growth and neurodevelopment, especially in preterm infants. However, KMC is frequently feared by health care professionals, particularly nurses who are in charge to support infants and parents during the procedure. The aim of this study is to demonstrate the safety of early KMC in preterm infants.

Methods

A prospective observational monocentric study was performed. Infants born between June 2018 and June 2020, with gestational age <33 weeks and birth weight <2000 grams were monitored while having KMC during the first three weeks of life. Infants with necrotizing enterocolitis, sepsis, congenital malformations, receiving mechanical ventilation or with more than five apneic episodes in the hour prior to KMC were excluded. Continuous oxygen saturation (SaO₂), heart rate (HR) and respiratory rate (RR) as well as body temperature were registered during KMC, and in the hour prior to KMC. The minimum duration of the KMC session was 90 minutes. Information regarding post conceptional age, weight, respiratory support, presence of central venous catheter and onset of sepsis within 72 hours after the procedure was collected. Two physicians, blinded to patient conditions and period of analysis (before or during KMC) evaluated desaturation episodes (SaO₂ <85%, >15 seconds), bradycardia (HR <100, >15 seconds), and apnea (pause in breathing > 20 seconds associated with desaturation or/and bradycardia). Wilcoxon signed-rank test was used for statistical analysis. The study was approved by the Local Ethics Committee.

Results

We analyzed 83 episodes of KMC for a total of 38 infants. Mean gestational age at birth was 29 weeks (range 23-33 weeks). Mean post conceptional age, days of life and weight at KMC were 31 weeks (range 25-34 weeks), 10 days (range 1-20 days) and 1131 grams (631-2206) respectively. Seventy-seven percent of patients were on respiratory support and 47% of patients had a central venous catheter (umbilical catheter or peripherally inserted central catheter) during KMC. Total duration of desaturation, total duration of bradycardia, number of apnea episodes and body temperature were not statistically different during KMC episode and the hour prior to KMC. No adverse events related to catheters were reported. One session was followed by sepsis.

Conclusion

KMC plays a key role in the care of the preterm infants, and deserves to be increasingly offered to infants and to their families. The results of this study should reassure health care professionals, highlighting the safety of the procedure in preterm infants and the possibility to perform KMC in an intensive care setting in the first weeks of life.

References:

1. Boundy EO, Dastjerdi R, Spiegelman D, Fawzi WW, Missmer SA, Lieberman E, Kajeepeta S, Wall S, Chan GJ. Kangaroo Mother Care and Neonatal Outcomes: A Meta-analysis. *Pediatrics*. 2016 Jan;137(1). DOI: <https://doi.org/10.1542/peds.2015-2238>
2. Shattawi KK, Al-Ali N, Alnuaimi K. Neonatal nurses' knowledge and beliefs about kangaroo mother care in neonatal intensive care units: A descriptive, cross-sectional study. *Nursing and Health Sciences*. 2019 Sep;21(3):352-358. DOI: 10.1111/nhs.12605
3. Park HK, Choi BS, Lee SJ, Son IA, Seol IJ, Lee HJ. Practical Application of Kangaroo Mother Care in Preterm Infants: Clinical Characteristics and Safety of Kangaroo Mother Care. *Journal of Perinatal Medicine*. 2014 Mar;42(2):239-45. DOI: 10.1515/jpm-2013-0066
4. Kommers DR, Joshi R, van Pul C, Atallah L, Feijs L, Oei G, Bambang Oetomo S, Andriessen P. Features of Heart Rate Variability Capture Regulatory Changes During Kangaroo Care in Preterm Infants. *Journal of Pediatrics*. 2017 Mar;182:92-98. DOI: 10.1016/j.jpeds.2016.11.059
5. Carbasse A, Kracher S, Hausser M, Langlet C, Escande B, Donato L, Astruc D, Kuhn P. Safety and Effectiveness of Skin-to-Skin Contact in the NICU to Support Neurodevelopment in Vulnerable Preterm Infants. *Journal of Perinatal and Neonatal Nursing*. 2013 Jul-Sep;27(3):255-62. DOI: 10.1097/JPN.0b013e31829dc349

Developmental Observer

A semi-annual publication of the NIDCAP Federation International ©2021. The statements and opinions contained in this newsletter are solely those of the individual authors and contributors and not necessarily of the NIDCAP Federation International. Articles from the *Developmental Observer*, duly acknowledged, may be reprinted with permission. Please contact us at: developmentalobserver@nidcap.org.

Senior Editor Kaye Spence AM

Associate Editors Diane Ballweg, APRN, CCNS, Deborah Buehler, PhD, Sandra Kosta, BA, Gretchen Lawhon, PhD, RN, FAAN, Maria Lopez Maestro, MD

Associate Editor for Science Jeffrey R. Alberts, PhD

Column Editor Debra Paul OTR/L



Contributions

We would like to thank all of our individual donors for their generous support of the NFI and its continuing work.

Recommended Standards, Competencies and Best Practices for Infant and Family Centered Developmental Care in the Intensive Care Unit

Browne J, Jaeger C, Spence K, Tyebkhan J, and the Gravens Consensus Panel

DOI: 10.14434/do.v14i1.31809

Background

The emphasis of newborn intensive care focuses on the physical care of the baby. The benefit of developmental care remains secondary, and the parents are often not integrated in the planning, education, decision-making, clinical implementation, and evaluation of their baby's care. However, developmental family centered care is evolving as an essential component of practice for newborns and their families who experience intensive care. Developmental practice currently lacks evidence based standardization and prioritization in order to affect collaborative practice standardization and ultimate outcomes. Consequently, education, communication and policies are inconsistent, and the transition of families to home is wrought with discontinuity.

Objective

A large body of research supportive of family centered developmental care practices and the resulting positive outcomes for infants and families has emerged. Examination of existing research and practices resulting in interprofessional standards, competencies and best practices is warranted.

Study Design

An interprofessional committee of experts and parents utilized a systematic review process to evaluate the quality and strength of credible evidence. The concept of infant and family centered developmental care was described, practice components were identified, and evidence based standards and competencies were articulated using a process of consensus approval.

Results

The Recommended Best Practices and Competencies for Infant and Family Centered Developmental Care (IFCDC) are the result of the consensus process, and are published (<https://nicudesign.nd.edu/nicu-care-standards/>). The components of IFCDC include: systems thinking, positioning and touch, sleep and arousal, skin-to-skin contact, reduction of pain and stress for infants and families, and feeding.

Implications for NIDCAP

The IFCDC document will assist in the provision of evidence for the on-going practices in newborn contexts within the NIDCAP model. An implementation strategy is required to enable competencies and best practices to be evaluated within each NIDCAP Training Center.

Conclusion

The successful utilization of IFCDC evidence based standards can integrate the family with the interprofessional team, standardize practice, improve outcome and complement NIDCAP implementation.

References:

1. Browne JV and the Consensus Committee on Infant Family Centered Developmental Care. Executive Summary: Standards, Competencies and Best Practices for Infant and Family Centered Care in the Intensive Care Unit. *Journal Perinatol*, 2020 Sep;40(Suppl 1):5-10. doi: 10.1038/s41372-020-0767-1.
2. Consensus Committee on Infant Family Centered Developmental Care. Report of the First Consensus Conference on Standards, Competencies and Best Practices for Infant and Family Centered Care in the Intensive Care Unit. February 2020. <https://nicudesign.nd.edu/nicu-care-standards/>
3. Consensus Committee on Infant Family Centered Developmental Care. Workshop: Recommended Standards, Competencies and Best Practices for Infant and Family Centered Care in the Intensive Care Unit. Gravens Conference on the Environment of Care for High Risk Newborns, Clearwater Beach, FL. March 4-7, 2020.
4. Consensus Committee on Infant Family Centered Developmental Care. Workshop: Recommended Standards, Competencies and Best Practices for Infant and Family Centered Care in the Intensive Care Unit. Gravens Conference on the Environment of Care for High Risk Newborns, Clearwater Beach, FL. March 6-9, 2019.
5. Consensus Committee on Infant Family Centered Developmental Care. Workshop: Recommended Standards, Competencies and Best Practices for Infant and Family Centered Care in the Intensive Care Unit. Gravens Conference on the Environment of Care for High Risk Newborns, Clearwater Beach, FL. February 28 - March 3, 2018.
6. Consensus Committee on Infant Family Centered Developmental Care. Workshop: Recommended Standards, Competencies and Best Practices for Infant and Family Centered Care in the Intensive Care Unit. Gravens Conference on the Environment of Care for High Risk Newborns, Clearwater Beach, FL. March 1-4, 2017.

Letter to the Editor

I can't thank you enough for giving me and Cyprus a place in the *Developmental Observer*. This article empowers all of us on the island who are working constantly to implement family centre care.

I also need to congratulate you as this issue has so much interesting and useful information on so many levels. It is definitely worth reading!

Pani Pantelides PT

*NIDCAP Professional
Consultant Neonatal Physiotherapist and
Early Intervention Specialist
Nicosia, Cyprus*

Kangaroo Care Practice during COVID-19 Pandemic in a Newborn Intensive Care Unit of a Middle-Income Country

Charafeddine L¹, Masri S¹, Maalouf F¹, Abi Farraj F², Haidar M³, Hamoud S³, Chemali Z³

¹ Department of Pediatrics and Adolescent Medicine, American University of Beirut Medical Center, Beirut, Lebanon

² Medical Student at the Faculty of Medicine, American University of Beirut Medical Center, Beirut, Lebanon

³ Nursing Services, American University of Beirut Medical Center, Beirut, Lebanon

DOI: 10.14434/do.v14i1.31810

Aims

Kangaroo mother care (KMC), the practice of skin to skin contact provided to preterm infants in addition to breastfeeding, supports parents and leads to earlier discharge from the hospital.¹ KMC is recommended for all clinically stable infants in the Newborn Intensive Care Unit (NICU) having been shown to improve infants' physiological stability, weight gain, mother-infant bonding, exclusive breastfeeding rates and newborn survival).²⁻⁵ In many NICUs, the COVID-19 pandemic has potentially jeopardized the practice of KMC where restricted visitation policies were adopted. Nevertheless, the American Academy of Pediatrics and World Health Organization (WHO) continue to recommend KMC and breastfeeding during this pandemic while taking appropriate precautions.^{6,7} The aim of the present study is to report the consequences of COVID-19 related visitation restrictions on the practice of KMC for infants ≤ 34 weeks during implementation of a quality improvement (QI) project promoting KMC in a NICU of a middle-income country.

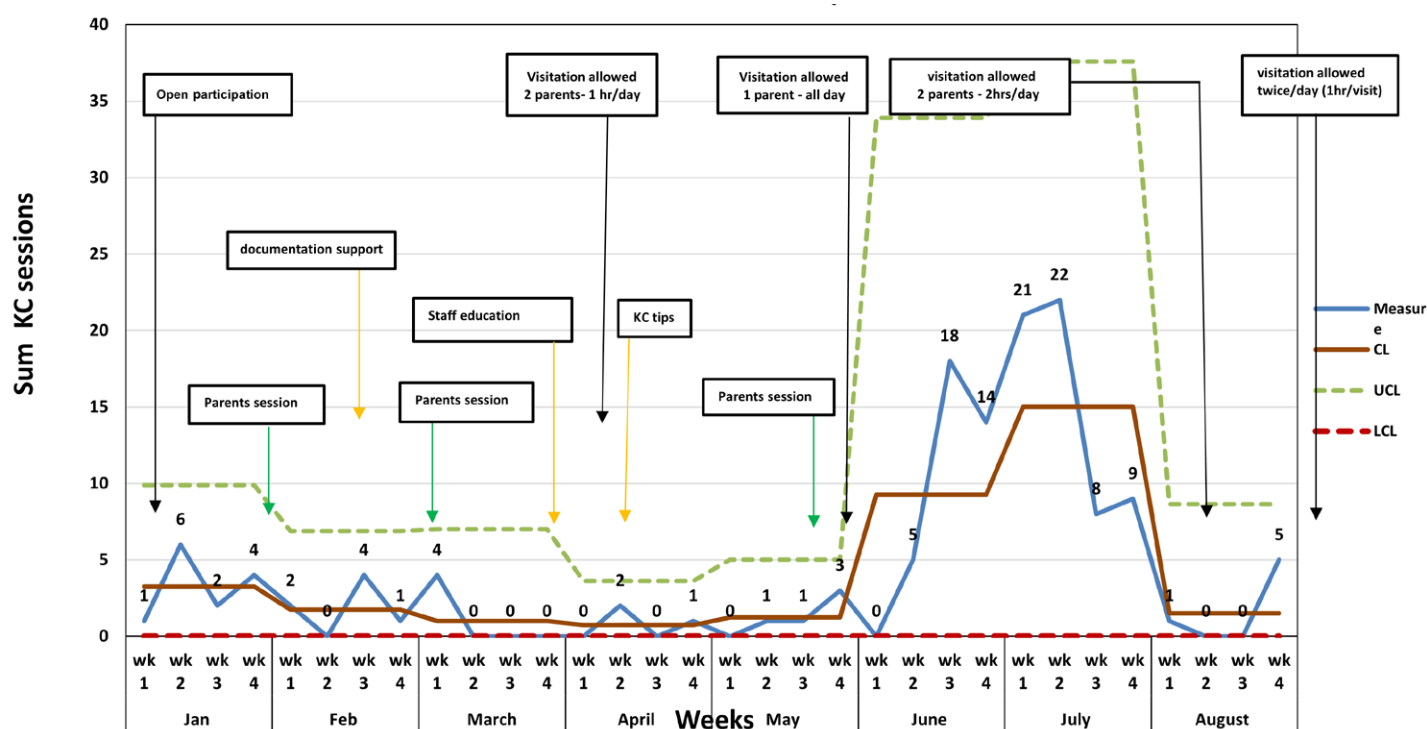
Methods

The QI, followed the Plan-Do-Study-Act (PDSA) methodology, and was initiated in October 2018 in a level IV NICU. The multidisciplinary QI team consisting of four NICU nurses, a neonatologist and a developmental care coordinator led the KMC implementation project. To increase awareness of KMC benefits among staff and parents, the team used an Arabic translation of the March of Dimes "Close to Me" education materials.⁸ The team held parent and staff education sessions, supported NICU nurses and parents in the practice of KMC, and posted KMC related tips in each NICU room. Documentation on KMC was noted to be deficient, which was targeted in one of the interventions.

The KMC practice was observed from January 2020 to August 2020. COVID-19 related participation restrictions were observed from April to August according to the hospital directions. The restrictions varied over time starting in March. At times, restrictions included prohibiting skin to skin and direct breastfeeding. During visits, each KMC session was considered as one occurrence per infant. Restrictions, variations and interventions over time are listed in the control chart. (Fig.1).

FIGURE 1. Control Chart

Sum of Kangaroo Care sessions for all infants per week



Results

The mean number of KMC sessions for infants ≤ 34 weeks was 2.5 sessions per month prior to visitation restrictions. After staff education, parent support sessions and later staff documentation, and after removing the restriction (June–July) the average sum of KMC increased to eight sessions per month.

Conclusion

Despite the participation restrictions, the KMC rate increased with time mainly due to parents' determination to visit their infants and spend this time more efficiently. The interventions performed by the KMC QI team seemed to improve the rates of KMC at our institution especially during the adverse times relating to the COVID-19 pandemic.

Lessons Learned

Many inevitable measures affected this QI process namely the variation in the restriction measures and scarcity of nurses' documentation. These are two main challenges that need to be addressed in the next PDSA cycle.

References

1. World Health Organization, Dept. of Reproductive Health and Research. Kangaroo mother care: a practical guide. ISBN: 9241590351, WHO reference number: WS 410 2003KA. https://www.who.int/maternal_child_adolescent/documents/9241590351/en/
2. Campbell-Yeo M, Disher T, Benoit B, Johnston C. Understanding kangaroo care and its benefits to preterm infants. *Pediatric Health Med Ther*. 2015;6:15-32. doi: 10.2147/PHMT.551869
3. Mazumder S, Taneja S, Dube B, Bhatia K, Ghosh R, Shekhar M, et al. Effect of community-initiated kangaroo mother care on survival of infants with low birthweight: a randomised controlled trial. *Lancet*. 2019; 394(10210):1724-1736. DOI: 10.1016/S0140-6736(19)32223-8
4. Manazir Ali S, Sharma J, Sharma R, Alam S. Kangaroo mother care as compared to conventional care for low birth weight babies. *Dicle Medical Journal/Dicle Tip Dergisi*. 2009; 36(3):155-160.
5. Conde-Agudelo, A., J.M. Belizán, and J. Diaz-Rossello. *Cochrane Review: Kangaroo mother care to reduce morbidity and mortality in low birthweight infants*. Evidence-Based Child Health: A Cochrane Review Journal, 2012. 7(2): p. 760-876. <https://doi.org/10.1002/ebch.1837>
6. FAQs: Management of Infants Born to Mothers with Suspected or Confirmed COVID-19 [Internet]. Services.aap.org, 2020 [cited 15 July 2020]. Available from: <https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/faqs-management-of-infants-born-to-covid-19-mothers>
7. Q&A: breastfeeding and COVID-19 [Internet]. Who.int. 2020 [cited 15 July 2020]. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/q-a-on-covid-19-and-breastfeeding>
8. Cooper, L., et al., Close to me: enhancing kangaroo care practice for NICU staff and parents. *Advances in Neonatal Care*. 2014. 14(6): p. 410-423. DOI: 10.1097/ANC.0000000000000144

The Gold Standard for Excellence in Newborn Individualized Developmental Care

What All Newborn Infants and Their Families Deserve

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 the only comprehensive, family centered, evidence-based approach to newborn developmental care. NIDCAP focuses on adapting the newborn intensive care nursery to the unique neurodevelopmental strengths and goals of each newborn cared for in this medical setting. These adaptations encompass the physical environment and its components, as well as, the care and treatment provided for the infant and his or her family, their life-long nurturers and supporters.

Assessment of Preterm Infants' Behavior (APIB)

The Assessment of Preterm Infants' Behavior (APIB) (Als et al., 1982) is a comprehensive and systematic research based neurobehavioral approach for the assessment of preterm and fullterm newborns. The APIB provides an invaluable diagnostic resource for the advanced level clinician in support of developmental care provision in a nursery.

NIDCAP Nursery Program

The NIDCAP Nursery Program provides a comprehensive resource for the self-evaluation by a nursery system of its strengths and goals for integration of NIDCAP principles into all aspects of their functioning. Highly attuned implementation of NIDCAP care for infants and their families, as well as for the staff, in a developmentally supportive environment is a goal as well as a process. External review and validation by the NFI may be sought when a nursery feels it has achieved this distinction. Nurseries that have achieved NIDCAP Nursery certification serve as a model and an inspiration to others. For information on the nursery self-assessment resources as well as the certification process and its eligibility requirements, please see: www.nidcap.org; and/or contact Rodd E. Hedlund, MEd, NIDCAP Nursery Program Director at: nidcapnurserydirector@nidcap.org or 785-841-5440.

Understanding Sleep States

Dyck N^{1,2,3}, Warren I⁴, Tyebkhan J^{1,2,3}

¹ Stollery Children's Hospital, Edmonton Alberta, Canada

² University of Alberta, Edmonton, Alberta, Canada

³ Edmonton NIDCAP Training Centre Canada (ENTCC), Edmonton, Alberta, Canada

⁴ University College London Hospital, London, UK

DOI: 10.14434/do.v14i1.31811

Aims

Understanding sleep states is critical in the interpretation of infant observations. Conversations with NIDCAP and APIB Professionals and Trainers revealed that sleep state recognition can continue to be challenging post-training.

Sleep is essential for healthy neurodevelopment and recent research on fetal and preterm sleep has expanded our understanding of sleep states, including the category of Indeterminate Sleep (INDS).¹ The aim of this survey of NFI members was to explore areas of consistency and discrepancy in the clinical recognition of sleep states.

Methods

An online, anonymous survey was emailed to the NIDCAP Federation International (NFI) Membership. The survey asked respondents to identify clinical features of Quiet Sleep (QS), Active Sleep (AS) and Indeterminate Sleep (INDS). Respondents were asked to rank clinical signs in terms of the importance of each as a defining feature of that Sleep State (i.e. Is this clinical sign "Never / Occasionally / Usually / Always" seen, during this sleep state). Respondents were invited to add comments and to suggest references.

Responses were automatically collated by survey software (Google Forms). The response categories Never and Occasionally were combined manually, as were the categories Usually and Always. Given the questions asked and number of responses received, formal statistical analyses were not conducted.

Results/Findings

39 responses were received, (17 from NIDCAP Trainers and 17 from NIDCAP Professionals). Please see Table 1 for details. QS was recognized by almost all as "Regular breathing; No / Occasional eye opening / closing, eye movements or body movements". Six respondents added "Lower heart rate with minimal variability".

AS was recognized by most as "Irregular breathing; eye movements usually/always present, eye opening/closing occasionally present". Nine respondents added "facial movements and sucking". There was less consistency of response for Body Movements and Startles/Twitches.

INDS: 19/38, (including 5/17 NIDCAP Trainers) stated that they distinguish INDS, from QS and AS. INDS was recognized by most as "Irregular breathing". However, there was no consistency for Eyes Opening/Closing, Eye Movements, Body Movements or Startles/Twitches. Comments suggest that there is discrepancy about recognition of INDS. 19/38, (including 12/17 trainers) stated that they do not distinguish INDS, from QS and AS. Reasons included: not an option on NIDCAP observation

sheet (12); not part of my training (7); not familiar with INDS.

In response to "At what gestational age (GA) does QS time equal AS time?", the median GA was 40w, range 32w to 1 year of age (n=28). Comments suggested that this GA may be dependent on GA at birth, and/or the caregiving environment.

Many other text responses highlighted points for deliberation, which we hope to present and discuss at the Annual NIDCAP Trainers Meeting 2020.

The most frequently recommended introductory reference was Graven and Browne 2008² (8/23 responses). There was no consensus for more detailed, in-depth references.^{1,3}

Limitations

The response rate was 39 of 242 (16%) NFI members, and 17/45 Trainers (38%), limiting generalizability of results. This survey was not pre-piloted, and some respondents made us aware of ambiguities of wording, that might have led to differing interpretations of questions.

TABLE 1. Results

QUIET SLEEP (n = 38)	Never/Occasionally	Usually/Always
Regular breathing	3	35
Irregular breathing	34	2
Eye movements	34	3
Eyes opening/closing	36	0
Body movements	35	1
Startles/ Twitches / Tremors	32	6
ACTIVE SLEEP (n = 38)	Never/Occasionally	Usually/Always
Regular breathing	32	4
Irregular breathing	6	32
Eye movements	3	34
Eyes opening/closing	26	12
Body movements	14	24
Startles/ Twitches / Tremors	20	18
INDETERMINATE SLEEP (n = 20)	Never/Occasionally	Usually/Always
Regular breathing	18	1
Irregular breathing	5	15
Eye movements	12	8
Eyes opening/closing	12	8
Body movements	11	9
Startles/ Twitches / Tremors	12	8

Conclusion

1. NIDCAP Trainers and Professionals are consistent in their clinical recognition of QS and AS.
2. Indeterminate Sleep (INDS) is not distinguished from QS and AS by many, possibly because they were not taught about INDS, and/or INDS is not an option on the NIDCAP Observation sheet. Considering the role that sleep plays in neurodevelopment we suggest that INDS be incorporated into Training Materials and into NIDCAP Observation.
3. There is little agreement about the age at which total QS equals total AS. Since this may be related to the infant's

experience and has significance for neurodevelopment, this topic deserves further research.

References:

1. Dereymaeker A, Pillay K., et al. Review of sleep-EEG in preterm and term neonates, *Early Human Development*. 2017, 113:87-103. DOI:10.1016/j.earlhumdev.2017.07.003
2. Graven SN, Browne J. Sleep and Brain Development: The Critical Role of Sleep in Fetal and Early Neonatal Brain Development. *Newborn and Infant Nursing Reviews*. 2008, 8(4):173–179. DOI:10.1053/j.nainr.2008.10.008
3. Bennet L, Walker DW, Horne RSC. Waking up too early – the consequences of preterm birth on sleep development. *Journal of Physiology*. 2018, 596(23):5687-5708. DOI: 10.1113/JP274950

31st Annual NIDCAP Trainers Meeting held virtually 21st – 23rd October 2020

A few comments from the evaluation:

168 delegates attended
from every NIDCAP
Training Center

The virtual format
was successful and very
much appreciated

The prerecorded sessions
worked well

Shorter days
seemed as
productive
as full days

NFI Membership
meeting was good
and informative

Moderators
were excellent

Time zones were
challenging

Abstract Session topics were
interesting, showed some
international differences

Pearls of Wisdom, personal story
telling, abstracts and journal club
continue to be very popular

Explore opportunities to
translate some presentations
in advance



Becoming Parents in NICU During the COVID-19 Pandemic: Challenges and Opportunities

Ancora G, Simeone N.

Neonatal Intensive Care Unit, AUSL Romagna, Infermi Hospital, Rimini, Italy

DOI: 10.14434/do.v14i1.31812

Background

During the COVID-19 pandemic many hospitals in Italy restricted parental access to Newborn Intensive Care Units (NICU). In the best of cases parents have been allowed to stay with their babies only one parent at a time, wearing face masks. Fathers were mostly hampered by the restrictive visiting policies, although their role in providing emotional support to mothers is well recognized. In addition, a good relationship between fathers and newborns will improve children's ability to regulate their emotions and impulses.

Aims/Purpose

To report challenges and opportunities in performing Family Centered Care in a level III Italian NICU during the COVID-19 pandemic outbreak.

Methods

During the lockdown period the level III NICU in Rimini remained open for parents 24 hours a day. As opposed to the pre-COVID-19 period, only one parent could take care of their baby at a time and were asked to wear a face mask. This new policy became necessary because of legislative and logistic reasons (eg., very small spaces in the Unit). To cope with the new situation we put in place several strategies: empowering parents; regular multidisciplinary meetings with both parents; staff support by means of weekly staff briefings and the administration of a symptom checklist to the healthcare team before and after a mindfulness intervention performed prior to the COVID-19 pandemic, and re-administered during the pandemic outbreak; early hospital discharge including home visits. Non-structured interviews of fathers were also performed by a NIDCAP professional to explore father's feelings.

Results

During a two-months period (March-April 2020) eight VLBW infants (Birthweight 943±341 grams, Gestational Age 26±2 weeks) were admitted to the NICU. Parents origin was heterogeneous: two from Italy, one from Albania, one from France, one from Senegal, one from China, and two from Brazil. All mothers practiced skin-to-skin contact (SSC) with their babies, initiated at 9±6 days; 6/8 fathers initiated the SSC at 13±6 days. Moreover, all fathers and mothers performed daily care for their babies (eg., tube feeding, nappy change). Fathers' interviews unveiled a loving engagement with their babies (*"At the beginning I was loath to touch my baby, but now I enjoy physical contact with him. I am also able to manage the nasal prongs. Now, I'd like to stay always in SSC, because it gives me a sense of safety and helps me to*

prepare to go home with him"; "Taking care of him helps me to be in tune with nurses"; "I'm happy to stay in SSC with my daughter, if I could I'll do it continuously. I love to give her a delicate massage behind the ear"). The symptom checklist administered to the healthcare team showed that the interventions was efficacious in reducing the anxiety score which remained stable during the COVID-19 period.

Conclusion

During the COVID-19 pandemic, missing facial expressions because of facial masks, made it difficult to modulate verbal communication with parents and to interpret parents' reaction to communication; moreover, at the bedside, parents were alone in communicating with the staff, without the support of their partner, feeling the emotional burden of reporting updates about the baby to the whole family. This led to a higher degree of uncertainty, fragility, and lack of confidence among parents. Despite this, both parents became involved in their baby's care and staff did not show increased levels of stress during this period. Coping strategies implemented in the Unit could have contributed to these results. Moreover, during the COVID-19 period, fathers, without the mother's presence, took up the challenge of taking care of their babies as primary caregivers. In conclusion, staff/parent partnerships, in challenging situations, can produce surprising opportunities for families.

References:

1. Lavizzari A, Klingenberg C, Profit J, Zupancic JAF, Davis AS, Mosca F, Molloy EJ, Roehr CC, and The International Neonatal COVID-19 Consortium. International comparison of guidelines for managing neonates at the early phase of the SARS-CoV-2 pandemic. *Pediatric Research*, Published: 15 June 2020. DOI: 10.1038/s41390-020-0976-5
2. O'Brien K, Robson K, Bracht M, Cruz M, Lui K, Alvaro R, Da Silva O, Monterrosa L, Narvey M, Ng E, Soraisham A, Ye X Y, Mirea L, Tarnow-Mordi W, Lee S, and the FICare Study Group and FICare Parent Advisory Board. Effectiveness of Family Integrated Care in neonatal intensive care units on infant and parent outcomes: a multicentre, multinational, cluster-randomised controlled trial. *Lancet Child Adolescent Health*. 2018 Apr;2(4):245-254. DOI: 10.1016/S2352-4642(18)30039-7.
3. Fishera D, Khashuef M, Adamab EA, Feeley N, Garfield CF, Irelande JF, Kolioulig F, Lindbergh B, Norgaardi B, Provenzi L, Thomson-Salok E, van Teijlingen E. Fathers in neonatal units: Improving infant health by supporting the babyfather bond and mother-father coparenting. *Journal of Neonatal Nursing*. 24 (6), 306-312. DOI: 10.1016/j.jnn.2018.08.007

SAVE THE DATES

The 32nd Annual NIDCAP Trainers Meeting Virtual Meeting

October 20–22, 2021

Check the NFI website for further details.
www.nidcap.org

A Quality Improvement Project for Non-pharmacological Pain and Stress Management

Akyempon AN¹, Hicks B², Warren I³

¹ Department of Neonatology, Homerton University Hospital, London

² Isle of Wight NHS Trust

³ Department of Neonatology, University College London Hospital, London

DOI: 10.14434/do.v14i1.31813

Background

Innovations, step three in the FINE training pathway¹ for infant and family centred developmental care, explores systems organisation, and includes a quality improvement project to give students experience of change management processes. This project took place in a Level III NICU in a large urban centre with supervision from senior FINE faculty with change management experience.

Aim

Hospitalised preterm and sick infants are exposed to many painful and stressful events. Repeated pain and stress may have long-term consequences for neurodevelopment² and in many situations non-pharmacological interventions are the first line of protection.³ This project aimed to improve the use of non-pharmacological pain and stress management strategies by 50% over a period of 6 months (July – December 2019) using the Evaluation of Intervention (EVIN)⁴ scale to train staff and evaluate practice.

Methods

The project was carried out in an eight bed high dependency unit with three to four nurses attending per shift. The project lead (who had completed FINE 2) trained a core team of FINE 1 educated staff to score the EVIN at the bedside. The EVIN measures the quality of non-pharmacological pain management during caregiving or medical procedures. Inter-rater reliability was checked. The selected intervention was heel lancing which was the most used method of blood sampling in both term and preterm newborn infants.

The project applied the Plan-Do-Study-Act (PDSA)⁵ cycle to bring about the desired improvement in the use of non-pharmacological interventions. Several plans for the project were modified after consultation with the FINE supervisors.

PDSA1 (April 2019): Baseline data was collected using EVIN scores for 20 heel prick or lancing episodes performed by nurses or doctors. Over two weeks the project lead and core team trained staff to use the EVIN with observation and scoring at the bedside or during simulations.

PDSA 2 (July 2019): Four weeks post training EVIN scores were again collected by core members working in pairs. Following this a second PDSA cycle was initiated with more training, engagement of parents, feedback, and campaigning.

PDSA 3: (December 2019): Further data was collected, evaluated, and disseminated. The Hospital Quality Improvement Team advised that the project be expanded to

involve the whole of the Neonatal Unit (46 beds: 16 Newborn Intensive Care Unit, 8 High Dependency Unit, 22 Special Care Baby Unit). Training sessions have now captured most of the nurses in unit. The EVIN will be incorporated into the unit pain management guideline entrusted to the project lead.

Results

An EVIN score of >85% indicates best practice and < 70% indicates poor practice. Average EVIN scores improved from 65% (poor) at baseline, to 71% (intermediate) at the mid-point and 87% (best practice) at the PDSA³ evaluation. The percentage of improvement in best practice scores increased from 0% at baseline to 59% at PDSA.³ Areas that showed the most improvement were rest before procedures, pacing of the procedure and facilitation of self-regulation. Areas identified for further improvement were provision of a sweet oral solution for painful procedures, support from a second person and facilitation of sucking.

Conclusion

A pilot quality improvement innovation project performed in the framework of FINE 3 training, improved standards of non-pharmacological pain management and was adopted as a model for achieving wider changes across all levels of care in a busy Level III neonatal unit. The EVIN proved to be a practical tool for training and evaluation of practice.

Relevance to NIDCAP

FINE 3 is part of an educational pathway that is endorsed by the NFI as foundations in NIDCAP education. The experience offered in FINE 3 shows promise as a way to nurture change management skills that could be applied either before, or even after, NIDCAP training.

References:

1. Warren I, Mat-Ali E, Green M, Nyathi D. Evaluation of the Family and Infant Neurodevelopmental Education (FINE) programme in the UK. *Journal of Neonatal Nursing* 2019,25(2):93-98. DOI:10.1016/J.JNN.2018.11.004
2. Brummelte S, Grunau RE, et al. Procedural pain and brain development in premature newborns. *Annals of Neurology* 2012,71(3):385-96. DOI: 10.1002/ana.22267
3. Pillai Riddell R, Racine N, et al. Non-pharmacological management of infant and young child procedural pain. *The Cochrane Database of Systematic Reviews* 2011, Issue 10. Art. No.: CD006275. DOI: 10.1002/14651858.CD006275.pub2
4. Warren I, Hicks B, Kleberg A, Eliahoo J, Anand KJS, Hickson M. The validity and reliability of the Evaluation of Intervention Scale: preliminary report. *Acta Paediatrica* 2016,105(6):618-22. DOI: 10.1111/apa.13370
5. Donnelly P, Kirk P. Use the PDSA model for effective change management. *Education for Primary Care* 2015,26(4): 279-81. DOI: 10.1080/14739879.2015.11494356

Little Readers Read-A-Thon: An initiative of the Australasian NIDCAP Training Centre and Life's Little Treasures Foundation

In 2020, staff working in Special Care Nurseries (SCN) and Newborn Intensive Care Nurseries (NICUs) worldwide were invited to participate in the Little Readers Read-A-Thon. Reading to babies every day supports development not only in the NICU, but also going into early infancy and childhood. Babies enjoy hearing their parent's voice over any other sound, and perhaps what's more important is that it is an activity that parents can do every day for their baby during a time when many feel helpless in an intense and often stressful environment. Reading is also linked to improved language and writing abilities at school age, so it's never too early to start. We encourage you to join our Little Readers Read-a-thon.

The Little Readers Read-a-thon is endorsed by the NIDCAP Federation International.

Dates for 2021 are 6-17 September. Check website for details - <https://lifeslittletreasures.org.au>



Little Readers Read-A-Thon Winner 2020

Theresa Gisondi BSN, RN, Assistant Nurse Manager, Special Care Nursery

The Andrew Tesaro's Special Care Nursery (SCN) at Abington-Jefferson Health in Pennsylvania, USA was thrilled to participate in the Little Readers Read-A-Thon in September of 2020. Our Clinical Nurse Scientist, Dr. gretchen Lawhon, brought this event to our attention and we recruited nursing volunteers to plan the event.

Our first step in planning the Read-A-Thon was to involve the community by requesting book donations. We posted our advertisement for book donations throughout the hospital as well as on the Newborn Special Care Associates Facebook page. During the Read-A-Thon, we received approximately 400 books that were used for Read-A-Thon "starter packs" that included five books, education on the importance of reading to infants, a handmade bookmark, and hand sanitizer to stress the importance of hand hygiene. In addition to the Read-A-Thon starter packs, we gave out books throughout the event and used some for prizes at the end. We continue to receive donations which allows us to have a robust library from which we continue to give books to our parents and promote reading to babies in the SCN.

To keep the momentum going during the Read-A-Thon, we created a goal of 5,000 minutes of reading and updated our



The SCN staff putting together the Read-A-Thon starter packs



The SCN staff celebrating the win in front of the new library. From Left to Right: Megan Marcinek, Shannon Macort, Casey Carr, Theresa Gisondi, Lauren Katcher, Jeannine Hoffman.

Read-A-Thon “Minute Tracker” every day. The Minute Tracker, which stood at the entrance of the SCN, was a handmade meter that tracked the number of minutes spent reading. It provided a visual reminder to the parents of our goal and how many minutes were still needed. We ended the Read-A-Thon with 5,344 minutes and surpassed our goal.

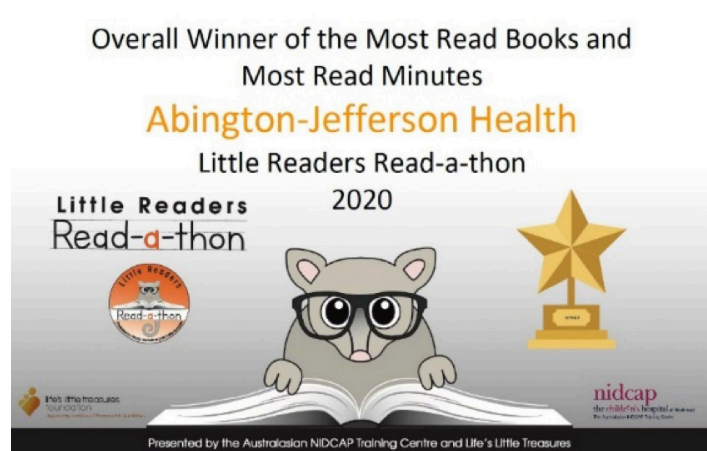
The passion and time the staff put into this event made it successful. They came in on their own time and put together the starter packs, designed the advertisements, and took time themselves to read to all the babies. The nurses described

the Read-A-Thon as empowering for our parents, as they felt they were making a positive impact on their child. It was heartwarming to walk through the unit and see parents interacting and reading together to their infant. One of the families who participated in the Read-A-Thon told us weeks later that they continue to read to their infant every night because of the Read-A-Thon.

Winning the Read-A-Thon was very exciting because we knew we did the best we could for our families. We did not know what to expect going into the event, but now seeing all the good that has come from it, we will continue this annual tradition. We are honored to be able to participate with hospitals around the world and promote this simple, yet impactful intervention in the SCN.



Family participating in Read-A-Thon. (Used with permission)



The winner's certificate



Global Perspectives of Developmental Care - SERBIA

Milica Rankovic Janevski, MD, PhD

Institute of Neonatology, Belgrade, Serbia

DOI: 10.14434/do.v14i1.31817

Serbia, officially the Republic of Serbia, is a landlocked country situated at the crossroads of Central and Southeast Europe in the southern Pannonian Plain and the Central Balkans. Serbia has a population of seven million people, with 65,000 newborn deliveries per year. The incidence of preterm births is about 7%. Belgrade, the capital city with two million inhabitants, has five maternity hospitals.

The Institute of Neonatology in Belgrade, is the largest neonatal unit in Serbia. The neonatal hospital has 160 beds, 313 employees, 42 medical doctors (30 neonatologists), and 209 neonatal nurses. There are five neonatal wards, one being the newborn intensive care unit (NICU) classified as a level IIIb with 22 beds. The Institute has approximately 900-950 admissions per year, (preterm and high-risk newborns), from 52 delivery facilities located all over the country. More than 60% of the babies require intensive care.

In an attempt to improve the outcome of newborns, as well as increasing our professional expertise, our Institute team chose to learn more about developmental care. In 2007, we started communication with the **UK NIDCAP Training Centre** in London. In 2008, Inga Warren, a NIDCAP Trainer, visited our Institute, conducted a study day, and consulted with our team members. As a result of our meetings, we set short-, medium- and long-term goals. By 2010, the majority of the tasks were completed, predominantly the short- and medium-term goals. We worked to turn the hospital into a more home-like environment for the babies. We introduced colorful bedding, improved positioning, started to encourage talking to the babies, and started using more shades and incubator covers. In addition, we started paying more attention to the environmental noise, we bought some Snoedel dolls, and made some shelves for the equipment. Two separate rooms for Kangaroo Mother Care were opened.

The rooms for **Kangaroo Mother Care (KMC)** were created as a place for skin-to-skin holding as well as a place where families could have privacy in a homey atmosphere. Parents' reactions to this were fantastic. Their satisfaction was visible – they described that they felt they were being treated as a family with understanding, attention, and respect, and they responded to the health care professionals in the same way. The parents started offering donations and asking how they can help the hospital. Very soon, the two rooms were not enough because they were occupied all the time! Actually, KMC was a turning point for



the nursery. They contributed very much to parents' encouragement and satisfaction. This had an impact on the parent – doctor relationship and contributed a lot to appreciation of the program among colleagues. We set up a **NIDCAP team** with six members, including: a neonatologist, a psychologist, a physiotherapist, NICU nurses and a respiratory therapist. In December 2010, two nurses became NIDCAP trainees under the UK NIDCAP Training Centre.

The Institute of Neonatology started the *Partnership with Parents for Better Outcome* project, which includes NIDCAP, KMC and introduced an open-door policy with daily 12 hour access for parents and families. All of these initiatives were approved by the Institute's Advisory and Management Board.

NIDCAP team members gave lectures, held presentations on NIDCAP and KMC in seminars and meetings for neonatologists and neonatal nurses. Several articles were published in the magazine for young parents *A Parent and a Child*. Team members were invited to speak about this new newborn care method on several television shows on different channels. One of the shows even sparked the creation of *The Battle for the Babies* campaign, which aimed to raise funds for one hundred incubators for the babies in Serbia. The result was not one hundred, but rather the donation of more than two hundred incubators. Early on the equipment for developmental care was not available in Serbia, such as reclining chairs for skin-to-skin contact, incubator covers, sound ears, nests and rolls for positioning, small pacifiers, small diapers and even small clothes for preterm and tiny babies. A lot of effort has been made to make it available, and today it is in use.

The opportunity of meeting the **European Foundation for the Care of Newborn Infants' (EFCNI)** Executive Board Chairwoman, Silke Mader, further helped raise awareness for the needs of preterm babies across the country. Very soon the **Serbian Preterm Infants' Parents Association Little Giant** was established. This organization became a member of the EFCNI and started a close cooperation. Celebration of the **World Prematurity Day** was initiated, first in Belgrade, and now all across Serbia. It has been a special privilege for us, and our work was to be included, as a Topic Expert group members, in the work on **Standards of Care for Newborn Health**, issued by the EFCNI.

The Institute of Neonatology has two NIDCAP professionals, and, considering the duration and complexity of NIDCAP training and education, together with the size of the hospital



The first family and first skin-to-skin contact in the newly opened KMC room. Photo taken by father (art photographer) Ivan Jekic, seen in the mirror.

and its number of staff and babies, we considered trying a less demanding form of education, named Practical Skills. Six nurses successfully completed the Practical Skills education, and we organized workshops for all the wards, to spread the basic knowledge and enable easy and successful implementation of developmental care. Later *Practical Skills* evolved into the **Family and Infant Neurodevelopmental Education (FINE)** programme. It seems that we were among the pioneers.

Our Institute has been involved in a number of additional related efforts: In collaboration with the **International Association for Infant Massage (IAIM)**, ten nurses completed the education, so that our Institute could offer education in baby massage to the parents, prior to or soon after discharge, in an effort to support emerging relationships and close contact between the babies and their parents; Two medical doctors were educated for **Bayley Scales of Infant and Toddler Development, (Bayley-III)** for further follow up of the hospitalized babies; Another equal achievement is that we actively participated in the Project of the **European Milk Bank Association (EMBA)** on Recommendations for the Establishment and Operation of Human Milk Banks in Europe: A Consensus Statement From EMBA. Breastfeeding and Milk Banks are closely connected to the developmental care; and **UNICEF in Serbia** showed interest in our work, and the Institute. In cooperation with UNICEF, workshops in developmental care were organized in all the regional medical centers in Serbia.

As all our activities, and especially the new method of NIDCAP care, became increasingly known, the members of the NIDCAP team were invited to share their knowledge and experience. They have given presentations and organized

workshops in several maternity and childrens' hospitals in Belgrade, other cities in Serbia, and even in the greater region.

There is, of course, still a lot of space for further education on developmental care in Serbia. Perhaps the FINE programme should be considered for the beginning, and NIDCAP as the next step for those more interested and willing to get involved in greater depth. Funding for education in developmental care is still a challenge that has to be resolved and where we constantly seek support.

We are very proud of the fact that our Institute and our country were the first in the region (Serbia also being eighth in Europe) to begin NIDCAP education and implementation. We started the education in NIDCAP in an attempt to expand our knowledge and improve the care and outcome of the babies at the Institute. Though honestly, the result was incomparably higher. Newborn care in hospitals has been improved all over the country, providing tangible, measurable results. And above all, the awareness of the specific needs and the interest in the wellbeing of preterm babies and their families has been elevated to a much higher level. This gives us all a strong encouragement to continue on the same path with equal effort and passion.



Mission

The NFI promotes the advancement of the philosophy and science of NIDCAP care and assures the quality of NIDCAP education, training, mentoring and certification for professionals, and hospital systems.

Adopted by the NFI Board, July 1, 2019

Vision

The NFI envisions a global society in which all hospitalized newborns and their families receive care in the evidence-based NIDCAP model. NIDCAP supports development, enhances strengths and minimizes stress for infants, family and staff who care for them. It is individualized and uses a relationship-based, family-integrated approach that yields measurable outcomes.

Adopted by the NFI Board, October 20, 2017



The journey of having an infant in the intensive care setting is a life altering event; one that many parents are not anticipating and will not soon forget. COVID-19 and the challenges associated with it have had a profound impact on infants and families whose life starts in the NICU. We have heard from our NICU colleagues across the world regarding policy changes in the face of the pandemic including restrictions in parents being with their infant which of course, has compounded the overwhelming stress and sadness parents experience. In this article, Lindsay Gilmore shares the story of her family's experience in the NICU at the onset of the pandemic and how they navigated it with courage and hope.

Heartbreak and Hope during the Pandemic

Lindsay Gilmore

DOI: 10.14434/do.v14i1.31814

Our pregnancy story begins as most do. Kyle and I became pregnant just a few months after officially deciding that we were ready for the new adventure of a child. We felt overly excited despite the typical dose of apprehension. My pregnancy consisted of the average morning sickness, body aches, and back pain; without fail all my symptoms were affirmed by the pregnancy apps that I would reference religiously. What was not average was the rise of a pandemic in my third trimester, one we have now all been impacted by in countless ways. At first, for us, this simply meant that we could hunker down together at home. I could do my best to teach middle schoolers online and my husband was being paid to stay home for a short time from his government job. This allowed us to do slow jogs together, cook yummy food, and prepare the nursery for the arrival of our sweet baby. We both felt quite happy in our new quarantine and I felt lucky for the chance to succumb to my aching and tired limbs. On April 1st, 2020, week 31 of pregnancy, we had a perfectly routine ultrasound, except for the new personal protective equipment (PPE) that our doctors and nurses were brandishing, of course. It was just two days later that the pregnancy took a startling turn.

The baby inside of me, which we had yet to know was a boy or a girl, was quite the acrobat. Our baby moved predictably, and I could trust that around 7:30 each evening I would feel a flurry of movement. I will always be so grateful for this predictability, as it is one of many things that would come to save the life of our sweet baby girl. Come Thursday evening, I didn't feel the baby move as I typically would, but I did feel a series of irregular Braxton Hicks contractions. I assumed that the lack of fetal movement was simply replaced by another typical sensation. The next day, while remote teaching on Zoom (video conferencing), I recall pausing to notice and wonder what was keeping my baby so quiet, as I had yet to feel any noticeable movement that day. While I knew that fetal movement often decreased later in term, I nevertheless felt unsettled about the lack of motion. Something didn't feel right. The day went on as I played mental ping pong, alternating between feeling as if I was being overly dramatic, and then feeling genuinely concerned. Come nine pm that night, after trying everything Google told me to-- jumping jacks, chocolate milk, a bright light, talking loudly, glass after glass of



Nearing the end of our NICU journey at 40 weeks.

juice, I still felt nothing and finally decided to call my provider. Thankfully, the on-call obstetrician (OB) that night listened intently and wasted no time validating my concern. Her responsiveness was yet another life saving measure. She later told me that knowing what she knows now, she guesses that our baby girl had only about two more hours of life left in utero, had we not quickly found her a way out.

The next few hours were spent getting checked in to the local hospital and assessing the situation. What Kyle and I deemed routine protocol, ultimately led to the appearance of my OB and a team of nurses, dressed for surgery. Typically, medical emergencies would be flown down to Denver, as we were in a small mountain community without the same level of care,

but it was decided that our baby was in immediate danger and we didn't have the necessary time for travel. Instead, Kyle and I were informed that a Children's Hospital Colorado NICU Flight team would arrive to meet our baby upon birth. At 1:51 am on April 3rd, Luka Lorene, was born extremely ill at 3 pounds, 5 ounces (1587 gram). With a low hematocrit of 6 (g/DL) and a low hemoglobin of 2, (g/DL) she had an acute loss of blood and oxygen. As it turns out, the NICU Flight team was significantly delayed due to weather, and so the team at our local hospital stepped up and helped to maintain our daughter's life. After an incredibly traumatic few hours, the NICU team arrived and Luka was finally transported down to the Children's Hospital in Aurora, Colorado. Kyle left to meet Luka as she arrived at the hospital, and our NICU journey began.

The next 24 hours were the most difficult of our lives as we fielded conversations about how sick our daughter was and heard expectations of her outcomes-- these were face to face conversations for Kyle, and communicated over the phone to me, as I remained in a different county. There was immediate confusion about why Luka was so sick and what went so wrong in utero. As there was no obvious explanation, doctors wondered if perhaps COVID-19 was to blame. She and I were tested but had to wait some time for results. When we received word that Luka wasn't expected to make it through the night, there was back and forth discussions about whether or not it would be safe for me to be reunited with her. A plan was made to discharge me under the premise that I was infected with COVID-19, and so I left in the hands of my parents to be driven to Denver 15 hours after my emergency C-Section. I arrived at the "dirty hall"-- the space that was reserved for those suspected of COVID-19 and took in the harsh sights and sounds of the NICU. The following hours continued to be a blur, but it was a comfort to touch the arms and legs of my sweet girl through the plastic walls of her isolette. The myriad of bells and alarms continued to ring in our ears as we watched many people come in and out of the room, managing the countless wires and tubes coming from her body and at times, attending to us. At the time, I didn't know who these people were, but I now know it was her exceptional team of doctors, nurses, respiratory therapists, ultrasound techs, nurse practitioners, social workers, specialists, and the like. It looked as



Luka at 5 months, celebrating being oxygen free by going on her first camping trip!

if we were in outer space, as they had PPE from head to toe and this being early April, not even masks felt commonplace. It was all so out of body, and beyond terrifying.

Being the fighter she is, Luka made it through the night. While her organs began to rebound, there continued to be trepidation about her outcomes. Given that she was without oxygen for seven and a half minutes at birth, we were prepared for significant impact and insult to her brain. We were warned that she may not walk, talk, or play. Miraculously, her brain magnetic resonance imaging (MRI) scan a week later showed only mild brain trauma and she had no signs of seizures-- we rejoiced! Within one week, she had weaned off her ventilator, was opening her eyes, and her organs all seemed to be improving their function with every day. While we felt so encouraged by Luka's progress, the growing impact of COVID-19 was creeping into the hospital and complicating an already difficult time.

Six days after we arrived at the NICU, the hospital enacted a one visitor per room policy. This was hard to swallow, as neither Kyle nor I could imagine losing time near Luka or each other. We had incredible support and advocacy from our NICU care team, and they advocated for us to receive an exception for the first eight days while I continued to heal from my Caesarean section. This was granted. Because we lived at a distance from the hospital, we had been spending each night either in a hospital sleeper room or the hospital room itself, and so moving forward we were allowed to both be present in the hospital at the same time, just not together in Luka's hospital room. While this arrangement still created significant logistical issues and felt lonely and isolating, we felt so lucky for the exceptions. Thankfully, this policy ended about a month later, and its end was met with great relief.

The days transitioned to weeks, and eventually the weeks transitioned to months. We found our routines in the NICU. I became consumed with pumping and increasing my milk supply, asking for lactation support as often as I could. Kyle became a master at coordinating our daily meals, keeping my water bottle full, and doing his part in skin to skin. We were solely focused on doing everything we could for Luka and relished the opportunity to hold her for hours at a time, once we were finally able to do so. There were many lows-- mastitis, a mysterious infection



Luka at one week of age

in Luka's gland, disagreeing specialists, new IV's (intravenous therapy), bradycardia events, and transfusions, but the highs overwhelmed them all. We delighted in her growth and the continued good news about her development. Her occupational and physical therapy visits left us most encouraged; we appreciated the tangible advice and skills that we received from her OT and PT specialists, as we always felt more empowered to support Luka.

As Luka's rounds began to occur later in the day and at a much more rapid pace, we knew that we were nearing the end of our NICU stay. After 59 nights of sleeping at Children's Hospital, it was finally time to leave. We were overwhelmed with joy that Luka was healthy and ready to come home, but there was a deep sadness over saying goodbye to the people that had seen us through the most difficult experience of our lives. Our gratitude for this team is without measure. Their listening and encouragement, their secret hugs (in the time of COVID-19), and their expertise left us in awe on a daily basis. We only just wish we were more acquainted with their beautiful faces; after so much time spent together, it was always a fun surprise if we caught a glimpse of anything more than their eyes below their masks. Another pandemic reality.

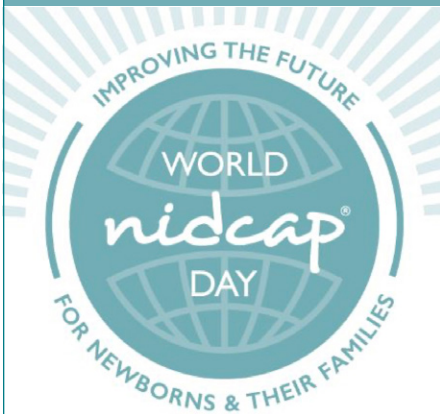
We still do not have answers about what went wrong in utero. There are theories-- Luka has a blood disorder, we experienced a fetomaternal hemorrhage, or she was on her way to a still-birth. The doctors still maintain that it's a relative mystery. The best explanation came from one of our favorite Neonatal Nurse Practitioners when she said, "consider yourself hit by



Luka is now a happy 9 months and the Gilmores are living their best life in the mountains of Breckenridge, Colorado.

lightning." In the same way, we understand that it was only with answered prayers and pure luck that today, Luka is thriving. We know full well that many NICU stories are without a happy ending and so we are beyond thankful that our prayers were answered in this way. For now, we treasure Luka's pure existence and feel blessed to be her parents.

WORLD NIDCAP DAY MARCH 20TH 2021

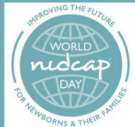


How you can celebrate

- » Promote NIDCAP and the World Day in your nursery and hospital
- » Wear Teal
- » Have an afternoon or morning tea for your staff and families
- » Celebrate and promote what your team has achieved in the past 12 months
- » Share photos and posts on social media using #NIDCAP, #NIDCAPpartneringwithfamilies and #worldNIDCAPday
- » Approach local news agencies for a story about NIDCAP in your unit/hospital
- » Illuminate landmarks in your area in the NFI color Teal
- » Download promotional fact sheets, poster templates, the WND logo

UPCOMING EVENTS

2021
MARCH



NIDCAP FEDERATION INTERNATIONAL CALENDAR

HIGHLIGHTS

Inaugural Webinar

Family Resource Series Films

Podcast Series

NEW Website Launch

SUN	MON	TUE	WED	THU	FRI	SAT
	1 World NIDCAP Month	2	3	4	5	6
7	8 NFI Online Educational Collection Family Resource Series	9	10	11	12	13
14	15	16	17	18	19	20 NIDCAP Cares for all Hospitalized Babies
21	22 NIDCAP Care Supporting Parents' Understanding of Their Preterm Infants' Behavior MARCH 1, 2021 2:00 PM EST	23	24	25	26	27
28	29	30	31			



WEBINAR
SERIES

NIDCAP Care



Heidelise Als, PhD
NIDCAP Originator

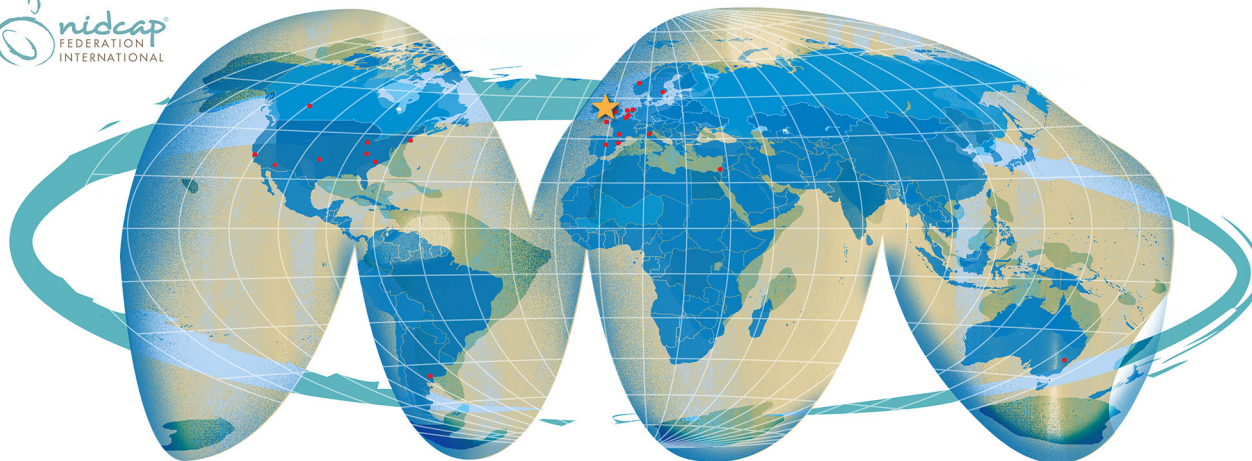
Supporting Parents' Understanding of Their Preterm Infants' Behavior

MARCH 1, 2021 | 2:00 PM EST

The webinar is free
for everyone.

Registration is required.

Please register here: https://us02web.zoom.us/webinar/register/WN_fng5rjGbS9GEgu16hbRyBg



NIDCAP Training Centers Around the World

The UK NIDCAP Centre at University College London Hospital (UCLH)

DOI 10.14434/do.v14i1.31815

The UK NIDCAP Centre was originally based at St Mary's Hospital in London with Inga Warren CBE, primary author of the FINE programme, as Senior NIDCAP Trainer. Following mergers and reorganisation of hospitals within the Trusts, the training centre moved down the road to UCLH, London NHS Foundation Trust in 2017. The centre director is Professor Neil Marlow with Dr. Giles Kendall, clinical lead for the Neonatal Unit (NNU), as operational director. The core strategic team is comprised of senior neonatal staff including the lead nurse and two additional consultants, and education and development team representatives. The group is chaired by a parent representative, the mother of a girl born extremely preterm 15 years ago and cared for at UCLH. Unfortunately, a current team photo is not available due to COVID-19 restrictions.

The objectives of the UK NIDCAP Centre are to deliver a unique educational programme designed to promote optimal developmental outcomes for high risk pre-term and full term babies, and to improve the experience of hospital care for infants and parents. An additional aim is to create Infant and Family Centered Developmental Care leaders in the UK.



The Neonatal Team, UCLH, celebrating World Prematurity Day with 'Superheroes' theme

To achieve our objectives, teaching is a prime focus with routinely scheduled FINE Level 1 and 2 courses run by NIDCAP Professionals. Attendance at these courses is a pre-requisite for those intending to progress to NIDCAP training. Pre-FINE education has been trialled and is currently being adapted for online use in collaboration with the Australasian NIDCAP Training Centre. The idea is to incorporate this into induction for new staff, so they begin

to associate the impact of their input and interactions on brain development. FINE Level 3, which supports innovation and leadership, has also been available with Inga Warren and Beverley Hicks as mentors. A quality improvement project on non-pharmacological pain management undertaken by one participant, a neonatal consultant, was recently presented at an international conference¹. We strive to provide ongoing contact and support for FINE 2 and

NIDCAP graduates through Masterclasses, the most recent being held in London and Bristol.

On a wider scale, both trainers, Inga Warren and Gillian Kennedy present regularly at international conferences. Inga Warren also runs FINE courses abroad with other faculty members who are all NIDCAP Professionals. The courses in Hungary and Romania have been run in collaboration with parent organisations.

Additionally, both Inga Warren and Gillian Kennedy are actively involved in research and development, with two publications produced this year relating to infant and family centred care^{2,3}. Research involving the use of our *Angel Eye*® webcam on the neonatal unit is in progress. The origins of this research links back to the 2016 NIDCAP Trainers Meeting Journal Club in Bologna, Italy and the subsequent 2017 presentation at the Congress of joint European Neonatal Societies (jENS) in Venice. In preparation for this, staff were surveyed for their views on the introduction of webcams. The information garnered from the survey is forming part of the research study. The same team is also keen to explore the impact of masks on language development in partnership with other centres to enable comparison between units where practice has varied.

Where possible, we promote the NIDCAP philosophy in a wider arena. Inga Warren frequently works jointly on projects with our NIDCAP colleagues around the world⁴. Gillian Kennedy is an expert advisor for the National Institute for Clinical Excellence (NICE) and was a committee member for the guideline on specialist neonatal respiratory care.

In 2020, the Coronavirus pandemic began impacting babies cared for in neonatal units and their families worldwide. Even within the same city, neonatal units adopted different practices, with some restricting parental presence and/or requiring masks be worn. Here at UCLH, our NIDCAP centre base, the ethos of not separating babies and parents has been maintained, although siblings and other close family members are currently not able to be present. Guided by our infection control nurse lead, also a senior neonatal nurse, parents who are asymptomatic have unrestricted access and are not required to do any more than the usual handwashing practice. No protective aprons, gloves or masks are worn, and both parents are welcome to be with their baby for as long as they want.

Unsurprisingly, COVID-19 has had a negative effect on wider ranging matters related to the UK NIDCAP Centre. At the start of 2019, there was agreement of the need to establish a new trainer-in-training position and approval was given by the NFI board. The intention was to identify funding from the Women's Health directorate to fulfil this aim by augmenting monies generated from running FINE courses at the Trust. Regrettably, the introduction in March last year of a new electronic patient record system and the current ongoing health crisis are issues which, understandably, have taken priority and redirected resources. Nevertheless, the future looks brighter with more robust measures closer to being ratified which would allow us to begin this training.

This situation perhaps brings to light a situation which may impact others in the NIDCAP community. The move from St. Mary's to UCLH plus intervening factors described above have meant the Centre is still becoming established on this site. In



Inga Warren (l) and Gillian Kennedy are actively involved in research and development

addition to this, the present trainers are of retirement age (although much younger in spirit!). Both factors provide extra challenges for the new trainer-in-training and thought is being given as to how best we can support this individual, such as Inga Warren and Gillian Kennedy obtaining honorary contracts to enable ongoing neonatal unit input and contact.

In response to the pandemic, we have tried to adapt our teaching methods and now deliver FINE 2 courses online. The adaptation of FINE 2 for remote teaching has been far easier than the current project of preparing FINE 1 (Foundation Toolkit) for online accessibility. That said, this is also nearly ready to be trialed in the format of shortened lectures with creative solutions to the more practical elements of the course.

In some ways the increase in video conferencing has opened possibilities. Our Developmental Group had ground to a halt, not so much due to lack of interest, rather more to do with staff availability to attend and participate. Now staff can join in wherever they are with the meetings timed to suit those who are on shift. We are approaching topics differently, tasking ourselves to explore our current stances and beliefs about subjects. Participants who have reservations about areas under discussion take the lead on literature searches into the subject, endeavouring to find a balance in the evidence base. This is proving to open our minds and inspire more inclusive planning.

Despite the challenges of the past year, we celebrated World Prematurity Day in fine style! With the theme of 'Superheroes', staff donned t-shirts (Batman and Robin clearly ended up wearing two masks each!) and the babies all received a hand crocheted small blanket shaped like a Superhero cape. Naturally, food was shared and enjoyed with one of the junior doctors making a wonderful cake. This joyous occasion and the recent more positive news about a potential trainer-in-training contributed to an uplifting end to 2020.

References:

1. Akeyempon A, Hicks B, Warren I. Non-pharmacological Pain & Stress Management: FINE 3 Quality Improvement Project. *The 31st NIDCAP Trainers Meeting*, 21-23 October 2020.
2. Mendizabal-Espinosa RM, Warren I. Non evidence-based beliefs increase inequalities in the provision of infant and family centred neonatal care. *Acta Paediatrica*. 2020, 109(2):314-320. DOI: 10.1111/apa.14972.
3. Tan A, Pelone F, Arnold S, Anderson J, Kennedy G, Goodmand J. Support and information needs of parents and carers of preterm babies requiring respiratory support on the neonatal unit: A qualitative systematic review. *Journal of Neonatal Nursing*. 2020, 26:93-100. DOI:10.1016/j.jnn.2019.11.003.
4. Warren I. Education in the Age of GLANCE. *The Virtual 2020 Stockholm Conference on Ultra-Early Intervention*, 19 March 2020.



Julia Giesen, NIDCAP Professional
Edmonton, Canada

DOI: 10.14434/do.v14i1.31819

Hello again from Edmonton! Julia Giesen here with a second reflection to share from my NIDCAP training. This poem is from an observation in July 2019, this time on a little boy named Benson. Benson was born at 30 weeks and was six days old. For this observation my trainer asked me to think about what I would like to communicate to the nurse looking after him in the NICU. I watched as little Benson paused in his breathing for longer and longer, dropping off to become unavailable. I recalled my NIDCAP Trainer saying one goal of every newborn is to interact with his or her caregivers. I had so many questions running through my head.



“What Can I Say?”

*Today I tried something new
To change my usual point of view
From seeing through the baby's eyes
To focus on what I could surmise
For tips and tricks I could relay
To nurses to improve their day*

*What could I glean from what I feel
This little one tries to reveal
What kind of help does he need
How can I teach a nurse to read
His cues and signs of hanging on
Keeping it together, then moving on*

*Slipping down, losing touch
When all of it becomes too much
When breathing pauses get drawn out
And he has nothing left to shout
That he really needs our help
But has no energy to yelp*

*How can we leave him at his best
So he can breathe and get some rest
Moving softly into sleep
That is robust, healing and deep
So that when he does awaken
Energy is not from him taken*

*To open his eyes and turn his head
And look up out of his bed
And meet the eyes he's coming to know
Will be there always to watch him grow*

—JULIA GIESEN

Developmental Observer

The Official Newsletter of the NIDCAP®
Federation International

Developmental Observer current and past
issues from: <https://scholarworks.iu.edu/journals/>

ISSN: 2689-2650 (online)

All published items have a unique document identifier (DOI)



NIDCAP Federation International Board of Directors and Staff 2020–2021

PRESIDENT

Deborah Buehler, PhD

NIDCAP Master Trainer

APIB Trainer

Director, West Coast NIDCAP and APIB

Training Center

email: nfipresident@nidcap.org

VICE PRESIDENT

Dorothy Vittner, RN, PhD

Senior NIDCAP Trainer

West Coast NIDCAP & APIB Training Center

email: dvitt8@gmail.com

TREASURER

Gloria McAnulty, PhD

National NIDCAP Training Center

email: gloria.mcanulty@childrens.harvard.edu

SECRETARY

Jean Powlesland, RN, MS

NIDCAP Trainer

Director, Children's Hospital of University of

Illinois NIDCAP Training Center

email: jpowlesl@uic.edu

Fatima Clemente, MD

NIDCAP Trainer

Co-Director, São João NIDCAP Training Center

email: clemente.fatima@gmail.com

Mandy Daly, Dip. H Diet and Nutrition, ACII, DLDU

Family Representative, Dublin, Ireland

email: mandy.daly@yahoo.co.uk

Jennifer Degl, MS

Family Representative, New York, USA

email: jenniferdegl@gmail.com

Maria Lopez Maestro, MD, PhD

NIDCAP Trainer

Hospital Universitario 12 de Octubre

NIDCAP Training Center

email: mariamaestro@gmail.com

Dalia Silberstein, RN, PhD

NIDCAP Trainer

Co-Director, Israel NIDCAP Training Center

email: dalia.silberstein@clalit.org.il

Juzer Tyebkhan, MBBS

NIDCAP Trainer

Director, Edmonton NIDCAP Training Centre

email: juzer.tyebkhan@albertahealthservices.ca

STAFF

Rodd E. Hedlund, MEd

Director, NIDCAP Nursery Program

NIDCAP Trainer

email: nidcapnurserydirector@nidcap.org

Sandra Kosta, BA

Executive Director of Administration

and Finance

email: sandra.kosta@childrens.harvard.edu

FOUNDER OF THE NIDCAP FEDERATION
INTERNATIONAL, INC.

Heidelise Als, PhD

NIDCAP Founder, Past President 2001-2012

Senior NIDCAP Master Trainer

APIB Master Trainer

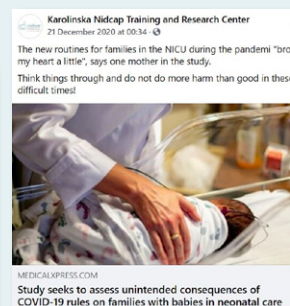
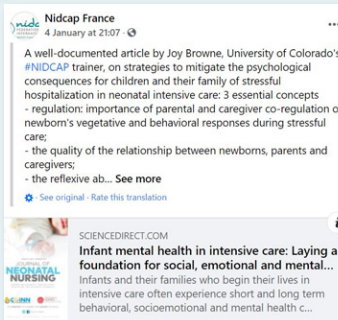
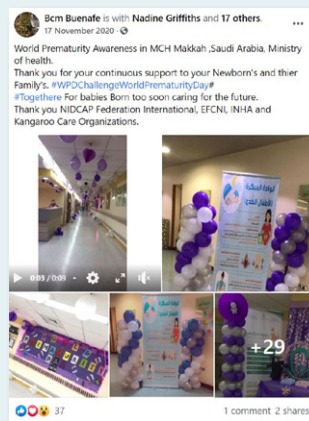
Director, National NIDCAP Training Center

email: heidelse.als@childrens.harvard.edu

NIDCAP on the Web

NIDCAP Training Centers – Facebook Pages

During the past six months, despite the adversity facing the NIDCAP Training Centers and NIDCAP Professionals worldwide, many positive achievements have taken place. This series of snapshots from the various Training Centers enable us to all celebrate and acknowledge each other's achievements.



The NFI [NIDCAP Blog](#) offers observations from many different perspectives on NIDCAP and its implementation, such as NIDCAP and APIB training, Nursery Certification, the science behind the approach, the family experience with NIDCAP, the NFI, and much more. We encourage you to visit the *NIDCAP Blog* and to leave comments for our bloggers and our NIDCAP community in general. If interested in becoming a guest blogger please contact Sandra Kosta at sandra.kosta@nidcap.org.

Follow us on all of our social media platforms:



Like Us on Facebook



Follow our posts on Instagram



Watch our videos on You Tube



Follow us on Twitter



Connect with colleagues on LinkedIn



Read and participate on our NIDCAP Blog

NIDCAP TRAINING CENTERS

AMERICAS

North America

CANADA

Edmonton NIDCAP Training Centre

Stollery Children's Hospital
Royal Alexandra Site
Edmonton, AB, Canada
Co-Directors: Andrea Nykipilo, RN and
Juzer Tyebkhan, MB
Contact: Juzer Tyebkhan, MB
email: Juzer.Tyebkhan@ahs.ca

UNITED STATES

St. Joseph's Hospital NIDCAP Training Center

St. Joseph's Hospital and Medical Center Phoenix,
Arizona, USA
Co-Directors: Bonni Moyer, MSPT and
Marla Wood, RN, BSN, MEd
Contact: Windy Crow
email: windy.crow@dignityhealth.org

West Coast NIDCAP and APIB Training Center

University of California San Francisco San
Francisco, California, USA
Director and Contact: Deborah Buehler, PhD
email: dmb@dmbuehler.com

Children's Hospital of University of Illinois (CHUI) NIDCAP Training Center

University of Illinois Medical Center at Chicago
Chicago, Illinois, USA
Co-Directors: Doreen Norris-Stojak MS, BSN, RN,
NEA-BC & Jean Powlesland, RNC, MS
Contact: Jean Powlesland, RNC, MS
email: jpowlesl@uic.edu

National NIDCAP Training Center

Boston Children's Hospital and
Brigham and Women's Hospital
Boston, Massachusetts, USA
Director: Heidelise Als, PhD
Contact: Sandra M. Kosta, BA
email: nidcap@childrens.harvard.edu

Carolina NIDCAP Training Center

WakeMed, Division of Neonatology Raleigh,
North Carolina, USA
Director and Contact: James Helm, PhD
email: jimhelm27@gmail.com

NIDCAP Cincinnati

Cincinnati Children's Hospital Medical Center
Cincinnati, Ohio, USA
Director: Michelle Shinkle, MSN, RN
Contact: Linda Lacina, MSN
email: Linda.Lacina@cchmc.org

South America

ARGENTINA

Centro Latinoamericano NIDCAP & APIB

Fernández Hospital
Fundación Dr. Miguel Margulies and
Fundación Alumbrar, Buenos Aires, Argentina
Director and Contact: Graciela Basso, MD, PhD
email: basso.grace@gmail.com

OCEANIA

AUSTRALIA

Australasian NIDCAP Training Centre

The Sydney Children's Hospitals Network
Westmead, Australia
Co-Directors: Alison Loughran-Fowlds MBBS,
DCH, FRACP, PhD and Kaye Spence AM, MN
Contact: Nadine Griffiths, NIDCAP trainer
email: SCHN-NIDCAPAustralia@health.nsw.gov.au

EUROPE

BELGIUM

The Brussels NIDCAP Training Center

Saint-Pierre University Hospital Free University of
Brussels Brussels, Belgium
Director: Inge Van Herreweghe, MD
Co-Director: Marie Tackoen, MD
Contact: Delphine Druart, RN
email: delphine_druart@stpierre-bru.be

DENMARK

Danish NIDCAP Training and Development Center

Aarhus University Hospital, Aarhus N, Denmark
Director: Tine Brink Henriksen Professor, MD, PhD
Co-Director: Majken Grund Nielsen, RN
Contact: Eva Jørgensen, RN
email: auh.nidcaptrainingcenter@rm.dk

FRANCE

French NIDCAP Center, Brest

Medical School, Université de Bretagne
Occidentale and University Hospital
Brest, France
Director: Jean-Michel Roué, MD, PhD
Contact: Sylvie Minguy
email: sylvie.bleunven@chu-brest.fr

French NIDCAP Center, Toulouse

Hôpital des Enfants Toulouse, France
Director: Charlotte Casper, MD, PhD
Co-Director and Contact: Sandra Lescure, MD
email: lescurer.s@chu-toulouse.fr

GERMANY

NIDCAP Germany, Training Center Tübingen

Universitätsklinik für Kinder- und Jugendmedizin
Tübingen, Germany
Director: Christian Poets, MD, PhD
Contact: Natalie Wetzel, RN
email: natalie.wetzel@med.uni-tuebingen.de

ITALY

Italian Modena NIDCAP Training Center

Modena University Hospital, Modena, Italy
Director: Fabrizio Ferrari, MD
Contact: Natascia Bertoncelli, PT
email: natascia.bertoncelli@gmail.com

Rimini NIDCAP Training Center

AUSL Romagna, Infermi Hospital
Rimini, Italy
Director and Contact: Gina Ancora, MD, PhD
Co-Director: Natascia Simeone, RN
email: gina.ancora@auslromagna.it

THE NETHERLANDS

Sophia NIDCAP and APIB Training Center

Erasmus MC-Sophia Children's Hospital
Rotterdam, The Netherlands
Director: Nikk Conneman, MD
Co-Director and Contact: Monique Oude Reimer, RN
email: nidcap@erasmusmc.nl

NORWAY

NIDCAP Norway, Ålesund Training Center

Ålesund Hospital, Ålesund, Norway
Director: Lutz Nietsch, MD
Contact: Unni Tomren, RN
email: nidcap@helse-mr.no

PORTUGAL

São João NIDCAP Training Center

Pediatric Hospital at São João Hospital
Porto, Portugal
Director: Hercília Guimarães, MD, PhD
Co-Director and Contact: Fátima Clemente, MD
email: nidcapportugal@gmail.com

SPAIN

Barcelona NIDCAP Training Center: Vall d'Hebron and Dr Josep Trueta Hospitals

Hospital Universitari Vall d'Hebron, Barcelona, Spain
Director and Contact: Josep Perapoch, MD, PhD
email: jperapoch.girona.ics@gencat.cat

Hospital Universitario 12 de Octubre NIDCAP Training Center

Hospital Universitario 12 de Octubre, Madrid, Spain
Director: Carmen Martínez de Pancorbo, MD
Contact: María López Maestro, MD
email: nidcap.hdoc@salud.madrid.org

SWEDEN

Karolinska NIDCAP Training and Research Center

Astrid Lindgren Children's Hospital at Karolinska
University Hospital Stockholm, Sweden
Director: Stina Klemming, MD
Co-Director: Björn Westrup, MD, PhD
Contact: Ann-Sofie Ingman, RN, BSN
email: nidcap.karolinska@sl.se

UNITED KINGDOM

UK NIDCAP Centre

Department of Neonatology,
University College Hospital, London, UK
Director: Neil Marlow, DM FMedSci
Contact: Gillian Kennedy, OBE, MSc
email: gillian.kennedy4@nhs.net

MIDDLE EAST

ISRAEL

Israel NIDCAP Training Center

Meir Medical Center
Kfar Saba, Israel
Co-Directors: Ita Litmanovitz, MD and Dalia
Silberstein, RN, PhD
Contact: Dalia Silberstein, RN, PhD
email: dalia.silberstein@clalit.org.il

Become a Member of the NFI

The NFI invites you to join us! For more information and the online application form,
visit our website at: www.nidcap.org or email us at nfimembership@nidcap.org