Gravens By Design: A Preview of Evidence-Based Programs for the Developmental and Family-Centered Care Track at the 36th Gravens Meeting

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The field of Infant and Family-Centered Developmental Care (IFCDC) has expanded to develop and provide rich and thoughtful approaches to supporting babies and families. Along with the development of these programs has come the evidence of positive medical and developmental outcomes to support their application in intensive care units. Seven evidence-based programs available to NICU professionals and family members will be presented in the Developmental and Family-Centered Care Track at the Gravens meeting this year. Representatives from these programs will provide an overview of the theoretical underpinnings, goals, content, and approaches used to deliver their approaches and, in particular, share the evidence on which each is based.

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Below is a brief overview of each program and the kind of information that will be provided in the Developmental and Family-Centered Care Track at Gravens. General references to describe each program and available website information are included in this overview. Presenters are leaders in the field and will provide substantial baby and family outcome data as evidence in support of their respective programs. We invite you to attend the Developmental and Family-Centered Care Track to get more information on the programs and the evidence behind each approach. The session will help you understand each program's underlying foundation, applicability, and robustness. Join us for an informative and lively session!

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The Newborn Individualized Developmental Care and Assessment Program (NIDCAP) (1) The NIDCAP priority is educational and consultative support to organizations towards effective infant care in an individualized neuro-developmentally supportive, family-centered framework. Systematic behavioral observation methodologies include the NIDCAP Observation, the Assessment of Preterm Infants' Behavior (APIB), and the NIDCAP Nursery Program (NNP). These instruments document the complexity of preterm and at-risk newborn infants by focusing on the interplay of the infant's autonomic, motoric, state organizational, and attentional functioning to develop strategies for individualized support as the infant interacts with their family, healthcare professionals, and environment. NIDCAP observations and neurobehavioral evaluations provide the basis for estimating the infant's current behavioral functioning and goals, which in turn lead to the recommendations supporting the infant's developmental trajectory. The NNP Program uses four key components: 1) Implementation of individualized developmentally supportive interactions with infants; 2) Enhancement of relationships between infant and family & promotion of family-centered care; 3) Provision of a nurturing physical & social environment; 4) Collaborative interactions and relationships among healthcare professionals. https://nidcap.org

Supporting and Enhancing NICU Sensory Experiences (SENSE) (2) is a program aimed at ensuring multi-modal positive sensory exposures across hospitalization for high-risk infants in

the NICU to optimize the NICU environment and improve outcomes for infants and families. Parent education in the SENSE program centers around helping families understand their important role in supporting their infant's development, the infant's sensory needs in the NICU, and what they can do to support the infant, given the infant's immaturity and medical interventions. Specific amounts of positive sensory exposures are identified in the SENSE program as targets for minimum amounts of positive sensory exposures each day. The program can be individualized for each infant based on the preferences of the family and/or the medical status/tolerance of the infant. The sensory interventions in the SENSE program are designed to be provided by parents, but the medical team and/or volunteers can also engage to ensure the sensory needs of each infant are met. The program is most often led by a neonatal therapist (PT, OT, SLP), which largely consists of education and support of the family, assessing the infant's tolerance, and adapting the program as needed. https://chan.usc.edu/nicu/sense

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Family Integrated Care (FiCare™) (3) In the FiCare model, parents/primary caregivers are welcomed as essential members of the infant's healthcare team, and the team works together to promote parent involvement to the fullest extent. Important to the implementation of FiCare is the partnership of former NICU parents (known as veteran, graduate, or alumni parents) in the core steering group to plan, implement and sustain the FiCare model in each NICU. The FiCare model is a comprehensive framework with four main pillars: Environment; NICU team education and support, Parent education/psychological support; and Active parent participation/partnership. This model's environment is designed or adapted to support 24-hour parental presence/participation. The model includes healthcare team training and ongoing education and coaching on Family-Centered Care (FCC) principles and FiCare skills to meet the special needs of NICU families. There is a program of parent-group education as well as individualized bedside teaching. Parents receive psychosocial support from professionals and trained parent-peer mentors. Finally, parents actively participate in daily rounds and shared decision-making and provide direct care for their infant in collaboration with nurses and other team members. https://familyintegratedcare.com

The Newborn Behavioral Observations (NBO) system™(4) is an infant-focused, family-centered approach designed to sensitize parents to their baby's competencies, vulnerabilities, and individuality. The goal of the NBO is to support parent-infant interaction from the very beginning, recognizing that development is shaped by and occurs only in the context of caregiving relationships. The NBO aims to support the infant's development and the parent's confidence and well-being. It is appropriate for use from birth to three months of (corrected gestational) age. An NBO session consists of 18 neurobehavioral observations, including the infant's capacity to protect sleep, quality of motor tone and activity level; capacity for self-regulation, including crying and consolability; response to stress; and visual, auditory, and social-interactive capacities. NBO is not an assessment, but rather a relationship-building tool, designed to adapt for use by a wide variety of practitioners. It is appropriate to use in an array of settings, including inpatient units (NICU, CICU, well newborn), outpatient clinics, and homes. https://www.childrenshospital.org/research/centers/brazelton-institute-research/nbo

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The Family Nurture Intervention (FNI) (5) Family Nurture Intervention was designed to overcome mother and infant autonomic stress and dysregulation following premature birth while in the NICU. The intervention involves an average of four two-hour facilitated calming sessions per week for an average 6-week period in the NICU. When the mother and infant are encouraged to connect emotionally at a deep level during the calming sessions, the observable behavioral state is called "emotional connection." A novel autonomic theory of emotions explains the profound and long-term impact of FNI and requires a new interpretation of neonatal developmental biology. FNI promotes the emotional connection of the mother and baby by re-engaging innate or primary mother and Infant autonomic socioemotional reflexes (ASRs) that develop during gestation. This occurs by way of autonomic conditioning or learning. After birth, these learned reflexes ensure that the mother and baby's bodies are automatically attracted to one another without thought. FNI changes the ASR from avoidant to attraction when the mother expresses her feelings and deepest emotions directly to her baby. https://nurturescienceprogram.org/family-nurture-intervention/

Creating Opportunities for Parent Empowerment NICU Parent Program (COPE) (6)

The COPE program enables parents to cope effectively with a preterm birth through education and provider support. The program is provided to parents shortly after their premature infants' birth. It includes a four-part series of audio and written information that provides infant characteristics and parent role information 2-4 days after admission to the NICU, 4-8 days after admission, 1-7 days before discharge, and one week after discharge. Parent skill-building activities that help parents implement the COPE are included in the book the parent receives. COPE teaches parents how to interact with their preterm infant in ways that enhance growth and development. The program also helps parents understand the workings of the NICU and encourages their active engagement with the NICU staff. Providers with an understanding/training of the materials provide the parent book and journal along

with the audio version to the parents and remain in contact to answer questions in the early months after the parent training. http://www.copeforhope.com/index.php

"The Close Collaboration with Parents program is an evidence-based and systematic training program for neonatal healthcare teams to improve family-centered care practices. The program aims to improve the skills of the healthcare team members to collaborate with parents and support parenting during hospital care."

Close Collaboration with Parents (7) The Close Collaboration with Parents program is an evidence-based and systematic training program for neonatal healthcare teams to improve family-centered care practices. The program aims to improve the skills of the healthcare team members to collaborate with parents and support parenting during hospital care. The program has a multi-scientific background integrating developmental psychology, neonatology, and nursing sciences. Learning is structured into four theoretical phases: 1) observing and communicating infants' behaviors and needs, II) supporting parents to share their observations and plan the care of the infant collaboratively with healthcare staff, III) understanding the individual story of the family into parenthood, and IV) involving parents in the decision-making from an early stage of care to the preparation of discharge. The training process for a unit takes about one and a half years. The training team provides support throughout the implementation, during which a unit carries out all four training phases for all their staff members with the help of e-learning and mentoring. Mentoring and reflective practice are the essential methods facilitating changes in the care practices aligned with family-centered care.

Please join us at the next Gravens meeting (March 8-11, 2023) to hear more details and evidence supporting these infant and family-centered care programs. Gravens will also provide you opportunities to meet and have conversations with these leaders in the field so that you have an in-depth understanding of their program's respective goals, approaches, and impact.

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References:

1. *Als H. Developmental care in the newborn intensive care unit. Curr Opin Pediatr. 1998;10(2):138-42. doi: 10.1097/00008480-199804000-00004. PubMed PMID: 9608890.*
2. *Pineda R, Raney M, Smith J. Supporting and enhancing NICU sensory experiences (SENSE): Defining developmentally-appropriate sensory exposures for high-risk infants. Early Hum Dev. 2019;133:29-35. Epub 20190501. doi: 10.1016/j.earlhumdev.2019.04.012. PubMed PMID: 31054467.*
3. *Franck LS, Waddington C, O'Brien K. Family Integrated Care for Preterm Infants. Crit Care Nurs Clin North Am. 2020;32(2):149-65. Epub 20200331. doi: 10.1016/j.cnc.2020.01.001. PubMed PMID: 32402313.*
4. *K NJ, CH K, S M, LC J, Y B. Understanding newborn behavior & early relationships: the newborn behavioral observations (NBO) system handbook. Baltimore: Brookes Publishing Co.; 2007.*
5. *Welch MG, Hofer MA, Brunelli SA, Stark RI, Andrews HF, Austin J, et al. Family nurture intervention (FNI): methods and treatment protocol of a randomized controlled trial in the NICU. BMC Pediatr. 2012;12:14. Epub 20120207. doi: 10.1186/1471-2431-12-14. PubMed PMID: 22314029; PubMed Central PMCID: PMCPMC3394087.*
6. *Melnyk BM, Bullock T, McGrath J, Jacobson D, Kelly S, Baba L. Translating the evidence-based NICU COPE program for parents of premature infants into clinical practice: impact on nurses' evidence-based practice and lessons learned. J Perinat Neonatal Nurs. 2010;24(1):74-80. doi: 10.1097/JPN.0b013e3181ce314b. PubMed PMID: 20147834.*
7. *Ahlqvist-Björkroth S, Boukydis Z, Axelin AM, Lehtonen L. Close Collaboration with Parents™ intervention to improve parents' psychological well-being and child development: Description of the intervention and study protocol. Behav Brain Res. 2017;325(Pt B):303-10. Epub 20161012. doi: 10.1016/j.bbr.2016.10.020. PubMed PMID: 27743940.*

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