

# Gravens By Design: Transformational Change: Making it Happen in the NICU, 2022 Conference Summary

Robert White, MD

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## Day 1 – Transformational Change: Making it Happen in the NICU

Our first day began with understanding the importance of the care we provide, as described by families and those who research their needs and desires in the NICU. Led by Dr. Annie Janvier, a parent and physician team from CHU Sainte-Justine in Montreal presented extensive research on the discrepancy between the perspectives of the medical members of the follow-up team, who tend to focus on describing the presence of deficits, compared to that of parents who are cognizant of their child’s challenges but much more likely to focus on their positive attributes.

Dr. Livio Provenzi from Italy introduced us to the fascinating effect of early life experiences on the epigenetic expression of a premature infant’s genome, which has lifelong implications. The environment of care in the NICU can alter the trajectory of many health factors far beyond the neonatal period, so neonatal neuroprotection demands attention to not just the care we provide but the environment in which it is provided – and to a large extent, we are, or control, that environment.

Dr. Daphna Yasova Barbeau from Gainesville, FL, reviewed the current understanding of infant sleep stages and their maturation in the newborn period and described the impacts of the environment on sleep in NICU babies. The research now is more nuanced than our early efforts to protect sleep simply by preventing any external stimulation for sleeping infants, who can tolerate and benefit from nurturing stimuli while asleep.

Dr. Terrie Inder from Boston described a comprehensive program for the developmental support of infants in the convalescent stage of NICU care. Their team provides continuity of care for babies

and supports families up to and beyond discharge in a setting that utilizes multiple rooms with three patient beds in each room to provide a more open and social setting than the single-family rooms used for their more critical, extremely premature infants.

Dr. Bobbi Pineda from Los Angeles described the Supporting and Enhancing NICU Sensory Experiences (SENSE), a method for teaching and facilitating parental delivery of developmentally-appropriate care according to the infant’s age and clinical status. More than 100 NICUs have now adopted it, and evidence is accumulating of its value to integrate families into the developmental care of their babies.

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Dr. Jochen Profit from Stanford described his research showing that self-care teamwork was important in promoting teamwork and resilience, preventing burnout, and changing the culture of care in the NICU.

Day 1 closed with Dr. Paige Church and her parent and physician team from Toronto, who showed how NICU family and developmental care practices could be improved through quality initiatives.

## Day 2 – Developmental Care Track

### Day 2 – NICU Design Track

A featured segment of the 2021 Gravens Conference was a virtual workshop entitled “Reimagining the NICU.” Later in 2021, the working group met again virtually to refine concepts of how the NICU of the Future might look, building on ideas regarding the design of the NICU itself into more flexible spaces to accommodate emerging patient needs as an infant’s status improved, potential technology innovations that could enhance the NICU experience for babies, parents, and staff alike, and possible ways in which the transition to the home could be accomplished, both through operational improvements and through re-thinking the places that might happen outside of a traditional NICU. These concepts were then brought to the 2022 Gravens conference as a general presentation and brainstorming session on day two, followed by a

more intensive working session on day three. The many ideas generated will be considered in future editions of the Recommended Standards for Newborn ICU Design and documents that capture best potential practices for NICUs of the future.

Dr. Mobolaji Famuyide and her team from Jackson, MS, and Dr. Beau Batton and his team from Springfield, IL then presented their new NICUs, followed by Judy Smith from Phoenix with a presentation on answers to common questions when planning a State of the Art NICU, Bob White from South Bend, IN with a 5-year post-occupancy survey of staff in their NICU, and a “Crowdsourcing” session where others in the audience with expertise addressed questions from attendees.

### Day 3

The keynote speaker for day 3 was Natalie Johnson, a health and well-being consultant and Chief Visionary of ViDL Solutions. Her talk, entitled “Stress is Your Superpower,” introduced us to the cognitive reframing of challenges as a technique for improving resilience and reducing burnout. This talk was followed by a workshop that explored this and related techniques to enhance resilience; other concurrent workshops also allowed attendees to learn more about topics presented in the plenary sessions on days 1 and 2. The afternoon sessions on day three were devoted to abstract presentations on topics that included developmental care, family support, feeding and lactation, and discharge preparation.

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### Day 4

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*Disclosure: The author has no conflicts of interest*

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