

The iRainbow[®]: A developmental care path for infants born preterm

Developed by Eilish Byrne, PT, DSc; Allison Freccero, OTD; Melissa Scala, MD

The iRainbow[®] is a unique, parent-friendly, infant-driven tool that guides sensory interventions in the NICU by staging infants using clinical indicators of cardiorespiratory status and infant physiologic maturity, not infant age. It is flexible and easy to use in a complex highly acute NICU setting. It is comprised of 6-color coded stages of advancing infant stability and maturity, with associated recommended evidence-based developmental activities. The iRainbow[®] is on a continuum that allows infants to enter at any stage, and it is recommended for infants ≤ 44 weeks post menstrual age. The iRainbow[®] was specifically designed to be infant led, following each infant's journey in the NICU. To accomplish this, the path was designed to be directive without being overly prescriptive. And in the later stages of the path, developmental "menus" of recommended activities are offered which allows parents to choose the activities!

Evidence: In a recent study¹, the iRainbow[®] improved the delivery of developmental care activities and was well received by parents and nurses. After iRainbow[®] implementation, disagreement among providers on appropriate developmental care interventions significantly decreased, while total minutes of daily developmental care and swaddled holding increased significantly. In addition, parent participants reported that they interacted with their baby more because of the iRainbow and said that they would recommend the tool to other parents.

Future Work Underway

“Exploring the impact of the iRainbow[®] on parent self-efficacy and measures of parent mental health.”

Cardiac iRainbow

The iRainbow[®] has been modified for infants in the cardiac intensive care unit!

Contact Eilish Byrne ebyrne@usa.edu to schedule a call to learn more about The iRainbow[®] or The Cardiac iRainbow[®]

For iRainbow Products

Visit *Products for Therapists: Care Paths for NICU Practice* and iRainbow[®] using this link [iRainbow Products](#)

Reference

1. Byrne EM, Hunt K, Scala M. Introducing the i-Rainbow[®]: An evidence-based, parent-friendly care pathway for critically ill infants in the NICU setting." *Pediatric Physical Therapy*. April 1;36(2):p266-273. DOI: [10.1097/PEP.0000000000001094](https://doi.org/10.1097/PEP.0000000000001094)

Peer Reviewed and Invited Talks on the iRainbow[®]

2023 The 36th Annual Gravens' Conference on the Environment of Care for High-Risk Newborns, In collaboration with the March of Dimes. Virtual Podium Presentation "Presenting the iRainbow[®]: A Developmental Care Pathway for Infants in the NICU Setting."

2023 Spring Meetings: Vermont Oxford Network Homeroom Cluster Education, "The iRainbow Carepath." Two virtual presentations to 2 national workgroups with attendees from USA and Canada

2023 Summer: National Family Centered Task Force Webinar: The iRainbow Developmental Care Path. Virtual presentation: Eilish Byrne PT and Melissa Scala MD.

2023 National Association of Neonatal Nurses Annual Meeting, Napa CA. "The iRainbow: Development and Implementation at the Bedside."

2022 The APTA Pediatrics Annual Conference, Concurrent Session: The Rainbow Developmental Care Path: A Flexible, Evidence-based Approach to Providing Developmental Care in the Neonatal Intensive Care Setting.

2018 The 31st Annual Gravens Conference on the Environment of Care for High-Risk Newborns. Podium Presentation: "Developmental Care Path for the Neonatal Intensive Care Setting."

Cardiac iRainbow

2024 The 37th Annual Gravens' Conference on the Environment of Care for High-Risk Newborns, In collaboration with the March of Dimes. Virtual Podium Presentation "Introducing the Cardiac iRainbow: A developmental care path for infants in the cardiac intensive care setting."

2022 Pediatric Cardiac Intensive Care Society, Podium Presentation “Implementation of a developmental care pathway based on clinical severity in the cardiovascular intensive care unit.