

# Premature and Medically Complex Neonates: Applying Critical Thinking to Support Long-term Outcomes

Kati Knudsen



## Faculty

Kati Knudsen has practiced as a pediatric physical therapist since 1996 and as a therapist in the NICU since 1999. Kati is lead therapist for two NICUs at sister hospitals in Portland, Oregon. She has obtained certifications in neonatal therapy, pediatric physical therapy, lactation education, neurodevelopmental treatment, infant massage, developmental care, and transportation of children with special needs in order to better support infants and families. Kati has published articles about support for preterm and medically fragile infants and has spoken nationally and internationally on care of infants in the NICU. Kati serves as the therapy representative on the Vermont Oxford Network Multidisciplinary Advisory Council and is a founding member and past co-chair of the Neonatal Therapy Certification Board. Kati also sees patients in NICU follow-up clinic where she has helped to redesign care to make it more accessible to families.

**Financial Disclosures:** Ms. Knudsen receives an honorarium as a Board Member of Pampers and AngelEye Health

**Non-Financial Disclosures:**

Ms. Knudsen serves on the Neonatal Therapy Certification Board and Vermont Oxford Network Multidisciplinary Advisory Council

## About this Live Webinar

This dynamic and collaborative advanced NICU therapy course will enable clinicians to apply strategies to support infants with extreme prematurity, complex neurological diagnoses, and in utero substance exposure using advanced problem-solving techniques. Modification of developmental and family-integrated practices to meet the needs of medically-complex infants will be discussed. Therapists will learn specific neuroprotective and neuropromotive strategies to support small babies in the NICU. Methods will be provided to support infants beyond the NICU through identification of follow up concerns, options for long-term support, and family integration to promote parent advocacy. Additionally, tools will be provided to support an expanded role of therapy in the NICU by establishing the benefits of strong developmental perspective, focus on long-term outcomes, increased role of therapists from admission through discharge, and team collaboration. Finally, clinicians will be able to identify and implement quality improvement techniques to better assist neonates and define and improve therapeutic outcomes.

## Objectives

- Utilize three strategies to support infants with extreme prematurity, complex neurological diagnoses, and in utero substance exposure using advanced problem-solving techniques.
- Apply at least two neuroprotective and neuropromotive strategies to support complex patients in the NICU.
- Determine a novel method to support infants beyond the NICU through identification of follow-up concerns, options for long-term support, and family integration to promote parent advocacy.
- Recommend a way to increase therapists' presence or therapeutic practices in the NICU, using the cases provided.
- Determine a quality improvement technique to better assist neonates and therapeutic outcomes.

Help your patients achieve better outcomes.

### Schedule – Day 1 10:40-6:45pm EST (US)

10:40–11:00 Webinar Registration/Zoom Course Opens

11:00-12:15 **The Complex Neonate**

- Clinical implication of diagnoses, overall medical & developmental picture
- Determining what, when, why and how to modify standard developmental care strategies when working with premies or other neonates with severe diagnoses or deficits
- Family integration: strategies and approaches for early family engagement & support, team collaboration with family
- Developmental care: from delivery through discharge, sensorimotor & regulation supports
- Increasing the role of neonatal therapy: developmental background, focus on long-term outcomes, increased role of therapists from admission through discharge, team collaboration

12:15-1:15 **Sensory System Development and Strategies for Neuroprotection & Neuropromotion**

- The sensory systems: order, physiology, therapeutic support
- Specific neuroprotective & neuropromotive strategies
- Tools available to support sensory development

1:15-1:45 **LUNCH**

1:45-2:45 **Case Study #1 (breakout rooms followed by group discussion):**

- Application of neuroprotection & neuropromotion strategies to support a moderate preterm infant

2:45-4:15 **Small Babies/Micropremies**

- Lower limits of viability: define, rationale
- Reduction of morbidities with decreased mortality
- Systems: central nervous system & brain, integumentary, pulmonary, cardiovascular, gastrointestinal & genitourinary
- Impact of medications on preterm development
- Neuroprotection & neuropromotion strategies specific to small babies
- Therapeutic strategies to support micropremies & families: education, positioning & handling, feeding

4:15-4:30 **BREAK**

4:30-6:45 **Follow Up/Follow Through Care**

- Options & access: in or out of health care system, locations, Early Intervention, financial
- Need for support from the NICU, parent education & advocacy, long term support
- Medical, development, feeding, growth, regulation, psychosocial, family integration
- Case Study #2 (breakout rooms followed by group discussion): Therapeutic support of a small baby in the NICU and via NICU follow through

### Schedule – Day 2 10:40-6:45pm EST (US)

10:40–11:00 Webinar Registration/Zoom Course Opens

11:00-1:30 **Complex Neurological Scenarios**

- Lissencephaly, seizure disorders, holoprosencephaly, chromosomal abnormalities with neurological sequelae, HIE (cooling & post-cooling)
- Systems overview: central nervous system & brain, integumentary, pulmonary, cardiovascular, gastrointestinal & genitourinary
- Neuroprotection & neuropromotion therapeutic strategies to support complex neuro patients & families

1:30-2:30 **Case Study #3 (breakout rooms followed by group discussion):**

- Application of clinical strategies to support an infant with HIE during and post-cooling

2:30-3:00 **BREAK**

3:00-3:30 **In Utero Substance Exposure Including Neonatal Opioid Withdrawal Syndrome**

- Opioid exposure (aka NAS) as compared with other substances & medications
- Systems: central nervous system & brain, gastrointestinal (not typically impacted: integumentary, pulmonary, cardiovascular, genitourinary)
- Eat Sleep Console for NOWS with family integration
- Therapeutic strategies to support IUSE infants & families: focus on current & future, trauma informed care lens, support for short & long-term outcomes

3:30-4:30 **Case Study #4 (breakout rooms followed by group discussion):**

- Application of Eat Sleep Console & Trauma Informed Care lens to support mother-infant dyad following in utero substance exposure

4:30-4:45 **BREAK**

4:45-6:45 **Continuous Quality Improvement at the Bedside & Measuring Outcomes**

- Application of knowledge and measuring therapy outcomes via continuous quality improvement strategies in the NICU
- Identification of questions/concerns to be improved and measured
- Designing a CQI project
- Sharing your results

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Approved provider of the FL Board of Occupational Therapy-CE Broker – 16.5 hrs.

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Most Physical Therapy State Boards accept webinars as a live offering. Please check with your state board to confirm.

Application has been made to the FL Physical Therapy Association for 16.5 continuing education contact hours. Application has been made to the MD Board of Physical Therapy Examiners for 1.4 CEUs. Application has been made to the NJ Board of Physical Therapy Examiners. Application has been made to the OK Board of Medical Licensure and Supervision for Physical Therapy.

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This course meets the criteria for 14 hours that can be applied toward the Neonatal Therapy National Certification.

12 hours of this course qualify towards the discipline-specific hours for the 20-hour requirement for NDTA re-certification. They do NOT qualify towards the 8-hour NDTA Instructor requirement for re-certification.

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### Webinar Dates and Times – 2022

#### February 10 and 11, 2022

10:40 am EST • 9:40 am CST • 8:40 am MST • 7:40 am PST (US)

Registration is for all sessions. Zoom log-in instructions and course materials will be emailed/added to your ERI account 5-7 days prior to the first date of the Webinar.



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**February 10 and 11, 2022**

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