# Babies' Bodies and Brains:

Multi-System Assessment and Treatment of the Premature/Medically Complex Infant for Rehabilitation Professionals
Holly Schifsky, OTR/L, CNT, NTMTC, CBIS



### **Faculty**

Holly Schifsky has worked in pediatrics for 24 yrs., with 16 yrs. in a level 4 NICU. She is a Certified Neonatal Therapist, Certified Neonatal Touch and Massage Therapist, Certified Brain Injury Therapist, a member of National Association of Neonatal Therapists, and has completed 6-month mentorship in infant/child NDT. She has worked within the NICU and NICU follow-up clinic to maximize patient and family outcomes for the most complex premature and medically-fragile term infants. Holly received her BA in OT from the University of North Dakota. She is a faculty member for the Neonatal Touch and Massage certification. She received the National Association of Neonatal Therapists Clinical Excellence award in 2018 for her clinical expertise and dedication to advancing the therapeutic interventions for NICU infants with cardiopulmonary condi-

Disclosure - Financial: Holly Schifsky receives an honorarium. Non-Financial: She has no non-financial relationships to disclose.

### **Course Requirements**

In order to maximize the learning experience during lab time, each participant needs to bring a soft body doll. The ideal size would be 10-15", but any soft body doll will work.

### **About this Live Webinar**

This intermediate-advanced course will provide a systems-based approach to assess the premature/medically complex infant in the NICU/PICU setting. This course will focus on understanding the co-morbidities associated with prematurity and medically complex infants and increase critical reasoning skills for the clinician to create treatment plans to advance motor and feeding skills for the infant. It will build on information provided during the "Baby Beats and Breaths" course but can be a stand-alone course for advanced clinicians working with medically complex infants. This course will provide the clinician with hands-on treatment techniques for positioning/handling infants in the Small Baby unit (infants under 32 weeks gestation), oral motor interventions to support pre-feeding/feeding development, edema management including lymphatic facilitation, post-surgical considerations for infants, trunk facilitation to support cough development, extremity facilitation to support ribcage development, pelvic floor activation for stooling, abdominal facilitation for infants with GI complications, scar assessment/treatment, and feeding techniques for infants with multi-system co-morbidities. Advanced information on reading/interpreting vent settings during interventions for objective assessments for infants that are intubated or have tracheostomy tubes. Expanded lecture/lab section devoted to infants with tracheostomy tubes included oral motor, feeding interventions, postural control, manual cough facilitation, positioning/handling, and durable medical equipment recommendations for infant/family in preparation for home discharge.

### **Objectives**

- Identify three anatomical and kinesiological developmental changes for the premature and newborn thoracic and abdominal cavity as related to motor development for oral feeding and postural control.
- Apply at least two positioning/handling interventions for small babies, with focus on interventions for infants 28 weeks and younger.
- Identify three neurological and gastrointestinal co-morbidities of prematurity (including anatomical changes post-surgical interventions for necrotizing enterocolitis) and the effects those co-morbidities have on feeding/motor development for the infant.
- Oifferentiate the lymphatic system of the premature infant from that of the full-term infant and how those differences affect feeding skills.
- Assess infant edema within face, extremities, and trunk using objective measurements.
- Apply two treatment strategies with positioning, handling and manual edema mobilization using the provided case study.
- Create an individualized care plan for an infant using the provided case study with tracheostomy tubes for improved outcomes with oral feeding, cough facilitation, motor control, and phonation.
- Integrate a systems approach to a current individualized care plan for a premature and/or medically complex infant.



### Schedule - Day 1 8:40 am to 5:30 pm EST (US)

Webinar Registration/Zoom Course Opens Updates in Literature: Includes resources and references for individualized learning

10:00-11:00

Typical Development of the Premature Infant

Anatomy and kinesiology of the trunk, extremities, oral cavity

11:00-11:15 Break

11:15-12:00

Co-morbidities of Prematurity

• Development of organ systems and effects of co-morbidities; including necrotizing enterocolitis, intraventricular hemorrhage, periventricular leukomalacia, renal anomalies, bronchopulmonary dysplasia, congenital heart defects, airway anomalies/injuries Small Baby Unit: Neonatal Therapy Interventions

12:00-1:00

- Identifying risk groups: infants 22-25 weeks; 26-29 weeks; and 30-32
- Education on development of skin, clinical practices to protect skin, positioning/handling to protect skin, humidification.
- Protecting sleep, neurodevelopmental protection in the NICU, environmental modifications
- Pulmonary interventions to reduce lung injury in fragile infants Lunch

1:00-1:30 1:30-3:15

LAB: Small Baby Unit (DEMO and VIDEO)

- Two-person cares
- Diapering small infants
- Positioning/handling with standard cares
- Positioning/handling for atelectasis, micro-turns verse full move-
- Stand pivot transfer for Kangaroo care
- Critical Lab values
- Oral Cares
- · Oral motor interventions
- Facial assessment with pulmonary equipment

3:15-3:30 3:30-4:30

Necrotizing Enterocolitis (NEC): multi-system effects of NEC, progression of enteral feeding, surgical interventions, risk for Short-Gut syndrome, oral feeding and motor considerations.

- Classifications of NEC, medical interventions, antibiotics use, use of perfusion monitoring (NIRS), and implications on development (oral feeding, GI motility, and abdominal activation).
- Neonatal therapist clinical algorithm to advance cares
- Neurodevelopmental outcomes

4:30-5:15

- LAB + Lecture: GI Considerations
- Scar assessment and treatment
- Abdominal sensory and motor assessment/treatment
- GI facilitation techniques
- Pelvic floor activation for stooling
- Oral motor facilitation for endurance
- Oral feeding progression and strategies
- Nutritional considerations

5:15-5:30 CASE ANALYSIS

### Schedule – Day 2 8:40 am to 5:30 pm EST (US)

Webinar Registration/Zoom Course Opens Updates in Literature: includes resources and references for individualized learning.

10:00-11:00

Neurological system: Lecture on neurological development of the premature infant, effects of intraventricular hemorrhage, periventricular leukomalacia, surgical intervention with shunts, hydrocephalus

- Use of NIRS perfusion monitoring for neuroprotection
- Risk of seizures
- Neurodevelopmental outcomes

11:00-11:15 Break

11:15-11:45 LAB: Neuro-interventions

- Symmetrical and asymmetrical movement
- Closed chain input for motor learning with infants
- Oral motor interventions:
  - Techniques to reduce gagging/retching

  - o Lip seal
  - o Lingual elevation o Pharyngeal lift

11:45-12:15

Cardiopulmonary System of the Premature or Critically ill Term Infant: anatomical differences, congenital heart defects, and vascularization. A therapist's guide for critical reasoning.

- Cardiopulmonary system and the unique changes required for the infant to have a successful in-utero to extra-utero transition
- Common congenital heart defects and effects on infant develop-
- Perfusion considerations related to risk of NEC, IVH, and ventilationperfusion ratio

12:15-1:00

Lymphatic System: Lymphatic system development, assessment and interventions.

- Maturation of system per gestational age, and genetic conditions related to lymphedema.
- Chylothorax and implications on feeding/development
- Assessing edema as acute or chronic, identifying when to intervene with edema management, and understanding pharmacological interventions for fluid management.
- Complex edema consideration for anasarca, superior vena cava syndrome, vascular anomalies, line occlusion, post-surgical recovery

1:00-1:30

LAB + Lecture: Edema Management 1:30-3:00

- Superficial lymphatic facilitation with manual edema mobilization techniques; utilizing a clear-flow-clear technique with activation of movement
  - o Diaphragm facilitation, lower extremity clearance
  - o Pectoralis/diaphragm facilitation for upper extremity clearance
  - o Facial region clearance with oral motor interventions
  - · Positioning and handling strategies to maximize lymphatic activation, neutral warmth for fluid viscosity reduction
  - Additional treatments for specific edema
    - Kinesiotaping
  - Pressure garments

Break

Implications of Tracheostomy Tube for Infants: Rationale for use of tracheostomy tube, neurodevelopmental outcomes, equipment, and family training.

3:45-4:30

3:00-3:15

3:15-3:45

LAB + Lecture: Feeding Infants with Tracheostomy Tubes.

- Assessment of phase of feeding, consideration of aerodigestive tract with artificial airway
- Pre-feeding skills: secretion management, laryngeal elevation, monitoring vent settings and trach cuff deflation
- Feeding considerations for swallow safety, bolus transit, positioning, vent settings, standardize swallow assessment

Advancing infant to use of one-way valve

4:30-5:15

5:15-5:30

- **LAB** + Lecture: Postural Control Development for Infants with Tracheostomy Tubes.
- Manual cough facilitation: vibration and percussion
- Rolling facilitation
- Pelvic floor activation with weight bearing
- Spinal extension facilitation
- Managing rib flares for infants with inverted diaphragm, complex BPD Additional Considerations for Infants with Tracheostomy Tubes
- Self-care: Bathing, dressing
  - Community mobility: equipment considerations
  - Family training
  - Developmental play tasks at home



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### **Credits**

This course meets the criteria for 15 contact hours (1.5) CEUs, Intermediate Level.



Approved Provider

Education Resources Inc. is an AOTA Approved Provider of professional development. Course approval ID# 02868. This Distance Learning-Interactive Couse is offered at 15 contact hours 1.5 CEUs. Intermediate Level, OT Service Delivery. AOTA does not endorse specific course content, products or clinical procedures..

Approved provider of the **FL** Board of Occupational Therapy-CE Broker-18 hours. This course meets the approval of the **TX** Board of OT Examiners NBCOT professional development provider - 15 PDU's



Education Resources Inc. Intermediate Level 1.5 ASHA CEUs

This course is offered for up to 1.5 ASHA CEUs (Intermediate level, Professional area).

Approved for 15 clock hours of continuing education credit by the **TX** Speech Language-Hearing-Association (TSHA). TSHA approval does not imply endorsement of course content, specific products or clinical procedures.

NBCOT professional development provider-15 PDUs.

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

Approved by the **NJ** Board of Physical Therapy Examiners. Application has been made to the FL Physical Therapy Association for 18 continuing education contact hours.

Approved sponsor by the State of **IL** Department of Financial and Professional Regulation for Physical Therapy for 18 contact hours. Approved by the **IL** El Training Program. Approved provider by the **NY** State Board of Physical Therapy for 18 contact hours (1.8 CEUs).

Education Resources, Inc. is an approved provider for Physical Therapy CEUs in the following

states: CA, KY, and TX. The following state boards of physical therapy accept other states' approval: AK, AR, AZ, DC, DE, GA, HI, ID, IN, KS, MI, MO, MS, NC, OR, PA, RI, SC, UT, VA, VT, WI, WY The following state boards of physical therapy either do not require course pre-approval or do not require CEUs for re-licensure: AL, CO, CT, IA, MA, ME, MT, NE, ND, NH, SD, WA 12 hours of this course qualify towards the discipline-specific hours for the 20-hour requirement for NDTA re-certification. This course meets the criteria for 15 hours towards Neonatal Therapy

Please contact us with any special needs requests: info@educationresourcesinc.com or 508-359-6533

**Audience:** This course is recommended for intermediate to advanced neonatal therapists, PTs, PTAs, OTs, OTAs, and SLPs, working with infants in the Neonatal Intensive Care Unit.

### **Webinar Dates and Times – 2021**

November 5 and 6, 2021

Certification.

8:40 am EST • 8:40 am CST • 6:40 am MST • 5:40 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.



\$369 fee. **LIMITED ENROLLMENT** Cancellation will be accepted until 14 days prior to the start date of the course, minus a \$75 Administration Fee. There will be NO REFUNDS after this 14 day deadline.

We encourage you to register online!

## WEBINAR: Babies' Bodies and Brains □ November 5 and 6, 2021

### **Course Registration Form**

| Name:                     |                                       |  |   |
|---------------------------|---------------------------------------|--|---|
| Address:                  |                                       |  |   |
| City:                     |                                       | State:   | Zip Code:                                 |
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