

# ACADEMY OF PEDIATRIC PHYSICAL THERAPY

## Neonatal Physical Therapy Practice: Roles and Training

*The Section on Pediatrics of the American Physical Therapy Association and the American Board of Physical Therapy Residency and Fellowship Education have recognized neonatal physical therapy as a subspecialty area of practice requiring advanced expertise.*

### **Rationale**

Neonates are infants (birth to 12 months of age) with medical fragility. They require specialized care due to physiologic, behavioral, and developmental vulnerabilities. Neonatal physical therapists play important roles in the interdisciplinary neonatal care team.

Guidelines outlining neonatal physical therapy roles, competencies, and scope of practice have been published.<sup>1-2</sup> Suggestions are made below for mentored, sequential, competency-based training in preparation for providing physical therapy services for this vulnerable population.

### **Recommendations for Developing Expertise in Neonatal Physical Therapy**

The vulnerability of neonates born prematurely or with complex medical conditions requires physical therapy services by physical therapists with specialized training to meet the complex needs of this population. Clinicians seeking to practice in this unique area should participate in continuing education, mentorship, and supervised experience before providing neonatal physical therapy services. To gain experience in preparation for mentored training in the neonatal intensive care unit (NICU), pediatric therapists will benefit from initially working with NICU graduates in early intervention, hospitals, or follow-up programs. Participation in examination and intervention with older, less fragile infants is advised prior to working with young neonates.

Preceded, competency-based experience is the preferred method of obtaining expertise in neonatal physical therapy. Neonatal physical therapy mentoring should be conducted by teams, which may include neonatal nurses, neonatologists, and neonatal therapists (physical, occupational, or speech) to cover the core principles guiding care for this vulnerable population. Specific mentoring in physical therapy roles and competencies is essential.

## **The Physical Therapist's Roles and Responsibilities in Neonatal Physical Therapy:**

- Screen neonates to determine needs for physical therapy referral.
- Examine neonates and interpret findings.
- Develop and implement a plan to prevent neurobehavioral disorganization and complications of prematurity in multiple systems.
- Design, implement, and evaluate the efficacy of intervention plans in collaboration with the family and medical team.
- Develop and implement discharge plans in collaboration with the family, medical team, and community resources.
- Consult with providers of specialized equipment or services in preparation for community-based care.
- Consult and collaborate with health care professionals, families, policy makers, and community organizations to advocate for services to support the development of neonates.
- Incorporate evidence-based literature into neonatal practice.
- Communicate, demonstrate, and evaluate neonatal physical therapy care procedures with NICU professionals and other caregivers.
- Develop a physical therapy risk management plan.
- Evaluate the effectiveness of a neonatal physical therapy program.

## **Knowledge and Skills Required**

### Knowledge

- Theoretical Principles that guide physical therapy practice in the NICU:
  - Family-centered care
  - Synactive theory of development & Dynamic systems theory
  - Theory of neuronal group selection & International Classification of Functioning, Disability and Health (ICF)
- Typical development of:
  - Central nervous system and musculoskeletal system
  - Behavioral state regulation and behavioral stress cues
  - Motor and sensory skills
  - Social development and infant/parent interaction
  - Early cognitive development and learning opportunities in infancy
- Developmental outcomes of neonatal at developmental risk:
  - Infants born preterm
  - Infants born at low birth weight
  - Infants with genetic conditions
  - Infants with cardiovascular and pulmonary conditions
  - Infants with neonatal brain injury
- Evidence for neonatal assessments and interventions
- Effective strategies for communication:
  - Teaming
  - Consulting with other professionals
  - Providing family education on a culturally sensitive manner

## Skills

- Examination procedures for neonates:
  - Determining physiologic and behavioral readiness for neonatal physical therapy examination
  - Monitoring autonomic, behavioral state, and motor stability throughout an examination
  - Conducting observational examination techniques
  - Administering minimal contact examination techniques
  - Determining when standardized assessment is safe to perform and clinically warranted
  - Providing standardized assessments developed for neonates born preterm or at term gestation
  - Determining the need for and completing oral motor or feeding readiness assessments
- Safe and effective interventions:
  - Positioning to support alignment and movement
  - Handling to support development and daily activities
  - Splinting to provide support for alignment and manage atypical postures or tone
  - Providing oral motor intervention in preparation for oral feeding
  - Developing and implementing parent/caregiver education programs for adult learners with diverse backgrounds
  - Developing and implementing environmental modification to support behavioral state regulation
- Educating/consulting others:
  - Collaborating as part of an interdisciplinary development team
  - Communicating with physicians, occupational therapists, speech language pathologists, respiratory therapists, child life, social workers, and other professionals
  - Planning for discharge, including community resources, car seats, and other equipment or therapy needs
  - Communicating with family members from diverse backgrounds

## References

1. Sweeney JK, Heriza CB, Blanchard Y. Neonatal physical therapy; part I: clinical competencies and neonatal intensive care unit clinical training models. *Pediatr Phys Ther.* 2009;21(4):296-307.
2. Sweeney JK, Heriza CB, Blanchard Y, Dusing SC. Neonatal physical therapy; part II: practice frameworks and evidence-based practice guidelines [erratum in: *Pediatr Phys Ther.* 2010;22(4):377]. *Pediatr Phys Ther.* 2010;22(1):2-16.

## Resources

Neonatology Special Interest Group, Section on Pediatrics, American Physical Therapy Association:  
<http://www.pediatricapta.org/special-interest-groups/neonatology/index.cfm>

Physical Therapy Neonatology Fellowship Programs:  
<http://www.abptrfe.org/FellowshipPrograms/ProgramsDirectory/>

Rapport MJ, Sweeney JK, Dannemiller L, Heriza CB. Student experiences in the neonatal intensive care unit: addendum to neonatal physical therapy competencies and clinical training models. *Pediatr Phys Ther.* 2010;22(4):439-440.

*There are numerous Web sites and publications available on this subject; this list is not meant to be all inclusive. Many of the listed sites have links to additional resources.*

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