PHYSICAL THERAPY MANAGEMENT OF CONGENITAL MUSCULAR TORTICOLLIS: AN EVIDENCE-BASED CLINICAL PRACTICE GUIDELINE FROM THE AMERICAN PHYSICAL THERAPY ASSOCIATION SECTION ON PEDIATRICS

SUMMARY OF ACTION STATEMENTS

IDENTIFICATION AND REFERRAL OF INFANTS WITH CMT

1: Identify Newborns At Risk For CMT. Physicians, (MDs), nurse midwives, obstetrical nurses, nurse practitioners, lactation specialists, Physical Therapists (PTs), or any clinician or family member must assess the presence of neck and/or facial or cranial asymmetry within the first 2 days of birth, using passive cervical rotation, passive lateral flexion, and/or visual observation as their respective training supports, when in the hospital or at time of delivery. (Evidence Quality, EQ, I, Recommendation Strength, RS: Strong)

2: Refer Infants With Asymmetries To Physician And Physical Therapist, PT. MDs, nurse midwives, obstetrical nurses, nurse practitioners, lactation specialists, PTs, or any clinician or family member should refer infants identified as having positional preference, reduced cervical range of motion, sternocleidomastoid masses, facial asymmetry and/or plagiocephaly to the primary pediatrician and a PT as soon as the asymmetry is noted. (EQ II, RS: Moderate)

3: Document Infant History. PTs should obtain a general medical and developmental history of the infant prior to an initial screening, including eight specific health history factors: age at initial visit, age of symptom onset, pregnancy history, delivery history including birth presentation and use of assistance, head posture/preference, family history of CMT, other known or suspected medical conditions, and developmental milestones. (EQ II, RS: Moderate)

4: Screen Infants Who Present Without MD Referral. When infants present without prior MD screening, and a professional or the parent or caretaker indicates concern about head or neck posture and/or developmental progression, PTs with infant experience, in states with autonomous practice, should perform screens of the neurological, musculoskeletal, integumentary and cardiopulmonary systems, including screens of vision, gastrointestinal functions, positional preference and the structural and movement symmetry of the neck, face and head, trunk, hips, upper and lower extremities. (EQ II-IV, RS Moderate)

5: Refer Infants From Physical Therapist To Physician If Red Flags Are Identified. PTs should refer infants to the primary MD for additional diagnostic testing when a screen or evaluation identifies red flags (e.g. poor visual tracking, abnormal muscle tone, extra-muscular masses or other asymmetries inconsistent with CMT) OR when, after 4-6 weeks of initial intense intervention, in the absence of red flags, little or no progress in neck asymmetry is noted. (EQ II, RS: Moderate)

6: Request Images And Reports. PTs should obtain copies of all images and interpretive reports, completed for the diagnostic workup of an infant suspected of having or diagnosed with CMT, to inform prognosis. (EQ II, RS: Moderate)

PHYSICAL THERAPY EXAMINATION OF INFANTS WITH CMT

7: Examine Body Structures. PTs should document the initial examination and evaluation of infants with suspected or diagnosed CMT for the following body structures:
- Infant posture and tolerance to positioning in supine, prone, sitting and standing for body symmetry, with or without support, as appropriate for age. (EQ II, RS: Moderate)
- Bilateral passive cervical rotation and lateral flexion. (EQ II, RS: Moderate)
- Bilateral active cervical rotation and lateral flexion. (EQ II, RS: Moderate)
- Passive and active range of motion (ROM) of the upper and lower extremities, inclusive of screening for possible hip dysplasia. (EQ II, RS: Moderate)
- Pain or discomfort at rest, and during passive and active movement. (EQ IV, RS Weak)
- Skin integrity, symmetry of neck and hip skin folds, presence and location of a SCM mass, and size, shape & elasticity of the SCM muscle and secondary muscles. (EQ II, RS: Moderate)
- Craniofacial asymmetries and head/skull shape. (EQ II, RS: Moderate)
8: Classify The Level Of Severity. PTs and other healthcare providers should classify the level of CMT severity choosing one of seven proposed grades. (EQ: V, RS: Best Practice)

9: Examine Activity And Developmental Status. During the initial and subsequent examinations of infants with suspected or diagnosed CMT, PTs should document the types of and tolerance to position changes, and motor development for movement symmetry and milestones, using an age appropriate, valid and reliable standardized tool. (Evidence quality: II, Recommendation strength: Moderate)

10. Examine Participation Status. The PT should document the parent/caregiver responses regarding:
   - Whether the parent is alternating sides when breast or bottle feeding the infant (EQII, RS: Moderate)
   - Sleep positions (ESII, RS: Moderate)
   - Infant time spent in prone (EQII, RS: Moderate)
   - Infant time spent in equipment/positioning devices, such as strollers, car seats or swings (EQ: II, RS: Moderate)

11: Determine Prognosis. PTs should determine the prognosis for resolution of CMT and the episode of care after completion of the evaluation, and communicate it to the parents/caregivers. Prognoses for the extent of symptom resolution, the episode of care, and/or the need to refer for more invasive interventions are related to: the age of initiation of treatment, classification of severity, intensity of intervention, presence of comorbidities, rate of change and adherence with home programming. (EQ: II, RS: Moderate)

PHYSICAL THERAPY INTERVENTION FOR INFANTS WITH CMT

12: Provide The Following Five Components As The First Choice Interventions. The PT plan of care for the infant with CMT or postural asymmetry should minimally address these 5 components:
   - Neck PROM. (EQ: II, RS: Moderate)
   - Neck and trunk AROM. (EQ: II, RS: Moderate)
   - Development of symmetrical movement. (EQ: II, RS: Moderate)
   - Environmental adaptations. (EQ: II, RS: Moderate)
   - Parent/caregiver education. (EQ: II, RS: Moderate)

13. Provide Supplemental Intervention(s), After Appraising Appropriateness For The Infant, To Augment The First Choice Intervention. PTs may add supplemental interventions, after evaluating their appropriateness for treating CMT or postural asymmetries, as adjuncts to the first choice intervention when the first choice intervention has not adequately improved range or postural alignment, and/or when access to services is limited, and/or when the infant is unable to tolerate the intensity of the first choice intervention, and if the PT has the appropriate training to administer the intervention. (EQ: III, RS: Weak)

14. Refer For Consultation When Outcomes Are Not Fully Achieved. PTs who are treating infants with CMT or postural asymmetries should initiate consultation with the primary MD and/or specialists about alternative interventions when the infant is not progressing. These conditions might include: when asymmetries of the head, neck and trunk are not resolving after 4-6 weeks of initial intense treatment; after 6 months of treatment with only moderate resolution; or if the infant is older than 12 months on initial examination and either aural asymmetry or 10-15 degrees of difference persist between the left and right sides for any motion; or the infant is older than 7 months on initial examination and a tight band or SCM mass is present; or if the side of torticollis changes. (EQ: II, RS: Moderate)

PHYSICAL THERAPY DISCHARGE AND FOLLOW-UP OF INFANTS WITH CMT

15: Document Outcomes And Discharge Infants From PT When Criteria Are Met. PTs should document outcome measures and discharge the infant diagnosed with CMT or asymmetrical posture from PT services when the infant has full passive ROM within 5 degrees of the non-affected side, symmetrical active movement patterns throughout the passive range, age appropriate motor development, no visible head tilt, and the parents/caregivers understand what to monitor as the child grows. (EQ: II-III, RS: Moderate)

16: Provide Follow-up Screening Of Infants 3-12 Months Post Discharge. PTs who treat infants with CMT should examine positional preference, the structural and movement symmetry of the neck, face and head, trunk, hips, upper and lower extremities, and developmental milestones, 3-12 months following discharge from physical therapy intervention OR when the child initiates walking. (EQ: II, RS: Moderate)