

1 **Clinical Practice Guideline:** **Physical Therapy Medical Policy/Guidelines**

2

3 **Date of Implementation:** **October 18, 2012**

4

5 **Product:** **Specialty**

6

7

- 
- Related Policies:
- CPG 12: Medical Necessity Decision Assist Guideline for Rehabilitative Care
  - CPG 30: Laser Therapy (LT)
  - CPG 83: Axial/Spinal Decompression Therapy
  - CPG 110: Medical Record Maintenance and Documentation Practices
  - CPG 111: Patient Assessments: Medical Necessity Decision Assist Guideline for Evaluations and Re-evaluations
  - CPG 112: Exercise Therapy for Treatment of Non-Specific Low Back Pain
  - CPG 113: Exercise Therapy for Treatment of Neck Pain
  - CPG 119: Spinal Manipulative Therapy for Non-Musculoskeletal Conditions and Related Disorders
  - CPG 121: Passive Physiotherapy Modalities
  - CPG 129: Electrodiagnostic Testing
  - CPG 133: Techniques and Procedures Not Widely Supported As Evidence-Based
  - CPG 143: Strapping and Taping
  - CPG 144: Prosthetic Training and Evaluation
  - CPG 146: Range of Motion Testing
  - CPG 148: Wheelchair Management
  - CPG 152: Orthotic Training and Evaluation
  - CPG 155: Occupational Therapy Medical Policy/Guideline
  - CPG 156: Wound Care
  - CPG 157: Lymphedema
  - CPG 165: Autism Spectrum Disorder (ASD) – Outpatient Rehabilitation Services (Speech, Physical, and Occupational Therapy)
  - CPG 166: Speech-Language Pathology/Speech Therapy Guidelines
  - CPG 175: Extra-Spinal Joint Manipulation/Mobilization for the Treatment of Upper Extremity Musculoskeletal Conditions
  - CPG 177: Extra-Spinal Joint Manipulation/Mobilization for the Treatment of Lower Extremity Musculoskeletal Conditions
  - CPG 178: Dry Needling
  - CPG 269: H-Wave® Electrical Stimulation
  - CPG 270: Cognitive Rehabilitation
  - CPG 272: Electric Stimulation for Pain, Swelling and Function in the Clinic Setting
  - CPG 273: Superficial Heat and Cold
  - CPG 274: Deep Heating Modalities (Therapeutic Ultrasound and Diathermy)
  - CPG 275: Mechanical Traction (Provided in a Clinic Setting)
  - CPG 276: MEDEK Therapy
  - CPG 277: Non-invasive Interactive Neurostimulation (InterX®)
  - CPG 286: Intensive Model of Therapy
  - CPG 295: Physical Performance Testing or Measurement
  - CPG 305: Virtual Physical Therapy and Rehabilitation Services

**CPG 135 Revision 18– S**

Physical Therapy Medical Policy/Guidelines

**Revised – December 22, 2023**

To CHSO for review and approval 12/22/2023

CHSO reviewed and approved 12.22/2023

To CQT for informational review 01/08/2024

CQT reviewed as informational 01/08/2024

To QIC for informational review 02/06/2024

QIC reviewed as informational 02/06/2024

To QOC for review and adoption 02/15/2024

QOC reviewed and approval 02/15/2024

1 **TABLE OF CONTENTS**  
 2 *(CTRL+Click on Section Heading to Follow Link)*

3 **1. PROVIDERS OF PHYSICAL THERAPY SERVICES..... 3**  
 4 **2. REHABILITATIVE PHYSICAL THERAPY SERVICES..... 5**  
 5 **3. MAINTENANCE PHYSICAL THERAPY SERVICES ..... 9**  
 6 **4. HABILITATIVE PHYSICAL THERAPY SERVICES ..... 10**  
 7 **5. REDUNDANT THERAPEUTIC EFFECTS AND REHABILITATIVE OR**  
 8 **HABILITATIVE SERVICES ..... 11**  
 9 **6. THERAPEUTIC MODALITIES AND PROCEDURES..... 12**  
 10 6.1 Passive Care and Active Care.....13  
 11 6.2 Treatment Interventions.....14  
 12 6.3 Precautions and Contraindications to Therapeutic Modalities and Procedures .....20  
 13 **7. CLINICAL DOCUMENTATION ..... 23**  
 14 7.1 Evaluation and Re-evaluations .....24  
 15 7.2 Treatment Sessions .....26  
 16 7.3 Discharge/Discontinuation of Intervention.....27  
 17 7.4 Duplicated / Insufficient Information .....27  
 18 7.5 Centers for Medicare and Medicaid Services (CMS) .....28  
 19 **8. CLINICAL REVIEW PROCESS..... 28**  
 20 8.1 Definition of Key Terminology used in Clinical Reviews .....29  
 21 8.2 Clinical Quality Evaluation .....30  
 22 8.3 Critical Factors during Clinical Reviews.....33  
 23 8.3.1 General Factors.....34  
 24 8.3.2 Factors that Influence Adverse Determinations of Clinical Services (Partial Approvals/Denials)  
 25 .....39  
 26 8.3.3 Referral / Coordination of Services .....43  
 27 **9. LITERATURE REVIEW ..... 44**  
 28 9.1 Physical Therapy for Conditions Considered Unproven .....45  
 29 9.2 Specific Physical Therapy Treatments Considered Unproven.....46  
 30 **10. CODING/BILLING INFORMATION..... 49**

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39

## DESCRIPTION

This document addresses Physical Therapy Services which may be delivered by a Physical Therapist acting within the scope of a professional license. This document also addresses the processes associated with Medical Necessity Determinations performed by American Specialty Health (ASH) Clinical Quality Evaluators (CQEs) on services submitted for review.

The availability of coverage for rehabilitative and/or habilitative services will vary by benefit design as well as by State and Federal regulatory requirements. Benefit plans may include a maximum allowable rehabilitation benefit, either in duration of treatment or in number of visits or in the conditions covered or type of services covered. When the maximum allowable benefit is exhausted or if the condition or service are not covered, coverage will no longer be provided even if the medical necessity criteria described below are met.

## GUIDELINES

### 1. PROVIDERS OF PHYSICAL THERAPY SERVICES

Covered, medically necessary rehabilitative or habilitative services must be delivered by a qualified Physical Therapist acting within the scope of their license as regulated by the Federal and State governments. Some services may be performed by ancillary providers (e.g., licensed physical therapist assistant) under the direction and supervision of, and in collaboration with, a licensed Physical Therapist; however, generally, only those healthcare practitioners who hold an active license, certification, or registration with the applicable state board or agency may provide such services. Benefits for services provided by these ancillary healthcare providers may also be dependent upon the patient's benefit contract language.

Aides and other nonqualified personnel are limited to provision of non-skilled services such as preparing the individual, treatment area, equipment, or supplies; assisting a qualified therapist or assistant; and transporting individuals.

Physical therapists provide services to patients who have impairments, functional limitations, disabilities, or changes in physical function and health status resulting from injury, disease, or other causes. Medically necessary physical therapy services must relate to a written treatment plan of care and be of a level of complexity that requires the judgment, knowledge and skills of a physical therapist to perform and/or supervise the services.

1 A service is not considered a skilled therapy service merely because it is furnished by a  
2 therapist or by a therapist/therapy assistant under the direct or general supervision, as  
3 applicable, of a therapist. If a service can be self-administered or safely and effectively  
4 furnished by an unskilled person, without the direct or general supervision, as applicable,  
5 of a therapist, the service cannot be regarded as a skilled therapy service even though a  
6 therapist actually furnishes the service. Similarly, the unavailability of a competent person  
7 to provide a non-skilled service, notwithstanding the importance of the service to the  
8 patient, does not make it a skilled service when a therapist furnishes the service.

9  
10 Services that do not require the professional skills of a therapist to perform or supervise  
11 are not medically necessary, even if they are performed or supervised by a therapist,  
12 physician or NPP. Therefore, if a patient's therapy can proceed safely and effectively  
13 through a home exercise program, self-management program, restorative nursing program  
14 or caregiver assisted program, physical therapy services are not indicated or medically  
15 necessary. Physical therapy is used for both rehabilitation and habilitation. Skilled physical  
16 therapy services may be necessary to improve a patient's current condition, to maintain the  
17 patient's current condition, or to prevent or slow further deterioration of the patient's  
18 condition.

19  
20 The plan of care for medically necessary physical therapy services is established by a  
21 licensed physical therapist. The amount, frequency and duration of the physical therapy  
22 services must be reasonable (within regional norms and commonly accepted practice  
23 patterns); the services must be considered appropriate and needed for the treatment of the  
24 condition and must not be exclusive palliative in nature. Thus, once therapeutic benefit has  
25 been achieved, or a home exercise program could be used for further gains without the  
26 need for skilled physical therapy, continuing supervised physical therapy is not considered  
27 medically necessary.

28  
29 Rehabilitative services are intended to improve, adapt or restore functions which have been  
30 impaired or permanently lost as a result of illness, injury, loss of a body part, or congenital  
31 abnormality involving goals an individual can reach in a reasonable period of time. If no  
32 improvement is documented after two weeks of treatment, an alternative treatment plan  
33 should be attempted. Treatment is no longer medically necessary when the individual stops  
34 progressing toward established goals.

35  
36 Habilitative services are defined by the National Association of Insurance Commissioners  
37 as "health care services that help a person keep, learn or improve skills and functioning for  
38 daily living." Habilitative services are intended to maintain, develop or improve skills  
39 needed to perform activities of daily living (ADLs) or instrumental activities of daily living  
40 (IADLs) which have not (but normally would have) developed or which are at risk of being

1 lost as a result of illness, injury, loss of a body part, or congenital abnormality. Examples  
2 include therapy for a child who is not walking at the expected age.

3  
4 **Note:** The availability of rehabilitative and/or habilitative benefits for physical therapy  
5 services, state and federal mandates, and regulatory requirements should be verified and  
6 followed in addition to the benefit plan provisions and medical necessity criteria defined  
7 in this document.

8  
9 The Guide to Physical Therapist Practice, published by the APTA (2014), supports this  
10 guideline in all areas of physical therapy practice.

## 11 **2. REHABILITATIVE PHYSICAL THERAPY SERVICES**

### 12 **Medically Necessary**

13  
14 (1) Rehabilitative physical therapy (PT) services to improve, adapt or restore functions  
15 which have been impaired or permanently lost and/or to reduce pain as a result of  
16 illness, injury, loss of a body part, or congenital abnormality are considered **medically**  
17 **necessary** when **ALL** the following criteria are met:

- 18 1. The services are delivered by a qualified provider of physical therapy services (i.e.,  
19 appropriately trained and licensed by the state to perform physical therapy  
20 services); and
- 21 2. Rehabilitative physical therapy occurs when the judgment, knowledge, and skills  
22 of a qualified provider of physical therapy services (as defined by the scope of  
23 practice for therapists in each state) are necessary to safely and effectively furnish  
24 a recognized therapy service due to the complexity and sophistication of the plan  
25 of care and the medical condition of the individual, with the goal of improvement  
26 of an impairment or functional limitation.
- 27 3. The patient’s condition has the potential to improve or is improving in response to  
28 therapy, maximum improvement is yet to be attained; and there is an expectation  
29 that the anticipated improvement is attainable in a **reasonable and predictable**  
30 **period of time\*** and will result in a clinically significant level of functional  
31 improvement; and
- 32 4. Improvement or restoration of function could not be reasonably expected as the  
33 individual gradually resumes normal activities without the provision of skilled  
34 rehabilitative services; and
- 35 5. The documentation objectively verifies progressive functional improvement over  
36 specific time frames and clinically justifies the initiation of continuation of  
37 rehabilitative services; and
- 38 6. The program is individualized, and there is documentation outlining quantifiable,  
39 attainable treatment goals.

1       **\*Reasonable and predictable period of time:** The specific time frames for which one would expect  
 2       practical functional improvement is dependent on various factors including whether the services are  
 3       Rehabilitative or Habilitative services. A reasonable trial of care for rehabilitative services to determine  
 4       the patient’s potential for improvement in or restoration of function is influenced by the diagnosis;  
 5       clinical evaluation findings; stage of the condition (acute, sub-acute, chronic); severity of the condition;  
 6       and patient-specific elements (age, gender, past and current medical history, family history, and any  
 7       relevant psychosocial factors). Habilitative services may be prolonged and are primarily influenced by  
 8       the type of ADLs or IADLs which have not developed, or which are at risk of being lost.  
 9

10       (2) A physical therapy evaluation is considered medically necessary for the assessment of  
 11       a physical impairment.

### 12

### 13 **Not Medically Necessary**

14       1) Rehabilitative PT services are considered not medically necessary if any of the  
 15       following is determined:

- 16       1. Rehabilitative services are NOT intended to improve, adapt or restore functions  
 17       which have been impaired or permanently lost as a result of illness, injury, loss of  
 18       a body part, or congenital abnormality.
- 19       2. The individual’s condition is strictly of a behavioral nature without any associated  
 20       motor involvement that impacts functional activities (e.g., ADHD, anxiety).
- 21       3. Improvement or restoration of function could reasonably be expected to improve  
 22       as the individual gradually resumes normal activities without the provision of  
 23       skilled therapy services. For example:
  - 24       ○ A patient suffers a transient and easily reversible loss or reduction in function  
 25       which could reasonably be expected to improve spontaneously as the patient  
 26       gradually resumes normal activities.
  - 27       ○ A fully functional patient who develops temporary weakness from a brief period  
 28       of bed rest following abdominal surgery.
- 29       4. Therapy services that do not require the skills of a qualified provider of PT services.  
 30       Examples include but are not limited to:
  - 31       ○ General exercises (basic aerobic, strength, flexibility or aquatic programs) to  
 32       promote overall fitness/conditioning.
  - 33       ○ Services for the purpose of enhancing athletic or recreational sports  
 34       performance or for return to sport after injury or surgery.
  - 35       ○ Massages and whirlpools for relaxation.
  - 36       ○ General public education/instruction sessions.
  - 37       ○ Repetitive gait or other activities and services that an individual can practice  
 38       independently and can be self-administered safely and effectively.
  - 39       a) Activities that require only routine supervision and NOT the skilled services  
 40       of a physical therapy provider.
  - 41       b) When a home exercise program is sufficient and can be utilized to continue  
 42       therapy (examples of exceptions include but would not be limited to the

1 following: if patient has poor exercise technique that requires cueing and  
 2 feedback, lack of support at home if necessary for exercise program  
 3 completion, and/or cognitive impairment that doesn't allow the patient to  
 4 complete the exercise program).

- 5 5. The expectation does **not** exist that the service(s) will result in a clinically  
 6 significant improvement in the level of functioning within a reasonable and  
 7 predictable period of time (up to 4 weeks).  
 8 ○ If function could reasonably be expected to improve as the individual gradually  
 9 resumes normal activities, then the service is considered **not** medically  
 10 necessary.  
 11 ○ The patient's condition does not have the potential to improve or is not  
 12 improving in response to therapy; or would be insignificant relative to the extent  
 13 and duration of therapy required; and there is an expectation that further  
 14 improvement is NOT attainable.  
 15 ○ The documentation fails to objectively verify functional progress over a  
 16 reasonable period of time (up to 4 weeks).  
 17 ○ The patient has reached maximum therapeutic benefit.
- 18 6. A passive modality is not preparatory to other skilled treatment procedures or is not  
 19 necessary in order to provide other skilled treatment procedures safely and  
 20 effectively.
- 21 7. A passive modality has insufficient published evidence to support a clinically  
 22 meaningful physiologic effect on the target tissue or improve the potential for a  
 23 positive response to care for the condition being treated.
- 24 8. Reevaluations or assessments of a patient's status that are not separate and distinct  
 25 services from those work components included within physical therapy services  
 26 provided.
- 27 9. Reevaluations or assessments of a patient's status that are not necessary to continue  
 28 a course of therapy nor related to a new condition or exacerbation for which the  
 29 reevaluation will likely result in a change in the treatment plan.
- 30 10. The treatments/services are not supported by and are not performed in accordance  
 31 with peer-reviewed literature as documented in applicable ASH CPGs or other  
 32 literature accepted by ASH Clinical Quality committee.

33  
 34 (2) The following treatments/programs are considered **not** medically necessary because  
 35 they are non-medical, non-rehabilitative, educational, or training in nature. In addition,  
 36 these treatments/programs may be specifically excluded under benefit plans:

- 37 • Back school.  
 38 • Vocational rehabilitation programs and any program or evaluation with the primary  
 39 goal of returning an individual to work.  
 40 • Work hardening programs.  
 41 • Health and wellness interventions.

- 1 • Education and achievement testing, including Intelligence Quotient (IQ) testing.  
 2 • Educational interventions (e.g., classroom environmental manipulation, academic  
 3 skills training and parental training).  
 4 • Services provided within the school setting and duplicated in the rehabilitation  
 5 setting.  
 6
- 7 (3) Physical therapy service for executive functioning is considered not medically  
 8 necessary as it does not address an underlying medical condition affecting motor  
 9 deficits.
- 10 • Executive functioning involves learning and cognitive skills which can be  
 11 addressed with instruction and practice in a life skills or educational program.  
 12 • Examples of executive functioning includes deficits in the following areas, but not  
 13 limited to: sustaining and shifting attention, focusing, planning, organizing,  
 14 sequencing, managing frustration, modulating emotions that are affecting life skills  
 15 and daily activities.  
 16
- 17 (4) Physical therapy for the treatment of any of the following conditions is considered  
 18 unproven:  
 19 1. Sexual dysfunction unrelated to musculoskeletal or orthopedic condition.  
 20 2. Scoliosis curvature correction (e.g., Schroth Method).  
 21
- 22 (5) Use of any of the following treatments is considered unproven. Refer to *Techniques*  
 23 *and Procedures Not Widely Supported as Evidence-Based (CPG 133 - S)* and/or the  
 24 specific guideline below for additional information.  
 25 1. Intensive model of constraint-induced movement therapy  
 26 2. Intensive Model of Therapy (IMOT) programs (*Intensive Model of Therapy [CPG*  
 27 *286 – S]*)  
 28 3. Dry hydrotherapy/aquamassage/hydromassage  
 29 4. Non-invasive Interactive Neurostimulation (e.g., InterX®) [*Non-invasive*  
 30 *Interactive Neurostimulation (InterX®) (CPG 277 – S)*]  
 31 5. Microcurrent Electrical Nerve Stimulation (MENS)  
 32 6. H-WAVE ® [*H-WAVE® Electrical Stimulation (CPG 269 – S)*]  
 33 7. Spinal manipulation for the treatment of non-musculoskeletal conditions and  
 34 related disorders [*Spinal Manipulative Therapy for Non-Musculoskeletal*  
 35 *Conditions and Related Disorders (CPG 119 – S)*]  
 36 8. Equestrian therapy (e.g., hippotherapy)  
 37 9. MEDEK Therapy [*MEDEK Therapy (CPG 276 – S)*]  
 38 10. The Interactive Metronome Program  
 39 11. Elastic therapeutic tape/taping (e.g., Kinesio™ tape, KT TAPE/KT TAPE PRO™,  
 40 Spidertech™ tape) [*Strapping and Taping (CPG 143 – S)*]

- 1 12. Dry Needling [*Dry Needling (CPG 178 – S)*]  
 2 13. Laser therapy [*Laser Therapy (LT) (CPG 30 – S)*]  
 3 14. Vertebral axial decompression therapy and devices (e.g., VAX-D, DRX,  
 4 DRX2000, DRX3000, DRX5000, DRX9000, DRS, Dynapro™ DX2, Accu-  
 5 SPINA™ System, IDD Therapy® [Intervertebral Differential Dynamics Therapy],  
 6 Tru Tac 401, Lordex Power Traction device, Spinerx LDM) [*Axial/Spinal*  
 7 *Decompression Therapy (CPG 83 – S)*]  
 8

### 9 **3. MAINTENANCE PHYSICAL THERAPY SERVICES**

10 According to the Centers for Medicare and Medicaid Services (CMS) guidelines, or when  
 11 covered by private carriers, maintenance physical therapy services are a covered benefit  
 12 when skilled physical therapy care is medically necessary to maintain functional status or  
 13 to prevent or slow further deterioration in function. Unlike coverage for rehabilitative  
 14 therapy, coverage for maintenance therapy does not depend on the presence or absence of  
 15 a patient’s potential for improvement for therapy; the deciding factors are always whether  
 16 the services are considered reasonable, effective treatments for the patient’s condition and  
 17 require the skills of a therapist. A maintenance program is considered medically necessary  
 18 when any of the following criteria are met:

- 19
- 20 • If the specialized skill, knowledge and judgment of a qualified physical therapist  
 21 are required to establish or design a maintenance program to maintain the patient’s  
 22 current condition or to prevent or slow further deterioration.-
  - 23 • If skilled physical therapy services by a qualified physical therapist, or physical  
 24 therapist assistant under the supervision of a qualified therapist, are needed to  
 25 instruct the patient or appropriate caregiver regarding the maintenance program.
  - 26 • If skilled physical therapy services are needed for periodic reevaluations or  
 27 reassessments of the maintenance program.

28 Once a maintenance program is designed or established, a maintenance program can  
 29 generally be performed by the patient alone or with the assistance of family member,  
 30 caregiver or unskilled personnel. In such situations, coverage is not medically necessary.  
 31 The performance or delivery of the maintenance therapy program is considered medically  
 32 necessary only when the documentation establishes that the following criteria has been  
 33 met:

- 34
- 35 1. The individualized assessment of a patient’s clinical condition demonstrates that  
 36 the specialized judgment, knowledge and skills of a physical therapy practitioner  
 37 (skilled care) are necessary for the performance of an effective maintenance  
 38 program.
  - 39 2. When the needed therapy procedures required to maintain the patient’s current  
 40 function or to prevent or slow further deterioration are of such complexity and

- sophistication that the skills of a qualified physical therapy practitioner (as defined by scope of practice in each state) are required to furnish the therapy procedure; or
3. The particular patient’s special medical complications require the skills of a qualified physical therapy practitioner to furnish a therapy service required to maintain the patient’s current function or to prevent or slow further deterioration, even if the skills of a physical therapy practitioner are not ordinarily needed to perform such therapy procedures.

The plan of care must be developed by the physician, NPP (non-physician practitioner) or PT who will provide the PT services.

**4. HABILITATIVE PHYSICAL THERAPY SERVICES**

Habilitative services may or may not be covered services. If the member’s contract excludes habilitative services, the contract prevails.

**Medically Necessary**

(1) Habilitative PT services are considered medically necessary when **ALL** the following criteria are met:

1. The therapy is intended to maintain or develop skills needed to perform Activities of Daily Living (ADLs) or Instrumental Activities of Daily Living (IADLs) which have not (but normally would have) developed or which are at risk of being lost as a result of illness (including developmental delay), injury, loss of a body part, or congenital abnormality.
2. The physical therapy services are evidence-based and require the judgment, knowledge, and skills of a qualified provider of physical therapy services due to the complexity and sophistication of the plan of care and the medical condition of the individual.
3. There is an expectation that the therapy will assist development of function or maintain an acceptable level of functioning.
4. An individual would either not be expected to develop the function or would be expected to permanently lose the function (not merely experience fluctuation in the function) without the habilitative service. If the undeveloped or impaired function is not the result of a loss of body part or injury, a physician experienced in the evaluation and management of the undeveloped or impaired has confirmed that the function would not either be expected to develop or would be permanently lost without the habilitative service. This information also concurs with the written treatment plan, which is likely to result in meaningful development of function or prevention of the loss of function.
5. There is a written treatment plan documenting the short and long-term goals (including estimated time when goals will be met) of treatment, frequency and

- 1 duration of treatment, and what quantitative outcome measures will be used to  
 2 assess function objectively.
- 3 6. Documentation objectively verifies that, at a minimum, functional status is  
 4 maintained or developed.
- 5 7. The services are delivered by a qualified provider of physical therapy services.  
 6

7 **Not Medically Necessary**

- 8 (1) Habilitative PT services are considered not medically necessary if any of the criteria  
 9 above are not met or the individual's condition is strictly of a behavioral nature without  
 10 any associated motor involvement that impacts functional activities (e.g., ADHD,  
 11 anxiety).  
 12

13 **5. REDUNDANT THERAPEUTIC EFFECTS AND REHABILITATIVE OR**  
 14 **HABILITATIVE SERVICES**

- 15
- 16 1. Redundant rehabilitative or habilitative therapy services expected to achieve the  
 17 same therapeutic goal are considered not medically necessary and it would be  
 18 inappropriate to provide these services to the same body region during the same  
 19 treatment session. This includes treatments, such as but not limited to:
- 20 ○ multiple modalities procedures that have similar or overlapping physiologic  
 21 effects (e.g., multiple forms of superficial or deep heating modalities).
  - 22 ○ massage therapy and myofascial release.
  - 23 ○ orthotics training and prosthetic training.
  - 24 ○ whirlpool and Hubbard tank.
- 25
- 26 2. Duplicative (same or similar) rehabilitative or habilitative services provided as part  
 27 of an authorized therapy program through another therapy discipline are not  
 28 medically necessary and inappropriate in the provision of care for the same patient.
- 29 ○ When individuals receive physical, occupational, or speech therapy, the  
 30 therapists should provide different treatments that reflect each therapy  
 31 discipline's unique perspective on the individual's impairments and  
 32 functional deficits and not duplicate the same treatment. They must also  
 33 have separate evaluations, treatment plans, and goals. This applies to  
 34 chiropractic services as well.
  - 35 ○ As an example, when individuals receive manual therapy services from a  
 36 physical therapist and chiropractic or osteopathic manipulation, the services  
 37 must be documented as separate and distinct, performed on different body  
 38 parts, and must be justified and non-duplicative.

## 6. THERAPEUTIC MODALITIES AND PROCEDURES

The CPT codebook defines a modality as "any physical agent applied to produce therapeutic changes to biologic tissue; includes but is not limited to thermal, acoustic, light, mechanical, or electric energy." Modalities may be supervised, which means that the application of the modality doesn't require direct one-on-one patient contact by the practitioner. This means that set-up and application of the modality needs to be supervised by a physical therapist, but they do not need to perform the modality. Modalities may also involve constant attendance, which indicates that the modality requires direct one-on-one patient contact by the practitioner.

Supervised modalities are untimed therapies. Untimed therapies are usually reported only once for each date of service regardless of the number of minutes spent providing this service or the number of body areas to which they were applied. Untimed services billed as more than one unit will require significant documentation to justify treatment greater than one session per day. Examples of supervised modalities include application of:

- Hot or cold packs
- Mechanical traction
- Unattended electrical stimulation (i.e., for pain relief)
- Vasopneumatic devices
- Whirlpool
- Paraffin bath
- Diathermy

Modalities that require constant attendance, are timed and reported in 15-minute increments (one unit) regardless of the number of body areas to which they are applied. Examples of modalities that require constant attendance include:

- Contrast baths
- Ultrasound
- Attended electrical stimulation (i.e., NMES)
- Iontophoresis

The CPT codebook defines therapeutic procedures as "A manner of effecting change through the application of clinical skills and/or services that attempt to improve function." Except for Group Therapy (97150) and Work Hardening/Conditioning (97545-6), therapeutic procedures require direct (one-on-one) patient contact by the Physical Therapist, are timed therapies, and must be reported in units of 15-minute increments. Only the actual time that the Physical Therapist is directly working with the patient performing exercises/activities, instruction, or assessments is counted as treatment time. The time that the patient spends not being treated because of a need for rest or equipment set up is not considered treatment time. Any exercise/activity that does not require, or no longer

1 requires, the skilled assessment and intervention of a health care practitioner is not  
 2 considered a medically necessary therapeutic procedure. Exercises often can be taught to  
 3 the patient or a caregiver as part of a home/self-care program. Examples of therapeutic  
 4 procedures that require the Physical Therapist to have direct (one-on-one) patient contact  
 5 include:

- 6 • therapeutic exercises
- 7 • neuromuscular reeducation
- 8 • gait training
- 9 • manual therapy (e.g., soft tissue mobilization)
- 10 • therapeutic activities
- 11 • sensory integrative techniques
- 12 • wheelchair training

### 14 **Documentation Requirements to Substantiate Medical Necessity of Therapeutic** 15 **Modalities and Procedures**

16 Proper and sufficient documentation is essential to establish the clinical necessity and  
 17 effectiveness of each modality and procedure, aid in the determination of patient outcomes  
 18 management, and support continuity of patient care. At a minimum, documentation is  
 19 required for every treatment day and for each therapy performed. Each daily record should  
 20 include: the date of service, the name of each modality and/or procedure performed, the  
 21 parameters for each modality (e.g., amperage/voltage, location of pads/electrodes), area of  
 22 treatment, total treatment time spent for each therapy (mandatory for timed services), the  
 23 total treatment time for each date of service, and the identity of the person(s) providing the  
 24 services. Failure to properly identify and sufficiently document the parameters for each  
 25 therapy on a daily progress note may result in an adverse determination (partial approval  
 26 or denial).

#### 28 **6.1 Passive Care and Active Care**

29 Generally, passive modalities are used to manage the acute inflammatory response, pain,  
 30 and/or muscle tightness or spasm in the early stages of musculoskeletal and related  
 31 condition management. They are most effective during the acute phase of treatment. The  
 32 use of passive modalities in the treatment of sub-acute or chronic conditions beyond the  
 33 acute inflammatory response time frame is generally considered not medically necessary  
 34 unless there is an exacerbation. Passive modalities are rarely beneficial alone and are most  
 35 effective when performed as part of a comprehensive treatment approach. Some  
 36 improvement with the use of passive modalities should be seen within three visits. If  
 37 passive therapy is not contributing to improvement, passive therapy should be  
 38 discontinued, and other evidence supported interventions implemented. The use of passive  
 39 modalities is generally considered not medically necessary unless they are preparatory and  
 40 essential to the safe and effective delivery of other skilled treatment procedures (e.g.,

1 therapeutic exercise training, etc.). Prolonged reliance on passive modalities is not  
2 supported by the clinical literature.

3  
4 A “passive therapy” is a procedure applied by a clinical practitioner without active  
5 engagement of or movement by the patient (e.g., ultrasound, hot packs).

6  
7 The selection of a passive modality should be based on an understanding of the known  
8 physiologic effects of the modality, contraindications, the stage of injury and/or tissue  
9 healing, anatomical location to be treated, patient specific conditions and the likelihood of  
10 the therapy to enhance recovery or facilitate treatment with manual and active therapeutic  
11 procedures. Use of more than two (2) modalities on each visit date is unusual and should  
12 be justified in the documentation.

13  
14 Transition from passive physiotherapy modalities to active treatment procedures should be  
15 timely and evidenced in the medical record, including instructions on self/home care.  
16 Active therapeutic procedures are typically started as swelling, pain, and inflammation are  
17 reduced. Active care elements include increasing range of motion, strengthening primary  
18 and secondary stabilizers of a given region, and increasing the endurance capability of the  
19 muscles. Care focuses on active participation of the patient in their exercise program. Gait  
20 training, muscle strengthening, and progressive resistive exercises are considered active  
21 procedures. Patients should progress from active procedures requiring the supervision of a  
22 skilled practitioner to a self-directed home activity program as soon as possible.

## 23 24 **6.2 Treatment Interventions**

25 Below are descriptions and medical necessity criteria, as applicable, for different treatment  
26 interventions, including specific modalities and therapeutic procedures associated with  
27 physical therapy. This material is for informational purposes only and is not indicative of  
28 coverage, nor is it an exhaustive list of services provided.

### 29 30 **Hydrotherapy/Whirlpool/Hubbard Tank**

31 These modalities involve supervised use of agitated water in order to relieve muscle  
32 spasm, improve circulation, or cleanse wounds e.g., ulcers, skin conditions. Hydrotherapy  
33 may be considered medically necessary for pain relief, muscle relaxation and improvement  
34 of movement for persons with musculoskeletal conditions or for wound care (cleansing  
35 and debridement).

### 36 37 **Fluidotherapy®**

38 This modality is used specifically for acute and subacute conditions of the extremities.  
39 Fluidotherapy® is a dry superficial thermal modality that transfers heat to soft tissues by  
40 agitation of heated air and Cellux particles. The indications for this modality are similar to  
41 paraffin baths and whirlpool and it is an acceptable alternative to other heat modalities for

1 reducing pain, edema, and muscle spasm from acute or subacute traumatic or non-traumatic  
 2 musculoskeletal disorders of the extremities, including complex regional pain syndrome  
 3 (CRPS). A benefit of Fluidotherapy® is that patients can perform active range of motion  
 4 (AROM) while undergoing treatment.

### 6 **Vasopneumatic Devices**

7 These special devices apply pressure for swelling/edema reduction, either after an acute  
 8 injury, following a surgical procedure, due to lymphedema, or due to pathology such as  
 9 venous insufficiency. Education sessions for home use are considered medically necessary  
 10 (up to two sessions). Cooling systems such as Game Ready® Systems, Cryocuff, Polar Care  
 11 Wave or any similar cold compression system devices are not considered vasopneumatic  
 12 devices and should not be billed as such.

### 14 **Hot/Cold Packs**

15 Hot packs increase blood flow, relieve pain and increase flexibility. Cold packs decrease  
 16 blood flow to an area for reduction of pain and swelling. They may be considered medically  
 17 necessary for musculoskeletal conditions that include significant pain and or swelling.

### 19 **Paraffin Bath**

20 This modality uses hot wax for application of heat. It is indicated for use to relieve pain  
 21 and increase range of motion of extremities (typically wrists and hands) due to chronic  
 22 joint problems post-injury, or post-surgical scenarios.

### 24 **Mechanical Traction**

25 This device provides a mechanical pull on the spine (cervical or lumbar) to relieve pain,  
 26 spasm, and nerve root compression. Mechanical traction may be considered medically  
 27 necessary only when there is no improvement after the application of other evidence-based  
 28 therapeutic procedures to significantly improve symptoms for 3 weeks; the patient has  
 29 signs of nerve root compression or radiculopathy; it is used in combination with other  
 30 evidence-based treatments including therapeutic exercise with extension movements.

32 Axial Decompression Therapy (aka Decompression Therapy or Spinal Decompression  
 33 Therapy) are considered experimental and not medically necessary.

### 35 **Infrared Light Therapy**

36 Infrared light therapy is a form of heat therapy used to increase circulation to relieve muscle  
 37 spasm. Other heating modalities are considered superior to infrared lamps and should be  
 38 considered unless there is a contraindication to those other forms of heat. Utilization of the  
 39 Infrared Light Therapy CPT code is not appropriate for low level laser treatment. This also  
 40 does not refer to Anodyne Therapy System.

1 **Electrical Stimulation**

2 Electrical stimulation is used in different variations to relieve pain, reduce swelling, heal  
3 wounds, and improve muscle function. Functional electric stimulation is considered  
4 medically necessary for muscle re-education (to improve muscle contraction) in the earlier  
5 phases of rehabilitation.

6  
7 **Iontophoresis**

8 Electric current used to transfer certain chemicals (medications) into body tissues. Use of  
9 iontophoresis may be considered medically necessary for the treatment of inflammatory  
10 conditions, such as plantar fasciitis and lateral epicondylitis.

11  
12 **Contrast Baths**

13 This modality is the application of alternative hot and cold baths and is typically used to  
14 treat extremities with subacute swelling or chronic regional pain syndrome (CRPS).  
15 Contrast baths may be considered medically necessary to reduce hypersensitivity reduction  
16 and swelling.

17  
18 **Ultrasound**

19 This modality provides deep heating through high frequency sound wave application. Non-  
20 thermal applications are also possible using the pulsed option. Ultrasound is commonly  
21 used to treat many soft tissue conditions that require deep heating or micromassage to a  
22 localized area to relieve pain and improve healing. Ultrasound may be considered  
23 medically necessary to relieve pain and improve healing.

24  
25 **Diathermy (e.g., shortwave)**

26 Shortwave diathermy utilizes high frequency magnetic and electrical current to provide  
27 deep heating to larger joints and soft tissue, and may be considered medically necessary  
28 for pain relief, increased circulation, and muscle spasm reduction. Microwave diathermy  
29 presents an unacceptable risk profile and is considered not medically necessary.

30  
31 **Therapeutic Exercises**

32 Therapeutic exercise includes instruction, feedback, and supervision of a person in an  
33 exercise program specific to their condition. Therapeutic exercise may be considered  
34 medically necessary to restore/develop strength, endurance, range of motion and flexibility  
35 which has been lost or limited as a result of a disease or injury. Exercise performed by the  
36 patient within a clinic facility or other location (e.g., home; gym) without a physician or  
37 therapist present and supervising would be considered not medically necessary.

38  
39 **Neuromuscular Reeducation (NMR)**

40 NMR generally refers to a treatment technique performed for the purpose of retraining the  
41 connection of the brain and muscles, via the nervous system, the level of communication

1 required to improve movement, strength, balance, and function. The goal of NMR is to  
2 develop conscious control of individual muscles and awareness of position of extremities.  
3 The procedure may be considered medically necessary for impairments which affect the  
4 neuromuscular system (e.g., poor static or dynamic sitting/standing balance, loss of gross  
5 and fine motor coordination) that may result from musculoskeletal or neuromuscular  
6 disease or injury such as severe trauma to nervous system, post orthopedic surgery, cerebral  
7 vascular accident and systemic neurological disease. Example techniques may include  
8 proprioceptive neuromuscular facilitation (PNF), BAP's boards, vestibular rehabilitation,  
9 and desensitization techniques. This does not include contract/relax or other soft tissue  
10 massage techniques. NMR is typically used as the precursor to Therapeutic Activities  
11 implementation.

### 12 13 **Aquatic Therapy**

14 Pool therapy (aquatic therapy) is provided individually, in a pool, to debilitated or  
15 neurologically impaired individuals. (The term is not intended to refer to relatively normal  
16 functioning individuals who exercise, swim laps or relax in a hot tub or Jacuzzi.) The goal  
17 is to develop and/or maintain muscle strength and range of motion by reducing forces of  
18 gravity through total or partial body immersion (except for head). Aquatic therapy may be  
19 considered medically necessary to develop and/or maintain muscle strength and range of  
20 motion when it is necessary to reduce the force of gravity through partial body immersion.

### 21 22 **Gait Training**

23 This procedure involves teaching individuals with neurological or musculoskeletal  
24 disorders how to ambulate given their disability or to ambulate with an assistive device.  
25 Assessment of muscle function and joint position during ambulation is considered a  
26 necessary component of this procedure, including direct visual observation and may  
27 include video, various measurements, and progressive training in ambulation and stairs.  
28 Gait training is considered medically necessary for training individuals whose walking  
29 abilities have been impaired by neurological, integumentary, muscular or skeletal  
30 abnormalities, surgery, or trauma. This also includes crutch/cane ambulation training and  
31 re-education.

### 32 33 **Therapeutic Massage**

34 Therapeutic Massage involves the application of fixed or movable pressure, holding and/or  
35 causing movement of or to the body, using primarily the hands and may be considered  
36 medically necessary when performed to restore muscle function, reduce edema, improve  
37 joint motion, or relieve muscle spasm caused by a specific condition or injury.

### 38 39 **Soft Tissue Mobilization**

40 Soft tissue mobilization techniques are more specific in nature and include, but are not  
41 limited to, myofascial release techniques, friction massage, and trigger point techniques.

1 Specifically, myofascial release is a soft tissue manual technique that involves  
 2 manipulation of the muscle, fascia, and skin. Skilled manual techniques (active and/or  
 3 passive) are applied to soft tissue to effect changes in the soft tissues, articular structures,  
 4 neural or vascular systems. Examples are facilitation of fluid exchange, restoration of  
 5 movement in acutely edematous muscles, or stretching of shortened connective tissue. This  
 6 procedure is considered medically necessary for treatment of pain and restricted motion of  
 7 soft tissues resulting in functional deficits.

### 8 9 **Joint Mobilization/Manipulation**

10 Joint mobilization and manipulation are utilized to reduce pain and increase joint mobility.  
 11 Most often mobilizations are indicated for extremity and spine conditions, while  
 12 manipulation may be more generally indicated for spinal conditions.

### 13 14 **Therapeutic Activities**

15 Therapeutic activities or functional activities (e.g., bending, lifting, carrying, reaching,  
 16 pushing, pulling, stooping, catching and overhead activities may be considered medically  
 17 necessary) to improve function when there has been a loss or restriction of mobility,  
 18 strength, balance or coordination. These dynamic activities must be part of an active  
 19 treatment plan and directed at a specific outcome. This intervention may be considered  
 20 medically necessary after a patient has completed exercises focused on strengthening and  
 21 range of motion but needs to improve function-based activities.

### 22 23 **Activities of Daily Living (ADL) Training**

24 This procedure is considered medically necessary to enable the patient to perform essential  
 25 activities of daily living, instrumental activities of daily living, and self-care including  
 26 bathing, feeding, preparing meals, toileting, dressing, walking, making a bed, and  
 27 transferring from bed to chair, wheelchair or walker. Services provided concurrently by  
 28 physical therapists and occupational therapists may be considered medically necessary if  
 29 there are separate and distinct functional goals.

### 30 31 **Cognitive Skills Development**

32 This procedure is considered medically necessary for persons with acquired cognitive  
 33 deficits resulting from head trauma, or acute neurologic events including cerebrovascular  
 34 accident or pediatric developmental condition, or other situations. It is not appropriate for  
 35 persons without potential for improvement. Occupational/speech therapists with specific  
 36 training typically provide this care, however physical therapists can also provide this care  
 37 through a team approach. This procedure should be aimed at improving or restoring  
 38 specific functions which were impaired by an identified illness or injury.

### 1 **Orthotic Management and Training**

2 Orthotic management and training may be considered medically necessary when the  
3 documentation specifically demonstrates that the specific knowledge, skills, and judgment  
4 of a physical therapist are required to train the patient in the proper use of braces and/or  
5 splints (orthotics). Many braces or splints do not require specific training by the physical  
6 therapist in their use and can be safely procured and applied by the patient. Patients with  
7 cognitive, dexterity, or other significant deficits may need specific training where other  
8 patients do not.

### 10 **Prosthetic Training**

11 Prosthetic training may be considered medically necessary when the professional skills of  
12 the practitioner are required to train the patient in the proper fitting and use of a prosthetic  
13 (an artificial body part, such as a limb). Periodic return visits beyond the third month may  
14 be necessary.

### 16 **Wheelchair Management Training**

17 This procedure is considered medically necessary only when it is part of an active treatment  
18 plan directed at a specific goal. The member must have the capacity to learn from  
19 instructions. Typically, three (3) sessions are adequate.

### 21 **Active Wound Care Management**

22 The CPT codebook defines active wound care procedures as those procedures "performed  
23 to remove devitalized tissue and/or necrotic tissue and promote healing" (AMA, current  
24 year). The practitioner is required to have direct one-on-one contact with the patient.  
25 Examples of active wound care management include debridement of an open wound,  
26 including topical application; use of whirlpool or other modalities; and negative pressure  
27 wound therapy.

### 29 **Electromyography (EMG) and Nerve Conduction Velocity (NCV) Tests**

30 According to the CPT codebook "Needle electromyographic procedures include the  
31 interpretation of electrical waveforms measured by equipment that produces both visible  
32 and audible components of electrical signals recorded from the muscle(s) studied by the  
33 needle electrode" (AMA, current year). For nerve conduction testing, "motor nerve  
34 conduction study recordings must be made from electrodes placed directly over the motor  
35 point of the specific muscle to be tested. Sensory nerve conduction study recordings must  
36 be made from electrodes placed directly over the specific nerve to be tested." Waveforms  
37 must be reviewed on site in real-time. Reports must be prepared on site by the examiner  
38 and consist of the work product of the interpretation of numerous test results. EMG and  
39 NCV testing is only covered if provided by a qualified health care professional or  
40 physician. Physical therapists who are board certified by the APTA are considered

1 qualified health professionals. State licensure rules and regulations apply. For more  
 2 information, see the *Electrodiagnostic Testing (CPG 129 – S)* clinical practice guideline.

### 4 **Lymphedema Management**

5 For more information, see the *Lymphedema (CPG 157 – S)* clinical practice guideline.

### 7 **6.3 Precautions and Contraindications to Therapeutic Modalities and Procedures**

8 1. The use of thermotherapy is contraindicated for the following:

- 9 • Recent or potential hemorrhage
- 10 • Thrombophlebitis
- 11 • Impaired sensation
- 12 • Impaired mentation
- 13 • Malignant tumor
- 14 • IR irradiation of the eyes

15  
 16 Precautions for use of thermotherapy include:

- 17 • Acute injury or inflammation
- 18 • Pregnancy
- 19 • Impaired circulation
- 20 • Poor thermal regulation
- 21 • Edema
- 22 • Cardiac insufficiency
- 23 • Metal in the area
- 24 • Over an open wound
- 25 • Over areas where topical counterirritants have recently been applied
- 26 • Demyelinated nerve

27  
 28 2. The use of cryotherapy is contraindicated for the following:

- 29 • Cold hypersensitivity
- 30 • Cold intolerance
- 31 • Cryoglobulinemia
- 32 • Paroxysmal cold hemoglobinuria
- 33 • Raynaud disease or phenomenon
- 34 • Over regenerating peripheral nerves
- 35 • Over an area with circulatory compromise or peripheral vascular disease

36  
 37 Precautions for cryotherapy include:

- 38 • Over the superficial branch of a nerve
- 39 • Over an open wound

- 1       • Hypertension
- 2       • Poor sensation or mentation

3

4       3. The use of immersion hydrotherapy is contraindicated for the following:

- 5       • Cardiac instability
- 6       • Confusion or impaired cognition
- 7       • Maceration around a wound
- 8       • Bleeding
- 9       • Infection in the area to be immersed
- 10      • Bowel incontinence
- 11      • Severe epilepsy
- 12      • Suicidal patients

13

14      Precautions for full body immersion in hot or very warm water include:

- 15      • Pregnancy
- 16      • Multiple Sclerosis
- 17      • Poor thermal regulation

18

19      4. Contraindications for Traction include:

- 20      • Where motion is contraindicated
- 21      • Acute injury or inflammation
- 22      • Joint hypermobility or instability
- 23      • Peripheralization of symptoms with traction
- 24      • Uncontrolled hypertension

25

26      Precautions for Traction include:

- 27      • Structural diseases or conditions affecting the tissues in the area to be treated (e.g., tumor, infection, osteoporosis, RA, prolonged systemic steroid use, local radiation therapy)
- 28      • When pressure of the belts may be hazardous (e.g., with pregnancy, hiatal hernia, vascular compromise, osteoporosis)
- 29      • Displaced annular fragment
- 30      • Medial disc protrusion
- 31      • When severe pain fully resolves with traction
- 32      • Claustrophobia or other psychological aversion to traction
- 33      • Inability to tolerate prone or supine position
- 34      • Disorientation

35

36      Additional precautions for cervical traction:

37

38

39

- 1 • TMJ problems
- 2 • Dentures

3

4 5. The use of thermal shortwave diathermy (SWD) is contraindicated for the following

- 5 • Any metal in the treatment area or on/in the body.
- 6 • Malignancy
- 7 • Eyes
- 8 • Testes
- 9 • Growing epiphyses

10

11 Contraindications for all forms of SWD:

- 12 • Implanted or transcutaneous neural stimulators including cardiac pacemakers
- 13 • Pregnancy

14

15 Precautions for all forms of SWD:

- 16 • Near electronic or magnetic equipment
- 17 • Obesity
- 18 • Copper-bearing intrauterine contraceptive devices

19

20 6. Contraindications for use of Electrical Currents:

- 21 • Demand pacemakers, implantable defibrillator, or unstable arrhythmia
- 22 • Placement of electrodes over carotid sinus
- 23 • Areas where venous or arterial thrombosis or thrombophlebitis is present
- 24 • Pregnancy – over or around the abdomen or low back

25

26 Precautions for electrical current use:

- 27 • Cardiac disease
- 28 • Impaired mentation
- 29 • Impaired sensation
- 30 • Malignant tumors
- 31 • Areas of skin irritation or open wounds

32

33 7. Contraindications to the use of ultrasound include:

- 34 • Malignant tumor
- 35 • Pregnancy
- 36 • Central Nervous Tissue
- 37 • Joint cement
- 38 • Plastic components
- 39 • Pacemaker or implantable cardiac rhythm device

---

**CPG 135 Revision 18– S**

Physical Therapy Medical Policy/Guidelines

**Revised – December 22, 2023**

To CHSO for review and approval 12/22/2023

CHSO reviewed and approved 12.22/2023

To CQT for informational review 01/08/2024

CQT reviewed as informational 01/08/2024

To QIC for informational review 02/06/2024

QIC reviewed as informational 02/06/2024

To QOC for review and adoption 02/15/2024

QOC reviewed and approval 02/15/2024

- 1 • Thrombophlebitis
- 2 • Eyes
- 3 • Reproductive organs

4  
5 Precautions for Ultrasound include:

- 6 • Acute inflammation
- 7 • Epiphyseal plates
- 8 • Fractures
- 9 • Breast implants

10  
11 The use of electrical muscle stimulation, SWD, thermotherapy, cryotherapy, ultrasound,  
12 laser/light therapy, immersion hydrotherapy, and mechanical traction with pediatric  
13 patients is contraindicated if the patient cannot provide the proper feedback necessary for  
14 safe application.

15  
16 In addition to the contraindications listed above, there are a wide range of services which  
17 are considered unproven, pose a significant health and safety risk, are scientifically  
18 implausible and/or are not widely supported as evidence based. Such services would be  
19 considered not medically necessary and include, but are not limited to:

- 20 • Axial/Spinal decompression
- 21 • Dry needling
- 22 • Laser therapy
- 23 • Manual muscle testing to diagnosis non-neuromusculoskeletal conditions
- 24 • Microcurrent Electrical Nerve Stimulation (MENS)
- 25 • Other unproven procedures (see the *Techniques and Procedures Not Widely*  
26 *Supported as Evidence-Based (CPG 133 – S)* clinical practice guideline for  
27 complete list)

## 28 29 **7. CLINICAL DOCUMENTATION**

30 Medical record keeping is an essential component of patient evaluation and management.  
31 Medical records should be legible and should contain, at a minimum sufficient information  
32 to identify the patient, support the diagnosis, justify the treatment, accurately document the  
33 results, indicate advice and cautionary warnings provided to the patient and provide  
34 sufficient information for another practitioner to assume continuity of the patient's care at  
35 any point in the course of treatment. Good medical record keeping improves the likelihood  
36 of a positive outcome and reduces the risk of treatment errors. It also provides a resource  
37 to review cases for opportunities to improve care, provides evidence for legal records, and  
38 offers necessary information for third parties who need to review and understand the  
39 rationale and type of services rendered (e.g., medical billers and auditors/reviewers.)

1 Outcome measures are important in determining effectiveness of a patient’s care. The use  
 2 of standardized tests and measures early in an episode of care establishes the baseline status  
 3 of the patient, providing a means to quantify change in the patient's functioning. Outcome  
 4 measures provide information about whether predicted outcomes are being realized. When  
 5 comparison of follow-up with baseline outcome metrics does not demonstrate minimal  
 6 clinically important difference (MCID) (minimal amount of change in a score of a valid  
 7 outcome assessment tool), the treatment plan should be changed or be discontinued. Failure  
 8 to use Functional Outcome Measures (FOMs) / Outcome Assessment Tools (OATs) may  
 9 result in insufficient documentation of patient progress and may result in an adverse  
 10 determination (partial approval or denial) of continued care.

### 11 **7.1 Evaluation and Re-evaluations**

12 The initial evaluation is usually completed in a single session. The initial evaluation should  
 13 document the necessity of a course of therapy through objective findings and subjective  
 14 patient/caregiver self-reporting. Initial evaluations are completed to determine the medical  
 15 necessity of initiating rehabilitative therapy or skilled instruction in maintenance activities  
 16 that the patient and/or caregiver can perform at home. The physical therapist performs an  
 17 initial examination and evaluation to establish a physical therapy diagnosis, prognosis, and  
 18 plan of care prior to intervention. Determination of referral to another health care  
 19 practitioner is also an essential part of an initial evaluation. An initial evaluation for a new  
 20 condition by a Physical Therapist is defined as the evaluation of a patient:

- 21 • For whom this is the first encounter with the practitioner or practitioner group;
- 22 • Who presents with:
  - 23 ○ A new injury or new condition; or
  - 24 ○ The same or similar complaint after discharge from previous care.
- 25 • Choice of code is dependent upon the level of complexity.

26  
 27  
 28 The evaluation codes reflect three (3) levels of patient presentation: low-complexity,  
 29 moderate-complexity, and high-complexity. Four components are used to select the  
 30 appropriate PT evaluation CPT code. These include:

- 31 1. Patient history and comorbidities;
- 32 2. Examination and the use of standardized tests and measures;
- 33 3. Clinical presentation;
- 34 4. Clinical decision making.

35  
 36 Relevant CPT Codes: CPT 97161, 97162, and 97163 – Physical Therapy evaluation

37  
 38 The physical therapist evaluation:

- 39 • Is documented, dated, and appropriately authenticated by the physical therapist who  
 40 performed it.

- 1 • Identifies the physical therapy needs of the patient.
- 2 • Incorporates appropriate tests and measures to facilitate outcome measurement.
- 3 • Produces data that are sufficient to allow evaluation, diagnosis, prognosis, and the
- 4 establishment of a plan of care.

5

6 The physical therapist’s plan of care should be sufficient to determine the medical necessity  
7 of treatment, including:

- 8 • The diagnosis along with the date of onset or exacerbation of the disorder/diagnosis.
- 9 • A reasonable estimate of when the goals will be reached.
- 10 • Long-term and short-term goals that are specific, quantitative and objective.
- 11 • Physical therapy evaluation pertinent findings.
- 12 • The frequency and duration of treatment.
- 13 • Rehabilitation or habilitation prognosis.
- 14 • The specific treatment techniques and/or exercises to be used in treatment.
- 15 • Signature of the patient's physical therapist.

16

17 Re-evaluations are distinct from therapy assessments. There are several routine  
18 reassessments that are not considered re-evaluations. These include ongoing reassessments  
19 that are part of each skilled treatment session, progress reports, and discharge summaries.  
20 Re-evaluation provides additional objective information not included in documentation of  
21 ongoing assessments, treatment or progress notes. Assessments are considered a routine  
22 aspect of intervention and are not billed separately from the intervention. Continuous  
23 assessment of the patient’s progress is a component of the ongoing therapy services and is  
24 not payable as a re-evaluation.

25

26 Re-evaluation services are considered medically necessary when all of the following  
27 conditions are met:

- 28 • Re-evaluation is not a recurring routine assessment of patient status;
- 29 • The documentation of the re-evaluation includes all of the following elements:
  - 30 ○ An evaluation of progress toward current goals;
  - 31 ○ Making a professional judgment about continued care;
  - 32 ○ Making a professional judgment about revising goals and/or treatment or
  - 33 terminating services.

34

35 **AND the following indication is documented:**

- 36 • An exacerbation or significant change in patient/client status or condition.

37

38 Relevant CPT Codes: CPT 97164 – Physical Therapy re-evaluation

1 In order to reflect that continued PT services are medically necessary, intermittent progress  
 2 reports must demonstrate that the individual is making functional progress.

### 4 **7.2 Treatment Sessions**

5 A physical therapy intervention is the purposeful interaction of the physical therapist and/or  
 6 physical therapist assistant with the patient and, when appropriate, with other individuals  
 7 involved in patient care, using various physical therapy procedures and techniques to  
 8 produce changes in the condition that are consistent with the diagnosis and prognosis.  
 9 Physical therapy interventions consist of coordination, communication, and  
 10 documentation; patient-related and family/caregiver instruction; and procedural  
 11 interventions. Physical therapists aim to alleviate impairment and functional limitation by  
 12 designing, implementing, and modifying therapeutic interventions. A physical therapy  
 13 session can vary in duration; however, treatment sessions lasting more than one hour per  
 14 day are infrequent in outpatient settings (payor medical or reimbursement coverage policy  
 15 may limit unit or session duration per date of service). Treatment sessions for more than  
 16 one hour per day may be medically appropriate but must be supported in the documented  
 17 plan of care and based on a patient's medical condition. A physical therapy session may  
 18 include:

- 19 • Evaluation or reevaluation
- 20 • Therapeutic exercise, including neuromuscular reeducation, strengthening,  
 21 coordination, and balance;
- 22 • Functional training in self-care and home management including activities of daily  
 23 living (ADL) and instrumental activities of daily living (IADL);
- 24 • Functional training in and modification of environments (e.g., home, work, school,  
 25 or community), including body mechanics and ergonomics;
- 26 • Manual therapy techniques, including soft tissue mobilization, joint mobilization,  
 27 and manual lymphatic drainage;
- 28 • Assessment, design, fabrication, application, fitting, and training in assistive  
 29 technology, adaptive devices, and orthotic devices;
- 30 • Training in the use of prosthetic devices;
- 31 • Integumentary and wound care and protection techniques;
- 32 • Electrotherapeutic modalities;
- 33 • Physical agents and mechanical modalities;
- 34 • Community functional reintegration;
- 35 • Training of the patient, caregivers, and family/parents in home exercise and activity  
 36 programs;
- 37 • Skilled reassessment of the individual's problems, plan, and goals as part of the  
 38 treatment session.

39  
 40 Documentation of each treatment session should include at a minimum:

- 1 • Date of treatment;
- 2 • Subjective complaints and current status (including functional deficits and ADL
- 3 restrictions);
- 4 • Description/name of each specific treatment intervention provided that match the
- 5 CPT codes billed, including;
- 6 ○ Treatment time for each modality or procedure performed
- 7 ○ Parameters of any modality or procedure, (e.g., voltage/amperage,
- 8 pad/electrode placement, area of treatment, types of exercises/activities, and
- 9 intended goal of each therapy)
- 10 • The patient’s response to each service and to the entire treatment session;
- 11 • Any progress toward the goals in objective, measurable terms using consistent and
- 12 comparable methods;
- 13 • Any changes to the plan of care;
- 14 • Recommendations for follow-up visit(s);
- 15 • Signature/electronic identifier, name and credentials of the treating clinician.

### 17 **7.3 Discharge/Discontinuation of Intervention**

18 The physical therapist discharges the patient from physical therapy services when the  
 19 anticipated goals or expected outcomes for the patient have been achieved. The physical  
 20 therapist discontinues intervention when the patient is unable to continue to progress  
 21 toward goals or when the physical therapist determines that the patient will no longer  
 22 benefit from physical therapy.

23  
 24 The physical therapy discharge documentation includes:

- 25 • The status of the patient at discharge and the goals and outcomes attained.
- 26 • Appropriate date and authentication by the physical therapist who performed the
- 27 discharge.
- 28 • When a patient is discharged prior to attainment of goals and outcomes, the status
- 29 of the patient and the rationale for discontinuation.
- 30 • Initial, subsequent, and final FOMs scores.
- 31 • Proposed self-care recommendations, if applicable.
- 32 • Referrals to other health care practitioners/referring physicians, as appropriate.
- 33 • If the patient self- discharges, documentation of final status and if known, the
- 34 reason for discontinuation of services.

### 36 **7.4 Duplicated / Insufficient Information**

37 (1) Entries in the medical record should be contemporaneous, individualized, appropriately  
 38 comprehensive, and made in a chronological, systematic, and organized manner.  
 39 Duplicated/nearly duplicated medical records (a.k.a. cloned records) are not acceptable. It  
 40 is not clinically reasonable or physiologically feasible that a patient’s condition will be

1 identical on multiple encounters. (Should the finding be identical for encounters, it would  
 2 be expected that treatment would end because patient is not making progress toward current  
 3 goals.)

4  
 5 This includes, but is not limited to:

- 6 • duplication of information from one treatment session to another (for the same or  
 7 different patient[s]);
- 8 • duplication of information from one evaluation to another (for the same or different  
 9 patient[s]).

10  
 11 Duplicated medical records do not meet professional standards of medical record keeping  
 12 and may result in an adverse determination (partial approval or denial) of those services.

13  
 14 (2) The use of a system of record keeping that does not provide sufficient information (e.g.,  
 15 checking boxes, circling items from lists, arrows, travel cards with only dates of visit and  
 16 listings). These types of medical record keeping may result in an adverse determination  
 17 (partial approval or denial) of those services.

18  
 19 Effective and appropriate record keeping that meets professional standards of medical  
 20 record keeping document with adequate detail a proper assessment of the patient’s status,  
 21 the nature and severity of his/her complaint(s) or condition(s), and/or other relevant clinical  
 22 information (e.g., history, parameters of each therapy performed, objective findings,  
 23 progress towards treatment goals, response to care, prognosis).

#### 24 25 **7.5 Centers for Medicare and Medicaid Services (CMS)**

26 For Medicare and Medicaid services, medical records keeping must follow and be in  
 27 accordance with Medicare and any additional state Medicaid required documentation  
 28 guidelines.

### 29 30 **8. CLINICAL REVIEW PROCESS**

31 Medical necessity evaluations require approaching the clinical data and scientific evidence  
 32 from a global perspective and synthesizing the various elements into a congruent picture  
 33 of the patient’s condition and need for skilled treatment intervention. Clinical review  
 34 decisions made by the CQEs are based upon the information provided by the treating  
 35 practitioner in the submitted documentation and other related findings and information.  
 36 Failure to appropriately document pertinent clinical information may result in adverse  
 37 determinations (partial approval or denial) of those services. Therefore, thorough  
 38 documentation of all clinical information that established the diagnosis/diagnoses and  
 39 supports the intended treatment is essential.

## 1 **8.1 Definition of Key Terminology used in Clinical Reviews**

### 2 **Elective/Convenience Services**

3 Examples of elective/convenience services include: (a) preventive services; (b) wellness  
4 services; (c) services not necessary to return the patient to pre-illness/pre-injury functional  
5 status and level of activity; (d) services provided after the patient has reached MTB.  
6 (Elective/convenience services may not be covered through specific client or ASH  
7 benefits.)  
8

### 9 **Minimal Clinically Important Difference (MCID)**

10 The MCID is the minimal amount of change in a score of a valid outcome assessment tool  
11 that indicates an actual improvement in the patient's function or pain. Actual significance  
12 of outcome assessment tool findings requires correlation with the overall clinical  
13 presentation, including updated subjective and objective examination/evaluation findings.  
14

### 15 **Maximum Therapeutic Benefit (MTB)**

16 MTB is the patient's health status when the application of skilled therapeutic services has  
17 achieved its full potential (which may or may not be the complete resolution of the patient's  
18 condition.) At the point of MTB, continuation of the same or similar skilled treatment  
19 approach will not significantly improve the patient's impairments and function during this  
20 episode of care.  
21

22  
23 If the patient continues to have significant complaints, impairments, and documented  
24 functional limitations, one should consider the following:

- 25 • Altering the treatment regimen such as utilizing a different physiological approach  
26 to the treatment of the condition, or decreasing the use of passive care (modalities,  
27 massage etc.) and increasing the active care (therapeutic exercise) aspects of  
28 treatment to attain greater functional gains;
- 29 • Reviewing self-management program including home exercise programs; and/or
- 30 • Referring the patient for consultation by another health care practitioner for  
31 possible co-management or a different therapeutic approach.  
32

### 33 **Preventive Services**

34 Preventive services are designed to reduce the incidence or prevalence of illness,  
35 impairment, and risk factors, and to promote optimal health, wellness, and function. These  
36 services are not designed or performed to treat or manage a specific health condition.  
37 (Preventive services may or may not be covered under specific clients or through ASH  
38 benefits.)

**1 Acute**

2 The stage of an injury, illness, or disease, in which the presence of clinical signs and  
 3 symptoms is less than six weeks in duration, typically characterized by the presence of one  
 4 or more signs of inflammation or other adaptive response.

**6 Sub-Acute**

7 The stage of an injury, illness, or disease, in which the presence of clinical signs and  
 8 symptoms is greater than six weeks, but not greater than twelve weeks in duration.

**10 Chronic**

11 The stage of an injury, illness, or disease, in which the presence of clinical signs and  
 12 symptoms is greater than twelve weeks in duration.

**14 Red Flag(s)**

15 Signs and symptoms presented through history or examination/assessment that warrant  
 16 more detailed and immediate medical assessment and/or intervention.

**18 Yellow Flag(s)**

19 Adverse prognostic indicators with a psychosocial predominance associated with chronic  
 20 pain and disability. Yellow flags signal the potential need for more intensive and complex  
 21 treatment and/or earlier specialist referral.

**23 Co-Morbid Condition(s)**

24 The presence of a concomitant condition, that has an unrelated pathology or disease  
 25 process, but may inhibit, lengthen, or alter in some way the expected response to care.

**27 8.2 Clinical Quality Evaluation**

28 The goal of the CQEs during the review and decision-making process is to approve, as  
 29 appropriate, those clinical services necessary to return the patient to pre-clinical/pre-  
 30 morbid health status or stabilize a chronic condition, as supported by the documentation  
 31 presented. The CQE is to evaluate if the documentation and other clinical information  
 32 presented by the treating provider has appropriately substantiated the patient's condition  
 33 and appropriately justifies the treatment plan that is presented.

**35 Approval**

36 ASH CQEs have the responsibility to approve appropriate care for all services that are  
 37 medically necessary. The CQEs assess the clinical data supplied by the practitioner in order  
 38 to determine whether submitted services and/or the initiation or continuation of care has  
 39 been documented as medically necessary. The practitioner is accountable to document the  
 40 medical necessity of all services submitted/provided. It is the responsibility of the peer

1 CQE to evaluate the documentation in accordance with their training, understanding of  
 2 practice parameters, and review criteria adopted by ASH through its clinical committees.

3  
 4 The following items influence clinical service approvals:

- 5 • No evidence of contraindication(s) to services submitted for review;
- 6 • Complaints, exam findings, and diagnoses correlate with each other;
- 7 • Treatment Plan is supported by the nature and severity of complaints;
- 8 • Treatment Plan is supported by exam findings;
- 9 • Treatment Plan is expected to improve symptoms (e.g., pain, function) within a  
 10 reasonable period of time;
- 11 • Maximum therapeutic benefit has not been reached;
- 12 • Treatment Plan requires the skills of the provider; and
- 13 • Demonstration of progression toward active home/self-care and discharge.

### 14 15 **Partial Approval**

16 Occurs when only a portion of the submitted services are determined to be medically  
 17 necessary services. The partial approval may refer to a decrease in treatment frequency,  
 18 treatment duration, number of Durable Medical Equipment (DME)/supplies/appliances,  
 19 number of therapies, or other services from the original amount/length submitted for  
 20 review. This decision may be due to any number of reasons, such as:

- 21 • the practitioner’s documentation of the history and exam findings are inconsistent  
 22 with the clinical conclusion(s)
- 23 • the treatment dosage (frequency/duration) submitted for review is not supported  
 24 by the underlying diagnostic or clinical features
- 25 • the need to initiate only a limited episode of care in order to monitor the patient’s  
 26 response to care

27  
 28 Additional services may be submitted and reviewed for evaluation of the patient’s response  
 29 to the initial trial of care. If the practitioner or patient disagrees with the partial approval of  
 30 services, they contact the CQE listed on their response form to discuss the case, submit  
 31 additional documentation through the Reopen process, or submit additional documentation  
 32 to appeal the decision through the Provider Appeals and Member Grievances process.

### 33 34 **Non-approval / Denial**

35 Occurs when none of the services submitted for review are determined to be medically  
 36 necessary services. The most common causes for a non-approval/denial of all services are  
 37 administrative or contractual in nature (e.g., ineligibility, reached plan benefit limits, non-  
 38 coverage). Clinically, it is appropriate to deny continued/ongoing care if the patient’s  
 39 condition(s) are not, or are no longer, responding favorably to the services being rendered  
 40 by the treating practitioner, or the patient has reached maximum therapeutic benefit.

## 1 **Additional / Continued Care**

2 Approval of additional treatment/services requires submission of additional information,  
3 including the patient's response to care and updated clinical findings. In cases where an  
4 additional course of care is submitted, the decision to approve additional services will be  
5 based upon the following criteria:

- 6 • The patient has made clinically significant progress under the initial treatment  
7 plan/program based on a reliable and valid outcome tool or updated subjective and  
8 objective examination findings.
- 9 • Additional clinically significant progress can be reasonably expected by continued  
10 treatment (The patient has not reached MTB or maximum medical improvement).
- 11 • There is no indication that immediate care/evaluation is required by other health  
12 care professionals.

13  
14 Any exacerbation or flare-up of the condition that contributes to the need for additional  
15 treatment/services must be clearly documented.

16  
17 Ancillary diagnostic procedures should be selected based on clinical history and  
18 examination findings that suggest the necessity to rule out underlying pathology or to  
19 confirm a diagnosis that cannot be verified through less invasive methods.

- 20 • Information is expected to directly impact the treatment/services and course of care.
- 21 • The benefit of the procedure outweighs the risk to the patient's health (short and  
22 long term).
- 23 • The procedure is sensitive and specific for the condition being evaluated (e.g., an  
24 appropriate procedure is utilized to evaluate for pathology).

25  
26 The clinical information that the CQE expects to see when evaluating the documentation  
27 in support of the medical necessity of submitted treatment/services should be  
28 commensurate with the nature and severity of the presenting complaint(s) and scope of the  
29 practitioner of services and may include but is not limited to:

- 30 • History
- 31 • Physical Examination/Evaluation
- 32 • Documented Treatment Plan and Goals
- 33 • Estimated time of Discharge

34  
35 In general, the initiation of care is warranted if there are no contraindications to prescribed  
36 care, there is reasonable evidence to suggest the efficacy of the prescribed intervention,  
37 and the intervention is within the scope of services permitted by State or Federal law. The  
38 treatment submission for a disorder is typically structured in time-limited increments  
39 depending on clinical presentation. Dosage (frequency and duration of service) should be  
40 appropriately correlated with clinical findings, potential complications/barriers to recovery

1 and clinical evidence. When the practitioner discovers that a patient is nonresponsive to  
 2 the applied interventions within a reasonable time frame, re-assessment and treatment  
 3 modification should be implemented and documented. If the patient’s condition(s) worsen,  
 4 the practitioner should take immediate and appropriate action to discontinue or modify care  
 5 and/or make an appropriate healthcare referral.

6  
 7 Services that do not require the professional skills of a practitioner to perform or supervise  
 8 are not medically necessary. If a patient’s recovery can proceed safely and effectively  
 9 through a home exercise program or self-management program, services are not indicated  
 10 or medically necessary.

### 11 **8.3 Critical Factors during Clinical Reviews**

12 The complexity and/or severity of historical factors, symptoms, examination findings, and  
 13 functional deficits play an essential role to help quantify the patient’s clinical status and  
 14 assess the effectiveness of planned interventions over time. CQEs consider patient-specific  
 15 variables as part of the medical necessity verification process. The entire clinical picture  
 16 must be taken into consideration with each case evaluated based upon unique patient and  
 17 condition characteristics.  
 18

19  
 20 Such variables may include, but not be limited to co-morbid conditions and other barriers  
 21 to recovery, the stage(s) of the condition(s), mechanism of injury, severity of the  
 22 symptoms, functional deficits, and exam findings, as well as social and psychological status  
 23 of the patient and the available support systems for self-care. In addition, the patient’s age,  
 24 symptom severity, and the extent of positive clinical findings may influence duration,  
 25 intensity, and frequency of services approved as medically necessary. For example:

- 26 • Severe symptomatology, exam findings, and/or functional deficits may require  
 27 more care overall (e.g., longer duration, more services per encounter, and frequency  
 28 of encounters that the average); these patients require a higher frequency; but may  
 29 require short-term trials of care initially to assess patient response to care.
- 30 • Less severe symptomatology, exam findings and/or functional deficits usually  
 31 require less care (e.g., shorter duration, fewer services per encounter, and frequency  
 32 of encounters that the average); overall but may allow for less oversight and a  
 33 longer initial trial of care.
- 34 • As patients age, they may have a slower response to care, and this may affect the  
 35 approval of a trial of care.
- 36 • Because pediatric patients (under the age of 12) have not reached musculo-skeletal  
 37 maturity, it may be necessary to modify the types of therapies approved as well as  
 38 shorten the initial trial of care.
- 39 • Complicating and/or co-morbid condition factors vary depending upon individual  
 40 patient characteristics, the nature of the condition/complaints, historical and

1 examination elements, and may require appropriate coordination of care and/or  
2 more timely re-evaluation.

3

4 The following are examples of the factors CQEs consider when verifying the medical  
5 necessity of rehabilitative services for musculoskeletal conditions and pain disorders.

6

### 7 **8.3.1 General Factors**

8 Multiple patient-specific historical and clinical findings may influence clinical decisions,  
9 such as but not limited to:

10

- 10 • Red Flags
- 11 • Yellow Flags (Psychosocial Factors)
- 12 • Co-morbid conditions (e.g., diabetes, inflammatory conditions, joint instability)
- 13 • Age (older or younger)
- 14 • Non-compliance with treatment and/or self-care recommendations
- 15 • Lack of response to appropriate care
- 16 • Lifestyle factors (e.g., smoking, diet, stress, deconditioning)
- 17 • Work and recreational activities
- 18 • Pre-operative/post-operative care
- 19 • Medication use (type and compliance)

20

21 Nature of Complaint(s)

22

- 22 • Acute and severe symptoms
- 23 • Functional testing results that display severe disability/dysfunction
- 24 • Pain that radiates below the knee or elbow (for spinal conditions)

25

26 History

27

- 27 • Trauma resulting in significant injury or functional deficits.
- 28 • Pre-existing pathologies/surgery(ies)
- 29 • Congenital anomalies (e.g., severe scoliosis)
- 30 • Recurring exacerbations
- 31 • Prior episodes (e.g., >3 for spinal conditions)
- 32 • Multiple new conditions which introduce concerns regarding the cause of these  
33 conditions

34

35 Examination

36

- 36 • Severe signs/findings
- 37 • Results from diagnostic testing that are likely to impact coordination of care and  
38 response to care (e.g., fracture, joint instability, neurological deficits)

## 1 **Assessment of Red Flags**

2 At any time the patient is under care, the practitioner is responsible for seeking and  
 3 recognizing signs and symptoms that require additional diagnostics, treatment/service,  
 4 and/or referral. A careful and adequately comprehensive history and evaluation in addition  
 5 to ongoing monitoring during the course of treatment is necessary to discover potential  
 6 serious underlying conditions that may need urgent attention. Red flags can present  
 7 themselves at several points during the patient encounter and can appear in many different  
 8 forms. If a red flag is identified during a medical necessity review, the CQE should  
 9 communicate with the provider of services as soon as possible by telephone and/or through  
 10 standardized communication methods. When red flag is identified, CQE may not approve  
 11 services and recommend returning the patient back to the referring healthcare practitioner  
 12 or referring the patient to other appropriate health care practitioner/specialist with the  
 13 measure of urgency as warranted by the history and clinical findings.

14  
 15 Due to the rarity of actual red flag diagnoses in clinical practice, it is emphasized that the  
 16 practitioner does not need to perform expensive or invasive diagnostic procedures (e.g., x-  
 17 ray, advanced imaging, laboratory studies) in the absence of suspicious clinical  
 18 characteristics. Important red flags and events as well as the points during the clinical  
 19 encounter at which they are likely to appear include but may not be limited to:

### 21 **Past or Current History**

- 22 • Personal or family history of cancer.
- 23 • Current or recent urinary tract, respiratory tract, or other infection.
- 24 • Anticoagulant therapy or blood clotting disorder.
- 25 • Metabolic bone disorder (osteopenia and osteoporosis).
- 26 • Unintended weight loss.
- 27 • Unexplained dizziness or hearing loss.
- 28 • Trauma with skin penetration; and
- 29 • Immunosuppression (AIDS/ARC).

### 31 **Present Complaint**

- 32 • Writhing or cramping pain.
- 33 • Precipitation by significant trauma.
- 34 • Pain that is worse at night or not relieved by any position.
- 35 • Suspicion of cerebrovascular compromise.
- 36 • Symptom's indicative of progressive neurological disorder.

### 38 **Physical Examination/Assessment**

- 39 • Inability to reproduce symptoms of musculoskeletal diagnosis or complaints.
- 40 • Pulsing abdominal mass.

- 1 • Fever, chills, or sweats without other obvious source.
- 2 • New or recent neurologic deficit (special senses, sensory, language, and motor).
- 3 • Signs of carotid/vertebrobasilar insufficiency.
- 4 • Uncontrolled hypertension.
- 5 • Signs of nutritional deficiency.
- 6 • Signs of allergic reaction requiring immediate attention.
- 7 • Abuse/neglect.
- 8 • Psychological distress.

9

#### 10 Pattern of Symptoms Not Consistent with Benign Disorder

- 11 • Chest tightness, difficulty breathing, chest pain.
- 12 • Headache of morbid proportion.
- 13 • Rapidly progressive neurological deficit.
- 14 • Significant, unexplained extremity weakness or clumsiness.
- 15 • Change in bladder or bowel function.
- 16 • New or worsening numbness or paresthesia.
- 17 • Saddle anesthesia.
- 18 • New or recent bilateral radiculopathy.

19

#### 20 Lack of Response to Appropriate Care

- 21 • History of consultation/care from a series of practitioners or a variety of health care approaches without resolving the patient's complaint.
- 22 • Unsatisfactory clinical progress, especially when compared to apparently similar cases or natural progression of the condition.
- 23 • Signs and symptoms that do not fit the normal pattern and are not resolving.

24

#### 25 **Assessment of Yellow Flags**

26  
27  
28 When yellow flags are present, clinicians need to be vigilant for deviations from the normal course of illness and recovery. Examples of yellow flags include depressive symptoms, injuries still in litigation, signs, and symptoms not consistent with pain severity, and behaviors incongruent with underlying anatomic and physiologic principles.

30

31  
32  
33 If a yellow flag is identified during a medical necessity review, the reviewer should communicate with the provider of services as soon as possible by telephone and/or through standardized communication methods. CQE may recommend returning the patient back to the referring healthcare practitioner or referring the patient to other health care practitioner/specialist as appropriate.

37

## 1 **Assessment of Historical Information**

2 The following factors are assessed in review and determination if the services are medically  
3 necessary:

- 4 • The mechanism of onset and date of onset are congruent with the stated condition's  
5 etiology.
- 6 • The patient's past medical history and response to care do not pose  
7 contraindication(s) for the services submitted for review.
- 8 • The patient's past medical history of pertinent related and unrelated conditions does  
9 not pose contraindication(s) for the services submitted for review.
- 10 • The patient's complaint(s) have component(s) that are likely to respond favorably  
11 to services submitted for review.
- 12 • Provocative and palliative factors identified on examination indicate the presence  
13 of a musculoskeletal condition as expected per diagnosis(es) or complaints, or as  
14 consistent with other type of diagnosis(es).
- 15 • The patient's severity of limitations to activities of daily living (ADLs) are  
16 appropriate and commensurate for the presence of the condition(s) or disorder(s).
- 17 • The quality, radiation, severity, and timing of pain are congruent with the  
18 documented condition(s) or disorder(s).
- 19 • The patient's past medical history of having the same or similar condition(s)  
20 indicates a favorable response to care.
- 21 • The absence or presence of co-morbid condition(s) may or may not present absolute  
22 or relative contraindications to care.

## 23 **Assessment of Examination Findings**

- 24 • The exam procedures, level of complexity, and components are appropriate for the  
25 patient's complaint(s) and historical findings.
- 26 • Objective palpatory, orthopedic, neurologic, and other physical examination  
27 findings are current, clearly defined, qualified, and quantified, including the nature,  
28 extent, severity, character, professional interpretation, and significance of the  
29 finding(s) in relation to the patient's complaint(s) and differential diagnosis(es).
- 30 • Exam findings provide evidence justifying the condition(s) is/are likely to respond  
31 favorably to services submitted for review.
- 32 • Exam findings provide a reasonable and reliable basis for the stated diagnosis(es).
- 33 • Exam findings provide a reasonable and reliable basis for treatment planning;  
34 accounting for variables such as age, sex, physical condition, occupational and  
35 recreational activities, co-morbid conditions, etc.
- 36 • The patient's progress is being appropriately monitored each visit (as noted within  
37 daily chart notes and during periodic re-exams) to ensure that acceptable clinical  
38 progress is realized.

## 1 **Assessment of Treatment / Treatment Planning**

- 2 • Treatment dosage (frequency and duration of service) is appropriately correlated
- 3 with the nature and severity of the subjective complaints, potential
- 4 complications/barriers to recovery, and objective clinical evidence.
- 5 • Services that do not require the professional skills of a practitioner to perform or
- 6 supervise are not medically necessary, even if they are performed or supervised by
- 7 a Physical Therapist. Therefore, if the continuation of a patient’s care can proceed
- 8 safely and effectively through a home exercise program or self-management
- 9 program, services are not indicated or medically necessary.
- 10 • The use of passive modalities in the treatment of subacute or chronic conditions
- 11 beyond the acute inflammatory response phase requires documentation of the
- 12 anticipated benefit and condition-specific rationale in order to be considered
- 13 medically necessary.
- 14 • The treatment plan includes the use of therapeutic procedures to address functional
- 15 deficits and ADL restrictions.
- 16 • The set therapeutic goals are functionally oriented, realistic, measurable, and
- 17 evidence based.
- 18 • The proposed date of release/discharge from treatment is clearly defined.
- 19 • The treatment/therapies are appropriately correlated with the nature and severity of
- 20 the patient’s condition(s) and set treatment goals.
- 21 • Functional Outcome Measures (FOM) demonstrate minimal clinically important
- 22 difference (MCID) from baseline results through periodic reevaluations during the
- 23 course of care. This is important in order to determine the need for continued care,
- 24 the appropriate frequency of visits, estimated date of release from care, and if a
- 25 change in the treatment plan or a referral to an appropriate health care
- 26 practitioners/specialist is indicated.
- 27 • Home care, self-care, and active-care instructions are documented.
- 28 • Durable Medical Equipment (DME), supplies, appliances, and supports are
- 29 provided when medically necessary and appropriately correlated with clinical
- 30 findings and clinical evidence.

## 31 **Assessment of Diagnostic Imaging / Special Studies**

- 32 • Laboratory tests are performed only when medically necessary to improve
- 33 diagnostic accuracy and treatment planning. Abnormal values are professionally
- 34 interpreted as they relate to the patient’s complaint(s) or to unrelated co-morbid
- 35 conditions that may or may not impact the patient’s prognosis and proposed
- 36 treatment.
- 37 • X-ray procedures are performed only when medically necessary to improve
- 38 diagnostic accuracy and treatment planning. (Indicators from history and physical
- 39

1 examination indicating the need for x-ray procedures are described in the *X-Ray*  
 2 *Guidelines (CPG 1-S)* clinical practice guideline).

- 3 • Advanced imaging studies, when medically necessary and/or available, are  
 4 evaluated for structural integrity and to rule out osseous, related soft tissue  
 5 pathology, or other pathology.
- 6 • EMG and NCV studies, when medically necessary and/or available, are evaluated  
 7 for objective evidence of neural deficit. For more information, see the  
 8 *Electrodiagnostic Testing (CPG 129-S)* clinical practice guideline.
- 9 • Imaging or special studies' findings are appropriate given the nature and severity  
 10 of the patient's condition(s) and the findings obtained are likely to influence the  
 11 basis for the proposed treatment.

### 13 **8.3.2 Factors that Influence Adverse Determinations of Clinical Services (Partial** 14 **Approvals/Denials)**

15 Factors that influence adverse determinations of clinical services may include but are not  
 16 limited to these specific considerations and other guidelines and factors identified  
 17 elsewhere in this policy.: Topics/factors covered elsewhere in this guideline are also  
 18 applicable in this section and may result in an adverse determination on medical necessity  
 19 review. To avoid redundancy, many of those factors have not been listed below.

#### 21 **Additional Factors Considered in Determination of Medical Necessity**

##### 23 **History / Complaints / Patient Reported Outcome Measures**

- 24 • The patient's complaint(s) and/or symptom(s) are not clearly described
- 25 • There is poor correlation and/or a significant discrepancy between the complaint(s)  
 26 and/or symptom(s) as documented by the treating practitioner and as described by  
 27 the patient
- 28 • The patient's complaint(s) and/or symptom(s) have not demonstrated clinically  
 29 significant improvement
- 30 • The nature and severity of the patient's complaint(s) and/or symptom(s) are  
 31 insufficient to substantiate the medical necessity of any/all submitted services
- 32 • The patient has little or no pain as measured on a valid pain scale
- 33 • The patient has little or no functional deficits using a valid functional outcome  
 34 measure or as otherwise documented by the practitioner

##### 36 **Evaluation Findings**

- 37 • There is poor correlation and/or a significant discrepancy in any of the following:  
 38 ○ patient's history  
 39 ○ subjective complaints  
 40 ○ objective findings

- 1           ○ diagnosis
- 2           ○ treatment plan
- 3       • The application of various exam findings to diagnostic or treatment decisions are
- 4       not clearly described or measured (e.g., severity, intensity, professional
- 5       interpretation of results, significance)
- 6       • The patient’s objective findings have not demonstrated clinically significant
- 7       improvement
- 8       • The objective findings are essentially normal or are insufficient to support the
- 9       medical necessity of any/all submitted services
- 10      • The submitted objective findings are insufficient due to any of, but not limited to,
- 11      the following reasons:
- 12          ○ old or outdated relative to the requested dates of service
- 13          ○ do not properly describe the patient’s current status
- 14          ○ do not substantiate the medical necessity of the current treatment plan do
- 15          not support the patient’s diagnosis/diagnoses do not correlate with the
- 16          patient’s subjective complaint(s) and/or symptom(s)
- 17      • Not all of the patient’s presenting complaints were properly examined
- 18      • The patient does not have any demonstrable functional deficits or impairments
- 19      • The patient has not made reasonable progress toward pre-clinical status or
- 20      functional outcomes under the initial treatment/services
- 21      • Clinically significant therapeutic progress is not evident through a review of the
- 22      submitted records; this may indicate that the patient has reached maximum
- 23      therapeutic benefit
- 24      • The patient is approaching or has reached maximum therapeutic benefit
- 25      • The patient’s exam findings have returned to pre-injury status or prior level of
- 26      function
- 27      • There is inaccurate reporting of clinical findings
- 28      • The exam performed is for any of the following:
- 29          ○ wellness
- 30          ○ pre-employment
- 31          ○ sports pre-participation
- 32      • The exam performed is non-standard and solely technique/protocol based

### 34 **Diagnosis**

- 35      • The diagnosis is not supported by one or more of the following:
- 36          ○ patient’s history (e.g., date/mechanism of onset)
- 37          ○ subjective complaints (e.g., nature and severity, location)
- 38          ○ objective findings (e.g., not clearly defined and/or quantified, not
- 39          professionally interpreted, significance not noted)

## 1 Submitted Medical Records

- 2 • The submitted records are insufficient to reliably verify pertinent clinical
- 3 information, such as (but not limited to):
  - 4 ○ patient’s clinical health status
  - 5 ○ the nature and severity of the patient’s complaint(s) and/or symptom(s)
  - 6 ○ date/mechanism of onset
  - 7 ○ objective findings
  - 8 ○ diagnosis/diagnoses
  - 9 ○ response to care
  - 10 ○ functional deficits/limitations
- 11 • There are daily notes submitted for the same dates of service with different/altere
- 12 findings without an explanation
- 13 • There is evidence of duplicated or nearly duplicated records for the same patient
- 14 for different dates of service, or for different patients
- 15 • There is poor correlation and/or a significant discrepancy between the information
- 16 presented in the submitted records with the information presented during a verbal
- 17 communication between the reviewing CQE and treating practitioner
- 18 • The treatment time (in minutes) and/or the number of units used in the performance
- 19 of a timed service (e.g., modality, procedure) during each encounter/office visit was
- 20 not documented
- 21 • Some or all of the service(s) submitted for review are not documented as having
- 22 been performed in the daily treatment notes

## 24 Treatment / Treatment Planning

- 25 • The submitted records show that the nature and severity of the patient’s
- 26 complaint(s) and/or symptom(s) require a limited, short trial of care in order to
- 27 monitor the patient’s response to care and determine the efficacy of the current
- 28 treatment plan. This may include, but not limited to, any of the following:
  - 29 ○ significant trauma affecting function
  - 30 ○ acute/sub-acute stage of condition
  - 31 ○ moderate-to-severe or severe subjective and objective findings
  - 32 ○ possible neurological involvement
  - 33 ○ presence of co-morbidities that may significantly affect the treatment plan
  - 34 and/or the patient’s response to care
- 35 • There is poor correlation of the treatment plan with the nature and severity of the
- 36 patient’s complaint(s) and/or symptom(s), such as (but not limited to):
  - 37 ○ use of acute care protocols for chronic condition(s)
  - 38 ○ prolonged reliance on passive care
  - 39 ○ active care and reduction of passive care are not included in the treatment
  - 40 plan

- 1           ○ Inappropriate use of passive modalities in the plan of care
- 2           ○ use of passive modalities as stand-alone treatments (which is rarely
- 3           therapeutic) or as the sole treatment approach to the patient’s condition(s)
- 4       • There is evidence from the submitted records that the patient’s treatment can
- 5       proceed safely and effectively through a home exercise program or self-
- 6       management program
- 7       • The patient’s function has improved, complaints and symptoms have decreased,
- 8       and patient requires less treatment (e.g., lesser units of services per office visit,
- 9       lesser frequency, shorter total duration to discharge)
- 10      • The patient’s symptoms and/or exam findings are mild and the patient’s treatment
- 11      plan requires a lesser frequency (e.g., units of services, office visits per week)
- 12      and/or total duration
- 13      • Therapeutic goals have not been documented. Goals should be measurable and
- 14      written in terms of function and include specific parameters
- 15      • Therapeutic goals have not been reassessed in a timely manner to determine if the
- 16      patient is making expected progress
- 17      • Failure to make progress or respond to care as documented within subjective
- 18      complaints, objective findings and/or functional outcome measures
- 19      • The patient’s condition(s) is/are not amenable to the proposed treatment plan
- 20      • Additional significant improvement cannot be reasonably expected by continued
- 21      treatment and treatment must be changed or discontinued
- 22      • The patient has had ongoing care without any documented lasting therapeutic
- 23      benefits
- 24      • The condition requires an appropriate referral and/or coordination with other
- 25      appropriate health care services
- 26      • The patient is not complying with the treatment plan that includes lifestyle changes
- 27      to help reduce frequency and intensity of symptoms
- 28      • The patient is not adhering to treatment plan that includes medically necessary
- 29      frequency and intensity of services
- 30      • The use of multiple passive modalities with the same or similar physiologic effects
- 31      to the identical region is considered redundant and not reasonable or medically
- 32      necessary
- 33      • Home care, self-care, and active-care instructions are not implemented or
- 34      documented in the submitted records
- 35      • Uncomplicated diagnoses do not require services beyond the initial treatment plan
- 36      before discharging the patient to active home/self-care
- 37      • As symptoms and clinical findings improve the frequency of services (e.g., visits
- 38      per week/month) did not decrease. The submitted services do not or no longer
- 39      require the professional skills of the treating practitioner. The treatment plan is for
- 40      any of the following:

- 1           ○ preventive care
- 2           ○ elective/convenience/wellness care
- 3           ○ back school
- 4           ○ vocational rehabilitation or return to work programs
- 5           ○ work hardening programs
- 6           ○ routine educational, training, conditioning, return to sport, or fitness.
- 7           ○ non-covered condition
- 8       • There is duplication of services with other healthcare practitioners/specialties
- 9       • The treatment plan is not supported due to, but not limited to, any of the following
- 10       reasons:
  - 11           ○ technique-/protocol-based instead of individualized and evidence based
  - 12           ○ generic and not individualized for the patient’s specific needs
  - 13           ○ does not correlate with the set therapeutic goals
  - 14           ○ not supported in the clinical literature (e.g., proprietary, unproven)
  - 15           ○ not considered evidence-based and/or professionally accepted

16  
17       The treatment plan includes services that are considered not evidence-based, not  
18       widely accepted, unproven and/or not reasonable or medically necessary,  
19       inappropriate or unrelated to the patient’s complaint(s) and/or diagnosis/diagnoses.  
20       (e.g., Low level laser therapy, axial/spinal decompression, select forms of EMS  
21       such as microcurrent, H-wave. Also see the *Techniques and Procedures Not Widely*  
22       *Supported as Evidence-Based (CPG 133 – S)* clinical practice guideline for  
23       complete list).

### 24 25 **Health and Safety**

- 26       • There are signs, symptoms and/or other pertinent information presented through the
- 27       patient’s history, exam findings, and/or response to care that require urgent
- 28       attention, further testing, and/or referral to and/or coordination with other
- 29       healthcare practitioners/specialists
- 30       • There is evidence of the presence of Yellow and/or Red Flags (See section on Red
- 31       and Yellow Flags above)
- 32       • There are historical, subjective, and/or objective findings which present as
- 33       contraindications for the plan of care

### 34 35 **8.3.3 Referral / Coordination of Services**

36       When a potential health and safety issue is identified, the CQE must communicate with the  
37       provider of services as soon as possible by telephone and/or through standardized  
38       communication methods to recommend returning the patient back to the referring health  
39       care practitioner or referring the patient to other appropriate health care

1 practitioner/specialist with the measure of urgency as warranted by the history and clinical  
2 findings.

3  
4 Clinical factors that may require referral or coordination of services include, but not limited  
5 to:

- 6 • Symptoms worsening following treatment;
- 7 • Deteriorating condition (e.g., orthopedic or neurologic findings, function, etc.);
- 8 • Reoccurring exacerbations despite continued treatment;
- 9 • No progress despite treatment;
- 10 • Unexplained diagnostic findings (e.g., suspicion of fracture);
- 11 • Identification of Red Flags;
- 12 • Identification of co-morbid conditions that don't appear to have been addressed  
13 previously that represent absolute contraindications to services;
- 14 • Constitutional signs and symptoms indicative of systemic condition (e.g.,  
15 unintended weight loss of greater than 4.5 kg/10 lbs. over 6-month period);
- 16 • Inability to provoke symptoms with standard exam;
- 17 • Treatment needed outside of scope of practice.

18  
19 The Clinical Policy is reviewed and approved by the ASH Clinical Quality committees that  
20 are comprised of contracted network practitioners including practitioners of the same  
21 clinical discipline as the treating providers for whom compliance with the practices  
22 articulated in this this document is required. Guidelines are updated at least annually, or as  
23 new information is identified that result in material changes to one or more of these  
24 policies.

## 25 26 **9. LITERATURE REVIEW**

27 There are several guidelines, systematic reviews, meta-analyses, and randomized  
28 controlled trials (RCTs) published that examine physical therapy (a variety of  
29 interventions) for various conditions and note effectiveness of physical rehabilitation,  
30 exercise, education, manual therapies (e.g., mobilization, manipulation, soft tissue  
31 mobilization), and other various modalities (Qaseem et al., 2020; Bricca et al., 2020;  
32 Raghava Neelapala et al., 2020; Taylor et al., 2007; Chou et al., 2016; Qaseem et al., 2017;  
33 Byström et al., 2013; Macedo et al., 2016; Saragiotto et al., 2016; Steffens et al., 2016; van  
34 Middelkoop et al., 2011; Logerstedt et al., 2010; Logerstedt et al., 2017; Logerstedt et al.,  
35 2018; Cibulka et al., 2017; Hurwitz et al., 2009; Delitto et al., 2012; Blanpied et al., 2017;  
36 BiDonde et al., 2019; Pollock et al., 2014; Yousefi-Nooraie et al., 2008; Chou et al., 2020;  
37 Skelly et al., 2018; Skelly et al., 2020; Jacobi et al., 2021; Mertens et al., 2022; Núñez-  
38 Cabaleiro et al., 2022; Schenk et al., 2022; Huang et al., 2022). Passive modalities, such as  
39 ultrasound, electric stimulation, traction, laser, and hot and cold packs, are often used in  
40 combination with manual therapies and exercise despite insufficient and/or inconclusive

1 evidence for many conditions. Often methodologic flaws and heterogeneity of studies  
2 result in an inability to draw confirmatory conclusions.

3  
4 **Massage Therapy:** Few clinical trials have been undertaken to assess the effect of this  
5 modality alone in the treatment of specific medical conditions. Rehabilitation programs  
6 frequently combine massage therapy with one or more other treatment interventions. While  
7 there is scant literature regarding the efficacy of this treatment when used as the sole  
8 modality, massage therapy has been a part of physical therapy or chiropractic treatment  
9 plans for the management of musculoskeletal pain. As an example, for mechanical low  
10 back pain, the greatest effects of massage therapy are seen in short term relief of pain. The  
11 effects on function were less clear. These therapeutic effects tend to diminish in the longer  
12 term (Chou et al., 2016). Massage therapy was also noted as an effective treatment of acute  
13 post-operative pain (Chou et al., 2020) and chronic low back pain in the intermediate term  
14 (Skelly et al., 2018). Slight functional improvements were noted in the intermediate term  
15 for fibromyalgia using myofascial release massage (Skelly et al., 2018; Kundakci et al.,  
16 2022).

### 17 18 **9.1 Physical Therapy for Conditions Considered Unproven**

#### 19 **Sexual Dysfunction (unrelated to musculoskeletal or orthopedic condition)**

20 Female sexual dysfunction conditions can be classified as sexual desire disorders, sexual  
21 arousal disorder, orgasmic disorder, or sexual pain disorders. Hypoactive sexual desire  
22 disorder and sexual aversion disorder comprise the sexual desire disorders. ACOG (2019)  
23 published a clinical management guideline on female sexual dysfunction. Conditions  
24 included in this guideline include sexual desire disorders (e.g., hypoactive sexual desire  
25 disorder and sexual aversion disorder), female sexual arousal disorder, female orgasmic  
26 disorder, and sexual pain disorders with no muscular involvement (e.g., dyspareunia,  
27 vaginismus). Physical therapy is not included in the recommendations in this guideline.  
28 The European Urological Association published guidelines on male sexual dysfunction,  
29 including erectile dysfunction and premature ejaculation. Physical therapy is not included  
30 in the guidelines as a treatment for these conditions (Hatzimouratidis, et al., 2015).

#### 31 32 **Scoliosis**

33 Scoliosis, lateral curvature of the spine, is a structural alteration that occurs in a variety of  
34 conditions. Progression of the curvature during periods of rapid growth can result in  
35 significant deformity, which may be accompanied by cardiopulmonary compromise  
36 (Schreiber et al., 2019; Scherl, 2016). Options for treatment of scoliosis include  
37 observation, bracing, and surgery. Evidence is insufficient to demonstrate effectiveness of  
38 physical therapy (scoliosis-specific exercises, (including the Schroth Method), chiropractic  
39 treatment, electrical stimulation, or biofeedback to correct, improve or prevent further  
40 curvature (Seleviciene et al., 2022; Santos et al., 2022; Fan et al., 2020; Schreiber et al.,  
41 2019; Scherl, 2016; National Institutes of Health [NIH]/National Institute of Arthritis and

1 Musculoskeletal and Skin Disease [NIAMS], 2019; American Academy of Orthopedic  
2 Surgeons [AAOS], 2019; Mehlman, 2020; Romano, et al., 2012).

3  
4 Evidence is insufficient to demonstrate effectiveness of this treatment method to correct,  
5 improve or prevent further curvature.

6  
7 **9.2 Specific Physical Therapy Treatments Considered Unproven**  
8 **Constraint-Induced Movement Therapy (CIMT)**

9 Constraint-induced movement therapy (CIMT) is a multi-faceted intervention that has been  
10 proposed for neurological conditions that involve hemiparesis. CIMT is also referred to as  
11 constraint-induced therapy or forced use therapy and is primarily provided by physical  
12 therapists and occupational therapists. Several variations exist based on method and length  
13 of restraint, and type and duration of therapy (e.g., environment and provider). The therapy  
14 involves constraining the unaffected arm or hand with a sling, glove or mitt. CIMT  
15 typically involves intensive individualized therapy with up to six–eight hours of therapy  
16 provided per day. However, other forms of modified CIMT have been developed with less  
17 therapy provided, but longer periods of restraint (Wolf, 2007). Veterans Affairs/Dept of  
18 Defense (VA/DoD) published guidelines that have also been endorsed by American Heart  
19 Association/American Stroke Association (AHA/ASA)—Clinical Practice Guideline for  
20 the Management of Adult Stroke Rehabilitation Care (Bates, et al., 2005). The guidelines  
21 note that, “Use of constraint-induced therapy should be considered for a select group of  
22 patients—that is, patients with 20 degrees of wrist extension and 10 degrees of finger  
23 extension, who have no sensory and cognitive deficits.” indicating a recommendation that  
24 the intervention may be considered). The Royal College of Physicians/Intercollegiate  
25 Stroke Working Party (United Kingdom) and the Ottawa Panel (2006) agree with these  
26 recommendations.

27  
28 CIMT has demonstrated inconsistent effectiveness for treatment of patients post-stroke  
29 (Abdullahi et al., 2020; Pulman et al., 2013; McIntyre et al., 2012; Corbetta et al., 2010;  
30 Sirtori et al., 2009; Abdullahi et al., 2021a; Abdullahi et al., 2021b; Alaca and Ocal, 2022).  
31 Future randomized controlled trials need to have accurate characteristics in terms of  
32 methodological quality, larger samples, longer follow up, reliable and relevant measure  
33 and report of adverse events. Some evidence demonstrates that modified CIMT could  
34 reduce the level of disability, improve the ability to use the paretic upper extremity, and  
35 enhance spontaneity during movement time, but evidence is still limited about the  
36 effectiveness of modified CIMT in kinematic analysis (Pollack et al., 2014; Shi et al.,  
37 2011). Research suggests that modified CIMT and intensive CIMT produce similar results  
38 (Peurala et al., 2012).

39  
40 CIMT has also been used for the treatment of children with cerebral palsy (CP). Research  
41 is not conclusive with regards to the effectiveness of CIMT for this population; however

1 there appears to be modest evidence to support its use in a modified format (Novak et al.,  
 2 2020; Taub et al., 2004; Sakzewski et al., 2009; Eliasson et al., 2005; Hoare et al., 2007;  
 3 Chen et al., 2014; Chiu and Ada, 2016; Eliasson et al., 2014, Hoare et al., 2019; Martínez-  
 4 Costa Montero et al., 2020; Ramey et al., 2021; Walker et al., 2022; Dionisio and Terrill,  
 5 2022; Jackman et al., 2022; Baker et al., 2022). Further research using adequately powered  
 6 RCTs [randomized controlled trials], rigorous methodology and valid, reliable outcome  
 7 measures is essential to provide higher level support of the effectiveness of CIMT for  
 8 children with hemiplegic cerebral palsy.

### 10 **Intensive Model of Therapy (IMOT) Programs**

11 Refer to *Intensive Model of Therapy (CPG 286 – S) clinical practice guideline* for more  
 12 information.

### 14 **Dry Hydrotherapy**

15 Dry hydrotherapy, also referred to as aquamassage, water massage, or hydromassage, is a  
 16 treatment that incorporates water with the intent of providing therapeutic massage. The  
 17 treatment is generally provided in chiropractor or physical therapy offices. There are  
 18 several dry hydrotherapy devices available that provide this treatment, including the  
 19 following:

- 20 • Aqua Massage® (AMI Inc., Mystic, CT)
- 21 • AquaMED® (JTL Enterprises, Inc., Clearwater, FL)
- 22 • H2OMassage System™ (H2OMassage Systems, Winnipeg, MB, Canada)
- 23 • Hydrotherapy Tables (Sidmar Manufacturing, Inc., Princeton, MN)

24  
 25 Proponents of dry hydrotherapy maintain that it can be used in lieu of certain conventional  
 26 physical medicine therapeutic modalities and procedures, such as heat packs, wet  
 27 hydrotherapy, massage, and soft tissue manipulation. The assertions that have been made  
 28 by manufacturers of this device at their websites have not yet been proven. No published  
 29 studies or information regarding dry hydrotherapy devices or dry hydrotherapy treatment  
 30 were identified in the peer-reviewed scientific literature. In the absence of peer- reviewed  
 31 literature demonstrating the effectiveness of dry hydrotherapy and in the absence of  
 32 comparison to currently accepted treatment modalities, no definitive conclusions can be  
 33 drawn regarding the clinical benefits of this treatment.

### 35 **Non-invasive Interactive Neurostimulation (e.g., InterX®)**

36 Refer to *Non-invasive Interactive Neurostimulation (InterX®) (CPG 277 – S) clinical*  
 37 *practice guideline* for more information.

### 39 **Microcurrent Electrical Nerve Stimulation (MENS)**

40 For more information, see *Electric Stimulation for Pain, Swelling and Function in the*  
 41 *Clinic Setting (CPG 272 – S) clinical practice guideline.*

**H-WAVE ®**

Refer to *H-WAVE® Electrical Stimulation (CPG 269 – S) clinical practice guideline* for more information.

**Spinal Manipulation for the Treatment of Non-Musculoskeletal Conditions and Related Disorders**

Refer to *Spinal Manipulative Therapy for Non-Musculoskeletal Conditions and Related Disorders (CPG 119 – S) clinical practice guideline* for more information.

**Equestrian Therapy (e.g., hippotherapy)**

Equestrian therapy, also known as hippotherapy, is proposed to offer a person with a disability a means of physical activity that aids in improving balance, posture, coordination, the development of a positive attitude and a sense of accomplishment. It is proposed for treatment of several conditions including autism spectrum disorders and cerebral palsy. There is insufficient published evidence regarding the effects of this therapy on individuals with impaired physical function resulting from illness, injury, congenital defect or surgery (Bronson et al., 2010; Lee et al., 2014; O'Haire et al., 2014; De Guindos-Sanchez et al., 2020; De Miguel et al., 2018; Kraft et al., 2019; De Guindos-Sanchez et al., 2020; Marquez et al., 2020; White et al., 2020; Santos de Assis et al., 2022; Pantera et al., 2022; Pérez-Gómez et al., 2022; Heussen and Häusler, 2022; Prieto et al., 2022). It is noted that most studies are limited by methodological weaknesses.

**MEDEK Therapy**

Refer to *MEDEK Therapy (CPG 276 – S) clinical practice guideline* for more information.

**The Interactive Metronome Program**

Interactive Metronome® (IM) is purported to be an assessment and training tool that measures and improves Neurotiming, or the synchronization of neural impulses within key brain networks for cognitive, communicative, sensory and motor performance. It is designed to improve processing speed, focus, and coordination. Patients wear headphones and match a beat using a hand or foot sensor along with visual and auditory feedback. The IM program has been promoted as a treatment for children with attention-deficit hyperactivity disorder (ADHD) and for other special needs children to increase concentration, focus, and coordination. It has also been promoted to improve athletic performance, to assess and improve academic performance of normal children, and to improve children's performance in the arts (e.g., dance, music, theater, creative arts). Additionally, it has been implemented as part of a therapy program for patients with balance disorders, cerebrovascular accident, limb amputation, multiple sclerosis, Parkinson's disease, and traumatic brain injury. However, based on peer-reviewed literature, evidence is insufficient to support effectiveness of the IM program. Well-

1 designed clinical studies are needed to determine the effectiveness of the IM program and  
2 whether a clinically significant improvement is achieved.

3  
4 **Taping/Elastic therapeutic tape (e.g., Kinesio™ tape, Spidertech™ tape)**

5 Refer to *Strapping and Taping (CPG 143 – S) clinical practice guideline* for more  
6 information.

7  
8 **Dry Needling**

9 Refer to *Dry Needling (CPG 178 – S) clinical practice guideline* for more information.

10  
11 **Laser Therapy (LT)**

12 Refer to *Laser Therapy (LT) (CPG 30 – S) clinical practice guideline* for more information.

13  
14 **Vertebral Axial Decompression Therapy and Devices**

15 Refer to *Axial/Spinal Decompression Therapy (CPG 83 – S) clinical practice guideline* for  
16 more information.

17  
18 **10. CODING/BILLING INFORMATION**

19 **Note:**

- 20 1) This list of codes may not be all-inclusive.  
21 2) Deleted codes and codes which are not effective at the time the service is rendered  
22 may not be eligible for reimbursement.

23  
24 **Covered when medically necessary:**

CPT®* Codes	Description
97010	Application of a modality to 1 or more areas; hot or cold packs
97012	Application of a modality to 1 or more areas; traction, mechanical
97014	Application of a modality to 1 or more areas; electrical stimulation (unattended)
97016	Application of a modality to 1 or more areas; vasopneumatic devices
97018	Application of a modality to 1 or more areas; paraffin bath
97022	Application of a modality to 1 or more areas; whirlpool
97024	Application of a modality to 1 or more areas; diathermy (e.g., microwave)
97026	Application of a modality to 1 or more areas; infrared
97028	Application of a modality to 1 or more areas; ultraviolet

CPT®* Codes	Description
97032	Application of a modality to 1 or more areas; electrical stimulation (manual), each 15 minutes
97033	Application of a modality to 1 or more areas; iontophoresis, each 15 minutes
97034	Application of a modality to 1 or more areas; contrast baths, each 15 minutes
97035	Application of a modality to 1 or more areas; ultrasound, each 15 minutes
97036	Application of a modality to 1 or more areas; Hubbard tank, each 15 minutes
97110	Therapeutic procedure, 1 or more areas, each 15 minutes; therapeutic exercises to develop strength and endurance, range of motion and flexibility
97112	Therapeutic procedure, 1 or more areas, each 15 minutes; neuromuscular reeducation of movement, balance, coordination, kinesthetic sense, posture, and/or proprioception for sitting and/or standing activities
97113	Therapeutic procedure, 1 or more areas, each 15 minutes; aquatic therapy with therapeutic exercises
97116	Therapeutic procedure, 1 or more areas, each 15 minutes; gait training (includes stair climbing)
97124	Therapeutic procedure, 1 or more areas, each 15 minutes; massage, including effleurage, petrissage and/or tapotement (stroking, compression, percussion)
97140	Manual therapy techniques (e.g., mobilization/manipulation, manual lymphatic drainage, manual traction), 1 or more regions, each 15 minutes
97161	Physical therapy evaluation: low complexity, requiring these components: A history with no personal factors and/or comorbidities that impact the plan of care; An examination of body system(s) using standardized tests and measures addressing 1-2 elements from any of the following: body structures and functions, activity limitations, and/or participation restrictions; A clinical presentation with stable and/or uncomplicated characteristics; and Clinical decision making of low complexity using standardized patient assessment instrument and/or measurable assessment of functional outcome. Typically, 20 minutes are spent face-to-face with the patient and/or family.
97162	Physical therapy evaluation: moderate complexity, requiring these components: A history of present problem with 1-2 personal factors and/or comorbidities that impact the plan of care; An examination of body systems using standardized tests and measures in addressing a total of 3 or more elements from any of the following: body structures and functions, activity

CPT®* Codes	Description
	limitations, and/or participation restrictions; An evolving clinical presentation with changing characteristics; and Clinical decision making of moderate complexity using standardized patient assessment instrument and/or measurable assessment of functional outcome. Typically, 30 minutes are spent face-to-face with the patient and/or family.
97163	Physical therapy evaluation: high complexity, requiring these components: A history of present problem with 3 or more personal factors and/or comorbidities that impact the plan of care; An examination of body systems using standardized tests and measures addressing a total of 4 or more elements from any of the following: body structures and functions, activity limitations, and/or participation restrictions; A clinical presentation with unstable and unpredictable characteristics; and Clinical decision making of high complexity using standardized patient assessment instrument and/or measurable assessment of functional outcome. Typically, 45 minutes are spent face-to-face with the patient and/or family.
97164	Re-evaluation of physical therapy established plan of care, requiring these components: An examination including a review of history and use of standardized tests and measures is required; and Revised plan of care using a standardized patient assessment instrument and/or measurable assessment of functional outcome Typically, 20 minutes are spent face-to-face with the patient and/or family.
97530	Therapeutic activities, direct (one-on-one) patient contact (use of dynamic activities to improve functional performance), each 15 minutes
97535	Self-care/home management training (e.g., activities of daily living (ADL) and compensatory training, meal preparation, safety procedures, and instructions in use of assistive technology devices/adaptive equipment) direct one-on-one contact, each 15 minutes
97542	Wheelchair management (e.g., assessment, fitting, training), each 15 minutes
97760	Orthotic(s) management and training (including assessment and fitting when not otherwise reported), upper extremity(ies), lower extremity(ies) and/or trunk, initial orthotic(s) encounter, each 15 minutes
97761	Prosthetic(s) training, upper and/or lower extremity(ies), initial prosthetic(s) encounter, each 15 minutes
97763	Orthotic(s)/prosthetic(s) management and/or training, upper extremity(ies), lower extremity(ies), and/or trunk, subsequent orthotic(s)/prosthetic(s) encounter, each 15 minutes

1

**CPG 135 Revision 18– S**

Physical Therapy Medical Policy/Guidelines

**Revised – December 22, 2023**

To CHSO for review and approval 12/22/2023

CHSO reviewed and approved 12.22/2023

To CQT for informational review 01/08/2024

CQT reviewed as informational 01/08/2024

To QIC for informational review 02/06/2024

QIC reviewed as informational 02/06/2024

To QOC for review and adoption 02/15/2024

QOC reviewed and approval 02/15/2024

<b>HCPCS Codes</b>	<b>Description</b>
G0151	Services performed by a qualified physical therapist in the home health or hospice setting, each 15 minutes
G0237	Therapeutic procedures to increase strength or endurance of respiratory muscles, face-to-face, one-on-one, each 15 minutes (includes monitoring)
G0238	Therapeutic procedures to improve respiratory function, other than described by G0237, one-on-one, face-to-face, per 15 minutes (includes monitoring)
G0239	Therapeutic procedures to improve respiratory function or increase strength or endurance of respiratory muscles, two or more individuals (includes monitoring)
S9131	Physical therapy; in the home, per diem

1  
2  
3

**Training in Nature/Not Medically Necessary/Not Covered:**

<b>CPT* Codes</b>	<b>Description</b>
20560	Needle insertion(s) without injection(s); 1 or 2 muscle(s)
20561	Needle insertion(s) without injection(s); 3 or more muscles
97169	Athletic training evaluation, low complexity, requiring these components: A history and physical activity profile with no comorbidities that affect physical activity; An examination of affected body area and other symptomatic or related systems addressing 1-2 elements from any of the following: body structures, physical activity, and/or participation deficiencies; and Clinical decision making of low complexity using standardized patient assessment instrument and/or measurable assessment of functional outcome. Typically, 15 minutes are spent face-to-face with the patient and/or family
97170	Athletic training evaluation, moderate complexity, requiring these components: A medical history and physical activity profile with 1-2 comorbidities that affect physical activity. An examination of affected body area and other symptomatic or related systems addressing a total of 3 or more elements from any of the following: body structures, physical activity, and/or participation deficiencies; and Clinical decision making of moderate complexity using standardized patient assessment instrument and/or measurable assessment of functional outcome. Typically, 30 minutes are spent face-to-face with the patient and/or family.

<b>CPT* Codes</b>	<b>Description</b>
97171	Athletic training evaluation, high complexity, requiring these components: A medical history and physical activity profile, with 3 or more comorbidities that affect physical activity; A comprehensive examination of body systems using standardized tests and measures addressing a total of 4 or more elements from any of the following: body structures, physical activity, and/or participation deficiencies; Clinical presentation with unstable and unpredictable characteristics; and Clinical decision making of high complexity using standardized patient assessment instrument and/or measurable assessment of functional outcome. Typically, 45 minutes are spent face-to-face with the patient and/or family.
97172	Re-evaluation of athletic training established plan of care requiring these components: An assessment of patient’s current functional status when there is a documented change, and A revised plan of care using a standardized patient assessment instrument and/or measurable assessment of functional outcome with an update in management options, goals, and interventions. Typically, 20 minutes are spent face-to-face with the patient and/or family.
97537	Community/work reintegration training (e.g., shopping, transportation, money management, avocational activities and/or work environment/modification analysis, work task analysis, use of assistive technology device/adaptive equipment), direct one-on-one contact, each 15 minutes
97545	Work hardening/conditioning; initial 2 hours
97546	Work hardening/conditioning; each additional hour (List separately in addition to code for primary procedure)

1

<b>HCPCS Codes</b>	<b>Description</b>
S8990	Physical or manipulative therapy performed for maintenance rather than restoration
S9117	Back school, per visit

1 Unproven and not covered when used to report constraint-induced movement therapy or  
 2 dry hydrotherapy/aquamassage/hydromassage, equestrian therapy (e.g., hippotherapy),  
 3 elastic therapeutic tape/taping, low-level laser therapy or vertebral axial decompression:  
 4

HCPCS Codes	Description
S8940	Equestrian/hippotherapy, per session
S8948	Application of a modality (requiring constant provider attendance) to one or more areas, low-level laser; each 15 minutes
S9090	Vertebral axial decompression, per session
E0744	Neuromuscular stimulator for scoliosis

5 \*Current Procedural Terminology (CPT®) ©Current Year American Medical Association:  
 6 Chicago, IL.

### 7 *References*

8  
 9 Abdullahi A, Van Crieking T, Umar NA, Zakari UU, Truijen S, Saeys W. Effect of  
 10 constraint-induced movement therapy on persons-reported outcomes of health status  
 11 after stroke: a systematic review and meta-analysis. *Int J Rehabil Res.* 2020 Nov 23.

12  
 13 Abdullahi A, Aliyu NU, Useh U, et al. Comparing two different modes of task practice  
 14 during lower limb constraint-induced movement therapy in people with stroke: A  
 15 randomized clinical trial. *Neural Plast.* 2021a;2021:6664058.

16  
 17 Abdullahi A, Truijen S, Umar NA, et al. Effects of lower limb constraint induced  
 18 movement therapy in people with stroke: A systematic review and meta-analysis.  
 19 *Front Neurol.* 2021b;12:638904

20  
 21 Agency for Healthcare Research and Quality. Multidisciplinary Postacute Rehabilitation  
 22 for Moderate to Severe Traumatic Brain Injury in Adults. *Effective Health Care*  
 23 *Program. Comparative Effectiveness Review, 2012;72.* Retrieved on April 18, 2023  
 24 from  
 25 [https://www.ncbi.nlm.nih.gov/books/NBK98993/pdf/Bookshelf\\_NBK98993.pdf](https://www.ncbi.nlm.nih.gov/books/NBK98993/pdf/Bookshelf_NBK98993.pdf)

26  
 27 Alaca N, Öcal NM. Proprioceptive based training or modified constraint-induced  
 28 movement therapy on upper extremity motor functions in chronic stroke patients: A  
 29 randomized controlled study. *NeuroRehabilitation.* 2022;51(2):271-282.  
 30 doi:10.3233/NRE-220009

- 1 American Academy of Orthopedic Surgeons. Scoliosis. Last reviewed: April 2021.  
2 Retrieved on April 18, 2023 from <http://orthoinfo.aaos.org/topic.cfm?topic=A00353>  
3
- 4 American Academy of Orthopedic Surgeons. Nonsurgical Treatment Options for  
5 Scoliosis. Last Reviewed: Sept 2019. Retrieved on April 18, 2023 from  
6 <http://www.orthoinfo.org/topic.cfm?topic=A00636>  
7
- 8 American College of Obstetricians and Gynecologists (ACOG) Committee on  
9 Gynecologic Practice. ACOG Committee Opinion: Number 345, October 2006:  
10 vulvodynia. *Obstet Gynecol.* 2006 Oct;108(4):1049-52. (reaffirmed 2008; 2015)  
11
- 12 American College of Obstetricians and Gynecologists' Committee on Practice Bulletins—  
13 Gynecology and American Urogynecologic Society. Pelvic Organ Prolapse: ACOG  
14 Practice Bulletin, Number 214. *Obstet Gynecol.* 2019 Nov;134(5):e126-e142. doi:  
15 10.1097/AOG.0000000000003519. PMID: 31651832.  
16
- 17 American Medical Association. (current year). *Current Procedural Terminology (CPT)*  
18 *Current year (rev. ed.)*. Chicago: AMA.  
19
- 20 American Physical Therapy Association (APTA). Criteria for Standards of Practice for  
21 Physical Therapy. BOD S03-06-16-38. 2006; updated: 08/12/20. Retrieved on April  
22 18, 2023 from [https://www.apta.org/apta-and-you/leadership-and-](https://www.apta.org/apta-and-you/leadership-and-governance/policies/standards-of-practice-pt)  
23 [governance/policies/standards-of-practice-pt](https://www.apta.org/apta-and-you/leadership-and-governance/policies/standards-of-practice-pt)  
24
- 25 American Physical Therapy Association Policies and Bylaws. Retrieved April 18, 2023  
26 from [https://www.apta.org/apta-and-you/leadership-and-governance/policies-and-](https://www.apta.org/apta-and-you/leadership-and-governance/policies-and-bylaws)  
27 [bylaws](https://www.apta.org/apta-and-you/leadership-and-governance/policies-and-bylaws)  
28
- 29 Aqua Massage [product description]. AMI Inc. Retrieved on April 18, 2023 from  
30 [http://amiaqua.com/PR\\_overview.htm](http://amiaqua.com/PR_overview.htm)  
31
- 32 AquaMED Dry Hydrotherapy. JTL Enterprises, Inc. Retrieved on April 18, 2023 from  
33 <http://www.hydromassage.com/>  
34
- 35 Baker A, Niles N, Kysh L, Sargent B. Effect of Motor Intervention for Infants and Toddlers  
36 With Cerebral Palsy: A Systematic Review and Meta-analysis. *Pediatr Phys Ther.*  
37 2022;34(3):297-307. doi:10.1097/PEP.0000000000000914  
38
- 39 Bates B, Choi JY, Duncan PW, et al. Veterans Affairs/Department of Defense Clinical  
40 Practice Guideline for the Management of Adult Stroke Rehabilitation Care: executive

- 1 summary. Stroke. 2005;36(9):2049-2056.  
 2 doi:10.1161/01.STR.0000180432.73724.AD  
 3
- 4 Bidonde J, Busch AJ, Schachter CL, Webber SC, Musselman KE, Overend TJ, Góes SM,  
 5 Dal Bello-Haas V, Boden C. Mixed exercise training for adults with fibromyalgia.  
 6 Cochrane Database Syst Rev. 2019 May 24;5(5):CD013340.  
 7
- 8 Blanpied PR, Gross AR, Elliott JM, Devaney LL, Clewley D, Walton DM, Sparks C,  
 9 Robertson EK. Neck Pain: Revision 2017. J Orthop Sports Phys Ther. 2017  
 10 Jul;47(7):A1-A83.  
 11
- 12 Boyd R, Sakzewski L, Ziviani J, Abbott DF, Badawy R, Gilmore R, et al. INCITE: A  
 13 randomised trial comparing constraint induced movement therapy and bimanual  
 14 training in children with congenital hemiplegia. BMC Neurol. 2010 Jan 12;10:4.  
 15
- 16 Bricca A, Harris LK, Jäger M, Smith SM, Juhl CB, Skou ST. Benefits and harms of  
 17 exercise therapy in people with multimorbidity: A systematic review and meta-  
 18 analysis of randomised controlled trials. Ageing Res Rev. 2020 Nov;63:101166. doi:  
 19 10.1016/j.arr.2020.101166. Epub 2020 Sep 5.  
 20
- 21 Brogårdh C, Flansbjerg UB, Lexell J. What is the long-term benefit of constraint-induced  
 22 movement therapy? A four-year follow-up. Clin Rehabil. 2009 May;23(5):418-23.  
 23 Epub 2009 Apr 6.  
 24
- 25 Bronson C, Brewerton K, Ong J, Palanca C, Sullivan SJ. Does hippotherapy improve  
 26 balance in persons with multiple sclerosis: a systematic review. Eur J Phys Rehabil  
 27 Med. 2010 Sep;46(3):347-53.  
 28
- 29 Byström MG, Rasmussen-Barr E, Grooten WJ. Motor control exercises reduces pain and  
 30 disability in chronic and recurrent low back pain: a meta-analysis. Spine (Phila Pa  
 31 1976). 2013 Mar 15;38(6):E350-8.  
 32
- 33 Cameron M. Physical Agents in Rehabilitation: An Evidence-Based Approach to Practice.  
 34 6th Edition. Elsevier; 2022.  
 35
- 36 Centers for Medicare and Medicaid Services (CMS). Pub. 100-02, Chapter 15, Sections  
 37 220 and 230 Therapy Services. Coverage of Outpatient Rehabilitation Therapy  
 38 Services (Physical Therapy, Occupational Therapy, and Speech-Language Pathology  
 39 Services) Under Medical Insurance (Rev. 11905, 03-16-23). Retrieved on April 18,  
 40 2023 from <http://www.cms.hhs.gov/manuals/Downloads/bp102c15.pdf>

1 Centers for Medicare & Medicaid Services (CMS). National Coverage Determination  
 2 160.16. Vertebral axial decompression (VAX-D). Effective date April 15, 1997.  
 3 Retrieved on April 18, 2023 from [http://www.cms.gov/medicare-coverage-](http://www.cms.gov/medicare-coverage-database/details/ncd-)  
 4 [database/details/ncd-](http://www.cms.gov/medicare-coverage-database/details/ncd-)  
 5 [details.aspx?NCDId=124&ncdver=1&bc=BAABAAAAAAAA&](http://www.cms.gov/medicare-coverage-database/details/ncd-)

6  
 7 Centers for Medicare & Medicaid Services (CMS). Local Coverage Article: Medical  
 8 Necessity of Therapy Services (A52775). Retrieved on April 18, 2023 from  
 9 [https://www.cms.gov/medicare-coverage-](https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleid=52775&ver=15&keyword=medical+necessity+of+therapy+services&keywordType=starts&areaId=all&docType=NCA%2cCAL%2cNCD%2cMEDCAC%2cTA%2cMCD%2c6%2c3%2c5%2c1%2cF%2cP&contractOption=all&sortBy=relevance&bc=AAAAAAQAAAA&KeyWordLookUp=Doc&KeyWordSearchType=Exact)  
 10 [database/view/article.aspx?articleid=52775&ver=15&keyword=medical+necessity+](https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleid=52775&ver=15&keyword=medical+necessity+of+therapy+services&keywordType=starts&areaId=all&docType=NCA%2cCAL%2cNCD%2cMEDCAC%2cTA%2cMCD%2c6%2c3%2c5%2c1%2cF%2cP&contractOption=all&sortBy=relevance&bc=AAAAAAQAAAA&KeyWordLookUp=Doc&KeyWordSearchType=Exact)  
 11 [of+therapy+services&keywordType=starts&areaId=all&docType=NCA%2cCAL%2c](https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleid=52775&ver=15&keyword=medical+necessity+of+therapy+services&keywordType=starts&areaId=all&docType=NCA%2cCAL%2cNCD%2cMEDCAC%2cTA%2cMCD%2c6%2c3%2c5%2c1%2cF%2cP&contractOption=all&sortBy=relevance&bc=AAAAAAQAAAA&KeyWordLookUp=Doc&KeyWordSearchType=Exact)  
 12 [NCD%2cMEDCAC%2cTA%2cMCD%2c6%2c3%2c5%2c1%2cF%2cP&contract](https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleid=52775&ver=15&keyword=medical+necessity+of+therapy+services&keywordType=starts&areaId=all&docType=NCA%2cCAL%2cNCD%2cMEDCAC%2cTA%2cMCD%2c6%2c3%2c5%2c1%2cF%2cP&contractOption=all&sortBy=relevance&bc=AAAAAAQAAAA&KeyWordLookUp=Doc&KeyWordSearchType=Exact)  
 13 [Option=all&sortBy=relevance&bc=AAAAAAQAAAA&KeyWordLookUp=Doc](https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleid=52775&ver=15&keyword=medical+necessity+of+therapy+services&keywordType=starts&areaId=all&docType=NCA%2cCAL%2cNCD%2cMEDCAC%2cTA%2cMCD%2c6%2c3%2c5%2c1%2cF%2cP&contractOption=all&sortBy=relevance&bc=AAAAAAQAAAA&KeyWordLookUp=Doc&KeyWordSearchType=Exact)  
 14 [&KeyWordSearchType=Exact](https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleid=52775&ver=15&keyword=medical+necessity+of+therapy+services&keywordType=starts&areaId=all&docType=NCA%2cCAL%2cNCD%2cMEDCAC%2cTA%2cMCD%2c6%2c3%2c5%2c1%2cF%2cP&contractOption=all&sortBy=relevance&bc=AAAAAAQAAAA&KeyWordLookUp=Doc&KeyWordSearchType=Exact)

15  
 16 Centers for Medicare and Medicaid. Local Coverage Determination (LCD): Outpatient  
 17 Physical and Occupational Therapy Services (L33631). Retrieved on April 18, 2023  
 18 from <https://www.cms.gov/medicare-coverage-database/details/lcd->  
 19 [details.aspx?lcdid=33631&ver=51&keyword=outpatient%20physical%20and%20oc](https://www.cms.gov/medicare-coverage-database/details/lcd-)  
 20 [cupational%20therapy&keywordType=starts&areaId=all&docType=NCA,CAL,NC](https://www.cms.gov/medicare-coverage-database/details/lcd-)  
 21 [D,MEDCAC,TA,MCD,6,3,5,1,F,P&contractOption=all&sortBy=relevance&bc=AA](https://www.cms.gov/medicare-coverage-database/details/lcd-)  
 22 [AAAAQAAAA&KeyWordLookUp=Doc&KeyWordSearchType=Exact](https://www.cms.gov/medicare-coverage-database/details/lcd-)

23  
 24 Chen YP, Pope S, Tyler D, Warren GL. Effectiveness of constraint-induced movement  
 25 therapy on upper-extremity function in children with cerebral palsy: A systematic  
 26 review and meta-analysis of randomized controlled trials. *Clin Rehabil.*  
 27 2014;28(10):939-953.

28  
 29 Chiu HC, Ada L. Constraint-induced movement therapy improves upper limb activity and  
 30 participation in hemiplegic cerebral palsy: A systematic review. *J Physiother.*  
 31 2016;62(3):130-137.

32  
 33 Chou R, Deyo R, Friedly J, Skelly A, Hashimoto R, Weimer M, Fu R, Dana T, Kraegel P,  
 34 Griffin J, Grusing S, Brodt E. Noninvasive Treatments for Low Back Pain.  
 35 Comparative Effectiveness Review No. 169. (Prepared by the Pacific Northwest  
 36 Evidence-based Practice Center under Contract No. 290-2012-00014-I.) AHRQ  
 37 Publication No. 16-EHC004-EF. Rockville, MD: Agency for Healthcare Research and  
 38 Quality; February 2016.

39  
 40 Chou R, Huffman LH; American Pain Society; American College of Physicians.  
 41 Nonpharmacologic therapies for acute and chronic low back pain: a review of the

- 1 evidence for an American Pain Society/American College of Physicians clinical  
2 practice guideline. *Ann Intern Med.* 2007a Oct 2;147(7):492-504.  
3
- 4 Chou R, Qaseem A, Snow V, Casey D, Cross JT Jr, Shekelle P, Owens DK; Clinical  
5 Efficacy Assessment Subcommittee of the American College of Physicians; American  
6 College of Physicians; American Pain Society Low Back Pain Guidelines Panel.  
7 Diagnosis and treatment of low back pain: a joint clinical practice guideline from the  
8 American College of Physicians and the American Pain Society. *Ann Intern Med.*  
9 2007b Oct 2;147(7):478-91.  
10
- 11 Chou R, Wagner J, Ahmed AY, et al. Treatments for Acute Pain: A Systematic Review.  
12 Rockville (MD): Agency for Healthcare Research and Quality (US); December 2020.  
13
- 14 Chronic Pelvic Pain: ACOG Practice Bulletin, Number 218. *Obstet Gynecol.*  
15 2020;135(3):e98-e109. doi:10.1097/AOG.0000000000003716  
16
- 17 Cibulka MT, Bloom NJ, Enseki KR, Macdonald CW, Woehrle J, McDonough CM. Hip  
18 Pain and Mobility Deficits-Hip Osteoarthritis: Revision 2017. *J Orthop Sports Phys  
19 Ther.* 2017 Jun;47(6):A1-A37.  
20
- 21 Corbetta D, Sirtori V, Moja L, Gatti R. Constraint-induced movement therapy in stroke  
22 patients: systematic review and meta-analysis. *Eur J Phys Rehabil Med.* 2010  
23 Dec;46(4):537-44.  
24
- 25 de Brito Brandão M, Mancini MC, Vaz DV, Pereira de Melo AP, Fonseca ST. Adapted  
26 version of constraint-induced movement therapy promotes functioning in children  
27 with cerebral palsy: a randomized controlled trial. *Clin Rehabil.* 2010 Jul;24(7):639-  
28 47.  
29
- 30 De Guindos-Sanchez L, Lucena-Anton D, Moral-Munoz JA, et al. The effectiveness of  
31 hippotherapy to recover gross motor function in children with cerebral palsy: A  
32 systematic review and meta-analysis. *Children (Basel).* 2020;7(9):106  
33
- 34 Delitto A, George SZ, Van Dillen LR, Whitman JM, Sowa G, Shekelle P, et al.;  
35 Orthopaedic Section of the American Physical Therapy Association. Low back pain.  
36 *J Orthop Sports Phys Ther.* 2012 Apr;42(4):A1-57. Epub 2012 Mar 30.  
37
- 38 De Miguel A, De Miguel MD, Lucena-Anton D, Rubio MD. Effects of hippotherapy on  
39 the motor function of persons with Down's syndrome: A systematic review. *Rev  
40 Neurol.* 2018;67(7):233-241.

- 1 Dionisio MC, Terrill AL. Constraint-Induced Movement Therapy for Infants With or at  
2 Risk for Cerebral Palsy: A Scoping Review. *Am J Occup Ther.*  
3 2022;76(2):7602205120. doi:10.5014/ajot.2022.047894  
4
- 5 Dromerick AW, Lang CE, Birkenmeier RL, Wagner JM, Miller JP, Videen TO, et al. Very  
6 Early Constraint-Induced Movement during Stroke Rehabilitation (VECTORS): A  
7 single-center RCT. *Neurology.* 2009 Jul 21;73(3):195-201. Epub 2009 May 20.  
8
- 9 Dromerick AW, Edwards DF, Hahn M. Does the application of constraint-induced  
10 movement therapy during acute rehabilitation reduce arm impairment after ischemic  
11 stroke? *Stroke.* 2000 Dec;31(12):2984-8.  
12
- 13 Dry Hydromassage. Princeton, MN: Sidmar Manufacturing, Inc.; 2001-2005. Retrieved on  
14 April 18, 2023 from <http://www.sidmar.com/>  
15
- 16 Eliasson AC, Krumlinde-Sundholm L, Shaw K, Wang C. Effects of constraint-induced  
17 movement therapy in young children with hemiplegic cerebral palsy: an adapted  
18 model. *Dev Med Child Neurol.* 2005 Apr;47(4):266-75.  
19
- 20 Eliasson AC, Krumlinde-Sundholm L, Gordon AM, et al; European network for Health  
21 Technology Assessment (EUnetHTA). Guidelines for future research in constraint-  
22 induced movement therapy for children with unilateral cerebral palsy: An expert  
23 consensus. *Dev Med Child Neurol.* 2014  
24
- 25 Fan Y, Ren Q, To MKT, Cheung JPY. Effectiveness of scoliosis-specific exercises for  
26 alleviating adolescent idiopathic scoliosis: a systematic review. *BMC Musculoskelet*  
27 *Disord.* 2020 Jul 27;21(1):495.  
28
- 29 Female Sexual Dysfunction: ACOG Practice Bulletin Summary, NUMBER 213. *Obstet*  
30 *Gynecol.* 2019 Jul;134(1):203-205.  
31
- 32 FitzGerald MP, Payne CK, Lukacz ES, Yang CC, Peters KM, Chai TC, et al; Interstitial  
33 Cystitis Collaborative Research Network. Randomized multicenter clinical trial of  
34 myofascial physical therapy in women with interstitial cystitis/painful bladder  
35 syndrome and pelvic floor tenderness. *J Urol.* 2012 Jun;187(6):2113-8.  
36
- 37 Frontera W, Silver J, Rizzo TD editors. *Essentials of physical medicine and rehabilitation.*  
38 3rd ed. Philadelphia, PA: Saunders, an imprint of Elsevier Inc.; 2014.  
39
- 40 Furlan AD, Giraldo M, Baskwill A, Irvin E, Imamura M. Massage for low-back pain.  
41 *Cochrane Database Syst Rev.* 2015 Sep 1;(9):CD001929.

- 1 Goetsch MF. Surgery combined with muscle therapy for dyspareunia from vulvar  
2 vestibulitis: an observational study. *J Reprod Med*. 2007 Jul;52(7):597-603.  
3
- 4 Goldstein AT, Marinoff SC, Haefner HK. Vulvodynia: strategies for treatment. *Clin Obstet  
5 Gynecol*. 2005 Dec;48(4):769-85.  
6
- 7 Grotta JC, Noser EA, Ro T, Boake C, Levin H, Aronowski J, Schallert T. Constraint-  
8 induced movement therapy. *Stroke*. 2004 Nov;35(11 Suppl 1):2699-701.  
9
- 10 Guindos-Sanchez L, Lucena-Anton D, Moral-Munoz JA, Salazar A, Carmona-Barrientos  
11 I. The Effectiveness of Hippotherapy to Recover Gross Motor Function in Children  
12 with Cerebral Palsy: A Systematic Review and Meta-Analysis. *Children (Basel)*. 2020  
13 Aug 19;7(9):106.  
14
- 15 H<sub>2</sub>O Massage System. Winnipeg, MB, Canada. Retrieved on April 18, 2023 from  
16 <http://www.h2omassage.com/>  
17
- 18 Haefner HK, Collins ME, Davis GD, Edwards L, Foster DC, Hartmann ED, et al. The  
19 vulvodynia guideline. *J Low Genit Tract Dis*. 2005 Jan;9(1):40-51.  
20
- 21 Hatzimouratidis K, Eardley I, Giuliano F, Hatzichristou D, Moncada I, Salonia A, et al.;  
22 European Association of Urology. Guidelines on male sexual dysfunction: erectile  
23 dysfunction and premature ejaculation. 2015.  
24
- 25 Heussen N, Häusler M. Equine-Assisted Therapies for Children With Cerebral Palsy: A  
26 Meta-analysis. *Pediatrics*. 2022;150(1):e2021055229. doi:10.1542/peds.2021-  
27 055229  
28
- 29 Hoare BJ, Imms C, Rawicki HB, Carey L. Modified constraint-induced movement therapy  
30 or bimanual occupational therapy following injection of Botulinum toxin-A to  
31 improve bimanual performance in young children with hemiplegic cerebral palsy: a  
32 randomised controlled trial methods paper. *BMC Neurol*. 2010 Jul 5;10(1):58.  
33
- 34 Hoare BJ, Wasiak J, Imms C, Carey L. Constraint-induced movement therapy in the  
35 treatment of the upper limb in children with hemiplegic cerebral palsy. *Cochrane  
36 Database Syst Rev*. 2007 Apr 18;(2):CD004149.  
37
- 38 Hoare BJ, Wallen MA, Thorley MN, et al. Constraint-induced movement therapy in  
39 children with unilateral cerebral palsy. *Cochrane Database Syst Rev*.  
40 2019;4:CD004149.

- 1 Huang HH, Fetters L, Hale J, McBride A. Bound for success: a systematic review of  
 2 constraint-induced movement therapy in children with cerebral palsy supports  
 3 improved arm and hand use. *Phys Ther.* 2009 Nov;89(11):1126-41.  
 4
- 5 Huang J, Ji JR, Liang C, et al. Effects of physical therapy-based rehabilitation on recovery  
 6 of upper limb motor function after stroke in adults: a systematic review and meta-  
 7 analysis of randomized controlled trials. *Ann Palliat Med.* 2022;11(2):521-531.  
 8 doi:10.21037/apm-21-3710  
 9
- 10 Hurwitz EL, Carragee EJ, van der Velde G, Carroll LJ, Nordin M, Guzman J, et al.  
 11 Treatment of neck pain: noninvasive interventions: results of the Bone and Joint  
 12 Decade 2000-2010 Task Force on Neck Pain and Its Associated Disorders. *J*  
 13 *Manipulative Physiol Ther.* 2009 Feb;32(2 Suppl):S141-75.  
 14
- 15 ICF Project Published Guidelines. Clinical Practice Guidelines. Orthopaedic Section,  
 16 American Physical Therapy Association. Retrieved on April 18, 2023 from  
 17 <https://www.orthopt.org/content/practice/clinical-practice-guidelines>  
 18
- 19 Jackman M, Sakzewski L, Morgan C, et al. Interventions to improve physical function for  
 20 children and young people with cerebral palsy: international clinical practice  
 21 guideline. *Dev Med Child Neurol.* 2022;64(5):536-549. doi:10.1111/dmcn.15055  
 22
- 23 Jacobi S, Beynon A, Dombrowski SU, Wedderkopp N, Witherspoon R, Hébert JJ.  
 24 Effectiveness of Conservative Nonpharmacologic Therapies for Pain, Disability,  
 25 Physical Capacity, and Physical Activity Behavior in Patients With Degenerative  
 26 Lumbar Spinal Stenosis: A Systematic Review and Meta-Analysis. *Arch Phys Med*  
 27 *Rehabil.* 2021;102(11):2247-2260.e7. doi:10.1016/j.apmr.2021.03.033  
 28
- 29 *Jimmo v. Sebelius*, No. 5:11-CV-17-CR (D. Vt. filed Jan. 18, 2011).  
 30
- 31 Koomar, J., Burpee, J. D., DeJean, V., Frick, S., Kawar, M. J., & Fischer, D. M. (2001).  
 32 Theoretical and clinical perspectives on the interactive metronome®: A view from  
 33 occupational therapy practice. *American Journal of Occupational Therapy*, 55(2),  
 34 163–166. <https://doi.org/10.5014/ajot.55.2.163>  
 35
- 36 Kong LJ, Zhan HS, Cheng YW, Yuan WA, Chen B, Fang M. Massage therapy for neck  
 37 and shoulder pain: a systematic review and meta-analysis. *Evid Based Complement*  
 38 *Alternat Med.* 2013;2013:613279.

- 1 Kraft KA, Weisberg J, Finch MD, et al. Hippotherapy in rehabilitation care for children  
2 with neurological impairments and developmental delays: A Case Series. *Pediatr Phys*  
3 *Ther.* 2019;31(1):E14-E21.  
4
- 5 Kundakci B, Kaur J, Goh SL, et al. Efficacy of nonpharmacological interventions for  
6 individual features of fibromyalgia: a systematic review and meta-analysis of  
7 randomised controlled trials. *Pain.* 2022;163(8):1432-1445.  
8 doi:10.1097/j.pain.0000000000002500  
9
- 10 Lee CW, Kim SG, Yong MS. Effects of hippotherapy on recovery of gait and balance  
11 ability in patients with stroke. *J Phys Ther Sci.* 2014 Feb;26(2):309-11.  
12
- 13 Lentz GM, Lobo RA, Gershenson DM, Katz VL editors. *Comprehensive Gynecology* 6<sup>th</sup>  
14 ed. Philadelphia: Mosby, imprint of Elsevier; 2012 ch9.  
15
- 16 Logerstedt DS, Snyder-Mackler L, Ritter RC, Axe MJ, Godges JJ; Orthopaedic Section of  
17 the American Physical Therapist Association. Knee stability and movement  
18 coordination impairments: knee ligament sprain. *J Orthop Sports Phys Ther.* 2010  
19 Apr;40(4):A1-A37.  
20
- 21 Logerstedt DS, Scalzitti D, Risberg MA, Engebretsen L, Webster KE, Feller J, Snyder-  
22 Mackler L, Axe MJ, McDonough CM. Knee Stability and Movement Coordination  
23 Impairments: Knee Ligament Sprain Revision 2017. *J Orthop Sports Phys Ther.* 2017  
24 Nov;47(11):A1-A47.  
25
- 26 Logerstedt DS, Scalzitti DA, Bennell KL, Hinman RS, Silvers-Granelli H, Ebert J, Hambly  
27 K, Carey JL, Snyder-Mackler L, Axe MJ, McDonough CM. Knee Pain and Mobility  
28 Impairments: Meniscal and Articular Cartilage Lesions Revision 2018. *J Orthop*  
29 *Sports Phys Ther.* 2018 Feb;48(2):A1-A50.  
30
- 31 Macedo LG, Saragiotto BT, Yamato TP, Costa LO, Menezes Costa LC, Ostelo RW, Maher  
32 CG. Motor control exercise for acute non-specific low back pain. *Cochrane Database*  
33 *Syst Rev.* 2016 Feb 10;2:CD012085.  
34
- 35 Martínez-Costa Montero MC, Cabeza AS. Effectiveness of constraint-induced movement  
36 therapy in upper extremity rehabilitation in patients with cerebral palsy: A systematic  
37 review. *Rehabilitacion (Madr).* 2020 Nov 30 [Online ahead of print].  
38
- 39 Marquez J, Weerasekara I, Chambers L. Hippotherapy in adults with acquired brain injury:  
40 A systematic review. *Physiother Theory Pract.* 2020 Jul;36(7):779-790.

- 1 McIntyre A, Viana R, Janzen S, Mehta S, Pereira S, Teasell R. Systematic review and  
 2 meta-analysis of constraint-induced movement therapy in the hemiparetic upper  
 3 extremity more than six months post stroke. *Top Stroke Rehabil.* 2012 Nov-  
 4 Dec;19(6):499-513.  
 5
- 6 Medically Necessary Physical Therapy Services. American Physical Therapy Association.  
 7 Position BOD P08-11-03-04; updated 2011.  
 8
- 9 Mehlman CT. Idiopathic Scoliosis. Jun 30, 2004. Updated Jan 3, 2023. emedicine.  
 10 Retrieved on April 18, 2023 from  
 11 <http://www.emedicine.com/orthoped/TOPIC504.HTM>  
 12
- 13 Mertens MG, Meert L, Struyf F, Schwank A, Meeus M. Exercise Therapy Is Effective for  
 14 Improvement in Range of Motion, Function, and Pain in Patients With Frozen  
 15 Shoulder: A Systematic Review and Meta-analysis. *Arch Phys Med Rehabil.*  
 16 2022;103(5):998-1012.e14. doi:10.1016/j.apmr.2021.07.806  
 17
- 18 Nair HKR. Microcurrent as an adjunct therapy to accelerate chronic wound healing and  
 19 reduce patient pain. *J Wound Care.* 2018 May 2;27(5):296-306.  
 20
- 21 National Center for Complementary and Alternative Medicine (NCCAM). National  
 22 Institutes of Health. Massage Therapy for Health Purposes: What You Need To Know.  
 23 September 2006; updated April 2019. Retrieved on October 18, 2022 from  
 24 <https://nccih.nih.gov/health/massage/massageintroduction.htm>  
 25
- 26 National Institutes of Health. National Institute of Arthritis and Musculoskeletal and Skin  
 27 Disease. Questions and answers about scoliosis in children and adolescents. NIH  
 28 Publication No. 13–4862. June 2021. Retrieved on April 18, 2023 from  
 29 [http://www.niams.nih.gov/Health\\_Info/Scoliosis/default.asp](http://www.niams.nih.gov/Health_Info/Scoliosis/default.asp)  
 30
- 31 Nijland R, Kwakkel G, Bakers J, van Wegen E. Constraint-induced movement therapy for  
 32 the upper paretic limb in acute or sub-acute stroke: a systematic review. *Int J Stroke.*  
 33 2011 Oct;6(5):425-33.  
 34
- 35 Novak I, Morgan C, Fahey M, Finch-Edmondson M, Galea C, Hines A, Langdon K,  
 36 Namara MM, Paton MC, Popat H, Shore B, Khamis A, Stanton E, Finemore OP,  
 37 Tricks A, Te Velde A, Dark L, Morton N, Badawi N. State of the Evidence Traffic  
 38 Lights 2019: Systematic Review of Interventions for Preventing and Treating Children  
 39 with Cerebral Palsy. *Curr Neurol Neurosci Rep.* 2020 Feb 21;20(2):3.

- 1 Núñez-Cabaleiro P, Leirós-Rodríguez R. Effectiveness of manual therapy in the treatment  
2 of cervicogenic headache: A systematic review. *Headache*. 2022;62(3):271-283.  
3 doi:10.1111/head.14278  
4
- 5 O'Haire ME. Animal-assisted intervention for autism spectrum disorder: a systematic  
6 literature review. *J Autism Dev Disord*. 2013 Jul;43(7):1606-22.  
7
- 8 Ottawa Panel. Ottawa panel evidence-based clinical practice guidelines for therapeutic  
9 exercises and manual therapy in the management of osteoarthritis. *Phys Ther* 2005  
10 Sep;85(9):907-71.  
11
- 12 Ottawa Panel. Ottawa Panel evidence-based clinical practice guidelines for therapeutic  
13 exercises in the management of rheumatoid arthritis in adults. *Phys Ther*. 2004  
14 Oct;84(10):934-72.  
15
- 16 Ottawa Panel, Khadilkar A, Phillips K, Jean N, Lamothe C, Milne S, Sarnecka J. Ottawa  
17 panel evidence-based clinical practice guidelines for post-stroke rehabilitation. *Top*  
18 *Stroke Rehabil*. 2006 Spring;13(2):1-269.  
19
- 20 Patel KC, Gross A, Graham N, Goldsmith CH, Ezzo J, Morien A, Peloso PM. Massage for  
21 mechanical neck disorders. *Cochrane Database Syst Rev*. 2012 Sep12;9:CD004871.  
22
- 23 Pantera E, Froment P, Vernay D. Does Hippotherapy Improve the Functions in Children  
24 with Cerebral Palsy? Systematic Review Based on the International Classification of  
25 Functioning. *J Integr Complement Med*. 2022;28(9):705-720.  
26 doi:10.1089/jicm.2021.0417  
27
- 28 Pérez-Gómez J, Amigo-Gamero H, Collado-Mateo D, et al. Equine-assisted activities and  
29 therapies in children with attention-deficit/hyperactivity disorder: A systematic  
30 review. *J Psychiatr Ment Health Nurs*. 2021;28(6):1079-1091.  
31 doi:10.1111/jpm.12710  
32
- 33 Peterson LE, Goodman C, Karnes EK, Chen CJ, Schwartz JA. Assessment of the quality  
34 of cost analysis literature in physical therapy. *Phys Ther*. 2009;89(8):733-755.  
35
- 36 Peurala SH, Kantanen MP, Sjögren T, Paltamaa J, Karhula M, Heinonen A. Effectiveness  
37 of constraint-induced movement therapy on activity and participation after stroke: a  
38 systematic review and meta-analysis of randomized controlled trials. *Clin Rehabil*.  
39 2012 Mar;26(3):209-23.

- 1 Pollock A, Baer G, Campbell P, Choo PL, Forster A, Morris J, et al. Physical rehabilitation  
2 approaches for the recovery of function and mobility following stroke. *Cochrane*  
3 *Database Syst Rev.* 2014 Apr 22;4:CD001920.  
4
- 5 Pollock A, Baer G, Pomeroy V, Langhorne P. Physiotherapy treatment approaches for the  
6 recovery of postural control and lower limb function following stroke. *Cochrane*  
7 *Database Syst Rev.* 2007 Jan 24;(1):CD001920.  
8
- 9 Prieto A, Martins Almeida Ayupe K, Nemetala Gomes L, Saúde AC, Gutierrez Filho P.  
10 Effects of equine-assisted therapy on the functionality of individuals with disabilities:  
11 systematic review and meta-analysis. *Physiother Theory Pract.* 2022;38(9):1091-  
12 1106. doi:10.1080/09593985.2020.1836694  
13
- 14 Pulman J, Buckley E, Clark-Carter D. A meta-analysis evaluating the effectiveness of two  
15 different upper limb hemiparesis interventions on improving health-related quality of  
16 life following stroke. *Top Stroke Rehabil.* 2013 Mar-Apr;20(2):189-96.  
17
- 18 Raghava Neelapala YV, Bhagat M, Shah P. Hip Muscle Strengthening for Knee  
19 Osteoarthritis: A Systematic Review of Literature. *J Geriatr Phys Ther.* 2020  
20 Apr/Jun;43(2):89-98.  
21
- 22 Ramey SL, DeLuca SC, Stevenson RD, et al. Constraint-Induced Movement Therapy for  
23 Cerebral Palsy: A Randomized Trial. *Pediatrics.* 2021;148(5):e2020033878.  
24 doi:10.1542/peds.2020-033878  
25
- 26 Romano M, Minozzi S, Bettany-Saltikov J, et al. Exercises for adolescent idiopathic  
27 scoliosis. *Cochrane Database Syst Rev.* 2012;2012(8):CD007837. Published 2012  
28 Aug 15. doi:10.1002/14651858.CD007837.pub2  
29
- 30 Qaseem A, Wilt TJ, McLean RM, Forcica MA; Clinical Guidelines Committee of the  
31 American College of Physicians. Noninvasive Treatments for Acute, Subacute, and  
32 Chronic Low Back Pain: A Clinical Practice Guideline From the American College of  
33 Physicians. *Ann Intern Med.* 2017 Apr 4;166(7):514-530.  
34
- 35 Qaseem A, McLean RM, O'Gurek D, Batur P, Lin K, Kansagara DL. Nonpharmacologic  
36 and Pharmacologic Management of Acute Pain From Non-Low Back,  
37 Musculoskeletal Injuries in Adults: A Clinical Guideline From the American College  
38 of Physicians and American Academy of Family Physicians. *Ann Intern Med.* 2020  
39 Nov 3;173(9):739-748.

- 1 Romano M, Minozzi S, Bettany-Saltikov J, Zaina F, Chockalingam N, Kotwicki T, et al.  
 2 Exercises for adolescent idiopathic scoliosis. *Cochrane Database Syst Rev.* 2012 Aug  
 3 15;(8):CD007837.  
 4
- 5 Royal College of Physicians/Intercollegiate Stroke Working Party. National clinical  
 6 guidelines for stroke 5<sup>th</sup> ed. 2016.  
 7
- 8 Sakzewski L, Gordon A, Eliasson AC. The state of the evidence for intensive upper limb  
 9 therapy approaches for children with unilateral cerebral palsy. *J Child Neurol.* 2014  
 10 Aug;29(8):1077-90.  
 11
- 12 Sakzewski L, Ziviani J, Boyd RN. Efficacy of upper limb therapies for unilateral cerebral  
 13 palsy: a meta-analysis. *Pediatrics.* 2014 Jan;133(1):e175-204.  
 14
- 15 Sakzewski L, Ziviani J, Boyd R. Systematic review and meta-analysis of therapeutic  
 16 management of upper-limb dysfunction in children with congenital  
 17 hemiplegia. *Pediatrics.* 2009;123(6):e1111-e1122. doi:10.1542/peds.2008-3335  
 18
- 19 Sall, J., Eapen, B. C., Tran, J. E., Bowles, A. O., Bursaw, A., & Rodgers, M. E. (2019).  
 20 The Management of Stroke Rehabilitation: A Synopsis of the 2019 U.S. Department  
 21 of Veterans Affairs and U.S. Department of Defense Clinical Practice  
 22 Guideline. *Annals of internal medicine,* 171(12), 916–924.  
 23
- 24 Santos TS, Oliveira KKB, Martins LV, Vidal APC. Effects of manual therapy on body  
 25 posture: Systematic review and meta-analysis. *Gait Posture.* 2022;96:280-294.  
 26 doi:10.1016/j.gaitpost.2022.06.010  
 27
- 28 Santos de Assis G, Schlichting T, Rodrigues Mateus B, Gomes Lemos A, Dos Santos AN.  
 29 Physical therapy with hippotherapy compared to physical therapy alone in children  
 30 with cerebral palsy: systematic review and meta-analysis. *Dev Med Child Neurol.*  
 31 2022;64(2):156-161. doi:10.1111/dmcn.15042  
 32
- 33 Saragiotto BT, Maher CG, Yamato TP, Costa LO, Menezes Costa LC, Ostelo RW, Macedo  
 34 LG. Motor control exercise for chronic non-specific low-back pain. *Cochrane*  
 35 *Database Syst Rev.* 2016 Jan 8;(1):CD012004.  
 36
- 37 Schenk R, Donaldson M, Parent-Nichols J, Wilhelm M, Wright A, Cleland JA.  
 38 Effectiveness of cervicothoracic and thoracic manual physical therapy in managing  
 39 upper quarter disorders - a systematic review. *J Man Manip Ther.* 2022;30(1):46-55.  
 40 doi:10.1080/10669817.2021.1923313

- 1 Scherl SA. Adolescent idiopathic scoliosis: Management and prognosis. In: UpToDate,  
2 Post TW (Ed), UpToDate, Waltham, MA.  
3
- 4 Schreiber S, Parent EC, Hill DL, Hedden DM, Moreau MJ, Southon SC. Patients with  
5 adolescent idiopathic scoliosis perceive positive improvements regardless of change  
6 in the Cobb angle - Results from a randomized controlled trial comparing a 6-month  
7 Schroth intervention added to standard care and standard care alone. SOSORT 2018  
8 Award winner. *BMC Musculoskelet Disord*. 2019 Jul 8;20(1):319.  
9
- 10 Seleviciene V, Cesnaviciute A, Strukcinskiene B, Marcinowicz L, Strazdiene N,  
11 Genowska A. Physiotherapeutic Scoliosis-Specific Exercise Methodologies Used for  
12 Conservative Treatment of Adolescent Idiopathic Scoliosis, and Their Effectiveness:  
13 An Extended Literature Review of Current Research and Practice. *Int J Environ Res*  
14 *Public Health*. 2022;19(15):9240. Published 2022 Jul 28. doi:10.3390/ijerph19159240  
15
- 16 Shi YX, Tian JH, Yang KH, Zhao Y. Modified constraint-induced movement therapy  
17 versus traditional rehabilitation in patients with upper-extremity dysfunction after  
18 stroke: a systematic review and meta-analysis. *Arch Phys Med Rehabil*. 2011  
19 Jun;92(6):972-82.  
20
- 21 Silberstein N. Dry hydrotherapy: don't add water. *Rehab Manag*. 2006 Jun;19(5):22-3.  
22
- 23 Silkwood-Sherer DJ, Killian CB, Long TM, Martin KS. Hippotherapy—an intervention to  
24 habilitate balance deficits in children with movement disorders: a clinical trial. *Phys*  
25 *Ther*. 2012 May;92(5):707-17.  
26
- 27 Singh P, Pradhan B. Study to assess the effectiveness of modified constraint-induced  
28 movement therapy in stroke subjects: A randomized controlled trial. *Ann Indian Acad*  
29 *Neurol*. 2013 Apr;16(2):180-4.  
30
- 31 Sirtori V, Corbetta D, Moja L, Gatti R. Constraint-induced movement therapy for upper  
32 extremities in stroke patients. *Cochrane Database Syst Rev*. 2009 Oct  
33 7;(4):CD004433.  
34
- 35 Skelly AC, Chou R, Dettori JR, et al. Noninvasive Nonpharmacological Treatment for  
36 Chronic Pain: A Systematic Review. Rockville (MD): Agency for Healthcare  
37 Research and Quality (US); June 2018.  
38
- 39 Skelly AC, Chou R, Dettori JR, Turner JA, Friedly JL, Rundell SD, Fu R, Brodt ED,  
40 Wasson N, Kantner S, Ferguson AJR. Noninvasive Nonpharmacological Treatment  
41 for Chronic Pain: A Systematic Review Update [Internet]. Rockville (MD): Agency

- 1 for Healthcare Research and Quality (US); 2020 Apr. Report No.: 20-EHC009. PMID:  
2 32338846.
- 3
- 4 Steffens D, Maher CG, Pereira LS, et al. Prevention of Low Back Pain: A Systematic  
5 Review and Meta-analysis. *JAMA Intern Med.* 2016;176(2):199-208.  
6 doi:10.1001/jamainternmed.2015.7431
- 7
- 8 Stevenson T, Thalman L, Christie H, Poluha W. Constraint-Induced Movement Therapy  
9 Compared to Dose-Matched Interventions for Upper-Limb Dysfunction in Adult  
10 Survivors of Stroke: A Systematic Review with Meta-analysis. *Physiother Can.* 2012  
11 Fall;64(4):397-413.
- 12
- 13 Sung IY, Ryu JS, Pyun SB, Yoo SD, Song WH, Park MJ. Efficacy of forced-use therapy  
14 in hemiplegic cerebral palsy. *Arch Phys Med Rehabil.* 2005 Nov;86(11):2195-8.
- 15
- 16 Taub E, Ramey SL, DeLuca S, Echols K. Efficacy of constraint-induced movement  
17 therapy for children with cerebral palsy with asymmetric motor impairment.  
18 *Pediatrics.* 2004 Feb;113(2):305-12.
- 19
- 20 Taylor NF, Dodd KJ, Shields N, Bruder A. Therapeutic exercise in physiotherapy practice  
21 is beneficial: a summary of systematic reviews 2002-2005. *Aust J Physiother.*  
22 2007;53(1):7-16.
- 23
- 24 Today's Physical Therapist: A Comprehensive Review of a 21st Century Health Care  
25 Profession. Alexandria, VA: APTA; 2011.
- 26
- 27 van Middelkoop M, Rubinstein SM, Kuijpers T, Verhagen AP, Ostelo R, Koes BW, van  
28 Tulder MW. A systematic review on the effectiveness of physical and rehabilitation  
29 interventions for chronic non-specific low back pain. *Eur Spine J.* 2011 Jan;20(1):19-  
30 39.
- 31
- 32 Walker C, Shierk A, Roberts H. Constraint Induced Movement Therapy in Infants and  
33 Toddlers with Hemiplegic Cerebral Palsy: A Scoping Review. *Occup Ther Health  
34 Care.* 2022;36(1):29-45. doi:10.1080/07380577.2021.1953206
- 35
- 36 Weiss HR. The method of Katharina Schroth - history, principles and current development.  
37 *Scoliosis.* 2011 Aug 30;6:17.
- 38
- 39 White E, Zippel J, Kumar S. The effect of equine-assisted therapies on behavioural,  
40 psychological and physical symptoms for children with attention deficit/hyperactivity  
41 disorder: A systematic review. *Complement Ther Clin Pract.* 2020 May;39:101101.

- 1 Wolf SL, Winstein CJ, Miller JP, Taub E, Uswatte G, Morris D, et al; EXCITE  
2 Investigators. Effect of constraint-induced movement therapy on upper extremity  
3 function 3 to 9 months after stroke: the EXCITE randomized clinical trial. JAMA.  
4 2006 Nov 1;296(17):2095-104.  
5
- 6 Yousefi-Nooraie R, Schonstein E, Heidari K, et al. Low level laser therapy for nonspecific  
7 low-back pain. Cochrane Database Syst Rev. 2008;(2):CD005107. Published 2008  
8 Apr 16. doi:10.1002/14651858.CD005107.pub4  
9
- 10 Youssef EF, Muaidi QI, Shanb AA. Effect of Laser Therapy on Chronic Osteoarthritis of  
11 the Knee in Older Subjects. J Lasers Med Sci. 2016 Spring;7(2):112-9.