

National Imaging Associates, Inc.*	
Clinical Guidelines	Original Date: November 2015
ACTIVE PROCEDURES IN PHYSICAL MEDICINE	
Physical Medicine – Clinical Decision Making	Last Revised Date: September 2022 December
	<del>2021</del>
Guideline Number: NIA_CG_608	Implementation Date: July 202322

#### **Policy Statement**

Active care services have sufficient evidence to support superior outcomes when used alone or in combination with manual-based treatments and/or passive care services. 1,2

# **Purpose**

These guidelines will assist the evidence-based physical medicine provider to properly choose the correct service(s) when indicated for proper overall case management.

# Scope

This policy will apply to all physical medicine participating network practitioners who provide active procedures, data/claims processing, and peer reviewers. Physical medicine practitioners include chiropractors, physical therapists, occupational therapists, and speech language pathologists.

# **Clinical Reasoning**

The current valid literature indicates the necessity of incorporating active care measures into treatment programs. Interventions chosen to treat the patient's symptoms or conditions should be selected based on the most effective and efficient means of achieving the patient's functional goals.<sup>3</sup>

#### **Timing of Introduction**

**Acute care cases**- The literature supports the introduction and management of active care procedures as soon as clinically possible once the patient has sufficient range of motion/functional ability. For the care to be considered beneficial and effective, active care services should generally be provided within the first two weeks of intervention. For the purpose of these guidelines, an acute care case is when a patient is seen for treatment within seven days of the onset of the illness, injury, and/or medical intervention.<sup>4</sup>

<sup>\*</sup> National Imaging Associates, Inc. (NIA) is a subsidiary of Magellan Healthcare, Inc.

**Subacute care cases**- Similar to acute care cases, the literature supports the introduction and management of active care procedures as soon as clinically possible once the patient has sufficient range of motion/functional ability. For the care to be considered beneficial and effective, active care services should generally be provided within the first two weeks of intervention. For the purpose of these guidelines, a subacute care case is when a patient is seen for treatment between 7 and 21 days after the onset of an illness, injury, and/or medical intervention.

**Chronic care cases**- The literature supports the introduction and management of active care procedures at the onset of intervention, either the first or second visit. For the purpose of these guidelines, a chronic care case is when a patient is seen for treatment beyond 21 days after the onset of an illness, injury, and/or medical intervention. Chronic conditions that have intermittent episodes will also be considered chronic in nature for <a href="purpose the purpose">purpose</a> the purpose of these guidelines.<sup>4</sup>

# **Documentation Requirements**

Documentation must support the medical necessity for the services requested and why the skills of a licensed professional are needed to render the service. The provider must outline the patient-specific rationale/need for care and intervention as it relates to the patient's condition and resultant functional limitations in activities of daily living, as well as mobility and safety, as identified in a comprehensive evaluation. Based on these findings, a plan of care is developed that includes specific and measurable goals that support the need for the identified interventions.<sup>5</sup>

Documentation must include a timeframe for initiating, progressingprogressing, and discharging the patient from skilled services. Documentation must also include specific\_treatment parameters to support the intervention, in addition to applicable precautions. This includes the specific type of procedure, instruction and/or exercise performed, area of body and muscle groups treated, and time component.<sup>5</sup>

## **Billing Units**

This organization follows Medicare rules for reporting timed units. Billing units are based on 15 minutes per unit for time-based codes and the Medicare minimum time requirement for a service to be justifiably billed.

```
1 unit - \geq 8 minutes to 22 minutes
2 units - \geq 23 minutes to 37 minutes
3 units - \geq 38 minutes to 52 minutes
4 units - \geq 53 minutes to 67 minutes
5 units - \geq 68 minutes to 82 minutes
6 units - \geq 83 minutes to 97 minutes
7 units - \geq 98 minutes to 112 minutes
8 units - \geq 113 minutes to 127 minutes
```

NOTE: Individual states may have varying statutory guidelines for reporting timed units that supersede this organization's requirements.

# **CPT Code Definitions, Examples, and Requirements**

# 97110 - Therapeutic Exercise

#### **Definition:**

Although not exclusive by definition, therapeutic exercise is any exercise planned and performed to attain a specific goal. Goals would be to increase strength, endurance, range of motion, and flexibility. Therapeutic procedures/exercise could be applied to one or more areas and billed in units as noted above.

## Parameters for Use:

The following requirements must be documented in the medical record to support and justify the use of all therapeutic procedures/exercises:

- Evidence to support medical necessity
- Plan of care with specific and measurable goals and timeframe for initiating, progressing, and discharging the patient from skilled medical services to an independent home program
- Detailed description of active care services including:
  - What exercise(s) were provided
  - What area and muscle groups the exercise(s) were provided to
  - Amount and type of resistance, number of repetitions and sets, and time component
- Evidence to support the need for skilled services <u>completed</u> by a licensed professional in direct contact with one patient

Medical research supports the initiation of appropriate therapeutic procedures/exercise as soon as the patient is reasonably able to engage in the planned activity. Therefore, the expectation is for a patient to perform therapeutic exercises and receive a home exercise program within a reasonable timeframe. Based on the definition and guidelines for services that are medically necessary, the expectation is for the provision of the therapeutic procedures/exercises that are not for the convenience of the patient or health care provider or more costly than an alternative form of treatment.

Guidelines regarding the use of fitness machines (MedX<u>equipment</u>, <u>cervical/lumbar e</u>Extension <u>m</u>Machines, Isostation B-220 Lumbar Dynamometer, Cybex Back System, etc.) show insufficient evidence that they are more efficacious than standard exercise equipment or that their use improves clinical outcomes to a greater extent than standard programs.

#### This documentation must:

- Clearly state why the intervention is medically necessary
- Provide evidence to support number of visits that are often in excess of community standards for treatment of musculoskeletal conditions
- Provide evidence of functional improvement as a result of the increased muscle strength
- Clearly state the skilled service being provided
- Provide evidence for why the skills of a <u>physical medicine provider/practitioner therapist</u>
   are needed beyond progressing weights and repetitions
- Provide evidence for why the skills of a <u>physical medicine provider/practitionertherapist</u> are needed beyond a few visits to establish a program
- Show that the therapeutic exercise is part of a comprehensive rehab program
- Include a plan of care driven by impairments, not the intervention itself
- Clearly demonstrate that increasing muscle strength is the treatment of choice (e.g., strength building may be detrimental in an individual with movement restrictions).

#### **Examples**

Strengthening of select muscle groups (beginning in gravity-eliminated plane, if needed) progressing to anti-gravity plane utilizing body weight with progressive resistive exercises utilizing thera-tubing, exercise ball, free weights, etc.; closed chain exercises are often preferable to open chain exercises in preventing shearing forces and simulating functional activities); monitored graded exercise following cardiac or pulmonary surgery or heart attack; selective stretching to increase joint range of motion (ROM).

# Support for this service

- Indications must be documented for loss or restriction of joint motion, reduced strength, and functional capacity or mobility concerns. The clinical records must show objective (quantitative if possible) loss of ROM, strength, flexibility, or mobility. The code is generally not reimbursable for increasing a patient's endurance without deficits, promotion of overall fitness, weight loss, return to work, return to sports, for sport(s) and/or recreation, and/or sports and aerobic conditioning.
- Documentation must include evidence of the skilled services required to support the use
  of therapeutic exercise. It is considered a skilled service that would require proper
  licensure/credentials of the clinician. Without evidence in the documentation to support
  the need for skilled services, the records would suggest the patient is "working out" in
  the clinical setting, which is generally not medically necessary and not eligible for
  reimbursement.
- Most programs should entail one to three units at any time to ensure competency and compliance with instructions. The clinical rationale for more than three units would need to be clearly supported by documentation. If more than three units are being

utilized per session, this might indicate the patient is "working out" in the clinical setting which is generally not considered medically necessary.

- Patient non-compliance with active home instructions will not result in further in-office instruction being considered medically necessary. The patient should instead be discharged for non-compliance/acting against medical advice.
- One to three sessions of in-office exercise should be sufficient, for the non-surgical patient, to ensure competency and compliance with a home exercise program. If in-office repetitive exercise continues after 3 sessions, the record must clearly document why the patient is not able to participate in a home exercise program. Any active care program may include periodic review of the program as part of case management in regard to monitoring continued therapeutic benefit and progression in specific exercises/instructions. This ongoing case management should outline patient compliance, necessary alterations to any active home care program, progression in specific active home care program, and anticipated term date for the need for skilled in-office services.

# 97112 - Neuromuscular re-education<sup>19</sup> Definition:

Neuromuscular re-education of movement, balance, coordination, kinesthetic sense, posture, and proprioception (defined as the three modalities of joint position: sense, sense of movement and sense of force). Injuries can be seen after stroke, closed head injury, spinal cord injury, tumor, congenital disorders such as cerebral palsy or secondary to degenerative joint disease, musculoskeletal injury such as ankle sprain, post orthopedic surgery, or prolonged immobilization. Neuromuscular re-education may be considered medically necessary if at least one of the following conditions is present and documented:

- The patient has the loss of deep tendon reflexes and vibration sense accompanied by paresthesia, burning, or diffuse pain of the feet, lower legs, and/or fingers.
- The patient has nerve palsy, such as peroneal nerve injury causing foot drop.
- The patient has muscular weakness or flaccidity, as a result of a cerebral dysfunction, a nerve injury or disease, or has had a spinal cord disease or trauma.
- The patient has muscle compensations requiring targeted exercise to produce stable, coordinated movements during functional tasks.<sup>20</sup>
- The patient has peripheral or central vestibular dysfunction causing dizziness, vertigo, imbalance, or disequilibrium that supports the use of Vestibular Balance and Rehabilitation Therapy (VBRT).<sup>21,22</sup>

#### **Examples**

Treatment involves the stimulation of reflexes, sensation, posture, proprioception and motor activity through rocker/BAPS board, mini-trampolines, targeted exercises to spastic or rigid muscles, balance training, proprioceptive neuromuscular facilitation (PNF), Feldenkrais, Bobath,

neurodevelopmental treatment (NDT), and desensitization techniques.

# Support for this service

Documentation must support the need for skilled services by a licensed professional in direct contact with one patient.

An indication of the lesion of the neuromusculoskeletal system needs to be documented and the exact procedure must be noted. Instructions for home care should be seen within a reasonable timeframe and the service discontinued with proper education and instruction given to the patient.

# 97113 - Aquatic Therapy<sup>23</sup>

#### **Definition**

A therapy program utilizing therapeutic exercise techniques with the properties of water, designed and carried out in a suitably heated hydrotherapy pool by a qualified clinician specifically for an individual to improve function. Examples: Ai Chi, Aquatic PNF,<sup>24</sup> the Bad Ragaz Ring Method,<sup>25,26</sup> Fluid Moves, the Halliwick Concept,<sup>27,28</sup> Swim Stroke Training and Modification, Task Type Training Approach and Watsu.<sup>29</sup> Treatment to address improved circulation and decreased venous pooling, increased endurance facilitated through the availability of cardiovascular training with less stress on weight-bearing joints or working with enhancement of balance and coordination as a result of the buoyancy obtained from an aquatic environment.

#### **Support for this Service**

Documentation must support the need for skilled services by a licensed professional in direct contact with one patient. The patient would need to be immersed in a pool of water for this code to apply.

The provider must also indicate the medical necessity for the buoyancy, hydrostatic pressure, and heat properties that are present in a pool setting versus standard <u>land-based</u> therapeutic exercise or activities. This is often used to transition the patient to a land-based program.

# 97116 - Gait Training

#### **Definition**

Training the patient in specific activities that will facilitate ambulation on varied surfaces and stair climbing with or without an assistive device. This includes training in rhythm, speed, sequencing, and safety instructions.

#### **Examples**

Gait training can be useful for people with any condition needing to re-learn proper ambulation to allow for functional performance <u>and mobility</u>. Common conditions include amputation, osteoarthritis, muscular dystrophy, cerebral palsy, stroke, Parkinson's disease, multiple sclerosis, brain/spinal cord injuries, post-surgical, sports injury, and low back pain.

# **Support for this Service**

The provider should consider the contextual factors that affect a person's ability to participate in meaningful ADLs. Gait training and ambulation interventions should directly address functional mobility. 30 Documentation must support the need for skilled services by a licensed professional in direct contact with one patient as opposed to just "walking the patient", addressing endurance deficits alone, or continue to treat until the patient can move to a lesser supportive assistive device.

Deficits in gait parameters including walking speed, cadence, stride length and balance, and functional ambulation category scores must be documented. The provider would need to document if body-weight support (BWS) systems, unweighting devices, or assistive devices are used. The record must denote the assessment of the phases of gait to include stance phase, stride length, balance issues and what the ankle, knee, hip, and low back are doing during the phases of gait cycle.

# 97760 - Orthotics Management and Training Definition

Orthotic(s) management and training, including assessment and fitting when not otherwise reported as a separate L HCPCS code (L-code), fitting and training, upper extremity or extremities, lower extremity or extremities, and/or trunk, each 15 minutes.

#### **Explanation**

This code applies to custom-fabricated orthotics and for adjustments to over-the-counter orthotics. The orthotics management portion of this code refers to time spent assessing the need for the orthotic and the type of orthotic as well as the fitting and the fabrication if the fabrication is done in the presence of the patient. The training portion of this code includes training in the care and use of the orthotic device.

This code cannot be used if the orthotic is fabricated/formed without the patient being present. Supplies and time for the actual orthotic fabrication is typically reported under L-codes. If an L-code is NOT used to report the orthotic, then the time assessing and fitting/fabricating would be reported under code 97760.

#### Support for this Service

The need for an orthotic requires documented support. This would include a proper examination (not just a vendor specific evaluation) along with the outline of the causal nexus to justify inclusion for any complaints other than foot-based. Foot-based complaints need a detailed notation as to the fault/deficit present that requires custom orthotics versus usage of a heel lift or over-the- counter orthotic. This service should typically not be seen more than once per calendar year for one set of orthotics. Orthotic use is based on plan benefit.

Documentation must also support why the skills of a licensed professional are needed for the training in care and use of the orthotic.

# 97761 - Prosthetic Training

#### Definition

Functional mobility and activities of daily living (ADL) assessment, training with prosthesis, upper and/or lower extremity. This would include instruction and practice in use of prosthesis.

# **Support for this Service**

The patient would need to be the recipient of a prosthetic device or require adjustments to current prosthetic device to improve function.

# 97763 - Checkout for Orthotic/Prosthetic Use, Established Patient Definition

Orthotic(s)/prosthetic(s) management and/or training, upper extremity or extremities, lower extremity or extremities, and/or trunk, subsequent orthotic(s)/prosthetic(s) encounter.

# **Support for this Service**

Documentation must clearly support the skilled need of a licensed professional for the adjustments.

# 97530 - Therapeutic Activities

#### Definition

This code includes the use of dynamic activities in teaching and training the patient to improve functional performance in a progressive manner.

## **Examples**

Activities that address quantifiable deficits (e.g., loss of ROM, strength, or functional capacity) resulting in a deficit in functional mobility. Functional mobility may include bending, reaching, lifting, carrying, pushing, pulling, bed mobility and transfers.

#### **Support for this Service**

Documentation must support the need for skilled services by a licensed professional in direct contact with one patient.

In order for therapeutic activities to be covered, all the following requirements must be met:

- The patient has a condition for which therapeutic activities can reasonably be expected to restore or improve functioning
- The patient's condition is such that he/she is unable to perform therapeutic activities except under the direct supervision of a physician, occupational therapist, or physical therapist
- There is a clear correlation between the type of exercise performed and the patient's underlying medical condition for which the therapeutic activities were prescribed

The code is generally not reimbursable for increasing a patient's endurance without deficits, promotion of overall fitness, weight loss, return to sports, and/or sports and aerobic conditioning.

# 971297 - Cognitive Skills Development

#### Definition

Therapeutic interventions that focus on cognitive function (e.g., attention, memory, reasoning, executive function, problem solving, and/or pragmatic functioning) and compensatory strategies to manage the performance of an activity (e.g., managing time or schedules, initiating, organizing, and sequencing tasks), direct (one-on-one) patient contact.

# **Examples**

Individuals with inherited learning disabilities, individuals who have lost cognitive skills as a result of illness or brain injury

# **Support for this Service**

Cognitive deficits would need to be present and quantifiably documented. Documentation must support the need for skilled services by a licensed professional in direct contact with one patient

# 97533 - Sensory Integration

#### Definition

Treatment techniques designed to enhance sensory processing and adaptive responses to environmental demands.

The goal of sensory integration therapy is to improve the way the brain processes and adapts to sensory information as a foundation for later, more complex learning behavior.

#### **Examples**

Sensory integration (SI) therapy has been proposed as a treatment of developmental disorders in patients with established dysfunction of sensory processing (e.g., children with autism, attention deficit hyperactivity disorder (ADHD), fetal alcohol syndrome, and neurotransmitter disease). Sensory integration disorders may also be a result of illness or brain injury.

Therapy usually involves activities that provide vestibular, proprioceptive, tactile, visual, and auditory stimuli, which are selected to match specific sensory processing deficits of the child. For example, swings are commonly used to incorporate vestibular input, while trapeze bars and large foam pillows or mats may be used to stimulate somatosensory pathways of proprioception and deep touch. Tactile reception may be addressed through a variety of activities and surface textures involving light touch.

This differs from neuromuscular re-education (97112) as neuromuscular re-education focuses on training to restore the ability to perform particular activities versus training to enhance sensory processing and adaptive responses This differs from neuromuscular re-education (97112) as neuromuscular re-education focuses on training to restore the ability to perform particular activities.

# **Support for this Service**

Sensory integration therapy is usually provided by occupational and physical therapists who are certified in sensory integration therapy.

Documentation must support the need for skilled services by a licensed professional in direct contact with one patient.

# 97535 -Self-care/Home Management Training Definition

Instructing and training the patient in self-care and home management activities (ADL). This includes compensatory training, safety procedures, and instruction in the use of assistive technology devices/adaptive equipment.

# **Examples**

Activities that address quantifiable deficits resulting in functional limitations in ADLs, such as toileting, continence, bathing, dressing, personal hygiene, housecleaning, eating and meal preparation.

#### **Support for this Service**

Documentation must support the need for skilled services by a licensed professional in direct contact with one patient. Documentation should relate the ADL instruction to the patient's expected functional goals and indicate that it is part of an active treatment plan directed at a specific goal.

# 97542 -Wheelchair Management and Training

#### Definition

Includes assessment, fitting, and adjustment of the wheelchair and seating; instructing the patient and/or caregiver on how to propel and safely operate the wheelchair (97001 and 97002 cannot be billed with this code).

## **Support for this Service**

Documentation should include the recent event that prompted the need for a skilled wheelchair assessment; the result of any previous wheelchair assessments; most recent prior functional level; the interventions that were tried by nursing staff, caregivers, or the patient to address poor seating or positioning; and any functional deficits or applicable impairments, such as ROM, strength, sitting balance, skin integrity, sensation, and tone.

The documentation must correlate the training provided to the expected functional goals that are attainable by the patient and/or caregiver, along with the response of the patient to the instruction or fitting.

The documentation must clearly support that the services rendered required the skills and expertise of a licensed therapist.

# 97537 -Community Work Reintegration – <u>typically not a covered service</u>

Services are instructing and training the patient in community and/or work re-integration activities. These activities could include shopping, safely accessing transportation sources, money management, avocational activities and/or work environment/modification analysis,<sup>31</sup> work task analysis, and use of assistive technology devices and/or adaptive equipment.

#### Example

Community reintegration is often performed in conjunction with other therapeutic procedures such as gait training and self-care/home management training. The payment for community reintegration training is often bundled into the payment for those other services. Therefore, those other services are not usually separately reimbursable.

Services provided to issue, modify, adjust, and/or educate the patient on assistive technology devices and/or adaptive equipment typically will not be covered if the adaptive equipment and/or assistive technology device(s) are not covered by the third-party payer.

Generally, services which are related solely to specific employment opportunities, work skills, or work settings are not reasonable and necessary for the diagnosis and treatment of an illness or injury and are excluded from coverage by Section 1862(a)(1) of the Social Security Act.

## **Support for this Service**

Documentation would need to provide evidence to support the medical necessity and the need for skilled services provided to the patient.

**97545 -Work Hardening/Conditioning** – <u>typically not a covered service</u> – initial 2 hours, use 97546 for each additional hour and use in conjunction with 97545

#### **Definition**

Work hardening includes job simulation tasks and educational activities related to a safe return to work for the patient. Often, work hardening programs incorporate an interdisciplinary approach to restore physical, behavioral, and/or vocational functions. Work conditioning includes exercises directed towards safely returning the patient to work-related activities or to commence with vocational rehabilitation services. In general, work conditioning programs are

designed to address neuromuscular functions, such as flexibility, strength, endurance, and/or range of motion, as well as cardiopulmonary functions.

# **Example**

A work-induced injury and/or impairment was present that resulted in the need for therapeutic exercises/procedures. Once the patient has completed acute medical care, including chiropractic or rehabilitation treatment, the patient may require a comprehensive, intensive, and individualized program for safely returning to work activities. Subsequently, the patient may begin a work hardening and/or work conditioning program. Typically, the patient will participate in a program for at least two hours a day, three days a week to as much as eight hours a day, five days a week. The activities performed by the patient in the program may include an exercise regimen, simulation of specific or general work requirements, training and/or modifications of activities of daily living, injury prevention training, cognitive-behavioral pain management training, and/or occupational/educational training aspects.

# **Support for this Service**

The documentation would need to support that the patient had an injury and/or impairment within the last 12 months, has received acute rehabilitation services, and is expected to return to his/her previous employment. Furthermore, the documentation should clearly report the patient's limitations for returning to work; the patient's willingness to participate in the program; a highly structured, goal-oriented plan of care, including reference to return to work and discharge from skilled services; identified systemic neuromusculoskeletal deficits that interfere with work; documentation to support that care is at the point of resolution for the initial or principal injury so that participation in the conditioning process would not be prohibited; and, if applicable, the identification of psychosocial and/or vocation problems and evidence of a referral to the appropriate professional.

#### **BACKGROUND**

A qualified health care provider is an individual who by education, training, and licensure/regulation performs a professional service within his/her scope of practice and reports a professional service. These providers are distinct from 'clinical staff' (e.g., physical therapy aide or speech language assistant). A clinical staff member is a person who works under the supervision of a qualified health care provider and who is allowed by law or regulation to perform or assist in the performance of a specified professional service. Examples of qualified health care providers for the purpose of this policy include chiropractors, physical therapists, occupational therapists, physician assistants, speech therapists, physical therapist assistants, and occupational therapy assistants.

Skilled care services are not required to effect improvement or restoration of function when a patient suffers a transient and easily reversible loss or reduction of function, which could reasonably be expected to improve spontaneously as the patient gradually resumes normal

activities. Skilled care services furnished in such situations are not considered reasonable and necessary for the treatment of the individual's illness or injury.

#### **Definition**

The following services are considered "active" meaning the patients themselves take part in the completion of the service. This is opposed to "passive", where the patient passively receives health care services without any physical input or effort.

All services outlined in this section require the provision of skilled services and direct (one-on-one) provider-patient contact.

While an individual's medical condition is a valid factor in making decisions about health care, the diagnosis or prognosis cannot be the sole basis in deciding that skilled care services are reasonable and necessary. The key judgment is whether the skills of a qualified health care provider are needed to treat the illness or injury or whether the services can be carried out by unskilled personnel.

Regardless of the expectation of improvement, reasonable and necessary skilled care services must be provided by a qualified health care provider and require a high level of complexity and sophistication or the condition of the patient is such that the services can be safely and effectively performed only by a qualified health care provider. Services that do not require the performance or supervision of a qualified health care provider are not skilled and are not considered reasonable or necessary services, even if they are performed or supervised by a qualified professional. Therefore, if a service can be self-administered or safely and effectively furnished by an unskilled person or caregiver, without the direct or general supervision of a qualified health care provider, the service cannot be regarded as skilled even if a qualified professional actually furnishes the service. Further, the unavailability of a competent person to provide a non-skilled service, despite the importance of the service to the patient, does not make it a skilled service when a qualified health care provider furnishes the service. A clinician may not merely supervise but must apply the skills of a professional by actively participating in the treatment of the patient. In addition, a provider's skills may be documented, for example, by the clinician's descriptions of their skilled treatment, the changes made to the treatment due to a clinician's assessment of the patient's needs on a particular treatment day or changes due to progress the clinician judged sufficient to modify the treatment toward the next more complex or difficult task.

Services related to activities for the general good and welfare of patients (e.g., general exercises to promote overall fitness and flexibility and activities to provide diversion or general motivation) do not constitute skilled care services. Services provided by practitioners/staff who are not qualified health care providers are not skilled intervention services. Unskilled services are palliative procedures that are repetitive or reinforce previously learned skills or services performed to maintain function.

**Objective Evidence:** Consists of serial standardized assessment tools/instruments, outcome measurements, and or measurable assessments of functional outcome used to quantify patient progress and support justification for continued treatment. Examples of objective evidence include:

- Functional assessment from standardized and validated outcomes instruments; or
- Functional assessment scores from tests and measurements that are validated in the professional literature, which are appropriate for the condition/function being measured.

Physical measures (e.g., range of motion or manual muscle strength testing) are generally not considered to be 'objective evidence' of functional assessment.

Rehabilitative (Restorative) Services: Are sServices designed to address recovery or improvement in function and, when possible, restoration to a previous level of health and well-being. Improvement is evidenced by successive objective measurements whenever possible (e.g., impairments, pain, functional status, etc.). If an individual's expected rehabilitation potential is insignificant in relation to the extent and duration of therapy services required to achieve such potential, rehabilitative therapy is not reasonable and necessary. Rehabilitative care must require the skills and level of sophistication of a qualified health care provider. Services that can be safely and effectively furnished by non-skilled personnel or caregivers are not rehabilitative care services.

Skilled rehabilitative care services must be part of a documented treatment plan provided to improve or restore lost or impaired physical function resulting from illness, injury, neurologic disorder, congenital defect, or surgery. These skilled care services are intended to enhance rehabilitation and recovery by clarifying a patient's impairments and functional limitations as well as by identifying interventions, treatment goals, and precautions.

**Reasonable and Necessary:** The services shall be of such a level of complexity and sophistication or the condition of the patient shall be such that the services required can only be performed safely and effectively by a qualified health care provider. Services that do not require the performance of a qualified health care provider are not skilled and are not considered reasonable or necessary.

#### **POLICY HISTORY**

Date	Summary
September 2022	References added
	<ul> <li>Billing Units: Added "≥" to billing unit descriptions</li> </ul>
	• Therapeutic exercise: Changed "therapist" to "physical medicine
	provider/practitioner"
	<ul> <li>Revised CPT code for Cognitive Skills Development</li> </ul>
	•

	Added information to identify difference between sensory integration and neuromuscular re-education      Minor editorial -changes      Minor editorial -changes
December 2021	<ul> <li>Added "General Information" statement</li> <li>Updated billing units according to CMS LCA</li> <li>Added VBRT under neuromuscular re-education</li> <li>Clarified support for service for 97761-Prosthetic Training</li> <li>Removed Code 97760 cannot be reported with gait training (97116)</li> </ul>
October 2020	No content changes
December 2019	Minor editorial edits only
July 2019	<ul> <li>Updated references (pulled any older than 10 years and provided updated reference if necessary).</li> <li>Provided further definition for use of neuromuscular re-education.</li> </ul>

#### **REFERENCES**

- 1. Cohen SP. Epidemiology, diagnosis, and treatment of neck pain. *Mayo Clin Proc*. Feb 2015;90(2):284-99. doi:10.1016/j.mayocp.2014.09.008
- 2. Searle A, Spink M, Ho A, Chuter V. Exercise interventions for the treatment of chronic low back pain: a systematic review and meta-analysis of randomised controlled trials. *Clin Rehabil*. Dec 2015;29(12):1155-67. doi:10.1177/0269215515570379
- 3. Paungmali A, Joseph LH, Sitilertpisan P, Pirunsan U, Uthaikhup S. Lumbopelvic Core Stabilization Exercise and Pain Modulation Among Individuals with Chronic Nonspecific Low Back Pain. *Pain Pract*. Nov 2017;17(8):1008-1014. doi:10.1111/papr.12552
- 4. Foster NE, Anema JR, Cherkin D, et al. Prevention and treatment of low back pain: evidence, challenges, and promising directions. *Lancet*. Jun 9 2018;391(10137):2368-2383. doi:10.1016/s0140-6736(18)30489-6
- 5. Centers for Medicare and Medicaid Services. Medicare Benefit Policy Manual Chapter 15 Covered Medical and Other Health

Services. Centers for Medicare and Medicaid Services (CMS). Updated May 20, 2022. Accessed August 11, 2022. <a href="https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/bp102c15.pdf">https://www.cms.gov/Regulations-and-Guidance/Manuals/Downloads/bp102c15.pdf</a>

- 6. Centers for Medicare & Medicaid Services. Billing and Coding: Outpatient Physical and Occupational Therapy Services (A57067). Centers for Medicare & Medicaid Services (CMS). Updated June 2, 2022. Accessed August 11, 2022. <a href="https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleid=57067&ver=23&Date=&DocID=A57067&bc=ggAAAAgAEAAA&="https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleid=57067&ver=23&Date=&DocID=A57067&bc=ggAAAAgAEAAA&="https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleid=57067&ver=23&Date=&DocID=A57067&bc=ggAAAAgAEAAA&="https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleid=57067&ver=23&Date=&DocID=A57067&bc=ggAAAAgAEAAA&="https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleid=57067&ver=23&Date=&DocID=A57067&bc=ggAAAAgAEAAA&="https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleid=57067&ver=23&Date=&DocID=A57067&bc=ggAAAAgAEAAA&="https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleid=57067&ver=23&Date=&DocID=A57067&bc=ggAAAAgAEAAA&="https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleid=57067&ver=23&Date=&DocID=A57067&bc=ggAAAAgAEAAA&=
- 7. Akhtar MW, Karimi H, Gilani SA. Effectiveness of core stabilization exercises and routine exercise therapy in management of pain in chronic non-specific low back pain: A randomized controlled clinical trial. *Pakistan journal of medical sciences*. Jul-Aug 2017;33(4):1002-1006. doi:10.12669/pjms.334.12664
- 8. Ammar T. A randomized comparison of supervised clinical exercise versus a home exercise program in patients with chronic low back pain. *Phys Ther Rehabil*. 2017;4(1):7.
- 9. Bronfort G, Maiers MJ, Evans RL, et al. Supervised exercise, spinal manipulation, and home exercise for chronic low back pain: a randomized clinical trial. *Spine J*. Jul 2011;11(7):585-98. doi:10.1016/j.spinee.2011.01.036
- 10. Gordon R, Bloxham S. A Systematic Review of the Effects of Exercise and Physical Activity on Non-Specific Chronic Low Back Pain. *Healthcare (Basel, Switzerland)*. 2016;4(2):22. doi:10.3390/healthcare4020022
- 11. Gross A, Kay TM, Paquin JP, et al. Exercises for mechanical neck disorders. *Cochrane Database Syst Rev.* Jan 28 2015;1:Cd004250. doi:10.1002/14651858.CD004250.pub5
- 12. Haufe S, Wiechmann K, Stein L, et al. Low-dose, non-supervised, health insurance initiated exercise for the treatment and prevention of chronic low back pain in employees. Results from a randomized controlled trial. *PloS one*. 2017;12(6):e0178585-e0178585. doi:10.1371/journal.pone.0178585

- 13. Hidalgo B, Hall T, Bossert J, Dugeny A, Cagnie B, Pitance L. The efficacy of manual therapy and exercise for treating non-specific neck pain: A systematic review. *J Back Musculoskelet Rehabil*. 2017;30(6):1149-1169. doi:10.3233/BMR-169615
- 14. Lee J-S, Kang S-J. The effects of strength exercise and walking on lumbar function, pain level, and body composition in chronic back pain patients. *J Exerc Rehabil*. 2016;12(5):463-470. doi:10.12965/jer.1632650.325
- 15. Lin CC, McAuley JH, Macedo L, Barnett DC, Smeets RJ, Verbunt JA. Relationship between physical activity and disability in low back pain: a systematic review and meta-analysis. *Pain*. Mar 2011;152(3):607-613. doi:10.1016/j.pain.2010.11.034
- 16. Macedo LG, Saragiotto BT, Yamato TP, et al. Motor control exercise for acute non-specific low back pain. *Cochrane Database Syst Rev*. Feb 10 2016;2:Cd012085. doi:10.1002/14651858.Cd012085
- 17. Miller J, Gross A, D'Sylva J, et al. Manual therapy and exercise for neck pain: a systematic review. *Man Ther*. Aug 2010;15(4):334-54.
- 18. Saragiotto BT, Maher CG, Yamato TP, et al. Motor control exercise for chronic non-specific low-back pain. *Cochrane Database Syst Rev.* Jan 8 2016;(1):Cd012004. doi:10.1002/14651858.Cd012004
- 19. Leone M, Alsofrom J, Kane M, Laryea S, Abdelatif D, Mohamed MA. Length of Neuromuscular Re-education Therapy and Growth Parameters in Premature Infants. *Am J Perinatol*. Sep 11 2020;doi:10.1055/s-0040-1716492
- 20. Judd DL, Winters JD, Stevens-Lapsley JE, Christiansen CL. Effects of neuromuscular reeducation on hip mechanics and functional performance in patients after total hip arthroplasty: A case series. *Clin Biomech (Bristol, Avon)*. 2016;32:49-55. doi:10.1016/j.clinbiomech.2015.12.008
- 21. Kundakci B, Sultana A, Taylor AJ, Alshehri MA. The effectiveness of exercise-based vestibular rehabilitation in adult patients with chronic dizziness: A systematic review. *F1000Res*. 2018;7:276. doi:10.12688/f1000research.14089.1
- 22. García-Muñoz C, Cortés-Vega MD, Heredia-Rizo AM, Martín-Valero R, García-Bernal MI, Casuso-Holgado MJ. Effectiveness of Vestibular Training for Balance and Dizziness Rehabilitation in People with Multiple Sclerosis: A Systematic Review and Meta-Analysis. *J Clin Med*. Feb 21 2020;9(2)doi:10.3390/jcm9020590
- 23. Veldema J, Jansen P. Aquatic therapy in stroke rehabilitation: systematic review and metaanalysis. *Acta Neurol Scand*. Mar 2021;143(3):221-241. doi:10.1111/ane.13371
- 24. Kim EK, Lee DK, Kim YM. Effects of aquatic PNF lower extremity patterns on balance and ADL of stroke patients. *J Phys Ther Sci.* Jan 2015;27(1):213-5. doi:10.1589/jpts.27.213
- 25. Cha HG, Shin YJ, Kim MK. Effects of the Bad Ragaz Ring Method on muscle activation of the lower limbs and balance ability in chronic stroke: A randomised controlled trial. *Hong Kong Physiother J.* Dec 2017;37:39-45. doi:10.1016/j.hkpj.2017.02.001
- 26. So BCL, Ng JK, Au KCK. A 4-week community aquatic physiotherapy program with Ai Chi or Bad Ragaz Ring Method improves disability and trunk muscle endurance in adults with chronic low back pain: A pilot study. *J Back Musculoskelet Rehabil*. 2019;32(5):755-767. doi:10.3233/bmr-171059

- 27. Terrens AF, Soh SE, Morgan P. The safety and feasibility of a Halliwick style of aquatic physiotherapy for falls and balance dysfunction in people with Parkinson's Disease: A single blind pilot trial. *PLoS One*. 2020;15(7):e0236391. doi:10.1371/journal.pone.0236391 28. Ballington SJ, Naidoo R. The carry-over effect of an aquatic-based intervention in children with cerebral palsy. *Afr J Disabil*. 2018;7(0):361. doi:10.4102/ajod.v7i0.361 29. Schitter AM, Fleckenstein J, Frei P, Taeymans J, Kurpiers N, Radlinger L. Applications, indications, and effects of passive hydrotherapy WATSU (WaterShiatsu)-A systematic review and meta-analysis. *PLoS One*. 2020;15(3):e0229705. doi:10.1371/journal.pone.0229705 30. American Occupational Therapy Association (AOTA). Ten things patients and providers should question: Don't provide ambulation or gait training interventions that do not directly
- should question: Don't provide ambulation or gait training interventions that do not directly link to functional mobility. Choosing Wisely, ABIM Foundation Initiative. Updated July 28, 2021. Accessed August 11, 2022. <a href="https://www.choosingwisely.org/clinician-lists/aota10-dont-provide-ambulation-or-gait-training-interventions-that-do-not-directly-link-to-functional-mobility/">https://www.choosingwisely.org/clinician-lists/aota10-dont-provide-ambulation-or-gait-training-interventions-that-do-not-directly-link-to-functional-mobility/</a>
- 31. Van Eerd D, Munhall C, Irvin E, et al. Effectiveness of workplace interventions in the prevention of upper extremity musculoskeletal disorders and symptoms: an update of the evidence. *Occupational and environmental medicine*. 2016;73(1):62-70. doi:10.1136/oemed-2015-102992

#### **ADDITIONAL RESOURCES**

- 1. Aboodarda SJ, Shariff MAH, Muhamed AMC, Ibrahim F, Yusof A. Electromyographic activity and applied load during high intensity elastic resistance and nautilus machine exercises. *J Hum Kinet*. 2011;30:5-12. doi:10.2478/v10078-011-0067-0
- 2. American Academy of Orthopaedic Surgeons. Management of osteoarthritis of the knee (non-arthroplasty) evidence-based clinical practice guideline. American Academy of Orthopaedic Surgeons; 2021.
- 3. APTA. Standards of Practice for Physical Therapy. American Physical Therapy Association (APTA). Updated August 12, 2020. Accessed August 11, 2022. https://www.apta.org/apta-and-you/leadership-and-governance/policies/standards-of-practice-pt
- 4. APTA. APTA Statement in Support of Essential Health Benefits. American Physical Therapy Association (APTA). Updated August 30, 2018. Accessed August 11, 2022.
- https://www.apta.org/apta-and-you/leadership-and-governance/policies/apta-statement-in-support-of-essential-health-benefits
- 5. Arcanjo FL, Martins JVP, Moté P, et al. Proprioceptive neuromuscular facilitation training reduces pain and disability in individuals with chronic low back pain: A systematic review and meta-analysis. *Complement Ther Clin Pract*. Feb 2022;46:101505. doi:10.1016/j.ctcp.2021.101505
- 6. Australian Acute Musculoskeletal Pain Guidelines Group, Brooks P. *Evidence-based*management of acute musculoskeletal pain: a quide for clinicians. Australian Academic Press;

  2004.

- 7. Beer A, Treleaven J, Jull G. Can a functional postural exercise improve performance in the cranio-cervical flexion test?--a preliminary study. *Man Ther*. Jun 2012;17(3):219-24. doi:10.1016/j.math.2011.12.005
- 8. Bernstein IA, Malik Q, Carville S, Ward S. Low back pain and sciatica: summary of NICE guidance. *Bmj.* Jan 6 2017;356:i6748. doi:10.1136/bmj.i6748
- 9. Bussières AE, Stewart G, Al-Zoubi F, et al. The Treatment of Neck Pain-Associated Disorders and Whiplash-Associated Disorders: A Clinical Practice Guideline. *J Manipulative Physiol Ther*. Oct 2016;39(8):523-564.e27. doi:10.1016/j.jmpt.2016.08.007
- 10. Cameron M. *Physical Agents in Rehabilitation: An Evidence-Based Approach to Practice*. 5th ed. Saunders Elsevier; 2018:464.
- 11. American Occupational Therapy Association (AOTA), American Physical Therapy Association (APTA), American Speech-Language-Hearing Association (ASHA). Consensus Statement on Clinical Judgment in Health Care Settings. American Occupational Therapy Association (AOTA). Updated October 14, 2014. Accessed August 11, 2022. https://www.aota.org/-/media/Corporate/Files/Practice/Ethics/APTA-AOTA-ASHA-Concensus-Statement.pdf
  12. Calafiore D, Negrini F, Tottoli N, Ferraro F, Ozyemisci-Taskiran O, de Sire A. Efficacy of robotic exoskeleton for gait rehabilitation in patients with subacute stroke: a systematic review. Eur J Phys Rehabil Med. Feb 2022;58(1):1-8. doi:10.23736/s1973-9087.21.06846-5
  13. Carmignano SM, Fundaro C, Bonaiuti D, et al. Robot-assisted gait training in patients with Parkinson's disease: Implications for clinical practice. A systematic review. NeuroRehabilitation.
- May 9 2022;doi:10.3233/nre-220026

  14. Dahm KT, Brurberg KG, Jamtvedt G, Hagen KB. Advice to rest in bed versus advice to stay active for acute low-back pain and sciatica. Cochrane Database Syst Rev. Jun 16
- active for acute low-back pain and sciatica. *Cochrane Database Syst Rev. Jun* 16
  2010;(6):Cd007612. doi:10.1002/14651858.CD007612.pub2
- 15. Debuse D, Birch O, St Clair Gibson A, Caplan N. Low impact weight-bearing exercise in an upright posture increases the activation of two key local muscles of the lumbo-pelvic region. *Physiother Theory Pract*. Jan 2013;29(1):51-60. doi:10.3109/09593985.2012.698718

  16. Giuriati S, Servadio A, Temperoni G, Curcio A, Valente D, Galeoto G. The effect of aquatic
- physical therapy in patients with stroke: A systematic review and meta-analysis. *Top Stroke*Rehabil. Jan 2021;28(1):19-32. doi:10.1080/10749357.2020.1755816
- 17. Gomes-Neto M, Lopes JM, Conceição CS, et al. Stabilization exercise compared to general exercises or manual therapy for the management of low back pain: A systematic review and meta-analysis. *Phys Ther Sport*. Jan 2017;23:136-142. doi:10.1016/j.ptsp.2016.08.004
- 18. Gottschall JS, Mills J, Hastings B. Integration core exercises elicit greater muscle activation than isolation exercises. *J Strength Cond Res*. Mar 2013;27(3):590-6.
- doi:10.1519/JSC.0b013e31825c2cc7
- 19. Javadian Y, Behtash H, Akbari M, Taghipour-Darzi M, Zekavat H. The effects of stabilizing exercises on pain and disability of patients with lumbar segmental instability. *J Back Musculoskelet Rehabil*. 2012;25(3):149-55. doi:10.3233/bmr-2012-0321
- 20. Jordan JL, Holden MA, Mason EE, Foster NE. Interventions to improve adherence to exercise for chronic musculoskeletal pain in adults. *The Cochrane database of systematic reviews*. 2010;2010(1):CD005956-CD005956. doi:10.1002/14651858.CD005956.pub2

- 21. Karahan AY, Sahin N, Baskent A. Comparison of effectiveness of different exercise programs in treatment of failed back surgery syndrome: A randomized controlled trial. *J Back Musculoskelet Rehabil*. Jun 17 2016;doi:10.3233/bmr-160722
- 22. Koes BW, van Tulder M, Lin C-WC, Macedo LG, McAuley J, Maher C. An updated overview of clinical guidelines for the management of non-specific low back pain in primary care. *Eur Spine J.* 2010;19(12):2075-2094. doi:10.1007/s00586-010-1502-y
- 23. Larsson ME, Kreuter M, Nordholm L. Is patient responsibility for managing musculoskeletal disorders related to self-reported better outcome of physiotherapy treatment? *Physiother Theory Pract*. Jul 2010;26(5):308-17. doi:10.3109/09593980903082136
- 24. Leininger B, McDonough C, Evans R, Tosteson T, Tosteson ANA, Bronfort G. Costeffectiveness of spinal manipulative therapy, supervised exercise, and home exercise for older adults with chronic neck pain. *The spine journal : official journal of the North American Spine Society*. 2016;16(11):1292-1304. doi:10.1016/j.spinee.2016.06.014
- 25. Lorusso M, Tramontano M, Casciello M, et al. Efficacy of Overground Robotic Gait Training on Balance in Stroke Survivors: A Systematic Review and Meta-Analysis. *Brain Sci.* May 31 2022;12(6)doi:10.3390/brainsci12060713
- 26. Magalhães MO, Muzi LH, Comachio J, et al. The short-term effects of graded activity versus physiotherapy in patients with chronic low back pain: A randomized controlled trial. *Man Ther*. Aug 2015;20(4):603-9. doi:10.1016/j.math.2015.02.004
- 27. Matarán-Peñarrocha GA, Lara Palomo IC, Antequera Soler E, et al. Comparison of efficacy of a supervised versus non-supervised physical therapy exercise program on the pain, functionality and quality of life of patients with non-specific chronic low-back pain: a randomized controlled trial. *Clin Rehabil*. Jul 2020;34(7):948-959. doi:10.1177/0269215520927076
- 28. Nazzal ME, Saadah MA, Saadah LM, et al. Management options of chronic low back pain. A randomized blinded clinical trial. *Neurosciences (Riyadh)*. Apr 2013;18(2):152-9.
- 29. Picelli A, Capecci M, Filippetti M, et al. Effects of robot-assisted gait training on postural instability in Parkinson's disease: a systematic review. *Eur J Phys Rehabil Med*. Jun 2021;57(3):472-477. doi:10.23736/s1973-9087.21.06939-2
- 30. Peng M-S, Wang R, Wang Y-Z, et al. Efficacy of therapeutic aquatic exercise vs physical therapy modalities for patients with chronic low back pain: a randomized clinical trial. *JAMA network open.* 2022;5(1):e2142069-e2142069.
- 31. Sachs BL, Ahmad SS, LaCroix M, et al. Objective assessment for exercise treatment on the B-200 isostation as part of work tolerance rehabilitation. A random prospective blind evaluation with comparison control population. *Spine (Phila Pa 1976)*. Jan 1 1994;19(1):49-52. doi:10.1097/00007632-199401000-00009
- 32. Sarker KK, Sethi J, Mohanty U. Comparative clinical effects of spinal manipulation, core stability exercise, and supervised exercise on pain intensity, segmental instability, and health-related quality of life among patients with chronic nonspecific low back pain: A randomized control trial. *J Nat Sci Biol Med*. 2020;11(1):27.
- 33. Sertpoyraz F, Eyigor S, Karapolat H, Capaci K, Kirazli Y. Comparison of isokinetic exercise versus standard exercise training in patients with chronic low back pain: a randomized controlled study. *Clin Rehabil*. Mar 2009;23(3):238-47. doi:10.1177/0269215508099862

- 34. Shen P, Li L, Song Q, et al. Proprioceptive Neuromuscular Facilitation Improves Symptoms
  Among Older Adults With Knee Osteoarthritis During Stair Ascending: A Randomized Controlled
  Trial. Am J Phys Med Rehabil. Aug 1 2022;101(8):753-760.
- doi:10.1097/phm.000000000001906
- 35. Sherman KJ, Cherkin DC, Wellman RD, et al. A randomized trial comparing yoga, stretching, and a self-care book for chronic low back pain. *Arch Intern Med*. 2011;171(22):2019-2026. doi:10.1001/archinternmed.2011.524
- 36. Skillgate E, Pico-Espinosa OJ, Côté P, et al. Effectiveness of deep tissue massage therapy, and supervised strengthening and stretching exercises for subacute or persistent disabling neck pain. The Stockholm Neck (STONE) randomized controlled trial. *Musculoskelet Sci Pract*. Feb 2020;45:102070. doi:10.1016/j.msksp.2019.102070
- 37. Sundstrup E, Jakobsen MD, Andersen CH, Jay K, Andersen LL. Swiss ball abdominal crunch with added elastic resistance is an effective alternative to training machines. *International* journal of sports physical therapy. 2012;7(4):372-380.
- 38. Tsertsvadze A, Clar C, Court R, Clarke A, Mistry H, Sutcliffe P. Cost-effectiveness of manual therapy for the management of musculoskeletal conditions: a systematic review and narrative synthesis of evidence from randomized controlled trials. J Manipulative Physiol Ther. Jul-Aug 2014;37(6):343-62. doi:10.1016/j.jmpt.2014.05.001
- 1. Aboodarda SJ, Shariff MAH, Muhamed AMC, Ibrahim F, Yusof A. Electromyographic activity and applied load during high intensity elastic resistance and nautilus machine exercises. *J Hum Kinet*. 2011;30:5-12. doi:10.2478/v10078-011-0067-0
- 2. APTA. Standards of Practice for Physical Therapy. American Physical Therapy Association (APTA). Updated August 12, 2020. Accessed September 16, 2021. <a href="https://www.apta.org/apta-and-you/leadership-and-governance/policies/standards-of-practice-pt">https://www.apta.org/apta-and-you/leadership-and-governance/policies/standards-of-practice-pt</a>
- 3. APTA. APTA Statement in Support of Essential Health Benefits. American Physical Therapy Association (APTA). Updated August 30, 2018. Accessed September 16, 2021.
- https://www.apta.org/apta and you/leadership and governance/policies/apta statement in support of essential health benefits
- 4. Australian Acute Musculoskeletal Pain Guidelines Group, Brooks P. *Evidence based*management of acute musculoskeletal pain: a guide for clinicians. Australian Academic Press;
  2004.
- 5. Beer A, Treleaven J, Jull G. Can a functional postural exercise improve performance in the cranio-cervical flexion test?--a preliminary study. *Man Ther*. Jun 2012;17(3):219-24. doi:10.1016/j.math.2011.12.005
- 6. Bernstein IA, Malik Q, Carville S, Ward S. Low back pain and sciatica: summary of NICE guidance. *Bmj.* Jan 6 2017;356:i6748. doi:10.1136/bmj.i6748
- 7. Bussières AE, Stewart G, Al-Zoubi F, et al. The Treatment of Neck Pain-Associated Disorders and Whiplash Associated Disorders: A Clinical Practice Guideline. *J Manipulative Physiol Ther*. Oct 2016;39(8):523-564.e27. doi:10.1016/j.jmpt.2016.08.007
- 8. Cameron M. *Physical Agents in Rehabilitation: An Evidence Based Approach to Practice*. 5th ed. Saunders Elsevier; 2018:464.

- 9. American Occupational Therapy Association (AOTA), American Physical Therapy Association (APTA), American Speech Language Hearing Association (ASHA). Consensus Statement on Clinical Judgment in Health Care Settings. American Occupational Therapy Association (AOTA). Updated October 14, 2014. Accessed September 17, 2021. <a href="https://www.aota.org/">https://www.aota.org/</a> /media/Corporate/Files/Practice/Ethics/APTA AOTA ASHA Concensus Statement.pdf
  10. Dahm KT, Brurberg KG, Jamtvedt G, Hagen KB. Advice to rest in bed versus advice to stay active for acute low-back pain and sciatica. Cochrane Database Syst Rev. Jun 16
  2010;(6):Cd007612. doi:10.1002/14651858.CD007612.pub2
- 11. Debuse D, Birch O, St Clair Gibson A, Caplan N. Low impact weight-bearing exercise in an upright posture increases the activation of two key local muscles of the lumbo-pelvic region. *Physiother Theory Pract.* Jan 2013;29(1):51-60. doi:10.3109/09593985.2012.698718
- 12. Gomes-Neto M, Lopes JM, Conceição CS, et al. Stabilization exercise compared to general exercises or manual therapy for the management of low back pain: A systematic review and meta-analysis. *Phys Ther Sport*. Jan 2017;23:136-142. doi:10.1016/j.ptsp.2016.08.004

  13. Gottschall JS, Mills J, Hastings B. Integration core exercises elicit greater muscle activation than isolation exercises. *J Strength Cond Res*. Mar 2013;27(3):590-6.

doi:10.1519/JSC.0b013c31825c2cc7

- 14. Gross AR, Paquin JP, Dupont G, et al. Exercises for mechanical neck disorders: A Cochrane review update. *Man Ther*. Aug 2016;24:25-45. doi:10.1016/j.math.2016.04.005
- 15. Javadian Y, Behtash H, Akbari M, Taghipour-Darzi M, Zekavat H. The effects of stabilizing exercises on pain and disability of patients with lumbar segmental instability. *J Back Musculoskelet Rehabil*. 2012;25(3):149-55. doi:10.3233/bmr-2012-0321
- 16. Jordan JL, Holden MA, Mason EE, Foster NE. Interventions to improve adherence to exercise for chronic musculoskeletal pain in adults. *The Cochrane database of systematic reviews*. 2010;2010(1):CD005956-CD005956. doi:10.1002/14651858.CD005956.pub2
- 17. Karahan AY, Sahin N, Baskent A. Comparison of effectiveness of different exercise programs in treatment of failed back surgery syndrome: A randomized controlled trial. *J Back Musculoskelet Rehabil*. Jun 17 2016;doi:10.3233/bmr 160722
- 18. Koes BW, van Tulder M, Lin C WC, Macedo LG, McAuley J, Maher C. An updated overview of clinical guidelines for the management of non-specific low back pain in primary care. *Eur Spine J.* 2010;19(12):2075-2094. doi:10.1007/s00586-010-1502-y
- 19. Larsson ME, Kreuter M, Nordholm L. Is patient responsibility for managing musculoskeletal disorders related to self-reported better outcome of physiotherapy treatment? *Physiother Theory Pract*. Jul 2010;26(5):308-17. doi:10.3109/09593980903082136
- 20. Leininger B, McDonough C, Evans R, Tosteson T, Tosteson ANA, Bronfort G. Costeffectiveness of spinal manipulative therapy, supervised exercise, and home exercise for older adults with chronic neck pain. *The spine journal : official journal of the North American Spine Society*. 2016;16(11):1292-1304. doi:10.1016/j.spinee.2016.06.014
- 21. Magalhães MO, Muzi LH, Comachio J, et al. The short-term effects of graded activity versus physiotherapy in patients with chronic low back pain: A randomized controlled trial. *Man Ther*. Aug 2015;20(4):603-9. doi:10.1016/j.math.2015.02.004
- 22. Matarán-Peñarrocha GA, Lara Palomo IC, Antequera Soler E, et al. Comparison of efficacy of a supervised versus non-supervised physical therapy exercise program on the pain,

functionality and quality of life of patients with non-specific chronic low-back pain: a randomized controlled trial. *Clin Rehabil*. Jul 2020;34(7):948-959. doi:10.1177/0269215520927076

- 23. Nazzal ME, Saadah MA, Saadah LM, et al. Management options of chronic low back pain. A randomized blinded clinical trial. *Neurosciences (Riyadh)*. Apr 2013;18(2):152-9.
- 24. Sachs BL, Ahmad SS, LaCroix M, et al. Objective assessment for exercise treatment on the B-200 isostation as part of work tolerance rehabilitation. A random prospective blind evaluation with comparison control population. *Spine (Phila Pa 1976)*. Jan 1 1994;19(1):49-52. doi:10.1097/00007632-199401000-00009
- 25. Sarker KK, Sethi J, Mohanty U. Comparative clinical effects of spinal manipulation, core stability exercise, and supervised exercise on pain intensity, segmental instability, and health-related quality of life among patients with chronic nonspecific low back pain: A randomized control trial. *J Nat Sci Biol Med*. 2020;11(1):27.
- 26. Sertpoyraz F, Eyigor S, Karapolat H, Capaci K, Kirazli Y. Comparison of isokinetic exercise versus standard exercise training in patients with chronic low back pain: a randomized controlled study. *Clin Rehabil*. Mar 2009;23(3):238-47. doi:10.1177/0269215508099862
  27. Sherman KJ, Cherkin DC, Wellman RD, et al. A randomized trial comparing yoga, stretching, and a self-care book for chronic low back pain. *Arch Intern Med*. 2011;171(22):2019-2026. doi:10.1001/archinternmed.2011.524
- 28. Skillgate E, Pico-Espinosa OJ, Côté P, et al. Effectiveness of deep tissue massage therapy, and supervised strengthening and stretching exercises for subacute or persistent disabling neck pain. The Stockholm Neck (STONE) randomized controlled trial. *Musculoskelet Sci Pract*. Feb 2020;45:102070. doi:10.1016/j.msksp.2019.102070
- 29. Sundstrup E, Jakobsen MD, Andersen CH, Jay K, Andersen LL. Swiss ball abdominal crunch with added elastic resistance is an effective alternative to training machines. *Int J Sports Phys Ther.* 2012;7(4):372–380.
- 30. Tsertsvadze A, Clar C, Court R, Clarke A, Mistry H, Sutcliffe P. Cost-effectiveness of manual therapy for the management of musculoskeletal conditions: a systematic review and narrative synthesis of evidence from randomized controlled trials. *J Manipulative Physiol Ther*. Jul Aug 2014;37(6):343–62. doi:10.1016/j.jmpt.2014.05.001

Reviewed/Approved by NIA Clinical Guideline Committee

#### **GENERAL INFORMATION**

It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.

Disclaimer: Magellan Healthcare service authorization policies do not constitute medical advice and are not intended to govern or otherwise influence the practice of medicine. These policies are not meant to supplant your normal procedures, evaluation, diagnosis, treatment and/or care plans for your patients. Your professional judgement must be exercised and followed in all respects with regard to the treatment and care of your patients. These policies apply to all Magellan Healthcare subsidiaries including, but not limited to, National Imaging Associates ("Magellan"). The policies constitute only the reimbursement and coverage guidelines of Magellan. Coverage for services varies for individual members in accordance with the terms and conditions of applicable Certificates of Coverage, Summary Plan Descriptions, or contracts with governing regulatory agencies. Magellan reserves the right to review and update the guidelines at its sole discretion. Notice of such changes, if necessary, shall be provided in accordance with the terms and conditions of provider agreements and any applicable laws or regulations.