MASSACHUSETTS

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Medical Policy

Continuous Passive Motion in the Home Setting

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Policy Number: 407

BCBSA Reference Number 1.01.10 (For Plan internal use only)

Related Policies

- Autologous Chondrocyte Implantation and Other Cell-Based Treatments of Focal Articular Cartilage Lesions, #374
- Autografts and Allografts in the Treatment of Focal Articular Cartilage Lesions, #111

Policy

Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity

Use of continuous passive motion in the home setting may be considered **MEDICALLY NECESSARY** as an adjunct to physical therapy in the following situations:

- Under conditions of low postoperative mobility or inability to comply with rehabilitation exercises following a total knee arthroplasty (TKA) or TKA revision. This may include individuals with complex regional pain syndrome (reflex sympathetic dystrophy); extensive arthrofibrosis or tendon fibrosis; or physical, mental, or behavioral inability to participate in active physical therapy.
- During the non-weight-bearing rehabilitation period following articular cartilage repair procedures of the knee (eg, microfracture, osteochondral grafting, autologous chondrocyte implantation, treatment of osteochondritis dissecans, repair of tibial plateau fractures).

Use of continuous passive motion in the home setting for all other conditions is considered **INVESTIGATIONAL**.

Note: CPM is covered as a DME benefit up for to 21 days. Coverage beyond 21 days must be substantiated by medical documentation from the member's treating physician. See Durable Medical Equipment Payment Policy – page 5.

Prior Authorization Information

Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** if the procedure is performed **inpatient**.

Outpatient

- For services described in this policy, see below for situations where prior authorization **might be required** if the procedure is performed **outpatient**.

	Outpatient
Commercial Managed Care (HMO and POS)	Prior authorization is **not required**.
Commercial PPO and Indemnity	Prior authorization is **not required**.

CPT Codes / HCPCS Codes / ICD Codes

Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

The following codes are included below for informational purposes only; this is not an all-inclusive list.

The above medical necessity criteria MUST be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity:

HCPCS Codes

HCPCS codes:	Code Description
E0935	Continuous passive motion exercise device for use on knee only

The following ICD Diagnosis Codes are considered medically necessary when submitted with the HCPCS codes above if medical necessity criteria are met:

ICD-10-CM Diagnosis Coding

ICD-10-CM diagnosis codes:	Code Description
Z48.89	Encounter for other specified surgical aftercare
Z96.651	Presence of right artificial knee joint
Z96.652	Presence of left artificial knee joint
Z96.653	Presence of artificial knee joint, bilateral
Z96.659	Presence of unspecified artificial knee joint

Description

Physical therapy of joints following surgery focuses both on passive motion to restore mobility and on active exercises to restore strength. While passive motion can be administered by a therapist, continuous passive motion devices have also been used. Continuous passive motion is thought to improve recovery by stimulating the healing of articular tissues and the circulation of synovial fluid; reducing local edema; and preventing adhesions, joint stiffness or contractures, or cartilage degeneration. Continuous passive motion has been investigated primarily in the knee, particularly after total knee arthroplasty or ligamentous or cartilage repair. Acceptance of its use in the knee joint has created interest in continuous passive motion use for other weight-bearing joints (ie, hip, ankle, metatarsals) as well as non-weight-bearing joints (ie, shoulder, elbow, metacarpals, interphalangeal joints). Use of continuous passive motion in stroke and burn individuals is also being explored.

The device used for the knee moves the joint (eg, flexion and extension) without patient assistance, continuously for extended periods of time (ie, up to 24 h/d). An electrical power unit is used to set the variable range of motion and speed. The initial settings for range of motion are based on a patient's level of comfort and other factors assessed intraoperatively. The range of motion is increased by 3 to 5 per day, as tolerated. The speed and range of motion can be varied, depending on joint stability. The use of

the device may be initiated in the immediate postoperative period and then continued at home for a variable period of time.

Over time, hospital lengths of stay have progressively shortened, and in some cases, surgical repair is done as an outpatient or with a length of stay of 1 to 2 days. As a result, there has been a considerable shift in the rehabilitation regimen, moving range of motion an intensive in-hospital program to a less intensive outpatient program. Some providers may want individuals to continue continuous passive motion in the home setting as a means of duplicating services offered with a longer (7-day) hospital stay.

The focus of the current review is to examine the literature on the use of continuous passive motion in the home setting as it is currently being prescribed postoperatively. Relevant comparisons are treatment outcomes of continuous passive motion when used alone or with physical therapy, compared with physical therapy alone.

Summary

Continuous passive motion devices are used to keep a joint in motion without patient assistance. continuous passive motion is being evaluated for treatment and postsurgical rehabilitation of the upper- and lower-limb joints and for a variety of musculoskeletal conditions.

Summary of Evidence

For individuals who have total knee arthroplasty who receive continuous passive motion in the home setting, the evidence includes randomized controlled trials (RCTs), case series, and systematic reviews. Relevant outcomes are symptoms and functional outcomes. Early trials generally used continuous passive motion in the inpatient setting and are less relevant to today's practice patterns of short hospital stays followed by outpatient rehabilitation. Current postoperative rehabilitation protocols differ considerably from when the largest body of evidence was collected, making it difficult to apply available evidence to the present situation. For use of continuous passive motion after total knee arthroplasty, recent studies have suggested that institutional and home use of continuous passive motion has no benefit compared with standard physical therapy (PT). There were no studies evaluating continuous passive motion in individuals who could not perform standard PT. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have articular cartilage repair of the knee who receive continuous passive motion in the home setting, the evidence includes nonrandomized studies, case series, and studies with nonclinical outcomes (eg, histology), and systematic reviews of these studies. Relevant outcomes are symptoms and functional outcomes. Systematic reviews of continuous passive motion for this indication have cited studies reporting better histologic outcomes in individuals following continuous passive motion. A few studies have reported clinical outcomes, but inadequacies of these studies do not permit conclusions on efficacy. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have musculoskeletal conditions other than total knee arthroplasty or knee cartilage repair requiring PT who receive continuous passive motion in the home setting, the evidence includes RCTs for some conditions and case series for others. Relevant outcomes are symptoms and functional outcomes. Three small RCTs of continuous passive motion after rotator cuff surgery showed some evidence that continuous passive motion after this shoulder surgery improved short-term pain and range of motion; however, the trials were not high-quality, and the small differences in outcomes may not be clinically important. Two trials reported short-term improvements in range of motion for individuals undergoing continuous passive motion, and one reported a short-term reduction in pain. None reported long-term improvements, and there are no reported benefits in functional status. Therefore, the clinical significance of the short-term improvements reported is uncertain. In addition, there is uncertainty about the optimal PT regimen following shoulder surgery such that the optimal treatment comparator for continuous passive motion is unclear. Two small RCTs compared continuous passive motion with conventional PT for treatment of adhesive capsulitis. One of the trials focused on diabetic individuals with adhesive capsulitis. Both reported comparable improvements in range of motion and functional ability between treatment groups. For other musculoskeletal conditions, RCTs do not exist; case series either

did not show efficacy of continuous passive motion or had important methodologic flaws. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have had a stroke requiring PT who receive continuous passive motion in the home setting, the evidence includes small RCT. Relevant outcomes are symptoms and functional outcomes. This trial reported a trend toward improved shoulder joint stability but no statistical difference between continuous passive motion plus PT and PT alone. The trial was small, and treatment lasted only 20 days. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Policy History

Date	Action
4/2022	Annual policy review. Policy statements unchanged.
4/2022	Clarified coding information.
5/2021	Annual policy review. Not medically necessary changed to investigational in second policy statement; but intent unchanged.
1/2021	Medicare information removed. See MP #132 Medicare Advantage Management for local coverage determination and national coverage determination reference.
5/2020	Annual policy review. Description, summary and references updated. Policy statements unchanged.
4/2019	Annual policy review. Description, summary and references updated. Policy statements unchanged.
5/2018	Annual policy review. Background and summary clarified. Policy note clarified. Prior Authorization Information reformatted. Effective 5/1/2018.
7/2017	Annual policy review. The word “intra-” removed from the second bullet point of the first policy statement and from the text. Policy statements otherwise unchanged.
4/2017	Annual policy review. New references added.
8/2016	Annual policy review. New references added.
4/2016	Annual policy review. New references added.
8/2015	Annual policy review. New references added.
9/2014	Annual policy review. New references added.
11/2013	Annual policy review. New medical policy describing ongoing medically necessary and not medically necessary indications. CPM is covered as a DME benefit up for to 21 days. Removed E0936 as it does not meet the intent of the policy.

Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:
Medical Policy Terms of Use
Managed Care Guidelines
Indemnity/PPO Guidelines
Clinical Exception Process
Medical Technology Assessment Guidelines

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