

# MEDICAL POLICY

MEDICAL POLICY DETAILS	
Medical Policy Title	Continuous Passive Motion Device in the Home Setting
Policy Number	1.01.02
Category	Contract Clarification
Original Effective Date	10/18/01
Committee Approval Date	10/18/01, 11/21/02, 09/18/03, 06/17/04, 04/21/05, 06/22/06, 08/23/07, 10/23/08, 08/27/09, 08/26/10, 08/25/11, 10/25/12, 08/22/13, 08/28/14, 08/27/15, 10/27/16, 10/26/17
Current Effective Date	10/17/24
Archived Date	08/23/18
Archive Review Date	08/22/19, 08/20/20, 10/28/21, 10/20/22, 10/19/23, 10/17/24
Product Disclaimer	<ul style="list-style-type: none"> <li>• Services are contract dependent; if a product excludes coverage for a service, it is not covered, and medical policy criteria do not apply.</li> <li>• If a commercial product (including an Essential Plan or Child Health Plus product), medical policy criteria apply to the benefit.</li> <li>• If a Medicaid product covers a specific service, and there are no New York State Medicaid guidelines (eMedNY) criteria, medical policy criteria apply to the benefit.</li> <li>• If a Medicare product (including Medicare HMO-Dual Special Needs Program (DSNP) product) covers a specific service, and there is no national or local Medicare coverage decision for the service, medical policy criteria apply to the benefit.</li> <li>• If a Medicare HMO-Dual Special Needs Program (DSNP) product DOES NOT cover a specific service, please refer to the Medicaid Product coverage line.</li> </ul>

## POLICY STATEMENT

- I. Based upon our criteria and assessment of peer-reviewed literature, a continuous passive motion (CPM) device is **medically appropriate** in the home setting following surgery under conditions of low postoperative mobility, or inability to comply with rehabilitation exercises, or during the non-weight bearing rehabilitation period for **ANY** of the following:
  - A. Total knee arthroplasty (TKA) or equivalent open knee surgery;
  - B. Anterior cruciate ligament (ACL) reconstruction;
  - C. Open reduction and internal fixation (ORIF) of tibial plateau or distal femur fractures involving the knee joint;
  - D. Surgical release of arthrofibrosis/adhesive capsulitis or manipulation under anesthesia of the knee until the member is participating in an active physical therapy (PT) program.
- II. Based upon our criteria, use of the CPM device beyond 21 days post-operatively or 21 days after manipulation under anesthesia is not supported by the medical literature, as it does not improve patient outcomes, and is considered **not medically necessary**.
- III. Based upon our criteria, CPM as an adjunct to conventional physical therapy for any other indication (e.g., rotator cuff, metacarpophalangeal or temporomandibular joint) has not been medically proven to be effective and is considered **not medically necessary**.
- IV. Based upon our criteria, CPM using stationary cycling (e.g., ROMTech PortableConnect Adaptive Telemed Technology) as an adjunct to conventional physical therapy has not been medically proven to be effective and is considered **not medically necessary**.

**Medical Policy: CONTINUOUS PASSIVE MOTION DEVICE IN THE HOME SETTING**

**Policy Number: 1.01.02**

**Page: 2 of 4**

**POLICY GUIDELINES**

- I. Contractual coverage of durable medical equipment is required.
- II. The CPM device is only allowable for up to 21 days if the patient is compliant with the regimen.

**DESCRIPTION**

The physical therapy restoration of joint range of motion (ROM) following surgery or trauma focuses both on passive motion to restore mobility and on active exercises to restore strength. Passive motion, a treatment component of joint rehabilitation, may be performed by a physical therapist or accomplished with a CPM device. A CPM device keeps a joint in motion (e.g., flexion, extension) without patient assistance-and is thought to improve recovery by stimulation the healing of articular tissues and the circulation of synovial fluid; reducing local edema; and preventing adhesion, joint stiffness or contractures, or cartilage degeneration. The use of the device may be initiated in the immediate postoperative period and then continued at home for a variable period of time. A unit is used to set the variable ROM and speed. The initial settings are increased as tolerated and depending on joint stability.

A variety of CPM devices are available. CPM are considered class 1 devices by the U.S. Food and Drug Administration and are exempt from 510(k) requirements.

Stationary cycling devices allow for therapeutic movement to begin within one day of surgery. Treatment plans utilizing these devices include three (3) to five (5) home therapy sessions per day for three (3) to six (6) weeks. The telemedicine capabilities of the device allow for monitoring of the patient’s progress by the physician during rehabilitation after knee surgery.

**RATIONALE**

Although there is inconsistency in the published studies on the use of the CPM device, there is evidence that CPM as an adjunct to standard physical therapy used immediately following total knee arthroplasty (TKA), anterior cruciate ligament (ACL) reconstruction, and open reduction and internal fixation (ORIF) of tibial plateau or distal femur fracture involving the knee joint does improve net health outcomes beyond the benefit of physical therapy alone (Herbold et al., 2014, Lenssen et al., 2008). Studies of postoperative use of CPM for other procedures do not permit conclusions that the CPM device is effective (e.g., rotator cuff repair [Lastayo et al., 1998, Garofalo et al., 2010], metacarpophalangeal joint arthroplasty [Massy-Westropp et al., 2008; Ring et al., 1998]; stroke rehabilitation [Kuo et al., 2023]; femoral fracture [Olasinde et al., 2023]; adhesive capsulitis of the shoulder [Baradaran et al., 2023]); major foot surgery [Bina et al., 2020].

In 2022, the International Consensus Meeting (ICM) brought together over 600 experts spanning a range countries and medical professional to conduct a comprehensive review of the literature and to generate practical recommendations for venous thromboembolism (VTE) prophylaxis across all type of orthopedic procedures. The ICM-VTE delegates issued an evidence-based recommendation, with 95% agreement, that there is no conclusive evidence that continuous passive machine (CPM) reduces the risk of VTE following knee surgery.

**CODES**

- *Eligibility for reimbursement is based upon the benefits set forth in the member’s subscriber contract.*
- ***CODES MAY NOT BE COVERED UNDER ALL CIRCUMSTANCES. PLEASE READ THE POLICY AND GUIDELINES STATEMENTS CAREFULLY.***
- *Codes may not be all inclusive as the AMA and CMS code updates may occur more frequently than policy updates.*
- *Code Key: Experimental/Investigational = (E/I), Not medically necessary/ appropriate = (NMN).*

**CPT Codes**

<b>Code</b>	<b>Description</b>
No specific code(s)	

## Medical Policy: CONTINUOUS PASSIVE MOTION DEVICE IN THE HOME SETTING

Policy Number: 1.01.02

Page: 3 of 4

Copyright © 2024 American Medical Association, Chicago, IL

### HCPCS Codes

Code	Description
E0935	Continuous passive motion exercise device for use on the knee only
E0936 (NMN)	Continuous passive motion exercise device for use other than knee

### ICD10 Codes

Code	Description
M17.0-M17.9	Osteoarthritis of knee (code range)
M23.50	Chronic instability of knee, unspecified knee

### REFERENCES

\*Bina S, Pacey V, Barnes EH, et al. Interventions for congenital talipes equinovarus (clubfoot). Cochrane Database of Systematic Reviews 2020, Issue 5. Art. No.: CD008602.

\*Bram JT et al. Use of continuous passive motion reduces rates of arthrofibrosis after anterior cruciate ligament reconstruction in a pediatric population. Orthopedics 2019;42(1):e81-e85.

Culvenor AG, Girdwood MA, Juhl CB, et al. Rehabilitation after anterior cruciate ligament and meniscal injuries: a best-evidence synthesis of systematic reviews for the OPTIKNEE consensus. Br J Sports Med 2022 Jun 29;56:1445-1453.

\*Du Plessis M , et al. The effectiveness of continuous passive motion on range of motion, pain and muscle strength following rotator cuff repair: a systematic review. Clin Rehabil 2011 Apr;25(4):291-302.

\*Garafalo R, et al. Effects of one-month continuous passive motion after arthroscopic rotator cuff repair: results at one year follow-up of a prospective randomized study. Musculoskel Surg 2010;94(Suppl 1):S79-83.

\*He ML, et al. Continuous passive motion for preventing venous thromboembolism after total knee arthroplasty. Cochrane Database Syst Rev 2014;7:CD008207.

\*Herbold JA, et al. Randomized controlled trial of the effectiveness of continuous passive motion after total knee replacement. Arch Phys Med Rehabil 2014 Jul;95(7):1240-5.

Hummer E, et al. Knee joint biomechanics of patients with unilateral total knee arthroplasty during stationary cycling. J Biomech 2021 Jan 22;115:110111.

\*ICM-VTE Hip & Knee Delegates. Recommendations from the ICM-VTE: hip & knee. J Bone Jt Surg 2022b Mar 16;104(Suppl 1):180-231.

Jette DU, Hunter SJ, Burkett L, et al. Physical therapist management of total knee arthroplasty. Phys Ther 2020 Aug 31; 100(9):1603-1631. PMID 32542403

\*Kuo LC, Yang KC, Lin YC, et al. Internet of Things (IoT) enables robot-assisted therapy as a home program for training upper limb functions in chronic stroke: a randomized control crossover study. Arch Phys Med Rehabil 2023 Mar; 104(3): 363-371. PMID 36122608

\*Lastayo PC, Wright T, Jaffe R, et al. Continuous passive motion after repair of the rotator cuff. A prospective outcome study. J Bone Joint Surg Am 1998 Jul;80(7):1002-11. PMID 9698005

\*Lenssen AF, et al. Continuous passive motion following primary total knee arthroplasty: short-and long-term effects on range of motion. Phys Ther Rev 2003;8:113-21.

**Medical Policy: CONTINUOUS PASSIVE MOTION DEVICE IN THE HOME SETTING**

**Policy Number: 1.01.02**

**Page: 4 of 4**

\*Maloney GE, et al. Effect of a passive jaw motion device on pain and range of motion in TMD patients not responding to flat plane intraoral appliances. Cranio 2002 Jan;20(1):55-66.

\* Massy-Westropp N, Johnston RV, Hill CL. Post-operative therapy for metacarpophalangeal arthroplasty. Cochrane Database of Systematic Reviews 2008, Issue 1. Art. No.: CD003522.

\*Milne S, et al. Continuous passive motion following total knee arthroplasty. Cochrane Database of Syst Rev 2003;(2):CD004260.

\*Nuyens G, et al. Reduction of spastic hypertonia during repeated passive knee movements in stroke patients. Arch Phys Med Rehabil 2002 Jul;83(7):930-5.

Olasinde AA, Olisa O, Muhumuza J, et al. Early outcome measurement of the effectiveness of conventional physical therapy versus continuous passive motion in knee function following retrograde femoral nailing-a prospective randomized controlled trial. Int Orthop 2023 Aug;47(8):2085-2093. PMID 37269402

Sattler, LN, et al. Pedaling-based protocol superior to a 10-exercise, non-pedaling protocol for postoperative rehabilitation after total knee replacement: a randomized controlled trial. J Bone Joint Surg Am 2019 Apr 17;101(8):688-695.

\*Key Article

**KEY WORDS**

Continuous passive motion, CPM, knee.

**CMS COVERAGE FOR MEDICARE PRODUCT MEMBERS**

There is currently a National Coverage Determination (NCD #280.1) Durable Medical Equipment Reference List for continuous passive motion devices. Please refer to the following NCD website for Medicare Members:

[\[https://www.cms.gov/medicare-coverage-database/view/ncd.aspx?NCID=190\]](https://www.cms.gov/medicare-coverage-database/view/ncd.aspx?NCID=190) accessed 09/03/24.