

<b>Case Number:</b>	CM15-0006447		
<b>Date Assigned:</b>	01/26/2015	<b>Date of Injury:</b>	03/14/2013
<b>Decision Date:</b>	03/17/2015	<b>UR Denial Date:</b>	12/18/2014
<b>Priority:</b>	Standard	<b>Application Received:</b>	01/12/2015

### HOW THE IMR FINAL DETERMINATION WAS MADE

MAXIMUS Federal Services sent the complete case file to an expert reviewer. He/she has no affiliation with the employer, employee, providers or the claims administrator. He/she has been in active clinical practice for more than five years and is currently working at least 24 hours a week in active practice. The expert reviewer was selected based on his/her clinical experience, education, background, and expertise in the same or similar specialties that evaluate and/or treat the medical condition and disputed items/Service. He/she is familiar with governing laws and regulations, including the strength of evidence hierarchy that applies to Independent Medical Review determinations.

The Expert Reviewer has the following credentials:  
 State(s) of Licensure: New Jersey, Michigan, California  
 Certification(s)/Specialty: Neurology, Neuromuscular Medicine

### CLINICAL CASE SUMMARY

The expert reviewer developed the following clinical case summary based on a review of the case file, including all medical records:

The injured worker is a 24 year male who sustained an industrial injury on March 14, 2013. He has complained of injuries to the left knee and has been diagnosed with torn anterior cruciate ligament, patellar tendinitis, and partial tear, patellar tendon. Treatment to date have included medical imaging and cortisone injections. Currently the injured worker complains of aching in the left knee that becomes sharp and shooting with standing and walking. The treatment plan included surgery, postoperative bracing, cold therapy, physical therapy. On December 18, 2014 Utilization Review non certified 1 cold therapy unit rental and CPM machine rental for two weeks for the left knee as outpatient citing the ACOEM guidelines.

### IMR ISSUES, DECISIONS AND RATIONALES

The Final Determination was based on decisions for the disputed items/services set forth below:

**Cold Therapy Unit Rental for 2 weeks for Left Knee as outpatient: Upheld**

**Claims Administrator guideline:** The Claims Administrator did not base their decision on the MTUS. Decision based on Non-MTUS Citation ACOEM - <https://www.acoempracguides.org/Knee; Table 2, Summary of Recommendations, Knee Disorders>.

**MAXIMUS guideline:** The Expert Reviewer did not base their decision on the MTUS. Decision based on Non-MTUS Citation Cold/heat packs.?([http://www.worklossdatainstitute.verioiponly.com/odgtwc/low\\_back.htm#SPECT](http://www.worklossdatainstitute.verioiponly.com/odgtwc/low_back.htm#SPECT)).

**Decision rationale:** According to ODG guidelines, cold therapy is Recommended as an option for acute pain. At-home local applications of cold packs in first few days of acute complaint; thereafter, applications of heat packs or cold packs. (Bigos, 1999) (Airaksinen, 2003) (Bleakley, 2004) (Hubbard, 2004) Continuous low-level heat wrap therapy is superior to both acetaminophen and ibuprofen for treating low back pain. (Nadler 2003) The evidence for the application of cold treatment to low-back pain is more limited than heat therapy, with only three poor quality studies located that support its use, but studies confirm that it may be a low risk low cost option. (French-Cochrane, 2006) There is minimal evidence supporting the use of cold therapy, but heat therapy has been found to be helpful for pain reduction and return to normal function. (Kinkade, 2007) See also Heat therapy; Biofreeze cryotherapy gel. There is no evidence to support the efficacy of hot and cold therapy in this patient. There is not enough documentation relevant to the patient's left knee surgery (scheduled for August 13, 2014) to determine the medical necessity for cold therapy. There is no controlled studies supporting the use of hot/cold therapy in knee post-op pain beyond 7 days after surgery. Therefore, the request for Cold Therapy Unit Rental for 2 weeks for Left Knee as outpatient is not medically necessary.

**CPM Machine Rental for 2 weeks for Left Knee as outpatient:** Upheld

**Claims Administrator guideline:** The Claims Administrator did not base their decision on the MTUS. Decision based on Non-MTUS Citation ACOEM - <https://www.acoempracguides.org/Knee; Table 2, Summary of Recommendations, Knee Disorders>.

**MAXIMUS guideline:** The Expert Reviewer did not base their decision on the MTUS. Decision based on Non-MTUS Citation Continuous passive motion (CPM)

**Decision rationale:** Recommended as indicated below, for in-hospital use, or for home use in patients at risk of a stiff knee, based on demonstrated compliance and measured improvements, but the beneficial effects over regular PT may be small. Routine home use of CPM has minimal benefit. Although research suggests that CPM should be implemented in the first rehabilitation phase after surgery, there is substantial debate about the duration of each session and the total period of CPM application. A Cochrane review on this topic concluded that short-term use of CPM leads to greater short-term range of motion. But in a recent RCT results indicated that routine use of prolonged CPM should be reconsidered, since neither long-term effects nor better functional performance was detected. The experimental group received CPM + PT in the home situation for 17 consecutive days after surgery, whereas the usual care group received the same treatment during the in-hospital phase (i.e. about four days), followed by PT alone (usual care) in the first two weeks after hospital discharge. (Lenssen, 2008) Continuous passive motion (CPM) combined with PT, may offer beneficial results compared to PT alone in the short-term rehabilitation following total knee arthroplasty. Results favoring CPM were found for the main comparison of CPM combined with physical therapy (PT) versus PT alone at end of treatment.

For the primary outcomes of interest, CPM combined with PT was found to statistically significantly increase active knee flexion and decrease length of stay. CPM was also found to decrease the need for post-operative manipulation. CPM did not significantly improve passive knee flexion and passive or active knee extension. (Milne-Cochrane, 2003) (Kirschner, 2004) (Brosseau, 2004) (Bennett, 2005) (Lanssen, 2006) Continuous passive motion can stimulate chondrocyte production of proteoglycan 4 (PRG4), a molecule found in synovial fluid with putative lubricating and chondroprotective properties. (Nugent-Derfus, 2006) A recent Cochrane review concluded that there is high-quality evidence that continuous passive motion increases passive knee flexion range of motion (mean difference 2 degrees) and active knee flexion range of motion (mean difference 3 degrees), but that these effects are too small to be clinically worthwhile, and there is low-quality evidence that continuous passive motion has no effect on length of hospital stay but reduces the need for manipulation under anaesthesia. (Harvey, 2010) The adjunctive home use of CPM may be an effective treatment option for patients at risk of knee flexion contractures, regardless of whether the patient is being treated as part of a worker's compensation claim or not. Recent literature suggests that routine home use of CPM has minimal benefit when combined with standard physical therapy, but studies conducted in a controlled hospital setting suggest that CPM can improve rehabilitation. (Dempsey, 2010). Criteria for the use of continuous passive motion devices: In the acute hospital setting, postoperative use may be considered medically necessary, for 4-10 consecutive days (no more than 21), for the following surgical procedures: (1) Total knee arthroplasty (revision and primary) (2) Anterior cruciate ligament reconstruction (if inpatient care) (3) Open reduction and internal fixation of tibial plateau or distal femur fractures involving the knee joint (BlueCross BlueShield, 2005) For home use, up to 17 days after surgery while patients at risk of a stiff knee are immobile or unable to bear weight: (1) Under conditions of low postoperative mobility or inability to comply with rehabilitation exercises following a total knee arthroplasty or revision; this may include patients with: (a) complex regional pain syndrome; (b) extensive arthrofibrosis or tendon fibrosis; or (c) physical, mental, or behavioral inability to participate in active physical therapy. (2) Revision total knee arthroplasty (TKA) would be a better indication than primary TKA, but either OK if #1 applies. That is no rationale behind the use of knee CPM. CPM is indicated in case of acute post op knee surgery or at home up to 17 days after surgery. There is no documentation that the patient is suffering from knee condition requiring CPM. Therefore, the request for CPM Machine Rental for 2 weeks for Left Knee as outpatient is not medically necessary.