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IRO CASE #: XXXX

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE: mechanical DVT prophylaxis

A DESCRIPTION OF THE QUALIFICATIONS FOR EACH PHYSICIAN OR OTHER HEALTH CARE PROVIDER WHO REVIEWED THE DECISION:

MD, Board Certified Orthopedic Surgery

REVIEW OUTCOME:

Upon independent review, the reviewer finds that the previous adverse determination/adverse determinations should be:

X	Upheld	(Agree)
☐	Overturned	(Disagree)
☐	Partially Overturned	(Agree in part/Disagree in part)

Provide a description of the review outcome that clearly states whether medical necessity exists for each of the health care services in dispute.

PATIENT CLINICAL HISTORY [SUMMARY]:

The patient is a XXXX whose date of injury is XXXX. The patient fell XXXX. The patient had four prior right knee surgeries including a patellofemoral joint replacement in XXXX. The patient had an eventual diagnosis of right knee posttraumatic degenerative joint disease with partial knee replacement. CT of the right knee dated XXXX revealed unicompartmental patellofemoral arthroplasty with no CT evidence of complications, any fluid collections or osteolytic lesions, no acute fracture or dislocation. Office visit note dated XXXX indicates that the patient presents with right knee pain, instability and limited function. Treatment to date includes surgical intervention, activity modification, medication management, bracing and therapy. Current medication is Ultram. On physical examination gait is antalgic. There is no varus or valgus deformity. McMurray's is positive. Lachman's, anterior and posterior drawer are negative. Sensation is intact. The patient was recommended for total knee replacement surgery with postoperative DME including walker, quad cane, 3 in 1 commode, and postoperative mechanical DVT prophylaxis as well as postoperative therapy. The initial request was non-certified noting that the patient does not meet guideline criteria for total knee replacement. As such, DVT prophylaxis is not indicated. The denial was upheld on appeal noting that there does not appear to be additional documentation submitted to support the request. The request remains noncertified. According to the guidelines, the use of short-term mechanical thromboprophylaxis is recommended for moderate-to-high risk surgical and hospitalized individuals. There is no mention in the medical records

of the claimant having any risk for deep vein thrombosis. Also, the additional request for knee surgery is not medically supported. The appeal request for mechanical deep vein thrombosis prophylaxis is noncertified.

ANALYSIS AND EXPLANATION OF THE DECISION INCLUDE CLINICAL BASIS, FINDINGS, AND CONCLUSIONS USED TO SUPPORT THE DECISION:

Based on the clinical information provided, the request for mechanical DVT prophylaxis is not recommended as medically necessary. The previous denials were based on the fact that the request is for postoperative mechanical DVT prophylaxis, and the requested surgery had been non-certified. There is no indication that the patient has been authorized for surgery or undergone surgery. Therefore, postoperative DVT prophylaxis is non-certified. Additionally, there is no indication that the patient is at high risk of developing DVT. Therefore, medical necessity is not established in accordance with current evidence based guidelines.

A DESCRIPTION AND THE SOURCE OF THE SCREENING CRITERIA OR OTHER CLINICAL BASIS USED TO MAKE THE DECISION:

X MEDICAL JUDGEMENT, CLINICAL EXPERIENCE, AND EXPERTISE IN ACCORDANCE WITH ACCEPTED MEDICAL STANDARDS

X ODG- OFFICIAL DISABILITY GUIDELINES & TREATMENT GUIDELINES

Official Disability Guidelines Treatment Index, 22nd edition online, 2017-Knee and Leg Chapter updated 11/15/17

Intermittent pneumatic compression devices
Recommended for short-term mechanical thromboprophylaxis for moderate- to high-risk perioperative surgical and hospitalized patients, especially following lower extremity trauma. Best practices involve use of simple, practical, and inexpensive lower leg-only devices, combined with pharmacological thromboprophylaxis when medically feasible. Although mechanical methods do reduce the risk of deep vein thrombosis [DVT], there is no evidence that they reduce the main threats, pulmonary embolism [PE], fatal PE, or total mortality. In contrast, pharmacological methods significantly reduce all of these outcomes. Not recommended for home use due to a lack of quality evidence, associated counter-productive immobilization, and patient non-compliance issues. See also Venous thrombosis, Compression garments and Vasopneumatic devices.
An intermittent pneumatic compression device (IPCD) is also referred to as a standard pneumatic compression device (SPCD) or a sequential compression device (SCD). This device is different from a lymphedema pump, also called an advanced pneumatic compression device (APCD), which is a more complex, durable, and expensive adjunct specifically designed for long-term home use. The distinction between standard devices for the prevention of DVT and complex devices for the treatment of chronic lymphedema are reflected in different billing codes, which should be appropriately used depending on prophylactic vs. chronic treatment indications (e.g., E0676 vs. E0650, E0651, and E0652). A Cochrane systematic review (SR) of 22 trials (9137 participants) showed moderate quality evidence for combining IPCD and pharmacological prophylaxis, as compared to each alone; these results support most current guideline recommendations for the use of combined modalities in hospitalized patients, limited to patients with trauma or undergoing surgery. Evidence is also consistent that while symptomatic DVT has been reduced with IPCD alone, only anticoagulation or combined approaches have actually decreased the incidence of PE. (Kakkos, 2016) These findings are further supported by another meta-analysis (MA) of 16,164 hospitalized patients (70 trials) where IPCD was more effective than either no device use or compression stockings in reducing DVT incidence, with combined pharmacological

thromboprophylaxis further reducing risk. (Ho, 2013) An MA of 9 studies and another SR of 14 RCTs both concluded that IPCD alone and chemoprophylaxis alone were equally effective but that a combined approach was superior for higher-risk surgical patients. (O'Connell, 2016) (Pavon, 2016) IPCDs have also been shown to be effective and inexpensive for DVT prophylaxis and improved survival in a large multi-center trial of hospitalized stroke patients. (Dennis, 2015)

Since current evidence guiding specific device selection remains limited, it has been suggested that flexibility and acceptance by nursing staff and patients, as well as costs, should be considered. Compliance with IPCDs has been problematic. An MA of 7 studies revealed 25% nonadherence during hospitalization with IPCDs. (Craigie, 2015) While home use of IPCDs still lacks any compelling evidence in the literature, it must be assumed that compliance would be even worse without nursing oversight. Different types of IPCDs for prevention of DVT after total hip replacement lack quality evidence due to a high bias risk, according to another SR. Making an informed selection regarding specific devices remains difficult due to differing compression garments, location of air bladders, patterns of pump pressure cycles, compression profiles, cycle length, duration of inflation/deflation times, and cycling modes. (Zhao, 2014) An RCT with and without a foot pump device in combination with anticoagulation failed to demonstrate any difference between groups regarding DVT incidence for total knee arthroplasty patients. (Sakai, 2016) This finding suggests that leg compression devices are preferable to foot-only models. Thigh/leg devices are more difficult to use, and there are no studies showing any superiority over standard leg models. Upon discharge from healthcare facilities, use of chemoprophylaxis alone for high-risk patients is best supported by existing evidence, unless medically contraindicated.