

<b>Case Number:</b>	CM14-0075705		
<b>Date Assigned:</b>	07/16/2014	<b>Date of Injury:</b>	02/23/2007
<b>Decision Date:</b>	08/22/2014	<b>UR Denial Date:</b>	05/06/2014
<b>Priority:</b>	Standard	<b>Application Received:</b>	05/23/2014

### 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. The expert reviewer is Board Certified in Occupational Medicine and is licensed to practice in California. 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/services. He/she is familiar with governing laws and regulations, including the strength of evidence hierarchy that applies to Independent Medical Review determinations.

### 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 claimant was injured on 02/23/07. A Q Tech Deep Vein Thrombosis (DVT) prevention system for postop use for 21 days is under review. She underwent left shoulder arthroscopic subacromial decompression and distal clavicle resection on 02/27/14. This Durable Medical Equipment (DME) was prescribed. This is a retrospective request. Following her surgery the claimant attended postop physical therapy. She has a history of diabetes mellitus type 2 and hypertension, 2 C-sections and gallbladder surgery. She saw [REDACTED] on 04/15/14. Other medical problems that she has had include gastritis and insomnia. There is no documentation of any medical conditions that place her at high risk of DVT.

### IMR ISSUES, DECISIONS AND RATIONALES

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

**DME Q Tech DVT Prevention System:** Upheld

**Claims Administrator guideline:** The Claims Administrator did not base their decision on the MTUS. Decision based on Non-MTUS Citation Official Disability Guidelines, shoulder Chapter.

**MAXIMUS guideline:** The Expert Reviewer did not base their decision on the MTUS. Decision based on Non-MTUS Citation Official Disability Guidelines (ODG), Shoulder, Venous Thrombosis.

**Decision rationale:** The history and documentation do not objectively support the request for a Q Tech DVT Prevention system for 21 days postoperatively following shoulder surgery. The ODG state recommend monitoring risk of perioperative thromboembolic complications in both the acute and subacute postoperative periods for possible treatment, and identifying subjects who are at a high risk of developing venous thrombosis and providing prophylactic measures such as consideration for anticoagulation therapy. In the shoulder, risk is lower than in the knee and depends on: (1) invasiveness of the surgery (uncomplicated shoulder arthroscopy would be low risk but arthroplasty would be higher risk); (2) the postoperative immobilization period; & (3) use of central venous catheters. Upper extremity deep vein thrombosis (UEDVT) may go undetected since the problem is generally asymptomatic. The incidence of UEDVT is much less than that of the lower extremity DVT possibly because: (a) fewer, smaller valves are present in the veins of the upper extremity, (b) bedridden patients generally have less cessation of arm movements as compared to leg movements, (c) less hydrostatic pressure in the arms, & (d) increased fibrinolytic activity that has been seen in the endothelium of the upper arm as compared to the lower arm. It is recommended to treat patients of asymptomatic mild UEDVT with anticoagulation alone and patients of severe or extensive UEDVT with motorized mechanical devices in conjunction with pharmacological thrombolysis, without delay beyond 10-14 days. Upper extremity DVT is much less studied compared to lower extremity DVT and the diagnostic and therapeutic modalities still have substantial areas that need to be studied. (Saseedharan, 2012) Although it is generally believed that venous thromboembolism (VTE) after shoulder surgery is very rare, there are increasing reports of deep venous thrombosis (DVT) and pulmonary embolism (PE) associated with shoulder surgery. (Ojike, 2011) Deep vein thrombosis (DVT) has an incidence of 1 case per 1000 and it is very rare after arthroscopy of the shoulder. The administration of DVT prophylaxis is not generally recommended in shoulder arthroscopy procedures. (Garofalo, 2010) On the other hand, the prevalence of DVT after reconstructive shoulder arthroplasty was 13%, compared to 27% after knee arthroplasty. (Willis, 2009) While the absolute rate of upper extremity deep vein thrombosis is low, the incidence is increasing due to more widespread use of peripherally inserted central venous catheters, according to a recent systematic review. A diagnostic algorithm using a clinical prediction score, D-dimer testing, and ultrasound can predict upper extremity deep vein thrombosis. The scoring system gives one point each for presence of venous material (such as a catheter), localized pain, and unilateral pitting edema, and subtracts one point if there is a plausible alternative diagnosis. For patients who score one point or less, the initial test of the algorithm is a serum D-dimer which if negative can rule out DVT. If the D-dimer is elevated, then a compression ultrasound is done. For patients with a score of 2 or 3, the algorithm starts with a compression ultrasound. If that is positive, DVT is diagnosed, but if negative, a D-dimer test is also obtained to confirm the absence of DVT. (Chopra, 2013). These criteria have not been met as increased risk of DVT has not been identified from the claimant's history or based on the procedure that was done. There is no clear documentation that a central venous catheter was used but the anesthesia report is largely illegible. The ODG indicate there is some increase risk of DVT following shoulder surgery, but it is not as great as following lower extremity surgery. There is no documentation that a clinical algorithm was used preoperatively or perioperatively to assess the claimant's risk level. The claimant's history does not include possible risk factors and there is no documentation during the postop period of any specific concern for thrombosis. In this case, the medical necessity of the DME Q Tech DVT Prevention System has not been clearly demonstrated.