

## **Prevention of Hospital Acquired Deep Venous Thrombosis and Pulmonary Embolism March 2011**

Under the Northeast Health Care Quality Foundation's (NHCQF's) current contracts as the Medicare QIO for the States of Maine, New Hampshire and Vermont, our work with providers to improve the quality of health care affords us the opportunity to observe quality improvement activities of various providers which may be interesting to and beneficial for others. The process described below for preventing hospital acquired deep venous thrombosis (DVT) and pulmonary embolism was developed by Lakes Region General Hospital (LRGH) in Laconia, New Hampshire and NHCQF has their permission to share this process with other providers.

LRGH developed a physician DVT Prophylaxis Order Sheet to ensure that physicians are appropriately "risk assessing" their patients and placing them on the appropriate DVT prophylaxis. Physicians and staff were educated on the use of the form. Order sets were also developed for top diagnoses and procedures with the DVT prophylaxis orders integrated into the order sets. The hospital is implementing an electronic medical record which will include the DVT prophylaxis on all adult order sets.

The hospital has also implemented concurrent review and follow up by quality review nurses on surgical cases to ensure compliance with CMS quality measures for surgical indicators regarding DVT prophylaxis.

Follow up random monitoring has shown 100% compliance with pharmacological prophylaxis unless the patient was at low risk for DVT or had a contraindication to pharmacological prophylaxis. Low risk or contraindications were adequately documented by physicians. Ongoing monitoring is planned to ensure continued compliance.

A copy of the Order Sheet follows this narrative.

**LRGHealthcare**

- LRGH
- FRH

**VTE Prophylaxis Order Sheet**

Date/Time

ALLERGIES: \_\_\_\_\_

**VTE Prophylaxis Order Sheet**  
(see scoring system on reverse side)

**\* Platelets < 100K, and /or hepatic disease are relative contraindications for pharmacologic prophylaxis.**

**For patients at risk of VTE, please order one of the following:**

- Heparin 5,000 units Sub Q q 12 hrs
- Heparin 5,000 units SubQ q 8 hrs
- Enoxaparin 40 mg SubQ daily
- Enoxaparin 30 mg SubQ daily (Est. CrCl < 30 mL/min)

**SCDs should only be used when there is a direct contraindication to pharmacologic prophylaxis such as a high risk of bleeding**

- Sequential compression device: \_\_\_\_\_
- Other: \_\_\_\_\_
- No VTE prophylaxis required due to \_\_\_\_\_
- Patient is therapeutic on Warfarin
- Patient is ambulatory
- Other: \_\_\_\_\_

Physician Signature

Physician Print Name

RN Signature

# VTE Risk Factors

## RISK FACTORS – 1 POINT EACH

- Age 41 – 60 years
- Minor surgery planned
- History of prior major surgery (< 1 month)
- Varicose veins
- History of inflammatory bowel disease
- Swollen legs (current)
- Obesity (BMI > 25 kg/m<sup>2</sup>)
- Acute myocardial infarction
- Congestive heart failure (< 1 month)
- Sepsis (< 1 month)
- Serious lung disease including pneumonia (< 1 month)
- Abnormal pulmonary function (COPD)
- Medical patient currently at bed rest
- Oral contraceptives or hormone replacement therapy
- Pregnancy or postpartum (< 1 month)
- History of unexplained stillborn infant, recurrent spontaneous abortion (≥3), premature birth with toxemia, or growth-restricted infant
- Other \_\_\_\_\_

## RISK FACTORS – 3 POINTS EACH

- Age ≥ 75 years
- History of DVT/PE
- Family history of thrombosis
- Positive factor V Leiden
- Positive prothrombin 20210A
- Elevated serum homocysteine
- Positive lupus anticoagulant
- Elevated anticardiolipin antibodies
- Heparin-induced thrombocytopenia (HIT)
- Other congenital or acquired thrombophilia \_\_\_\_\_

## RISK FACTORS – 5 POINTS EACH

- Elective major lower extremity arthroplasty
- Hip, pelvis, or leg fracture (< 1 month)
- Stroke (< 1 month)
- Multiple trauma (< 1 month)
- Acute spinal cord injury (paralysis) (< 1 month)

## RISK FACTORS – 2 POINTS EACH

- Age 60 – 74 years
- Arthroscopic surgery
- Malignancy (present or previous)
- Major surgery (> 45 minutes)
- Laparoscopic surgery (> 45 minutes)
- Patient confined to bed (> 72 hours)
- Immobilizing plaster cast (< 1 month)
- Central venous access

## DVT PROPHYLAXIS PRECAUTIONS

- Active bleeding
- History of HIT
- Platelet count < 100,000/mm<sup>3</sup>
- Concurrent oral anticoagulants
- Abnormal creatinine clearance

## TOTAL RISK

## RISK LEVEL

## INCIDENCE OF DVT

0-1

Low

<10%

2

Moderate

10% - 20%

3-4

High

20% - 40%

≥5

Highest

40% - 80%