

## UMHHC Policy 07-01-050

# Venous Thromboembolism Risk Assessment and Prophylaxis

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### I. POLICY STATEMENT

It is the policy of the University of Michigan Health System that all adult patients (age  $\geq$  18 years) will be assessed for venous thromboembolism (VTE) risk upon admission to the hospital, at key transitions in care, and that appropriate interventions will be used to prevent VTE.

### II. POLICY PURPOSE

The purpose of this policy is to facilitate provider decision making related to VTE prophylaxis based on the combination of individual patients' risk factors and contraindications.

### III. DEFINITIONS

**A. Deep Vein Thrombosis (DVT)** - Formation of a blood clot (thrombus) in one or more deep veins

**B. Pulmonary Embolism (PE)** - A blood clot (thrombus) in the main pulmonary artery or one of its branches that has travelled in the bloodstream, usually from an existing DVT.

**C. Venous Thromboembolism (VTE)** - VTE includes both deep vein thrombosis (DVT) and pulmonary embolism (PE).

**D. Provider** - Physicians and non-physician professional personnel recognized as authorized signers of patient care orders according to [UMHHC Policy 62-10-003](#).

**E. VTE Prophylaxis** - VTE prophylaxis includes both pharmacologic and mechanical methods (e.g. sequential compression devices) to prevent VTE from developing in at-risk patients.

**F. Key Transitions in Care** - Key transitions in care include transfers to/from intensive care settings, changes of service, postoperatively or post-interventional procedure. In addition VTE risk assessment is to occur at transfer from observation status to inpatient status.

### IV. POLICY STANDARDS AND PROCEDURES

#### A. Initial VTE Risk Assessment & Prophylaxis Orders:

1. Within 24 hours of inpatient admission, all hospitalized adult patients must be assessed for level of VTE risk and/or contraindications for VTE prophylaxis using the [Hospital-Approved VTE Risk Assessment Tool](#). (Exhibit A)
2. It is the responsibility of the provider placing admission orders to ensure that VTE risk assessment is completed and documented within the medical record.
3. The risk assessment tool is meant to be a guide and is not a substitute for provider judgment regarding individual patient care. It is the provider's discretion whether or not to

prescribe VTE prophylaxis, but any deviation from the hospital-approved treatment standards in VTE prophylaxis orders must include documentation of rationale in the medical record.

4. All patients will receive orders for VTE prophylaxis according to hospital-approved treatment standards based upon the patient's individual level of VTE risk as documented on the VTE risk assessment tool (or according to service specific guidelines preapproved by the VTE Committee) unless there are documented contraindications

5. All contraindications to VTE prophylaxis will be documented in the medical record. If contraindications to VTE chemoprophylaxis exist, alternative mechanical methods (i.e. sequential compression devices) will be ordered.

6. Contraindications will be reassessed at 24-48 hour intervals with documentation of whether the contraindication is still present and whether the selected contraindication outweighs the risk of VTE prophylaxis.

7. In instances where a pre-operative VTE risk assessment has been performed within 30 days prior to surgery, it is the responsibility of the primary service to review this assessment and either confirm the accuracy or modify the assessment as required based on reassessment of patient's individual VTE risk

#### **B. Repeat VTE Risk Assessment:**

1. Repeat VTE risk assessment will occur at key transitions as previously defined.

#### **C. Administration of VTE Prophylaxis:**

1. Preoperative VTE Prophylaxis

a. For the purposes of this policy, all preoperative doses of subcutaneous heparin will be administered by anesthesia at the time of induction.

2. Inpatient VTE Prophylaxis

a. As per UMHC Policy 07-01-001, when it is not possible to administer a dose as ordered, rationale will be documented in the electronic medication administration record (eMAR). See [Medication Administration Policy](#).

b. If a patient refuses prophylaxis, patient education should be provided by the appropriate healthcare provider. The prescriber should always be contacted when a patient is unable or unwilling to take a prescribed medication or mechanical device so that alternative interventions can be considered per [UMHC Nursing Medication Administration Policy](#). Patient education should include:

1) The rationale for the intervention(s) (i.e. preventing clot formation)

2) The need for multiple intervention modalities to minimize VTE risk (e.g. sequential compression devices, heparin, etc.).

#### **D. Monitoring:**

1. For baseline and ongoing laboratory monitoring recommendations, please see UMHHC Policy 07-01-051 [Inpatient Anticoagulation Monitoring Policy](#).

#### **E. Neuraxial Anesthesia/Analgesia (epidural/spinal)**

1. VTE thromboprophylaxis may need to be adjusted to accommodate patients with epidural, intrathecal, or peripheral nerve drug delivery in order to minimize hematoma formation.

2. Removal of an epidural catheter should occur when the anticoagulant effect of the thromboprophylaxis is at a minimum, and will be timed accordingly by the Acute Pain Service to avoid interruption of VTE prophylaxis

#### **F. Extended VTE Prophylaxis**

1. All patients undergoing total hip replacement, total knee replacement, or hip fracture surgery should receive VTE prophylaxis for at least 10 days following surgery with either low molecular weight heparin or vitamin K antagonist (i.e., warfarin) or oral factor Xa inhibitor (i.e., rivaroxaban).

a. It is recommended that patients undergoing total hip replacement, total knee replacement, or hip fracture surgery have prophylaxis extended beyond 10 days and up to 35 days following surgery.

b. While not required, when a vitamin K antagonist (i.e., warfarin) is used, clinicians may consider bridging patients with low molecular weight heparin until warfarin is therapeutic (Target INR 2.5, range 2.0 – 3.0).

2. While not required, surgical patients with active malignancy, prior history of venous thromboembolism, or known hypercoagulable state should be considered for extended VTE prophylaxis following discharge for up to 35 days.

3. Some postpartum patients are candidates for out-patient VTE prophylaxis at time of discharge. Please review [Risk Assessment Tool for Thrombo-Prophylaxis in Pregnancy](#)

#### **G. Michigan Visiting Nurses (MVN)**

1. MVN will follow the home care VTE risk assessment protocol to enhance VTE assessment and detect events early, referring when appropriate for further evaluation and additional care.

2. Medication assessment will include prescribed anticoagulants for the purposes of VTE prophylaxis and nurses will provide feedback to prescribers when lack of adherence is identified.

3. Calf assessment will be performed each day on all patients seen by MVN.

## VI. REFERENCES

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5. Caprini JA. Thrombosis risk assessment as a guide to quality patient care. *Dis Mon.* 2005;51):70-8.

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