Figure 4. VTE Prophylaxis Pathway

VENOUS THROMBOEMBOLISM (VTE) PROPHYLAXIS IN THE HOSPITALIZED MEDICAL PATIENT [1]

DVT-FREE Consensus Panel Guidelines and Recommendations

ALL PATIENTS SHOULD BE SCREENED AND CONSIDERED FOR VTE PROPHYLAXIS

RISK FACTOR ASSESSMENT

Does the patient have reduced mobility AND is at least one of the following VTE risk factors present?

[See Table 1]

NO → **PATIENT SHOULD BE REASSESSED DAILY FOR DEVELOPMENT OF VTE RISK FACTORS DURING HOSPITALIZATION**

YES

TABLE 1

VTE RISK FACTORS[2]

- Age > 40 years (VTE risk increases with advancing age)
- Intensive care unit (ICU) admission
- Prior history of VTE (DVT or PE)
- Obesity
- Ischemic (non-hemorrhagic) stroke
- Heart failure
- Chronic lung disease
- Respiratory failure
- Pneumonia
- Serious infection
- Malignancy
- Thrombophilia (hematological disorders that promote thrombosis)
- Active collagen-vascular disorder
- Inflammatory disorder (e.g., inflammatory bowel disease, etc.)
- Central venous line/catheter
- Varicose veins

This is a partial list of common risk factors. Clinicians are advised to consider other risk factors or conditions that may predispose to VTE.

PROPHYLAXIS MANAGEMENT

PROPHYLAXIS FOR VTE INDICATED

YES ← **VTE RISK FACTORS DEVELOP DURING HOSPITALIZATION**

EXCLUSION CRITERIA

Are possible exclusion criteria for pharmacologic (i.e. anticoagulant) prophylaxis present?

[See Table 2]

YES → **MECHANICAL MEASURES IN DICATED (i.e. INTERMITTENT PNEUMATIC COMPRESSION)**

NO

TABLE 2

POSSIBLE EXCLUSION CRITERIA FOR VTE PROPHYLAXIS

- Bleeding (active)
- Hypersensitivity to UFH or LMWH
- Uncontrolled hypertension
- Significant renal insufficiency (creatinine clearance <30ml/minute)[3]
- Coagulopathy
- Heparin-induced thrombocytopenia
- Recent intraocular or intracranial surgery[5]
- Spinal tap or epidural anesthesia within 24 hours

This is a list of possible exclusion criteria. Accordingly, clinicians are advised to consider other risk factors or conditions that, in the individual patient, may be relative or absolute contraindications for pharmacological prophylaxis.

PROPHYLAXIS GUIDELINES

ENOXAPARIN 40 mg SUBCUTANEOUSLY ONCE DAILY (PREFERRED PHARMACOLOGIC STRATEGY FOR VTE PROPHYLAXIS) TO BE ADMINISTERED UNTIL PATIENT'S CLINICAL STATUS WARRANTS DISCONTINUATION

OR

UNFRACTIONATED HEPARIN (UFH) 5000 IU SUBCUTANEOUSLY EVERY 8 HOURS[3,4] TO BE ADMINISTERED UNTIL PATIENT'S CLINICAL STATUS WARRANTS DISCONTINUATION

Clinical trials support use of pharmacological prophylaxis for about 7 to 12 days, although a shorter or longer duration of prophylaxis may be appropriate based on clinical factors or length of hospitalization.[6]

[1] Includes all in-hospital settings in which acutely ill medical patients are managed, among them — but not restricted to — the emergency department, observation units, intensive care unit, medical wards, and long-term care facilities.

[2] For more discussion about VTE risk factors in medical patients, please consult the American College of Chest Physicians (ACCP) Year 2001 Guidelines.

[3] UFH (unfractionated heparin) preferred for VTE prophylaxis in patients with renal failure, since clinical studies evaluating safety and efficacy of enoxaparin in VTE prophylaxis excluded patients with a creatinine clearance of < 30 ml/minute.

[4] Studies are available demonstrating comparable efficacy between enoxaparin 40 mg subQ once daily and UFH administered q 8 hours. There are no head-to-head VTE prophylaxis trials comparing UFH administered on a q 8-hour vs. q 12-hour basis. Although some institutions and clinicians administer UFH on a q 12-hour basis for VTE prophylaxis in medically ill patients, this may be less effective that the q 8-hour regimen. Therefore, clinicians are advised to use UFH on a q 8-hour basis. Further studies are warranted to clarify the optimal dosing regimen for UFH. Clinical judgment and individualization of patient circumstances are crucial when making decisions regarding prevention of VTE in medically ill patients.

[5] Studies evaluating the risk of hemorrhage associated with prophylaxis in patients with intracranial surgery are conflicting. ACCP guidelines recommend that, pending further information, caution should be exercised with routine, early use of LMWH in craniotomy patients.

[6] Length of pharmacologic prophylaxis should be evaluated and continuously reassessed according to persistence of VTE risk factors. In some cases pharmacologic prophylaxis may need to be continued in the post-hospitalization phase in other clinical environments (i.e., long-term care facility, skilled nursing facility, supervised home care, etc.).