

# Inpatient VTE Prevention Pathway Arnold Palmer Hospital for Children

## Risk Factors\*

- Cardiovascular compromise
- Inflammatory disease (SLE, IBD)
- Peds ICU admission
- Mechanical ventilation
- Mobility decreased from baseline
- Severe dehydration requiring intervention
- Systemic or severe local infection
- Major Trauma
- Orthopedic surgery
- Spine surgery
- Cancer (active, not in remission)
- Estrogen therapy received within past month
- Obesity (BMI >99th percentile)
- Protein losing disorders (nephrotic syndrome, protein losing enteropathy, draining Chylous effusion)
- Age ≥12 years or post-pubertal
- Anticipated hospitalization >72 hours
- Surgery >90 mins within previous 14 days (abdominal, Orthopedic, thoracic)
- Burns
- Sickle Cell disease

Total Score \_\_\_\_\_

- Low Risk    Moderate Risk    High Risk

**Inclusions:\***  
Anticipated LOS >24 hrs.  
> 1yr of age & ≤ 18 yrs. of age

**Exclusions:**  
NICU  
PICU  
Currently being treated for a DVT

Personal or 1<sup>st</sup> degree family history of unprovoked VTE (<40 yrs. of age) or severe thrombophilia+

YES

## Severe Thrombophilia+

- Antithrombin deficiency
- Homozygous Factor V Leiden mutation
- Homozygous prothrombin mutation
- Protein C deficiency
- Protein S deficiency
- Antiphospholipid Syndrome
- 2 or more Thrombophilia traits

NO

Central Venous Line (including PICC, Broviac, Mediport, Femoral/ Jugular Line?)

YES

NO

0-1 additional Risk factors

≥ 2 additional Risk factors

0-2 additional Risk factors

3 additional Risk factors

≥ 4 additional Risk factors

Moderate Risk  
Early Mobilization  
+  
Active Range of Motion  
+  
Mechanical Prophylaxis

High Risk  
Early mobilization  
Active range of motion  
Mechanical prophylaxis  
+pharmacologic prophylaxis (see dosing\*\*\*) if no contraindications  
Hematology Consult  
Physical Therapy consult for mobility screen and therapeutic exercise education.

Low Risk  
Early Mobilization  
+  
Active Range of Motion

Moderate Risk  
Early Mobilization  
+  
Active Range of Motion  
+  
Mechanical Prophylaxis

High Risk  
Early mobilization  
Active range of motion  
Mechanical prophylaxis  
+pharmacologic prophylaxis (see dosing\*\*\*) if no contraindications  
Hematology Consult  
Physical Therapy Consult for mobility screen and therapeutic exercise education

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Patient may have multiple risk factors that are offset by clinical judgement, pt. acuity level or family refusal. If question remains about whether or not to initiate prophylaxis, consult Hematology



\*Patients with cystic fibrosis often fall outside these guidelines so they will be assessed individually for their risk for VTE and treated appropriately\*

## CONTRAINDICATIONS TO PHARMACOLOGIC/MECHANICAL PROPHYLAXIS AND DOSING

### Contraindications to Anticoagulation

- Ongoing and uncontrolled bleeding
- Uncorrected coagulopathy
- Congenital bleeding disorder
- Intracranial hemorrhage
- Intracranial mass
- Acute large territorial arterial ischemic stroke
- Incomplete spinal cord injury with suspected or known paraspinal hematoma
- Known AVM, aneurysm, MoyaMoya
- Uncontrolled severe hypertension
- Epidural catheter or lumbar puncture in last 24 hrs
- Epidural (discuss with Anesthesia prior to initiating pharmacologic prophylaxis)
- Within 72hr of a neurosurgical procedure or TBI
- IV thrombolytic therapy in last 24 hrs
- Allergy to heparin or enoxaparin
- Heparin induced thrombocytopenia (current or historical)
- Platelet count <50,000/mcl
- Fibrinogen unable to be maintained >100 mg/dL
- Patient is likely to require an invasive procedure within 24 hours of starting enoxaparin

### Contraindications to Mechanical Prophylaxis

- Distal/peripheral IV access (i.e. IV in foot)
- Suspected or existing deep vein thrombosis (CAN use compression stockings-see extremity precautions procedure)
- Skin conditions affecting extremity (i.e. dermatitis, burn, etc.)
- Acute fracture- Ok to use device on unaffected extremity. Obtain orthopedics clearance prior to placing on same side of fracture
- No appropriate size pneumatic sequential compression device (SCD) available
- Lower extremity conditions which result in significant pain with compression (i.e. solid tumor, vaso-occlusive episode in sickle cell disease, etc.)
- Surgical or anesthesia contraindication to sequential compression during a procedure

Labs prior to the initiation of Lovenox  
CBC, PT, PTT, Fibrinogen, Creatinine

### \*\*\*Pharmacologic Prophylaxis Dosing

Enoxaparin (Lovenox®) Subcutaneous Injection

Enoxaparin Dosing <sup>#</sup>	
Age ≤2 months	0.75 mg/kg every 12 hrs
Age >2 months and weight <60 kg	0.5 mg/kg every 12 hrs (max 30 mg/dose)
Weight ≥60 kg	40 mg every 24 hrs or 30 mg every 12 hrs <sup>^</sup>

<sup>^</sup>Consider q12 hr dosing in post-surgical and trauma patients

For high risk post-operative patients, discuss with Surgery/Hematology

<sup>#</sup>For patients with renal dysfunction, discuss with Pharmacy/Hematology

### Dose Rounding

- Patients <10 kg: round to the nearest 0.1 mg
- Patients 10-40 kg: round to the nearest 1 mg
- Patients >40 kg: round to the nearest 10 mg

### Early Mobilization defined as:

Ages 3-5: physical activity throughout day goal of 180+ minutes of active play

Ages 6+: 60 minutes per day of activity; walking, stationary cycling.