UAB Trauma VTE Prophylaxis Guideline

Update 8-1-2024

Background: Trauma patients are at increased risk of forming DVT/PTE and all efforts should be made to ensure timely dosing of chemical DVT prophylaxis. The traditional process of chemical prophylaxis starting upon admission to the hospital and initiation of admission order sets results in potential for significant delays in the first dose of chemical prophylaxis being administered. In order to ensure timely first dosing is achieved; patients being admitted to the hospital will receive their first dose of chemical prophylaxis in the trauma bay unless the patient meets defined exclusion criteria.

While in the Trauma Bay:

-Dosing Protocol: Trauma patients being admitted to the hospital should receive *30mg Lovenox prior to leaving the trauma bay*.

-Residents, upon completing film review and determining patient disposition with the on-call trauma attending, will place an admission order and now dose order for 30mg Lovenox.

-The order for DVT prophylaxis should be directly communicated to the bedside nurse. The bedside nurse should ensure the patient receives their Lovenox prior to leaving the trauma bay for admission.

-Exclusion Criteria: The subgroup of patients that *should not* receive an initial dose of lovenox:

1. Any intracranial hemorrhage on Head CT (see below under "Special Situations" for recommended time periods for chemoprophylaxis initiation)
2. Patients with acute spine fractures until deemed non-operative
3. Patients with acute intraocular hemorrhage until cleared by ophthalmology
3. Patients going to OR or IR as level 1 case for concern of active hemorrhage
4. Platelet count <50K or on therapeutic anticoagulation evidenced by INR or anti-Xa

*******High grade solid organ injury ***is not*** a contraindication for chemical VTE prophylaxis

ICU/Step Down/Floor Management:

-All patients should receive sequential compression devices at all times unless contraindicated

-Early mobilization, including range of motion exercises with physical therapy when ambulation is not possible, should be achieved for all patients

Standard Chemoprophylaxis Dosing Protocol:

- The preferred agent for prophylaxis will be Lovenox via a BID dosing strategy using a weight based scale (see below). Patients with a creatinine clearance at or below 30 should receive Heparin.

- Trauma[14]

Weight range	Dose recommendation
< 84.9 kg	30 mg BID
85 – 108.9 kg	40 mg BID
109 – 133.9 kg	50 mg BID
> 134 kg	60 mg BID

Based on approximate dose of 0.41 mg/kg (range 0.35 to 0.47 mg/kg). Patients < 50 kg may need alternative dosing

- modifications of dosing will be made based on trough Xa levels (drawn 12H after the dose) of 0.1 – 0.2 units/mL
- The trauma bay dose of Lovenox is documented in the MAR. Inpatient dosing of lovenox is given at 09:00 and 21:00. For patients that receive an appropriate dose of lovenox in the trauma bay within 6 hours of the bid dosing time, pharmacy will hold the next inpatient dose.

Monitoring:

- While patients are admitted to the hospital, routine anti-Xa levels will be monitored for patients receiving Lovenox and adjustments may be made in conjugation with pharmacy staff.
- If patient does not have appropriate anti-Xa level after two dose adjustments, antithrombin III level should be ordered as patient may require alternative chemoprophylaxis strategy.

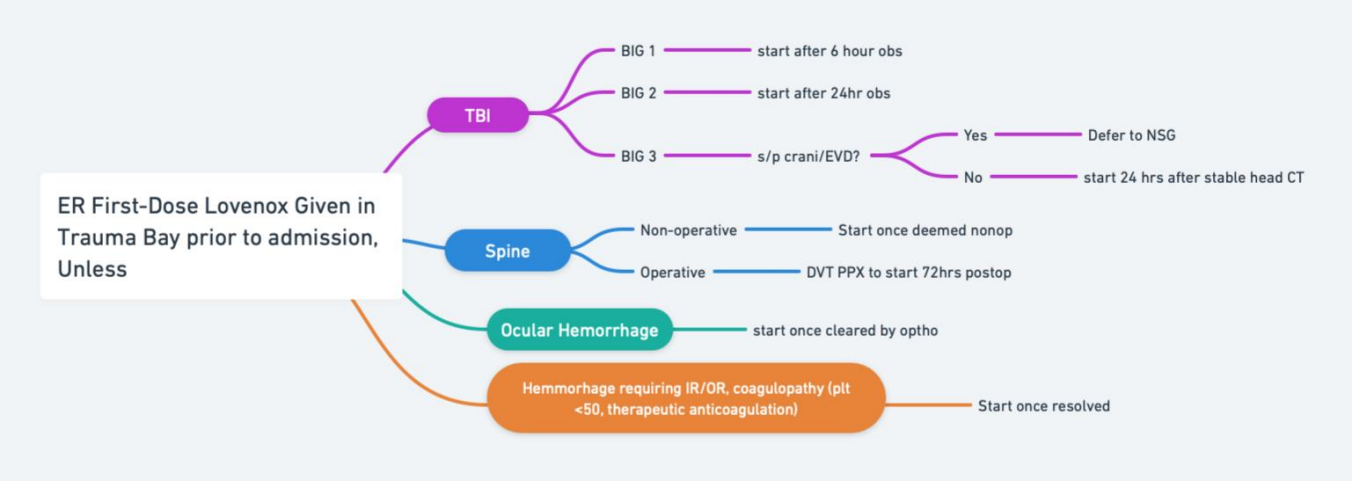
Special Situations:

- **Traumatic Brain Injury:** Traumatic brain injuries are associated with an inherent coagulopathy that impacts a patient's risk for VTE. Expansion of intracranial bleeds can be associated with need for increased neurosurgical procedures; however, there remains a paucity of prospective data assessing the optimal timing of chemoprophylaxis.
  - BIG1/2: Initiate Lovenox after 6-hour observation period in BIG1 and after 24-hour observation period in BIG2
  - BIG3: Initiate Lovenox 24 hours from stable head CT unless otherwise specified by neurosurgical attending.
    - Exceptions: patients s/p craniotomy, patients with EVD in place.
    - Patients for whom neurosurgery has recommended once daily prophylaxis, will receive lovenox 40mg QD
- **Spinal Injuries:** Spinal cord injury is a well-documented risk factor for VTE. Data suggests that early initiation of chemoprophylaxis is safe and decreases rate of VTE; however, optimal timing of initiation has yet to be defined.
  - Nonoperative injuries to receive standard prophylaxis.
  - If spinal injury requires operation, Lovenox will be initiated 72 hours following operative intervention unless otherwise specified by spine attending.
- **Prophylactic IVC Filter:** The routine use of prophylactic IVC filters is not recommended for VTE prevention. However, consideration for a retrievable IVC filter in high-risk patients who cannot receive chemoprophylaxis due to ongoing life-threatening

hemorrhage or severe TBI may be considered and removed as soon as patients can tolerate chemoprophylaxis.

Discharge:

- Orthopedic Trauma DVT Prophylaxis Guidelines
    - Upper Extremity Injuries: (Scapula, Humerus, Forearm, Wrist): 2 Weeks of ASA 81mg bid
    - Bilateral lower extremities non-weight bearing: 12 Weeks of ASA 81mg bid
    - Unilateral lower extremity non-weight bearing: 6 Weeks of ASA 81mg bid


ER First-Dose Lovenox Given in Trauma Bay prior to admission, Unless
TBI
BIG 1
start after 6 hour obs
BIG 2
start after 24hr obs
BIG 3
s/p crani/EVD?
Yes
Defer to NSG
No
start 24 hrs after stable head CT
Spine
Non-operative
Start once deemed nonop
Operative
DVT PPX to start 72hrs postop
Ocular Hemorrhage
start once cleared by optho
Hemmorhage requiring IR/OR, coagulopathy (plt <50, therapeutic anticoagulation)
Start once resolved