

## First Dose Chemical DVT Prophylaxis Protocol

**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 Quality Improvement review of inpatient DVT/PTE cases, we have identified delays in first dosing to be an opportunity for improvement. 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.

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

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

1. Any intracranial hemorrhage on Head CT
2. Patients with acute spine fractures until deemed non-operative
3. Patients going to OR or IR as level 1 case
4. Patients with platelet count <50K or on therapeutic anticoagulation evidenced by INR or anti-Xa

**Note:** High grade solid organ injury is not a contra-indication for initiation of chemical DVT prophylaxis.

**Implementation:** 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.

**Additional Inpatient Information:** The trauma bay dose of Lovenox is documented in the MAR. Inpatient dosing of lovenox is bid and 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 .

The inpatient dosing of chemical DVT prophylaxis is determined by creatinine clearance and patient weight. Patients with a creatinine clearance >30 should receive the following dose of lovenox bid.

Weight Range:

<84.9 kg	30mg Lovenox
85kg-108.9 kg	40mg Lovenox
109-133.9 kg	50mg Lovenox
>134 kg	60mg Lovenox

Trauma patients with a creatinine clearance <30 should receive 5000 units of subcutaneous heparin tid.

**References:**

Bellal et al. Is early chemical thromboprophylaxis in patients with solid organ injury a solid decision? J Trauma 2019 Nov; 87(5): 1104-1112

Martin et al. Updated guidelines to reduce venous thromboembolism in trauma patients: A Western Trauma Association critical decisions algorithm. J Trauma Nov 2020; 89(5): 971-981