

# Anticoagulation and VTE Prophylaxis for Hospitalized COVID-19 Patients, Pregnancy Considerations

All hospitalized pregnant COVID-19 + Patients ≥ 18 years old admitted to the hospital should receive DVT prophylaxis unless contraindicated

Is the patient in active labor?

Yes

Sequential Compression Device (SCD) until delivery and low risk of post-partum bleeding

No

**Intermediate Risk = High Intensity Thromboembolic Prophylaxis**

Recommend if ANY of the following:

- Admitted to an ICU
- High-flow nasal oxygen
- BMI ≥ 40 kg/m<sup>2</sup> while pregnant
- BMI ≥ 30 kg/m<sup>2</sup> post-partum
- Rapidly increasing D-dimer
- ECMO

**High Risk = Therapeutic Anticoagulation**

Recommend if ANY of the following:

- Continuation of home therapy
- Evidence of new DVT or PE
- High clinical suspicion for DVT/PE, but objective evidence cannot be obtained

Consider if ANY of the following:

- Renal failure on RRT with repetitive clotting of circuit (2 circuits in 24 hours)
- Persistently elevated D-dimer without clinical improvement

**Low Risk = Standard Thromboembolic Prophylaxis**

- All patients who do NOT have a clear indication for full dose/therapeutic anticoagulation, AND do not meet criteria for "Intermediate Risk" group

**For pts with CrCl ≥ 30mL/min:**  
Enoxaparin 40mg Qday  
No monitoring necessary

**For CrCl <30 ml/min and no IHD:**  
Enoxaparin 30mg Qday  
Monitoring: Anti-Xa, goal peak 0.2-0.5 IU/mL

**For CrCl <30 ml/min WITH IHD:**  
UFH 5000 units q 8 hrs  
No monitoring necessary

**Post Discharge:**  
Consider ASA 81mg or prophylactic dose LMWH for 14 days if post-partum

**Non-ECMO:**

**CrCl ≥ 30mL/min:**  
Enoxaparin 0.5mg/kg BID (min dose 40 BID, max dose 80 BID)  
Consider Monitoring: Anti-Xa, goal peak 0.2-0.5 IU/mL  
Wt >160 kg: Consider therapeutic enoxaparin vs UFH infusion  
Monitoring: hPTT 60-80 sec if UFH infusion

**For CrCl <30 ml/min and no IHD:**  
BMI ≤ 40: Enoxaparin 30mg Qday  
BMI > 40: Enoxaparin 40mg Qday  
Monitoring: Anti-Xa, goal peak 0.2-0.5 IU/mL

**For CrCl <30 ml/min WITH IHD:**  
BMI ≤ 40: UFH 5000 units q 8 hrs  
BMI > 40 or Wt >100kg: 7500 units q 8 hrs  
No monitoring necessary

*Consider ASA 81mg daily for all patients in this category if bleeding risk low*

**ECMO:**  
Per CVICU routine

**Post Cannulation:**  
Consider surveillance imaging or scanning for VTE if clinically stable

**\*Post Discharge:**  
LMWH for 14 days  
Consider DOAC if post-partum AND no plans for breastfeeding

**CrCl ≥ 30mL/min:**  
Enoxaparin 1 mg/kg BID (max dose 180 BID)  
Monitoring: Anti-Xa, goal peak 0.6-1.2 IU/mL  
**OR** UFH infusion  
Monitoring: hPTT 90-130s +/- bolus

**CrCl < 30mL/min, unstable renal fxn and/or high risk for bleeding:**  
UFH infusion  
Monitoring: hPTT 90-130s +/- bolus

*Consider ASA 81mg daily for all patients in this category if bleeding risk low*

**\*Post Discharge:**  
If known VTE: LMWH or warfarin based off clinical factors and insurance. Duration determined by indication  
If NO known VTE: LMWH for 14 days  
Consider DOAC if post-partum AND no plans for breastfeeding

**Recommendations for monitoring**

**Admission labs:**

- See ID work-up guidance algorithm
- D-dimer

**Ongoing surveillance if in Intermediate or High Risk group or change in clinical status:**

- D-dimer every 48 hours until down trending
- Daily CBC and platelet count, if plts <100, evaluate for DIC (fibrinogen, PT, aPTT) and modify intensity if s/sx of bleeding

\*For patients being discharged on DOAC or LMWH, will need to f/u with discharge pharmacy and med-access teams  
If patient is un-insured, consider ASA 325 mg vs coupon card for DOAC

UFH = Unfractionated Heparin  
LMWH = Low Molecular Weight Heparin  
DOAC = Direct Acting Oral Anticoagulant  
VTE = Venous Thromboembolism  
IHD = Intermittent Hemodialysis