# 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

**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

**Intermediate Risk = High Intensity Thromboembolic Prophylaxis**

Recommend if ANY of the following:
- Admitted to an ICU
- High-flow nasal oxygen
- BMI ≥ 40 kg/m2 while pregnant
- BMI ≥30 kg/m2 post-partum
- Rapidly increasing D-dimer
- ECMO

**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

**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

**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