

# COVID-19 PUI/Positive Patients: Anticoagulation Management at LBH

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**All patients** receive anticoagulation, unless bleeding contraindications - thoroughly consider and factor into the decision-making a patient's bleeding risk factors

## Therapeutic Anticoagulation

### Full-intensity

- Confirmed DVT or PE or other established reason for therapeutic anticoagulation (AF, mechanical heart valves replacement, etc.);
- High suspicion of DVT/PE, but objective documentation cannot be obtained.
- Renal failure patient on dialysis with repetitive clotting of dialysis tubing.

#### Enoxaparin

CrCl  $\geq$  30 mL/min: 1 mg/kg Q12H or 1.5 mg/kg Q24H  
CrCl 20-29 mL/min: 1mg/kg Q24H  
CrCl < 20/Dialysis: utilize UFH

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#### UFH 80 U/kg bolus, then 18 U/kg/hr

- Target site-specific aPTT goal or anti-Xa: 0.3-0.7 U/ml
- Anti-Xa monitoring for critical care/IMC areas only
- Refer to site-specific "Anti-Xa Guidance" document on COVID intranet resource page

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## VTE Prophylaxis

### Standard Dosing VTE Prophylaxis

- All patients who do NOT have a clear indication for therapeutic anticoagulation

#### Enoxaparin

CrCl  $\geq$  30 mL/min: 40 mg Q24H  
If CrCl 20-29 mL/min: enoxaparin 30 mg SQ Q24H  
If CrCl < 20/Dialysis: utilize UFH below

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For patients with BMI  $\geq$ 40/ weight  $\geq$  120 kg: enoxaparin 40 mg SQ Q12H

#### UFH

Weight  $\leq$  120 kg: 5000 units Q8H  
Weight >120 kg: 7500 units Q8H

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**Intermediate Dosing VTE Prophylaxis:** May still be considered in low bleed risk but high VTE risk patients (i.e. critically ill)  
Refer to notes/rationale section of this document for additional information

#### Enoxaparin (Intermediate VTE prophylaxis)

CrCl  $\geq$  30 mL/min: 0.5 mg/kg Q12H  
CrCl 20-29 mL/min: 0.5 mg/kg Q24H  
If CrCl < 20/Dialysis: utilize UFH  
Dose will be rounded to the nearest syringe size by pharmacy following dose rounding protocol.

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#### UFH (Intermediate VTE prophylaxis)

Weight < 50 kg: 5000 units Q8H  
Weight  $\geq$  50 kg: 7500 units Q8H

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## Notes/Rationale:

- It is now understood that COVID-19 is associated with a coagulopathy where patients can present with elevated fibrinogen levels, modest thrombocytopenia, and marked elevations in D-dimer levels (1). This has led some experts to suggest intermediate dose VTE prophylaxis in the treatment of select critically ill COVID-19 patients (2). At this time there is a lack of RCT data comparing standard VTE prophylaxis dosing to intermediate VTE prophylaxis dosing; therefore, it is difficult to make an evidence based recommendation on the correct approach to treating COVID-19 patients. With a lack of robust data available paired with cognizance of the increased bleeding risk with higher doses of anticoagulation this had led several organizations to suggest using standard VTE prophylaxis (3,4). When considering an approach to anticoagulation therapy in COVID-19 patients it is prudent to assess risk vs benefit of therapy to guide therapy decisions.
- D-dimer elevation and other biomarkers have been associated with worse outcomes in patients with COVID-19, however it is UNKNOWN if intensification of anticoagulant therapy based on biomarker threshold alone improves patient outcome. Therefore current recommendation is AGAINST intensification of anticoagulant dosing based ONLY on D-dimer level. D-dimer measurement can be considered to assess continuation of VTE prophylaxis anticoagulation therapy post-discharge for high risk patients in conjunction with other risk factors. Refer to the “COVID Prophylaxis Dosing and Post-Discharge AC Management” guidance document on the LBH COVID Resource Intranet Page.

## References:

1. McBane RD 2nd, Torres Roldan VD, Niven AS, et al. Anticoagulation in COVID-19: A Systematic Review, Meta-analysis, and Rapid Guidance From Mayo Clinic. *Mayo Clin Proc.* 2020;95(11):2467-2486. doi:10.1016/j.mayocp.2020.08.030
2. Barnes GD, Burnett A, Allen A, et al. Thromboembolism and anticoagulant therapy during the COVID-19 pandemic: interim clinical guidance from the anticoagulation forum. *J Thromb Thrombolysis.* 2020;50:72–81. <https://doi.org/10.1007/s11239-020-02138-z>
3. Moores LK, Tritschler T, Brosnahan S, et al. Prevention, Diagnosis, and Treatment of VTE in Patients With Coronavirus Disease 2019: CHEST Guideline and Expert Panel Report. *Chest.* 2020;158(3):1143-1163. doi:10.1016/j.chest.2020.05.559
4. American Society of Hematology. ASH guidelines on use of anticoagulation in patients with COVID-19. 2020. Available at <https://www.hematology.org/education/clinicians/guidelines-and-quality-care/clinical-practice-guidelines/venous-thromboembolism-guidelines/ash-guidelines-on-use-of-anticoagulation-inpatients-with-covid-19>. Accessed January 18, 2021