

## Symptomatic COVID-19 Patients Adult ( $\geq 18$ yrs of age)

1. Requiring low-flow O<sub>2</sub> supplementation  
*Defined as: conventional or reservoir nasal cannula flows of < 15 L/min*
2. Not requiring ICU level of care for COVID infection

### Notes

- Evidence for treatment of COVID-19 and complications from COVID-19 is rapidly evolving
- Safety and efficacy is uncertain in populations excluded from trials, including but not limited to:
  - Concurrent dual antiplatelet therapy
  - Platelets < 50k, Hemoglobin < 8 g/dL
  - Major bleed within past 3 months
  - Intracranial surgery, bleed, or stroke in past 3 months
- In patients with D-Dimer levels rapidly rising but < 1000, consider repeat evaluation for thrombosis with appropriate imaging
- Consider definitive imaging to determine most appropriate duration of anticoagulation

### Renal Failure

- 30% of COVID-19 patients may develop renal failure
- Heparin should be utilized for those in renal failure or with declining renal function
- Heparin duration of action is shorter and is more easily reversed

- Check baseline and daily D-Dimer
- Evaluate for thrombosis if clinically appropriate
- If thrombosis observed, use therapeutic anticoagulation

Bleeding

Yes

No

Elevated D-Dimer > 1000

No

Yes

### Start Therapeutic Anticoagulation

Enoxaparin<sup>+</sup> 1 mg/kg SubQ twice daily  
IV Heparin (Low intensity with initial bolus; increase to high intensity if thrombosis present)

<sup>+</sup>: Preferred due to reduced patient contact  
*Consult Pharmacist for bariatric and renal dosing*

No

Confirmed or highly suspected VTE

Yes

Standard duration of therapy (3 to 6 months)

**Treat for Disseminated Intravascular Coagulation**  
Monitor Hemoglobin, platelet count, INR and fibrinogen level Q 4-6 H

- Transfuse one adult dose platelets if platelet count < 50 x 10<sup>9</sup>/L
- Administer cryoprecipitate one pool (= 5 units, volume 110mls) if fibrinogen < 100 mg/dL and 2 pools (220mls) if fibrinogen < 70 mg/dL
- Transfuse FFP 10-15ml/kg if PT/INR remains > 2 **and clinically relevant bleeding continues**
- Consider tranexamic acid for severe bleeding: **1 gram IV bolus followed by TXA 1 gram in 250 mls NS over 8 hours if the bleeding is gastrointestinal, upper respiratory or genito-urinary. Modify TXA infusion for renal impairment**

### Start DVT Prophylaxis

Enoxaparin<sup>+</sup> 40 mg SubQ daily  
Heparin 5,000 units SubQ three times daily

<sup>+</sup>: Preferred due to reduced patient contact  
*Consult Pharmacist for bariatric and renal dosing*

### Duration 14 days or until recovery\*

\*Hospital discharge or liberation from supplemental oxygen for > 24 hrs, whichever comes first

# VTE Prophylaxis after hospital discharge

- Use the [IMPROVE Risk Score](#) to determine if appropriate to continue VTE prophylaxis after discharge:

**Table 1** Modified IMPROVE VTE risk score<sup>11</sup>

| VTE risk factor                                      | VTE risk score |
|--|----------------|
| Previous VTE   | 3              |
| Known thrombophilia <sup>a</sup>                     | 2              |
| Current lower limb paralysis or paresis <sup>b</sup> | 2              |
| History of cancer <sup>c</sup>                       | 2              |
| ICU/CCU stay   | 1              |
| Complete immobilization <sup>d</sup> ≥ 1 d           | 1              |
| Age ≥60 y  | 1              |

Abbreviations: CCU, cardiac care unit; ICU, intensive care unit; IMPROVE, International Medical Prevention Registry on Venous Thromboembolism; NIH, National Institutes of Health; VTE, venous thromboembolism.

<sup>a</sup>A congenital or acquired condition leading to excess risk of thrombosis (e.g., factor V Leiden, lupus anticoagulant, factor C or factor S deficiency).

<sup>b</sup>Leg falls to bed by 5 seconds, but has some effort against gravity (taken from NIH stroke scale).

<sup>c</sup>Cancer (excluding nonmelanoma skin cancer) present at any time in the past 5 years (cancer must be in remission to meet eligibility criteria).

<sup>d</sup>Immobilization is being confined to bed or chair with or without bathroom privileges.

