**COVID-19 patient**

### Mild disease
- Upper respiratory tract symptoms (B/f or fever) WITHOUT shortness of breath or hypoxia

### Moderate disease
- Any one of:
  1. Respiratory rate ≥ 24/min, breathlessness
  2. SpO2: 90% to < 93% on room air

### Severe disease
- Any one of:
  1. Respiratory rate > 30/min, breathlessness
  2. SpO2 < 90% on room air

## Home Isolation & Care

**MUST Do's**
- Physical distancing, indoor mask use, strict hand hygiene.
- Symptomatic management (hydration, anti-pyretics, antiseptic, multivitamins).
- Stay in contact with treating physician.
- Monitor temperature and oxygen saturation (by applying a SpO2 probe to fingers).

Seek immediate medical attention if:
- Difficulty in breathing
- High grade fever/severe cough, particularly if lasting for >5 days
- A low threshold to be kept for those with any of the high-risk features

**MAY Do's**

Therapies based on low certainty of evidence:
- Tab Ivermectin (200 mcg/kg once a day for 3 days).
- Avoid in pregnant and lactating women.
  - OR
- Tab HCQ (400 mg BD for 1 day f/b 400 mg OD for 4 days) unless contraindicated.
- Inhalational Budesonide (given via metered dose inhaler/ Dry powder inhaler) at a dose of 800 mcg BD for 5 days to be given if symptoms (fever and/or cough) are persistant beyond 5 days of disease onset.

## Oxygen Support: ADMIT IN WARD

- Target SpO2: 92-96% (88-92% in patients with COPD).
- Preferred devices for oxygenation: non-rebreathing face mask.
- Awake proning encouraged in all patients requiring supplemental oxygen therapy (sequential position changes every 2 hours).

### Anti-inflammatory or immunomodulatory therapy

- Inj. Methylprednisolone 0.5 to 1 mg/kg in 2 divided doses (or an equivalent dose of dexamethasone) usually for a duration of 5 to 10 days.
- Patients may be initiated or switched to oral route if stable and/or improving.

### Anticoagulation

- Conventional dose prophylactic unfractionated heparin or Low Molecular Weight Heparin (weight based e.g., enoxaparin 0.5mg/kg per day SC). There should be no contraindication and high risk of bleeding.

### Monitoring

- Clinical Monitoring: Work of breathing, Hemodynamic instability, Change in oxygen requirement.
- Serial CXR; HRCT chest to be done ONLY if there is worsening.
- Lab monitoring: CRP and D-dimer 24 to 72 hrly; CBC, KFT, LFT to 48 hrly; IL-6 levels to be done if deteriorating (subject to availability).

## ADMIT IN ICU

### Respiratory support

- Consider use of NIV (Helmet or face mask interface depending on availability) in patients with increasing oxygen requirement, if work of breathing is LOW.
- Consider use of HFNC in patients with increasing oxygen requirement.
- Intubation should be prioritized in patients with high work of breathing if NIV is not tolerated.
- Use conventional ARDSnet protocol for ventilatory management.

### Anti-inflammatory or immunomodulatory therapy

- Inj. Methylprednisolone 1 to 2mg/kg IV in 2 divided doses (or an equivalent dose of dexamethasone) usually for a duration 5 to 10 days.

### Anticoagulation

- Weight based intermediate dose prophylactic unfractionated heparin or Low Molecular Weight Heparin (e.g., Enoxaparin 0.5mg/kg per dose SC BD). There should be no contraindication or high risk of bleeding.

### Supportive measures

- Maintain euolemia (if available, use dynamic measures for assessing fluid responsiveness).
- If sepsis/septic shock: manage as per existing protocol and local antibiogram.
- Monitoring
  - Serial CXR; HRCT chest to be done ONLY if there is worsening.
  - Lab monitoring: CRP and D-dimer 24-48 hourly; CBC, KFT, LFT daily; IL-6 to be done if deteriorating (subject to availability).

### After clinical improvement, discharge as per revised discharge criteria.

### EUA/Off label use (based on limited available evidence and only in specific circumstances):

- **Remdesivir (EUA)** may be considered ONLY in patients with
  - Moderate to severe disease (requiring SUPPLEMENTAL OXYGEN), AND
  - No renal or hepatic dysfunction (eGFR <30 ml/min/m2; AST/ALT >5 times ULN (Not an absolute contradiction), AND
  - Who are within 10 days of onset of symptoms/ s.
  - Recommended dose: 200 mg IV on day 1 f/b 100 mg IV OD for next 4 days.
  - Not to be used in patients who are NOT on oxygen support or in home settings

- **Tocilizumab (OFF-label)** may be considered when ALL OF THE BELOW CRITERIA ARE MET
  - Presence of severe disease (preferably within 24 to 48 hours of onset of severe disease/ICU admission).
  - Significantly raised inflammatory markers (CRP B/or IL-6).
  - Not improving despite use of steroids.
  - No active bacterial/fungal/tubercular infection.
  - Recommended single dose: 4 to 6 mg/kg (400 mg in 60kg adult) in 100 ml NS over 1 hour.

**Clinical Guidance for Management of Adult COVID-19 Patients**

**Ministry of Health & Family Welfare, Government of India**

17th May 2021