# Therapeutic Management of Adult Patients with COVID-19

## SEVERITY OF ILLNESS

### Critically Ill Patients
- Hospitalized/Intensive Care Unit (ICU)
- Patients requiring respiratory (high-flow oxygen, noninvasive ventilation, mechanical ventilation) and/or circulatory (vasopressor/inotropes) support

**Antiviral**
- Remdesivir is recommended for patients acutely ill with COVID-19 or immunocompromised, who are not mechanically ventilated. See formulary for details.

**Immunomodulatory**
- Dexamethasone is strongly recommended.
- Tocilizumab or baricitinib are recommended for patients experiencing significant progressive respiratory failure. See formulary for details. If available, preferred over casirivimab-imdevimab in critically ill patients.

**Neutralizing Antibodies**
- Casirivimab-imdevimab (4 g/4 g) may be considered for patients who test seronegative for COVID-19 antibodies or who are severely immunocompromised. See formulary for details.

### Severely Ill Patients
- Hospitalized, ward-based
- Patients requiring supplemental oxygen

**Antiviral**
- Remdesivir is recommended for patients acutely ill with COVID-19 or immunocompromised COVID-19 patients. See formulary for details.

**Immunomodulatory**
- Dexamethasone is strongly recommended.
- Tocilizumab or baricitinib are recommended in this patient population if they require supplemental oxygen > 6 L/min to achieve a minimum SpO2 of 90% or they require non-invasive ventilation. See formulary for details.

**Neutralizing Antibodies**
- Casirivimab-imdevimab (4 g/4 g) is recommended for patients who test seronegative for COVID-19 antibodies or who are severely immunocompromised. See formulary for details.

### Mildly Ill Patients
- Ambulatory, outpatient
- Patients who do not require supplemental oxygen, intravenous fluids, or other physiological support

**Antiviral**
- Remdesivir is not recommended for mildly ill patients.

**Immunomodulatory**
- Oral corticosteroids are not recommended unless otherwise indicated. Inhaled budesonide via dry powder inhaler may be recommended for mildly ill outpatients.
- Tocilizumab and baricitinib are not recommended in this patient population due to a lack of evidence for benefit.

**Neutralizing Antibodies**
- Casirivimab-imdevimab is not currently recommended.

### Agents NOT recommended except in approved clinical trials
- Ivermectin
- Lopinavir/ritonavir
- Colchicine
- Fluvoxamine

### Agents NOT recommended
- Chloroquine or hydroxychloroquine (with or without azithromycin)
- Interferon
- Convalescent plasma

## ANTICOAGULATION
- In moderately sick hospitalized COVID-19 patients (requiring oxygen up to 15 L/min via nasal cannula) with no contraindications to anticoagulation and low bleeding risk, therapeutic dose tinzaparin (175 u/kg) is recommended for 14 days or until discharge, to increase the probability of survival until hospital discharge and reduce the need for ICU-level organ support. In critically ill hospitalized COVID-19 patients with no contraindications to anticoagulation, prophylactic dose tinzaparin (75 u/kg) is recommended.

## ANTIBACTERIALS
- Bacterial co-infection in patients with early COVID-19 is uncommon. In patients who are not critically ill, do not routinely add antibacterials unless bacterial infection is strongly suspected. In critically ill patients, empiric antibiotics are reasonable, as long as there is a focus on de-escalation as soon as appropriate on the basis of clinical review, microbiology results, and laboratory and imaging findings. Continue empiric antibiotics for no more than 5 days.