

# Therapeutic Management of Adult Patients with COVID-19

Recommendations apply to patients >18 years of age. Recommendations are based on the best available data and may change as additional data becomes available. Science Briefs can be found on the [Ontario COVID-19 Science Advisory Table](#) website.



## SEVERITY OF ILLNESS

## RECOMMENDATIONS

### Critically Ill Patients

Patients requiring ventilatory and/or circulatory support, including high-flow nasal oxygen, non-invasive ventilation, invasive mechanical ventilation, or ECMO.

These patients are usually managed in an intensive care setting.

- **Dexamethasone** 6 mg PO/IV daily for 10 days (or until discharge if sooner) **is recommended** for critically ill patients with suspected or confirmed COVID-19.
- **Tocilizumab** (dosed according to body weight) **is recommended** for critically ill patients with suspected or confirmed COVID-19, who are on recommended doses of dexamethasone therapy (or a dose-equivalent corticosteroid) AND are within 14 days of hospital admission (or within 14 days of a new COVID-19 diagnosis if the infection was nosocomially acquired).
  - A second dose of tocilizumab may be considered after 24 hours if the patient is not improving.
  - The dose of intravenous tocilizumab may be determined by a weight-based dose strategy (8 mg/kg, maximum dose 800 mg) OR by a weight-based dose banding strategy (800 mg if weight >90 kg; 600 mg if weight >65 and ≤90 kg; 400 mg if weight >40 and ≤65 kg; and 8 mg/kg if weight ≤40 kg).

- **Prophylactic dose low molecular weight or unfractionated heparin is recommended** in critically ill patients hospitalized with COVID-19.
  - These patients **should not receive therapeutic dose anticoagulation** unless they have a separate indication for this treatment.
- **Remdesivir is not recommended** for critically ill patients with COVID-19 receiving mechanical ventilation.
- ▲ In critically ill patients requiring high-flow oxygen (i.e., oxygen by mask, oxygen by high-flow nasal cannula, or non-invasive mechanical ventilation), **remdesivir** 200 mg IV on day 1, then 100 mg IV daily for 4 days **may be considered** for suspected or confirmed COVID-19.
- Bacterial co-infection is uncommon in COVID-19 pneumonia at presentation. **Do not add empiric antibiotics for bacterial pneumonia** unless bacterial infection is strongly suspected. Continue empiric antibiotics for no more than 5 days and de-escalate on the basis of microbiology results and clinical judgment.

### Moderately Ill Patients

Patients newly requiring low-flow supplemental oxygen.

These patients are usually managed in hospital wards.

- **Dexamethasone** 6 mg PO/IV daily for 10 days (or until discharge if sooner) **is recommended** for moderately ill patients with suspected or confirmed COVID-19.
  - ▲ If patients are discharged with home-based oxygen therapy, **dexamethasone** 6 mg PO daily until oxygen is no longer required (for a maximum of 10 days) **may be considered**.
- **Remdesivir** 200 mg IV on day 1, then 100 mg IV daily for 4 days **is recommended** for moderately ill patients with suspected or confirmed COVID-19.
- ▲ **Therapeutic dose anticoagulation may be considered** over prophylactic dose anticoagulation in moderately ill patients who are felt to be at low risk of bleeding.
- **All other patients should receive prophylactic dose anticoagulation.**

- **Tocilizumab** (dosed according to body weight) **is recommended** for moderately ill patients with suspected or confirmed COVID-19, who have evidence of systemic inflammation, defined as a serum CRP of 75 mg/L or higher, AND have evidence of disease progression (i.e., increasing oxygen or ventilatory requirements) despite 24-48 hours of recommended doses of dexamethasone therapy (or a dose-equivalent corticosteroid), AND are within 14 days of hospital admission (or within 14 days of a new COVID-19 diagnosis if the infection was nosocomially acquired).
  - A second dose of tocilizumab may be considered after 24 hours if the patient is not improving, with dosing strategies being the same as for critically ill patients.

### Mildly Ill Patients

Patients who do not require new or additional supplemental oxygen from their baseline status, intravenous fluids, or other physiological support.

These patients are usually managed in an ambulatory/ outpatient setting.

- **Dexamethasone** is **not recommended** for mildly ill patients with suspected or confirmed COVID-19.
- **Remdesivir** is **not recommended** for mildly ill patients with suspected or confirmed COVID-19.
- **Tocilizumab** is **not recommended outside of clinical trials** for mildly ill patients with suspected or confirmed COVID-19.
- ◆ There is currently **insufficient evidence** to make a recommendation around **anticoagulation** for mildly ill patients.

- ◆ The panel was **unable to reach a consensus** on the use of **inhaled budesonide** based on the available evidence. At this time, a recommendation cannot be made for its use to change disease course or serious disease outcomes. In selected patients with increased risk of adverse COVID-19 outcomes (≥65 years, or ≥50 years with one or more of: immunosuppression; heart disease; hypertension; asthma; lung disease; diabetes; liver disease; stroke; neurologic disease; or obesity, inhaled budesonide 800 mcg twice daily for 14 days may reduce patient-reported symptoms and time to recovery.

## CURRENTLY NOT RECOMMENDED

There is insufficient evidence to support the use of the following therapies in the treatment of COVID-19 outside of clinical trials or where other indications would justify its use:

- ◆ Anti-SARS-CoV-2 monoclonal antibodies
- ◆ Colchicine
- ◆ Interferon (with or without lopinavir-ritonavir and ribavirin)
- ◆ Vitamin D

## RECOMMENDED AGAINST

The following therapies are not recommended for the treatment of COVID-19 due to lack of benefit, potential harm, and system implications of overuse:

- Antibiotics (azithromycin)
- Hydroxychloroquine or chloroquine
- Ivermectin
- Lopinavir/ritonavir

[Click here for dosing and pharmacologic considerations for medications approved or under investigation for COVID-19](#)