

# Antimicrobial and Immunomodulatory Therapy in Adult Patients with COVID-19

Created and Maintained by  
the AHS COVID-19  
Therapeutics Working Group

Recommendations in this  
document apply to patients  
≥ 18 years of age

Recommendations are based on the best available data, are  
current only to the date of this document and will be updated as  
relevant new information becomes available

SEVERITY OF ILLNESS	ANTIVIRAL	IMMUNOMODULATORY	ANTIBACTERIAL
<b>Critically Ill Patients Hospitalized, in Intensive Care Unit (ICU)</b> Patients requiring respiratory (high-flow oxygen, noninvasive ventilation, mechanical ventilation) and/or circulatory (vasopressor/inotropes) support	<b>Remdesivir</b> is <u>not recommended</u> for patients on ECMO, high-flow oxygen, or mechanical ventilation.	<b>Dexamethasone</b> is <u>strongly recommended</u>  <b>Tocilizumab</b> * is <u>recommended</u> for patients experiencing significant progressive respiratory failure, if they were admitted to hospital for COVID-19 pneumonia 7 or fewer days ago or they developed symptoms due to hospital-acquired COVID-19 7 or fewer days ago, and no more than 24 hours has elapsed since initiation of mechanical ventilation (or as soon as possible if not mechanically ventilated). <b>Bamlanivimab</b> is <u>not recommended</u> in this patient population.	Bacterial co-infection in patients with early COVID-19 is uncommon. 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.
<b>Severely Ill Patients Hospitalized, ward-based</b> Patients requiring supplemental oxygen	<b>Remdesivir</b> is <u>not recommended</u> for routine use in patients on low-flow oxygen. Exceptional access requests may be considered. See the <a href="#">AHS formulary</a> for details.	<b>Dexamethasone</b> is <u>strongly recommended</u> .  <b>Tocilizumab</b> * is recommended in this patient population if they require supplemental oxygen to achieve a minimum SpO2 of 90% in the form of heated high-flow oxygen with FiO2 > 0.5, nasal prong-delivered oxygen at a rate of > 6 L/minute, or mask-delivered oxygen with FiO2 > 0.5, or they require non-invasive ventilation. They must also meet the time criteria outlined in the "Critically Ill" tocilizumab criteria above. <b>Bamlanivimab</b> is <u>not recommended</u> outside of approved clinical trials. It can be considered for patients with early onset hospital acquired COVID-19 via the CATCO-NOS trial. See recruitment website: <a href="https://is.gd/CATCO_NOS">https://is.gd/CATCO_NOS</a>	Bacterial co-infection in patients with early COVID-19 is uncommon. Do not routinely add antibacterials unless bacterial infection is strongly suspected. If empiric antibacterials are indicated, de-escalate on the basis of clinical review, microbiology results, and laboratory and imaging findings. Continue empiric antibiotics for no more than 5 days.
<b>Mildly Ill Patients Ambulatory, outpatient</b> Patients who do not require supplemental oxygen, intravenous fluids, or other physiological support	<b>Remdesivir</b> is <u>not recommended</u> for mildly ill patients.	<b>Oral corticosteroids</b> are <u>not recommended</u> unless otherwise indicated. <b>Inhaled budesonide</b> via dry powder inhaler <u>may be considered</u> for mildly ill outpatients.  <b>Bamlanivimab</b> is <u>not recommended</u> for this patient population outside of approved clinical trials.  <b>Tocilizumab</b> is <u>not recommended</u> in this patient population due to a lack of evidence for benefit.	Bacterial co-infection in patients with early COVID-19 is uncommon. Do not routinely add antibacterials unless bacterial infection is strongly suspected. If empiric antibacterials are indicated, de-escalate on the basis of clinical review, microbiology results, and laboratory and imaging findings. Continue empiric antibiotics for no more than 5 days.
<b>Agents NOT recommended</b> except within the context of approved clinical trials	Ivermectin Lopinavir/Ritonavir	Baricitinib Colchicine Convalescent plasma	
<b>Agents NOT recommended</b>		Chloroquine or hydroxychloroquine (with or without azithromycin) Interferon	

\*Tocilizumab - due to a limited supply and significant demand, supply may not be available. Please check with your local Pharmacy department to determine current supply status.