Inpatient Pharmacotherapy Guidelines for COVID-19 in Adult Patients

- Infectious Diseases involvement is recommended (as available by site) for patients admitted with COVID-19 (SARS-CoV-2) infection.
- These recommendations are subject to change based on emerging data and drug availability.
- No therapies are currently FDA-approved for the treatment of COVID-19. Decisions to use these therapies should be individualized based on patient-specific assessment and discussions.

Criteria for Use by Pharmacologic Agent

See Table 1 for Dosing and Special Considerations and Table 2 for Monitoring Considerations

I. Hydroxychloroquine

Note: Hydroxychloroquine is the preferred agent for treatment of COVID-19 unless patient is eligible for remdesivir clinical trial (NCT04292899) and is admitted at an enrolled facility. Remdesivir may also be obtained via compassionate use; visit https://rdvcu.gilead.com/ for more information.

Hospitalized patient with positive test for COVID-19 OR a person of interest with COVID-19 test in process

*AND*

≥1 of the following:
- Requiring intensive care
- Risk factors for progression to severe disease (e.g., severe immunocompromising conditions or medications, structural lung disease, diabetes, age > 60 years)
- Early signs of progression of disease (e.g., hypoxia or radiographic evidence of pneumonia)

Patients meeting ANY of the following criteria should be excluded from use:
- > 10 days from symptom onset
- Patients 85 years and older
- Life expectancy less than 12 months
- Multiorgan system failure
- Receiving other investigational antivirals for COVID-19 (e.g., remdesivir)

Additional criteria for use:
- Hydroxychloroquine should be discontinued once patient has clinically improved as determined by treatment team in order to conserve supply
II. Remdesivir

Currently only available by participation in remdesivir clinical trial (NCT04292899) at enrolled sites, or by compassionate use through the manufacturer.

- For more information on compassionate use, visit [https://rdvcu.gilead.com/](https://rdvcu.gilead.com/)
- For general questions on eligibility criteria for the clinical trial, please visit clinicaltrials.gov and search NCT04292899

III. Tocilizumab

If patient is eligible for remdesivir clinical trial (NCT04292899) and is admitted to an enrolled facility, use remdesivir first. If patient is ineligible for remdesivir, and all 6 criteria are met, IL-6 blockade x1 dose may be considered in addition to hydroxychloroquine.

1. Hospitalized patient with positive test for COVID-19 OR a person of interest with COVID-19 test in process
2. ARDS or impending respiratory compromise, PLUS 2 or more of the following predictors for severe disease:
   - IL-6 > 10 pg/mL
   - CRP > 35 mg/L (trend daily to determine response)
   - Ferritin >500-600 ng/mL
   - D-dimer > 1 mcg/L
   - Neutrophil-Lymphocyte Ratio > 4
   - LDH >200 U/L
   - Increased troponin in patient w/out known cardiac disease
3. Patient is not pregnant
4. Infectious Diseases approval where available
5. Informed consent by patient or family member must be clearly documented in the electronic medical record AND Quantiferon-TB must be ordered prior to administration of IL-6 blockade
6. If Quantiferon-TB positive after receipt of IL-6 blockade, treatment for LTBI should be started
# Table 1. Dosing and Special Considerations for Pharmacologic Agents

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
<th>Special Considerations</th>
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</thead>
<tbody>
<tr>
<td>Preferred</td>
<td>Hydroxychlorquine</td>
<td>• No dose adjustment required in renal dysfunction</td>
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<tr>
<td></td>
<td>Day 1: 400mg PO/NGT BID x 2 doses, followed by Day 2-5: 400mg PO/NGT once daily</td>
<td>• Use in caution in patients with QT prolongation. Monitor QTc and avoid other QT prolonging agents when able.</td>
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<tr>
<td></td>
<td></td>
<td>• Adverse effects can include diarrhea, bloating, abdominal pain. This may be mitigated by spacing out dosing (e.g. 200mg BID) or taking with food.</td>
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<tr>
<td></td>
<td></td>
<td>• Pregnancy is not a contraindication to hydroxychloroquine use</td>
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<tr>
<td>Remdesivir</td>
<td>200mg IV x 1 dose, followed by 100mg IV q24 hours per protocol</td>
<td>• Only available through clinical trial or compassionate use. See criteria for use section for more detail.</td>
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<tr>
<td>Tocilizumab</td>
<td>400mg IV x 1 dose. Dose may be repeated up to 2 additional times q12h based on ID/ASP approval where available</td>
<td>• See criteria for use section for additional monitoring parameters</td>
</tr>
<tr>
<td>Not recommended at this time due to lack of data. New treatment options will be re-evaluated continually.</td>
<td>Lopinavir-ritonavir Corticosteroids Oseltamivir</td>
<td>Ribavirin Baloxavir Azithromycin</td>
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</tbody>
</table>
### Table 2. Monitoring Considerations for Currently Recommended Agents

<table>
<thead>
<tr>
<th>Management Strategy</th>
<th>No Pharmacologic Management</th>
<th>Hydroxychloroquine</th>
<th>Tocilizumab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Labs Recommended</td>
<td>CBC + differential CMP</td>
<td>CBC + differential CMP CRP Ferritin D-Dimer LDH</td>
<td>CBC + differential CMP CRP Ferritin D-Dimer LDH</td>
</tr>
<tr>
<td>Less Frequent Labs and Procedures Recommended</td>
<td>CRP q48h Ferritin (baseline and as needed) D-Dimer (baseline and as needed) LDH (baseline and as needed)</td>
<td>EKG (baseline and as needed if other QTc prolonging agents are added)</td>
<td>IL-6 (prior to initiation) Quantiferon-TB (prior to initiation) Urine HCG Rapid Pregnancy Test (prior to initiation in females)</td>
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</tbody>
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References

