## Adult COVID-19 (SARS-CoV-2) Treatment

**MercyOne Des Moines**

<table>
<thead>
<tr>
<th>Disease Severity</th>
<th>Treatment Options</th>
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| Not hospitalized, mild to moderate COVID-19 | • Supportive care. Specific antiviral therapy or corticosteroids are not recommended  
• COVID Monoclonal antibody therapy can be considered for those who meet specified criteria *(Section III)* |
| Hospitalized but does not require supplemental oxygen | • Supportive care |
| Hospitalized requiring supplemental oxygen ≥2 liters/min* and chest X-ray reporting infiltrates | • Dexamethasone  
• Remdesivir |
| Hospitalized and requires high flow oxygen or noninvasive ventilation | • Dexamethasone  
• Remdesivir  
• Tocilizumab |
| Hospitalized and requires invasive ventilation or ECMO | • Dexamethasone  
• Tocilizumab |

### I. Remdesivir (Veklury®)

- FDA Approved for treatment of COVID-19 hospitalized adults and pediatrics (12 years of age and older and weighing at least 40 kg)
- **Use Criteria**
  - ID consultation, 1st doses may be ordered by hospitalists, pulmonology/critical care, and emergency dept. providers
  - Symptoms present for no more than 10 days. If symptom duration unknown, positive SARS-CoV-2 laboratory test within last 10 days, or up to 14 days for immunosuppressed patients
  - Requiring at least 2 liters of oxygen to maintain oxygen saturation of 92% and chest x-ray with infiltrates
  - Renal impairment: Use caution when using remdesivir in patients with eGFR less than 30 mL/min. The prescribing information recommends against using in this population, however, risk versus benefit should be considered given lack of specific data on possible toxicity. Recent data suggests remdesivir may be safely used for short courses in patients with eGFR less than 30 mL/min or on hemodialysis.
- **Exclusion Criteria**
  - Consider excluding those who require mechanical ventilation or ECMO due to lack of improvement in recovery time in trials to date
- **Dosing**
  - Adults: 200mg day one, followed by 100mg daily x 4 days. Each dose infused over 1 hour.
- **Monitoring**
  - LFTs while on remdesivir. Discontinue if greater than 10 times the upper limit of normal, or if ALT elevation is accompanied by signs or symptoms of liver inflammation

*Updated: 03/2021*
II. Corticosteroids
   o Recommended for hospitalized patients with severe COVID-19, such as those who require supplemental oxygen, mechanical ventilation, or ECMO
   o Not recommended for patients not requiring supplemental oxygen
   o Dexamethasone 6 mg IV or PO for 10 days (or until discharge if earlier)
   o Alternative glucocorticoids can be utilized such as, methylprednisolone 32 mg or prednisone 40 mg daily if dexamethasone is unavailable

III. COVID-19 Monoclonal Antibody
   o Criteria for use include (Adults):
     ▪ Symptoms present for no more than 10 days and positive SARS-CoV-2 viral test within 10 days and no other positive tests in the previous 90 days. AND must meet at least one of the following criteria:
       • Age ≥ 65 years
       • Obesity (BMI ≥ 35)
       • Chronic kidney disease
       • Diabetes
       • Immunosuppressive disease, or treatment
       • Age ≥ 55 AND one of the following
         o Cardiovascular disease
         o Hypertension
         o Chronic pulmonary disease or other chronic respiratory disease
     ▪ May be considered for inpatients who meet the above criteria, in addition to the following:
       • Hospital admission is unrelated to COVID-19 (e.g. nosocomial transmission)
       • Admitted as observation status due to COVID-19 symptoms or other diagnoses
       • Inpatient use must be approval by antimicrobial stewardship
         o Hours: 8am – 6pm daily
         o Contact Jeff Brock, PharmD (cell: 515-201-6339, or via PerfectServe)
           ▪ If antimicrobial stewardship is unavailable, contact Edina Avdic
             (office: 247-3267; cell: 410-258-1522)
   o Dosing Information:
     ▪ Bamlanivimab 700 mg and etesevimab 1400 mg IV piggyback
     ▪ Casirivimab 1200 mg and imdevimab 1200 mg IV piggyback

IV. Convalescent plasma (CCP)
   o The FDA has issued an Emergency Use Authorization (EUA) to permit the use of COVID-19 convalescent plasma to treat hospitalized patients with COVID-19
   o Infectious Diseases consultation required for use
   o Start within 3 days of symptom onset or within 3 days of positive SARS-CoV-2 test if unable to determine symptom onset. Consider for patients who are older or those with comorbidities
   o NIH COVID-19 treatment guidelines states there are insufficient data to recommend either for or against the use of CCP for COVID-19 treatment
   o High titer CCP can be obtained through the blood bank

Updated: 03/2021
V. **Tocilizumab**
   - Restricted to pulmonary critical care and infectious diseases providers
   - May be considered for the following patients:
     - Intensive Care: Administer within 24 hours to patients who require invasive mechanical ventilation, noninvasive mechanical ventilation, or high-flow nasal canula (e.g. Airvo, Optiflow) OR
     - General Floor: Administer to recently hospitalized patients with rapidly increasing oxygen needs who require noninvasive mechanical ventilation, or high-flow nasal canula. Consider limiting to patients who have significantly increased markers of inflammation, such as a C-reactive protein (CRP) ≥ 7.5 mg/dL
   - Administer along with dexamethasone or equivalent corticosteroid
   - Dosing:
     - Weight ≤ 40 kg: 8 mg/kg x 1
     - Weight 41 kg to 65 kg: 400 mg x 1
     - Weight 66 kg to 90 kg: 600 mg x 1
     - Weight > 90 kg: 800 mg x 1

VI. **Influenza vaccination**
   - Optimal timing of influenza vaccination for patient with COVID-19 remains unknown. However, influenza vaccination remains important for this population. Once patients are clinically stable (transferred out of ICU care) and have been afebrile for at least 24 hours, flu vaccines will be administered before discharge.

**Questions:** Contact the on-call MercyOne infectious diseases physician (515-643-7900) or Jeff Brock, PharmD. (515-643-8697)

**References:**

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