**Aim:** To provide guidance for management of patients with COVID-19.

---

**Patient with confirmed COVID-19** (positive PCR or rapid antigen)

- Appropriate PPE, rooming and staffing. Educate family on positive test and isolation.

**Assess COVID-19 Illness Level (note 1)**

- Signs/symptoms, vital signs, hydration respiratory status. Consider also alternate etiologies for illness.

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**Asymptomatic**

- Tested for reasons other than symptoms (e.g., pre-op, behavioral health admission).

**Mild**

- Symptomatic, but not generally requiring hospitalization for COVID-19. *(note 2)*

- No additional tests/treatments needed
  - Manage primary condition
  - See “behavioral health” order set for updated guidance on retesting in behavioral health patients

**Moderate**

- (Can include “severe pneumonia,” see p. 4)
- Signs or symptoms of COVID-19 requiring med-surg care but not generally meeting criteria for critical care.

**Severe/Critical**

- Critically ill, requiring ICU level of care.

---

**Disclaimers:**

- This guideline is designed for general use with most patients; each clinician should use his or her own independent judgment to meet the needs of each individual patient. This guideline is not a substitute for professional medical advice, diagnosis or treatment.

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**Reviewer:** Workgroup | Rev 6/21 | Exp 6/24 | Page 1

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**Additional testing**

- Obtained CBC+diff, CRP, CMP, IgG, PT/PTT/fibrinogen, d-dimer AND start VTE prophylaxis.
- CXR if respiratory symptoms
- Evaluate and treat suspected coinfections based on symptoms (note 3).
- Antibiotics per suspected sepsis order set if sepsis is present
- Consult immunology, pulmonology, ID and other specialists as indicated.
- See separate MIS-C guideline if primary diagnosis of acute COVID-19 uncertain and concern for MIS-C
- Additional therapies specific to COVID-19 (see subsequent pages for detail).
CLINICAL GUIDELINE
MEDICAL MANAGEMENT FOR PATIENTS WITH CONFIRMED COVID-19
(Age <25 years)

Aim: To provide guidance for management of patients with COVID-19.

NOTE 1: SEVERITY OF ILLNESS CATEGORIES

• Mild: No respiratory distress or oxygen requirement; able to self-hydrate (may be after initial fluid support)

• Moderate: Requiring ongoing IVF support OR requiring respiratory support including low flow nasal cannula for hypoxia or high flow nasal cannula for increased work of breathing. If hypoxia and/or respiratory distress are not improved with trial of low or high flow nasal cannula, escalate to severe category. If suspected MIS-C but no cardiac dysfunction (e.g. abnormal echo, EKG or troponin, etc.) and patient without shock or hemodynamic stability may consider admitted to med-surg unit.

• Severe/Critical: Hypoxia or work of breathing requiring non-invasive or invasive ventilation or concern that patient status is worsening on high flow nasal cannula OR SIRS/Sepsis/Septic OR rapidly worsening status. If suspected MIS-C and any cardiac dysfunction (e.g. abnormal echo, EKG or troponin, etc.), and/or shock/hypotension or concern for rapid progression patient should be admitted to ICU.

• Consider also risk factors for more severe COVID-19 in considering to step-up to next level of severity for disposition decisions (shared decision making with family and other providers) in your patient: immunocompromise, age < 12 months, complex chronic conditions, obesity, chronic kidney disease, chronic hepatitis, endocrine disorders. Consider also ability of family/guardian to provide supportive cares as well as follow-up options.

Discharge criteria:

• Routine medical criteria
• Encourage virtual or in-clinic follow-up with PCP
• Speak with MDH/infection prevention on-call for guidance for home isolation.

* Note that information on COVID-19 incidence and management is rapidly evolving. Please refer to www.CDC.gov, www.who.int, https://www.health.state.mn.us/ or Children’s Minnesota infection prevention team for updates. Due to the dynamic nature of this guideline, it is not run through the Guideline Governance Council but is updated regularly by clinical leadership.

NOTE 2

• If bronchodilator indicated, use MDI instead of nebulizer, follow treatment with inhaled corticosteroid.

• Systemic corticosteroids may be used for asthma/croup indications. Discuss with multidisciplinary team in patients requiring persistent/escalating supplemental oxygen or mechanical ventilation.

• Acetaminophen preferred 1st line. Ibuprofen can be used as 2nd line analgesic/antipyretic agent.

• Maintain euvoema, avoid overhydration as this may increase ARDS risk.

NOTE 3

Bacterial co-infection at time of presentation with COVID-19 is uncommon (<2% in adult patients). Only use antibiotics with strong suspicion for bacterial pneumonia based on clinical exam and imaging findings.

*Treatment Recommendations for Pneumonia (CAP):

• Age ≤ 28 days OR preterm infant (less than 37 weeks gestation) with PMA less than 41 weeks
  - Follow febrile infant guideline for workup, use Ampicillin plus Ceftazidime; Cefdinir for ongoing oral CAP treatment

• > 28 days OR preterm infant (less than 37 weeks gestation) with PMA ≥ 41 weeks–4 months
  - Ceftriaxone/Cefdinir

• > 4 mo and fully immunized for age
  - Ampicillin/Amoxicillin (PCN exposure or allergy not anaphylaxis - Cefuroxime/Cefprozil)

• > 4 mo and has not received 2 Hib and Pneumococcal vaccine doses
  - Ceftriaxone/Cefdinir

• Consider adding Azithromycin for patients ≥ 5 yr.

• Oseltamivir if influenza positive.

• Antibiotics per suspected sepsis orderset if sepsis is present.

• Consult ID for empiric antibiotic recommendations if hospital-acquired infection suspected.
<table>
<thead>
<tr>
<th>CLINICAL SEVERITY</th>
<th>CLINICAL PRESENTATION</th>
<th>THERAPEUTIC AGENTS</th>
<th>COMMENTS</th>
<th>MONITORING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mild illness</strong></td>
<td>Uncomplicated URT viral infection, with non-specific symptoms: e.g. fever, fatigue, cough, anorexia, malaise, muscle pain, sore throat, dyspnea, nasal congestion, or headache</td>
<td>SUPPORTIVE CARE</td>
<td></td>
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<tr>
<td></td>
<td><strong>Consider Anti-SARS-CoV-2 Monoclonal Antibodies via EUA (non-hospitalized patients)</strong></td>
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<tr>
<td></td>
<td>• Casirivimab/sorivimab can be given in non-hospitalized pediatric (≥12 years-old and ≥ 40 kg) or adult patients with confirmed SARS-CoV-2 infection (PCR or antigen) who are at high-risk for progressing to severe COVID-19, and are within 10 days from symptom onset (Appendix A for high risk criteria)</td>
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<tr>
<td></td>
<td>• Dose: 1,200 mg IV × 1 outpatient infusion</td>
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<tr>
<td></td>
<td><strong>FDA EUA CAS/I Fact Sheet for Healthcare Providers</strong></td>
<td>Provider Tools for Anti-SARS-CoV-2 Monoclonal Antibodies</td>
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<tr>
<td></td>
<td>• CAS/I Eligibility Criteria also posted on MDH website Pediatric mAb criteria</td>
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<td></td>
<td>• FDA EUA CAS/I Fact Sheet for Patients and Caregivers</td>
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<tr>
<td></td>
<td>• Provider CAS/I Talking Points and FAQs</td>
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<td></td>
<td><strong>EUA:</strong> Emergency Use Authorization</td>
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<td></td>
<td><strong>Note 4:</strong> Separate guidelines are available for COVID-19 vaccination for patients with primary or secondary immunodeficiency including children with trisomy 21 (i.e. patients with impaired antibody production)</td>
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<tr>
<td></td>
<td>• Pediatric dose: 5 mL/kg (max 2 units)</td>
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<td></td>
<td>• No lower age limit</td>
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<td></td>
<td>• See Note 4 for documentation and reporting requirements</td>
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</tr>
<tr>
<td><strong>Non-Severe Pneumonia</strong></td>
<td>Pediatric Patients</td>
<td>SUPPORTIVE CARE</td>
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<tr>
<td></td>
<td>Cough or dry sputum plus tachypnea</td>
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<td></td>
<td>Tachypnea (breaths/min):</td>
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<tr>
<td></td>
<td>• ≤ 2 months: ≥ 60</td>
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<td></td>
<td>• 2–11 months: ≥ 50</td>
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<td>• 1–5 years: ≥ 40</td>
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<td>• 6–12 years: ≥ 35</td>
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<td></td>
<td>• 13–18 years: ≥ 30 and no signs of severe pneumonia</td>
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<tr>
<td><strong>Adult Patients</strong></td>
<td>No signs of severe pneumonia and no need for supplemental oxygen</td>
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<tr>
<td></td>
<td>Clinical experience in adults has shown that rapid clinical deterioration can take place within a few hours. Physical exam and close monitoring of symptoms are essential.</td>
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<tr>
<td><strong>SUPPORTIVE CARE</strong></td>
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<td>• Dose: 1,200 mg IV × 1 outpatient infusion</td>
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<tr>
<td><strong>May Consider Convalescent Plasma under FDA EUA (hospitalized pediatric and adult patients)</strong></td>
<td>Consider on case-by-case basis for patients with primary or secondary immunodeficiency including children with trisomy 21 (i.e. patients with impaired antibody production)</td>
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<tr>
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<td></td>
<td>• See Note 4 for documentation and reporting requirements</td>
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<tr>
<td><strong>Recommend Oseltamivir when influenza is co-circulating with COVID-19 (hospitalized patients)</strong></td>
<td>Oseltamivir until upper respiratory tract (NP swab) influenza PCR test is negative</td>
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<tr>
<td><strong>Treat suspected pneumonic coinfections per recommendations included in Note 3, page 2</strong></td>
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<tr>
<td><strong>Consider IVIG Replacement</strong></td>
<td>If initial IgG is below the following age-based thresholds, consider IVIG at 400 mg/kg (based on ideal body weight):</td>
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<td>0 - 1 month: ≤400 mg/dL</td>
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<td>1 - &lt; 7 month: ≤200 mg/dL</td>
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<td>7 month - &lt;3 year: ≤ 250 mg/dL</td>
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<td>3 - &lt; 6 year: &lt;350 mg/dL</td>
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<td></td>
<td>6 years - adults: ≤500 mg/dL</td>
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<tr>
<td><strong>Provider Tools for FDA EUA Convalescent Plasma</strong></td>
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<td></td>
<td>• Convalescent plasma might interfere with the vaccine-induced immune response. Deferral of Covid-19 immunization for 90 days is recommended.</td>
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<td><strong>EUA:</strong> Emergency Use Authorization</td>
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</table>
**MEDICAL MANAGEMENT FOR PATIENTS WITH CONFIRMED COVID-19**

(Age <25 years)

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<tr>
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<th>THERAPEUTIC AGENTS</th>
<th>COMMENTS</th>
<th>MONITORING</th>
</tr>
</thead>
</table>
| Severe Pneumonia  | Pediatric Patients    | Systemic Corticosteroids | • Dexamethasone 0.15 mg/kg (max 6 mg/dose) PO/NG/IV q24h for up to 10 days for patients requiring persistent supplemental oxygen or mechanical ventilation  
  • Recommend against use in patients not requiring supplemental oxygen  
  • In preterm neonates, neonates v. beneficial should be considered based on gestational age, postnatal age, and illness severity  
  • Remdesivir [Restricted to ID]  
  • FDA approval applies to pediatric patients ≥ 12 years of age and ≥ 40 kg and to all adult patients  
  • FDA EUA applies to pediatric patients < 18 years of age who weigh 3.5 kg to < 40 kg and to pediatric patients <12 years of age who weigh at least 3.5 kg.  
  See Note 5 for documentation and reporting requirements  
  • Mey Consider Use in Neonates < 3.5 kg who are not covered under either FDA EUA or FDA approval (Remdesivir dosing should be discussed with Gilead Medical Monitor (COVID19@gilead.com).)  
  See Note 6 for documentation and reporting requirements  
  | Remdesivir Dosing | Systemic Corticosteroid Alternatives (If dexamethasone is unavailable)  
  • Prednisolone 1 mg/kg (max 40 mg/dose) PO/NG q24h for up to 10 days  
  • Methylprednisolone 0.8 mg/kg (max 32 mg/dose) IV q24h for up to 10 days  
  Remdesivir not recommended for:  
  • Adult and pediatric patients (> 18 days old) with eGFR < 30 mL/min, OR  
  • Full-term neonates (7 days to ≤ 28 days old) with SCr ≥ 1 mg/dL.  
  | Use Authorization | Useful websites  
  • COVID-19 drug interactions  
  http://www.covid19-druginteractions.org/  
  | All hospitalized patients | • On admission: Baseline CBC, d-dimer, CRP, CMP, ferritin, LDH, CPK, D-imer, D-dimer, IGG, IGM, blood culture, serum to save (≥ 3 mL)  
  • During hospitalization:  
  • Daily labs as clinically indicated  
  • If symptom progression (persistent high fever, worsening respiratory distress, increasing oxygen requirements, or transfer to ICU):  
  CBC, d-dimer, CRP, procalcitonin, CMP, IGG, PT/PTT/fibrinogen, D-dimer, cytochrome c test, CRP, troponin, blood culture, consider repeat CPR  
  | Patients on Remdesivir | • Labs prior to initiation and daily:  
  • BMP, CBC, d-dimer, AST, ALT, alkaline phosphatase, T/D bilirubin, PT (PT at least on initiation)  
  • Consider discontinuation if ALT ≥ 10 × ULN during treatment  
  • Discontinue if ALT elevation is accompanied by s/o of liver inflammation  
  | Patients on Tocilizumab | • Monitoring: fever, hypotension, leukopenia, neutropenia, infection reaction (e.g. HSV, VZV, TB, Strongyloides)  
  | Monitoring | Systemic Corticosteroids Recommend gastric ulcer prophylaxis  
  | | • Tocilizumab should be avoided if:  
  • Significant immunosuppression, especially if recent use of other biologic immunomodulators  
  • ALT > 5 × ULN  
  • High risk for GI perforation  
  • Uncertained, senseus bacterial, fungal, or non-SARS-CoV-2 viral infection  
  • ANC <500 cells/µL  
  • Platelet count <50,000 cells/µL  
  • Consider prophylactic iv ertexin for patients receiving tocilizumab who are from areas where Strongyloides is endemic (e.g. SE Asia, sub-Saharan Africa)  

Disclaimer: This guideline is designed for general use with most patients; each clinician should use his or her own independent judgment to meet the needs of each individual patient. This guideline is not a substitute for professional medical advice, diagnosis or treatment.

**Medical Management for Patients with Confirmed COVID-19**

*Age <25 years*

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### ARDS/Critical Pneumonia Requiring Mechanical Ventilation or ECMO

**Pediatric ARDS Definition**
- Oxygenation index (OI) or saturation index (SI) by pulse oximetry
- Moderate ARDS (inv asively ventilated): 5 ≤ OI < 8 or 7.5 ≤ OSI < 12.3
- Severe ARDS (inv asively ventilated): OI ≥ 8 or OSI ≥ 12.3

**Berliner ARDS Definition for Adults**
- PaO₂/FiO₂ ratio
  - Mild ARDS: 200 mmHg < PaO₂/FiO₂ ≤ 300 mmHg
  - Moderate ARDS: 100 mmHg < PaO₂/FiO₂ ≤ 200 mmHg
  - Severe ARDS: PaO₂/FiO₂ ≤ 100 mmHg

**Consider Remdesivir (Restricted to ID)**
- FDA approval applies to pediatric patients ≥ 12 years of age and ≥ 40 kg and to all adult patients
- FDA EUA applies to pediatric patients ≤ 18 years of age who weigh 40 kg or greater and to pediatric patients ≤ 12 years of age who weigh at least 3.5 kg.

**Remdesivir Dosing**
- 3.5 kg to < 40 kg: 5 mg/kg IV q1 day
- 40 kg ≤ weight: 200 mg IV q1 day

**Remdesivir Not Recommended for:**
- Adult: pediatric patients (> 28 days old) with eGRF < 30 mL/min
- Full-term neonates (≥ 7 days to ≤ 28 days old) with SCr ≥ 1 mg/dL

### Systemic Corticosteroids

**Recommend Systemic Corticosteroids**
- Dexamethasone 0.15 mg/kg (max 6 mg/dose) PO/NG/IV q24h for up to 10 days for patients requiring persistent supplemental oxygen or mechanical ventilation
- In preterm neonates, risk vs. benefit should be considered based on gestational age, postnatal age, and illness severity

**Concern for Health**
- Consider replacement dose of IVIG if low IgG for age (see recommended doses under "Non-Severe Pneumonia")

**Consider Tocilizumab (Restricted to Immunology, Hematology/Oncology, and PICU providers)**
- If dexamethasone is unavailable
- Patients on Tocilizumab should be advised to follow recommendations included in Note 3, page 2

**Concern for Tocilizumab**
- Patients receiving tocilizumab who are from areas where Strongyloides is endemic (e.g. SE Asia, sub-Saharan Africa)

**Clinic of Influenza A/B**
- Specimens are determined to be negative by influenza PCR test

**Recommend Empiric Antibiotics if Concern for Pneumonic Bacterial Coinfection**
- Ceftriaxone (32 mg/dose) IV q24h for up to 10 days

---

**Systemic Corticosteroids**
- Recommend systemic gastric ulcer prophylaxis

**Systemic Corticosteroid Alternatives**
- If dexamethasone is unavailable
- Prednisolone 1 mg/kg (max 40 mg/dose) PO/NG q24h for up to 10 days
- Methylprednisolone 0.8 mg/kg (max 640 mg/dose) IV q24h for up to 10 days

**Remdesivir Not Recommended for:**
- Adult: pediatric patients (> 28 days old) with eGRF < 30 mL/min
- Full-term neonates (≥ 7 days to ≤ 28 days old) with SCr ≥ 1 mg/dL

**Useful websites**
- COVID-19 drug interactions
  - http://www.covid19drugsinteractions.org/
- EUA Emergency Use Authorization

**Toxicilzumab Should be Avoided if any of the following:**
- Significant immunosuppression, especially if recent use of other biologic immunomodulators
- ALT > 5 x ULN
- High risk for GI perforation
- Uncontrolled, serious bacterial, fungal, or non-SARS-CoV-2 viral infection
- ANC <500 cells/µL
- Platelet count <50,000 cells/µL

**Consider prophylactic lactic acidemia:**
- Patients receiving tocilizumab who are from areas where Strongyloides is endemic (e.g. SE Asia, sub-Saharan Africa)

---

**All hospitalized patients**
- On admission: Baseline CBC-diff, CRP, CMP, ferritin, LDH, CK, LFT, AP, IgG, IgM, cytomegalovirus 4-plex panel, immune status panel (ISP), blood culture, serum to save (≥ 3 mL)
- During hospitalization:
  - Daily labs as clinically indicated
  - If symptom progression (persistent high fever, worsening respiratory distress, increasing O2 requirements, or transfer to ICU)

**Systemic Corticosteroids**
- Recommend systemic gastric ulcer prophylaxis

**Systemic Corticosteroid Alternatives**
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**Remdesivir Not Recommended for:**
- Adult: pediatric patients (> 28 days old) with eGRF < 30 mL/min
- Full-term neonates (≥ 7 days to ≤ 28 days old) with SCr ≥ 1 mg/dL

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**Remdesivir Not Recommended for:**
- Adult: pediatric patients (> 28 days old) with eGRF < 30 mL/min
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- Uncontrolled, serious bacterial, fungal, or non-SARS-CoV-2 viral infection
- ANC <500 cells/µL
- Platelet count <50,000 cells/µL

**Consider prophylactic lactic acidemia:**
- Patients receiving tocilizumab who are from areas where Strongyloides is endemic (e.g. SE Asia, sub-Saharan Africa)
NOTE 4: Convalescent Plasma FDA EUA Documentation and Reporting Requirements

- Providers **must document** in EMR that patient/caregiver was:
  1) Given the Fact Sheet for Patients and Caregivers;
  2) Informed of alternatives to convalescent plasma;
  3) Informed of risks and benefits of convalescent plasma, and
  4) Informed that convalescent plasma is not an FDA approved biological product
- Providers **must report** any infusion reactions to the Blood Bank which will initiate appropriate investigations if necessary

NOTE 5: Remdesivir FDA EUA Documentation and Reporting Requirements

- Providers **must document** in EMR that patient/caregiver was:
  1) Given the Fact Sheet for Patients and Caregivers;
  2) Informed of alternatives to remdesivir, and
  3) Informed that remdesivir is an approved drug that is authorized for this unapproved use
- Providers **must report** all medication errors and serious adverse events potentially related to remdesivir within 7 calendar days from the event by:
  1) Submitting an MedWatch Report, and
  2) Emailing a copy of the submitted MedWatch Report to Gilead Safety_fc@gilead.com

NOTE 6: Documentation and Reporting Requirements for Remdesivir Use in Neonates < 3.5 kg who are not enrolled in GS-US-540-5823

- Providers **should document** the following in EMR:
  1) Remdesivir is not FDA approved or authorized for use in these patients;
  2) Why patient is considered for remdesivir;
  3) All other options have been evaluated;
  4) Risk/benefits discussed with parents/caregivers;
  5) How was dosing derived; and
  6) Consent has been signed and a copy has been given to parent/caregiver
- Providers **should report** all medication errors and serious adverse events potentially related to remdesivir within 7 calendar days from the event by:
  1) Submitting an MedWatch Report, and
  2) Emailing a copy of the submitted MedWatch Report to Gilead Safety_fc@gilead.com
**APPENDIX A – ANTI-SARS-COV-2 MONOCLONAL ANTIBODIES (CASIRIVIMAB/IMDEVIMAB)**

Emergency Use Authorization (EUA) for Non-Hospitalized Patients

<table>
<thead>
<tr>
<th>Eligibility Criteria</th>
<th>Patients must meet all the following criteria:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Positive SARS-CoV-2 result (PCR or antigen); - Symptomatic mild or moderate COVID-19 without requiring hospitalization or new/increased supplemental oxygen needs compared to baseline - Within 10 days of symptom onset; and - Presence of ≥1 of the following high-risk medical conditions</td>
<td></td>
</tr>
</tbody>
</table>

### Pediatric patients (12-17 years of age and ≥ 40 kg)*

- Race/ethnicity
- BMI ≥ 99th percentile for age/sex
- Pregnancy
- Chronic kidney disease
- Diabetes
- Immunosuppressive disease or treatment
- Cardiovascular disease
- Chronic lung disease
- Sickle cell disease
- Neurodevelopmental, congenital, genetic, or metabolic disorders, and other conditions that confer medical complexity

### Adult patients (18-54 years of age)

- Race/ethnicity
- BMI ≥ 25 kg/m²
- Pregnancy
- Chronic kidney disease
- Diabetes
- Immunosuppressive disease or treatment
- Cardiovascular disease
- Chronic lung disease
- Sickle cell disease
- Neurodevelopmental, congenital, genetic, or metabolic disorders, and other conditions that confer medical complexity
- Medically-related technological dependence
- Cancer
- Dementia
- Disability
- Liver disease
- Thalassemia
- Smoking, current or former
- Stroke
- Substance use disorder
- Other

**Provider Tools**

- *For more information on pediatric eligibility criteria please see [CAS/I Eligibility Criteria](#) or on the MDH website [Pediatric mAb criteria](#)
- [FDA EUA CAS/I Fact Sheet for Healthcare Providers](#)
- [FDA EUA CAS/I Fact Sheet for Patients and Caregivers](#)
- [Provider CAS/I Talking Points and FAQs](#)
REFERENCES
Guidelines, Expert Reviews, Evidence Summaries

Drug Interactions
16. COVID-19 drug interactions, University of Liverpool http://www.covid19-druginteractions.org/

Remdesivir

Disclaimer: This guideline is designed for general use with most patients; each clinician should use his or her own independent judgment to meet the needs of each individual patient. This guideline is not a substitute for professional medical advice, diagnosis or treatment.
Corticosteroids


Convalescent Plasma


Anti-SARS-CoV-2 Monoclonal Antibodies


43. Fact Sheet for Patients And Parent/Caregivers for Emergency Use Authorization (EUA) of casirivimab/imdevimab. https://www.fda.gov/media/145612/download


IVIG

Tocilizumab
MEDICAL MANAGEMENT FOR PATIENTS WITH CONFIRMED COVID-19
(Age <25 years)

COVID-19 Interim Clinical Guidance Workgroup
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Created: 04/08/20

Revised: 05/25/20 1) Added convalescent plasma as an investigational option for prophylaxis or treatment of COVID-19; 2) Added Appendix B with eligibility criteria for use of convalescent plasma; 3) Updated literature

Revised: 05/29/20 1) Added clarification regarding remdesivir dosing in pediatric patients ≤7 days of age or born prematurely; 2) Updated literature

Revised: 06/17/20 1) Added restriction of remdesivir to Infectious Disease per P&T Committee approval on 6.17.20; 2) Removed hydroxychloroquine as a treatment option; 3) Removed doxycycline as alternative to azithromycin if concern for community-acquired pneumonic bacterial coinfection; 4) Removed original Appendix A that provided guidance with QTc prolonging pharmacotherapies; 5) Updated literature

Revised: 07/07/20 1) Added dexamethasone as treatment consideration in patients requiring supplemental oxygen or mechanical ventilation; 2) Added methylprednisolone and prednisolone as alternative agents if dexamethasone is unavailable; 3) Updated convalescent plasma eligibility criteria for the pediatric study to: a) include medically complex children or children on technological support associated with developmental delay or genetic anomalies, and b) extend the onset of symptoms to up to 7 days; 4) Updated convalescent plasma eligibility criteria for the adult study to include patients with clinically suspected SARS-CoV-2 infection; 5) Updated literature

Revised: 09/25/20 1) Removed tocilizumab as treatment consideration in patients with severe pneumonia or ARDS; 2) Removed IVIG 400 mg/kg/day × 3 days as treatment consideration if admission or follow-up labs suggest HLH physiology or cytokine storm; providers are now referred to discuss with Immunology use of biologic modulators, including IVIG, for severe pneumonia or ARDS; 3) Included dosing weight recommendations for convalescent plasma; 4) Updated convalescent plasma eligibility criteria for patients with clinically suspected SARS-CoV-2 infection; 5) Updated literature

Revised: 01/20/21 1) Added rapid antigen as confirmation for COVID-19; 2) Revised daily lab to daily labs as clinically indicated; 3) Removed the rapid 4-plex cytokine panel and the immune comprehensive panel from the admission labs (except in ARDS); 4) Added prothrombin time (PT) as required lab prior to and during remdesivir treatment; 5) Added a new section on pae 3 for asymptomatic patients with high-risk SARS-CoV-2 exposure; 6) Added guiding statements “May consider” vs. “Considers” vs. “Recommended” for all COVID-19 therapeutic agents; 7) Added anti-SARS-CoV-2 monoclonal antibodies as a treatment option for eligible, non-hospitalized patients with mild or moderate COVID-19; 8) Included information about timing of Covid-19 vaccine after administration of monoclonal antibodies treatment for Covid-19 or convalescent plasma; 9) Revised the remdesivir section to include information on a) patient populations that are covered under FDA approvals vs. FDA EUA; b) the process for using remdesivir in patients <3.5 kg who are not covered under FDA approval or EUA; and c) recommendations for remdesivir use in renal and hepatic dysfunction; 10) Added documentation and reporting requirements for FDA EUA convalescent plasma, FDA EUA remdesivir, and remdesivir use in patients <3.5 kg; 11) Added recommendations for oseltamivir use when influenza is co-circulating with COVID-19; 12) Removed convalescent plasma from Severe Pneumonia and ARDS; 13) Updated literature

Revised: 02/10/21 Removed convalescent plasma for confirmed infection or high risk exposure in pediatric patients (IRB 2005-044) as a treatment option

Revised: 03/30/21 1) ARDS and critical pneumonia (pneumonia requiring invasive mechanical ventilation or ECMO) were categorized under the same clinical severity (page 5); 2) Included tocilizumab in combination with systemic corticosteroids as a treatment consideration for certain hospitalized patients who are exhibiting rapid respiratory decompensation due to COVID-19

Revised: 04/17/21 Removed bamlanivimab monotherapy for outpatient treatment of mild to moderate COVID-19 in response to the bamlanivimab EUA reversion by the FDA on 4/16/21

Revised: 06/03/21 Included casirivimab/indirivimab for outpatient treatment of mild to moderate COVID-19 per the expanded criteria of the 5/17/21 FDA EUA