PURPOSE: To outline consensus recommendations on the management of pediatric patients with suspected or confirmed COVID-19 infections at CHKD. For information on the treatment and management of multisystem inflammatory syndrome in children (MIS-C), please refer to the MIS-C specific guideline available on KDnet.

PATIENT PRESENTATION:
Range from uncomplicated upper respiratory tract viral infection to pneumonia, acute respiratory distress syndrome (ARDS), sepsis, and septic shock (Table 1). No specific data is available establishing risk factors for severe COVID-19 disease in children.

Table 1. Clinical Symptoms Associated with COVID-19:

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Description</th>
</tr>
</thead>
</table>
| Uncomplicated Illness     | Uncomplicated upper respiratory tract viral infection with nonspecific symptoms including:
                               | Fever, cough, sore throat, nasal congestion, malaise, headache, muscle pain, anosmia, hyposmia
|                           | Without signs of dehydration, sepsis, or shortness of breath                |
| Mild Pneumonia            | Non-severe pneumonia presenting with cough or difficulty breathing + tachypnea |
|                           | Without signs of severe pneumonia                                           |
| Severe Pneumonia          | Adolescent: fever or suspected respiratory infection + one of the below:     |
|                           | •  RR > 30 breaths/min                                                      |
|                           | •  Severe respiratory distress                                              |
|                           | •  SpO2 < 90% on room air                                                  |
|                           | Child: cough or difficulty breathing + one of the below:                    |
|                           | •  Central cyanosis                                                         |
|                           | •  SpO2 < 90%                                                              |
|                           | •  Severe respiratory distress                                              |
|                           | •  Clinical signs of pneumonia + inability to breast feed or drink, lethargy, convulsions |
| ARDS                      | New or worsening respiratory symptoms within one week of known clinical insult |
|                           | Chest imaging consistent with ARDS                                          |
|                           | Respiratory failure not explained by cardiac failure or fluid overload      |
| Sepsis/Septic Shock       | Diagnosis made clinically                                                   |

Table 2. COVID-19 SPECIFIC THERAPY

<table>
<thead>
<tr>
<th>Class</th>
<th>Agent</th>
<th>Route</th>
<th>Patient Status</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antivirals</td>
<td>Remdesivir</td>
<td>IV</td>
<td>Either</td>
<td>FDA Approved: In adult and pediatric patients (&gt; 28 days AND ≥ 3 kg)</td>
</tr>
<tr>
<td></td>
<td>(Veklury)*</td>
<td></td>
<td></td>
<td>EUA: Mild-moderate High-Risk COVID-19 (+) patients:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>a) ≥ 12 years and ≥ 40 kg, AND</td>
</tr>
<tr>
<td></td>
<td>Nirmatrevir/ritonavir (Paxlovid)*</td>
<td>PO</td>
<td>Out-pt</td>
<td>b) Confirmed (+) COVID-19 test, AND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>c) High risk for progression to severe COVID-19, AND</td>
</tr>
<tr>
<td></td>
<td>Molnupiravir*</td>
<td>PO</td>
<td>Out-p</td>
<td>d) Within 5 days of symptoms onset</td>
</tr>
<tr>
<td>JAK-1 Inhibitor</td>
<td>Baricitinib</td>
<td>PO</td>
<td>In-p</td>
<td>EUA: ≥ 2 years in combo with Remdesivir</td>
</tr>
<tr>
<td></td>
<td>(Olumiant)</td>
<td></td>
<td></td>
<td>Reserved for contraindications to corticosteroids, Not FDA approved for COVID-19</td>
</tr>
<tr>
<td>mAbs</td>
<td>Bebtelovimab*</td>
<td>IV</td>
<td>Out-p</td>
<td>EUA: ≥ 12 years of age and ≥ 40 kg</td>
</tr>
<tr>
<td></td>
<td>Tixagevimab/Cilgavimab*</td>
<td>IM</td>
<td>Out-p</td>
<td>EUA: ≥ 12 years of age and ≥ 40 kg</td>
</tr>
</tbody>
</table>

IM, intramuscular; In-p, inpatient; IV, intravenous; mAbs, COVID-19 monoclonal antibodies; out-p, outpatient; PO, orally
* Refer to drug specific guidelines, available on Kdnet
◊ refer to remdesivir specific guideline on KDnet
COVID-19 SUPPORTIVE CARE & ANTICOAGULATION:

Supportive Care:
Sufficient fluid and calorie intake, and additional oxygen supplementation should be used in the treatment of children infected with COVID-19. The aim is to prevent ARDS, organ failure, and secondary nosocomial infections. If bacterial infection is suspected, broad-spectrum antibiotics may be used.22

Anticoagulation:
COVID-19 is associated with an increased risk of venous thromboembolism (VTE) in adults. There are no specific recommendations for pediatric patients with COVID-19.16-21 Asymptomatic, mild, or moderate COVID-19 is not an indication for anticoagulant prophylaxis unless the patient qualifies based on risks outlined in Table 2. All hospitalized COVID-19 (+) patients should undergo a risk assessment as outlined in Table 3 & Figure 1.

a) Strongly consider Hematology consult to assess risk factors

b) If patient qualifies for thromboprophylaxis, obtain D-dimer, fibrinogen, PT/PTT, & Serum Creatinine (Scr), and consult Hematology

c) Thromboprophylaxis may be changed to treatment if very high risk for VTE/microvascular thrombosis. Discuss with Hematology

d) Patients with decreased renal function should have enoxaparin adjusted or changed to unfractionated heparin, discuss with Hematology

e) Length of VTE prophylaxis to be determined by Hematology

Figure 1: Anticoagulation in Pediatric Acute COVID-19

![Diagram of anticoagulation protocol for pediatric COVID-19 patients]

Table 2: Risk Factors for VTE

- Age ≥ 12 years
- BMI > 30
- Chronic venous disease
- Recent surgery
- Immobilization
- Cancer
- Inflammation

Table 3: VTE Prophylaxis Guidelines

- All hospitalized COVID-19 (+) patients should undergo risk assessment
- Consult Hematology
- Obtain labs: D-dimer, fibrinogen, PT/PTT, Scr
- Assess and adjust therapy based on risk factors

Figure 1: Anticoagulation in Pediatric Acute COVID-19

[Diagram showing decision tree for anticoagulation based on age and risk factors]
Table 3: Thromboprophylaxis should be considered in patients who meet ≥ 1 of the following

<table>
<thead>
<tr>
<th>Risk Factors for VTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age ≥12 years or post-pubertal</td>
</tr>
<tr>
<td>Patients on PICU service</td>
</tr>
<tr>
<td>Mechanical Ventilation</td>
</tr>
<tr>
<td>Obesity</td>
</tr>
<tr>
<td>Central Line(s)</td>
</tr>
<tr>
<td>Decreased mobility</td>
</tr>
<tr>
<td>Sickle Cell Disease</td>
</tr>
<tr>
<td>Autoimmune Disorders</td>
</tr>
<tr>
<td>Nephrotic Syndrome</td>
</tr>
<tr>
<td>CF Exacerbation</td>
</tr>
<tr>
<td>Prolonged Length of Stay (anticipated &gt; 3 days)</td>
</tr>
<tr>
<td>First degree family history of unprovoked VTE</td>
</tr>
<tr>
<td>Personal and/or family history of thrombosis/thrombophilia</td>
</tr>
<tr>
<td>Concomitant estrogen-containing medication</td>
</tr>
<tr>
<td>Inotropic infusion requirement</td>
</tr>
<tr>
<td>Any heart rhythm abnormalities</td>
</tr>
<tr>
<td>Congenital or acquired heart disease with venous stasis or impaired venous return</td>
</tr>
</tbody>
</table>

Table 4. Bleeding Risk Factors: 15-22

<table>
<thead>
<tr>
<th>Bleeding Risk Factors</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Recommended</td>
<td>Intrapranial hemorrhage</td>
</tr>
<tr>
<td></td>
<td>Active bleed</td>
</tr>
<tr>
<td>Consider with caution</td>
<td>Intrapranial mass</td>
</tr>
<tr>
<td></td>
<td>Lumbar puncture w/in 24 hours</td>
</tr>
<tr>
<td></td>
<td>Coagulopathy</td>
</tr>
<tr>
<td></td>
<td>Neurosurgical procedure w/in 24 hours</td>
</tr>
</tbody>
</table>
**Figure 2. Treatment Algorithm:**

Dosing per (Table 5) or refer to drug specific guideline on KDnet

VTE risk assessment See Figure 1/Table 3

**Inpatient:**

- **Inpatient: Mild**
  - Otherwise healthy child with COVID-19 + clinical symptoms including:
    - Uncomplicated illness
    - Mild Pneumonia

- **Inpatient: Moderate**
  - Clinical symptoms including:
    - Mild Pneumonia
    - Moderate Pneumonia
    - Severe Pneumonia
  - Consider baseline interleukin levels

- **Inpatient: Severe (NICU/PICU)**
  - Clinical symptoms including:
    - Severe Pneumonia
    - ARDS
    - Sepsis/Shock
  - Consider baseline interleukin levels

**Low Risk**

- Supportive Care ONLY

**High Risk**

- Bebtelovimab (IV) *£×5
- Remdesivir (IV) *£
- Nirmatrelvir/ritonavir (PO) *^£
- Molnupiravir (PO) *^£

**Outpatient**

- COVID-19 (+)
  - Assess for VTE Risk Factors
  - Respiratory support required

**Eligible for Remdesivir:**

- Refer to CHKD Remdesivir Guideline

**Supportive Care ONLY**

- Respiratory support required

**Supportive Care + Steroids + Remdesivir **£×^£

**Supportive Care ONLY**

- Respiratory support required

**Supportive Care + Steroids + Remdesivir **£×^£

**Supportive Care + Steroids + Consider Tocilizumab/Sarilumab**£×^£

**Supportive Care**

- Contact ID

**Contact ID**

- Remdesivir

**Contact ID**

- Nirmatrelvir/ritonavir

**Contact ID**

- Molnupiravir

**Contact ID**

- Bebtelovimab (IV)

**Criteria for risk high risk of cytokine storm**

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IL-6</td>
<td>&gt;5x upper normal limit</td>
</tr>
<tr>
<td>Ferritin</td>
<td>&gt;500 mcg/L with doubling in 24 hr</td>
</tr>
<tr>
<td>Ferritin</td>
<td>&gt;600 mcg/L at presentation</td>
</tr>
<tr>
<td>LDH</td>
<td>&lt;250</td>
</tr>
<tr>
<td>D-dimer</td>
<td>Elevated</td>
</tr>
</tbody>
</table>

* Reserved for High Risk Patients- See drug specific guideline on kdnet
^ ID Restricted. Contact for approval
× Pending available supply
^£ Consider Baricitinib if steroids are contraindicated
£ Patients with signs and symptoms of cytokine storm
^ Patients must meet individual criteria for use, see specific guideline on KDnet

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**Effective Date:** 3/20/2020

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Table 5. Agents Approved & Under Investigation for Treatment of COVID-19\(^\text{50}\)

<table>
<thead>
<tr>
<th>COVID-19 Treatment: Drugs(^\text{50})</th>
<th>Dosing &amp; Duration(^\text{23,47})</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Remdesivir</strong>*(Veklury®)* (IV only)</td>
<td><strong>Adult dosing:</strong></td>
<td>Adverse events:</td>
</tr>
<tr>
<td><strong>Restricted to:</strong></td>
<td>- 200 mg load, then 100 mg q24h</td>
<td>- Increased liver enzymes, discontinue if ALT (\geq 10) times UNL</td>
</tr>
<tr>
<td>a. <strong>Infectious Disease</strong></td>
<td><strong>Pediatric dosing:</strong></td>
<td>- Infusion related hypotension</td>
</tr>
<tr>
<td>b. (\leq 7) days of illness, (do not use in patients with symptoms for (&gt; 7) days) unlikely to reap benefits of therapy, risk vs. benefit</td>
<td>- <strong>Weight</strong></td>
<td>- Drug-drug interactions CYP450</td>
</tr>
<tr>
<td><strong>Outpatient Use:</strong></td>
<td><strong>LD (once)</strong></td>
<td>- QT prolongation (possible TdP Risk)</td>
</tr>
<tr>
<td>a. <strong>High-risk</strong> patients with confirmed (+) COVID-19</td>
<td><strong>MD (q24h)</strong></td>
<td><strong>Duration:</strong></td>
</tr>
<tr>
<td>b. <strong>(\leq 7) days of illness</strong> (symptom onset)</td>
<td>(&lt;40 \text{ kg}$$)</td>
<td>- Hospitalized: 5 days</td>
</tr>
<tr>
<td><strong>As of 4/25/2022:</strong></td>
<td>5 mg/kg</td>
<td>- Non-hospitalized: 3 days</td>
</tr>
<tr>
<td>- FDA approved: (&gt; 28) days of age AND (\geq 3) kg</td>
<td>2.5 mg/kg</td>
<td><strong>Dosing:</strong></td>
</tr>
<tr>
<td><strong>Restrict to Infectious Disease</strong></td>
<td>**(\geq 40 \text{ kg}$$)</td>
<td><strong>Preferred Drug</strong></td>
</tr>
<tr>
<td><strong>Refer to Remdesivir Guideline on KDnet</strong></td>
<td>200 mg</td>
<td><strong>Dose</strong> (^\text{23,47})</td>
</tr>
<tr>
<td></td>
<td><strong>LD-Loading Dose,</strong> Max =200 mg</td>
<td><strong>Dexamethasone</strong></td>
</tr>
<tr>
<td><strong>Corticosteroids</strong> (IV/PO)</td>
<td><strong>MD-Maintenance Dose,</strong> Max= 100 mg</td>
<td>- Preferred in adults.</td>
</tr>
<tr>
<td><strong>Dexamethasone</strong></td>
<td><strong>Duration:</strong> up to 10 days</td>
<td>- No known superior agent in children</td>
</tr>
<tr>
<td>- <strong>Preferred in COVID-19 + asthmatic patients</strong>(^\text{54})</td>
<td><strong>Preferred Drug</strong></td>
<td><strong>Methylprednisolone</strong></td>
</tr>
<tr>
<td>- <strong>Alternatives:</strong></td>
<td><strong>Dose</strong> (^\text{23,47})</td>
<td>- Preferred in COVID-19 + asthmatic patients</td>
</tr>
<tr>
<td>a. Breastfeeding/Pregnant: Prednisolone or methylprednisolone</td>
<td>Dexamethasone</td>
<td>- No data in pregnancy or breast feeding</td>
</tr>
<tr>
<td>b. Preterm infant: Corrected GA (&lt; 40) weeks: Hydrocortisone</td>
<td>Methylprednisolone</td>
<td><strong>Interactions:</strong></td>
</tr>
<tr>
<td><strong>Indicated for patients with:</strong></td>
<td><strong>Preterm infant: Corrected GA (&lt; 40) weeks:</strong></td>
<td>- Potent CYP3A Inducers: associated with the potential for loss of virologic response and resistance. Cannot be started immediately after discontinuation due to the delayed offset of the recent CYP3A inducer</td>
</tr>
<tr>
<td>a. Respiratory support: oxygen or invasive mechanical ventilation</td>
<td>Hydrocortisone</td>
<td><strong>Warnings:</strong></td>
</tr>
<tr>
<td>b. <strong>Continuation for underlying condition requiring chronic steroid treatment</strong></td>
<td><strong>Adverse Effects (≥5%):</strong></td>
<td>- Hepatotoxicity</td>
</tr>
<tr>
<td>c. <strong>Additional diagnosis where steroid therapy is appropriate</strong></td>
<td></td>
<td>- HIV Resistance</td>
</tr>
<tr>
<td></td>
<td><strong>Not available at CHKD, outpatient only</strong></td>
<td><strong>Contraindications:</strong></td>
</tr>
<tr>
<td><strong>Paxlovid (nirmatrelvir/ritonavir)</strong> (PO)(^62)</td>
<td><strong>Renal Dosing: CrCl</strong></td>
<td>a. History of significant hypersensitivity reactions to any ingredient</td>
</tr>
<tr>
<td><strong>EUA for the treatment of mild-to-moderate COVID-19 in patients:</strong></td>
<td><strong>CrCl (mL/min)</strong></td>
<td>b. <strong>Highly metabolized CYP3A drugs:</strong> Elevated concentrations associated with serious and/or life-threatening reactions</td>
</tr>
<tr>
<td>a. (\geq 12) years and (\geq 40) kg</td>
<td><strong>Adjustment</strong></td>
<td>c. <strong>Potent CYP3A Inducers:</strong> associated with the potential for loss of virologic response and resistance. Cannot be started immediately after discontinuation due to the delayed offset of the recent CYP3A inducer</td>
</tr>
<tr>
<td>b. <strong>Confirmed (+) COVID-19 test</strong></td>
<td></td>
<td><strong>Warnings:</strong></td>
</tr>
<tr>
<td>c. <strong>High risk</strong> for progression to severe COVID-19</td>
<td></td>
<td>- Hepatotoxicity</td>
</tr>
<tr>
<td>d. <strong>Within 5 days of symptoms onset</strong></td>
<td></td>
<td>- HIV Resistance</td>
</tr>
<tr>
<td><strong>NOT authorized:</strong></td>
<td></td>
<td><strong>No data in pregnancy or breast feeding</strong></td>
</tr>
<tr>
<td>a. <strong>Hospitalized due to severe/critical COVID-19</strong></td>
<td></td>
<td><strong>Adverse Effects (≥5%):</strong></td>
</tr>
<tr>
<td>b. <strong>Use for &gt; 5 consecutive days</strong></td>
<td></td>
<td>- Dry cough, diarrhea, hypertension, myalgia</td>
</tr>
<tr>
<td>c. <strong>Pre or post-exposure prophylaxis</strong></td>
<td><strong>Drug Interactions!!!!!</strong></td>
<td><strong>For specific recommendations and contraindications, refer to specific guideline on KDnet</strong></td>
</tr>
</tbody>
</table>

\(\text{LD} = \text{Loading dose}, \text{MD} = \text{Maintenance dose}\)

**Table 5.** Table showing the approved and under investigation agents for the treatment of COVID-19. The table includes the name of the drug, dosing and duration, and comments on adverse events and contraindications. The table also highlights the importance of considering symptoms and patient history when determining the appropriate treatment. The table is valuable for healthcare providers and patients alike, providing a comprehensive overview of the available options for COVID-19 treatment.
Molnupiravir (PO) 63

**EUA:** Mild-moderate COVID-19 in patients:
- ≥ 18 years of age
- Confirmed (+) COVID-19 test
- High risk for progression to severe COVID-19
- Within 5 days of symptoms onset

**Outpatient ONLY**

**NOT authorized:**
- Hospitalized patients, due to COVID-19
- Pre or post-exposure prophylaxis
- Duration > 5 consecutive days

**Pregnancy testing prior to initiating**

Refer to Oral Antivirals Guideline on KDnet

Not available at CHKD, outpatient only

Baricitinib (Olumiant®)-(PO/NG/GT only)

**EUA:** ≥ 2 years in combo with Remdesivir

At CHKD, Baricitinib is reserved for patients who meet the stated EUA criteria and have a contraindication to corticosteroid treatment

Corticosteroids should be 1st line and Baricitinib 2nd line only when steroid use is contraindicated

CBC, CMP: Required at baseline and only when steroid use is contraindicated

**Restricted to Infectious Disease**

Tocilizumab (TOCI) (IV)

- IL-6 inhibitor
- Added to antiviral therapy + steroids in those meeting criteria (Figure 2)

Sarilumab (SC or IV) 23,55-57

**2nd Line IL-6 inhibitor**

- Alternative during critical TOCI shortage in those ≥ 40 kg
- Data is limited in children

Added to antiviral therapy + steroids in those meeting criteria (Figure 2)

**Restricted to Infectious Diseases**

Dosing:
- 800 mg (4 caps) every 12 hours X 5 days
- Supplied as 200 mg capsules

No renal or hepatic dose adjustments required

Not recommended in pregnancy or breastfeeding

**Duration:**
- 5 days

**Administration:**
- If hospitalization occurs after starting treatment, complete the full 5-day course per the healthcare provider’s discretion
- If a dose is missed within an 10 hours window, take the missed dose as soon as possible, if > 10 hours, do not take the missed dose and resume normal schedule

Contraindications: None known

**Warnings:** (Data from animal studies)
- Embryo-Fetal Toxicity: Advise use of effective contraception correctly and consistently, for the duration of treatment and for 4 days after the last dose
- Bone and Cartilage Toxicity: Avoid age < 18 years may affect bone & cartilage growth

Adverse Effects (< 2 %):
- Diarrhea, nausea, dizziness

Drug Interactions: none known to date

Pregnancy Surveillance Program
- Voluntary long-term follow up program

Tocilizumab (TOCI) (IV)

Dosing:

<table>
<thead>
<tr>
<th>Age</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 2-8 years</td>
<td>2 mg once daily</td>
</tr>
<tr>
<td>≥ 9 years</td>
<td>4 mg once daily</td>
</tr>
</tbody>
</table>

Dose Adjustments/Contraindications for:
- Renal Insufficiency
- Hepatic Failure
- ALC < 200 cells/µL
- ANC < 500 cells/µL

**Duration:** ONCE

Adult Dosing (≥18 years):
- 8 mg/kg X 1 (Max 800 mg)

**Pediatric Dosing (<18 years):**
- < 30 kg: 12 mg/kg X 1 (Max 800 mg)
- ≥ 30 kg: 8 mg/kg X 1 (Max 800 mg)

**Duration:** ONCE

Serious Infections

**Contraindications:**
- Avoid use of live vaccines w/ Baricitinib
- Hypersensitivity-Rare but has been reported

Sarilumab (SC or IV) 23,55-57

**Dosing:**
- 400 mg IV X 1 dose

**Administration:**
- 400 mg in 100 mL of 0.9% NaCl infused over 1 hour

**Duration:** ONCE

Route of Administration:
- **IV only for COVID-19**
- SC NOT FDA approved for CRS
- IV is not FDA approved, studied in a clinical trial of hospitalized patients with COVID-19

**Contraindications:**
- Avoid in pregnancy/breastfeeding
- Liver aminotransferase >5 times UNL
- Absolute neutrophil count <500 cells/µL
- Platelet count <50,000 cells/µL

**Caution:**
- Avoid live viral vaccines
- Caution converting from either agent to anakinra
- CRP & IL-6 levels not reliable post dose

**Serious adverse events:**
- GI perforation, Anemia, Hepatitis, Infusion reaction

Do not anticipate response for 48-72 hrs post dose

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**Author/Owner(s):**
- **Sarah Parsons**, Pharm D, BCPS, Infectious Diseases, Antimicrobial Stewardship Co-Lead
- **Laura Sass MD**, Pediatric Infectious Disease

**Reviewers:** Chris Foley MD; Michael Chichella Pharm. D., BCPS, FPPAG; MD, Melissa Mark, MD & William Owen, MD, Pediatric Hematology/Oncology, Jessica Price Pharm. D. Pediatric Hematology/Oncology Pharmacy Specialist; Brittany Asaban Pharm. D., BCPS Pharmacy Specialist, Tina Hellauer Pharm. D., Pharmacy Specialist

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**Last Revised:** 4/27/2022

**Revision History:**
- 4/27/22: remdesivir full FDA approval updated
- 3/30/22: removed sotrovimab from guideline per FDA recommendations or BA2
- 2/22/22: Bebetclovimab added to flow diagram and Table 2.
- 11/19/21: addition of PF-07321332/Ritonavir (Paxlovid) to figure 2. and table 4.
- 8/23/21: remdesivir restriction added
- 8/20/21: clarified recommendations for dexamethasone and Remdesivir in algorithm added, sarilumab added w/ innovative use guidance, C/I ppx comment added
- 7/23/21: updated steroid recommendations
- 6/2/21: conv plasma removed, monoclonal antibodies updated to reflect variant changes, C/I recommended agent, dosing for Sotrovimab added with note to used C/I as preferred, flow diagram updated
- 3/24/21: Anticoagulation lab recommendations, Bamlanivimab monotherapy removed.
- 2/26/21: MIS-C guideline separation, update treatment to include anticoagulation recommendations and risk assessment. Added BAM-E to guideline and recommended using BAM containing first over C/I.
- 1/28/21: added heme-one consult and removed ASA as initial therapy without consult. Add dosing recommendations and caveat in dosing table.
- 1/20/21: updated MIS-C guideline, steroids and anakinra dosing, Remdesivir ALT recommendations
- 12/15/20: updated Baricitinib recommendations from 12/14 NIH
- 11/24/20: added Bamlanivimab & Casirivimab and Imdevimab, and Baricitinib, removed nebulized recommendations, added covid specific therapy chart, removed
- 10/23/20: Updated MIS-C management and FDA Remdesivir approval
- 8/7/20: clarified recommendations for dexamethasone and Remdesivir in algorithm
- 7/22/20: updated Remdesivir use of CHKD product under EUA
- 7/17/20: updated anakinra dosing and tocilizumab information
- 7/8/20: added nebulized therapy guidance, renumbered tables
- 6/24/20: dexamethasone recommendations added, Qtc monitoring (Figure 2.) removed, organized to improve flow. Tables and figures renumbered
- 6/17/20: Hydroxychloroquine and azithromycin removed from guideline
- 6/1/20: ID consult added to MIS-C and moderate-severe criteria combine
- 5/29/20: Hydroxychloroquine removed from algorithm and ID will recommend as a 2nd line therapy if indicated, and moved to 2nd line in table 4. ID consult added to algorithm. Reformating of table 4
- 5/22/20: addition of definition and review of treatment for MIS-C, Remdesivir EUA update, addition of chart with known indication in COVID-19 and unclear, anakinra added to list, cytokine storm table moved to tocilizumab dosing table, QTC chart updated. MIS-C severity table, guideline for MIS-C treatment and dosing. MIS-C flow diagram included tocilizumab dosing
- 5/4/20: Updated information on disease process in children, added EUA to Remdesivir, changed to consider Hydroxychloroquine to the treatment algorithm. Added new references. Removed Lopinavir-Ritonavir
- 4/9/20: NG administration for hydroxychloroquine, Remdesivir added to figure 1, azithromycin changed to (+/-) in figure 1. Tables renumbered for organization, VTE prophylaxis guidance-Reviewed by Eric Lowe MD & Jessica Price PharmD
- 4/3/20: Remdesivir reference to guideline, included reference for cytokine storm

**Version:** 13 **4/27/2022**
**Effective Date:** 3/20/2020
03/30/20: updated Lopinavir/ritonavir dosing and duration, remove azithromycin from combination early initiation, added QT monitoring recommendations and risks, NSAID statement

The recommendations in this guide are meant to serve as treatment guidelines for use at The Children’s Hospital of The King’s Daughters. As a result of ongoing research, practice guidelines may from time to time change. The authors of these guidelines have made all attempts to ensure the accuracy based on current information, however, due to ongoing research, users of these guidelines are strongly encouraged to confirm the information through an independent source.

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