

Therapeutic Management of Hospitalized Children With COVID-19

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This section outlines the COVID-19 Treatment Guidelines Panel’s (the Panel) recommendations for the therapeutic management of children (i.e., pediatric patients aged <18 years) who are hospitalized for COVID-19. Throughout this section, the term “COVID-19” refers to the acute, primarily respiratory illness due to infection with SARS-CoV-2. Multisystem inflammatory syndrome in children (MIS-C) refers to the postinfectious inflammatory condition.

Treatment Considerations for Children With COVID-19

To date, no comparative clinical trials evaluating the treatment of COVID-19 in children have been published. Evaluations of pharmacologic therapies in children with COVID-19 have been limited to small pharmacokinetic studies and retrospective observational reports.¹⁻⁵ Therefore, more high-quality randomized trials, observational studies, and pharmacokinetic studies are urgently needed. Whenever possible, clinical trials of therapeutics and multicenter observational cohorts should enroll children with COVID-19.

Published guidance on the treatment of COVID-19 in children has been extrapolated mostly from recommendations for adults with COVID-19, recommendations for children with other viral infections, and expert opinion.⁶⁻⁸ Applying adult data from COVID-19 trials to children is a unique challenge because most children experience a mild course of illness with COVID-19.³ Relative to adults, children with COVID-19 have substantially lower mortality and less need for hospitalization.⁹⁻¹¹ Because of these differences in epidemiology and disease severity, the effect sizes of treatments for children are likely to be smaller than those observed in adults. Therefore, to produce a beneficial outcome in children, the number needed to treat is higher. Collectively, these factors influence the risk versus benefit balance for pharmacologic therapies in children.

Other challenges are the uncertainty about which comorbid conditions place children at the highest risk of severe COVID-19 and the uncertainty about the absolute magnitude of the increased risk from those comorbid conditions. For children with COVID-19, the type, number, and severity of comorbid conditions influence decisions about pharmacologic treatment. For more information on risk factors in children with COVID-19, see [Special Considerations in Children](#) and [Therapeutic Management of Nonhospitalized Children With COVID-19](#).

Recommendations

In the absence of sufficient clinical trial data on the treatment of children with COVID-19, the Panel’s recommendations for the therapeutic management of hospitalized children are based largely on safety and efficacy data from clinical trials in adults, the child’s risk of disease progression, and expert opinion (see Table 3c). For the Panel’s recommendations for adults, see [Therapeutic Management of Hospitalized Adults With COVID-19](#).

In general, data from clinical trials in adults are most applicable to the treatment of older children with severe COVID-19 and predominantly lower respiratory tract disease. Using data from clinical trials in adults to develop recommendations for children with SARS-CoV-2 infection who have clinical syndromes associated with other respiratory viruses (e.g., bronchiolitis, croup, asthma) is a challenge. No evidence suggests that these syndromes should be managed differently when caused by

SARS-CoV-2 infection. Clinical judgment is needed when applying recommendations for treatment in adults to children, particularly young children, with these clinical syndromes.

Table 3c. Therapeutic Management of Hospitalized Children With COVID-19

Disease Severity	Panel's Recommendations
Hospitalized for COVID-19	For children aged ≥ 12 years admitted for COVID-19, use prophylactic anticoagulation unless contraindicated (BIII) . ^a
Does Not Require Supplemental Oxygen	For children admitted for COVID-19 who are at the highest risk of progression to severe COVID-19 ^b (especially those who are severely immunocompromised), consider using remdesivir ^c for children aged 12–17 years (CIII) . There is insufficient evidence for using remdesivir in children aged 28 days to <12 years and weighing ≥ 3 kg. For children admitted for reasons other than COVID-19 who have mild to moderate COVID-19 and are at the highest risk of progression, ^b refer to Therapeutic Management of Nonhospitalized Children With COVID-19 .
Requires Conventional Oxygen^d	Use 1 of the following options: <ul style="list-style-type: none"> • Remdesivir^c (BIII) • Dexamethasone plus remdesivir^c for children with increasing oxygen needs, particularly adolescents (BIII)
Requires Oxygen Through High-Flow Device or NIV^e	Use 1 of the following options: <ul style="list-style-type: none"> • Dexamethasone (BIII) • Dexamethasone plus remdesivir^c (BIII) For children who do not have rapid (e.g., within 24 hours) improvement in oxygenation after initiation of dexamethasone, baricitinib ^f or tocilizumab can be considered for children aged 12–17 years (BIII) and for children aged 2–11 years (CIII) .
Requires MV or ECMO^g	Dexamethasone ^g (AII) For children who do not have rapid (e.g., within 24 hours) improvement in oxygenation after initiation of dexamethasone, baricitinib ^f or tocilizumab may be considered for children aged 12–17 years (BIII) and for children aged 2–11 years (CIII) .
Each recommendation in the Guidelines receives a rating for the strength of the recommendation (A, B, or C) and a rating for the evidence that supports it (I, IIa, IIb, or III). See Guidelines Development for more information.	

^a Weighing the risk factors for thrombosis and bleeding, some Panel members would use prophylactic anticoagulation for children aged <12 years who are hospitalized for COVID-19.

^b See [Therapeutic Management of Nonhospitalized Children With COVID-19](#) for a list of conditions that will put children at highest risk for progression to severe COVID-19.

^c The clinical benefit of remdesivir is greatest if it is initiated within 10 days of symptom onset. Remdesivir should be given for 5 days or until hospital discharge, whichever comes first. Examples of patients who may benefit most from adding remdesivir >10 days from symptom onset include patients who are severely immunocompromised, particularly if they have evidence of ongoing viral replication (e.g., those with a low Ct value, as measured by an RT-PCR result or with a positive rapid antigen test result).

^d Conventional oxygen refers to oxygen supplementation that is not high-flow oxygen, NIV, MV, or ECMO.

^e Patients who are receiving NIV or MV at baseline and require a substantial increase in baseline support should be treated per the recommendations for patients requiring new NIV or MV.

^f **Tofacitinib** is an alternative if baricitinib is not available **(BIII)**.

^g For children who started receiving remdesivir before admission to the ICU, the remdesivir should be continued to complete the treatment course.

Key: Ct = cycle threshold; ECMO = extracorporeal membrane oxygenation; ICU = intensive care unit; MV = mechanical ventilation; NIV = noninvasive ventilation; the Panel = the COVID-19 Treatment Guidelines Panel; RT-PCR = reverse transcription polymerase chain reaction

Rationale for the Panel's Recommendations for Drug Therapies

Remdesivir

Remdesivir is approved by the Food and Drug Administration (FDA) for hospitalized and nonhospitalized pediatric patients aged ≥ 28 days and weighing ≥ 3 kg.¹² Remdesivir is expected to be active against circulating variants, although clinical efficacy data in children are currently limited.¹³⁻¹⁶ For most hospitalized patients, remdesivir should be administered for 5 days or until the patient is ready for discharge, whichever comes first. Treatment may be extended to 10 days for patients who have not clinically improved or for patients who are severely immunocompromised. See [Remdesivir](#) and [Special Considerations in People Who Are Immunocompromised](#) for more information.

In a trial conducted mostly among hospitalized adults with COVID-19 who did not receive supplemental oxygen at enrollment, a 5-day course of remdesivir was associated with greater clinical improvement when compared with the standard of care.¹⁷ Remdesivir was also studied in ACTT-1, a double-blind, placebo-controlled, randomized trial for hospitalized adults with COVID-19 who received remdesivir for 10 days (or until hospital discharge) or placebo.¹⁸ The study reported that the remdesivir arm had a shorter time to clinical recovery than the placebo arm (10 days vs. 15 days; $P < 0.001$). A subgroup analysis demonstrated that patients who received conventional oxygen therapy had the greatest benefit. No benefit was detected for patients who did not receive supplemental oxygen or for those who received noninvasive ventilation (NIV) or mechanical ventilation. No statistically significant differences in mortality or in the need for new mechanical ventilation were detected, and the benefit of remdesivir in this study was limited to patients with symptoms for < 10 days.

Three open-label trials in adults compared remdesivir to a local standard of care. The World Health Organization's Solidarity trial enrolled hospitalized adult patients with COVID-19 in 35 countries.¹⁹ In the overall cohort, no difference in hospital mortality was demonstrated (14.5% in the remdesivir arm vs. 15.6% in the usual care arm; rate ratio 0.91; 95% CI, 0.82–1.02; $P = 0.12$). However, in the large subset of patients receiving supplemental oxygen but not NIV or mechanical ventilation, remdesivir significantly reduced the risk of in-hospital mortality by 13% (14.6% vs. 16.3%; rate ratio 0.87; 95% CI, 0.76–0.99; $P = 0.03$).

The CATCO study demonstrated similar findings.²⁰ Treatment with remdesivir, when compared with standard care, reduced the need for mechanical ventilation in hospitalized adults with COVID-19 (8% vs. 15%; relative risk 0.53; 95% CI, 0.38–0.75). In this study, 87% of adult patients in both the remdesivir arm and standard of care arm received dexamethasone. In contrast to these 2 studies, the DisCoVeRy trial demonstrated no difference for any clinical outcome when the use of remdesivir plus usual care was compared to usual care alone.²¹

The efficacy of remdesivir has not been evaluated in clinical trials of hospitalized children with COVID-19. A Phase 2/3, single-arm, open-label study evaluated the safety, tolerability, and pharmacokinetics of remdesivir in 53 hospitalized children with COVID-19.²² Children weighing 3 to < 40 kg received remdesivir 5 mg/kg on Day 1, followed by remdesivir 2.5 mg/kg daily. Adverse events included acute kidney injury (11%) and an increase in alanine transaminase levels (8%). However, this study did not have a placebo group, limiting the ability to draw conclusions regarding the significance of these adverse events. Published observational data are limited to descriptive case series.^{1,2,23} Other uncontrolled case series reported similar safety profiles.^{4,23-25}

Findings from the adult trials and the pediatric pharmacokinetic study led the Panel to recommend **remdesivir** for hospitalized children who have a new or increasing need for conventional oxygen (**BIII**) and to recommend **dexamethasone plus remdesivir** for children who require oxygen through a high-flow device or NIV (**BIII**). It is not known if remdesivir offers an additional clinical benefit to

standard care in younger children with SARS-CoV-2 infection who are receiving respiratory support for bronchiolitis, asthma, or croup.

For children hospitalized for COVID-19 who do not require supplemental oxygen, the Panel recommends **remdesivir** for children aged 12 to 17 years who are at the highest risk for progression to severe disease, especially those who are severely immunocompromised (**CIII**). This recommendation was extrapolated from the findings of the PINETREE study, which demonstrated a reduction in hospitalization among high-risk, unvaccinated adults treated in the outpatient setting.²⁶ However, there is insufficient evidence for or against the use of remdesivir in children aged 28 days to <12 years and weighing ≥ 3 kg who do not require supplemental oxygen. Given the reported clinical experience with the use of remdesivir in younger patients,²² the use of remdesivir in high-risk, younger children who do not require supplemental oxygen may be considered on a case-by-case basis.

Dexamethasone

Dexamethasone was evaluated in the RECOVERY trial, which was an open-label, randomized trial conducted in the United Kingdom.²⁷ The trial compared the use of up to 10 days of dexamethasone 6 mg, administered by intravenous injection or orally, with usual care among hospitalized adults with COVID-19. The primary outcome was all-cause mortality at 28 days, which occurred in 22.9% of patients randomized to receive dexamethasone versus 25.7% of patients randomized to receive usual care (age-adjusted rate ratio 0.83; 95% CI, 0.75–0.93; $P < 0.001$). Patients who required mechanical ventilation or extracorporeal membrane oxygenation (ECMO) had the greatest effect size (29.3% vs. 41.4%; rate ratio 0.64; 95% CI, 0.51–0.81). No difference in outcomes was observed in patients who did not require supplemental oxygen (17.8% vs. 14.0%; rate ratio 1.19; 95% CI, 0.92–1.55). For the 28-day mortality outcome, a difference between arms was observed in patients who required supplemental oxygen (23.3% vs. 26.2%; rate ratio 0.82; 95% CI, 0.72–0.94). However, it should be noted that these patients were a heterogeneous group, including those who received either conventional oxygen or NIV. See [Systemic Corticosteroids](#) for detailed information.

The safety and efficacy of using dexamethasone or other corticosteroids for the treatment of COVID-19 have not been evaluated in pediatric patients. Given that the mortality for adults in the placebo arm in the RECOVERY trial was substantially greater than the mortality generally reported for children with COVID-19, caution is warranted when extrapolating from recommendations for adults and applying them to patients aged <18 years.

However, because of the effect size observed in the RECOVERY trial, the Panel recommends the use of **dexamethasone** for children who require mechanical ventilation or ECMO (**AIII**). The Panel also recommends the use of **dexamethasone**, with or without concurrent **remdesivir**, for children who require oxygen through a high-flow device or NIV (**BIII**). The Panel **does not recommend** routine use of corticosteroids for children who require only conventional oxygen, but corticosteroids can be considered in combination with remdesivir for patients with increasing oxygen needs, particularly adolescents (**BIII**).

Evidence has demonstrated that the use of corticosteroids does not benefit infants with viral bronchiolitis not related to COVID-19, and current American Academy of Pediatrics guidelines recommend against the use of corticosteroids in this population.²⁸ There are no data specific to COVID-19 that support the use of corticosteroids in children with bronchiolitis due to SARS-CoV-2 infection. Corticosteroids should be used per the usual standards of care in children with asthma or croup triggered by SARS-CoV-2.

The use of dexamethasone for the treatment of severe COVID-19 in children who are profoundly

immunocompromised has not been evaluated, and there is a potential risk of harm. Therefore, the use of corticosteroids should be considered on a case-by-case basis in consultation with relevant specialists, and the benefits and risks of the therapy should be weighed. If dexamethasone is not available, alternative glucocorticoids such as prednisone, methylprednisolone, or hydrocortisone can be considered. The dexamethasone dose for pediatric patients is 0.15 mg/kg (with a maximum dose of 6 mg) once daily for ≤ 10 days or until hospital discharge, whichever comes first.

Baricitinib

The Janus kinase inhibitor baricitinib was approved by the FDA for the treatment of COVID-19 in hospitalized adults. An FDA Emergency Use Authorization for baricitinib remains active for the treatment of COVID-19 in hospitalized children aged 2 to 17 years who require supplemental oxygen, NIV, mechanical ventilation, or ECMO.²⁹

In the COV-BARRIER trial, adults with COVID-19 pneumonia were randomized to receive baricitinib or standard care. Patients treated with baricitinib showed a reduction in mortality when compared with those who received standard care.³⁰ The reduction was greatest in patients who received high-flow oxygen or NIV. Similarly, the ACTT-2 trial in adults showed that patients who received baricitinib plus remdesivir had improved time to recovery when compared with patients who received remdesivir alone.³¹ This effect was most pronounced in patients who received high-flow oxygen or NIV. In the ACTT-4 trial, 1,010 patients were randomized 1:1 to receive baricitinib plus remdesivir or dexamethasone plus remdesivir.³² The study reported no difference between the arms for the outcome of mechanical ventilation–free survival.

In the RECOVERY trial, 8,156 patients, including 33 children aged 2 to 17 years, were randomized to receive baricitinib or usual care (95% received corticosteroids).³³ Treatment with baricitinib was associated with a 13% proportional reduction in mortality, with the greatest effect size occurring in patients who received NIV. The RECOVERY investigators included these patients in a meta-analysis and found that treatment with baricitinib was associated with a 20% relative reduction in mortality (rate ratio 0.80; 95% CI, 0.72–0.89; $P < 0.0001$). See [Janus Kinase Inhibitors](#) and [Therapeutic Management of Hospitalized Adults With COVID-19](#) for additional information. These data in adults indicate that baricitinib is likely to be most beneficial for patients receiving noninvasive forms of respiratory support.

Several open-label trials and cohort studies have evaluated baricitinib in children with autoinflammatory and rheumatic diseases, including many children aged < 5 years, and found the treatment was well tolerated; however, the pharmacokinetics of baricitinib in younger children are not well studied.³⁴⁻³⁷ Information on the safety and effectiveness of the use of baricitinib in children with COVID-19 is limited to case reports.

In contrast to the strong recommendation for its use in adults, baricitinib is not considered the standard of care for all children who require high-flow oxygen or NIV because of the low mortality in children with COVID-19 (especially young children) and the limited data on the use of baricitinib in these children.

Extrapolating from clinical trials among adults with COVID-19, the Panel recommends that:

- For children who require oxygen through a high-flow device or NIV *and* do not have rapid (e.g., within 24 hours) improvement in oxygenation after initiation of dexamethasone, **baricitinib** can be considered for children aged 12 to 17 years (**BIII**) and for children aged 2 to 11 years (**CIII**).
- For children who require mechanical ventilation or ECMO *and* do not have rapid (e.g., within 24 hours) improvement in oxygenation after initiation of dexamethasone, **baricitinib** may be

considered for children aged 12 to 17 years (**BIII**) and for children aged 2 to 11 years (**CIII**).

Clinicians should consult with specialists experienced in treating children with immunosuppression (e.g., in pediatric infectious disease, pediatric rheumatology) when considering the use of baricitinib in hospitalized children with COVID-19. Data from adults indicate that baricitinib should be initiated promptly. Ideally, it should be initiated at the onset of clinical deterioration or respiratory failure.

Tofacitinib

There are no data on the efficacy of tofacitinib in pediatric patients with COVID-19; the Panel's recommendation is extrapolated from data in adults. The STOP-COVID trial compared tofacitinib to the standard of care in adults hospitalized for COVID-19 pneumonia.³⁸ The standard of care included glucocorticoids for most patients. The study demonstrated a reduction in mortality and respiratory failure at Day 28 for the tofacitinib arm when compared with the placebo arm. Tofacitinib has been studied less extensively than baricitinib for the treatment of COVID-19. Thus, tofacitinib, as an alternative to baricitinib, is recommended to be used in combination with dexamethasone in adults with COVID-19 who require high-flow oxygen or NIV. See [Janus Kinase Inhibitors](#) and [Therapeutic Management of Hospitalized Adults With COVID-19](#) for additional information.

No trials have evaluated the safety of using tofacitinib in children with COVID-19. Overall, there has been more clinical experience with the use of tofacitinib than baricitinib in children, particularly when used in children with juvenile idiopathic arthritis (JIA) as young as 2 years of age. A Phase 1 study was conducted to define the pharmacokinetics and safety of using tofacitinib in children,³⁹ and a Phase 3, double-blind, randomized, placebo-controlled trial investigated the efficacy of using tofacitinib in children with JIA.⁴⁰ Tofacitinib is available as a liquid formulation for children.

Given the established safety of tofacitinib in the pediatric population, **tofacitinib** can be considered an alternative for children hospitalized for COVID-19 if baricitinib is not available (**BIII**). The dose of tofacitinib that should be used to treat hospitalized children with COVID-19 has not been established. As with baricitinib, the dose of tofacitinib for hospitalized children with COVID-19 likely needs to be higher than the dose typically used to treat pediatric rheumatologic diseases. Therefore, clinicians should consult with specialists experienced in treating children with immunosuppression (e.g., in pediatric infectious disease, pediatric rheumatology) when considering administering tofacitinib to hospitalized children with COVID-19.

Tocilizumab

Tocilizumab is an interleukin-6 inhibitor that has received an FDA Emergency Use Authorization for the treatment of hospitalized adults and children with COVID-19 who are aged ≥ 2 years; receiving systemic corticosteroids; and require supplemental oxygen, NIV, mechanical ventilation, or ECMO.⁴¹ Two large randomized controlled trials (REMAP-CAP and RECOVERY) conducted among hospitalized adults with COVID-19 have demonstrated reductions in mortality with the use of tocilizumab.^{42,43} See [Interleukin-6 Inhibitors](#) and [Therapeutic Management of Hospitalized Adults With COVID-19](#) for additional information.

The RECOVERY trial was an open-label study that included hospitalized adults who had an oxygen saturation of $<92\%$ on room air or were receiving supplemental oxygen therapy; patients also had C-reactive protein levels ≥ 75 mg/L.⁴³ Patients were randomized to receive tocilizumab plus usual care or usual care alone. Mortality at 28 days was significantly lower in the tocilizumab arm compared to the usual care arm. The REMAP-CAP trial included adults with suspected or confirmed COVID-19 who were admitted to an intensive care unit and received either respiratory (i.e., NIV or mechanical ventilation) or cardiovascular organ (i.e., vasopressor/inotrope) support.⁴² Patients were randomized

within 24 hours of organ failure to receive either tocilizumab or sarilumab (the majority received tocilizumab) or to receive standard care. The median number of organ support-free days was higher for those who received tocilizumab than for those who received standard care, and in-hospital mortality was lower in the combined tocilizumab or sarilumab arm than in the standard care arm. In both studies, the majority of patients received dexamethasone (82% in the RECOVERY trial and 93% in the REMAP-CAP trial).

Studies have evaluated the use of tocilizumab for the treatment of non–COVID-19 conditions in children, including JIA⁴⁴⁻⁴⁸ and cytokine release syndrome related to chimeric antigen receptor T cell therapy.⁴⁹ The FDA approved tocilizumab for use in children aged ≥ 2 years for these indications.⁴⁴⁻⁴⁸ The use of tocilizumab in children with severe cases of COVID-19 has been described only in case series.⁵⁰⁻⁵²

Extrapolating from clinical trials among adults with COVID-19, the Panel recommends that:

- For children who require oxygen through a high-flow device or NIV *and* do not have rapid (e.g., within 24 hours) improvement in oxygenation after initiation of dexamethasone, **tocilizumab** can be considered for children aged 12 to 17 years (**BIII**) and for children aged 2 to 11 years (**CIII**).
- For children who require mechanical ventilation or ECMO *and* do not have rapid (e.g., within 24 hours) improvement in oxygenation after initiation of dexamethasone, if tocilizumab has not been started, addition of **tocilizumab** may be considered for children aged 12 to 17 years (**BIII**) and for children aged 2 to 11 years (**CIII**).

Data from REMAP-CAP and RECOVERY are most likely to be applicable to high-risk adolescent patients. Clinicians should consult with specialists experienced in treating children with immunosuppression (e.g., in pediatric infectious disease, pediatric rheumatology) when considering the use of tocilizumab in younger children with COVID-19.

Sarilumab

Sarilumab, a monoclonal antibody that blocks interleukin-6 receptors, is not authorized by the FDA for the treatment of COVID-19. Data on the efficacy of sarilumab for the treatment of COVID-19 hyperinflammation are limited, and there is a lack of pediatric dosing information. Therefore, the Panel **recommends against** the use of **sarilumab** in hospitalized children with COVID-19, except in a clinical trial (**AIII**).

Anticoagulation in Children With COVID-19

Recommendations

- The Panel recommends prophylactic anticoagulation for children aged ≥ 12 years who are hospitalized for COVID-19, unless there are contraindications (**BIII**).
- Weighing the risk factors for thrombosis and bleeding, some Panel members would use prophylactic anticoagulation for children aged < 12 years who are hospitalized for COVID-19. Institutional standards for anticoagulation should be followed.
- There is insufficient evidence for the Panel to recommend either for or against the use of therapeutic anticoagulation for venous thromboembolism prophylaxis in children of any age with COVID-19.

Limited data characterize the risk of thromboembolic disease in children with COVID-19. Among children who do not have COVID-19, most thromboembolic events occur in neonates and adolescents.^{53,54} In a multicenter, retrospective cohort study that included 814 pediatric patients with

COVID-19 or MIS-C,⁵⁵ thromboembolic events were detected in 2.1% of patients with COVID-19 and in 6.5% of patients with MIS-C. A single-center study found that 1 of 596 participants (0.2%) with COVID-19 and 2 of 94 participants (2.1%) with MIS-C experienced thrombosis.⁵⁶

Limited data inform the clinical use of anticoagulation in children with COVID-19. Only the COVAC-TP trial has evaluated the dose, safety, and efficacy of prophylactic anticoagulants in children with COVID-19 or MIS-C.⁵⁷ In this multicenter, Phase 2 clinical trial of children hospitalized with COVID-19–related illness (including MIS-C) in the United States, a starting dose of enoxaparin 0.5 mg/kg achieved targeted anticoagulant activity (as measured by antifactor Xa level) in the majority of patients with few dose changes, and no patients experienced clinically relevant bleeding as defined by the International Society on Thrombosis and Haemostasis.⁵⁸ In this trial, thromboembolic events occurred in 2 patients (5.3%; 90% CI, 1.0%–15.7%); both events were related to central venous catheters.⁵⁷ These results raise the question of whether prophylactic doses of anticoagulants sufficiently reduce thromboembolism risk in children hospitalized with COVID or MIS-C.

To date, no clinical trial has evaluated the safety and efficacy of therapeutic anticoagulation in hospitalized children with COVID-19. Therefore, the Panel has determined that there is insufficient evidence to recommend either for or against the use of therapeutic anticoagulation for venous thromboembolism prophylaxis in children of any age with COVID-19.

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