NATIONAL CLINICAL EVIDENCE TASKFORCE
COVID-19

DRUG TREATMENTS FOR AT RISK CHILDREN AND ADOLESCENTS WITH COVID-19 WHO DO NOT REQUIRE OXYGEN

VERSION 2.1
PUBLISHED 27 OCTOBER 2022

START HERE

Child or adolescent with symptomatic COVID-19 who does not require oxygen and is **at high risk of deterioration**

Children and adolescents who are suspected to be at high risk of deterioration should be managed by and discussed with a multidisciplinary team.

Risk factors for deterioration

- **Paediatric complex chronic conditions (PCCC):** congenital and genetic, cardiovascular, gastrointestinal, malignancies, metabolic, neuromuscular, renal and respiratory conditions
- **Severe asthma:** for example, in the past 12 months ≥1 exacerbation requiring ICU admission or IV treatment, OR ≥2 hospital admissions for asthma; children requiring biologic therapy for symptoms
- **Obesity:** above 95th percentile on BMI for age growth chart
- **Other significantly immunocompromising conditions, seek expert advice**

Immunocompromising conditions

Primary or acquired immunodeficiency
- **Haematologic neoplasms:** leukaemias, lymphomas, myelodysplastic syndromes
- **Post-transplant:** solid organ (on immunosuppressive therapy), haematopoietic stem cell transplant (within 24 months)
- **Immunocompromised due to primary or acquired (AIDS) immunodeficiency**
- **Other significantly immunocompromising conditions**

Immunosuppressive therapy (current or recent)
- **Chemotherapy,** whole body radiotherapy or total lymphoid irradiation
- **High-dose corticosteroids:** 0.5 mg/kg of prednisone per day (or equivalent) for ≥14 days
- **Selected other potent immunosuppressive therapies** (refer to ATAGI advice)

This decision aid is intended for children and adolescents up to 16 years of age. Where appropriate, based on age or physical size, refer to adult guidance.

Drug treatments decision tool for adults with COVID-19

Click to view

For complete summaries of treatment recommendations, refer to:

Drug treatments for children and adolescents with COVID-19

Drug treatments for adults with COVID-19

Click to view

Is the patient:

Immunocompromised?

- NO → Has the patient: **Received a vaccine dose or had a SARS-CoV-2 infection in the past 6 months?**
  - YES → **Treat and observe symptoms**
  - NO → Is the patient: **Aged ≥12 years and ≥40 kg?**
    - YES → Is the patient: **Within 5 days of symptom onset?**
      - YES → **Are one or more treatments accessible and the patient has no relative or absolute contraindications?**
        - YES → **There are limited data on the efficacy of these treatments in children <12 years, and no studies comparing these treatment options in any age group. Inhaled corticosteroids (budesonide or ciclesonide) can be considered for adjunctive use with other treatment options; however, the added benefit of adjunctive use is unclear. There is currently no evidence available on the effectiveness of concurrent use of monoclonal antibodies or antivirals for COVID-19, except where co-formulated.**
        - NO → **Is remdesivir accessible and the patient has no relative or absolute contraindications?**
          - YES → **In exceptional circumstances, if previous options are not suitable or available, and in consultation with a specialist paediatrician, consider***
            - **remdesivir**
              ≥40 kg: 200 mg IV on day 1 then 100 mg IV on days 2 & 3
              ≥3 kg to <40 kg: 5 mg/kg IV on day 1 then 2.5 mg/kg on days 2 & 3
            - Antiviral (monotherapy)
            - Clinical evidence: Adults aged ≥13 years in the PINETREE trial were treated within 7 days of symptom onset with three IV doses on consecutive days (200 mg on day 1, followed by 100 mg on days 2 & 3). Paediatric patients aged 28 days to <18 years in the CARAVAN trial were treated for up to 10 days with daily IV infusions, dosed according to weight category (≥3 kg to <40 kg; or ≥40 kg).
            - Administration considerations: *Not approved by TGA for paediatric patients <40 kg not requiring oxygen. Should be administered intravenously in a setting with immediate access to medications to treat severe infusion or hypersensitivity reactions and an emergency medical response. Due to potential concerns with the use of cyclodextrin in infants, the benefits and risks should be carefully considered. See full TGA PI
            - Contraindications: Hypersensitivity to active ingredients or other components of the product.
            - Drug interactions: No interaction studies have been conducted. Patients should remain under close observation during the days of remdesivir administration. Do not use concomitantly with chloroquine phosphate or hydroxychloroquine sulphate.
          - NO → **Are inhaled corticosteroids accessible and the patient has no relative or absolute contraindications?**
            - YES → Consider **Inhaled corticosteroids (budesonide or ciclesonide)**
            - NO → **In exceptional circumstances and in consultation with a specialist paediatrician, consider***
              - **nirmatrelvir plus ritonavir (Paxlovid)** 300 mg / 100 mg PO bd for 5 days
              - **tixagevimab plus cilgavimab (Evusheld)** 300 mg / 300 mg IM once
              - Product type: Antiviral (dual therapy) / Monoclonal antibody (dual therapy)
              - Clinical evidence: Adults aged ≥18 years in the EPIC-HR trial were treated within 5 days of symptom onset with oral nirmatrelvir/ritonavir 300 mg/100 mg twice daily for 5 days. / Adults aged ≥18 years in the TACKLE trial were treated within 5 days of symptom onset with a single dose of Evusheld consisting of two IM injections (300 mg tixagevimab and 300 mg cilgavimab).
              - Administration considerations: *Not approved by TGA for this indication. Nirmatrelvir (two 150 mg tablets) and ritonavir (one 100 mg tablet) should be taken together orally every 12 hours for 5 days, with or without food. The tablets should be swallowed whole and not chewed, broken or crushed. See full TGA PI / *Not approved by TGA for this indication. Single dose of 600 mg Evusheld consisting of separate sequential intramuscular injections (300 mg tixagevimab and 300 mg cilgavimab). See full TGA PI
              - Contraindications: Severe renal or severe hepatic impairment. Concomitant use with drugs that are highly dependent on CYP3A for clearance or are potent CYP3A inducers. Hypersensitivity to active ingredients or other components of the product. / Hypersensitivity to active ingredients or other components of the product.
              - Drug interactions: Multiple significant drug-drug interactions associated with CYP3A inhibition. See full TGA PI See Liverpool interaction checker / No formal interaction studies have been conducted. Evusheld is not expected to undergo metabolism by hepatic enzymes or renal elimination.
              - ▶ Sotrovimab and Ronapreve (casirivimab plus imdevimab) can be used in the target population but have been omitted due to reduced effectiveness against the circulating Omicron variant.
    - NO → Is the patient: **Aged ≥28 days and ≥3 kg?**
      - YES → Is the patient: **Within 7 days of symptom onset?**
        - YES → **Is remdesivir accessible and the patient has no relative or absolute contraindications?**
          - YES → **In exceptional circumstances, if previous options are not suitable or available, and in consultation with a specialist paediatrician, consider***
            - **remdesivir**
              ≥40 kg: 200 mg IV on day 1 then 100 mg IV on days 2 & 3
              ≥3 kg to <40 kg: 5 mg/kg IV on day 1 then 2.5 mg/kg on days 2 & 3
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            - Administration considerations: *Not approved by TGA for paediatric patients <40 kg not requiring oxygen. Should be administered intravenously in a setting with immediate access to medications to treat severe infusion or hypersensitivity reactions and an emergency medical response. Due to potential concerns with the use of cyclodextrin in infants, the benefits and risks should be carefully considered. See full TGA PI
            - Contraindications: Hypersensitivity to active ingredients or other components of the product.
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          - NO → **Are inhaled corticosteroids accessible and the patient has no relative or absolute contraindications?**
            - YES → Consider **Inhaled corticosteroids (budesonide or ciclesonide)**
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              - ▶ Sotrovimab and Ronapreve (casirivimab plus imdevimab) can be used in the target population but have been omitted due to reduced effectiveness against the circulating Omicron variant.
        - NO → **Within 14 days of symptom onset?**
          - YES → **Are inhaled corticosteroids accessible and the patient has no relative or absolute contraindications?**
            - YES → Consider **Inhaled corticosteroids (budesonide or ciclesonide)**
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