NATIONAL CLINICAL EVIDENCE TASKFORCE COVID-19

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

VERSION 4.0
Published 27 March 2023

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

Refer to:

Care at home for children and adolescents with mild COVID-19

Care in hospital for children and adolescents with mild to moderate COVID-19

Care in hospital for children and adolescents with severe to critical COVID-19

Click to view

Is the patient:

Immunocompromised?

NO → **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?

NO → Is the patient:

Aged ≥28 days and ≥3 kg?

NO → **Treat and observe symptoms**

YES → Is the patient:

Within 5 days of symptom onset

NO → Is the patient:

Within 7 days of symptom onset

NO → Is the patient:

Within 14 days of symptom onset

NO → **Treat and observe symptoms**

YES → **Are one or more treatments accessible and the patient has no relative or absolute contraindications?**

NO → **Is remdesivir accessible and the patient has no relative or absolute contraindications?**

NO → **Are inhaled corticosteroids accessible and the patient has no relative or absolute contraindications?**

NO → **Treat and observe symptoms**

YES → Consider **Inhaled corticosteroids (budesonide or ciclesonide)**

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.

In exceptional circumstances and in consultation with a specialist paediatrician, consider*

nirmatrelvir plus ritonavir (Paxlovid)
300 mg / 100 mg PO bd for 5 days

Product type: Antiviral (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.

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. Tablets can be swallowed whole, crushed or split and mixed with food or liquid, or alternatively administered via nasogastric tube, as indicated.
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.

Drug interactions: Multiple significant drug-drug interactions associated with CYP3A inhibition.
See full TGA PI
See Liverpool interaction checker

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)

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).

*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

Hypersensitivity to active ingredients or other components of the product.

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.