Caring for children with COVID-19 in the community

Introduction

Most children infected with COVID-19 will not require care in a hospital and can be safely managed in the community.

The team responsible for the care of a child with COVID-19 will vary according to local resourcing, geographic location and service models. The team should be multidisciplinary and include clinicians with paediatric expertise.

Purpose of this guideline

This advice is adapted from the **Sydney Children's Hospitals Network** guidance; and this guideline was developed in consultation with the network.

It outlines guidance to assist health staff to:

- **triage** children who can be safely cared for in the community at the time of referral
- **detect** clinical deterioration
- **escalate** appropriately.

This is relevant to babies and children up to 16 years of age, or when they transition to adult services.

This guide aligns with *Caring for adults with COVID-19 in the community*.

It should be read in conjunction with local health district COVID-19 management guidelines, as well as the following state and national resources addressing clinical care of people with COVID-19, virtual care and infection control:

- Communicable Disease Network of Australia (CDNA) Coronavirus Disease 2019 (COVID-19) National Guidelines for Public Health Units
- CEC Primary and Community Care Infection Prevention and Control information
- CEC Deteriorating Patient Program
- Adult and Paediatric Hospital in the Home Guideline

Governance

Use of this guideline and other policy documents will be underpinned by local factors. These include location and demographics; as well as service factors, such as leadership, governance, resources and policies/procedures.

Methodology

Expert advice was sought in the development of this guideline from clinicians across the state, the Sydney Children's Hospitals Network Virtual Care team, the Agency for Clinical Innovation (ACI) Virtual Care team and the ACI COVID-19 Critical Intelligence Unit.

Notification and referral process

COVID-19 is a notifiable disease and positive cases are notified to the local public health unit (PHU) based on the person's usual place of residence.

PHUs are responsible for arranging ongoing clinical and welfare support. This may be provided by the local health district (LHD) service, such as a COVID-19 team, a community team, virtual care service or Hospital in the Home (HITH). These services will:

- assess clinical status and the need for further clinical review
- assess compliance with isolation and infection control requirements
- identify welfare needs.

LHDs must develop appropriate local referral pathways into their community, virtual care or HITH team for COVID positive patients. These teams should include clinicians with capabilities in the care of children.

Natural history of COVID-19 infection in children

Common symptoms of COVID-19 in children include rhinorrhea, sore throat, fever, cough and gastrointestinal symptoms. These features are usually mild.

Features of concern are breathlessness/difficulty breathing, syncope/dizziness, chest pain, severe headache, decreased level of consciousness, significant vomiting and diarrhoea and poor fluid intake or output. Children with these features require prompt clinical review.

Medical risk factors for children

Children more likely to require care in hospital or develop more severe disease include those who are immunocompromised; have pre-existing medical conditions; are severely obese or pregnant.

Adolescents and babies under three months of age (corrected for prematurity) are at a relatively higher risk.

Social risk factors for children

Safe care of children in the community depends on the health and wellbeing of parents/carers.

Due to the contagious nature of this illness, household contacts are likely to also develop COVID-19. The health risks of parents/carers with COVID-19, especially if unvaccinated, should be identified (refer to *Caring for adults in the community with COVID-19*).

Plans should be made for continuing care of the children if the parent/carer becomes unwell or requires hospitalisation.

Other high-risk factors include:

- the level of literacy
- social isolation
- size of the household (risk increases with number of occupants)
- low digital literacy or access to data
- risk of violence, abuse and neglect
- child in the home with significant disability, behavioural, developmental or mental health problems.

The stresses of quarantine add to the challenges for these households.

Support may include a social work response, Department of Community and Justice, Police welfare checks, mental health services and the families' general practitioner.

PIMS-TS

Paediatric inflammatory multisystem syndrome temporarily associated with SARS Co-V (PIMS-TS) has been associated with COVID-19 infection in children.[1] It is also known as multisystem inflammatory syndrome in children (MIS-C).

This is a rare condition affecting approximately 1/1,000 children after COVID-19 infection, including asymptomatic or mild infection.

It presents two to six weeks after infection of COVID-19. The child may return a negative polymerase chain reaction (PCR) test at that time.

Clinical features include fever, rash, gastrointestinal symptoms and shock.

Families should be advised to look out for these features and seek prompt medical care if any of these occur.

On-boarding to a local health service

Parents/carers must be provided with resources to enable safe care in the community. This can include information about the relevant health service; devices and data to enable virtual care or telehealth (if needed); monitoring equipment; and telephone numbers for the local telehealth service and 000 for ambulance.

Pulse oximetry monitoring

Pulse oximeters may be used for intermittent or 'spot' measurement for scheduled health reviews. It requires several minutes to obtain a reliable reading and can be difficult in children under 12 years of age. Appropriate oximeters and probes should be used in younger children if oximetry is performed. [2]

Resources for people with COVID-19 and carers:

- COVID-19 symptoms, spread and home isolation guidance
- COVID-19 Frequently asked questions
- Hygiene at home
- Information for carers

De-isolation

The decision to de-isolate children and families is led by the LHD public health unit. Criteria for de-isolation can be found in Communicable Diseases Network Australia Coronavirus Disease 2019 National Guidelines for Public Health Units.

Transfer of care from acute care

Formal arrangements for transfer of clinical care back to the GP should be made by the COVID-19 medical team. A formal transfer of care should be given to the GP, including a written summary of the person's episode of care and follow-up advice.

Documentation

It is a requirement that all clinical activity, including telehealth consultations, is documented in the person's health record.

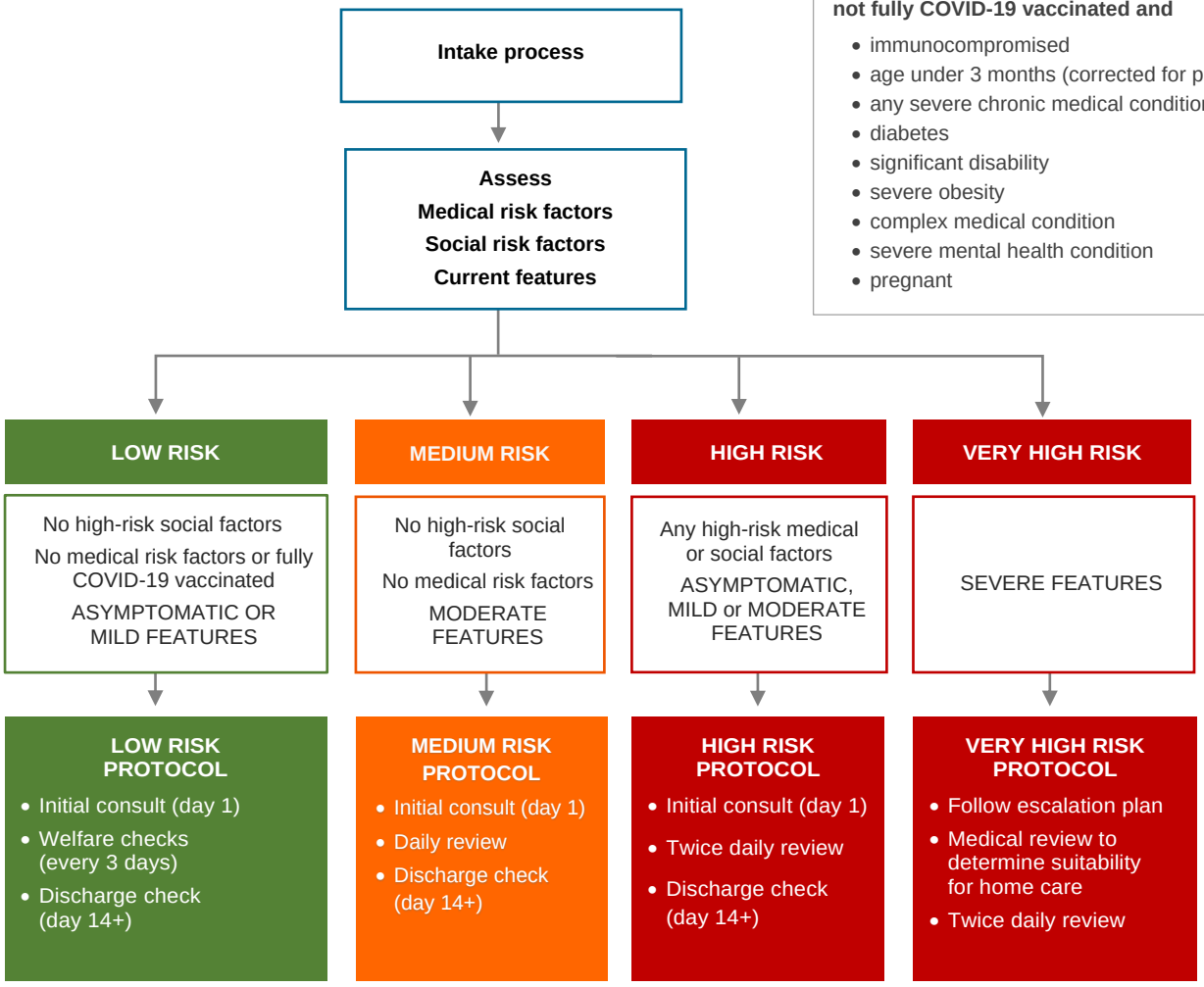
Determining the level of risk and appropriateness for care of children in the community with COVID-19

Patient care is tailored to individual risk. During the initial phone call, follow the flow chart using the patient's information. Once the level of risk is determined, see associated box for care package.

Note: days are calculated based on the days that symptoms commenced (day 0).
If the patient is asymptomatic, count from positive swab day (day 0).

Medical risk factors for children: not fully COVID-19 vaccinated and

- immunocompromised
- age under 3 months (corrected for prematurity)
- any severe chronic medical condition
- diabetes
- significant disability
- severe obesity
- complex medical condition
- severe mental health condition
- pregnant



Change risk level as clinical features change

MILD FEATURES

- Low grade fever <38
- Mild cough or upper respiratory tract symptoms
- No breathlessness
- Mild GI symptoms
- Normal fluid intake and urine output

MODERATE FEATURES

- Fever >38
- Marked cough/sputum
- Diarrhoea (up to 4/day)
- Vomiting
- Fluid intake/urine output more than half normal
- Dizziness on standing up
- Headache
- Has required ED or hospital admission during illness

SEVERE FEATURES

- Persistent fever >39
- Breathless/difficulty breathing
- Oxygen saturations <95%
- Chest pain
- Poor fluid intake/urine output – less than half normal
- Syncope/dizziness unrelated to posture
- Severe headache
- Vital signs in blue, yellow or red zones

HIGH RISK SOCIAL FACTORS

- Parent/carer at high medical risk
- Low literacy
- Social isolation
- Large household
- Risk of violence, abuse or neglect
- Child in the home with significant disability, developmental, behavioural or mental health problem

COVID-19 positive patient clinical escalation pathway

Deterioration may be detected by the patient, parent/carers or clinicians.

Concern about deterioration by child, parent/carer or clinical staff

↓

Review by clinical staff

↓

RED FLAGS for CLINICAL DETERIORATION in COVID-19 POSITIVE PATIENTS

FEATURES

- **Breathlessness/difficulty breathing**
- **Syncope or dizziness (unrelated to posture change)**
- **Chest pain**
- **Severe headache**
- **Decreased level of consciousness**
- **Vomiting, abdominal pain or diarrhoea > 4 x/day***
- **Poor oral intake/urine output – less than half normal**

  * All patients with these symptoms should have MO review and be discussed with the designated senior medical officer

SIGNS

- **Vital signs in the Blue, Yellow or Red Zones as identified in the relevant Standard Paediatric Observation Chart****

  ** Isolated fever without other red flags consider non-urgent medical review (e.g. shift handover)

  - **Tachypnoea/increased work of breathing**
  - **Oxygen saturation < 95% on room air (reliable in children 12 years and older)**
  - **Persistent tachycardia**
  - **Hypotension, including symptomatic postural hypotension**
- **Clinician concern that the child is very unwell or deteriorating**

↓

VITAL SIGNS IN RED ZONE or three yellow zone observations on BTF Chart

↓

Patient Requires Urgent Review

or call 000

Refer to local COVID escalation plan

↓

VITAL SIGNS Normal or in Blue/Yellow Zones on BTF Chart

↓

MO/Senior clinician review of patient by phone/video

↓

- Refer to local LHD escalation protocols or call 000
- Provide verbal and written handover to accepting team
- Ensure DC summary written if transferring patient out of LHD

- Document assessment and management plan
- Update HITH, community or Virtual Care NUM
- Ensure patient is handed over if repeat review required

ALL COVID-19 positive patients with clinical deterioration and/or RED FLAGs should be discussed with the designated senior medical officer.

References

1. National Centre for Immunisation Research and Surveillance. Advice for clinicians: Paediatric Inflammatory Multisystem Syndrome Temporally associated with SARS-COV-2 (PIMS-TS) [internet]. NCIRS: Sydney, NSW. June 2020 [cited 25 August 2021]. Available at: https://www.ncirs.org.au/advice-for-clinicians-PIMS-TS
2. NSW Agency for Clinical Innovation. Pulse oximetry for care of children with COVID-19 in the community. ACI: NSW; Aug 2021 (unpublished).

Document information	
Version number	1
Original publication date	3 September 2021
Developed by	Virtual Care Community of Practice working group
Consultation	• Expert advice was sought the Chief Paediatrician, Sydney Children's Hospital Network Virtual Care clinicians and sub specialists, Children's Health Care Network Medical Leads, ACI Paediatric Network Clinical Nurse Consultant Co-Chairs • This document has been informed by existing clinical NSW COVID-19 services and in particular Sydney Children's Hospitals Network Virtual Hospital.
Endorsed by	Nigel Lyons
Review date	August 2022
Reviewed by	
For use by	Clinicians delivering virtual and clinical care to people with COVID-19 in the community, including: • Virtual care services • COVID response teams • Community nursing • Hospital in the Home • Integrated care teams • Primary care

TRIM: ACI/D21/2004 SHPN: (ACI)210783 ACI-3647 [08/21]