



भारतसरकार  
GOVERNMENT OF INDIA  
राष्ट्रीयबालअधिकारसंरक्षणआयोग  
NATIONAL COMMISSION FOR PROTECTION OF CHILD RIGHTS  
नईदिल्ली- ११०००१  
NEW DELHI-110 001



126

D.O Letter No-NCPCR/2021-22/(3)/Child Health  
Dated-22.01.2022

To

**Chairperson(s)**  
State Commission for Protection of Child Rights (SCPCRs)  
Of all States/UTs

Dear Madam/Sir,

India's second wave of COVID-19 has been catastrophic, with a surging increase in cases, deaths of near ones in last year. We all are well aware that India is in the throes of the third wave of Covid-19. Children can be vulnerable to the third wave of Covid-19.

In this regard, Ministry of Health and Family Welfare, Government of India has reviewed the comprehensive guidelines for Management of COVID-19 in children and adolescents (below 18 years) by the group of experts in view of the current surge mainly attributed to the Omicron variant of concern. Further MoH&FW has mentioned that the available data from other countries suggests that disease caused by the Omicron variant is less severe; however, there is need for a careful watch, as the current wave evolves. Revised comprehensive guidelines for Management of COVID-19 in Children and Adolescents (below 18 years) by MoH&FW are attached herewith for kind information of all the SCPCRs.

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२५/०१/२२

You are requested to kindly upload these guidelines on your website.

With regards,

Annexure-as above

Yours sincerely

Sd/-

(Priyank Kanoongo)



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SEI

Dated 20<sup>th</sup> January 2022

**Government of India  
Ministry of Health and Family Welfare**

**Revised Comprehensive Guidelines for Management of COVID-19 in Children and Adolescents (below 18 years)**

The Comprehensive Guidelines for Management of COVID-19 in CHILDREN and ADOLESCENTS (below 18 years) were reviewed by the group of experts in view of the current surge mainly attributed to the Omicron variant of concern. The available data from other countries suggests that disease caused by the Omicron variant is less severe; however, there is need for a careful watch, as the current wave evolves. These guidelines are dynamic, and will be reviewed and updated, on availability of new evidence.

The experts have assessed the available evidence and overall, the management remains unchanged, barring a few changes outlined below.

1. Title of the document has been changed from Comprehensive Guidelines for Management of COVID-19 in CHILDREN (below 18 years) to Comprehensive Guidelines for Management of COVID-19 in CHILDREN and ADOLESCENTS (below 18 years).
2. Use of antivirals or monoclonal antibodies is not recommended for children less than 18 years of age, irrespective of the severity of infection.
3. For diagnosing MIS-C, caution should be exercised while interpreting an isolated increase in COVID antibodies.
4. The CRP level for diagnosis of MIS-C has been revised as >5mg/dL.
5. If steroids are used, they should be tapered over 10-14 days, subject to clinical improvement.
6. Use of anticoagulants has been revised.
7. New section on post-COVID care has been added.

Attention is drawn to the following MoHFW guidelines:

- FAQs on SARS-CoV-2 Variant-Omicron, available at <https://www.mohfw.gov.in/pdf/FAQsonOmicron.pdf>
- Revised guidelines for Home Isolation of mild /asymptomatic COVID-19 cases, available at <https://www.mohfw.gov.in/pdf/RevisedHomeIsolationGuidelines05012022.pdf>
- Guidelines for COVID-19 vaccination of children between 15-18 years, available at <https://www.mohfw.gov.in/pdf/GuidelinesforCOVID19VaccinationofChildrenbetween15to18yearsandPrecautionDosestoHCWsFLWs&60populationwithcomorbidities.pdf>

**COVID Appropriate Behavior** is recommended to prevent SARS-CoV-2 infections:

**3Ws:**

- Watch your distance (more than 2 meters)
- Wash your hands
- Wear a mask

**2Vs:**

- Ventilation – open spaces are less risky than closed or poorly ventilated areas
- Vaccination – for 15-18 years age group



134

Asymptomatic	Mild	Moderate	Severe
<ul style="list-style-type: none"> <li>Positive without symptoms</li> </ul>	<ul style="list-style-type: none"> <li>Sore throat, rhinorrhoea</li> <li>Cough without breathing difficulty</li> <li>SpO<sub>2</sub> ≥94% on room air</li> <li>For other symptoms, see COVID-19 symptoms – at a glance</li> </ul>	<ul style="list-style-type: none"> <li>In addition to symptoms in mild cases, check for pneumonia which may not be apparent</li> <li>Rapid respiration (age based): &lt;2 months RR ≥60/min; 2-12 months RR ≥50/min; 1-5 years RR ≥40/min; &gt;5 years RR ≥30/min</li> <li>AND/OR SpO<sub>2</sub> 90-93% on room air</li> <li>For other symptoms, see COVID-19 symptoms – at a glance</li> </ul>	<ul style="list-style-type: none"> <li>SpO<sub>2</sub> &lt;90% on room air</li> <li>Any of the following – signs of severe pneumonia, acute respiratory distress syndrome, septic shock, multi-organ dysfunction syndrome, or pneumonia with cyanosis, grunting, severe retraction of chest, lethargy, somnolence, seizure</li> <li>For other symptoms, see COVID-19 symptoms – at a glance</li> </ul>
Home isolation (tele consultation SOS)	Home isolation* (tele consultation SOS) or COVID Care Centre	Admit in DCHC or COVID-19 Hospital	Admit in HDU/ICU of COVID-19 Hospital
<b>Mainstay of Treatment</b> <ul style="list-style-type: none"> <li>Infants and younger children to stay under immediate care of parents/guardians</li> <li>No specific medication required for COVID-19 infection</li> <li>Continue medications for other conditions, if any</li> <li>Promote COVID appropriate behaviour (mask, strict hand hygiene, physical distancing; please see guide for using mask (refer page 9))</li> <li>Fluids and feeds: ensure oral fluids to maintain hydration and give a nutritious diet</li> <li>Advise older children and family to stay connected and engage in positive talks through phone, video-calls, etc.</li> <li>Parent/caregivers to contact the doctor in case of appearance of symptoms</li> </ul>	<b>Mainstay of Treatment</b> <ul style="list-style-type: none"> <li>For fever, give paracetamol 10-15mg/kg/dose; may repeat every 4-6 hours</li> <li>For cough, give throat soothing agents and warm saline gargles in older children and adolescents</li> <li>Fluids and feeds: ensure oral fluids to maintain hydration and give a nutritious diet</li> <li>No other COVID-19 specific medication needed</li> <li>Antimicrobials are not indicated</li> <li>Maintain monitoring chart including counting of respiratory rate 2-3 times a day; look for chest indrawing, cold extremities, urine output, oxygen saturation, fluid intake, activity level, especially for young children</li> <li>Promote COVID appropriate behaviour (mask, strict hand hygiene, physical distancing; please see guide for using mask (refer page 9))</li> <li>Advise older children and family to stay connected and engage in positive talks through phone, video-calls, etc.</li> <li>Parent/caregivers to contact the doctor in case of deterioration of symptoms</li> </ul>	<b>Mainstay of Treatment</b> <ul style="list-style-type: none"> <li>Initiate oxygen (SpO<sub>2</sub> ≤ 94%) and maintain between 94-96%</li> <li>Maintain fluid and electrolyte balance               <ul style="list-style-type: none"> <li>Encourage oral fluids (breast feeds in infants)</li> <li>Initiate intravenous fluid therapy if oral intake is poor</li> </ul> </li> <li>Corticosteroids are not required in all children with moderate illness; they may be administered in rapidly progressive disease</li> <li>Fever with temperature &gt;38°C (or 100.4°F): Paracetamol 10-15mg/kg/dose; may repeat every 4-6 hours</li> <li>Antimicrobials to be administered if there is evidence/strong suspicion of superadded bacterial infection; please see antimicrobial use guide</li> <li>Supportive care for comorbid conditions, if any</li> </ul>	<b>Mainstay of Treatment</b> <ul style="list-style-type: none"> <li>Initiate immediate oxygen therapy and maintain target SpO<sub>2</sub> 94-96%</li> <li>Maintain fluid and electrolyte balance</li> <li>Corticosteroids therapy to be initiated</li> <li>Anticoagulants may also be indicated; see anticoagulants guide</li> <li>Exercise caution- use of corticosteroids and anticoagulants guide (refer page 6)</li> <li>In case Acute Respiratory Distress Syndrome (ARDS) or shock develops, initiate necessary management; see ARDS and Shock guide</li> <li>Antimicrobials to be administered if there is evidence/strong suspicion of superadded bacterial infection; see antimicrobial use guide</li> <li>May need organ support in case of organ dysfunction e.g. renal replacement therapy</li> </ul>
<b>Investigations</b> <ul style="list-style-type: none"> <li>No investigations needed</li> </ul>	<b>Investigations</b> <ul style="list-style-type: none"> <li>No investigations needed</li> </ul>	<b>Investigations</b> <ul style="list-style-type: none"> <li>Baseline CBC including ESR, blood glucose</li> <li>Chest X-Ray</li> </ul>	<b>Investigations</b> <ul style="list-style-type: none"> <li>Baseline: CBC including ESR, blood glucose, CRP, LFT, KFT, serum ferritin, D-Dimer</li> <li>Chest X-Ray</li> </ul>

CT chest is not indicated in diagnosis or management of COVID-19 infection in children  
Consider CT chest only if no improvement in respiratory status

As of now, in absence of safety and efficacy data, the use of antivirals such as Remdesivir, Favipiravir, Molnupiravir, Fluvoxamine, and monoclonal antibodies such as Sofrovimab, Casirivimab+Imdevimab, are NOT recommended for children less than 18 years of age irrespective of severity of illness  
Children with comorbidities should continue to receive appropriate management for their underlying disease

\* Decision for home isolation for children with immunocompromised state or chronic illness should be taken after proper assessment and discussion with family

**COVID-19 symptoms in children – at a glance**

Common symptoms			
Fever	Sore throat/throat irritation	Diarrhoea	
Cough	Body ache/headache	Anorexia/nausea/vomiting	
Rhinorrhoea	Malaise/weakness	Loss of sense of smell and/or taste	

Differentiating symptoms/signs	Asymptomatic	Mild	Moderate	Severe
Respiratory rate/min	Normal with age dependent variation	Normal with age dependent variation	Rapid respiration (age based) <2 months ≥60/min 2-12 months ≥50/min 1-5 years ≥40/min >5 years ≥30/min	Rapid respiration (age based) <2 months ≥60/min 2-12 months ≥50/min 1-5 years ≥40/min >5 years ≥30/min
SpO <sub>2</sub> on room air	≥94%	≥94%	90-93%	<90%
Grunting, severe retraction of chest	×	×	×	+/-
Lethargy, somnolence	×	×	×	+/-
Seizure	×	×	×	+/-



**Management of Acute Respiratory Distress Syndrome (ARDS) and Shock Guide:**

ARDS may be classified based on Pediatric Acute Lung Injury Consensus Conference (PALICC) definition into mild, moderate and severe

**i) Mild ARDS**

- o High flow nasal oxygen (start with 0.5 L/kg/min to begin with and increase to 2 L/kg/min with monitoring) or non-invasive ventilation (BiPAP or CPAP) may be given

**ii) Moderate-Severe ARDS**

- o Lung protective mechanical ventilation may be initiated, low tidal volume (4-8 ml/kg); plateau pressure <28-30 cmH<sub>2</sub>O, MAP <18-20 cmH<sub>2</sub>O; driving pressure <15 cmH<sub>2</sub>O; PEEP 6-10 cm H<sub>2</sub>O (or higher if severe ARDS), FiO<sub>2</sub>, <60% sedoanalgesia ± neuromuscular blockers; cuffed ETT, inline suction, heat and moisture exchange filters (HMEF)
- o Avoid frequent disconnection of ventilator circuit, nebulization or metered dose inhaler
- o Restrict fluids; calculate fluid overload percentage, keeping it <10%
- o Prone position may be considered in hypoxemic children if they are able to tolerate it
- o Daily assessment for weaning and early extubation; enteral nutrition within 24 hours, achieve full feeds by 48 hours
- o Transfusion trigger Hb <7g/dL if stable oxygenation and hemodynamics and <10 g/dL if refractory hypoxemia or shock

**Management of shock:**

- Consider crystalloid fluid bolus 10-20 ml/kg cautiously over 30-60 minutes with early vasoactive support (epinephrine)
- Start antimicrobials within the first hour, after taking blood cultures, according to hospital antibiogram or treatment guidelines
- Consider inotropes (milrinone or dobutamine) if poor perfusion and myocardial dysfunction persists despite fluid boluses, vasoactive drugs and achievement of target mean arterial pressure
- Hydrocortisone may be added if there is fluid refractory catecholamine resistant shock (avoid if already on dexamethasone or methylprednisolone)
- Once stabilized, restrict IV fluids to avoid fluid overload
- Initiate enteral nutrition-sooner the better
- Transfusion trigger Hb <7g/dL if stable oxygenation and hemodynamics, and <10 g/dL if refractory hypoxemia or shock

**Management of Multisystem Inflammatory Syndrome (MIS-C) in children and adolescents temporally related to COVID-19**

Multi System Inflammatory Syndrome in Children (MIS-C) is a new syndrome in children characterized by unremitting fever >38°C and epidemiological linkage with SARS-CoV-2

**Diagnostic criteria (WHO)**

- Children and adolescents 0-18 years of age with fever ≥3 days
- **And any two** of the following:
  - o Rash or bilateral non-purulent conjunctivitis or muco-cutaneous inflammation signs (oral, hands or feet)



321

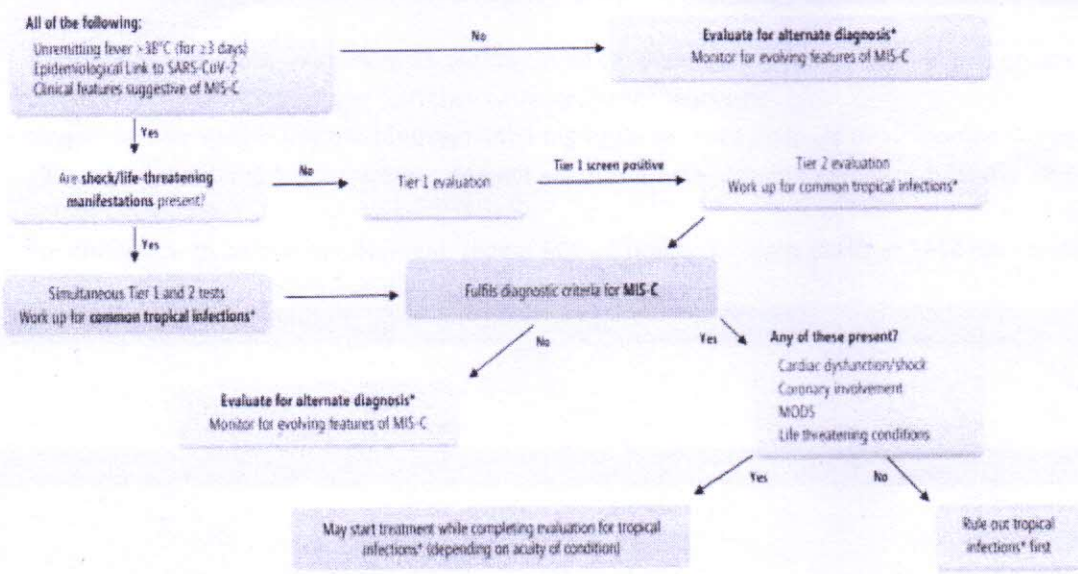
- Hypotension or shock
- Features of myocardial dysfunction, pericarditis, valvulitis, or coronary abnormalities (including ECHO findings or elevated Troponin/NT-proBNP)
- Evidence of coagulopathy (PT, PTT, elevated D-Dimers)
- Acute gastrointestinal problems (diarrhea, vomiting, or abdominal pain)
- **And** elevated markers of inflammation such as ESR (>40 mm), C-Reactive Protein (>5 mg/dL), or procalcitonin
- **And** no other obvious microbial cause of inflammation, including bacterial sepsis, staphylococcal or streptococcal shock syndromes
- **And** evidence of recent COVID-19 infection (RT-PCR antigen test or serology positive), or likely contact with patients with COVID-19

Alternative diagnoses that must be excluded before making a diagnosis of MIS-C

- Tropical fevers (malaria, dengue, scrub typhus, enteric fever)
- Toxic shock syndrome (staphylococcal or streptococcal)
- Bacterial sepsis

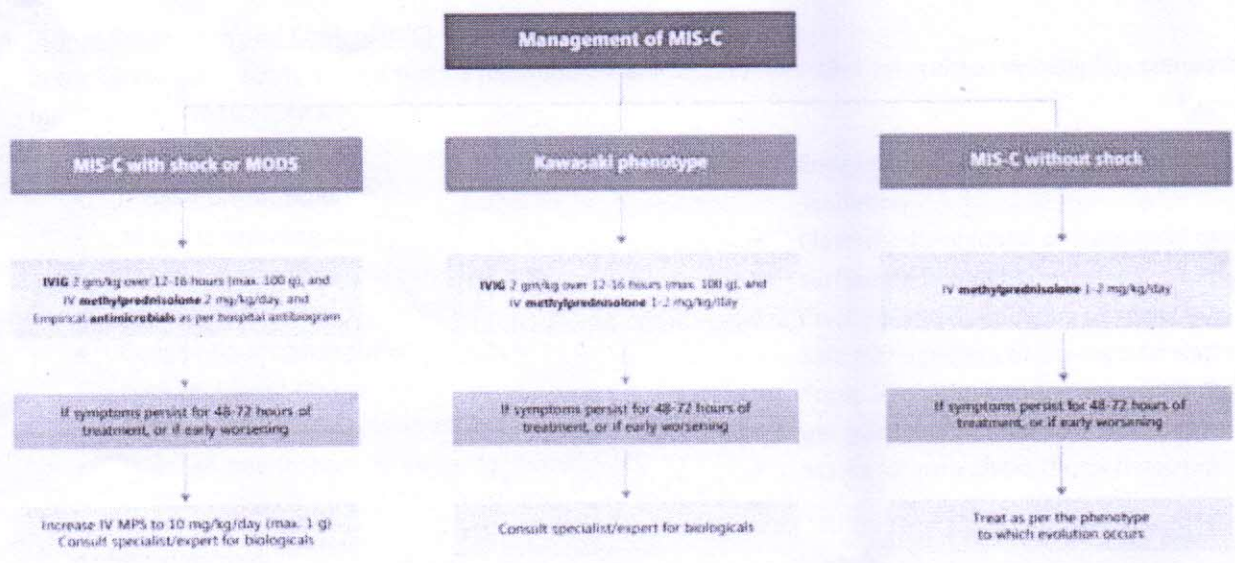
MIS-C with Kawasaki Disease (KD) phenotype is characterized by fever, conjunctival redness, oropharyngeal findings (red and/or cracked lips, strawberry tongue), rash, swollen and/or erythematous hands and feet and cervical lymphadenopathy

**Stepwise investigations in a patient with MIS-C**



Tier 1 tests (may be done at Covid Care Centre, Dedicated Covid Health Centre): CBC, complete metabolic profile (LFT/lyft/blood gas/glucose), CRP and/or ESR, SARS-CoV-2 serology and/or RT-PCR, blood culture  
 Positive Tier 1 screen both of these should be present:  
 1. CRP >5 mg/dL and/or ESR >40 mm/hour  
 2. At least one of these: ALC <1000/µL, platelet count <150,000/µL, Na <135 mEq/L, neutrophilia, hypoalbuminemia  
 Tier 2 tests (may be done at Dedicated Covid Hospital): Cardiac (ECG, echocardiogram, BNP, troponin T); inflammatory markers (procalcitonin, ferritin, PT, PTT, D-Dimer, fibrinogen, LDH, triglyceride, cytokine panel); blood smear; SARS-CoV-2 serology  
 Isolated increased COVID-19 antibodies are NOT SYNONYMOUS with MIS-C  
 \* For diagnosis of MIS-C, it is mandatory to rule out common tropical infections including malaria, dengue, enteric fever, rickettsia illness (scrub typhus), etc.





- Appropriate supportive care is needed preferably in ICU for treatment of cardiac dysfunction, coronary involvement, shock or multi-organ dysfunction syndrome (MODS)
- IVIG to be given slower (over up to 48 hours) in children with cardiac failure/ fluid overload
- Taper steroids over 2-3 weeks with clinical and CRP monitoring
- Aspirin 3-5 mg/kg/day, maximum 75 mg/day in all children for 4-6 weeks (with platelet count >80,000/ $\mu$ L) for at least 4-6 weeks or longer for those with coronary aneurysms
- Low molecular weight heparin (Enoxaparin) 1 mg/kg/dose twice daily s/c in >2 months (0.75mg/kg/dose in <2 months) if patient has thrombosis or giant aneurysm with absolute coronary diameter  $\geq$  8 mm or Z score  $\geq$ 10 or LVEF <30%
- For children with cardiac involvement, repeat ECG 48 hourly & repeat ECHO at 7-14 days and between 4 to 6 weeks, and after 1 year if initial ECHO was abnormal

**Use biologicals only after expert consultation and at tertiary care only**

**Suggested proforma for monitoring in children**

Name: \_\_\_\_\_ Age: \_\_\_\_\_ Sex: \_\_\_\_\_ Date: \_\_\_\_\_

#	Co-morbid conditions (if any)	Controlled (yes/no)	Drugs being taken
1			
2			
3			

**Template for recording of symptoms and signs** (may be done more frequently for sicker children)

Time	Leithargy/sedation*	SOB**	Temperature	B/P	Respiratory rate**	Chest indrawing	SpO <sub>2</sub> ** & pulse rate	Physical activity
	(normal)	(yes/no)	(range)	(normal)	(normal)	(yes/no)	(normal)	(normal/low)
06:00 am								
12:00 noon								
06:00 pm								
12:00 am								

\*Mild or 'waking of drowsiness'; \*\*SOB - detection of breathlessness; \*\*\*SpO<sub>2</sub> - suggest levels to be measured by pulse oximeter  
 \* measure BP if age appropriate BP cuffs and available. \*\* record respiratory rate in a calm or sleeping state



**Infection Prevention and Control (IPC)**

Every COVID care facility should have a multidisciplinary hospital infection control committee; key components of infection control strategy are:

- Standard precautions
- Droplet precautions
- Airborne precautions
- Contact precautions and hand hygiene
- Physical Distancing
- Cough etiquette/respiratory hygiene
- Well ventilated rooms
- Monitor healthcare associated infections
- Train all health care workers to develop IPC skills
- Environment cleaning, disinfection, and sanitation
- Cleaning/disinfection of frequently touched surfaces/equipment
- Cleaning and disinfection of linen
- Safe management of bio-medical waste
- Triple layer mask to be worn by patient as per guidance below
- Masks for care givers (home/hospital)

**Guide for using mask**

- Masks are not recommended for children aged 5 years and under
- Children aged 6-11 years may wear a mask depending on the ability of child to use a mask safely and appropriately under direct supervision of parents/guardians
- Children aged 12 years and over should wear a mask under the same conditions as adults
- Ensure hands are kept clean with soap and water, or an alcohol-based hand rub, while handling masks

**Antimicrobial use guide**

COVID-19 is a viral infection and antimicrobials have no role in the management of uncomplicated COVID-19 infection

- **Asymptomatic and mild cases:** antimicrobials are not recommended for therapy or prophylaxis
- **Moderate and severe cases:** antimicrobials should not be prescribed unless there is clinical suspicion of a superadded infection
- **Septic shock:** empirical antimicrobials (according to body weight) are frequently added to cover all likely pathogens based on clinical judgement, patient host factors, local epidemiology and antimicrobial policy of the hospital

**Use of steroids and anticoagulants; Post COVID care**

**Steroids:**

- **Steroids are not indicated and are harmful in asymptomatic and mild cases of COVID-19**
- Indicated only in hospitalized severe and critically ill COVID-19 cases under strict supervision
- Steroids should be used at the **right time**, in **right dose** and for the **right duration**
- Indications and recommended dose of corticosteroids may be used in rapidly progressive moderate and all severe cases
  - Dexamethasone 0.15 mg/kg, maximum dose 6 mg once a day **OR**
  - Methylprednisolone 0.75 mg/kg, maximum dose 30 mg once a day
- Continue for 5-7 days and taper up to 10-14 days, depending on clinical assessment on daily basis
- Avoid steroids in first 3-5 days since onset of symptoms as it prolongs viral shedding

**Self-medication of steroids must be avoided**

**Anticoagulants:**

- Not indicated routinely
- All hospitalized children should be evaluated for risk of developing thrombosis and monitored for development of thrombosis
- **Prophylactic anticoagulant** is indicated in following circumstances (the decision to administer prophylactic anticoagulation must be balanced with the child's bleeding risk):
  - a) strong personal or family history of VTE, or
  - b) an indwelling central venous line and two or more additional risk factors\*, or
  - c) four or more risk factors\*

(\*Predisposing risk factors for development of thrombosis – personal history of venous thrombotic events (VTE), family history of first-degree relative with VTE, presence of central venous line, decreased mobility from baseline, burns, active malignancy, estrogen therapy, flare of inflammatory disease, morbid obesity, severe dehydration, recent surgery or trauma)
- Prophylactic dose of low molecular weight heparin (Enoxaparin): 0.5 mg/kg twice daily, till child is discharged from hospital
- On suspicion of thrombosis, confirm by appropriate investigations and start on low molecular weight heparin in therapeutic doses for period of 12 weeks with monitoring
- Children already on anticoagulation therapy may continue same unless they develop active bleeding
- Therapeutic dose of low molecular weight heparin (Enoxaparin): 1 mg/kg twice daily.

**Post COVID Care:**

- Children with asymptomatic infection or mild disease should receive routine childcare, appropriate vaccination (if eligible), nutrition counselling, and psychological support on follow up
- In addition to above, for children with moderate to severe COVID, at discharge from hospital, parents/caregivers should be counselled regarding monitoring for persistence/worsening respiratory difficulty and explained the indications for bringing the child back to facility
- Children who develop any organ specific dysfunction during hospital stay or subsequently should receive appropriate care