JHCC Peds ED MIS-C Guidelines*

May 29, 2020

*These are soft guidelines based on limited evidence. Tool is a guide for evaluation and subject to change as more evidence becomes available. It does not replace clinical judgement or decision making.

Fever ≥ 3 days* (temp ≥ 38.0 or subjective temp)†
AND
Two or more organ involvement (cardiac, renal, respiratory, GI, dermatologic, neurologic)
OR
Fever ≥ 4 days and no obvious source

**Strongly recommend follow up within 24 hours for patients with 2 days of fever and any symptoms listed*

Presentation		
Systemic	**Cardiac/Circulation**	**Respiratory**
Fever Myalgias Lethargy Loss of smell or taste	Tachycardia Hypotension Hypo/hyperperfusion Syncope	Cough Sore throat Respiratory distress Chest pain
Neurologic	**Gastrointestinal**	**Mucocutaneous†**
Headache Altered mental status Meningismus Focal deficits Seizure	Abdominal pain *(Can mimic surgical abdomen)* Nausea/vomiting Diarrhea Loss of appetite	Lymphadenopathy Rash (Please add pictures of rashes to EPIC chart) Lip swelling/cracking/erythema, strawberry tongue Conjunctivitis Swollen hands/feet Erythematous/violaceous changes of toes † *Consider work-up if Kawasaki symptoms **without** fever*

Labs	COVID	Imaging
CRP **CMP** **Ferritin** **Troponin** **Pro-BNP** CBC/ESR D-dimer Blood Cx UA	COVID NAT NP swab COVID IgG/IgA +COVID contact in past 4 wks	EKG Chest x-ray *If respiratory complaints* Echocardiogram *If cardiac findings or ill consult Cardiology for ED or inpatient echo* Abdominal US or CT *If GI complaints* **Add pictures of rashes to EPIC chart**

- Workup may be completed simultaneously or sequentially
- Red: recommended labs if highly suspicious for MIS-C
- **Bold labs** are sent in a single Gold Top Tube; Can send together
- **Echo order**: write in order: "Concern for MIS-C" + COVID pending or result.

Consider admission if but not necessary or limited to:

- Elevated
  - CRP > 3, ESR
  - Cardiac abnormalities (Troponin, Pro-BNP, echo)
- Leukopenia and/or thrombocytopenia
- Meets lab criteria for atypical Kawasaki
- Persistent abdominal pain with findings of bowel edema or mesenteric adenitis on imaging
- Meeting pediatric SIRS criteria following antipyresis
- **Other usual reasons for admission**

Normal labs/ imaging → Discharge with PCP follow-up in 24 hours. Consider obs period in ED to monitor vital sign changes. *(If no PCP, consider return to ED in 24hrs if fever persists)*

Unstable OR Cardiac abnormalities → PICU

Stable → Floor

Consider PICU admission

- Signs of shock, respiratory, or neurologic decompensation
- Persistent tachycardia
- Abnormal cardiac markers or echocardiogram
  (Per Cardiology, echo will NOT be used to determine floor vs PICU placement)
- Frequent abdominal exams or neuro exams
- If not clear disposition, discuss with PICU for shared decision making

Other involved specialists available for consults

- Cardiology
- Rheumatology
- Infectious Disease
- Gastroenterology
- General Pediatric Surgery

Initial Resuscitation Guidelines	
Fluid resuscitation	10 cc/kg aliquots of NS if evidence of dehydration/shock; carefully assess response/tolerance of fluid (hemodynamic response, lung exam/liver edge; POCUS exam of IVC if available) as boluses are administered
Vasoactives	Shock with poor perfusion: epinephrine, 0.02-0.05 mcg/kg/min, titrate to effect; use with caution in patients with extreme tachycardia Consider addition of milrinone, 0.25 – 0.5 mcg/kg/min if oxygen delivery remains inadequate
	Shock with normal/hyperperfusion: norepinephrine, 0.02-0.05 mcg/kg/min, titrate to effect; use with caution in the setting of myocardial dysfunction Consider vasopressin, 0.1-2 mcg/kg/min if hypotension is refractory to catecholamine infusions
Hydrocortisone	If unresponsive to vasoactives, consider stress dose hydrocortisone, 25 – 50 mg/m^2/dose q6h; send spot cortisol or complete ACTH stim test prior to first dose if possible

JHCC inpatient/PICU MIS-C guidance document:
https://intranet.insidehopkinsmedicine.org/asp/_docs/pediatric/MIS-C-draft-5-25-2020.pdf

JH HEIC guidance on clearing MISC from inpatient negative pressure rooms:
MIS-C in Pediatrics- Infection Control Considerations

The following multispecialty pediatric team contributed to this document:
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