# MIS-C

**Multisystem Inflammatory Syndrome in Children**

**Inpatient Quick Reference**

Multisystem Inflammatory Syndrome in Children (MIS-C) is a newly recognized inflammatory syndrome presenting in pediatric patients, associated with current or recent SARS-CoV-2 infection. The pathogenesis is unclear, and the manifestations are still being clarified. At present, we know that children present with prolonged or persistent fever and a constellation of variable symptoms. They exhibit many markers of significant inflammation and are at high risk for cardiovascular collapse. This document accompanies the MIS-C protocol and is designed to be a quick reference guide when admitting these patients.

## Initial evaluation criteria

- **T ≥ 38.5°C for at least 3 days, plus 2 or more concerning signs/symptoms**
- **No other etiology identified**

### Concerning signs and symptoms
- Persistent fever ≥ 38.5°C
- Nausea, vomiting, diarrhea, abdominal pain (may mimic appendicitis)
- Rash
- Conjunctivitis
- Oral mucosal changes
- Headache, irritability
- Cough, shortness of breath
- Sore throat
- Chest pain
- Extremity swelling
- Lymphadenopathy

### Initial lab testing and thresholds of concern:
- Absolute Lymphocyte Count < 0.5 k/uL
- Albumin < 2 g/dL
- CRP > 10 mg/dL
- High Sensitivity Troponin > 30 pg/mL
- Ferritin > 350 ng/mL

**Note:** Work-up of alternative diagnoses should be concurrent with initial MIS-C evaluation.

## Additional Workup at Admission

- SARS-CoV-2 swab
- SARS-CoV-2 serologies
- RPAN
- Blood culture
- UA w/ reflex urine culture
- VBG
- Procalcitonin
- PT/PTT
- Fibrinogen
- ESR
- CK
- Triglycerides
- BNP
- LDH
- Cytokine Panel
- EKG
- Peripheral smear

- If ALC < 0.5, order a Primary Immunodeficiency Flow Panel
- Consider obtaining IgG levels
- To order the peripheral smear:
  - Order “Peripheral Smear Morphology Review Request”
  - Type in “For Cellavision Review” in the additional comments box
MIS-C
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**Vital Signs Monitoring**
- Continuous cardiorespiratory monitor (+/- telemetry)
- Continuous pulse oximetry
- Consider checking vital signs every 2-4 hours initially if there is any concern for instability

**Special Pathogen Isolation**
- Place patients in special pathogen precautions
- Negative pressure rooms are not needed unless patients are likely to undergo aerosol-generating procedures
- May discontinue precautions after 2 negative SARS-CoV-2 PCR swabs, at least 24 hours apart
- Most up-to-date recommendations regarding special pathogen precautions: [http://www.med.umich.edu/i/ice/resources/clinical_guidance.html](http://www.med.umich.edu/i/ice/resources/clinical_guidance.html)

**Disease Reporting**
- Must report disease if there is sufficient evidence to make diagnosis of presumed MIS-C, based on the CDC case definition
- Notify IPE at pager 30032 or by email at UM-ICE@med.umich.edu to report the case. IPE will enter the case into the state database
- Please document in the chart once IPE has been notified

**Subspecialty Consultations**
- ID – Consult if there are clinical concerns
- Hematology – Consult if there is clinical concern for coagulopathy
- Rheumatology – Consult if there are clinical concerns
- Cardiology – Consult if abnormal cardiac screening labs, abnormal EKG, or abnormal echo, or if there is clinical concern for cardiac involvement

**Antibiotic Coverage**
- Only if concerned about concomitant bacterial infection or sepsis
- Empiric antibiotic coverage for sepsis per the institutional sepsis guidelines and should be tailored if a bacterial process is identified

**Increasing Level of Care**
- Please have a lower threshold for calling an RRT on these patients; the PICU is aware this will occur