MIS-C
(multisystem inflammatory syndrome in children)

defined by Centers for Disease Control (CDC)

when to consider evaluation for MIS-C — office setting

An individual aged <21 years +
fever* +
lab evidence of inflammation** +
clinically severe illness requiring hospitalization
with involvement of 2 or more organ systems***

AND

Positive for current or recent SARS-CoV-2 infection
• PCR NP swab
• Blood test SARS-CoV-2 IgG

OR
COVID-19 exposure within the 4 weeks prior
to the onset of symptoms

AND

No alternative plausible diagnoses

DISCLAIMER: This guide is to help
aid and evaluate for potential
MIS-C in outpatient guidelines.
Providers are encouraged to
use judgment beyond these
guidelines and refer to the ED
if they feel necessary.

Fever - 38.0°C or higher for 24 hours, or report of subjective fever for
greater than 24 hours.

One or more of the following: an elevated C-reactive protein (CRP),
erthrocyte sedimentation rate (ESR), fibrinogen, procalcitonin,
d-dimer, ferritin, lactate dehydrogenase (LDH), elevated
neutrophils, reduced lymphocytes and low albumin.

Additional comment:
• Patients meeting criteria for Kawasaki disease should be reported
if they also meet CDC definition for MIS-C.

*** Multisystem involvement examples:
• Cardiovascular: shock, increased troponin, elevated BNP,
abnormal echocardiogram, arrhythmia
• Respiratory: pneumonia, pulmonary embolism, ARDS
• Renal: AKI, renal failure
• Neurologic: aseptic meningitis, stroke, seizure
• GI: increased LFTs, diarrhea, GI bleed, ileus, vomiting,
abdominal pain
• Dermatologic: rash, mucositis, erythroderma
When to consider evaluation for MIS-C — office setting

Outpatient/office setting

Patient toxic/ill appearing

Refer patient to the emergency department
Exit guideline.

Alternative diagnosis found (non-COVID-19)
Exit guideline.

Consider/evaluate for non-COVID-19 related illness before considering MIS-C.

Providers are encouraged to consider and explore other etiologies (keep the differential broad). Many non-COVID-19 etiologies cause similar clinical presentations and laboratory changes. Premature diagnosis to MIS-C could result in a delayed diagnosis and ultimately harm to the patient.

Unexplained fever >24 hours (increase suspicion if >96 hours). Likely to involve cutaneous, mucocutaneous or GI systems.

Lab evaluation for MIS-C (need results except IgG back same day or should refer patient to ED for expedited workup).
- CBCPD
- Ferritin
- CRP
- Troponin I
- CMP
- UA
- BNP
- Coronavirus IgG
- Coronavirus PCR

Some results are abnormal.

Ferritin (>500) and/or troponin abnormal
Send to Dayton Children's Hospital or send to your local ED. Depending on patient's severity of illness, additional diagnostics may be needed while awaiting transfer to a children’s hospital.

Diagnostics:
- CXR
- ECG
- ECHO (stat if patient condition warrants or elevated troponin I)
- Other laboratory and diagnostic tests as indicated by clinical assessment

** If unsure or have questions regarding potential MIS-C in an outpatient setting, please contact Dayton Children’s pediatric rheumatology via the communications center at 937-641-4385.