**Coronavirus: MIS-C Algorithm (Stakeholder-approved; CSW approval in process)**

**Inclusion Criteria**
- Fever AND critically ill OR
- Persistent Fever ≥3d AND Evidence of MIS-C (see box) AND ill-appearing OR
- Persistent unexplained fever >5d

**Clinical Features/Evidence of MIS-C**
- Hypotension or shock
- Cardiac dysfunction, pericarditis, valvulitis, or coronary abnormalities
- Acute gastrointestinal symptoms (diarrhea, vomiting, or abdominal pain)
- Rash, bilateral nonpurulent conjunctivitis, or mucocutaneous inflammation signs (oral, hands, or feet)
- Irritability, headache, altered mental status
- Recent COVID illness OR exposure (note: not necessary to suspect MIS-C)

**Lab Evidence of MIS-C**
- No lab criteria is diagnostic; look for significant inflammation and pattern of lab evidence

**Signs of shock?**
- Yes
  - Obtain Initial and Additional Labs, EKG, CXR
  - ECHO (early if signs of cardiac dysfunction)
  - Consider Sepsis Pathway
    - Caution with boluses; monitor for cardiac dysfunction

**Lab Evidence of MIS-C?**
- Yes
  - Obtain Additional labs
  - Echo
  - EKG

**Evidence of MIS-C without alternate diagnosis?**
- No
  - Consider Alternate Diagnoses
  - Consider Discharge with close follow-up

**Complete or Incomplete Kawasaki?**
- Yes
  - Follow KD Pathway if COVID testing negative or while pending
  - Monitor closely for signs of shock

**Suspected MIS-C:** Ongoing fever, lab evidence of inflammation, multi-system involvement, and clinically ill.
(Reconsider broad differential; MIS-C is rare)

**MIS-C:** Above plus known exposure or confirmed PCR or IgG+
- ECHO if not done, or repeat if new signs of cardiac dysfunction
- Consult ID, Rheum, and Cardiology (Heart Failure Team if decr EF)
- IVIG
- Consider cytokine levels to target further treatments
- Discuss anticoagulation: enoxaparin or ASA; consider using both
- Treatments to consider with consultants: Steroids and Anakinra
- Trend CBC, CRP, LDH, ALT, Albumin, Ferritin, Creatinine, Lypes, D-Dimer, BNP, Fibrinogen until improved and while weaning therapy

**Updated 6/22/20. Authors: Katherine Kazmier, MD; Surabhi Vora, MD, Kristen Hayward, MD, Alpana Waghmare, MD, Jesselle Albert, MD, Michael Portman, MD, Mariska Kemna, MD, Emily Hartford, MD, Indi Trehan, MD, Denise Shushan, MD, and Sarah Nutman, MD**
Differential Diagnosis:

Kawasaki Disease
- more common in younger children, if COVID testing negative, and without shock/cardiac dysfunction

Bacterial Infections/Sepsis:
- obtain cultures and evaluate for source
- consider meningitis

Staphylococcal and streptococcal toxin-mediated diseases
- diffuse rash and hypotension, obtain cultures and evaluate for source including gynecologic or scarlet fever

Staph Scalded Skin Syndrome (SSSS)
- increasing erythema and bullae
- younger children
- obtain cultures

Tick-Borne Illnesses
- with epidemiologic risk factors
- Rocky Mountain Spotted Fever or Leptospirosis

Viral Infections
- Measles, Adenovirus, enterovirus, active COVID infection

Myocarditis
- may overlap with MIS-C or have alternate cause

Drug Hypersensitivity Reactions
- consider SJS, DRESS, or serum sickness like reaction
- history of recent or semi-recent exposure to drug; consider with arthralgias and diffuse mucositis

Labs to Consider with consultants:

- Quantitative immunoglobulins (IgG, IgA, IgM, red tube)
- Specimen storage, red and lavender (freeze)
- Lymphocyte subset – Full Panel with TCR
- Antiphospholipid Ab (anticardiolipin, β2 glycoprotein, lupus anticoagulant)
- Cytokine panel
- IL-1β (ARUP test code 0051536, collect 2-3mL in gold/red top, spin and freeze within 2h)
- sIL-2R (AKA sCD25)