ALASKA NATIVE MEDICAL CENTER GUIDELINE

MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN (MIS-C)

Case Definition for Multisystem Inflammatory Syndrome in Children (MIS-C) According to the CDC:

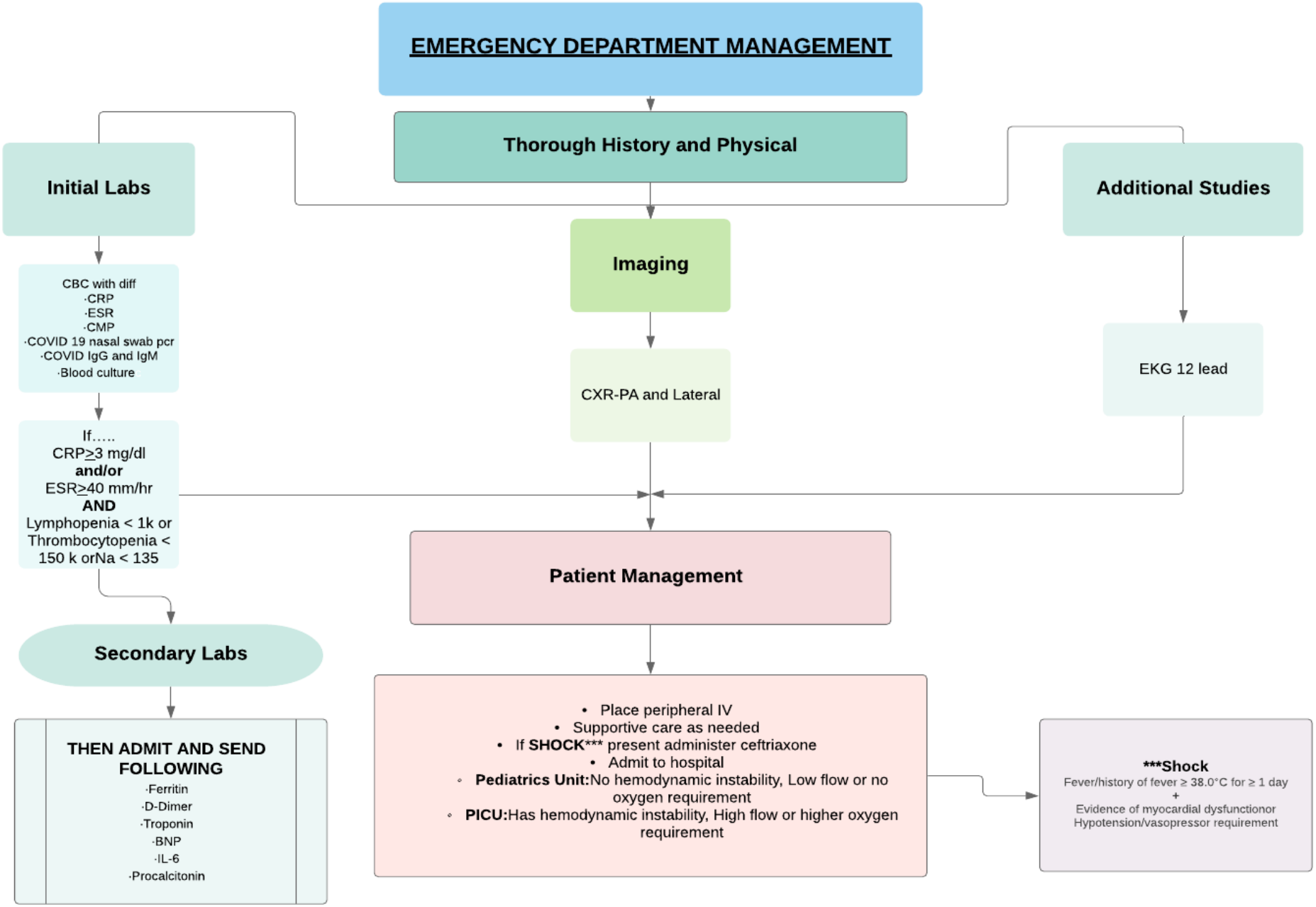
- **An individual aged <21 years presenting with:**
  - **Fever** ≥38.0°C for ≥24 hours, or report of subjective fever lasting ≥24 hours if shock (3 days if not in shock)
  - Laboratory evidence of **inflammation**
    - Including, but not limited to, one or more of the following: an elevated C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), fibrinogen, procalcitonin, d-dimer, ferritin, lactic acid dehydrogenase (LDH), or interleukin 6 (IL-6), elevated neutrophils, reduced lymphocytes and low albumin
  - Evidence of **clinically severe illness** requiring hospitalization with multisystem (≥2) organ involvement (rash, GI symptoms, extremity changes, oral mucosal changes, conjunctivitis, lymphadenopathy, neurologic symptoms).
    - Rash: polymorphic, maculopapular, petechial, NOT vesicular
    - GI symptoms: diarrhea, abdominal pain, vomiting
    - Extremity Changes: Erythema and edema of hands and feet
    - Oral Mucosal Changes: Erythema and cracking of lips, strawberry tongue, erythema of oral and pharyngeal mucosa
    - Conjunctivitis: Bilateral bulbar conjunctival injection without exudate
    - Lymphadenopathy: Cervical > 1.5 cm unilateral
    - Neurologic: Headache, irritability, lethargy, AMS

- **AND No alternative plausible diagnoses**
- **AND Positive** for current or recent **SARS-CoV-2** infection by RT-PCR, serology, or antigen test; or COVID-19 exposure within the 4 weeks prior to the onset of symptoms
  - Clinicians may consider diagnosis while awaiting serology or if all SARS-CoV-2 testing is negative but clinical suspicion for MIS-C still remains high

- Some individuals may fulfill full or partial criteria for Kawasaki Disease but should still be reported if they meet the case definition for MIS-C
- Consider MIS-C in any pediatric death with evidence of SARS-CoV-2 infection

***MIS-C is a reportable disease

MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN



Inpatient Management

Medications

- Methylprednisolone IV
  - 2 mg/kg/day divided BID X 5 days
  - Max dose 60 mg/day
- IVIG
  - 2 grams/kg x 1
  - Max dose 100 grams
- Lovenox or Aspirin
  - Lovenox: Any age with moderate or severe systolic dysfunction:
    - Anti-Xa level target 0.5-1.0
  - Lovenox for≥12 years of age with normal function
    - < 60 kg: 0.5 mg/kg SQ BID
    - > 60 kg: 40 mg SQ daily
    - Anti-Xa level target 0.2 – 0.4
  - Aspirin 3-5mg/kg/day (max 81 mg) for≤12 years of age and not receiving Lovenox unless contraindicated (i.e. risk of Reye syndrome or platelets < 100,000)
- Antibiotics (if **SHOCK*****present)
  - Ceftriaxone 50 mg/kg/dayMax 2 grams

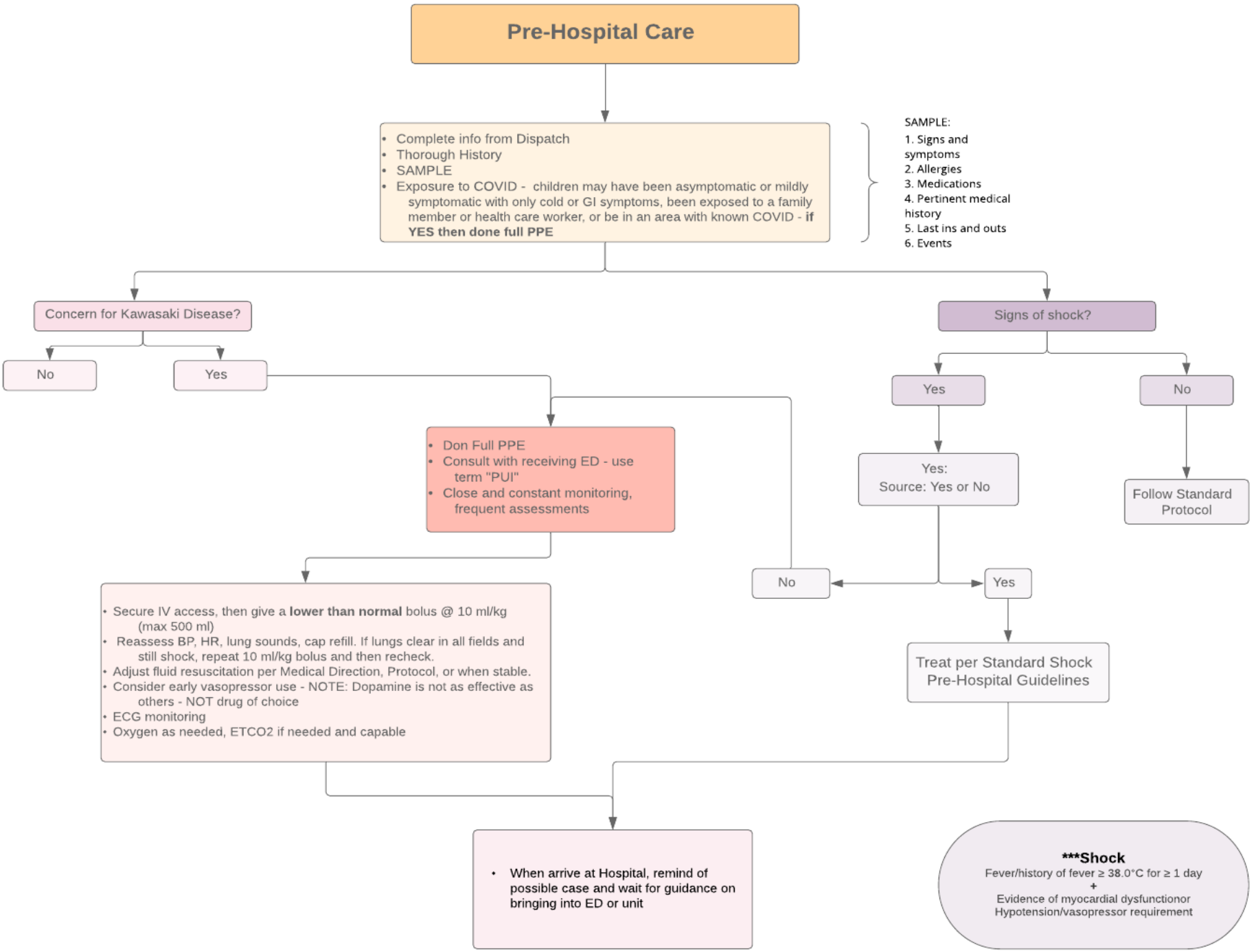
*****Shock**
Fever/history of fever ≥ 38.0°C for ≥ 1 day
+
Evidence of myocardial dysfunctionor
Hypotension/vasopressor requirement

OTHER TREATMENTS

- ECHO
- Check daily CBC, CMP, ESR, CRP,ferritin, procalcitonin, BNP, troponin, D-dimer
- Continuous cardiac monitoring
- Supplemental oxygen as needed
- IV fluids as needed

CONSULTS

- Cardiology
- Consider ID


Pre-Hospital Care
Complete info from Dispatch
Thorough History
SAMPLE
Exposure to COVID - children may have been asymptomatic or mildly symptomatic with only cold or GI symptoms, been exposed to a family member or health care worker, or be in an area with known COVID - if YES then done full PPE
SAMPLE:
1. Signs and symptoms
2. Allergies
3. Medications
4. Pertinent medical history
5. Last ins and outs
6. Events
Concern for Kawasaki Disease?
No
Yes
Signs of shock?
Yes
No
Don Full PPE
Consult with receiving ED - use term "PUI"
Close and constant monitoring, frequent assessments
Yes:
Source: Yes or No
Follow Standard Protocol
No
Yes
Secure IV access, then give a lower than normal bolus @ 10 ml/kg (max 500 ml)
Reassess BP, HR, lung sounds, cap refill. If lungs clear in all fields and still shock, repeat 10 ml/kg bolus and then recheck.
Adjust fluid resuscitation per Medical Direction, Protocol, or when stable.
Consider early vasopressor use - NOTE: Dopamine is not as effective as others - NOT drug of choice
ECG monitoring
Oxygen as needed, ETCO2 if needed and capable
Treat per Standard Shock Pre-Hospital Guidelines
When arrive at Hospital, remind of possible case and wait for guidance on bringing into ED or unit
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+
Evidence of myocardial dysfunctionor
Hypotension/vasopressor requirement