

## **Health Advisory: Pediatric Multi-System Inflammatory Syndrome Potentially Associated with COVID-19 in Children, May 12, 2020**

### **Actions**

- Be aware that the Novel Coronavirus (COVID-19) has been recently reported as possibly linked with a pediatric multi-system inflammatory syndrome disease – “Pediatric Multi-System Inflammatory Syndrome Potentially Associated with COVID-19.”
- Consider “Pediatric Multi-System Inflammatory Syndrome Potentially Associated with COVID-19” in children who present with persistent fever, inflammation (e.g., neutrophilia, elevated C-reactive protein and lymphopenia) and evidence of single or multi-organ dysfunction (shock, cardiac, respiratory, renal, gastrointestinal or neurological disorder). See below for additional information.
- **Report** cases of pediatric multi-system inflammatory syndrome potentially associated with COVID-19 in patients who are under 21 years of age within 24 hours to Public Health at 206-263-8171.
- **Perform a PCR and serological test** to detect the presence of SARS-COV-2, the virus that causes COVID-19, or corresponding antibodies in the patient.
- **Use COVID-19 PPE and infection control precautions** while patients are under evaluation for and if diagnosed with COVID-19.

### **Background**

- In the United Kingdom and Europe, a possible link has been reported between COVID-19 and a serious inflammatory disease recently termed “Pediatric Multi-System Inflammatory Syndrome Temporally Associated with COVID-19.”
- As of May 11, 2020, two suspected pediatric clinical cases compatible with multi-system inflammatory syndrome associated with COVID-19 have been reported in children in Washington State. As of May 5, 2020, 64 cases have been reported in children in New York State.
- This syndrome has features which overlap with Kawasaki Disease and Toxic Shock Syndrome.
  - Inflammatory markers may be elevated, and fever and abdominal symptoms may be prominent.
  - Rash also may be present.
  - Myocarditis and other cardiovascular changes may be seen. Additionally, some patients have developed cardiogenic or vasogenic shock and required intensive care.
  - This inflammatory syndrome may occur days to weeks after acute COVID-19 illness.
- The syndrome may include:
  - A child presenting with persistent fever, inflammation (e.g., neutrophilia, elevated C-reactive protein and lymphopenia) and evidence of single or multi-organ dysfunction (shock, cardiac, respiratory, renal, gastrointestinal or neurological disorder). This may include children meeting full or partial criteria for Kawasaki disease.
  - Exclusion of any other microbial cause, including bacterial sepsis, staphylococcal or streptococcal shock syndromes, and infections associated with myocarditis such as enterovirus. Clinicians should not delay seeking expert advice while waiting for results of these investigations.
- Early recognition by pediatricians and prompt referral to an in-patient specialist, including to critical care is essential.
- This syndrome should be considered by pediatricians and specialists, particularly when other microbial etiologies have not been identified.

- Pediatricians and specialists should elicit any recent history of illness with COVID-19 or close contact with individuals who are known to have COVID-19 for children presenting with symptoms that are compatible with pediatric multi-system inflammatory syndrome potentially associated with COVID-19.
- The majority of patients who have presented with this syndrome have tested positive for SARS-CoV- 2 or corresponding antibodies. Some tested positive on diagnostic, molecular testing for SARS-CoV-2, others were positive on serological testing for corresponding antibodies.

### Resources

- Centers for Disease Control and Prevention (CDC) COVID-19 Website  
<https://www.cdc.gov/coronavirus/2019-ncov/index.html>
- Royal College of Paediatrics and Child Health Guidance: Paediatric Multisystem Inflammatory Syndrome Temporally Associated with COVID-19  
<https://www.rcpch.ac.uk/sites/default/files/2020-05/COVID-19-Paediatric-multisystem-%20inflammatory%20syndrome-20200501.pdf>
- Hyperinflammatory shock in children during COVID-19 pandemic. [Lancet, 2020.](#)  
[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31094-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31094-1/fulltext)