

**2020 Health Alert #13:  
Pediatric Multi-System Inflammatory Syndrome Potentially  
Associated with COVID-19**

- **Fifteen cases compatible with multi-system inflammatory syndrome have been identified in children in New York City hospitals.**
- **Characterized by persistent fever and features of Kawasaki disease and/or toxic shock syndrome; abdominal symptoms common**
- **Cases may require intensive care unit admission for cardiac and/or respiratory support**
- **Polymerase chain reaction testing for SARS-CoV-2 may be positive or negative**
- **Early recognition and specialist referral are essential, including to critical care if warranted**
- **Immediately report cases to the New York City Health Department's Provider Access Line: 866-692-3641**

May 4, 2020

Dear Colleagues,

A pediatric multi-system inflammatory syndrome, recently reported by authorities in the United Kingdom,<sup>1</sup> is also being observed among children and young adults in New York City and elsewhere in the United States. Clinical features vary, depending on the affected organ system, but have been noted to include features of Kawasaki disease or features of shock; however, the full spectrum of disease is not yet known. Persistent fever and elevated inflammatory markers (CRP, troponin, etc.) have been seen among affected patients. Patients with this syndrome who have been admitted to pediatric intensive care units (PICUs) have required cardiac and/or respiratory support. Only severe cases may have been recognized at this time.

The NYC Health Department contacted PICUs in NYC during April 29-May 3, 2020 and identified 15 patients aged 2-15 years who had been hospitalized from April 17- May 1, 2020 with illnesses compatible with this syndrome (i.e., typical Kawasaki disease, incomplete Kawasaki disease, and/or shock). All patients had subjective or measured fever and more than half reported rash, abdominal pain, vomiting, or diarrhea. Respiratory symptoms were reported in less than half of these patients. Polymerase chain reaction (PCR) testing for SARS-CoV-2 has been positive (4), negative (10), and initially indeterminate and then negative (1). Six patients with negative testing by PCR were positive by serology. More than half of the reported patients

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<sup>1</sup> Pediatric Intensive Care Society. PICS Statement: Increased number of reported cases of novel presentation of multi-system inflammatory disease. April 27, 2020. Available at <https://picsociety.uk/wp-content/uploads/2020/04/PICS-statement-re-novel-KD-C19-presentation-v2-27042020.pdf>.

required blood pressure support and five required mechanical ventilation. No fatalities have been reported among these cases.

If the above-described inflammatory syndrome is suspected, pediatricians should immediately refer patients to a specialist in pediatric infectious disease, rheumatology, and/or critical care, as indicated. Early diagnosis and treatment of patients meeting full or partial criteria for Kawasaki disease is critical to preventing end-organ damage and other long-term complications. Patients meeting criteria for Kawasaki disease should be treated with intravenous immunoglobulin and aspirin.

**Consistent with the NYC Health Code Article 11, which requires reporting of outbreaks and suspected outbreaks of syndromes of known or unknown etiology and of unusual manifestations of disease of public health interest, any patient who meets the following criteria should immediately be reported to the NYC Health Department by calling the Provider Access Line at 866-692-3641:**

- Less than 21 years old, with persistent fever (four or more days), and either incomplete Kawasaki disease, typical Kawasaki disease, and/or toxic shock syndrome-like presentation;
- and***
- No alternative etiology identified that explains the clinical presentation (note: patients should be reported regardless of SARS-CoV-2 PCR test result).

Thank you for your ongoing collaboration.

Sincerely,

A handwritten signature in black ink, appearing to read "Demetre C. Daskalakis". The signature is fluid and cursive, written over a faint, light-colored background that looks like a watermark or a very light stamp.

Demetre C. Daskalakis, MD, MPH  
Deputy Commissioner  
Division of Disease Control  
New York City Health Department