



**CABINET FOR HEALTH AND FAMILY SERVICES  
DEPARTMENT FOR PUBLIC HEALTH**

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**Eric C. Friedlander**  
Secretary

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Dear Healthcare Provider:

The Kentucky Department for Public Health (KDPH) is requesting your help in identifying Pediatric Multi-System Inflammatory Syndrome (PMIS) Potentially Associated with COVID-19.

**Key Points**

- While older adults are at highest risk for severe COVID-19 outcomes, children can be infected; children usually present with no or mild symptoms, but severe, COVID-19-associated illness can occur.
- Two children in Kentucky hospitals exhibiting symptoms compatible with multi-system inflammatory syndrome have been identified and are currently under investigation.
- PMIS is characterized by persistent fever and features of Kawasaki disease and/or toxic shock syndrome with abdominal symptoms common.
- Cases may require intensive care unit admission for cardiac and/or respiratory support.
- Polymerase chain reaction (PCR) testing for SARS-CoV-2 may or may not be positive.
- Early recognition and specialist referral are essential, including to critical care if warranted.
- Statewide Provider to Provider Pediatric Infectious Disease Consult: 800-722-5725.
- Report cases to KDPH by calling: 502-564-3261.

**Background**

A pediatric multi-system inflammatory syndrome, recently reported by authorities in the United Kingdom<sup>1</sup>, is potentially being observed among children and young adults in Kentucky 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 Toxic Shock Syndrome. 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.

KDPH has received reports of two potential patients with illnesses that may be compatible with this syndrome (i.e., typical Kawasaki disease, incomplete Kawasaki disease, and/or shock). These reports

are currently under investigation. Patients may have subjective or measured fever, rash, abdominal pain, vomiting, diarrhea, and/or respiratory symptoms. Polymerase chain reaction (PCR) testing for SARS-CoV-2 may be positive or negative. This inflammatory syndrome may occur days to weeks after acute COVID-19 illness.

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.

State regulation (902 KAR 2:020) requires immediate reporting of cases of emerging pathogens and pathogens of public health importance, such as an unexpected pattern of cases, suspected cases, or deaths, by telephone to KDPH. Any patient who meets the following criteria should immediately be reported to KDPH by calling 502-564-3261 and asking for the PMIS Coordinator.

### **Case Definition**

- 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;
  - Symptoms may include fever, multi-system inflammation, elevated inflammatory markers (CRP, troponin, etc.), rash, abdominal pain, vomiting, diarrhea, and/or respiratory symptoms.
  - Typical Kawasaki disease is considered as a case in a patient with fever of 5 or more days duration (or fever until the date of administration of intravenous immunoglobulin if it is given before the fifth day of fever), and the presence of at least 4 of the following 5 clinical signs:
    - Rash, cervical lymphadenopathy (at least 1.5 cm in diameter), bilateral conjunctival injection, oral mucosal changes, peripheral extremity changes
  - Patients whose illness does not meet the above Kawasaki disease case definition but who have fever and coronary artery abnormalities are classified as having atypical or incomplete Kawasaki disease.<sup>2</sup>
  - Toxic shock syndrome (Other Than Streptococcal) case definition includes fever, diffuse macular erythroderma rash, desquamation 1-2 weeks after rash, hypotension, and multisystem involvement (3 or more organ systems including gastrointestinal, muscular, mucous membranes, renal, hepatic, hematologic, and/or central nervous system).<sup>3</sup>
  - Streptococcal toxic shock syndrome (STSS) case definition includes hypotension, multisystem involvement (2 or more organ systems including renal, coagulopathy, liver, acute respiratory distress syndrome, generalized erythematous macular rash that may desquamate, and/or soft tissue necrosis).<sup>4</sup>

*and*

- No alternative etiology identified that explains the clinical presentation (note: patients should be reported regardless of SARS-CoV-2 PCR test result).

## **HIPPA Guidance**

Requests for information during public health investigations are exempt from the Health Insurance Portability and Accountability Act (HIPAA). "...the Rule permits covered entities to disclose protected health information without authorization for specified public health purposes" 45 CFR 164.512(b). Specified public health purposes include, "...the reporting of a disease or injury; reporting vital events, such as births or deaths; and conducting public health surveillance, investigations, or interventions." See 45 CFR 164.512(b)(1)(i). More information regarding your responsibilities as they pertain to HIPAA is available on the United States Department of Health and Human Services website: <https://www.hhs.gov/hipaa/for-professionals/special-topics/public-health/index.html>.

If you have any questions, please contact your local health department or KDPH.

## **Reporting**

As noted above, potential cases of PMIS are reportable to KDPH immediately as per state regulation (902 KAR 2:020).

Any pediatric patient suspected of having PMIS associated with COVID-19 should be immediately reported to the Kentucky Department for Public Health at 502-564-3261. You will be asked to complete an EPID 200 Reportable Disease Form (available at: <https://chfs.ky.gov/agencies/dph/dehp/idb/Documents/EPID200.pdf>) and CDC's COVID-19 PUI form (available at: <https://www.cdc.gov/coronavirus/2019-ncov/downloads/pui-form.pdf>) and submit both via secure fax at: 502-696-3803. The illness name can be listed as, "PMIS-COVID-19." For questions, please call 502-564-3261 during business hours or after-hours at 888-9-REPORT (888-973-7678).

Thank you very much for your assistance and ongoing collaboration! We will disseminate additional information as it becomes available.

Sincerely,



Doug Thoroughman, PhD, MS  
State Epidemiologist (acting)

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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>.

<sup>2</sup> Kawasaki Disease. Case Definition. Accessed May 13, 2020. <https://www.cdc.gov/kawasaki/case-definition.html>.

<sup>3</sup> Toxic Shock Syndrome (Other Than Streptococcal) (TSS) 2011 Case Definition. Accessed May 13, 2020. <https://wwwn.cdc.gov/nndss/conditions/toxic-shock-syndrome-other-than-streptococcal/case-definition/2011/>.

<sup>4</sup> Streptococcal Toxic Shock Syndrome (STSS) (Streptococcus pyogenes) 2010 Case Definition. Accessed May 13, 2020. <https://wwwn.cdc.gov/nndss/conditions/streptococcal-toxic-shock-syndrome/case-definition/2010/>.