

Health Advisory:
Multisystem Inflammatory Syndrome in Children (MIS-C) Associated with Coronavirus Disease 2019 (COVID-19) in Georgia, February 2021

ACTION STEPS

District and County Health Departments: Please forward to hospitals and clinics in your jurisdiction.

Hospitals and clinics: Please distribute to infectious disease physicians, infection preventionists, emergency department physicians, intensive care physicians, cardiologists, primary care providers, and pediatricians.

Background:

In April of 2020, clinicians in the United Kingdom recognized the presence of severe inflammatory syndrome in otherwise healthy children who currently or recently tested positive for SARS-CoV-2, the virus that causes COVID-19 [1]. These patients presented with systemic signs and symptoms such as fever, hypotension, and multiorgan system involvement [1]. Since May 2020, the Centers for Disease Control and Prevention (CDC) has requested reports of this syndrome, called multisystem inflammatory syndrome in children (MIS-C). MIS-C is reportable in Georgia, and suspect cases should be reported to the Georgia Department of Public Health (DPH).

Epidemiology:

From March 11, 2020, through February 8, 2021, 2,060 confirmed MIS-C cases were reported in the United States, including 30 deaths [2]. Case-patient ages range from infancy to 20 years old with most cases occurring in children ages 1 to 14 years old [2]. Over one third (69%) of reported cases have occurred in children who are Hispanic or Latino (690 cases) or Black, non-Hispanic (600 cases) [2]. Most case-patients (99%) tested positive for SARS CoV-2, and the remaining 1% were around someone with COVID-19 [2]. As of February 15, 2021, 154 confirmed MIS-C cases have been reported in Georgia.

Case Definition:

- An individual aged <21 years presenting with fever¹, laboratory evidence of inflammation², and evidence of clinically severe illness requiring hospitalization, with multisystem (≥ 2) organ involvement (cardiac, renal, respiratory, hematologic, gastrointestinal, dermatologic or neurological); AND
- No plausible alternative diagnoses³; AND
- Positive for current or recent SARS-CoV-2 infection by RT-PCR, serology, or antigen test; OR exposure to a suspected or confirmed COVID-19 case within the 4 weeks before the onset of symptoms.
- Note: Consider MIS-C in any pediatric death with evidence of SARS-CoV-2 infection.

¹ Fever >38.0°C for ≥ 24 hours, or report of subjective fever lasting ≥ 24 hours.

² 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

³ Some individuals may fulfill full or partial criteria for Kawasaki disease but should be reported if they meet the case definition for MIS-C.

Public Health Reporting: Report suspect MIS-C cases to the Georgia Department of Public Health as soon as possible.

- Report cases electronically through the State Electronic Notifiable Disease Surveillance System (SendSS): <https://sendss.state.ga.us/sendss/login.screen>.)
- Alternatively, providers may report by phone to their local health district office or by calling 404-657-2588 during business hours or 1-866-PUB-HLTH evenings and weekends.
- Reporting of suspected cases should not be delayed pending results of SARS-CoV-2 test results.

Clinical Presentation and Evaluation:

Pediatricians and other clinicians should refer children with suspected MIS-C for inpatient evaluation and consultation with infectious disease, cardiology, and rheumatology specialists. Clinicians should elicit any recent history of an illness compatible with COVID-19 or close contact with individuals suspected or known to have COVID-19 infection. Testing for SARS-CoV-2 should include PCR, antigen, and serology (IgG). Patients may present with persistent fevers, abdominal pain, and some may experience hypotension and shock. Laboratory abnormalities may include lymphocytopenia, elevated inflammatory markers such as C-reactive protein (CRP), and elevated cardiac markers such as troponin and brain natriuretic peptide (BNP). Depending on the presentation, abdominal imaging and/or chest radiography may show abnormalities. An echocardiogram may show left ventricular dysfunction, coronary artery dilation/aneurysm, and other findings such as mitral regurgitation and pericardial effusion.

Visit CDC's webpage for healthcare providers (<https://www.cdc.gov/mis-c/hcp/index.html>) and the American Academy of Pediatrics' webpage (<https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/multisystem-inflammatory-syndrome-in-children-mis-c-interim-guidance/>) for more information regarding the evaluation and treatment of MIS-C patients.

MIS-C Resources:

- COVID-19 in Georgia: <https://www.dph.georgia.gov>
- Guidance for Healthcare providers:
 - <https://www.cdc.gov/mis-c/hcp/>
 - <https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/multisystem-inflammatory-syndrome-in-children-mis-c-interim-guidance/>

References:

1. Godfred-Cato S, Bryant B, Leung J, et al. COVID-19–Associated Multisystem Inflammatory Syndrome in Children — United States, March–July 2020. *MMWR Morb Mortal Wkly Rep* 2020;69:1074–1080. DOI: <http://dx.doi.org/10.15585/mmwr.mm6932e2>
2. Health Department-Reported Cases of Multisystem Inflammatory Syndrome in Children (MIS-C) in the United States [Internet]. Centers for Disease Control and Prevention; 2021. Retrieved from: <https://www.cdc.gov/mis-c/cases/index.html> [Accessed February 15, 2021]

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