

Montana Health Alert Network

# DPHHS HAN

## ADVISORY

### Cover Sheet

#### DATE

May 15, 2020

#### SUBJECT

Multisystem Inflammatory Syndrome in Children (MIS-C) Associated with Coronavirus Disease 2019 (COVID-19)

#### INSTRUCTIONS

Please see the attached CDC HAN, Montana is not aware of any similar cases, please report all COVID-19 related cases and related complications to your local health department.

***DISTRIBUTE*** to your local HAN contacts. This HAN is intended for general sharing of information.

- Time for Forwarding: **As Soon As Possible**
- Please forward to DPHHS at [hhshan@mt.gov](mailto:hhshan@mt.gov)
- **Remove this cover sheet before redistributing and replace it with your own**



For LOCAL HEALTH DEPARTMENT reference only  
DPHHS Subject Matter Resource for more information regarding this HAN, contact:

DPHHS CDCP

**Epidemiology Section  
1-406-444-0273**

*For technical issues related to the HAN message contact the Emergency Preparedness Section at 1-406-444-0919*

DPHHS Health Alert Hotline:  
1-800-701-5769

DPHHS HAN Website:  
[www.han.mt.gov](http://www.han.mt.gov)

## REMOVE THIS COVER SHEET BEFORE REDISTRIBUTING AND REPLACE IT WITH YOUR OWN

Please ensure that DPHHS is included on your HAN distribution list.  
[hhshan@mt.gov](mailto:hhshan@mt.gov)

#### Categories of Health Alert Messages:

**Health Alert:** conveys the highest level of importance; warrants immediate action or attention.

**Health Advisory:** provides important information for a specific incident or situation; may not require immediate action.

**Health Update:** provides updated information regarding an incident or situation; unlikely to require immediate action.

**Information Service:** passes along low level priority messages that do not fit other HAN categories and are for informational purposes only.

Please update your HAN contact information on the Montana Public Health Directory

**This is an official**  
**CDC HEALTH ADVISORY**

Distributed via the CDC Health Alert Network  
May 14, 2020, 4:45 PM ET  
CDCHAN-00432

**Multisystem Inflammatory Syndrome in Children (MIS-C) Associated  
with Coronavirus Disease 2019 (COVID-19)**

**Summary**

The Centers for Disease Control and Prevention (CDC) is providing 1) background information on several cases of a recently reported multisystem inflammatory syndrome in children (MIS-C) associated with coronavirus disease 2019 (COVID-19); and 2) a case definition for this syndrome. CDC recommends healthcare providers report any patient who meets the case definition to local, state, and territorial health departments to enhance knowledge of risk factors, pathogenesis, clinical course, and treatment of this syndrome.

**Background**

On April 26, 2020, clinicians in the United Kingdom (UK) recognized increased reports of previously healthy children presenting with a severe inflammatory syndrome with Kawasaki disease-like features.<sup>1</sup> The cases occurred in children testing positive for current or recent infection by SARS-CoV-2, the novel coronavirus that causes COVID-19, based on reverse-transcriptase polymerase chain reaction (RT-PCR) or serologic assay, or who had an epidemiologic link to a COVID-19 case. Patients presented with a persistent fever and a constellation of symptoms including hypotension, multiorgan (e.g., cardiac, gastrointestinal, renal, hematologic, dermatologic and neurologic) involvement, and elevated inflammatory markers.<sup>2</sup> Respiratory symptoms were not present in all cases.

Eight cases, including one death, from the UK were described in a recent publication.<sup>3</sup> In the limited sample of 8 children, it was reported that 75% of the patients were of Afro-Caribbean descent and 62.5% were male. The report also indicated that all 8 patients tested positive for SARS-CoV-2 through antibody testing, including the patient that died.<sup>3</sup>

During March and April, cases of COVID-19 rapidly increased in New York City and New York State. In early May 2020, the New York City Department of Health and Mental Hygiene received reports of children with multisystem inflammatory syndrome. From April 16 through May 4, 2020, 15 patients aged 2-15 years were hospitalized, many requiring admission to the intensive care unit. As of May 12, 2020, the New York State Department of Health identified 102 patients (including patients from New York City) with similar presentations, many of whom tested positive for SARS-CoV-2 infection by RT-PCR or serologic assay. New York State and New York City continue to receive additional reports of suspected cases.

Additional reports of children presenting with severe inflammatory syndrome with a laboratory-confirmed case of COVID-19 or an epidemiological link to a COVID-19 case have been reported by authorities in other countries.<sup>4</sup>

It is currently unknown if multisystem inflammatory syndrome is specific to children or if it also occurs in adults.

There is limited information currently available about risk factors, pathogenesis, clinical course, and treatment for MIS-C. CDC is requesting healthcare providers report suspected cases to public health authorities to better characterize this newly recognized condition in the pediatric population.

## Recommendations

Healthcare providers who have cared or are caring for patients younger than 21 years of age meeting MIS-C criteria should report suspected cases to their local, state, or territorial health department.

For additional information, please contact CDC's 24-hour Emergency Operations Center at 770-488-7100. After hour phone numbers for health departments are available at the Council of State and Territorial Epidemiologist website (<https://resources.cste.org/epiafterhours>).

### Case Definition for Multisystem Inflammatory Syndrome in Children (MIS-C)

- An individual aged <21 years presenting with fever<sup>i</sup>, laboratory evidence of inflammation<sup>ii</sup>, and evidence of clinically severe illness requiring hospitalization, with multisystem ( $\geq 2$ ) organ involvement (cardiac, renal, respiratory, hematologic, gastrointestinal, dermatologic or neurological); **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

<sup>i</sup>Fever  $\geq 38.0^{\circ}\text{C}$  for  $\geq 24$  hours, or report of subjective fever lasting  $\geq 24$  hours

<sup>ii</sup>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

#### Additional comments

- Some individuals may fulfill full or partial criteria for Kawasaki disease but should 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

## References

<sup>1</sup> <https://www.cdc.gov/kawasaki/index.html>

<sup>2</sup>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>.

<sup>3</sup>Riphagen S, Gomez X, Gonzales-Martinez C, Wilkinson N, Theocharis P. Hyperinflammatory shock in children during COVID-19 pandemic. Lancet. 2020. Advance online publication, doi: 10.1016/S0140-6736(20)31094-1 [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)

<sup>4</sup>Verdoni L, Mazza A, Gervasoni A, Martelli L, Ruggeri M, Ciuffreda M, Bonanomi E, D'Anitga L. An outbreak of severe Kawasaki-like disease at the Italian epicentre of the SARS-CoV-2 epidemic: an observational cohort study. Lancet. 2020. Advance online publication, doi: 10.1016/S0140-6736(20)31129-6 [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31103-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31103-X/fulltext)

*The Centers for Disease Control and Prevention (CDC) protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national, and international organizations.*

---

Categories of Health Alert Network messages:

**Health Alert** Requires immediate action or attention; highest level of importance  
**Health Advisory** May not require immediate action; provides important information for a specific incident or situation  
**Health Update** Unlikely to require immediate action; provides updated information regarding an incident or situation  
**HAN Info Service** Does not require immediate action; provides general public health information

##This message was distributed to state and local health officers, state and local epidemiologists, state and local laboratory directors, public information officers, HAN coordinators, and clinician organizations##