



**Public Health Department** Danette York, MPH, Director  
David Canton, DO, MPH, JD, Health Officer, Interim

**Community Health Division – Communicable Diseases/Oroville**

202 Mira Loma Drive  
Oroville, California 95965

T: 530.552.3929  
F: 530.538.5387

[buttecounty.net/publichealth](http://buttecounty.net/publichealth)

## Health Advisory

To: Healthcare Providers

From: David Canton, DO, MPH, JD, Health Officer Interim (signed original on file)

Date: November 1, 2021

Re: Multisystem Inflammatory Syndrome in Children (MIS-C)

Since March 1, 2020 the Butte County Department of Public Health (BCPH) has identified two confirmed cases and one suspect case still under investigation of Multisystem Inflammatory Syndrome in Children. BCPH is reminding providers to be aware of the potential for MIS-C and to be diligent in reporting suspected cases.

### Background

Multisystem Inflammatory Syndrome in Children (MIS-C) is a health condition occurring in individuals under age 21 that results in inflammation of various organs. Many children with MIS-C had the virus that causes COVID-19 or had been around someone with COVID-19. MIS-C can be serious, even deadly, but most children who were diagnosed with this condition have improved with medical care.

### Clinical Presentation

Patients with MIS-C usually present with persistent fever, abdominal pain, vomiting, diarrhea, skin rash, mucocutaneous lesions and, in severe cases, with hypotension and shock. They have elevated laboratory markers of inflammation (e.g., CRP, ferritin), and in a majority of patients laboratory markers of damage to the heart (e.g., troponin; B-type natriuretic peptide (BNP) or proBNP). Some patients develop myocarditis, cardiac dysfunction, and acute kidney injury. Not all children will have the same signs and symptoms, and some children may have symptoms not listed here. MIS-C may begin weeks after a child is infected with SARS-CoV-2. The child may have been infected from an asymptomatic contact and, in some cases, the child and their caregivers may not even know they had been infected.

### Case Definition

- An individual aged <21 years presenting with fever\*, laboratory evidence of inflammation\*\*, 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 exposure to a suspected or confirmed COVID-19 case within the 4 weeks prior to the onset of symptoms.

\*Fever  $\geq 38.0^{\circ}\text{C}$  for  $\geq 24$  hours, or report of subjective fever lasting  $\geq 24$  hours

\*\*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

For further detailed information see the May 14, 2020 CDC Health Advisory titled [Multisystem Inflammatory Syndrome in Children \(MIS-C\) Associated with Coronavirus Disease 2019 \(COVID-19\)](#) or visit the CDC website [Information for Healthcare Providers about Multisystem Inflammatory Syndrome in Children \(MIS-C\)](#).

### **Reporting**

Healthcare providers are required to report suspected cases among patients meeting MIS-C criteria described in the case definition above to the Butte County Department of Public Health by phone at (530) 552-3929, via fax at (530) 538-5387 or through the California Reportable Disease Information Exchange (CalREDIE). Clinicians can report by submitting either the completed [Multisystem Inflammatory Syndrome Associate with COVID-19 Case Report Form](#) or by faxing medical records for review.

Please contact Butte County Public Health's Communicable Disease Program staff at (530) 552-3929 for further questions or guidance.

### **Reference**

Centers for Disease Control and Prevention: [Multisystem Inflammatory Syndrome \(MIS\)](#)

Centers for Disease Control and Prevention: [Health Alert Network](#)

California Department of Public Health: [Multisystem Inflammatory Syndrome in Children \(MIS-C\)](#)

Butte County Department of Public Health: [Reporting a Disease/Outbreak](#)

Under Title 17, California Code of Regulations (CCR), failure to report is a misdemeanor (Health and Safety Code § 120295) and is a citable offense under the Medical Board of California's Citation and Fine Program (Title 16, CCR, § 1364).

### **Categories of urgency levels:**

**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