

New Jersey Department of Health  
Infectious and Zoonotic Disease Program  
PO Box 369  
Trenton, NJ 08625-0369

**MULTISYSTEM INFLAMMATORY SYNDROME ASSOCIATED WITH COVID-19:  
CASE REPORT FORM**

**CONFIDENTIAL**

This case report form should be completed on any patient who meets the following criteria: (1) Less than 21 years old, presenting with fever (> 38°C or subjective, for > 24 hours) laboratory evidence of inflammation, and evidence of clinically severe illness requiring hospitalization with multisystem (>2) organ involvement; and (2) No alternative plausible diagnosis; and (3) Positive for current or recent SARS-CoV-2 infection by RT-PCR, serology, or antigen test; OR COVID-19 exposure within 4 weeks prior to the onset of symptoms. All completed case report forms should be faxed to (609)-826-5972 or sent via secure email to pedcov@doh.nj.gov. The NJDOH team will review the form for missing information and coordinate securing medical records and conduct chart abstraction if necessary. Please note this is a dynamic and evolving situation, as more is learned about this syndrome this form may be modified or changed.

**PROVIDER INFORMATION**

Hospital Name:		Date form completed:	
Name of person completing form:		Title:	
Phone Number: (            )            -		Email:	

**PATIENT INFORMATION**

Patient Name:		Patient Date of Birth:	
Patient Mailing Address:			
Patient Phone Number: (            )            -		Medical Record #:	

**COMMENTS**

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**----- TO BE COMPLETED BY CDS ONLY -----**

MIS ID:	Health Department ID:	NCOV ID (if available):
NNDSS ID (local record id/case id):	Tools for CRF data submission to supplement NNDSS data: <input type="radio"/> DCIPHER <input type="radio"/> RedCap	
Abstractor Name:	Date of Abstraction:	

**SECTION 1 – INCLUSION CRITERIA**

- 1.1 Age <21, AND
- 1.2 Fever >38.0°C for ≥24 hours, or report of subjective fever lasting ≥24 hours, AND
- 1.3 Laboratory markers of inflammation (including, but not limited to one or more; 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, AND
- 1.4 Evidence of clinically severe illness requiring hospitalization, with multisystem (≥2) organ involvement (*check all applicable below*): AND
  - 1.4.1 Cardiac (e.g. shock, elevated troponin, BNP, abnormal echocardiogram, arrhythmia)
  - 1.4.2 Renal (e.g. acute kidney injury or renal failure)
  - 1.4.3 Respiratory (e.g. pneumonia, ARDS, pulmonary embolism)
  - 1.4.4 Hematologic (e.g. elevated D-dimers, thrombophilia, or thrombocytopenia)
  - 1.4.5 Gastrointestinal (e.g. elevated bilirubin, elevated liver enzymes, or diarrhea)
  - 1.4.6 Dermatologic, (e.g. rash, mucocutaneous lesions)
  - 1.4.7 Neurological, (e.g. CVA, aseptic meningitis, encephalopathy)
- 1.5 No alternative plausible diagnosis; AND
- 1.6 Positive for current or recent SARS-COV-2 infection by (check all applicable below): OR
  - 1.6.1 RT-PCR
  - 1.6.2 Serology
  - 1.6.3 Antigen test
- 1.7 COVID-19 exposure within the 4 weeks prior to the onset of symptoms
  - 1.7.1 If yes, date of first exposure within the 4 weeks prior : (MM/DD/YYYY): Unknown

**SECTION 2 – PATIENT DEMOGRAPHICS**

- 2.1 **State of Residence:** \_\_\_\_\_
  - 2.2 **Patient zip code/postal code (primary residence):** \_\_\_\_\_
  - 2.3 **Date of birth (MM/DD/YYYY):** \_\_\_\_\_
  - 2.4 **Sex:**            Male            Female
  - 2.5 **Ethnicity:**    Hispanic or Latino            Not Hispanic or Latino            Refused or Unknown
  - 2.6 **Race (mark all that apply, selecting more than one option as necessary):**
    - 2.6.1 White
    - 2.6.2 Black or African American
    - 2.6.3 American Indian
    - 2.6.4 Alaska Native or Aboriginal Canadian
    - 2.6.5 Native Hawaiian
    - 2.6.6 Other Pacific Islander
    - 2.6.7 Asian
    - 2.6.8 Other
    - 2.6.9 Refused or Don't know
  - 2.7 **Height:** \_\_\_\_\_ inches
  - 2.8 **Weight:** \_\_\_\_\_ lbs
  - 2.9 **BMI:** \_\_\_\_\_
- Comorbidities:**
- |  |     |    |   |
|--|-----|----|---|
| 2.10.1 Immunosuppressive disorder/malignancy | Yes | No | 2.11 Hospital admission date (MM/DD/YYYY): _____                  |
| 2.10.2 Obesity                               | Yes | No | 2.11.1 Number of days in the hospital: _____                      |
| 2.10.3 Type 1 diabetes                       | Yes | No | 2.12 If admitted to the ICU, admission date (MM/DD/YYYY): _____   |
| 2.10.4 Type 2 diabetes                       | Yes | No | 2.12.1 Number of days in the ICU: _____                           |
| 2.10.5 Seizures                              | Yes | No | 2.13 <b>Patient outcome:</b> Died    Discharged    Still admitted |
| 2.10.6 Congenital heart disease              | Yes | No | 2.13.2 Hospital discharge or death date (MM/DD/YYYY): _____       |
| 2.10.7 Sickle cell disease                   | Yes | No |   |
| 2.10.8 Chronic lung disease                  | Yes | No |   |
| 2.10.9 Other congenital malformations        | Yes | No |   |
| 2.10.10 Other (specify): _____               |     |    |   |

**SECTION 3 – CLINICAL SIGNS AND SYMPTOMS**

- 3.1** Did the patient have preceding COVID-like illness?      Yes      No
- 3.1.1** Date of symptom onset (MM/DD/YYYY):
- 3.2** Date of symptom onset of MIS (MM/DD/YYYY):
- 3.3** Fever ≥ 38.0°C:      Yes      No
- 3.3.1** Date of fever onset (MM/DD/YYYY):
- 3.3.2** Highest Temperature: \_\_\_\_\_ °C
- 3.3.3** Number of days febrile: \_\_\_\_\_

**Signs and symptoms *during present illness***

<p><b>3.4.1 Cardiac</b></p> <p><b>3.4.1.1</b> Shock      Yes      No</p> <p><b>3.4.1.2</b> Elevated troponin      Yes      No</p> <p><b>3.4.1.3</b> Elevated BNP or NT-proBNP      Yes      No</p> <p><b>3.4.2 Renal</b></p> <p><b>3.4.2.1</b> Acute kidney injury      Yes      No</p> <p><b>3.4.2.2</b> Renal failure      Yes      No</p> <p><b>3.4.3 Respiratory</b></p> <p><b>3.4.3.1</b> Cough      Yes      No</p> <p><b>3.4.3.2</b> Shortness of breath      Yes      No</p> <p><b>3.4.3.3</b> Chest pain/tightness      Yes      No</p> <p><b>3.4.3.4</b> Pneumonia      Yes      No</p> <p><b>3.4.3.5</b> ARDS      Yes      No</p> <p><b>3.4.3.6</b> Pulmonary embolism      Yes      No</p> <p><b>3.4.4 Hematologic</b></p> <p><b>3.4.4.1</b> Elevated D-dimers      Yes      No</p> <p><b>3.4.4.2</b> Thrombophilia      Yes      No</p> <p><b>3.4.4.3</b> Thrombocytopenia      Yes      No</p>	<p><b>3.4.5 Gastrointestinal</b></p> <p><b>3.4.5.1</b> Abdominal pain      Yes      No</p> <p><b>3.4.5.2</b> Vomiting      Yes      No</p> <p><b>3.4.5.3</b> Diarrhea      Yes      No</p> <p><b>3.4.5.4</b> Elevated bilirubin      Yes      No</p> <p><b>3.4.5.5</b> Elevated liver enzymes      Yes      No</p> <p><b>3.4.6 Dermatologic</b></p> <p><b>3.4.6.1</b> Rash      Yes      No</p> <p><b>3.4.6.2</b> Mucocutaneous lesions      Yes      No</p> <p><b>3.4.7 Neurological</b></p> <p><b>3.4.7.1</b> Headache      Yes      No</p> <p><b>3.4.7.2</b> Altered mental state      Yes      No</p> <p><b>3.4.7.3</b> Syncope/near syncope      Yes      No</p> <p><b>3.4.7.5</b> Meningitis      Yes      No</p> <p><b>3.4.7.6</b> Encephalopathy      Yes      No</p> <p><b>3.4.8 Other</b></p> <p><b>3.4.8.1</b> Neck pain      Yes      No</p> <p><b>3.4.8.2</b> Myalgia      Yes      No</p> <p><b>3.4.8.3</b> Conjunctival injection      Yes      No</p> <p><b>3.4.8.4</b> Periorbital edema      Yes      No</p> <p><b>3.4.8.5</b> Cervical lymphadenopathy &gt;1.5 cm diameter      Yes      No</p>
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**SECTION 4 – COMPLICATIONS**

<p><b>4.1 Arrhythmia</b>      Yes      No</p> <p>If yes:</p> <p><b>4.1.1</b> Ventricular arrhythmia:      Yes      No</p> <p><b>4.1.2</b> Supraventricular arrhythmia:      Yes      No</p> <p><b>4.1.3</b> Other arrhythmia (<i>specify</i>):      Yes      No</p> <p>_____</p> <p><b>4.2</b> Congestive heart failure      Yes      No</p> <p><b>4.3</b> Myocarditis      Yes      No</p>	<p><b>4.4</b> Pericarditis      Yes      No</p> <p><b>4.5</b> Liver failure      Yes      No</p> <p><b>4.6</b> Deep vein thrombosis or PE      Yes      No</p> <p><b>4.7</b> ARDS      Yes      No</p> <p><b>4.8</b> Pneumonia      Yes      No</p> <p><b>4.9</b> CVA or stroke      Yes      No</p> <p><b>4.10</b> Encephalitis or aseptic meningitis      Yes      No</p> <p><b>4.11</b> Shock      Yes      No</p> <p><b>4.12</b> Hypotension      Yes      No</p>
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**SECTION 5 – TREATMENTS**

<p><b>5.1</b> Low flow nasal cannula      Yes      No</p> <p><b>5.2</b> High flow nasal cannula      Yes      No</p> <p><b>5.3</b> Non-invasive ventilation      Yes      No</p> <p><b>5.4</b> Intubation      Yes      No</p> <p><b>5.5</b> Mechanical ventilation      Yes      No</p> <p><b>5.6</b> ECMO      Yes      No</p> <p><b>5.7</b> Vasoactive medications (e.g. epinephrine, milrinone, norepinephrine, or vasopressin) (<i>specify</i>):      Yes      No</p> <p><b>5.8</b> Steroids      Yes      No</p> <p><b>5.9</b> Immune modulators (e.g. anakinra, tocilizumab) (<i>specify</i>):      Yes      No</p>	<p><b>5.10</b> Antiplatelets (e.g. aspirin, clopidogrel) (<i>specify</i>):      Yes      No</p> <p><b>5.11</b> Anticoagulation (e.g. heparin, enoxaparin, warfarin) (<i>specify</i>):      Yes      No</p> <p><b>5.12</b> Dialysis      Yes      No</p> <p><b>5.13</b> First IVIG      Yes      No</p> <p><b>5.14</b> Second IVIG      Yes      No</p>
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**SECTION 6 – STUDIES**

**6.1 Blood Test Results**

<b>6.1.1</b>	Fibrinogen	Highest value:	units:	Low	Normal	High
<b>6.1.2</b>	CRP	Highest value:	units:	Low	Normal	High
<b>6.1.3</b>	Ferritin	Highest value:	units:	Low	Normal	High
<b>6.1.4</b>	Troponin	Highest value:	units:	Low	Normal	High
<b>6.1.5</b>	BNP	Highest value:	units:	Low	Normal	High
<b>6.1.6</b>	NT-proBNP	Highest value:	units:	Low	Normal	High
<b>6.1.7</b>	D-dimer	Highest value:	units:	Low	Normal	High
<b>6.1.8</b>	IL-6	Highest value:	units:	Low	Normal	High
<b>6.1.9</b>	Serum White blood count	Highest value:	Lowest value:	units:		
<b>6.1.10</b>	Platelets	Highest value:	Lowest value:	units:		
<b>6.1.11</b>	Neutrophils	Highest value:	Lowest value:	units:		
<b>6.1.12</b>	Lymphocytes	Highest value:	Lowest value:	units:		
<b>6.1.13</b>	Bands	Highest value:	Lowest value:	units:		

**6.2 CSF Studies**

<b>6.2.1</b>	White blood count	Highest value:	Lowest value:	units:
<b>6.2.2</b>	Protein	Highest value:	Lowest value:	units:
<b>6.2.3</b>	Glucose	Highest value:	Lowest value:	units:

**6.3 Urinalysis**

<b>6.3.1</b>	Urine White blood count	Highest value:	Lowest value:	units:
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**6.4 Echocardiogram** (check if seen on ANY echocardiogram)

- 6.4.1** Not done
- 6.4.2** Normal results
- 6.4.3** Coronary artery aneurysms
  - 6.4.3.1** Max coronary artery Z-score:
- 6.4.4** Coronary artery dilatation
- 6.4.5** Cardiac dysfunction (decreased function), specify type:
  - 6.4.5.1** left ventricular dysfunction
  - 6.4.5.2** right ventricular dysfunction
- 6.4.6** Pericardial effusion
- 6.4.7** Pleural effusion
- 6.4.8** Mitral regurgitation, specify type:      mild      moderate      severe
- 6.4.9** Other (*specify*):

**6.5 Date of first test showing coronary artery aneurysm or dilatation (MM/DD/YYYY):**

**6.6 Abdominal imaging**

Ultrasound      CT      Not done

- 6.6.1** Normal
- 6.6.2** Mesenteric lymphadenopathy
- 6.6.3** Free fluid
- 6.6.4** Other (*specify*):

**6.7 Chest imaging**

Chest x-ray      CT      Not done

- 6.7.1** Normal
- 6.7.2** Pneumonia
- 6.7.3** Atelectasis
- 6.7.4** Pleural effusion
- 6.7.5** Other (*specify*):

**SARS-COV-2 testing**

**6.8 RT-PCR:**      Positive      Negative      Not done  
**6.8.1**      If performed, date (MM/DD/YYYY):

**6.9 Antigen:**      Positive      Negative      Not done  
**6.9.1**      If performed, date (MM/DD/YYYY):

**6.10 IgG:**      Positive      Negative      Not done  
**6.10.1**      If performed, date (MM/DD/YYYY):

**6.11 IgM:**      Positive      Negative      Not done  
**6.11.1**      If performed, date (MM/DD/YYYY):

**6.12 IgA:**      Positive      Negative      Not done  
**6.12.1**      If performed, date (MM/DD/YYYY):

**SECTION 7 COVID-19 VACCINE INFORMATION**

**7.1 Has the patient received a COVID-19 vaccine?** Yes No Unknown

**7.2 If yes, how many doses?** 1 dose 2 doses Unknown

**7.2.1** Date dose 1 received (MM/DD/YYYY):

**7.2.2** Date dose 2 received (MM/DD/YYYY):

**7.3 COVID-19 Vaccine manufacturer** Pfizer Moderna Johnson & Johnson/Janssen

Other, (specify): Unknown