World Health Organization

PARTICIPANT ID I___I I___I I___I I___I I___I -- I___I I___I I___I I___I

Global COVID-19 Clinical Platform: Case Report Form for suspected cases of Multisystem inflammatory syndrome (MIS) in children and adolescents temporally related to COVID-19

Preliminary case definition

Children and adolescents 0–19 years of age with fever ≥ 3 days

AND **two** of the following:

a) Rash or bilateral non-purulent conjunctivitis or muco-cutaneous inflammation signs (oral, hands or feet)
b) Hypotension or shock
c) Features of myocardial dysfunction, or pericarditis, or valvulitis, or coronary abnormalities (ECHO findings or elevated Troponin/NT-proBNP)
d) Evidence of coagulopathy (abnormal PT, PTT, elevated d-Dimers)
e) Acute gastrointestinal problems (diarrhoea, vomiting or abdominal pain)

AND

Elevated markers of inflammation such as ESR, C-reactive protein or procalcitonin

AND

No other obvious microbial cause of inflammation, including bacterial sepsis, staphylococcal or streptococcal shock syndromes

AND

Evidence of COVID **(**RT-PCR, antigen test or serology positive) or likely contact with patients with COVID

MODULE 1. Complete this form for all children aged 0–19 suspected to have multisystem inflammatory disorder (even if all criteria in the case definition are not met – to capture full spectrum of the condition). Initiate the form at the time the disorder is suspected. Submit Module 1 when initial investigations included in case definition are available.

Facility name_____ **Country**_____

Date of completing module [_D_][_D_]/[_M_][_M_]/[_2_][_0_][_Y_][_Y_]

Date of admission to hospital [_D_][_D_]/[_M_][_M_]/[_2_][_0_][_Y_][_Y_]

1a. CLINICAL FEATURES OF CURRENT ILLNESS *(complete when MIS is first suspected)*

Fever ☐Yes ☐No ☐Unknown

Duration of fever ___ days

Rash ☐Yes ☐No ☐Unknown

Bilateral non-purulent conjunctivitis ☐Yes ☐No ☐Unknown
Oral mucosal inflammation signs ☐Yes ☐No ☐Unknown

Peripheral cutaneous inflammation signs (hands or feet) ☐Yes ☐No ☐Unknown

Hypotension (age-appropriate) ☐Yes ☐No ☐Unknown
Tachycardia (age-appropriate) ☐Yes ☐No ☐Unknown
Prolonged capillary refill time ☐Yes ☐No ☐Unknown
Pale/mottled skin ☐Yes ☐No ☐Unknown
Cold hands/feet ☐Yes ☐No ☐Unknown
Urinary output < 2 mL/kg/hr ☐Yes ☐No ☐Unknown

Chest pain ☐Yes ☐No ☐Unknown
Tachypnoea (age-appropriate) ☐Yes ☐No ☐Unknown
Respiratory distress ☐Yes ☐No ☐Unknown

Abdominal pain ☐Yes ☐No ☐Unknown
Diarrhoea ☐Yes ☐No ☐Unknown
Vomiting ☐Yes ☐No ☐Unknown

1b. DEMOGRAPHICS *(complete when MIS is first suspected)*

Sex at birth ☐Male ☐Female ☐Not specified. **Date of birth** [_D_][_D_]/[_M_][_M_]/[_Y_][_Y_][_Y_][_Y_]

If date of birth is unknown, record **Age** [_____][____][____]years OR [_][_]months

Ethnicity (as reported by family) (please pre-specify main groups in the population and choose from the list) _____

Has the child been admitted to hospital in the last three months? ☐Yes ☐No ☐ Unknown

If yes, date of discharge from hospital [_D_][_D_]/[_M_][_M_]/[_2_][_0_][_Y_][_Y_]

If yes, was it for the same or similar problems? ☐Yes ☐No ☐ Unknown

1c. DATE OF ONSET OF CURRENT ILLNESS AND VITAL SIGNS *(complete when MIS is first suspected)*

Date of onset of first symptom or sign [_D_][_D_]/[_M_][_M_]/[_2_][_0_][_Y_][_Y_]

Date of onset of fever [_D_][_D_]/[_M_][_M_]/[_2_][_0_][_Y_][_Y_]

Temperature [_][____] [_]°C **Heart rate** [___][___][_]beats/min

Respiratory rate [_][___]breaths/min

BP [_] [_] [_](systolic) [___][_][_](diastolic) mmHg **Dehydration** ☐Severe ☐Some ☐None

Capillary refill time > 2 seconds ☐Yes ☐No ☐Unknown

Oxygen saturation [__][ ][__]% on ☐Room air ☐Oxygen therapy ☐Unknown

Conscious state ☐Alert ☐Response to verbal stimuli ☐Response to painful stimuli ☐Unresponsive

Mid-upper arm circumference [_][_][___]mm **Length / Height** [___] [___][___]cm **Weight** [_][_][___]kg

1d. CO-MORBIDITIES, PAST HISTORY, FAMILY HISTORY *(complete when MIS is first suspected)*

Inflammatory or rheumatological disorder If yes, specify_____	☐Yes ☐No ☐Unknown	Asplenia	☐Yes ☐No ☐Unknown
Hypertension (age-appropriate)	☐Yes ☐No ☐Unknown	Congenital or acquired immune-suppression If yes, specify_____	☐Yes ☐No ☐Unknown
Other chronic cardiac disease If yes, specify_____	☐Yes ☐No ☐Unknown	Chronic kidney disease	☐Yes ☐No ☐Unknown
Asthma	☐Yes ☐No ☐Unknown	Chronic liver disease	☐Yes ☐No ☐Unknown
Tuberculosis	☐Yes ☐No ☐Unknown	Chronic neurological disorder	☐Yes ☐No ☐Unknown
Other chronic pulmonary disease If yes, specify_____	☐Yes ☐No ☐Unknown	HIV? ☐Yes (on ART) ☐Yes (not on ART) ☐No ☐Unknown ART	
Diabetes	☐Yes ☐No ☐Unknown	Other? If yes, specify _____	
Malignant neoplasm	☐Yes ☐No ☐Unknown	Past history of Kawasaki disease	☐Yes ☐No ☐Unknown
Haematologic disorder	☐Yes ☐No ☐Unknown	Family history of Kawasaki disease	☐Yes ☐No ☐Unknown
History of respiratory infection in the previous 4 weeks prior to current illness?	☐Yes ☐No ☐Unknown	Any household member (or other contact) with confirmed COVID-19 in previous 4 weeks?	☐Yes ☐No ☐Unknown
		Any household member (or other contact) with suspected COVID-19 in previous 4 weeks?	☐Yes ☐No ☐Unknown

1e. PRE-ADMISSION AND CHRONIC MEDICATION
Were any of the following taken within 14 days of admission: *(complete when MIS is first suspected)*

Non-steroidal anti-inflammatory (NSAID)? ☐Yes ☐No ☐Unknown
If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Inhaled ☐Topical ☐Unknown

Steroids? ☐Yes ☐No ☐Unknown
If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Inhaled ☐Topical ☐Unknown

Any other medication? ☐Yes ☐No ☐Unknown
If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Inhaled ☐Topical ☐Unknown
If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Inhaled ☐Topical ☐Unknown
If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Inhaled ☐Topical ☐Unknown

1f. OTHER SIGNS AND SYMPTOMS *(in addition to clinical features on page 1)*
(complete when MIS is first suspected)

Cough	☐Yes	☐No	☐Unknown	Fatigue/malaise	☐Yes	☐No	☐Unknown
Sore throat	☐Yes	☐No	☐Unknown	Seizures	☐Yes	☐No	☐Unknown
Runny nose	☐Yes	☐No	☐Unknown	Headache	☐Yes	☐No	☐Unknown
Wheezing	☐Yes	☐No	☐Unknown	Hypotonia/floppiness	☐Yes	☐No	☐Unknown
Swollen joints	☐Yes	☐No	☐Unknown	Paralysis	☐Yes	☐No	☐Unknown
Joint pain (arthralgia)	☐Yes	☐No	☐Unknown	Hyposmia/anosmia (loss of smell)	☐Yes	☐No	☐Unknown
Muscle aches	☐Yes	☐No	☐Unknown	Hypogeusia (loss of taste)	☐Yes	☐No	☐Unknown
Skin ulcers	☐Yes	☐No	☐Unknown	Bleeding (haemorrhage)	☐Yes	☐No	☐Unknown
Stiff neck	☐Yes	☐No	☐Unknown	Not able to drink	☐Yes	☐No	☐Unknown
Other? Specify				If yes, specify site_____			

1g. LABORATORY RESULTS
(complete when results of tests ordered at the time MIS is first suspected) (record units if different from those listed)*

Parameter	Value*	Not done	Parameter	Value*	Not done
Markers of inflammation/coagulopathy			**Markers of organ dysfunction**		
Haemoglobin (g/L)		☐	Creatinine (µmol/L)		☐
Total WBC count (x10^9/L)		☐	Sodium (mEq/L)		☐
Neutrophils (x10^9/L)		☐	Potassium (mEq/L)		☐
Lymphocytes (x10^9/L)		☐	Urea (BUN) (mmol/L)		☐
Haematocrit (%)		☐	Glucose (mmol/L)		☐
Platelets (x10^9/L)		☐	Pro-BNP (pg/mL)		☐
APTT/APTR		☐	Troponin (ng/mL)		☐
PT (seconds)		☐	Creatine kinase (U/L)		☐
INR		☐	LDH (U/L)		☐
Fibrinogen (g/L)		☐	Triglycerides		☐
Procalcitonin (ng/mL)		☐	ALT/SGPT (U/L)		☐
CRP (mg/L)		☐	Total bilirubin (µmol/L)		☐
ESR (mm/hr)		☐	AST/SGOT (U/L)		☐
D-dimer (mg/L)		☐	Albumin (g/dL)		☐
IL-6 (pg/mL)		☐	Lactate (mmol/L)		☐
Ferritin (ng/mL)		☐			

1h. IMAGING AND PATHOGEN TESTING

(complete when results of tests ordered at the time MIS is first suspected are available)

Chest X-ray/CT performed ☐Yes ☐No ☐Unknown **If yes, findings** _____

Echocardiography performed ☐Yes ☐No ☐Unknown

If yes, features of myocardial dysfunction? ☐Yes ☐No ☐Unknown

features of pericarditis? ☐Yes ☐No ☐Unknown

features of valvulitis? ☐Yes ☐No ☐Unknown

coronary abnormalities? ☐Yes ☐No ☐Unknown

Other cardiac imaging performed ☐Yes ☐No ☐Unknown

If yes, specify name of imaging and results _____

Bacterial pathogen testing

Bacterial pathogen ☐Positive ☐Negative ☐Not done

If positive, specify_____

SARS-CoV-2 testing

RT-PCR ☐Positive ☐Negative ☐Not done Site of specimen collection _____

Rapid antigen test ☐Positive ☐Negative ☐Not done Site of specimen collection _____

Rapid antibody test ☐Positive ☐Negative ☐Not done

ELISA ☐Positive ☐Negative ☐Not done If done, titres _____

Neutralization test ☐Positive ☐Negative ☐Not done If done, titres _____

Other test? Specify _____ Results _____

1i. TREATMENT: ***until the time of reporting Module 1, did the patient receive any of the following:***

Oral/orogastric fluids? ☐Yes ☐No ☐Unknown

Intravenous fluids? ☐Yes ☐No ☐Unknown

Antiviral? ☐Yes ☐No ☐Unknown

If yes ☐Ribavirin ☐Lopinavir/Ritonavir ☐Neuraminidase inhibitor ☐Tocilizumab ☐Anakinra ☐Ivermectin

☐Interferon alpha ☐Interferon beta ☐Remdesivir ☐Other, specify_____

Corticosteroid? ☐Yes ☐No ☐Unknown

If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Inhaled ☐Topical ☐Unknown

If yes, please provide maximum daily dose _____

IV immune globulin? ☐Yes ☐No ☐Unknown

If yes, daily dose_____; Number of days of treatment_____

Immunomodulators? ☐Yes ☐No ☐Unknown

If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

Antibiotic? ☐Yes ☐No ☐Unknown

If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

Antifungal agent? ☐Yes ☐No ☐Unknown

If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

Antimalarial agent? ☐Yes ☐No ☐Unknown If yes, specify_____

If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

Experimental agent? ☐Yes ☐No ☐Unknown If yes, specif_____

If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

Non-steroidal anti-inflammatory (NSAID)? ☐Yes ☐No ☐Unknown

If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

Systemic anticoagulation? ☐Yes ☐No ☐Unknown

If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

Other? ☐Yes ☐No ☐ Unknown

If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

1j. SUPPORTIVE CARE: ***until the time of reporting Module 1, did the patient receive any of the following:***

ICU or high dependency unit admission? ☐Yes ☐No ☐Unknown

If yes, number of days in ICU _____

Oxygen therapy? ☐Yes ☐No ☐Unknown

If yes, O_2 flow ☐1–5 L/min ☐6–10 L/min ☐11–15 L/min ☐>15 L/min ☐Unknown

If yes, interface ☐Nasal prongs ☐HF nasal cannula ☐Mask ☐Mask with reservoir ☐CPAP/NIV mask ☐Unknown

If yes, number of days of oxygen therapy? _____

Non-invasive ventilation? (e.g. BiPAP/CPAP) ☐Yes ☐No ☐Unknown

If yes, prone position? ☐Yes ☐No ☐Unknown

If yes, duration in days?_____

Invasive ventilation *(any)*? ☐Yes ☐No ☐Unknown

If yes, maximum PEEP (cm H_2O) _____; FiO_2 (%) _____; Plateau pressure (cm H_2O) _____; $PaCO_2$ _____; PaO_2_____

If yes, duration in days?_____

Inotropes/vasopressors? ☐Yes ☐No ☐Unknown

If yes, specify name _____

Extracorporeal (ECMO) support? ☐Yes ☐No ☐Unknown

Plasma exchange? ☐Yes ☐No ☐Unknown

HFOV? ☐Yes ☐No ☐Unknown

Blood transfusion? ☐Yes ☐No ☐Unknown

MODULE 3. Complete and submit this module at the time of discharge or death

3a. SUMMARY OF CLINICAL FEATURES OF CURRENT ILLNESS
(include all signs identified any time between admission and discharge/ death)

Fever ☐Yes ☐No ☐Unknown
Duration of fever ___ days

Rash ☐Yes ☐No ☐Unknown
Bilateral non-purulent conjunctivitis ☐Yes ☐No ☐Unknown
Oral mucosal inflammation signs ☐Yes ☐No ☐Unknown
Peripheral cutaneous inflammation signs (hands or feet) ☐Yes ☐No ☐Unknown

Hypotension (age-appropriate)	☐Yes	☐No	☐Unknown
Tachycardia (age-appropriate)	☐Yes	☐No	☐Unknown
Prolonged capillary refill time	☐Yes	☐No	☐Unknown
Pale/mottled skin	☐Yes	☐No	☐Unknown
Cold hands/feet	☐Yes	☐No	☐Unknown
Urinary output < 2 mL/kg/hr	☐Yes	☐No	☐Unknown
Chest pain	☐Yes	☐No	☐Unknown
Tachypnoea (age-appropriate)	☐Yes	☐No	☐Unknown
Respiratory distress	☐Yes	☐No	☐Unknown
Abdominal pain	☐Yes	☐No	☐Unknown
Diarrhoea	☐Yes	☐No	☐Unknown
Vomiting	☐Yes	☐No	☐Unknown

3b. LABORATORY RESULTS
*(record the most abnormal result during the hospital admission up to the time of discharge/death) (*record units if different from those listed)*

Parameter	Value*	Not done	Parameter	Value*	Not Done
Markers of inflammation/coagulopathy			**Markers of organ dysfunction**		
Haemoglobin (g/L)		☐	Creatinine (µmol/L)		☐
Total WBC count (x10⁹/L)		☐	Sodium (mEq/L)		☐
Neutrophils (x10⁹/L)		☐	Potassium (mEq/L)		☐
Lymphocytes (x10⁹/L)		☐	Urea (BUN) (mmol/L)		☐
Haematocrit (%)		☐	Glucose (mmol/L)		☐
Platelets (x10⁹/L)		☐	Pro-BNP (pg/mL)		☐
APTT/APTR		☐	Troponin (ng/mL)		☐
PT (seconds)		☐	Creatine kinase (U/L)		☐
INR		☐	LDH (U/L)		☐
Fibrinogen (g/L)		☐	Triglycerides		☐
Procalcitonin (ng/mL)		☐	ALT/SGPT (U/L)		☐
CRP (mg/L)		☐	Total bilirubin (µmol/L)		☐
ESR (mm/hr)		☐	AST/SGOT (U/L)		☐
D-dimer (mg/L)		☐	Albumin (g/dL)		☐
IL-6 (pg/mL)		☐	Lactate (mmol/L)		☐
Ferritin (ng/mL)		☐			

3c. IMAGING/PATHOGEN TESTING *(include the most abnormal results from admission up to the time of discharge/death)*

Chest X-ray/CT performed ☐Yes ☐No ☐Unknown **If yes, findings** _____

Echocardiography performed ☐Yes ☐No ☐ Unknown
If yes, features of myocardial dysfunction? ☐Yes ☐No ☐ Unknown
features of pericarditis? ☐Yes ☐No ☐ Unknown
features of valvulitis? ☐Yes ☐No ☐ Unknown
coronary abnormalities? ☐Yes ☐No ☐ Unknown

Other cardiac imaging performed ☐Yes ☐No ☐Unknown
If yes, specify name of imaging and results _____

Bacterial pathogen testing

Bacterial pathogen ☐Positive ☐Negative ☐Not done
If positive, specify_____

SARS-CoV-2 testing

RT-PCR	☐Positive	☐Negative	☐Not done	Site of specimen collection _____
Rapid antigen test	☐Positive	☐Negative	☐Not done	Site of specimen collection _____
Rapid antibody test	☐Positive	☐Negative	☐Not done	
ELISA	☐Positive	☐Negative	☐Not done	If done, titres _____
Neutralization test	☐Positive	☐Negative	☐Not done	If done, titres _____

Other test? Specify _____Results _____

3d. TREATMENT: ***at any time during the hospital admission, did the patient receive any of the following:***

Oral/orogastric fluids? ☐Yes ☐No ☐Unknown

Intravenous fluids? ☐Yes ☐No ☐Unknown

Antiviral? ☐Yes ☐No ☐Unknown
If yes ☐Ribavirin ☐Lopinavir/Ritonavir ☐Neuraminidase inhibitor ☐Tocilizumab ☐Anakinra ☐Ivermectin
☐Interferon alpha ☐Interferon beta ☐Remdesivir ☐Other, specify_____

Corticosteroid? ☐Yes ☐No ☐Unknown
If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Inhaled ☐Topical ☐Unknown
If yes, please provide maximum daily dose_____

IV immune globulin? ☐Yes ☐No ☐Unknown
If yes, daily dose_____; Number of days of treatment_____

Immunomodulators? ☐Yes ☐No ☐Unknown
If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

Antibiotic? ☐Yes ☐No ☐ Unknown
If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

Antifungal agent? ☐Yes ☐No ☐Unknown
If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

Antimalarial agent? ☐Yes ☐No ☐Unknown If yes, specify _____
If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

Experimental agent? ☐Yes ☐No ☐Unknown If yes, specify _____
If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

Non-steroidal anti-inflammatory (NSAID)? ☐Yes ☐No ☐Unknown
If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

Systemic anticoagulation? ☐Yes ☐No ☐Unknown
If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

Other? ☐Yes ☐No ☐Unknown
If yes, specify name _____; Route ☐Oral/rectal ☐Parenteral (IM/IV) ☐Unknown

3e. SUPPORTIVE CARE: ***at any time during the hospital admission, did the patient receive any of the following:***

ICU or high dependency unit admission? ☐Yes ☐No ☐Unknown
If yes, number of days in ICU _____

Oxygen therapy? ☐Yes ☐No ☐Unknown
If yes, O_2 flow ☐1–5 L/min ☐6–10 L/min ☐11–15 L/min ☐>15 L/min ☐Unknown
If yes, interface ☐Nasal prongs ☐HF nasal cannula ☐Mask ☐Mask with reservoir ☐CPAP/NIV mask ☐Unknown
If yes, number of days of oxygen therapy? _____

Non-invasive ventilation? (e.g. BiPAP/CPAP) ☐Yes ☐No ☐Unknown
If yes, prone position? ☐Yes ☐No ☐ Unknown
If yes, duration in days?_____

Invasive ventilation *(any)*? ☐Yes ☐No ☐Unknown
If yes, maximum PEEP (cm H_2O) _____; FiO_2 (%) _____; Plateau pressure (cm H_2O) _____; P_aCO_2 _____; P_aO_2_____
If yes, duration in days?_____

Inotropes/vasopressors? ☐Yes ☐No ☐Unknown
If yes, specify name _____

Extracorporeal (ECMO) support? ☐Yes ☐No ☐Unknown

Plasma exchange? ☐Yes ☐No ☐Unknown

HFOV? ☐Yes ☐No ☐Unknown

Blood transfusion? ☐Yes ☐No ☐Unknown

3f. OUTCOME
(complete at the time of discharge/death)

Outcome ☐Discharged alive ☐Hospitalized ☐Transfer to other facility ☐Death ☐Left against medical advice ☐Unknown

Outcome date [_D_][_D_]/[_M_][_M_]/[_2_][_0_][_Y_][_Y_] ☐Unknown

If discharged alive

Care needs at discharge versus before illness ☐Same as before illness ☐Worse ☐Better ☐Unknown

What was the physician's impression of the final diagnosis?

Multisystem inflammatory syndrome ☐Yes ☐No ☐Unknown

Kawasaki disease ☐Yes ☐No ☐Unknown

Atypical Kawasaki disease ☐Yes ☐No ☐Unknown

Other, specify _____

Were there any sequelae present at the time of discharge. If yes, specify_____