

Global COVID-19 Clinical Platform: Case Record 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 measured or self-reported fever ≥ 3 days

AND at least **two** of the following:

- Rash or bilateral non-purulent conjunctivitis or muco-cutaneous inflammation signs (oral, hands or feet)
- Hypotension or shock
- Features of myocardial dysfunction, or pericarditis, or valvulitis, or coronary abnormalities (ECHO findings or elevated Troponin/NT-proBNP)
- Evidence of coagulopathy (abnormal PT, PTT, elevated d-Dimers)
- 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

NB Consider this syndrome in children with features of typical or atypical Kawasaki disease or toxic shock syndrome.

Complete this module 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 the full spectrum of the condition). Complete the module at the time the disorder is suspected. Submit module when initial investigations included in case definition are available

Facility name _____ Country _____

Date of patient assessment [D][D]/[M][M]/[2][0][Y][Y]

Date of admission to hospital [D][D]/[M][M]/[2][0][Y][Y]

a. 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) _____

b. 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

c. POSSIBLE SIGNS AND SYMPTOMS OF MULTISYSTEM INFLAMMATORY SYNDROME (complete when MIS is first suspected)

Fever (measured or self-reported)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
Duration of fever ___ days			
Rash	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
If yes type of rash _____			
Bilateral conjunctivitis	<input type="checkbox"/> Yes, purulent	<input type="checkbox"/> Yes, non-purulent	<input type="checkbox"/> No <input type="checkbox"/> Unknown
Oral mucosal inflammation signs	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
Peripheral cutaneous inflammation signs (hands or feet)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
Hypotension (age-appropriate)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
Tachycardia (age-appropriate)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
Prolonged capillary refill time	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
Pale/mottled skin	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
Cold hands/feet	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
Urinary output < 2 mL/kg/hr	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
Chest pain	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
Tachypnoea (age-appropriate)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
Respiratory distress	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
Abdominal pain	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
Diarrhoea	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
Vomiting	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown

d. OTHER SIGNS AND SYMPTOMS (complete when MIS is first suspected)

Cough	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Fatigue/malaise	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Sore throat	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Seizures	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Runny nose	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Headache	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Wheezing	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Hypotonia/floppiness	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Swollen joints	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Paralysis	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Cervical lymphadenopathy	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Irritability	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Joint pain (arthralgia)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Photophobia	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Muscle aches	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Hyposmia/anosmia (loss of smell)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Skin ulcers	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Hypogeusia (loss of taste)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Stiff neck	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Not able to drink	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Other? Specify _____		Bleeding (haemorrhage)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
		If yes, specify site _____	

e. RECENT HISTORY

Has the child been admitted to hospital in the last 3 months? Yes No Unknown

If yes, date of discharge from hospital [_] [_] / [_] [_] / [2] [0] [_] [_]

If yes, was it related to this illness episode or for the same or similar problems? Yes No Unknown

History of COVID-19 infection in the previous 4 weeks prior to current illness?
Yes - Lab confirmed Yes - Clinically diagnosed No Unknown

History of any 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

Past history of Kawasaki disease? Yes No Unknown

Family history of Kawasaki disease? Yes No Unknown

f. CO-MORBIDITIES, PAST HISTORY (complete when MIS is first suspected)			
Inflammatory or rheumatological disorder If yes, specify _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Asplenia	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Hypertension (age-appropriate)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Congenital or acquired immune-suppression If yes, specify _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Other chronic cardiac disease If yes, specify _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Chronic kidney disease	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Asthma	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Chronic liver disease	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Tuberculosis	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Chronic neurological disorder	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Other chronic pulmonary disease If yes, specify _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Haematologic disorder	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Diabetes	<input type="checkbox"/> Yes type 1 <input type="checkbox"/> Yes type 2 <input type="checkbox"/> No <input type="checkbox"/> Unknown	HIV <input type="checkbox"/> Yes (on ART) <input type="checkbox"/> Yes (not on ART) <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Malignant neoplasm	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Other? If yes, specify _____	

g. 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)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If yes, specify name _____; Route <input type="checkbox"/> Oral/rectal <input type="checkbox"/> Parenteral (IM/IV) <input type="checkbox"/> Unknown	
Steroids? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If yes, specify name _____; Route <input type="checkbox"/> Oral/rectal <input type="checkbox"/> Parenteral (IM/IV) <input type="checkbox"/> Inhaled <input type="checkbox"/> Topical <input type="checkbox"/> Unknown	
Antibiotics? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If yes, specify name _____; Route <input type="checkbox"/> Oral/rectal <input type="checkbox"/> Parenteral (IM/IV) <input type="checkbox"/> Unknown	
Any other medication? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If yes, specify name _____; Route <input type="checkbox"/> Oral/rectal <input type="checkbox"/> Parenteral (IM/IV) <input type="checkbox"/> Inhaled <input type="checkbox"/> Topical <input type="checkbox"/> Unknown If yes, specify name _____; Route <input type="checkbox"/> Oral/rectal <input type="checkbox"/> Parenteral (IM/IV) <input type="checkbox"/> Inhaled <input type="checkbox"/> Topical <input type="checkbox"/> Unknown If yes, specify name _____; Route <input type="checkbox"/> Oral/rectal <input type="checkbox"/> Parenteral (IM/IV) <input type="checkbox"/> Inhaled <input type="checkbox"/> Topical <input type="checkbox"/> Unknown	

h. LABORATORY RESULTS					
(complete with results of tests ordered at the time MIS is first suspected) (* record units if different from those listed)					
Record the worst value between 00:00 to 24:00 on day of assessment (if Not Available write 'N/A'):					
Parameter	Value*	Not done	Parameter	Value*	Not done
Markers of inflammation/coagulopathy			Markers of organ dysfunction		
Haemoglobin (g/L)		<input type="checkbox"/>	Creatinine (µmol/L)		<input type="checkbox"/>
Total WBC count (x10 ⁹ /L)		<input type="checkbox"/>	Sodium (mmol/L)		<input type="checkbox"/>
Neutrophils (x10 ⁹ /L)		<input type="checkbox"/>	Potassium (mmol/L)		<input type="checkbox"/>
Haematocrit (%)		<input type="checkbox"/>	Glucose (mmol/L)		<input type="checkbox"/>
Platelets (x10 ⁹ /L)		<input type="checkbox"/>	Pro-BNP (pg/mL)		<input type="checkbox"/>
APTT/APTR		<input type="checkbox"/>	Troponin (ng/mL)		<input type="checkbox"/>
PT (seconds)		<input type="checkbox"/>	Creatine kinase (U/L)		<input type="checkbox"/>
INR		<input type="checkbox"/>	LDH (U/L)		<input type="checkbox"/>
Fibrinogen (g/L)		<input type="checkbox"/>	Triglycerides		<input type="checkbox"/>
Procalcitonin (ng/mL)		<input type="checkbox"/>	ALT/SGPT (U/L)		<input type="checkbox"/>
CRP (mg/L)		<input type="checkbox"/>	Total bilirubin (µmol/L)		<input type="checkbox"/>
ESR (mm/hr)		<input type="checkbox"/>	AST/SGOT (U/L)		<input type="checkbox"/>
D-dimer (mg/L)		<input type="checkbox"/>	Albumin (g/dL)		<input type="checkbox"/>
IL-6 (pg/mL)		<input type="checkbox"/>	Lactate (mmol/L)		<input type="checkbox"/>
IL-10 (pg/mL)		<input type="checkbox"/>	Ferritin (ng/mL)		<input type="checkbox"/>

i. 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** _____**ECG performed?** Yes No Unknown

On that ECG what were the findings? _____

Echocardiography performed Yes No UnknownIf yes, features of myocardial dysfunction? Yes No Unknownfeatures of pericarditis? Yes No Unknownfeatures of valvulitis? Yes No Unknowncoronary abnormalities? Yes No Unknown**Other cardiac imaging performed** Yes No Unknown

If yes, specify name of imaging and results _____

This module contains section 1 (pages 1-4) from the full document "Global COVID-19 Clinical Platform: Case Record Form for suspected cases of Multisystem inflammatory syndrome (MIS) in children and adolescents temporally related to COVID-19"