

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 \geq 3 days **AND** at least **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

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

MODULE 1. 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_]	

1a. DEMOGRAPHICS (complete when MIS is first suspected)

Sex at birth DMale 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)

1b. DATE OF ONSET OF CURRENT ILLNESS AND VITAL SIGNS (complete when MIS is first suspected)						
Date of onset of first symptom or sign [_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						
Oxygen saturation [][]% on □Room air □Oxygen therapy □Unknown						
Conscious state \Box Alert \Box Response to verbal stimuli \Box Response to painful stimuli \Box Unresponsive						
Mid-upper arm circumference [][][mm Length / Height [] []cm Weight [][]kg						



Fever (measured or se	elf-reporte	ed)	□Yes	□No						
Duration of fever	-	(u)								
Rash □Yes □No			If yes ty	no of r	ach					
Bilateral conjunctivitis						Unknow	n			
2					known					
Peripheral cutaneous inflammation signs (hands or fe						□Unknow	'n			
5 (
Tachycardia (age-app	• •		□Yes							
Prolonged capillary re	• •		□Yes							
Pale/mottled skin			□Yes	□No						
Cold hands/feet			□Yes	□No	□Unknown					
Urinary output < 2 mL	/kg/hr		□Yes	□No	o □Unknown					
Chest pain			□Yes	□No	□Unknown					
Tachypnoea (age-app	oropriate)		□Yes	□No	□Unknown					
Respiratory distress	□Yes	□No	□Unkn	own						
Abdominal pain			□Yes	□No						
Diarrhoea			□Yes	□No						
Vomiting			□Yes	□No						
1d. OTHER SIGNS ANI	D SYMPT	OMS (d	complete wl	hen Ml	S is first suspected))				
Cough	□Yes	□No	Unknow	n F	atigue/malaise		□Yes	□No	□Unknown	
Sore throat	□Yes	□No	□Unknow	n S	Seizures		□Yes	□No	□Unknown	
Runny nose	□Yes		□Unknow		leadache		□Yes	□No	□Unknown	
Wheezing	□Yes		□Unknow		lypotonia/floppiness	;	□Yes	□No	□Unknown	
Swollen joints	□Yes	□No	□Unknow	n F	Paralysis		□Yes	□No	□Unknown	
Cervical lymphadenopathy	□Yes	□No	□Unknow	n lr	ritability		□Yes	□No	□Unknown	
Joint pain (arthralgia)	□Yes	□No	□Unknow	n F	hotophobia		□Yes	□No	□Unknown	
Muscle aches	□Yes	□No	□Unknow	n F	lyposmia/anosmia (loss of smell)	□Yes	□No	□Unknown	
Skin ulcers	□Yes	□No	□Unknow	n F	lypogeusia (loss of	taste)	□Yes	□No	□Unknown	
Stiff neck	□Yes	□No	□Unknow	n N	lot able to drink		□Yes	□No	□Unknown	
Other? Specify					Not able to drink Lyes No Lunknown Bleeding (haemorrhage) If yes Ino Ind Ind If yes, specify site Ind Ind Ind Ind Ind					

1e. RECENT HISTORY

Has the child been admitted to hospital in the last 3 months? UYes Unknown

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

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



PARTICIPANT ID I___I I___I I___I I___I -- I___I I___I I___I

1f. CO-MORBIDITIES, PAST HIST	ORY (co	mplete	when MIS is fir	st 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	Haematologic disorder	□Yes	□No	□Unknown	
Diabetes	□Yes □No	•••	∃Yes type 2 ⊒Unknown	HIV ⊡Yes (on ART) ⊡Yes (not on ART) ⊡No ⊡Unknown				
Malignant neoplasm	□Yes	□No	□Unknown	Other? If yes, specify				
1g. PRE-ADMISSION AND CHRON Were any of the following taken w				complete when MIS is first suspect	ed)			
Non-steroidal anti-inflammatory (NS If yes, specify name	,			□Unknown tal □Parenteral (IM/IV) □Unknow	/n			
Steroids? ⊡Yes ⊡No ⊡Unknown If yes, specify name		; Ro	ute □Oral/rect	tal □Parenteral (IM/IV) □Inhaled		al □	Unknown	
Antibiotics? □Yes □No □Unknown If yes, specify name		; Ro	ute □Oral/rect	tal □Parenteral (IM/IV) □Unknov	/n			
Any other medication? □Yes □No I If yes, specify name If yes, specify name		; Ro	ute ⊡Oral/rect	tal □Parenteral (IM/IV) □Inhaled	□Topic □Topic		Unknown Unknown	
If yes, specify name							Unknown	

1h. 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/coa	igulopathy		Markers of organ dysfunction				
Haemoglobin (g/L)			Creatinine (µmol/L)				
Total WBC count (x10 ⁹ /L)			Sodium (mmol/L)				
Neutrophils (x10 ⁹ /L)			Potassium (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)				
IL-10 (pg/mL)			Ferritin (ng/mL)				

COVID-19 CASE RECORD FORM FOR SUSPECTED CASES OF MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN AND ADOLESCENTS TEMPORALLY RELATED TO COVID-19 01 June 2020 **3** © World Health Organization 2020. Some rights reserved. This publication is available under the licence <u>CC BY-SA 3.0 IGO</u>. This publication is adapted from the COVID-19 Case Record Forms (CRF) published by <u>ISARIC</u> on behalf of Oxford University. WHO reference number: WHO/2019-nCoV/MIS_Children_CRF/2020.2



1i. IMAGING AND PATHOGEN TESTING (complete when results of tests ordered at the time MIS is first suspected are available)								
Chest X-ray/CT performed	⊡No	⊡Unk	nown	If yes, findings				
ECG performed? □Yes □No □ Unknown On that ECG what were the findings?								
Echocardiography performed	□Yes	□No	□Unknow	/n				
If yes, features of myocardial dys	sfunction?	□Yes	□No	□Unknown				
features of pericarditis?	□Yes	□No	□Unknow	/n				
features of valvulitis?	□Yes	□No	□Unknow	/n				
coronary abnormalities?	□Yes	□No	□Unknow	<i>i</i> n				
Other cardiac imaging performed If yes, specify name of im		□No sults		vn				



MODULE 2. Complete and submit this module at the time of discharge or death

2a. SUMMARY OF CLINI (include all signs identified								
Fever □Yes □No □ Maximum temperature du Duration of fever during th						IA')		
Rash □Yes □No □ If yes type of rash	∃Unknown							
Bilateral conjunctivitis Oral mucosal inflammation Peripheral cutaneous infla	-	∕es ⊡l	No E	Unknow	n			
Hypotension (age-approp	riate)	□Yes	□No		lUnknown			
Tachycardia (age-approp		□Yes	□No					
Prolonged capillary refill ti	nged capillary refill time □Yes □N		□No		□Unknown			
Pale/mottled skin		□Yes	□No		lUnknown			
Cold hands/feet		□Yes			IUnknown			
Urinary output < 2 mL/kg/ł	hr	□Yes	□No	L	lUnknown			
Chest pain		□Yes	□No	Г	lUnknown			
Tachypnoea (age-appropr	iate)	⊡Yes			lUnknown			
Respiratory distress	/	□Yes	□No		lUnknown			
Abdominal pain		□Yes	□No		lUnknown			
Diarrhoea Vomiting		□Yes			IUnknown			
Vomiting		□Yes	□No	L	lUnknown			
Other, specify								
2b. LABORATORY RESU	LTS							
(record the most abnorma	al result durir	ng the ho	spital ad	mission u	up to the time of dischar	ge/death) (*record units if diff	erent from	
those listed)					1	1	I	
Parameter	Most abno (and Date)		ue*	Not done	Parameter	Most abnormal value* (and Date)	Not Done	
Markers of inflammation	coagulopa	hy			Markers of organ dy	sfunction		
Haemoglobin (g/L)					Creatinine (µmol/L)			
Total WBC count (x10 ⁹ /L)					Sodium (mmol/L)			
Neutrophils (x10 ⁹ /L)					Potassium (mmol/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			
ESR (mm/hr)					AST/SGOT (U/L)			
D-dimer (mg/L)					Albumin (g/dL)			
IL-6 (pg/mL)					Lactate (mmol/L)			
IL-10 (pg/mL)					Ferritin (ng/mL)			
IL-10 (pg/IIIL)					remun (ng/mL)			

				esults from admission up to the time of discharge/deat
hest X-ray performed	I⊔Yes ⊔		n Ify	res, findings
hest CT performed?	□Yes □	No □Unknow	vn lfy	es, were infiltrates present? Yes No Unknown other findings
	e of the mos	at abnormal ec e: features of n features of p features of v	hocardiogram [_[nyocardial dysfund ericarditis? □Yes alvulitis? □Yes [D_][_D_]/[_M_][_M_]/[_2_][_0_][_Y_][_Y_] ction? □Yes □No □ Unknown s □No □ Unknown □No □ Unknown s □No □ Unknown
ECG performed? □Ye If yes what was the dat On that ECG what were	e of the mo	st abnormal E		<u>M][M]/[2][0][Y][Y]</u>
Dther cardiac imaging If yes, date [<u>D][D</u> If yes, specify name of]/[_ <u>M_][_N</u> f imaging ar	<u>/]/[_2_][_0_]</u>		
Other cardiac imaging If yes, date [<u>D][D</u> If yes, specify name of Bacterial pathogen tes]/[<u>M</u>][<u>N</u> f imaging ar	<u>/_]/[_2_][_0_]</u> id most abnorr][_Y_][_Y_] nal results	
Dther cardiac imaging If yes, date [<u>D][D</u>]/[_M_][_N f imaging ar sting □Positive	<u>/_]/[_2_][_0_]</u> id most abnorr ⊡Negative][_Y_][_Y_] nal results	
Other cardiac imaging If yes, date [<u>D][D</u> If yes, specify name of Bacterial pathogen tes Bacterial pathogen]/[_M_][_N f imaging ar sting □Positive	<u>/_]/[_2_][_0_]</u> id most abnorr ⊡Negative][_Y_][_Y_] nal results	
Other cardiac imaging If yes, date [<u>D</u>][<u>D</u> If yes, specify name of Bacterial pathogen tes Bacterial pathogen If positive, specify	f imaging ar sting □Positive	<u>/_]/[_2_][_0_]</u> id most abnorr ⊡Negative][_Y_][_Y_] nal results	
Other cardiac imaging If yes, date [<u>D</u>][<u>D</u> If yes, specify name of Bacterial pathogen tes Bacterial pathogen If positive, specify SARS-CoV-2 testing]/[_M_][_N f imaging an sting □Positive	<u>/_</u>]/[_2_][_0_] id most abnorr ⊡Negative ⊡Negative][_Y_][_Y_] nal results	
Other cardiac imaging If yes, date [<u>D</u>][<u>D</u> If yes, specify name of Bacterial pathogen tes Bacterial pathogen If positive, specify SARS-CoV-2 testing RT-PCR]/[_M_][_N f imaging an sting □Positive □Positive	<u>/]/[_2_][_0_]</u> id most abnorr ⊡Negative ⊡Negative ⊡Negative	I[<u>Y][Y]</u> nal results □Not done	Site of specimen collection
Dther cardiac imaging If yes, date [_D][_D If yes, specify name of Bacterial pathogen tes Bacterial pathogen If positive, specify SARS-CoV-2 testing RT-PCR Rapid antigen test]/[_M_][_N f imaging an sting □Positive □Positive	<u>/]/[_2_][_0_]</u> id most abnorr ⊡Negative ⊡Negative ⊡Negative	<pre>[[Y][Y] mal results □Not done</pre>	Site of specimen collection
Dther cardiac imaging If yes, date [_D_][_D If yes, specify name of Bacterial pathogen tes Bacterial pathogen If positive, specify SARS-CoV-2 testing RT-PCR Rapid antigen test Rapid antibody test]/[_M_][_N f imaging an sting □Positive □Positive □Positive □Positive	<u>/]/[_2_][_0_</u> d most abnorr □Negative □Negative □Negative □Negative	I[_Y_][_Y_] nal results □Not done □Not done □Not done □Not done	Site of specimen collection Site of specimen collection

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2d. TREATMENT: at any t	ime during	the hos	pital admission, di	d the patient receiv	ve any of the following	y:	
Oral/orogastric fluids?	□Yes	□No	□Unknown				
Intravenous fluids?	□Yes	□No	□Unknown				
Antiviral?	□Yes	□No	□Unknown				
If yes ORibavirin OLopin	avir/Ritona	vir O Ne	euraminidase inhibito	or O Tocilizumab	OAnakinra Olverme	ctin	
OInterferon alpha OInterfe	eron beta	OR	emdesivir	Other, specify	/		
Corticosteroid (not topic If yes, specify name	al)?	□Yes ; F		nknown □Parenteral (IM/IV	/) □Inhaled	□Unknown	
If yes, please provide maxi							
If yes, date commenced: [_D_][_D_]/[_M_][_A_]/[_2_][_0_][_Y_][_Y_] Duration:days 🗆 Unknown							
IV immune globulin? If yes, daily dose		; Nur					
Date commenced: [_D_][_D	_]/[<u>M</u>][_N	<u>/_]/[_2_]</u>	[_0_][_ <u>Y_][_Y_]</u> Dura	ation:days	Max daily dose and ur	nit:	
Immunomodulators? If yes, specify name If yes, date commenced: [; F			/) □Unknown _days □ Unknown		
Antibiotic? If yes, specify name If yes, date commenced: [renteral (IM/IV) _days □ Unknown	□Unknown	
If yes, specify name If yes, date commenced: [_				□Oral/rectal □Par] Duration:	renteral (IM/IV) _days □ Unknown	□Unknown	
If yes, specify name If yes, date commenced: [_				□Oral/rectal □Par] Duration:	renteral (IM/IV) _days □ Unknown	□Unknown	
Antifungal agent? If yes, specify name If yes, date commenced: [_			; Route	□Oral/rectal] Duration:	□Parenteral (IM/IV) _days □ Unknown	□Unknown	
Antimalarial agent? If yes, specify name If yes, date commenced: [-	lf yes, specify □Oral/rectal] Duration:	□Parenteral _days □ Unknown	(IM/IV) □Unknown	
Experimental agent? If yes, specify name If yes, date commenced: [; Route	If yes, specify □Oral/rectal] Duration:		□Unknown	
Non-steroidal anti-inflam If yes, specify name If yes, date commenced: [_	; Route	□Oral/rectal	□Parenteral (IM/IV) _days □ Unknown	□Unknown	
Systemic anticoagulation If yes, specify name If yes, date commenced: [□Unknown ; Route]/[_2_][_0_][_Y_][_Y_]	□Oral/rectal] Duration:	□Parenteral (IM/IV) _days □ Unknown	□Unknown	
Other? If yes, specify name If yes, date commenced: [_	□Yes □_][_0_]/[_		□Unknown ; Route]/[_2_][_0_][_Y_][_Y_]	□Oral/rectal] Duration:	□Parenteral (IM/IV) _days □ Unknown	□Unknown	



2e. SUPPORTIVE CARE: at any time	2e. 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 supplementation therapy? Yes No Unknown If yes, max O2 flow 11–5 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?								
Prone positioning ? Yes No] Unknown	lf yes, dur	ation: days					
Non-invasive ventilation? (any e.g. E If yes, prone position? If yes, duration in days?	3iPAP/CPAP	') □Yes	□Yes □No □Unknown □No □Unknown					
Invasive ventilation (any)? If yes, maximum PEEP (cm H ₂ O) If yes, duration in days?		□Yes); I	□No □Unknown Plateau pressure (cm H₂O); PaCO₂; PaO₂					
Inotropes/vasopressors? If yes, specify name		□Yes _						
Extracorporeal (ECMO) support?	□Yes	□No	□Unknown If yes, total duration: days					
Plasma exchange?	□Yes	□No	□Unknown					
HFOV?	□Yes	□No	□Unknown					
Blood transfusion?	□Yes	□No	Unknown					
Renal replacement therapy (RRT) or	r dialysis? □]Yes □N	lo □ Unknown If yes, total duration: days					
2f. OUTCOME (complete at the time o	of discharge/c	leath)						
Outcome Discharged alive Hospi	talized ⊡Tra	ansfer to c	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	e illness	□Same a	as before illness □Worse □Better □Unknown					
What was the physician's impression of	of the final dia	agnosis?						
Multisystem inflammatory syndrome	□Yes	□No	□Unknown					
Kawasaki disease	□Yes	□No	□Unknown					
Atypical Kawasaki disease	□Yes	□No	□Unknown					
Toxic shock syndrome	□Yes	□No						
Other, specify								
Were there any sequelae present at th	e time of dis	charge. If	yes, specify					