Multisystem Inflammatory Syndrome (MIS-C) Case Reporting Form

{Section 90 (1) (j), (k) and (w) of National Health Act, 2003 (Act no. 61 of 2003)}

This form must be **completed immediately** by the health care provider who diagnosed the condition

Please mark applicable areas with an X

Complete this module for all children aged 0–19 suspected to have multisystem inflammatory syndrome of childhood (MIS-C)

Health facility name:		Health facility contact number:		Health district:	
Patient file/folder number:			Date of notification:	Y Y Y Y - M M - D D	

PATIENT DEMOGRAPHICS		PATIENT RESIDENTIAL ADDRESS	
First name:		Street/dwelling unit/building/ERF number:	
Surname:		Street name, building, location description:	
RSA ID / Passport number:		Sub-place, suburb, village, postal area:	
Citizenship:		Town/city	
Ethnic group:	Black/African ☐ Coloured ☐ Indian/Asian ☐ White ☐ Other ☐	EMPLOYER / EDUCATIONAL INSTITUTION ADDRESS	
Date of birth:	Y Y Y Y - M M - D D	Institution name:	
Age:	Years / Months (if less than 1 year) / Days (if less than 1 month)	Street name, building, location description:	
Gender:	Male ☐ Female ☐ Self-defined ☐	Sun-place, suburb, village, postal area:	
Contact number:	Alternative number:	Town/city:	
NEXT OF KIN		Contact number:	
Name:		NOTIFYING HEALTH CARE PROVIDER'S DETAIL	
Surname:		First Name:	Email address:
Relationship to the patient:		Surname:	SANC/HPCSA number
Contact number:		Mobile number:	Signature:

DATE OF ONSET OF CURRENT ILLNESS AND VITAL SIGNS (complete when MIS-C is first suspected)			
Date of onset of first symptom or sign	D D - M M - Y Y Y Y	Date of onset of fever	D D - M M - Y Y 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 (children >6 months)	mm	Length / Height	cm
Weight	kg		

POSSIBLE SIGNS AND SYMPTOMS OF MIS-C (complete when MIS-C is first suspected)													
Fever (measured or self-reported)		Yes		No		Unknown	Duration of fever		days		Maximum fever (De		
Rash		Yes		No		Unknown	If yes, type of rash						
Oral mucosal inflammation signs		Yes		No		Unknown	Vomiting		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
Bilateral conjunctivitis		Yes, purulent		Yes, non-purulent		No		Unknown					
OTHER SIGNS AND SYMPTOMS (complete when MIS-C 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
Cervical lymphadenopathy		Yes		No		Unknown	Irritability		Yes		No		Unknown
Joint pain (arthralgia)		Yes		No		Unknown	Photophobia		Yes		No		Unknown
Muscle aches		Yes		No		Unknown	Hyposmia/anosmia (loss of smell)		Yes		No		Unknown
Skin ulcers		Yes		No		Unknown	Hypogeusia (loss of taste)		Yes		No		Unknown
Stiff neck		Yes		No		Unknown	Not able to drink		Yes		No		Unknown
Other? Specify							Bleeding(haemorrhage)		Yes		No		Unknown
							If yes, specify site						

health
Department:
Health
REPUBLIC OF SOUTH AFRICA

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NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES
Division of the National Health Laboratory Service

RECENT HISTORY

Has the child been admitted to hospital in the last 3 months?	Yes	No	Unknown	If yes, date of discharge from hospital	Y	Y	Y	Y	-	M	M	-	D	D		
If yes, was it related to this illness episode, or for the same or similar problems?	Yes / No / Unknown	Detail:														
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	Detail:														
Any household member (or other contact) with confirmed COVID-19 in previous 4 weeks?	Yes / No / Unknown	Detail:														
Past history of Kawasaki disease?	Yes / No / Unknown	Family history of Kawasaki disease?	Yes / No / Unknown													

CO-MORBIDITIES, PAST HISTORY (complete when MIS-C is first suspected)

Inflammatory or rheumatological disorder	Yes	No	Unknown	Asplenia	Yes	No	Unknown	
If yes, specify				Congenital or acquired immune suppression	Yes	No	Unknown	
Hypertension (age-appropriate)	Yes	No	Unknown	If yes, specify				
Other chronic cardiac disease	Yes	No	Unknown	Chronic kidney disease	Yes	No	Unknown	
If yes, specify				Chronic liver disease	Yes	No	Unknown	
Asthma	Yes	No	Unknown	Chronic neurological disorder	Yes	No	Unknown	
Tuberculosis	Yes	No	Unknown	Haematologic disorder	Yes	No	Unknown	
If yes, currently on TB treatment?	Yes	No	Unknown	If yes, specify				
Other chronic pulmonary disease	Yes	No	Unknown	Malignant neoplasm	Yes	No	Unknown	
If yes, specify				If yes, specify				
				HIV exposed? (in utero)	Yes	No	Unknown	
Diabetes	Yes, type 1	Yes, type 2	No / Unknown	HIV infected?	Yes (on ART)	Yes (not on ART)	No	Unknown
Other underlying illness, specify								

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

Non-steroidal anti-inflammatory (NSAID)?	Yes	No	Unknown	If yes, specify name		Route:		Oral/rectal		Parenteral (IM/IV)		Unknown
Steroids?	Yes	No	Unknown	If yes, specify name		Route:		Oral/rectal		Parenteral (IM/IV)		Unknown
Antibiotics?	Yes	No	Unknown	If yes, specify name		Route:		Oral/rectal		Parenteral (IM/IV)		Unknown
Any other medication?	Yes	No	Unknown	If yes, specify name		Route:		Oral/rectal		Parenteral (IM/IV)		Unknown

LABORATORY RESULTS *(complete with results of tests ordered at the time MIS-C is first suspected) (* record units if different from those listed).* (if Not Available write 'N/A'):

Parameter	Value*	Not done	Parameter	Value*	Not done	Parameter	Value*	Not done
Markers of inflammation/coagulopathy / Markers of organ dysfunction								
Haemoglobin (g/L)			Lymphocytes ($x10^9$/L)			Sodium (mmol/L)		
Total WBC count ($x10^9$/L)			Neutrophils ($x10^9$/L)			Potassium (mmol/L)		
Haematocrit (%)			Monocytes ($x10^9$/L)			Urea (mmol/L)		
Pro-BNP (pg/mL)			Platelets ($x10^9$/L)			Creatinine (µmol/L)		
Prothrombin Time (seconds)			Total bilirubin (µmol/L)			Lactate (mmol/L)		
LDH (U/L)			Total protein (g/dL)			Total cholesterol (mmol/L)		
CRP (mg/L)			Albumin (g/dL)			Triglycerides (mmol/L)		
ESR (mm/hr)			ALT (U/L)			INR		
Procalcitonin (ng/mL)			AST (U/L)			APTT/APTR		
Total bilirubin (µmol/L)			Glucose (mmol/L)			Fibrinogen (g/L)		
D-dimer (mg/L)			Creatine kinase (U/L)			COVID-19 (PCR)		
Ferritin (ng/mL)			Troponin (ng/mL)			COVID-19 (serology/antigen)		

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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 /Unknown	If yes, features of myocardial dysfunction?	Yes / No /Unknown	Cardiac failure?	Yes / No /Unknown	Minimum ejection fraction (%)	
Features of pericarditis?	Yes / No /Unknown	Features of valvitis?	Yes / No /Unknown	Specify			
Coronary abnormalities?	Yes / No /Unknown	If yes specify				Max coronary Z score	
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:		Date of Test:	Y Y Y Y - M M - D D	
SARS-CoV-2 testing	RT-PCR	Positive / Negative / Not done	Site of specimen collection:		Date of Test:	Y Y Y Y - M M - D D	
	Rapid antigen test	Positive / Negative / Not done	If done, titres:		Date of Test:	Y Y Y Y - M M - D D	
	Rapid antibody test	Positive / Negative / Not done	If done, titres:		Date of Test:	Y Y Y Y - M M - D D	
	ELISA	Positive / Negative / Not done			Date of Test:	Y Y Y Y - M M - D D	
	Neutralization test	Positive / Negative / Not done	If done, titres:		Date of Test:	Y Y Y Y - M M - D D	
Other test?	Specify:		Results:				
If no pathogen testing: Clinically diagnosed COVID-19?	Yes /No /Unknown		Comment:				

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 (not topical)?	Yes	No	Unknown	If yes, specify name; max daily dose; date commenced; duration:	Name	Maximum daily dose (mg)		Date commenced: YYYY-MM-DD	Duration (days)
1st dose IV immune globulin?	Yes	No	Unknown	If yes, daily dose, date commenced, duration	Name	Daily dose (g)		Date commenced: YYYY-MM-DD	Duration (days)
Required 2nd dose IV immune globulin?	Yes	No	Unknown	If yes, daily dose, date commenced, duration	Name	Daily dose (g)		Date commenced: YYYY-MM-DD	Duration (days)
Immunomodulators?	Yes	No	Unknown	If yes, specify name, route (oral/parental), date commenced, duration	Name	Oral	Parenteral	Date commenced: YYYY-MM-DD	Duration (days)
Antibiotics?	Yes	No	Unknown	If yes, specify name, route (oral/parental), date commenced, duration	Name	Oral	Parenteral	Date commenced: YYYY-MM-DD	Duration (days)
	Yes	No	Unknown	If yes, specify name, route (oral/parental), date commenced, duration	Name	Oral	Parenteral	Date commenced: YYYY-MM-DD	Duration (days)
	Yes	No	Unknown	If yes, specify name, route (oral/parental), date commenced, duration	Name	Oral	Parenteral	Date commenced: YYYY-MM-DD	Duration (days)
	Yes	No	Unknown	If yes, specify name, route (oral/parental), date commenced, duration	Name	Oral	Parenteral	Date commenced: YYYY-MM-DD	Duration (days)
Antifungal agents?	Yes	No	Unknown	If yes, specify name, route (oral/parental), date commenced, duration	Name	Oral	Parenteral	Date commenced: YYYY-MM-DD	Duration (days)
	Yes	No	Unknown	If yes, specify name, route (oral/parental), date commenced, duration	Name	Oral	Parenteral	Date commenced: YYYY-MM-DD	Duration (days)
	Yes	No	Unknown	If yes, specify name, route (oral/parental), date commenced, duration	Name	Oral	Parenteral	Date commenced: YYYY-MM-DD	Duration (days)
Antimalarial agent?	Yes	No	Unknown	If yes, specify name, route (oral/parental), date commenced, duration	Name	Oral	Parenteral	Date commenced: YYYY-MM-DD	Duration (days)
Experimental agent?	Yes	No	Unknown	If yes, specify name, route (oral/parental), date commenced, duration	Name	Oral	Parenteral	Date commenced: YYYY-MM-DD	Duration (days)
Non-steroidal anti-inflammatory (NSAID)?	Yes	No	Unknown	If yes, specify name, route (oral/parental), date commenced, duration	Name	Oral	Parenteral	Date commenced: YYYY-MM-DD	Duration (days)
Systemic anticoagulation?	Yes	No	Unknown	If yes, specify name, route (oral/parental), date commenced, duration	Name	Oral	Parenteral	Date commenced: YYYY-MM-DD	Duration (days)
Other?				If yes, specify name, route (oral/parental), date commenced, duration	Name	Oral	Parenteral	Name	

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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	Number of days in ICU:	
Oxygen supplementation therapy?	Yes	No	Unknown	If yes, max O_2 flow 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	If yes, duration	
Non-invasive ventilation? (any e.g. BiPAP/CPAP)	Yes	No	Unknown	If yes, prone position? If yes, duration in days?	
Inotropes/vasopressors?	Yes	No	Unknown	If yes, specify name:	
Renal replacement therapy (RRT) or dialysis?	Yes	No	Unknown	If yes, total duration ibn days	

OUTCOME (complete at the time of discharge/death)												
Outcome	Discharged alive		Hospitalized		Transfer to other facility		Death		Left against medical advice		Unknown	
Outcome date:	Y	Y	Y	Y	-	M	M	-	D	D		
If discharged alive	Care needs at discharge versus before illness:		Same as before illness		Worse		Better		Unknown			
What is the physician's impression of the final diagnosis?												
Multisystem inflammatory syndrome	Yes / No / Unknown - Comment											
Kawasaki disease	Yes / No / Unknown - Comment											
Incomplete Kawasaki disease	Yes / No / Unknown - Comment											
Toxic shock syndrome	Yes / No / Unknown - Comment											
Other, specify	Yes / No / Unknown - Comment											
Were there any sequelae present at the time of discharge? If yes, specify												

Send to NMCsurveillanceReport@nicd.ac.za or fax to 086 639 1638 or NMC hotline 072 621 3805