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

Division of Public Health Surveillance and Response
and
Centre for Emerging Zoonotic and Parasitic Diseases

COMPILED: 6 JUNE 2022 UPDATED: 24 MARCH 2023

GUIDANCE FOR THE LABORATORY INVESTIGATION OF SUSPECTED CASES OF MPOX FROM OUTSIDE OF SOUTH AFRICA

STEP 1: CONSIDER THE CASE DEFINITION AND IF MONKEYPOX IS CONSIDERED A LIKELY DIAGNOSIS CONTACT THE NICD FOR SAMPLE SUBMISSION AND TESTING

- Email: jacquelinew@nicd.ac.za and naazneenm@nicd.ac.za (an import permit will be issued for the request)

STEP 2: COMPLETE THE CASE INVESTIGATION FORM

- Complete the case investigation form fully ((CIF-MPOX)
- Include case investigation form with specimens submitted for testing

STEP 3: SUBMIT SAMPLES FOR SPECIALIZED LABORATORY INVESTIGATION

- For testing, the following specimens are used:

Sample type	Collection materials	Comments
Skin lesion material: Swabs of lesion exudate / Aspirate of lesion fluid Lesion roof/s Lesion crust/s	Dacron or polyester flocked swabs with VTM or dry swab	Preferred sample Required for all investigations. **Samples should be kept cold during transport (cold packs are sufficient).**
Throat swab	Dacron or polyester flocked swabs with VTM or dry swab	Optional, on case by case basis and in consultation with NICD. **Samples should be kept cold during transport (cold packs are sufficient).**
Rectal and or genital swabs (if lesions present)	Dacron or polyester flocked swabs with VTM or dry swab	
Semen	Urine specimen jar	
Plasma	EDTA collection tube (purple top)	
Serum	Serum separator tubes or clotted blood	

- The specimems should be packaged in compliance with the guidelines for the transport of dangerous biological goods (i.e. Category A shipments with triple packaging using absorbent material) and transported directly and urgently to:

Centre for Emerging Zoonotic and Parasitic Diseases
Special Viral Pathogens Laboratory
National Institute for Communicable Diseases (NICD)
National Health Laboratory Service (NHLS)
No. 1 Modderfontein Rd
Sandringham, 2131

Laboratory contact details:
Dr Jacqueline Weyer: jacquelinew@nicd.ac.za / 011 386 6376 / 082 903 9131
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Annex A: World Health Organization case definitions

(as on 22 December 2022, Surveillance, case investigation and contact tracing for Mpox: Interim guidance (who.int))

Suspected case:

A person who is a contact of a probable or confirmed mpox case in 21 days before the onset of signs or symptoms, and who presents with any of the following:

- Headache
- Acute onset of fever (>38.5ºC),
- Lymphadenopathy (swollen lymph nodes)
- Myalgia (muscle and body aches)
- Back pain
- Asthenia (profound weakness) or fatique

OR

A person presenting with:

- An unexplained acute rash*
- Lymphadenopathy (swollen lymph nodes) or,
- Mucosal lesions

***** The skin rash may include single or multiple lesions in the ano-genital region or elsewhere on the body. Mucosal lesions may include single or multiple oral, conjunctival, urethral, penile, vaginal, or ano-rectal lesions. Ano-rectal lesions can also manifest as ano-rectal inflammation (proctitis), pain and/or bleeding.

AND

for which the following common causes of acute rash do not explain the clinical picture: varicella zoster, herpes zoster, measles, Zika, dengue, chikungunya, herpes simplex, bacterial skin infections, disseminated g*onococcus* infection, primary or secondary syphilis, chancroid, lymphogranuloma venereum, granuloma inguinale, molluscum contagiosum, allergic reaction (e.g., to plants); and any other locally relevant common causes of papular or vesicular rash.

N.B. It is not necessary to obtain negative laboratory results for listed common causes of rash illness in order to classify a case as suspected. Further, if suspicion of mpox infection is high due to either history and/or clinical presentation or possible exposure to a case, the identification of an alternate pathogen which causes rash illness should not preclude testing for MPXV, as co-infections have been identified.

Probable case:

A person meeting the case definition for a suspected case

AND

One or more of the following:

- has an epidemiological link (face-to-face exposure, including health workers without eye and respiratory protection); direct physical contact with skin or skin lesions, including sexual contact; or contact with contaminated materials such as clothing, bedding or utensils to a probable or confirmed case of mpox in the 21 days before symptom onset
- reported travel history to a mpox endemic country in the 21 days before symptom onset
- Identifies as gay, bisexual or other man who has sex with men
- has had multiple and/or casual sexual partners in the 21 days before symptom onset
- has a positive result of an *orthopoxvirus* serological assay, in the absence of recent smallpox/monkepox vaccination or other known exposure to orthopoxviruses

Confirmed case:

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A case meeting the definition of either a suspected or probable case and is laboratory confirmed for mpox virus by detection of unique sequences of viral DNA either by real-time polymerase chain reaction (PCR) and/or sequencing.

**Mpox endemic countries are: Benin, Cameroon, the Central African Republic, the Democratic Republic of the Congo, Gabon, Ghana (identified in animals only), Côte d'Ivoire, Liberia, Nigeria, the Republic of the Congo, Sierra Leone and South Sudan. Countries recently reporting cases of the West African clade are Cameroon (n=18) and Nigeria (n=800) as of 1/3/2023. Benin and South Sudan have documented importations from Nigeria in the past in 1978 and 2005. The WHO conducted a follow-up examination and discovered evidence of sporadic, infrequent cases of mpox in southern Sudan, pointing to intermittent introductions from local, putative animal reservoirs. With this case definition, all countries except these four (Nigeria, Cameroon, Benin, South Sudan) reported cases as new cases of mpox as part of the 2022 multi-country outbreak (West African Clade). As of 1/3/2023, Benin reported 3 cases and South Sudan none. In addition, until 3/1/2013, African countries reported mpox cases with Liberia (n=7), Ghana (n=121), CAR (n=27), Congo (n=5), DRC (n=395) and Gabon, Côte d'Ivoire, sierra Leone none. Sudan, Egypt, Mozambique and South Africa reported 18, 3, 1 and five cases respectively from the multi-country outbreak as of 1/3/2023.