

Case presentation, management and infection prevention and control monkeypox

SAA- WHO- AFRO Webinar

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World Health
Organization

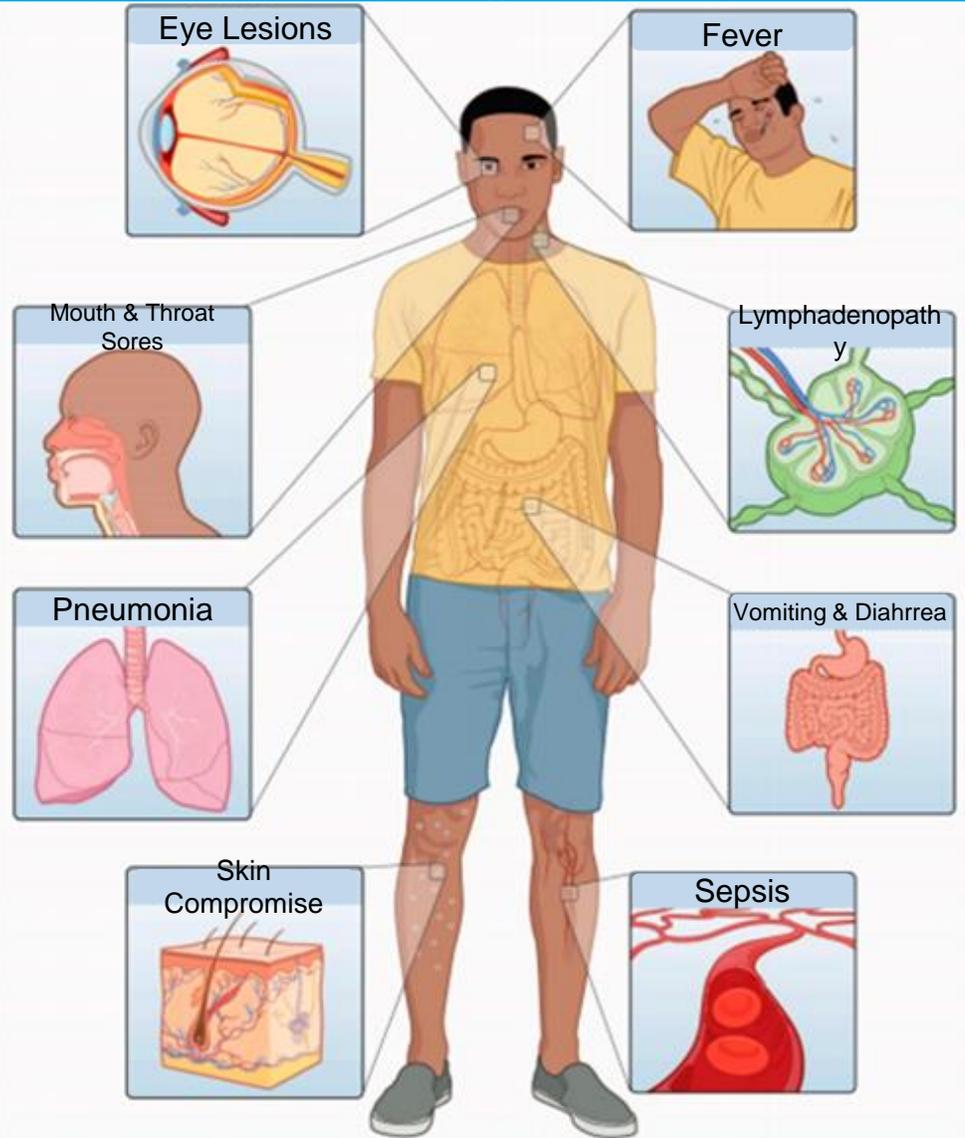


Credit: Central African Republic - Ministry of Health

- **Signs and symptoms include:**
 - Fever
 - Swollen lymph nodes
 - Typical or atypical rash
 - Sores in the mouth and throat
 - Eye irritation or redness
 - Skin involvement of genitals or perineum
- Monkeypox treatment remains mostly **supportive** and **symptomatic**
- **Specific antiviral treatment** – available under study protocols in participating countries



- Knowledge of transmission is evolving
- Zoonotic transmission - from live or dead animals
- Person to person contact
 - sexual encounters are most commonly reported
 - face-to-face (such as talking, breathing, singing)
 - skin-to-skin (such as touching, vaginal or anal sex)
 - mouth-to-mouth (such as kissing)
 - mouth-to-skin (such as oral sex)
- Contaminated environments (surfaces, objects and materials touched by someone infectious)
- Common exposure settings include parties, bars, saunas, sex-on-premises venues, events and other gatherings



Complications

- Bacterial infection of eyes or skin
- Diarrhea and vomiting leading to dehydration
- Abscess with airway obstruction
- Bronchopneumonia
- Encephalitis (<1%), sepsis (<1%)
- Proctitis
- Urethritis
- Urinary retention

Danger signs

- loss of vision
- delirium, loss of consciousness, convulsions
- respiratory distress
- bleeding, inability to produce urine
- signs of sepsis

- **Long-term sequelae**
 - pockmarks, scarring or loss of pigmentation
 - corneal ulcers and blindness
- **Complications of pregnancy**
 - bleeding, miscarriage or stillbirth
- **Optimized supportive care**
 - is essential
 - includes mental health support

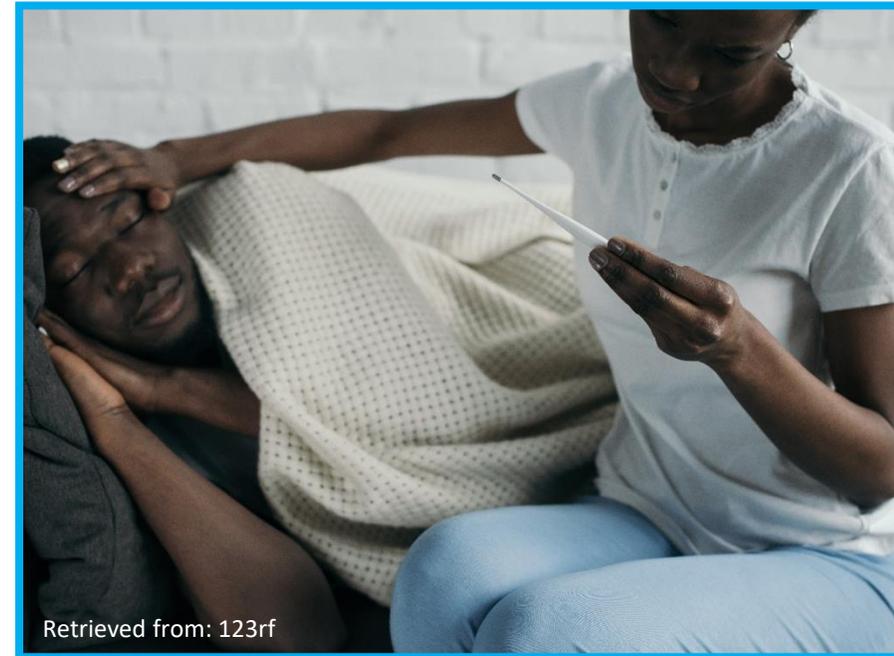


- Fever and pain management
- Skin, eye and mouth care
- Respiratory care
- Hydration and nutritional support
- Mental health support
- Prevention & treatment of complications
- Infection prevention and control
- Testing and treatment for other infections



Fever and pain management:

- external **cooling**
 - remove garments
 - apply cool damp cloths
- **antipyretic** and pain medication
 - **paracetamol**
 - non-steroidal anti-inflammatory medication (avoid if ulcers, bleeding or dehydration)
 - opioids where indicated
- Antiviral agent tecovirimat may reduce duration of symptoms, pain



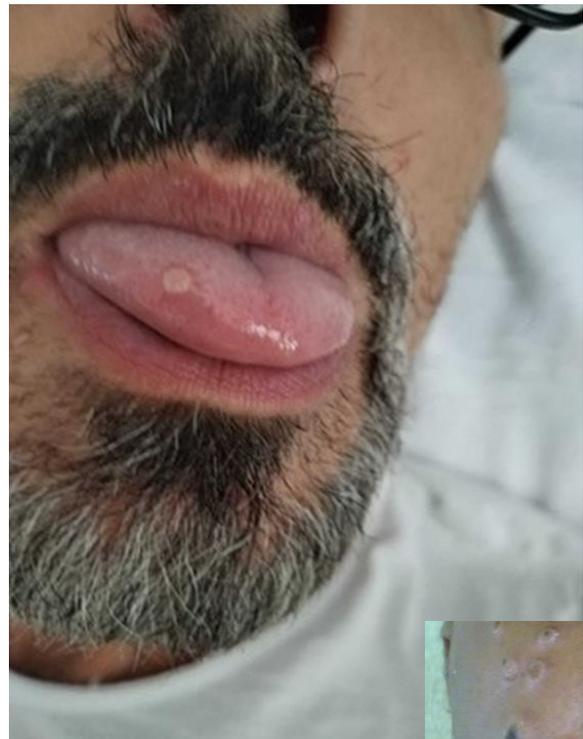
Credit P.K. Mbala. L'Institut National de Recherche Biomédicale DRC



Rash may lead to severe or permanent **skin damage** and **fluid loss**

Rash and skin care:

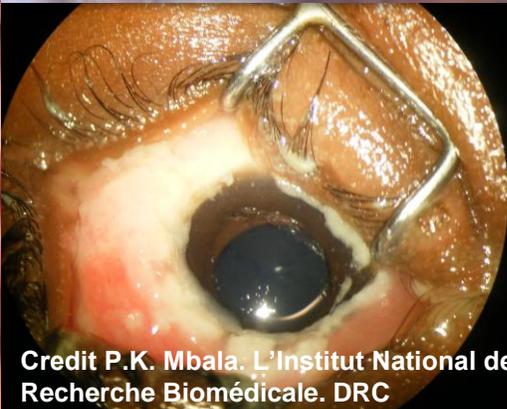
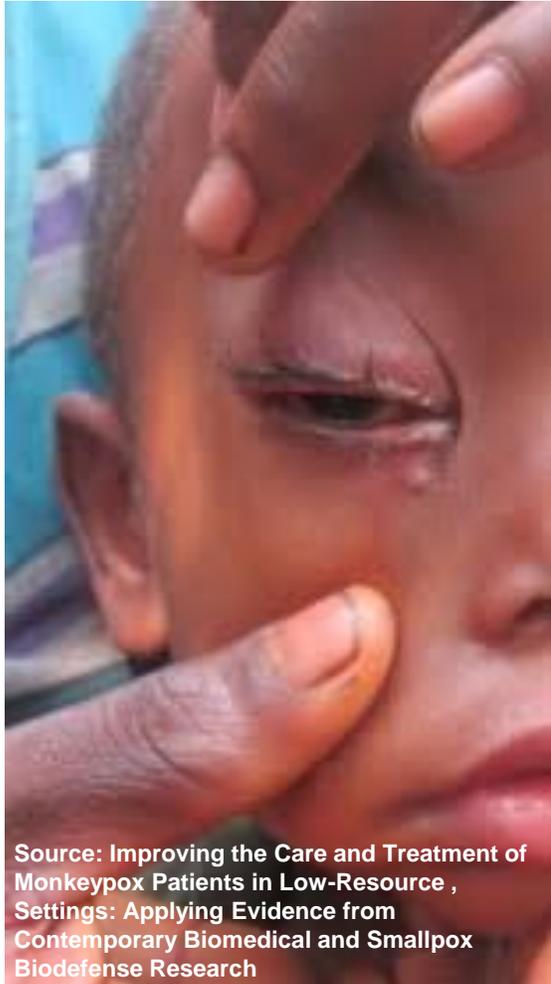
- **avoid touching** or scratching lesions
- gentle **washing**
- keep **clean and dry**
- protect and **hydrate** with moist dressings
- **gentian violet** or **nystatin cream**
- topical or oral antibiotics as needed
- treat inguinal or genital ulcers with a warm saline sitz bath or a light sofra-tulle dressing



Mouth sores can be painful

- wash mouth with warm clean salted water
- for severe ulcers, consider gentian violet or antibiotics
- vitamin C and other multivitamins

Sores can be a source of face-to-face transmission via respiratory droplets or short-range aerosols



Eyes may develop infection or ulcers

- **vitamin A** supplements
- **protective eye pads**
- topical or oral antibiotics in combination
- tetracycline or trifluridine eye drops / ointment
- do not use steroid ointment or drops



Retrieved from: 123rf

Ensure patients eat and drink

- liquids: water, soups, teas, oral rehydration solution
- intravenous fluids if needed

Treat conditions affecting nutrition (mouth sores, vomiting, diarrhea)

Consideration for young patients

- oral **vitamin A**
- **breast feeding, breast milk** or infant formula according to the situation
- caregiver precautions, masks, hygiene

Provide psychological support

- **psychologist**
- **social worker** or
- **specially trained nurse**

Offer **non-intrusive practical** help to:

- **calm** patient and family
- keep them **informed**
 - what to know, what to expect
 - how to care for themselves
 - how to take precautions



Condition	Treatment objective	Treatment and care	Monitoring
Fever	Prevent and treat	External cooling Antipyretic medications	Regular temperature monitoring
Skin infections	Prevent or treat secondary bacterial infections Promote lesion healing	Oral or intravenous antibiotics; incision and drainage, Advanced wound management	Fever, pain, tenderness, erythema, oedema, exudate, warmth
Exfoliation, skin compromise	Avoid scratching Minimize insensible fluid loss Promote lesion healing	Wash with soap and water or povidone-iodine solution Moist dressings and topical antibiotics (e.g silver sulfadiazine or gentian violet) Surgical debridement, skin grafts	Lesion count/rash burden Skin turgor in non-affected areas Body weight Fluid intake/output
Eye infection	Prevent corneal scarring and visual impairment	Vitamin A supplementation Ophthalmic antibiotics/antivirals	Repeat examination and vision testing Slit lamp examination
Mouth and throat sores	Minimize mucosal pain Encourage food intake Promote lesion healing	Oral/topical analgesic medications	Lesion burden Pain scale Food and fluid intake/output
Vomiting and diarrhea	Minimize fluid loss Maintain nutrition	Oral or intravenous rehydration Oral or intravenous antiemetic Antidiarrheal medication	Frequency and volume of emesis and diarrhoea, Body weight, skin turgor Food and fluid intake/output
Lymphadenopathy	Minimize pain Reduce swollen lymph nodes	Oral or intravenous analgesic or anti-inflammatory medications	Size of lymph nodes Pain/tenderness
Respiratory symptoms or distress	Maintain open airways Prevent and treat infection Prevent and manage respiratory distress	Suctioning of nasopharynx and airways Incentive spirometry, chest physiotherapy Bronchodilation, nebulizer treatments Oral/intravenous antibiotics Oxygen, non invasive ventilation (e.g, BiPAP or CPAP) Intubation and ventilation	Respiratory rate and other vital signs Signs of distress such as indrawing, shortness of breath Pulse oximetry
Sepsis	Hemodynamic stabilization	Oral/intravenous antibiotics Intravenous fluid hydration, vasopressors Supplemental oxygen, corticosteroids, insulin	Pulse, blood pressure Fluid status

Adapted from: [Viruses. 2017 Dec; 9\(12\): 380.](#)



- Isolation room or space
- Handwashing
- Gown, mask, goggles and gloves
- Cleaning and disinfection
- Waste management
- Safe handling of linens



- Follow the advice of health worker
- Provide a separate area for care
- Minimize contact
- Use protection: masks, gloves
 - to care for patient
 - to clean and wash at home
- Wash linen with care
- Disinfect surfaces and floors
- Wash hands frequently



CLINICAL MANAGEMENT AND INFECTION PREVENTION CONTROL FOR MONKEYPOX

Emergency rapid response guidance

Scope of rapid interim clinical guidance

- Screening, triage, and clinical assessment
- Management of mild or uncomplicated patients
- Mental health care of patients
- Antivirals and other therapeutics
- Infection Prevention Control at health facilities
- Consideration for sexually active populations
- Caring for women during and after pregnancy
- Caring for infants and young children with Monkeypox
- Feeding of infants in mothers infected with Monkeypox
- Management of high-risk patients and those with complications or severe disease
- Caring for patients after acute infection
- Management of deceased patients
- Management of exposed health workers
- Collection of standardized data collection and the WHO Clinical data platform
- Uncertainties and areas for research

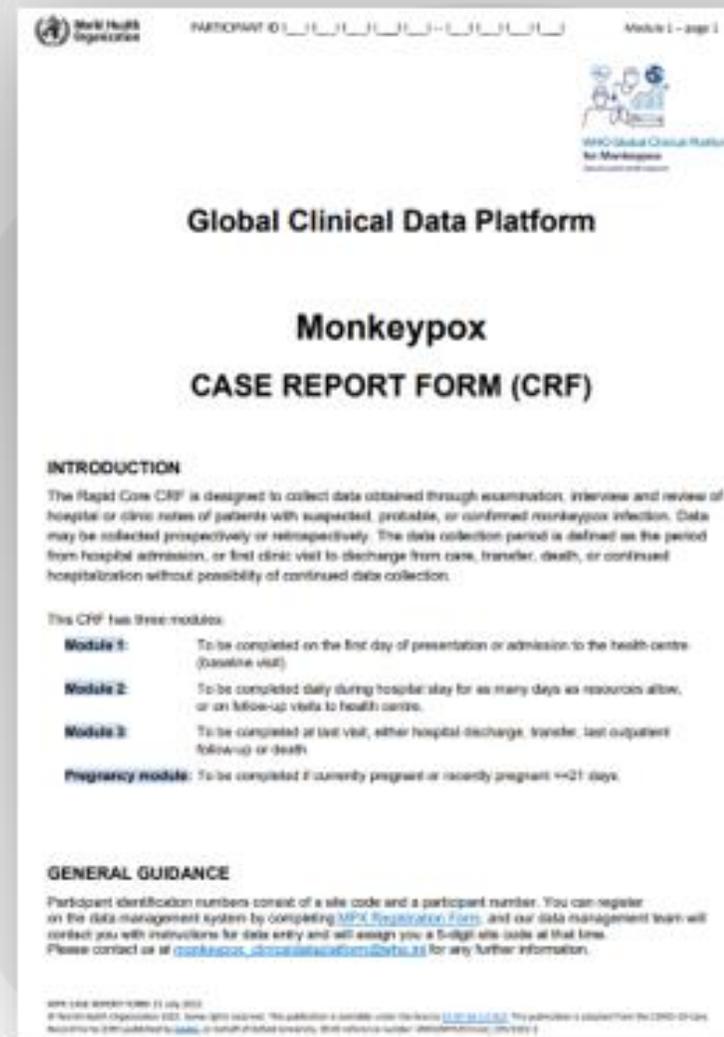
[Clinical Management and Infection Prevention Control for Monkeypox Guidance](#)

The objectives of the Platform are to:

- Describe the clinical characteristics of monkeypox
- Assess variations in clinical characteristics
- Identify the association of clinical characteristics with outcomes; and if available with vaccination and treatments
- Describe temporal trends in clinical characteristics

*WHO invites Member States, health facilities and other entities to participate in the global effort to collect anonymized clinical data relating to suspected or confirmed cases of monkeypox and contribute data to the **WHO Global Clinical Platform**.*

WHO has developed a clinical characterization case report forms (CRF) to standardize data collection of clinical features of monkeypox among outpatient and hospitalized cases.

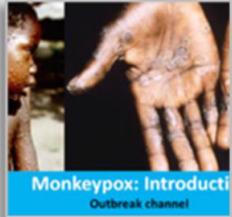


The screenshot shows the title page of the 'Global Clinical Data Platform Monkeypox CASE REPORT FORM (CRF)'. It includes the WHO logo, a participant ID field, and the text 'Module 1 - page 1'. The main title is 'Global Clinical Data Platform Monkeypox CASE REPORT FORM (CRF)'. Below this is an 'INTRODUCTION' section explaining the purpose of the CRF and listing three modules: Module 1 (baseline visit), Module 2 (daily during hospital stay), and Module 3 (at last visit, discharge, transfer, or death). A 'Pregnancy module' is also mentioned. A 'GENERAL GUIDANCE' section provides instructions on how to register and contact the team. At the bottom, there is a small copyright notice for WHO 2021.

[The WHO Global Clinical Platform for monkeypox](#)



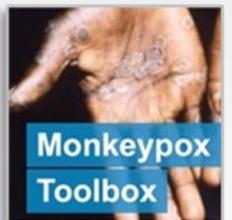
[Multi-country monkeypox outbreak: External situation reports](#)



OpenWHO: Monkeypox introduction
[English](#)
[Français](#)



OpenWHO: Monkeypox epidemiology, preparedness and response
[English](#)
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[Monkeypox outbreak toolbox](#)



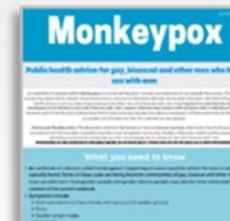
[Key facts about Monkeypox](#)



[WHO website: Monkeypox](#)



[Monkeypox Q&A](#)



[Monkeypox: public health advice for gay, bisexual and other men who have sex with men](#)