

# MARBURG VIRUS DISEASE PREPAREDNESS

Update for Physicians, Accident & Emergency Practitioners and Laboratorians  
Outbreak Response Unit, Division of Public Health Surveillance and Response and Centre  
for Emerging Zoonotic & Parasitic Diseases  
National Institute for Communicable Diseases (NICD)  
24-hour hotline number 0800 212 552

**An outbreak of Marburg virus disease (MVD) was declared in Equatorial Guinea on 13 February 2023.**

This is the first recorded outbreak of MVD in Equatorial Guinea. MVD is emerging in West Africa with outbreaks reported in Guinea and Ghana 2021 and 2022, respectively. MVD outbreaks have previously been reported in Kenya, DRC, Angola and Uganda. The first known MVD outbreak in Africa was detected in South Africa in 1975 in two patients with travel history to Zimbabwe and a healthcare worker. The risk for importation of MVD from Equatorial Guinea to South Africa is considered to be low. Risk is continuously assessed as the situation develops in Equatorial Guinea.

Despite the low risk of importation into South Africa, healthcare workers across the country should be on high alert for suspected MVD cases (see case definition). It is important to exclude malaria in cases of febrile illness among returning travellers from affected areas/countries.

### **MVD case definition:**

A **suspected case** of MVD:

Any person presenting with one or more of the following symptoms: an acute onset of fever ( $\geq 38^{\circ}\text{C}$ ), nausea, vomiting, diarrhoea, severe headache, muscle pain, abdominal pain, or unexplained haemorrhage; who visited or resided in Equatorial Guinea, in the 21 days prior to onset of illness and had direct contact with or cared for suspected/confirmed MVD cases in the 21 days prior to onset of illness or has unexplained multisystem illness that is malaria-negative.

### **Transmission of Marburg virus (MARV):**

MARV is transmitted through close and direct physical contact with infected bodily fluids (with blood, faeces and vomit being the most infectious). Health care workers and caretakers are at higher risk. Other higher risk activities include contact with the deceased for example during funeral processions. In previous outbreaks, cases of Cases of MVD have been reported among miners working in caves inhabited by *Rousettus aegyptiacus* (Egyptian fruit) bats, as well as in visitors to these caves for recreation.

### **Specimen collection for confirmation of MVD:**

1. Detailed specimen collection and submission guidelines are available on the NICD website ([lab guidelines](#))
2. Submit both a clotted blood (red or yellow top tube) and EDTA treated tube (purple top tube) for investigation.
3. The specimens should be packaged in accordance with the [Guidelines for Regulations for the Transport of Infectious Substances](#) (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), 1 Modderfontein Rd., Sandringham, 2131**
4. Ensure that the completed VHF case investigation form accompanies the specimens ([VHF CIF](#))
5. Samples should be kept cold during transport (cold packs are sufficient).
6. The NICD offers a full repertoire of laboratory testing for MVD. **Test requests need only to state for Marburg/Ebola /VHF investigation.** The NICD will provide appropriate testing for each case. Refer to [lab guidelines](#) on NICD website for more information.

### **Response to a suspected case of MVD:**

1. Establish that the patient meets the case definition for a suspected MVD case.
2. Observe appropriate infection control procedures.
3. Standard management for MVD is limited and may include supportive therapy including fluid management, provision of oxygen, and maintenance of blood pressure and treatment of secondary infections.
4. Inform the NICD hotline (0800 212 552) and notify the local and provincial communicable disease control co-ordinator (CDCC) telephonically.
5. Notify the case telephonically or through the NMC to platform – complete the Case Investigation Form - **National Guidelines of Recognition and Management of Viral Haemorrhagic Fevers** ([National Guidelines](#)). Submit forms to provincial CDCC.
6. Submit samples to NICD for laboratory testing.

Refer to the [National Guidelines](#) for Recognition and Management of viral haemorrhagic fevers for more information.

### **Managing a suspected MVD case**

**As soon as the decision is made to proceed on the basis of a presumptive diagnosis of MVD, measures should be applied to minimize exposure of medical staff, other patients and relatives.**

1. Inform the management and infection control officers at the medical facility concerned of the existence of the suspected case of MVD.
2. Isolate the patient and apply infection precautions.
3. Administer such life-saving therapy as may be necessary and possible. Keep the patient hemodynamically stable and manage fever. Treat for any other life-threatening symptoms as necessary.
4. Take steps to verify the diagnosis.
5. Notify the case on NMC (see above) and the National Director of Communicable Disease Control (CDCC) and the relevant provincial CDCC if not already done.
6. Decide whether the patient is to be retained at the primary hospital (isolation facilities), or whether to seek transfer to an VHF designated hospital.
7. Assess the status of the patient as either low, moderate or high risk ([National Guidelines](#)).

**For more information, visit the NICD website, [MARBURG](#) and [VIRAL HAEMORRHAGIC FEVER \(VHF\)](#)**