

Case definition recommendations for Ebola or Marburg virus diseases

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1. Standard case definitions

Routine surveillance¹

- **Suspected case**
Illness with onset of fever and no response to treatment for usual causes of fever in the area, and at least one of the following signs:
 - bloody diarrhea
 - bleeding from gums
 - bleeding into skin (purpura)
 - bleeding into eyes and urine
- **Confirmed case**
A suspected case with laboratory confirmation (positive IgM antibody, positive PCR or viral isolation)

Community-based surveillance

- **Alert case**
 - a. Illness with onset of fever and no response to treatment of usual causes of fever in the area; **OR**
 - b. At least one of the following signs: bleeding, bloody diarrhoea, bleeding into urine; **OR**
 - c. Any sudden death
- **If an alert case (living or dead) is identified**, report the case to a surveillance team or to the closest health centre
- This definition of “alert cases” for Ebola or Marburg virus disease has been developed for use by the community or community-based volunteers. It may be used for community-based surveillance during the pre-epidemic phase and during the outbreak.

Note: During an Ebola or Marburg outbreak, surveillance should use the case definitions described in section 2.

¹ *Technical Guidelines for Integrated Disease Surveillance and Response in the African Region (2nd ed.)* Brazzaville, World Health Organization, October 2010. (<http://www.afro.who.int/en/clusters-a-programmes/dpc/integrated-diseasesurveillance/features/2775-technical-guidelines-for-integrated-disease-surveillance-and-response-in-the-african-region.html>)

2. Case definitions during an Ebola or Marburg outbreak

Case definitions to be used by mobile teams, health stations and health centres

Important: During an outbreak, case definitions are likely to be adapted to new clinical presentation(s) or different modes of transmission related to the local event

- **Suspected case**
 - a. Any person, alive or dead, suffering or having suffered from a sudden onset of high fever and having had contact with:
 - a suspected, probable or confirmed Ebola or Marburg case;
 - a dead or sick animal (for Ebola)
 - a mine (for Marburg); **OR**
 - b. Any person with sudden onset of high fever and at least three of the following symptoms:
 - headaches
 - anorexia / loss of appetite
 - stomach pain
 - vomiting
 - diarrhea
 - lethargy
 - aching muscles or joints
 - difficulty swallowing
 - difficulty breathing
 - hiccups; **OR**
 - c. Any person with inexplicable bleeding; **OR**
 - d. Any sudden, inexplicable death
- **When a suspected case has been identified**
 - Report the case to the surveillance team
 - After obtaining express consent, collect a sample
 - Fill in a case notification form
 - Draw up a list of contacts of the suspected case
 - If the subject is alive, explain to the patient and his/her family the need to go to hospital to receive adequate medical care. After having obtained the consent of the patient or his/her family arrange for transfer.
 - If the subject has passed away, explain to the family the need for conducting a safe burial. After obtaining consent, coordinate funeral arrangements with the burial team.

Case definition for exclusive use by hospitals and surveillance teams

Important: During an outbreak, case definitions are likely to be adapted to new clinical presentation(s) or different modes of transmission related to the local event

- **Probable case**
 - a. Any suspected case evaluated by a clinician; **OR**
 - b. Any deceased suspected case (where it has not been possible to collect specimens for laboratory confirmation) having an epidemiological link with a confirmed case

Note: if laboratory specimens are collected in due time during the illness, the preceding categories are reclassified as “laboratory confirmed” cases and “non-case”.
- **Laboratory confirmed case**

Any suspected or probable cases with a positive laboratory result. Laboratory confirmed cases must test positive for the virus antigen, either by detection of virus RNA by reverse transcriptase-polymerase chain reaction (RT-PCR), or by detection of IgM antibodies directed against Marburg or Ebola.
- **Non-Case**

Any suspected or probable case with a negative laboratory result. “Non-case” showed no specific antibodies, RNA or specific detectable antigens.

Definition of Ebola or Marburg contacts

Important: During an outbreak, contact definitions are likely to be adapted to newly reported infection risk factors related to the local event

- **Ebola or Marburg case contacts**

Any person having been exposed to a suspect, probable or confirmed case of Ebola or Marburg, less than 21 days before the identification as a contact by surveillance teams, in at least one of the following ways:

 - slept in the same household with a case
 - direct physical contact with the case (alive or dead) during the illness
 - direct physical contact with the (dead) case at the funeral
 - touched his/her blood or body fluids during the illness
 - touched his/her clothes or linens
 - been breastfed by the patient (baby)

 - **Dead or sick animal contacts**

Any person having been exposed to a sick or dead animal, less than 21 days before the identification as a contact by surveillance teams, in at least one of the following ways:

 - direct physical contact with the animal
 - direct contact with the animal's blood or body fluids
 - carved up the animal
 - eaten raw bush-meat

 - **Laboratory contacts**

Any person having been exposed to biological material in a laboratory, less than 21 days before the identification as a contact by surveillance teams, in at least one of the following ways:

 - has had direct contact with specimens collected from suspected Ebola or Marburg patients
 - has had direct contact with specimens collected from suspected Ebola or Marburg animal cases

 - **Other infection risk factors include** contact with a hospital where Ebola or Marburg cases are being treated; injection or vaccination in the 21 days preceding the onset of symptoms.

 - **The contact person should be followed for 21 days after exposure.** If the contact person is asymptomatic for 21 days after exposure, they can be released the follow-up.
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