
Ebola virus disease

Frequently Asked Questions

1. What is Ebola virus disease?

Ebola virus disease (EVD) (previously known as Ebola haemorrhagic fever), is a severe, often fatal disease in humans and non-human primates. The disease is caused by infection with the Ebola virus. The disease was first recognized in 1976 when two outbreaks (near the Ebola River, Democratic Republic of Congo (DRC), and South Sudan) occurred almost concurrently. Since then, sporadic outbreaks have occurred in the DRC, Uganda, South Sudan, Congo and Gabon resulting in less than 2 500 confirmed cases from 1976 -2013 with mortality rates of 50 – 90% of Ebola patients have died. The largest EVD outbreak took place in west Africa from December 2013 to June 2016, predominantly in Sierra Leone, Liberia and Guinea, with over 28,616 suspected cases and 11,310 deaths reported to the World Health Organisation.

2. Who can get EVD?

Ebola virus is a zoonosis, and bats are the suspected but unproven animal reservoir of infection. Non-human primates contract EVD from bats. Persons in contact with infected non-human primates or bats are at risk of contracting EVD. Following transmission to humans, human-to-human transmission is possible. The persons at risk of contracting EVD include healthcare workers, family members or friends in close contact with infected people, and mourners who have direct contact with the bodies of the deceased as part of burial ceremonies.

3. Where does EVD occur in South Africa?

EVD does not occur in South Africa. There has been a single imported case of EVD documented in South Africa in 1996. The case involved a health care worker travelling to South Africa from Gabon, where an EVD outbreak was raging at the time. One secondary case involving a nurse was also reported in 1996. EVD may be imported to South Africa by travellers returning from EVD affected countries, and have had contact with EVD cases. During the West Africa outbreak from 2013-2016, no cases of EVD were imported to South Africa.

4. How is Ebola virus transmitted?

Human-to-human transmission of the virus occurs following when blood or other infectious bodily fluids (may include stool, urine, saliva and semen) of an infected person comes into contact with broken skin or mucous membranes including the nose, eyes and mouth of a contact. Infection can also occur following direct contact with environments that are contaminated with an Ebola patient's blood or body fluids, such as soiled clothing, bed linen, or used needles. Burial ceremonies in which mourners wash the body of the deceased person can spread infection. Ebola virus is not spread in the air or in water, nor through being in the same room as an infected person where contact detailed above has not taken place. The virus may be aerosolized in the hospital setting through suctioning or inserting and removal of tubes.

5. How does Ebola virus disease affect animals?

Bats are thought to be the reservoir of infection. Non-human primates such as monkeys, gorillas and chimpanzees may develop severe illness including bleeding following infection with EVD.

6. What are the signs and symptoms of EVD in humans?

Ebola virus has an incubation period of 2 to 21 days (on average, 8 to 10 days) after which the person will start to have symptoms. Usually persons will give a history of having had contact with an infected person, or being in an environment where infected persons were cared for. After the incubation period, the symptoms may include fever, weakness and lethargy, muscle pain, headache and sore throat, followed by vomiting, diarrhoea, abdominal pain, and sometimes a rash. Some patients may have bleeding inside and outside of the body; this is the most serious complication. Death often occurs through dehydration and less frequently through haemorrhagic complications

7. How is EVD diagnosed?

EVD can only be confirmed through a laboratory blood test. EVD can only be diagnosed once a person develops signs and symptoms of the disease; there is no test available to detect infection whilst a person is in the incubation period. Specific laboratory tests include serological screening for IgG and IgM antibodies, PCR detection of the virus (RNA) or virus isolation. Antigen detection is particularly useful in the early acute stage of illness. These specialized laboratory tests, including virus isolation, are performed under biosafety level 4 conditions (i.e. maximum bio-containment), available at the National Institute for Communicable Diseases.

8. How is EVD treated?

There is no specific treatment available. Various experimental treatments are currently under evaluation in animal models. Standard management for EVD is limited to supportive therapy including fluid management, provision of oxygen, maintenance of blood pressure and treatment of complicating secondary infections. Severely ill patients require intensive supportive care. Some patients will recover with the appropriate medical care. During previous EVD outbreaks, the mortality rate has ranged from 50 to 90%.

9. How is EVD prevented?

Currently no licensed vaccines are available for prevention of EVD. Several candidate vaccines are being evaluated in clinical trials around the globe. Once an initial case of EVD occurs in a community, prevention of secondary cases through appropriate infection control is critical. Infection control includes avoiding direct contact with the blood, or other body fluids and secretions of infected people and animals through the use of personal protective equipment (including gloves, masks, gowns and goggles). Mourners should avoid direct contact with the body of the deceased person. Patients suspected to have EVD should be isolated and treated by trained healthcare workers employing strict infection prevention and control measures. Healthcare workers should apply strict precaution by wearing

10. Where can I find more information?

Medical/clinical related queries: NICD Hotline +27 82 883 9920 (for use by healthcare professionals only)

Laboratory related and result queries: Dr Jacqueline Weyer: (Tel) +27 11 386 6376 or 6339, jacquelinew@nicd.ac.za. Guidelines are available on the NICD website at www.nicd.ac.za on the 'Diseases A-Z' tab.