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## Ebola Virus Disease in West Africa.

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### Key facts

- The Ebola virus causes severe Ebola Virus Disease (EVD) outbreaks in humans.
- Ebola Virus Disease outbreaks have a case fatality rate of up to 90%.
- Ebola Virus Disease outbreaks occur primarily in remote villages in Central and West Africa, near tropical rainforests.
- The virus is transmitted to people from wild animals and spreads in the human population through human-to-human transmission.
- Fruit bats of the *Pteropodidae* family are considered to be the natural host of the Ebola virus.
- There is no treatment or vaccine available for either people or animals.

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### Current Situation in West African.

#### GUINEA

As of 3 May 2014, the Ministry of Health of Guinea has reported a cumulative total of 231 clinical cases of Ebola virus disease (EVD), including 155 deaths. The numbers of cases which are laboratory confirmed by Ebola virus PCR are 127 cases including 83 deaths.

The geographical distribution of clinical cases of EVD since the beginning of the outbreak is: Conakry (53 cases, including 24 deaths), Guekedou (145 cases/105 deaths), Macenta (22 cases/16 deaths), Kissidougou (6 cases/5 deaths), Dabola (4 cases/4 deaths) and Djingaraye(1 case/1 death). There have been no new cases of EVD in Kissidougou since 1 April and in Macenta since 9 April. In Djingaraye and Dabola, no new cases have been reported since the end of March 2014.

#### LIBERIA

As of 2 May, the Ministry of Health and Social Welfare (MOHSW) of Liberia has reported that total number of clinical EVD cases reported in Liberia is 13 (6 confirmed, 2 probable and 5 suspected cases), including 11 deaths. The number of laboratory confirmed cases remains at 2; both patients are from Lofa County, one of whom has died. There have been no new clinical cases in Liberia since 6 April.

#### SIERRA LEONE

As of 3 May, no cases of EVD have been confirmed in Sierra Leone. From 16 March to 2 May 2014, the Ministry of Health and Sanitation (MOHS) of Sierra Leone has tested 105 patients presenting with a VHF-like illness for EVD and Lassa fever.

No cases of EVD have been detected using Ebola virus PCR assays while 10 patients have been confirmed with a Lassa fever virus infection. Lassa fever is endemic in Sierra Leone. Thirty-five (35 contacts) have been traced; 15 have completed 21 days of follow-up and have been discharged from medical surveillance.

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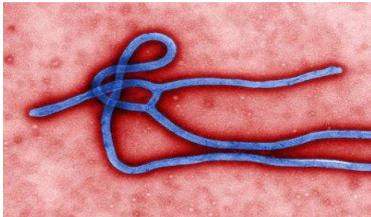
## **GHANA**

There has been a report of one suspected case to date in Ghana and the test result is negative for EVD (Ebola). Changes to this situation will be communicated as soon as further information becomes available. WARA is closely monitoring the developments and further updates will follow.

**As this is a rapidly changing situation, the number of reported cases and deaths, contacts under medical observation and the number of laboratory results are subject to daily changes due to consolidation of case, contact and laboratory data, enhanced surveillance and contact tracing activities and ongoing laboratory investigations.**

## **Ebola Virus Disease**

Ebola is a severe, infectious often-fatal disease in humans and nonhuman primates (monkeys, gorillas, and chimpanzees) caused by infection with Ebola virus. It is very infectious, kills in a short time with a case fatality rate of up to 90%.



## **Transmission**

Ebola is introduced into the human population through close contact with the blood, secretions, organs or other bodily fluids of infected animals. eg. Through the handling of infected chimpanzees, gorillas, fruit bats, monkeys, forest antelope and porcupines found dead or ill in the rainforest.

Later Ebola spreads in the community through human-to-human transmission, resulting from close contact with the blood, secretions, organs or other bodily fluids of infected people. Burial ceremonies where mourners have direct contact with the body of the deceased person can also play a role in the transmission of Ebola. Transmission via infected semen can occur up to seven weeks after clinical recovery.

Health-care workers have frequently been infected while treating Ebola patients. This has occurred through close contact without the use of correct infection control precautions and adequate barrier nursing procedures.

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## Signs and symptoms

Signs and symptoms characterized by the sudden onset of fever, intense weakness, muscle pain, headache and sore throat. This is followed by vomiting, diarrhoea, rash, impaired kidney and liver function, and in some cases, both internal and external bleeding.

Laboratory findings show low counts of white blood cells and platelets as well as elevated liver enzymes.

People are infectious as long as their blood and secretions contain the virus.

**The incubation period (interval from infection to onset of symptoms) varies between 2 to 21 days.**

## Diagnosis/ Differential diagnoses

Differential diagnoses include, malaria, typhoid fever, shigellosis, cholera, leptospirosis, plague, rickettsiosis, relapsing fever, meningitis, hepatitis.

Ebola virus infections can only be diagnosed definitively in the laboratory by a number of different tests:

- enzyme-linked immunosorbent assay (ELISA)
- antigen detection tests
- serum neutralization test
- reverse transcriptase polymerase chain reaction (RT-PCR) assay
- Virus isolation by cell culture.

## Treatment and vaccine

Severe cases require intensive supportive care. Patients are frequently dehydrated and in need of intravenous fluids or oral rehydration with solutions containing electrolytes.

**No specific treatment or vaccine is yet available for EVD.**

## Prevention:

In the absence of effective treatment and a human vaccine, raising awareness of the risk factors of Ebola infection and the protective measures individuals can take is the only way to reduce human infection and death.

- Education of the general public, both about the nature of the disease itself and about necessary outbreak containment measures, including burial of the deceased. People who have died from Ebola should be promptly and safely buried
  - Reducing the risk of wildlife-to-human transmission from contact with infected fruit bats or monkeys/apes and the consumption of their raw meat. Animals should be
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handled with gloves and other appropriate protective clothing. Their products (blood and meat) should be thoroughly cooked before consumption.

- Reducing the risk of human-to-human transmission in the community arising from direct or close contact with infected patients, particularly with their bodily fluids. Close physical contact with Ebola patients should be avoided. Gloves and appropriate personal protective equipment should be worn when taking care of ill patients at home. Regular hand washing is required after visiting sick relatives in hospital, as well as after taking care of ill patients at home.
- Precautionary measures are needed in Africa to avoid that pig farms infected through contact with fruit bats amplify the virus and cause EVD outbreaks.
- Regular hand washing is advised in case of an outbreak.
- Avoid visits to hospitals.
- Avoid travels to outbreak areas.
- Report to the nearest clinic or hospital if you experiencing any of the signs and symptoms.

### **Controlling infection in health-care settings**

Transmission to healthcare workers has been reported when appropriate infection control measures have not been observed.

Health-care workers caring for patients with suspected or confirmed Ebola virus should apply infection control precautions to avoid any exposure to the patient's blood and body fluids and/or direct unprotected contact with the possibly contaminated environment. Health-care workers must practice and adhere to basic hand hygiene, and the use of personal protective equipment, safe injections practices and safe burial practices.

Laboratory workers are also at risk. Samples taken from suspected human and animal Ebola cases for diagnosis should be handled by trained staff and processed in suitably-equipped laboratories.

### **References:**

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