



EBOLA VIRUS DISEASE:

What do health professionals need to know?

12 August 2014

Ebola virus disease

Health professionals in the Caribbean are advised to be vigilant for the recognition, reporting and prompt investigation of patients with symptoms of Ebola and other similar diseases that can cause viral haemorrhagic fevers.

Person-to-person transmission of Ebola virus is primarily associated with direct contact with blood and body fluids. Health care workers caring for patients with suspected or confirmed Ebola virus disease (EVD) should apply strict infection control precautions at all times.

Reporting

Patients under investigation for EVD should be reported immediately to the national health authorities, who will then inform the PAHO/WHO International Health Regulations Focal Point and the Caribbean Public Health Agency (CARPHA).

Case definitions

The World Health Organization has classified cases of Ebola virus disease as:

Confirmed:

A confirmed Ebola case can only be done through laboratory testing in a suitably equipped laboratory.

Probable:

A probable case is defined as one with clinical evidence of illness and a history within the three weeks before onset of fever of one of the following:

- travel in a specific area of a country where an outbreak of Ebola has recently occurred;
- contact with a suspect, probable or confirmed case of Ebola;
- direct contact with blood or other body fluid secretions or excretions of a person or animal with a confirmed or probable case of Ebola;
- work in a laboratory or animal facility that handles haemorrhagic fever viruses.

Controlling infection in health-care settings

Human-to-human transmission of the Ebola virus is primarily associated with direct or indirect contact with blood and body fluids. Transmission to health-care workers has been reported when appropriately strict infection control measures have not been observed.

It is not always possible to identify patients with EVD early because initial symptoms may be non-specific. For this reason, it is important that health-care workers apply standard precautions consistently with all patients – regardless of their diagnosis – in all work practices at all times. These include basic hand hygiene, respiratory hygiene, the use of personal protective equipment (according to the risk of splashes or other contact with infected materials), safe injection practices and safe burial practices.

Health-care workers caring for patients with suspected or confirmed Ebola virus should apply, in addition to standard precautions, other infection control measures to avoid any exposure to the patient's blood and body fluids and direct unprotected contact with the possibly contaminated environment. When in close contact (within one metre) of patients with EVD, health-care workers should wear face protection (a face shield or a medical mask and goggles), a clean, non-sterile long-sleeved gown, and gloves (sterile gloves for some procedures).

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

Clinical symptoms

Clinical symptoms of Ebola include severe acute viral illness consisting of sudden onset of fever, malaise, myalgia, headache, conjunctival injection, pharyngitis, vomiting, diarrhea that can be bloody, and impaired kidney and liver function.

It is often accompanied by a maculopapular or petechial rash that may progress to purpura. Bleeding from gums, nose, injection sites and gastrointestinal tract occurs in about 50% of patients. Dehydration and significant wasting occur as the disease progresses.

In severe cases, the severe bleeding may be accompanied by leucopenia; thrombocytopenia; hepatic, renal and central nervous system involvement; or shock with multi-organ dysfunction.

Testing

Health professionals in CARPHA Member States should **communicate with CARPHA prior undertaking any laboratory testing** on patients who are probable cases of Ebola infection.

Samples from such patients are an extreme biohazard risk, and any testing related to a suspected Ebola infection must be carried out in a biosafety level 4 (BSL4)

laboratory. A BSL4 laboratory ensures maximum biological containment and the safety and security of staff and the public. Although there are no BSL4 laboratories in the Caribbean, CARPHA can help to facilitate testing should the need arise.

Samples should **not** be sent to CARPHA for testing. In the event of a symptomatic person with a relevant travel history presenting to healthcare, the relevant Ministry of Health should be informed and the CARPHA Health Emergency Response Operations Centre contacted in order to optimise delivery of any requested laboratory service(s).

Shipping of samples

If a sample requires testing, immediately contact the CARPHA Health Emergency Response Operations Centre. An expert will assist you in developing and implementing a plan for the safe shipping of the sample to the appropriate reference centre.

Vaccine and treatment

No licensed vaccine for EVD is available. Several vaccines are being tested, but none are available for clinical use.

There is no effective antiviral treatment for Ebola infections. Treatment is supportive, and is directed at maintaining renal function and electrolyte balance, and combatting haemorrhage and shock.

Additional resources

- WHO Case definition recommendations for Ebola or Marburg Virus Diseases – 09 April 2014 <http://www.who.int/csr/resources/publications/ebola/ebola-case-definition-contact-en.pdf?ua=1>
- WHO Interim Infection Control Recommendations for Care of Patients with Suspected or Confirmed Filovirus (Ebola, Marburg) Haemorrhagic Fever - March 2008
http://www.who.int/csr/bioriskreduction/filovirus_infection_control/en/
- WHO Interim manual - Ebola and Marburg virus disease epidemics: preparedness, alert, control, and evaluation – June 2014
http://www.who.int/csr/disease/ebola/manual_EVD/en/
- Environmental Sanitation Practices to Control the Spread of Communicable Disease in Passenger Conveyances and Terminals - June 23, 2014
- Ebola virus: Pathogen Safety Data Sheet - Infectious substances
- Centers for Disease Control and Prevention: Ebola Haemorrhagic Fever
- World Health Organization: Global Alert and Response (GAR) - Ebola virus disease (EVD)
- Public Health England: Ebola - General information
- Interim Infection Prevention and Control Guidance for [Hospital] Care of Patients with Suspected or Confirmed [Ebola]:
<http://www.who.int/csr/resources/who-ipc-guidance-ebolafinal-09082014.pdf>