

## Facsimile Cover Sheet

### Wharangi Nama Waea

**Date/Te Ra: 1 August 2014**

<b>To/Kia:</b> Primary Care, After Hours Clinics, Emergency Departments; Greater Wellington Region.	<b>From/Na:</b> Margot McLean, Medical Officer of Health
<b>Name of Agency/Wahi Mahi:</b> Regional Public Health	<b>Fax Number/Nama Waea:</b>

### Public Health Information

#### **Ebola virus disease: Information for health professionals**

I would be grateful if you could distribute the following information from the Ministry of Health to relevant staff in your organisation.

If you would also like to receive this by email for ease of distribution, storage and retrieval please advise RPH of your email on [rph@huttvalleydhb.org.nz](mailto:rph@huttvalleydhb.org.nz).

Kind regards,

Margot McLean

Medical Officer of Health

## **Ebola virus disease (EVD)**

### **Information for Health Professionals and laboratories**

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31 July 2014

This document provides updated information on Ebola virus disease (EVD), including updated case definitions and advice on testing. This information is complementary to what is provided in the Communicable Disease Control Manual 2012.

In patients with clinically-compatible symptoms and a history of travel or residence in affected countries (see case definition and map) or contact with known confirmed or probable cases or exposure to EVD-infected blood or tissues in the 21 days before illness onset, the following is recommended:

1. **Transmission-based precautions should be immediately implemented** (contact and droplet), including the use of personal protective equipment (PPE). Airborne transmission precautions apply to aerosol generating procedures and in the laboratory.
2. The suspected case should be **immediately notified** to the local Medical Officer of Health and the Director of Public Health at the Ministry of Health.
3. In consultation with the Medical Officer of Health and an infectious disease physician, the patient should be **hospitalised in a single room with negative pressure air** handling.
4. **Blood and other samples should be collected for Ebola virus testing and for other investigations**, but since blood is highly infectious, routine haematology and other tests should be minimised. If other tests are required for the immediate management of the patient, these should only be performed in close collaboration with specialist physicians, laboratory staff and public health authorities.

## Case Definitions for Ebola virus

### Suspected Case (under investigation)

- a person with a clinical illness compatible with EVD \*
- AND EITHER
- a history of travel to a the affected countries § within 21 days before onset of illness,
- OR
- close contact with a probable or confirmed case within 21 days before onset of illness \*\*
- OR
- exposure to EVD-infected blood or tissues within 21 days before onset of illness.

### Probable Case

- a suspected case with no possibility of laboratory confirmation for EVD either because the patient or samples are not available for testing

### Confirmed Case

- a suspected case with laboratory confirmation (positive serology or PCR).

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\* sudden onset of high fever (usually > 40 °C) with, as possible initial symptoms, headache, vomiting, anorexia / loss of appetite, diarrhoea, lethargy, stomach pain, aching muscles or joints, difficulty swallowing, breathing difficulties and hiccup. This is usually followed by the worsening of these symptoms after a few days, with prostration, evidence of capillary leak, haemorrhage, shock and impaired consciousness. Please note that during the current outbreak in West Africa, haemorrhagic symptoms have been reported less frequently than fever, vomiting and diarrhoea.

§ Guinea, Liberia and Sierra Leone in Western Africa

\*\* Close contact includes:

- Having slept in the same household with a case
- Direct physical contact with the case (dead or alive) during the illness
- Direct physical contact with the (dead) case at the funeral,
- Having touched case's blood or body fluids during the illness
- Having touched case's clothes or linens
- Having been breastfed by the case (baby)

[based on WHO guidance]

### **How do I test for EVD?**

- Testing for EVD is conducted in a Physical Containment level 4 laboratory in Australia (Victorian Infectious Diseases Reference Laboratory, VIDRL, Peter Doherty Institute, Victoria).
- Where tests for EVD have been ordered, routine haematology and other tests should be minimised since blood is highly infectious.
- The primary diagnostic method is detection of Ebola virus by PCR in serum, plasma, a throat swab or urine. Serology is also available.
- In the event of a suspected case, ESR Laboratory at the NCBID should be contacted as soon as possible for further advice on testing.

### **What are the recommended infection control and biosafety measures for laboratory personnel?**

The WHO provides guidance on infection control at

[http://www.who.int/csr/bioriskreduction/filovirus\\_infection\\_control/en/](http://www.who.int/csr/bioriskreduction/filovirus_infection_control/en/).

### **Situation updates**

See the WHO website (<http://www.who.int/csr/don/en/>) for the latest information

## Map of affected areas



**Map:** Areas of West Africa affected by Ebola as of 24 July 2014 (from the CDC website <http://www.cdc.gov/vhf/ebola/resources/distribution-map-guinea-outbreak.html>, accessed 31 July 2014)

## **Background information**

### **Ebola viruses**

EVD is caused by an Ebola virus. Ebola viruses are part of the family Filoviridae, which also includes Marburg virus. Fruit bats of the Pteropodidae family are considered to be a likely natural host of the Ebola virus, with outbreaks amongst other species such as chimpanzees, gorillas, monkeys, forest antelope from time to time. Five species of ebola virus have been identified, namely Zaire, Sudan, Reston, Tai Forest and Bundibugyo, from samples collected during humans and non-human primates outbreaks since the first outbreak in the Democratic Republic of the Congo.

### **Transmission**

Ebola is introduced into the human population through close contact with the blood, secretions, organs or other bodily fluids of infected animals (often therefore through hunting or preparation of "bushmeat"). Ebola virus then spreads through person-to-person transmission via contact with the blood, secretions, organs or other bodily fluids of infected people, and indirect contact with environments contaminated with such fluids, including in healthcare settings. The risk for infection in healthcare settings can be significantly reduced through the appropriate use of infection control precautions and adequate barrier procedures. Transmission through sexual contact may occur up to seven weeks after clinical recovery. Airborne transmission, as occurs for measles or smallpox, has never been documented. Simple physical contact with a sick person appears not to be sufficient for contracting EVD. Transmission through heavily contaminated fomites is apparently possible. Traditional burial ceremonies in affected areas of Africa are a known high risk activity for transmission.

### **Symptoms and incubation period**

The onset of symptoms is sudden and includes intense weakness, muscle pain, headache, nausea and sore throat. This is followed by vomiting, diarrhoea, impaired kidney and liver function, and in some cases, both internal and external bleeding. Laboratory findings frequently include low white blood cell and platelet counts and elevated liver enzymes. The next stage is characterised by vomiting, diarrhoea, rash and malfunction of liver and kidneys. Some cases present with profuse internal and external bleeding and progress shock and to multi-organ failure. The case-fatality ratio for the Zaire strain of Ebola virus is estimated to be between 50% and 90%. The incubation period varies from 2 to 21 days.

### **Treatment**

There are no specific prophylactic (vaccine) or therapeutic (antiviral drugs) options available to treat human infections, and care is largely supportive.

### **EVD is a notifiable disease**

EVD is notifiable as a viral haemorrhagic fever under the Health Act 1956.