

Ebola Virus Disease Info for Health Care Workers

Public Health - Factsheet

What is Ebola virus disease?

Ebola virus disease (EVD) is a severe viral illness that causes hemorrhagic fever in humans and non-human primates such as chimpanzees. EVD is often fatal as it can affect the body's vascular system and can lead to significant internal bleeding and organ failure.

EVD occurs mainly in areas surrounding the rain forests in Central Africa. The first outbreak of Ebola virus disease was recorded in 1976. The most recent EVD outbreak (2014) is the largest outbreak of EVD ever documented and mainly affects the West African countries of Guinea, Liberia and Sierra Leone.

What are the signs and symptoms of Ebola virus disease?

A sudden onset of fever is usually the first symptom of Ebola, but other signs and symptoms include, tiredness, muscle aches, severe headache, red eyes, sore throat, vomiting and diarrhea that can be bloody. Symptoms start between two and 21 days after infection.

When the disease progresses, there may be a rash and bleeding (inside and outside the body) that often starts as red or purple spots on the skin, bruising, or oozing from sites of broken skin and mucous membranes such as eyes, lips and ears. Various forms of bleeding occur in about 50-60 percent of cases, but is less common in children. Ebola virus disease can cause death, but early medical care increases the chances of survival.

How is Ebola virus disease transmitted?

Ebola virus is introduced into the human population through close contact with the blood, secretions, organs or other body fluids of infected animals such as bats, monkeys, and apes in Central or West Africa.

Person-to-person transmission is by direct contact through broken skin or mucous membranes, with the blood or other body fluids (stool, urine, saliva, vomit, semen) of a person with EVD. It can also occur by contact with environmental surfaces and fomites (e.g., needles) soiled with the body fluids of a person with EVD.

Airborne transmission has not been documented, and the virus does not spread by water or, in general, by food. However, in Africa, Ebola may be spread by handling bush meat (African wild animals hunted for food).

Ebola is not transmitted from an infected person until they show signs and symptoms of the disease. People with EVD are most infectious in the later stages of their illness because viral load rises and they experience significant fluid loss due to diarrhea, vomiting and/or hemorrhage.

Because EVD is transmitted through blood, bodily fluids or tissues, or by contact with medical equipment that was used in the care of a person with EVD, there is still a serious risk of infection after the person recovers or dies. In men, semen may also still be infectious for a period of time after recovery (the duration of this period is variable).

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What is the risk of getting Ebola virus disease in Manitoba?

There has never been a confirmed case of Ebola virus infection in Manitoba or Canada. Public health risk in Manitoba due to EVD remains very low. The chance of a potential Ebola patient arriving for medical care in either primary care settings or out-patient departments is extremely low.

In other locations, health care workers have been infected while treating patients under investigation for, or who are considered as being probable or confirmed cases of EVD. *This has occurred through close contact with patients when infection prevention and control precautions were not strictly practiced.*

See: www.gov.mb.ca/health/publichealth/cdc/protocol/ebolainfectionguidelines.pdf

How is Ebola virus disease diagnosed?

Laboratory testing of an appropriate clinical specimen (e.g., blood, serum, urine, throat secretions) is required to confirm EVD. Testing for Ebola virus is only performed at the Public Health Agency of Canada's National Microbiology Laboratory.

Prior to obtaining a specimen, an Infectious Disease Physician must be consulted as other diseases may need to be considered. These may include: malaria, typhoid fever, shigellosis, cholera, leptospirosis, plague, rickettsiosis, relapsing fever, meningitis, hepatitis and other viral hemorrhagic fevers

How is Ebola virus disease treated?

The treatment for EVD is supportive and is directed at maintaining renal function and electrolyte balance, and at combating

hemorrhage and shock. Admission to an intensive care unit may be required. There is no effective antiviral treatment for EVD.

See: www.gov.mb.ca/health/publichealth/cdc/protocol/ebola.pdf

How is Ebola virus disease prevented?

There is no licensed vaccine currently available to prevent EVD. Rigorous adherence to recommended infection prevention and control practices is required when managing a person with EVD to prevent spreading the infection to others. Travel to countries experiencing EVD outbreaks should be avoided.

What is the average period of sickness in this outbreak?

No data is currently available on the average period of sickness during the current outbreak. Studies conducted in other outbreaks have shown the average time from symptom onset to death is nine days (DRC, 1995) or eight days (Uganda, 2000). It's important to remember that these numbers are averages, based on previous outbreaks of EVD.

Do survivors have life-long immunity to Ebola?

Studies of survivors have shown presence of antibodies for up to 10 years. However, it is not known whether these people remain immune for life, or if they can be re-infected with a different strain of the Ebola virus.

How does Ebola virus disease affect pregnant women or nursing mothers?

According to published case series, pregnant women with EVD are at greater risk of miscarriage and serious bleeding, which means

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their EVD- related mortality is slightly higher than in the general population.

If a nursing mother develops EVD, the most important recommendation is to immediately stop breastfeeding and remove the infant from the mother's care. Those designated to care for the child while the mother receives treatment must be trained and prepared for the management of suspected cases, since the infant is regarded as a contact. If the infant develops symptoms caregivers should proceed immediately as in any other suspected case.

How has Manitoba prepared for Ebola virus disease?

Manitoba is well-prepared in the rare event Ebola comes to the province. Manitoba Health, Healthy Living and Seniors (MHLS) is monitoring the ongoing EVD outbreak in West Africa, and is actively working with the Public Health Agency of Canada, Regional Health Authorities and other partners.

Travelers from countries affected by Ebola do not arrive directly in Manitoba. They are screened at major airports in other countries and again when arriving in Canada. As part of enhanced border measures implemented November 10, 2014, by the Government of Canada, all travelers from Ebola outbreak affected countries:

- Will either be immediately isolated and sent to hospital for a medical examination (if symptomatic); or
- Will be required to report to a local public health authority and be monitored for up to 21 days by local public health.

Regional Public Health is now aware of any travelers arriving from affected countries and is monitoring them. Should these individuals

develop signs and symptoms consistent with EVD, arrangements have been made for their transport by Emergency Medical Services to Emergency Rooms across the province for assessment and to Health Sciences Centre for EVD testing if required.

MHLS has developed protocols and guidelines for health care providers, and various fact sheets and documents for reference by the public and health care staff. These documents and other EVD resources for Manitoba can be accessed at:

www.gov.mb.ca/health/publichealth/diseases/ebola.html .

Where can I find more information on Ebola virus disease?

For more information on Ebola virus disease, including a list of countries with localized or isolated transmission, please visit:

www.gov.mb.ca/health/publichealth/diseases/ebola.html .