



Outbreak in West Africa

- This is the largest Ebola epidemic in history. Reports as of Dec. 2, 2014:
 - 17,111 cases
 - 6,055 deaths
- CDC's response is the largest international outbreak response in history.
- On August 8, the World Health Organization (WHO) declared the current Ebola outbreak a Public Health Emergency of International Concern – reaffirmed in October.
- Underscores the need for a coordinated international response to contain the spread of Ebola.

Vermont Department of Health

WEST AFRICA Ebola Outbreak



Likely host = bats

The 2014 Ebola epidemic is the largest in history and is affecting multiple countries.

1 in 2 people who get Ebola in this outbreak have died.

How do you get the Ebola virus?

Direct contact with

- 1** Body fluids of a person who is sick with or has died from Ebola. (blood, vomit, pee, poop, sweat, semen, spit, other fluids)
- 2** Objects contaminated with the virus (needles, medical equipment)
- 3** Infected fruit bats or primates (apes and monkeys)

Early Symptoms

Ebola can only be spread to others after symptoms begin. Symptoms can appear from 2 to 21 days after exposure.

- Fever
- Headache
- Diarrhea
- Vomiting
- Stomach pain
- Unexplained bleeding or bruising
- Muscle pain

When is someone able to spread the disease to others?

Ebola only spreads when people are sick. A patient must have symptoms to spread the disease to others.



After 21 days, if an exposed person does not develop symptoms, they will not become sick with Ebola.

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U.S. Department of Health and Human Services
Centers for Disease Control and Prevention



Background on Ebola

Future estimates of cases

Outbreak challenges in West Africa

Transmission, symptoms and progression of illness

Background

Ebola is a rare and deadly disease.

- First discovered in 1976 near the Ebola River in the Democratic Republic of Congo.
- Outbreaks occur sporadically in Africa.
- Historically, death rates for Ebola range from 50% to 90%.



EBOLAVIRUS OUTBREAKS BY SPECIES AND SIZE, 1976 - 2014



Future Estimates of Ebola Cases

Sept. 23 edition of *MMWR* * – CDC estimates future number of Ebola cases if current trends continue in Liberia and Sierra Leone

- Without additional interventions or changes in community behavior, CDC indicated that by Jan. 20, 2015, there will be approximately 550,000 Ebola cases in Liberia and Sierra Leone, or 1.4 million if corrections for underreporting are made.
- Cases in Liberia were doubling every 15 to 20 days, and those in Sierra Leone and Guinea were doubling every 30 to 40 days.

* *Morbidity & Mortality Weekly Report – Estimating the Future Number of Cases in the Ebola Epidemic – Liberia and Sierra Leone, 2014-2015:*



Outbreak Challenge in West Africa

Overburdened public health and healthcare systems —

- Unpaid healthcare workers
- Insufficient treatment centers, beds, medical supplies and personal protective equipment (PPE)
- Burial practices that increase risk of transmission

Transmission – How Ebola is Spread

Ebola virus is spread by direct contact (through broken skin or mucous membranes – eyes, nose, mouth) with:

- **A sick person's blood or body fluids**
urine, saliva, sweat, feces, vomit, semen
- **Contaminated objects**
like needles and syringes
- **Infected bush meat**
wild animals hunted for food in Africa

Ebola virus has been detected in breast milk, but it is not known if the virus can be transmitted through breastfeeding.

How Ebola is NOT Spread

The Ebola virus is not spread through mosquito or other insect bites.

Facts *about* **Ebola** in the U.S.

You **CAN'T** get Ebola through **AIR**



You **CAN'T** get Ebola through **WATER**



You **CAN'T** get Ebola through **FOOD** grown or legally purchased in the U.S.



You can only get Ebola from

- Touching the blood or body fluids of a person who is sick with or has died from Ebola.
- Touching contaminated objects, like needles.
- Touching infected fruit bats or primates (apes and monkeys).



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Symptoms

Signs of Ebola include fever higher than 100.4 degrees F – and symptoms such as:

- ▣ Vomiting
- ▣ Diarrhea
- ▣ Severe headache
- ▣ Abdominal pain
- ▣ Muscle pain
- ▣ Fatigue
- ▣ Unexplained bleeding

The **incubation period** – the time it takes for symptoms to develop – is 2 to 21 days (average = 8 days).

A person with Ebola is **NOT** contagious until he or she has symptoms.

Viral Load – Progression of Illness

- A person cannot spread Ebola before he or she has symptoms.
- When symptoms begin, the virus is detected in the person's body fluids, but in low amounts.
- As the person's illness progresses, the amount of virus in the body fluids increases, and that person becomes more contagious.
- When a person dies from Ebola, their body fluids still contain high levels of virus. Traditional burial practices in Africa must be changed to reduce the risk of infection.



Prevention

Public health actions to respond quickly

International, national, local collaboration

International Public Health Response

Control outbreak at the source Manage outbreak in West Africa

- Isolate and provide care for patients who are ill
- Proper infection control practices for care givers
- Contact tracing
- Monitor contacts for 21 days
- Educate people about transmission

What is contact tracing?
Contact tracing can stop the Ebola outbreak in its tracks



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Contact tracing is finding everyone who comes in direct contact with a sick Ebola patient. Contacts are watched for signs of illness for 21 days from the last day they came in contact with the Ebola patient. If the contact develops a fever or other Ebola symptoms, they are immediately isolated, tested, provided care, and the cycle starts again—all of the new patient's contacts are found and watched for 21 days. **Even one missed contact can keep the outbreak going.**



U.S. Public Health Service Response

Centers for Disease Control & Prevention (CDC) provides guidance to protect Americans from Ebola

Guidance and protocols for:

- Preparing U.S. health care facilities and EMS to safely transport and manage a person with suspected Ebola
- Monitoring health care providers and travelers who have returned from Liberia, Sierra Leone, Guinea or Mali who may have been exposed to Ebola
 - Assess the person's risk
 - Recommend level of monitoring based on the risk

Vermont Department of Health

2014 EBOLA RESPONSE CDC IN ACTION

Testing samples of suspected Ebola cases around the world.

Interviewing people who may have been in contact with Ebola patients to see if they have symptoms.

Communicating health messages in West Africa and the United States.

Educating healthcare workers in the U.S. and in West Africa.

Advising travelers how to protect their health.

Training officials in West Africa how to prevent sick travelers from getting on planes.

Working with partners at U.S. ports of entry to identify travelers who show signs of illness.

EBOLA SUPPORT STAFF

CDC's response to Ebola is the largest international outbreak response in CDC's history. **Teams are working worldwide and at home to stop this epidemic.**

www.cdc.gov/ebola

Vermont Department of Health Response



Coordinating the state's plan for a possible case of Ebola

Activated the Health Operations Center on October 20, 2014 to organize statewide Ebola preparedness –

- Brings together experts from state and local agencies including hospitals and EMS, to plan for quarantine, case investigations, communication, management of exposed pets, medical waste management, fatalities and funeral home guidelines.
- Prepares health care providers to safely identify, isolate, transport and treat any person with Ebola.

What the Health Department is Doing

Draft guidance and plans for Vermont preparedness, response and communication about Ebola –

- Health advisories and all-hospital calls
- Active post-arrival monitoring of travelers from West Africa
- Quarantine management
- Pre-hospital/EMS/9-1-1 guidance for suspected Ebola patient
- Specimen collection instructions (UVM Medical Center & Dartmouth-Hitchcock Medical Center)
- Inter-facility transportation guidelines for symptomatic patients
- Case management
- Management of exposed pets
- Medical waste management plan
- Fatality management
- Funeral home guidelines

Communication



Objectives:

- Vermonters understand the facts about Ebola: how the virus is spread and not spread, and that risk for spread of Ebola in the U.S. is very low.
- Misinformation, rumors or stigmatizing messages are counteracted with facts.

Ebola: What you need to know if you live in the U.S.

Ebola is a serious disease. It can often be deadly to humans. Because of this, many people are concerned about Ebola. However, if you live in the United States, it's very unlikely that you will be infected with the disease.

What is Ebola? Where does it come from?

Ebola is a disease that is caused by a virus. The virus is believed to be spread to people by wild animals. In humans, Ebola can be spread from a person who has symptoms to another person.

Ebola first appeared in 1976 in two outbreaks in Africa. Since then, there have been other outbreaks of Ebola in Africa.

In 2014, a serious Ebola outbreak was detected in West Africa, causing thousands of deaths. The disease spread beyond Africa when sick people traveled to other countries and brought the disease with them.



Image courtesy CDC Public Health Image Library, Frederick Murphy

How does Ebola spread between people?

Image courtesy CDC

Facts about Ebola in the U.S.	You can't get Ebola through air
You can't get Ebola through water	You can't get Ebola through food

Ebola is spread by direct contact – such as through broken skin or through your mouth, eyes or nose – with the body fluids of a person who is sick with the disease and has symptoms.

Objects with body fluids on them, such as needles, can also spread Ebola. Body fluids include blood, vomit, feces, saliva, semen, sweat and breast milk.

Ebola is not spread through the air or by water, according to the Centers for Disease Control and Prevention. It is not spread by food legally sold in the U.S. You can't catch Ebola from mosquitoes or other insects.

When Ebola is spread, it's often among those who have close contact with a sick person, such as their family. Health workers can also get Ebola while caring for patients with the disease.

You can only catch Ebola from people who are infected and have symptoms.

I live in the United States. Am I at risk for Ebola?

The risk of catching Ebola in the U.S. is very low. Few people have ever become infected with Ebola while in the United States. In fact, as of October 2014, only two people had become infected with Ebola while in America. They were both health workers who had cared for a sick patient who had traveled from Africa, where he caught the disease.

Another reason that you are unlikely to be at risk for Ebola is the U.S. health system. Unlike many countries in Africa, the U.S. has a strong public health network. This network works to detect dangerous diseases. It also helps prevent them from spreading. The U.S. has one of the world's most advanced health care systems.

Communication

ATTENTION

Objectives:

- Vermonters understand the state's plan in the event a person with suspected Ebola presents to a health care facility or hospital.



Monitoring Returning Travelers

What's the difference?

- **Active monitoring** – Travelers must report to a Health Department representative their temperature and the presence or absence of other possible symptoms of Ebola.
- **Direct active monitoring** – Public health representatives directly observe traveler being monitored at least once a day, review symptoms and check temperature.

What can you do?



- Educate yourself, family and friends about how Ebola is spread and how it does not spread. Counteract misinformation and rumors with facts.
- Prevent the spread of infectious diseases in your community by getting vaccines, washing hands often and well, and staying home and away from others when you're feeling sick.
- Understand the devastating impact of Ebola on West Africa. If you wish, donate to a credible organization to help control the current outbreak.

Thank you.

If you have questions about Ebola:

healthvermont.gov - or - dial

