

INFORMATION ABOUT EBOLA VIRUS DISEASE (EBOLA)

DATE: OCTOBER 13, 2014

WHAT IS EBOLA?

Ebola is a severe, often fatal disease in humans and some animals. It is caused by an infection with a virus (Ebola Virus or EBOV).

WHAT IS THE SITUATION IN AFRICA CURRENTLY?

West Africa is currently experiencing the largest Ebola outbreak in history. The outbreak is getting worse, but the CDC and other US agencies and international partners are taking active steps to respond to this rapidly changing situation.

ARE THERE ANY PEOPLE WITH EBOLA IN THE US OR COLORADO?

As of October 13, 2014, no one in Colorado has been reported to have Ebola.

The first imported case of Ebola was confirmed in the US in Dallas, Texas on September 30, 2014. The patient had traveled to Dallas, Texas from West Africa. The patient did not have symptoms when leaving West Africa, but developed symptoms approximately five days after arriving in the United States. The patient was not treated as a possible Ebola case when he first sought care at the emergency room on Sept. 25, but returned to the hospital by ambulance on Sept. 28 where he was put in isolation at Texas Health Presbyterian Hospital of Dallas when Ebola was suspected. Household contacts of the patient were first quarantined in their apartment, then relocated to a separate residence on October 3 to be monitored for symptoms for a 21-day period. A CDC team of experts worked with local public health staff to identify additional people who may have had close contact with the ill person and to monitor them for signs of infection. Unfortunately, despite intensive efforts by the medical team, the patient passed away on October 8, 2014.

On October 12, 2014, the Centers for Disease Control and Prevention confirmed that a nurse who had treated the now-deceased patient tested positive for Ebola. The nurse was admitted to the same hospital as the first patient, Texas Health Presbyterian Hospital of Dallas, and as of October 13, 2014 is clinically stable. The CDC considers it most likely that the nurse's infection resulted from a breach in protocol, although a specific breach has not yet been identified. A close contact of the nurse has been proactively placed in quarantine, and other health worker contacts are being monitored for fever. As of October 13, 2014, no other contacts of either patient have tested positive for Ebola.

Three American medical relief workers had previously been infected with the Ebola virus while providing health care in Liberia. Two were also transported to a hospital in Atlanta, GA, and one to a hospital in Nebraska. All have been released from the hospital after laboratory testing confirmed that they no longer had Ebola virus in their blood. The CDC has advised the hospital

that there is no public health concern with their release and that they do not pose a risk to household contacts or to the public.

More recently, a photojournalist who was part of an NBC news team in Liberia was also diagnosed with Ebola and returned to the U.S. to be hospitalized in Nebraska on October 5. The rest of the news team is under mandatory isolation for 21 days.

Other persons, such as aid workers, may continue to be evacuated to the U.S for treatment. Other travelers from West Africa who later become ill may be identified here and be hospitalized in the U.S.

Even a single case of Ebola diagnosed in the United States raises concerns. Knowing that such cases have occurred, medical and public health professionals across the country have been preparing to respond. CDC and public health officials in Texas are taking precautions to identify people who have had close personal contact with the deceased patient or the infected nurse, and health care professionals have been reminded to use meticulous infection control at all times.

IS THERE A DANGER OF EBOLA SPREADING IN THE US?

Ebola is not spread through casual contact; therefore, the risk of a large outbreak in the U.S. is very low, but sporadic imported cases with transmission to close contacts may occur. We know how to stop Ebola's further spread: by identifying and isolating all cases; and by tracking people in close contact with the ill person and monitoring them to see if they develop symptoms.

WHAT IS BEING DONE TO STOP ILL PERSONS FROM GETTING ON A PLANE?

IN WEST AFRICA

CDC's Division of Global Migration and Quarantine is working with airlines, airports, and ministries of health to provide technical assistance for the development of exit screening and travel restrictions in the affected areas. This includes:

- Assessing the ability of Ebola-affected countries and airports to conduct exit screening,
- Assisting with development of exit screening protocols,
- Training staff on exit screening protocols and appropriate PPE use, and
- Training in-country staff to provide future trainings.

DURING TRAVEL

CDC works with international public health organizations, other federal agencies, and the travel industry to identify sick travelers arriving in the United States and take public health actions to prevent the spread of communicable diseases. Airlines are required to report any deaths onboard or ill travelers meeting certain criteria to CDC before arriving into the United States, and CDC and its partners determine whether any public health action is needed. If a traveler is infectious or exhibiting symptoms during or after a flight, CDC will conduct an investigation of exposed travelers and work with the airline, federal partners, and state and local health departments to notify them and take any necessary public health action. When CDC receives a

report of an ill traveler on a cruise or cargo ship, CDC officials work with the shipping line to make an assessment of public health risk and to coordinate any necessary response.

IN THE US

CDC has staff working 24/7 at 20 Border Health field offices located in international airports and land borders. CDC staff are ready to investigate cases of ill travelers on planes and ships entering the United States. Screening efforts at five of the busiest U.S. airports have also been stepped up for flights arriving in the U.S. from the affected West African countries.

CDC works with partners at all ports of entry into the United States to help prevent infectious diseases from being introduced and spread in the United States. CDC works with Customs and Border Protection, U.S. Department of Agriculture, U.S. Coast Guard, U.S. Fish and Wildlife Services, state and local health departments, and local Emergency Medical Services staff.

Relatively few of the approximately 350 million travelers who enter the United States each year come from these countries. Most people who become infected with Ebola are those who live with or care for people who have already caught the disease and are showing symptoms. The recent case that occurred in Dallas has made hospitals and healthcare providers in the United States much more prepared for the possibility that a traveler could get Ebola and become ill after entering the U.S.

THE WORLD HEALTH ORGANIZATION HAS DECLARED THE EBOLA OUTBREAK TO BE A PUBLIC HEALTH EMERGENCY. IS COLORADO CONSIDERING DOING THE SAME?

No, Colorado is not declaring a public health emergency at this time (10/3/2014) since there are no cases of Ebola in the state.

WHY HAS THE CDC DECLARED AN EMERGENCY FOR EBOLA?

The CDC is on Level 1 emergency activation, which is the highest possible. The reason for this is so that CDC can devote a large part of its resources to combating the spread of Ebola in West Africa, as well as help the US prepare for patients with Ebola in the US.

WHAT CAN WE EXPECT IN THE NEAR FUTURE?

It is critical for the U.S. to join with other nations to help control the Ebola outbreak in West Africa, as that is the only long-term protection for the U.S and the rest of the world. Failure to do so would worsen the current human tragedy in developing nations, as well as lead to severe economic and supply chain impacts on the developed world. But bringing an end to the Ebola outbreak in West Africa will take months, even in the best case scenario. Health care providers here in CO must continue to follow preventive practices so they do not come in contact with blood or body fluids of patients who might have Ebola. They must also ask sick patients about recent travel to make sure they can rule out Ebola. The Colorado State Department of Health and the Larimer County Department of Health and Environment will continue to monitor the outbreak in West Africa, work with partners such as our local Emergency Healthcare Coalition and the CDC, and provide updates to the public and health care providers.

EBOLA SIGNS / SYMPTOMS / SEVERITY

WHAT ARE THE SIGNS AND SYMPTOMS OF THIS VIRUS IN PEOPLE?

Ebola's earliest symptoms are non-specific, and commonly occur with many diseases:

- Fever over 101.5 F, chills
- Headache
- Weakness and malaise (generalized feeling of illness)
- Muscle aches
- Loss of appetite

Around the third to fifth day of illness, gastrointestinal and other symptoms may appear:

- Severe watery diarrhea
- Rash
- Chest pain
- Nausea and vomiting
- Red eyes (conjunctivitis)
- Shortness of breath
- Stomach/abdominal pain
- Bleeding inside and outside of the body
- Confusion
- Hiccups
- Seizures

HOW SEVERE IS ILLNESS ASSOCIATED WITH EBOLA?

Ebola is a severe, often fatal disease. Some people who become sick with Ebola are able to recover, while others do not. The reasons behind this are not fully understood. Recovery from Ebola is largely dependent on a patient's development of an immune response. Evidence shows that people who recover from Ebola infection develop antibodies that last for at least 10 years, possibly longer.

EBOLA VIRUS TRANSMISSION / INFECTIVITY

IS EBOLA CONTAGIOUS? HOW DOES IT SPREAD?

Yes, Ebola spreads from person to person. You can get Ebola from direct contact (through broken skin or mucous membranes) with the body fluids of someone who is currently sick with (has symptoms), or has died from, Ebola. You can also get Ebola from direct contact (through broken skin or mucous membranes) with objects that have come in contact with the body fluids of someone sick with Ebola, such as needles. While Ebola virus does not persist in the air or travel through HVAC systems, it can be found in droplets of body fluids that may spray short distances when someone vomits, coughs, or undergoes certain medical procedures like having a breathing tube inserted. Healthcare providers wear mask and face shields to prevent droplets from patients going into their eyes, nose, or mouths. What health professionals call "droplet transmission" of a disease is different than what they call "airborne transmission." (Measles and TB are airborne infections that primarily spread through the air.) These terms can cause confusion for the layperson who may consider droplets as "airborne" spread. The current scientific evidence indicates that Ebola virus may be spread by droplets, but there is no convincing evidence that the virus is becoming "airborne" (as scientists use the word). The length of time that these fallen droplets may persist on objects in the environment and remain infectious is unclear. It may be from minutes to several days.

IF SOMEONE SURVIVES EBOLA, CAN HE OR SHE STILL SPREAD THE VIRUS?

Once someone recovers from Ebola, they can no longer spread the virus. However, Ebola virus has been found in semen for up to three months. People who recover from Ebola are advised to abstain from sex or use condoms for three months.

WHAT IS THE INCUBATION PERIOD FOR EBOLA?

The incubation period is the time from when someone is exposed until they start to show symptoms. According to the CDC, the incubation period for Ebola is 2-21 days, though 8-10 days is most common. If symptoms start later than 21 days after exposure, the patient likely does not have Ebola infection.

WHO IS AT HIGHEST RISK FOR GETTING INFECTED WITH EBOLA?

During outbreaks of Ebola, those at highest risk include health care workers and family and friends who may have unprotected, direct contact with an infected person.

HOW CAN I PROTECT MYSELF FROM GETTING EBOLA?

If you must travel to an area affected by the 2014 Ebola outbreak, protect yourself by doing the following:

- Wash hands frequently or use an alcohol-based hand sanitizer.
- Avoid contact with blood and body fluids of any person, particularly someone who is sick.
- Do not handle items that may have come in contact with an infected person's blood or body fluids.
- Do not touch the body of someone who has died from Ebola.
- Do not touch bats and nonhuman primates or their blood and fluids and do not touch or eat raw meat prepared from these animals.
- Avoid hospitals in foreign countries where Ebola patients are being treated. The U.S. Embassy or consulate is often able to provide advice on medical facilities.
- Seek medical care immediately if you develop fever (temperature of 101.5°F/ 38.6°C) and any of the other following symptoms: headache, muscle pain, diarrhea, vomiting, stomach pain, or unexplained bruising or bleeding.
 - Limit your contact with other people until and when you go to the doctor. Do not travel anywhere else besides a healthcare facility.

TREATMENT

WHAT IS THE TREATMENT FOR PEOPLE WITH EBOLA?

There is no specific medicine that cures people infected with Ebola. People with Ebola will receive medical care such as fluids, oxygen, blood transfusion and other medicines as needed. Early treatment is best. Some experimental medications are being used on patients in the U.S. but their effectiveness is unknown.

IS THERE A VACCINE FOR EBOLA?

No, there is no licensed vaccine to prevent Ebola. Some experimental vaccines are beginning to be tested.

WHAT EXPERIMENTAL TREATMENTS HAVE BEEN USED ON EBOLA PATIENTS?

ZMapp, an experimental drug for use with people infected with Ebola virus, has not yet been tested in humans for safety or effectiveness. Two American relief workers received the treatment and have since recovered. An infected patient in another country also received ZMapp and later died from the illness. Supplies of ZMapp have been exhausted at this time, but increasing the capacity to make more of it is underway.

The Liberian patient in Dallas and the NBC cameraman were treated with the experimental drug, brincidofovir. A third aid worker received the experimental drug TKM-Ebola. Both the aid worker and the cameraman also received a transfusion from one of the recovered Ebola patients, but the patient in Dallas could not receive this treatment because of an incompatible blood type. It is unclear what benefit these experimental drugs have had on patient outcomes.

WHAT IS COLORADO DOING IN RESPONSE TO THIS SITUATION?

The risk of Ebola being spread in Colorado is extremely low. Nevertheless, our local health departments and the state health department are working with hospitals, health care providers, emergency medical services, colleges and universities, church mission groups, and others to communicate information about where Ebola is occurring, asking about recent travel, Ebola's signs and symptoms, how to find CDC resources with the latest information.

WHAT WOULD WE DO IF THERE WAS A CASE OF EBOLA IN COLORADO?

Systems are in place to identify suspected cases of Ebola. The person would be isolated and cared for at a hospital. Hospitals are well-equipped to care for a person with Ebola by following appropriate infection control procedures. Public health workers from the County or State Health Department would investigate close contacts of any patient, assess them for symptoms, and

monitor them for 21 days after exposure to make sure they did not become ill. This kind of investigation is done for many reportable diseases.

HOW ARE COLORADO'S HOSPITALS EQUIPPED TO DEAL WITH EBOLA?

Hospitals in Colorado are well equipped to care for a person with possible Ebola by appropriate infection control procedures. Hospital staff follow procedures to prevent infections such as wearing gloves, gowns, masks, and other protective gear when caring for patients so that they don't come in contact with blood or other body fluids. These same procedures would be very carefully followed if they were caring for a patient with Ebola in the United States.

EBOLA TRAVEL ISSUES AND CONCERNS

CAN I TRAVEL TO COUNTRIES AFFECTED BY THE OUTBREAK?

The CDC urges all US residents to avoid nonessential travel to Liberia, Guinea, and Sierra Leone due to this current outbreak of Ebola. In addition, the CDC recommends travelers to Nigeria take additional steps to protect themselves and be on alert/avoid high-risk exposure to Ebola.

More information can be found on the CDC website at <http://wwwnc.cdc.gov/travel/notices/>.

If you are planning to travel outside of the US, talk with your doctor, or make an appointment at a travel medicine specialist before leaving. After you return to the US (assuming you had no contact with someone infected with Ebola), if you get a fever, headache, joint and muscle aches within three weeks of returning from your trip, call your doctor right away. They will let you know if you need to come in for a visit. Be sure to tell your doctor where you traveled, what activities you took part in, and if you had contact with anyone who had Ebola.

If you were exposed to Ebola during your trip, call your doctor even if you do not have symptoms. Your doctor should evaluate your exposure level and any symptoms and consult with public health authorities to determine whether actions, such as medical evaluation and testing for Ebola, monitoring, or travel restrictions are needed.

Even if not exposed to Ebola, travelers returning from Guinea, Liberia, Nigeria, and Sierra Leone are advised to take the following steps:

- Monitor your health for 21 days. During the time you are monitoring your health, you can continue your normal activities, including work.
- Seek medical care immediately if you develop fever and additional Ebola symptoms like severe headache, muscle pain, vomiting, diarrhea, stomach pain, or unexplained bleeding or bruising. Tell the doctor about recent travel and symptoms before going to the office or emergency room. When possible, calling in advance or notifying ambulance or emergency responders will help the doctor provide care and protect others from exposure.

- If you get symptoms of Ebola, it is important to stay apart from other people and to call your doctor right away.

SHOULD I AVOID CONTACT WITH PEOPLE THAT HAVE RECENTLY TRAVELED TO WEST AFRICA?

No, you do not need to avoid contact with someone who has recently traveled to a country where an outbreak is occurring. Ebola is spread through direct contact with blood or body fluids and is only spread when a person is showing symptoms. Although there are no Ebola cases in Colorado, it is always a good idea to avoid contact with another person's blood or body fluids.

If a person who recently traveled to West Africa has symptoms of Ebola, such as fever, they should contact their health care providers and tell them about their travel history. Their health care provider will evaluate their risk for Ebola as well as other more common infections in West Africa, such as malaria and typhoid fever.

ADDITIONAL EBOLA INFORMATION/RESOURCES

WHERE CAN I LEARN MORE?

The CDC website has the most updated information about Ebola and the current outbreak. The web address is: <http://www.cdc.gov/ebola/>