



**COUNTY OF ORANGE
HEALTH CARE AGENCY**

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**PUBLIC HEALTH
EPIDEMIOLOGY & ASSESSMENT**

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Ebola Update

The first case of Ebola Virus Disease (EVD) diagnosed in the United States was confirmed on September 30, 2014 in Dallas, Texas. The risk of an Ebola outbreak in the United States remains low. Orange County Health Care Agency is working with community partners, including healthcare facilities, to assure that our community is prepared to safely care for and respond to a suspect case. **Health care providers should remember to obtain a travel history for any patients with febrile illness, and be familiar with Ebola's clinical presentation and infection control requirements.**

The first imported case was a 42 year old male who had a history of close contact to a known case of Ebola in West Africa prior to visiting the United States, then developed symptoms several days after arrival in the U.S. He passed away on October 8. Local public health officials in Dallas have identified 10 contacts with definite exposure and 38 possible contacts and are monitoring them for illness for 21 days after last exposure. No secondary cases have been identified thus far.

The current Ebola epidemic is the largest in history. From March 24, 2014, through October 5, 2014, there have been 8,033 total cases (4,461 were laboratory-confirmed) and 3,865 total deaths reported. Widespread disease continues to occur in Guinea, Liberia, and Sierra Leone. Localized transmission occurred in Nigeria and a travel-associated case occurred in Senegal, though these events appear to have been contained.

Clinical Presentation

Ebola's incubation period averages 8 to 10 days, but can range from 2-21 days. Ebola illness is sudden in onset. Initial symptoms include fever of greater than 38.6°C or 101.5°F, along with additional symptoms which can include severe headache, muscle pain, vomiting, diarrhea, and abdominal pain. Hemorrhage such as epistaxis, hematemesis, or hematuria occurs in approximately 25% of patients. Death results from systemic inflammatory response syndrome leading to multiorgan system failure.

Providers should contact Orange County Public Health immediately at 714-834-8180 (714-628-7008 after hours) upon identifying any patient with suspect EVD.

Orange County Public Health can assist with assessment and testing of any case meeting the CDC-defined criteria for a Person Under Investigation, which includes:

1. Clinical criteria:
 - a. Fever of greater than 38.6 degrees Celsius or 101.5 degrees Fahrenheit, and
 - b. Additional symptoms such as severe headache, muscle pain, vomiting, diarrhea, abdominal pain, or unexplained hemorrhage

AND

2. Epidemiologic risk factors within the past 21 days before the onset of symptoms, such as:
 - a. Contact with blood or other body fluids or human remains of a patient known to have or suspected to have EVD or

- b. Residence in—or travel to—an area where EVD transmission is active* or
- c. Direct handling of bats, rodents, or primates from disease-endemic areas.

Family and friends and healthcare workers who have had close contact with Ebola cases in West Africa are at particularly high risk for developing disease.

Laboratory Testing

The diagnostic test of choice for EVD is polymerase chain reaction (PCR) testing of the blood. The virus is generally PCR-detectable from 3-10 days after onset of symptoms. If the onset of symptoms is <3 days prior to specimen collection, a subsequent specimen will be required to completely rule-out EVD.

Testing is currently performed by a limited number of public health laboratories. When a suspect Ebola case is identified, Orange County Public Health will assist to assure appropriate transport of specimens.

For additional clinical guidance, see www.cdc.gov/vhf/ebola/hcp/index.html.

Infection Prevention and Control

Ebola is spread through direct contact with infected blood or body fluids through broken skin or mucous membranes. Virtually all body fluids can contain the virus, including blood, urine, saliva, feces, vomit, sweat, breast milk, and semen. Persons become ill after exposure to the blood or body fluids of a person who is sick with Ebola or contact with objects (such as needles and syringes) that have been contaminated with these fluids.

Patients in whom a diagnosis of Ebola is being considered should be isolated in a single room with a private bathroom. Standard, contact and droplet precautions are indicated for suspected EVD. Personal protective equipment (PPE) should include gloves, gown (fluid resistant or impermeable), eye protection (goggles or face shield) and facemask. Additional PPE is necessary if copious blood or other fluid is present in the environment, including double gloving, disposable shoe covering, and leg covering. PPE should be discarded on leaving room taking care to avoid contamination when removing.

For additional guidance for infection prevention and control for hospitalized patients with known or suspected Ebola, see www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html.

For additional information on Ebola, see www.ochealthinfo.com/ebola or www.cdc.gov/vhf/ebola/index.html.

* As of October 9, countries where EVD is active include Guinea, Liberia, and Sierra Leone.