

**This is an official**  
**CDC HEALTH ADVISORY**

Distributed via the CDC Health Alert Network  
June 19, 2015, 10:30 EDT (10:30 AM EDT)  
CDCHAN-00381

## **Clinical Considerations for the Evaluation of Ill Travelers from Liberia to the United States**

**Summary:** *CDC recommends that healthcare providers consider not only Ebola virus disease (EVD), but also other much more likely infectious diseases, including malaria, when evaluating ill travelers from Liberia to the United States. Signs and symptoms of EVD are non-specific and overlap with many other more prevalent infectious diseases in West Africa. For any patient returning from West Africa and presenting with non-specific signs and symptoms consistent with EVD, providers should use clinical judgment, taking into account the patient's epidemiological history for management, diagnostic testing, and treatment and coordinate healthcare as needed with the state or local health department to ensure that these patients get appropriate care without delay. The rapid identification of the cause of an acute illness in a Person Under Investigation (PUI) enables rapid treatment and resolution of symptoms.*

### **Background**

Travelers from Liberia are at extremely low risk of exposure to Ebola virus at this time. For more than two months, there have been no cases of Ebola virus disease in Liberia. On May 9, 2015, the World Health Organization (WHO) declared the end of the EVD outbreak in Liberia after 42 days (two incubation periods) had passed since the last EVD patient was buried. It has been more than three months since the last case in the border regions between Liberia, Sierra Leone, and Guinea.

CDC changed the country classification for Liberia on May 13, 2015, to a country with former widespread Ebola virus transmission and current, established control measures. CDC and other international partners continue to support Liberia and neighboring countries in protecting their borders through training and technical assistance. Border officials in Liberia are trained to screen and identify persons with symptoms consistent with EVD and to act quickly and safely to prevent further movement or transmission, including isolating sick travelers and linking them to care. Public health officials in border communities are trained to coordinate contact investigations with counterparts across the border.

Liberia now has a stronger surveillance and response system in place for suspected EVD cases, and the country remains vigilant in its efforts to stay at zero cases of EVD. Liberia is prepared to handle future EVD cases, should they arise, through:

- Effective surveillance
- Integrated laboratory testing capacity
- Sustained capacity to rapidly triage, isolate, treat, and manage suspect EVD cases
- Cross-border communication, screening, investigation, and information sharing
- Active and on-going dead body swabbing
- A prevention program to reduce the potential risk of sexual transmission of Ebola virus from survivors to susceptible partners

### **Recommendations**

As of May 13, 2015, patients who have only traveled to Liberia in the previous 21 days are in the low (but not zero) risk category for EVD, and should be evaluated for the possibility of other illnesses, based on a complete travel, exposure and health history. The signs and symptoms of Ebola virus disease are non-specific, both in the early and advanced clinical course. Because EVD is very unlikely, especially in persons without direct contact with the blood or body fluids of a symptomatic EVD patient or direct contact with the body of a person who died of EVD, other more common conditions should be considered.

- Because no cases of EVD among travelers with low (but not zero) risk of exposure who have been in a country with former widespread transmission in the previous 21 days have been documented, other more common acute conditions consistent with the signs and symptoms should be considered and placed higher on the list of differential diagnoses, as appropriate, and diagnostic testing conducted to confirm the diagnosis.
- Travelers with low (but not zero) risk of Ebola virus exposure returning to the United States from Ebola affected countries over the past year, who had symptoms suggestive of Ebola, most often had malaria or respiratory infections.

Common acute syndromes for which PUIs have presented for evaluation have included the following:

**1. Acute febrile illnesses without localizing signs or symptoms.** These can be manifested with or without localizing signs by acute fever (definition  $\geq 100.4$  degrees Fahrenheit for PUIs), constantly elevated temperature or intermittent fever, subjective fever, and chills. Because the causes of fever among PUIs can be systemic, bacterial, viral, or parasitic, appropriate tests for these causes should be used to establish an alternative diagnosis.

**2. Acute upper and lower tract respiratory illnesses.** These can be manifested with or without fever by sneezing, nasal congestion or stuffiness, nasal discharge, sore throat, hoarseness, eye burning or tearing, cough, malaise, muscle aches, and headache. Because the causes of the common cold, sinusitis, pharyngitis, bronchitis, and pneumonia can be bacterial or viral, appropriate tests for these conditions should be used to establish an alternative diagnosis.

**3. Acute gastrointestinal (GI) illnesses.** These can be manifested with or without fever by diarrhea, nausea, vomiting, abdominal pain, abdominal cramps, headaches, and rash. Because the causes of acute GI illness are likely to be due to enteric pathogens, hydration and empiric treatment should be considered, taking into account travel-associated etiologies. GI symptoms may also be associated with respiratory or systemic infections.

Rapid tests for malaria, influenza, respiratory, and gastrointestinal pathogens are helpful. Proper interpretation of test results is needed as these rapid tests may not have the sensitivity or specificity necessary to rule out a pathogen. Molecular assays have much higher sensitivity than rapid screening tests.

For travelers from Liberia, with signs and symptoms consistent with EVD, healthcare providers should:

- Place the patient in a private room with a private bathroom if he or she presents with signs and symptoms consistent with EVD; patient can be removed from isolation after the risk assessment is conducted and EVD is determined not to be the differential diagnosis
- Follow routine standard hospital infection control practices/protocols based on symptom presentation
- Conduct a thorough travel, Ebola virus exposure, and health history, including vaccination and prophylaxis compliance for other infectious diseases; diagnostic testing and treatment should be based on clinical judgment, taking into account the patient's EVD risk assessment
- Evaluate the patient using clinical guidance and case definitions provided by CDC
- Follow routine standard hospital infection control practices/protocols for use of patient care and other medical equipment, medical procedures, environmental infection control, and laboratory testing
- Investigate other potential causes of the patient's signs and symptoms without delay in patient care

For any patient returning from West Africa and presenting with non-specific signs and symptoms consistent with EVD, providers should use clinical judgment, taking into account the patient's epidemiological history for management, diagnostic testing, and treatment. The rapid identification of the cause of an acute illness in a PUI enables rapid treatment and resolution of symptoms.

**Note about Lassa fever:** *Healthcare providers may be concerned about a recent report of Lassa Fever, another viral hemorrhagic fever illness, in the US. However, Lassa fever is much less likely to be fatal than EVD, and there has never been person-to-person transmission of Lassa fever documented in the United States. Although Lassa fever is a viral hemorrhagic fever, the disease is different from EVD, which is responsible for the current outbreak in West Africa. Lassa fever has an estimated 1 percent death rate while that for EVD has been as high as 70 percent.*

**For more information:**

- For more information on Ebola, see <http://www.cdc.gov/vhf/ebola/>.
- For more information on viral hemorrhagic fevers, see <http://www.cdc.gov/vhf/virus-families/index.html>.
- For more information on Lassa fever, see <http://www.cdc.gov/vhf/lassa/>.
- For more information on malaria, see <http://www.cdc.gov/malaria/>.

*The Centers for Disease Control and Prevention (CDC) protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national, and international organizations.*

---

**Categories of Health Alert Network messages:**

**Health Alert** Requires immediate action or attention; highest level of importance  
**Health Advisory** May not require immediate action; provides important information for a specific incident or situation  
**Health Update** Unlikely to require immediate action; provides updated information regarding an incident or situation  
**HAN Info Service** Does not require immediate action; provides general public health information

##This message was distributed to state and local health officers, state and local epidemiologists, state and local laboratory directors, public information officers, HAN coordinators, and clinician organizations##