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## MEMORANDUM

TO: Infection Control Professionals, Infectious Disease Physicians, Laboratories, Local Health Departments, Regional Offices of Illinois Department of Public Health

FROM: Communicable Disease Control Section  
Illinois Department of Public Health

DATE: August 20, 2014

SUBJECT: Evaluating Patients for Ebola Virus Disease in Illinois

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The purpose of this document is to provide guidance to medical providers and public health practitioners on the evaluation and case management for suspect and confirmed cases of Ebola Virus Disease.

- No cases of Ebola Virus Disease (EVD) have been identified and diagnosed in the United States.
- Report immediately to the Local Health Department any patient with fever who traveled to Guinea, Sierra Leone, Liberia, or Lagos, Nigeria within 21 days of symptom onset (*See [www.cdc.gov/ebola](http://www.cdc.gov/ebola) for most up to date list of affected areas*).
  - Ask about contact with a suspected or known EVD patient, work in a laboratory or healthcare setting, physical contact with a deceased person, or attendance at a funeral when in an area affected by the EVD outbreak.
  - Isolate any patient being evaluated for possible EVD in a single room with a private bathroom, and use standard, contact, and droplet precautions.
  - Limit phlebotomy, and only perform essential diagnostic and other clinical laboratory tests.
- LHD and IDPH will determine if diagnostic testing for EVD is indicated and will assist with arranging packaging and shipment of specimens for testing.

**Please Share this Alert with All Primary Care, Family Medicine, Emergency Medicine, Internal Medicine, Pediatrics, Infectious Disease, Laboratory Medicine, Pathology, Critical Care and Infection Control Staff in Your Facility.**

### **Identifying and Reporting suspect cases of EVD to the Local Health Department**

Introduction of EVD into the US is possible. The greatest risk of imported EVD is among healthcare personnel working in affected countries caring for EVD patients or anyone with recent unprotected, direct contact with a suspected or confirmed EVD patient.

IDPH requests that all healthcare providers in Illinois hospitals and outpatient settings facilitate rapid identification of potential EVD cases as follows:

1. **Obtain a travel history in all patients presenting with fever.** Asking about travel is particularly important in acute care settings to rapidly recognize any potential communicable disease associated with an overseas outbreak. Consider using signage in your triage areas (e.g. see attached).
2. **Immediately isolate – using standard, contact and droplet precautions - patients who meet the following criteria:** Travel within 21 days of illness onset to an EVD outbreak affected area, as defined by CDC (See <http://www.cdc.gov/vhf/ebola/hcp/case-definition.html>), **AND EITHER**
  - a. Fever ( $\geq 38.6^{\circ}\text{C}$  or  $101.5^{\circ}\text{F}$ ) **OR**
  - b. Concerning illness for EVD (e.g., severe illness with thrombocytopenia and elevated transaminases)
3. **Ask patients meeting the criteria above whether they had any of the following risk exposures when in the EVD outbreak affected area and within the 21 days preceding illness onset:**
  - a. Have any contact with a person with known or suspected EVD?
  - b. Work or spend time in a health care facility where EVD patients were being treated?
  - c. Work in a laboratory where specimens from EVD patients were being analyzed or processed?
  - d. Participate in funeral rites or have other exposure to human remains in the EVD outbreak affected area?
4. **Obtain Infectious Disease Consultation**
5. **Immediately call the Local Health Department to report any patient who meets the reporting criteria (see #2 above).** Be prepared to discuss clinical information, travel history, and risk exposures (see #3 above) to help the Local Health Department (LHD) decide whether to test for Ebola virus. IDPH will provide consultation as needed. (If the LHD cannot be reached, IDPH can be contacted at 217-785-7165; during non-business hours call 217-782-7860 and ask to speak to the IDPH duty officer.)

If the patient has no exposures listed above under #3 and no concerning clinical manifestations of EVD, the Local Health Department will recommend evaluation for other causes of illness first and close monitoring of the patient for several days. Patients with no known risk exposures who remain hospitalized should be kept in isolation using standard, droplet, and contact precautions until it is determined that EVD is unlikely. For patients with a low index of suspicion for EVD who are ill enough to be hospitalized, monitor the patient in isolation until an alternative diagnosis is established and the patient is clearly improving. If the patient deteriorates or develops nosebleed, bloody diarrhea, dramatic rise in LFTs, sudden fall in platelets, clinical shock, or rapidly increasing oxygen requirements without an alternative diagnosis, consult with public health regarding testing. If the patient does not need to be hospitalized, and EVD remains under consideration as a possible diagnosis the Local Health Department will recommend voluntary isolation at home until the Local Health Department determines that EVD is unlikely. During this time, the Health Department will monitor the patient's status daily.

### **Triaging, Evaluating and Managing Suspected EVD Patients in Healthcare Settings**

*Triage.* In outpatient settings and emergency departments, healthcare personnel should routinely and immediately ask any patient presenting with fever about travel to Guinea, Sierra Leone, Liberia, or Lagos, Nigeria within 21 days of illness onset (monitor CDC website at [www.cdc.gov/ebola](http://www.cdc.gov/ebola) as list of affected

countries may change). All patients reporting fever and travel to an affected country should be masked immediately and escorted to a private room for immediate medical evaluation.

*Clinical Evaluation.* All patients should be asked detailed questions about risk exposures in an affected country, as described above in #3, above. The differential diagnosis should consider the most common causes of fever in travelers returning from sub-Saharan Africa, including malaria, acute gastroenteritis, typhoid fever, influenza and rickettsial infection. When a suspected EVD patient is reported to the Local Health Department, clinical details will be reviewed with the patient's clinicians and, if indicated, consult IDPH to determine whether Ebola virus testing is indicated.

*Routine Clinical Laboratory Testing.* Interim guidance for clinical laboratories on how to safely receive, process, test, and dispose of specimens from suspected or confirmed EVD patients is attached. In addition to this detailed guidance, IDPH reminds laboratory partners to:

- Limit phlebotomy and laboratory testing to tests essential for clinical care.
- Label all specimens to indicate that they originate from a suspected EVD patient.
- Maintain a log of all personnel handling any specimens from suspected or confirmed EVD patients, including dates and times when specimens were handled by each staff member and the identity of the patient (i.e., medical record number).

*Diagnostic testing for Ebola virus.* If testing has been approved, collect a minimum of 4 mL of whole blood preserved with EDTA, clot activator, sodium polyanethol sulfonate (SPS), or citrate in a **plastic** collection tube, and store at 4°C. <sup>1</sup> Diagnostic testing for Ebola virus is currently available at CDC. The IDPH laboratory will assist with arranging for packaging and shipping specimens for testing at CDC. Ebola virus generally is detectable in infected patients on the third day after symptom onset by real-time RT-PCR.

### **Isolation and Infection Control Principles and Practices for Suspected EVD Patients**

Patients with suspected or confirmed EVD can be managed safely using established infection control principles and precautions:

- All suspect and confirmed EVD patients should be isolated in a single room with a private bathroom that contains dedicated medical equipment. Airborne infection isolation rooms (negative pressure) are acceptable, but not required.
- Hospital personnel entering this room must use standard, contact, and droplet precautions: gloves, gown, mask, and eye protection.
- Avoid aerosol-generating procedures, such as open suctioning of airways and intubation. If intubation or other aerosol-generating procedures are required, airborne precautions are needed as well, and should be performed in an airborne infection isolation room (negative pressure). Patients with severe pulmonary disease should be placed in airborne isolation.
- Use disposable medical equipment whenever possible.
- Hand hygiene with soap and water or alcohol-based hand rubs must be performed diligently by all personnel after removing protective gear. Recommended removal procedures for PPE may be found here: <http://www.cdc.gov/vhf/ebola/pdf/ppe-poster.pdf>
- Restrict entry to a patient's room to healthcare personnel; visitors should be considered on a case-by-case basis.
- Maintain a log of all persons who have contact with the EVD patient since arrival at the facility.
- Ensure environmental services staff wear recommended personal protective equipment.

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<sup>1</sup> <http://www.cdc.gov/vhf/ebola/hcp/interim-guidance-specimen-collection-submission-patients-suspected-infection-ebola.html>

- Implement diligent environmental cleaning processes and procedures. As a precaution, selection of a disinfectant product with a higher potency than what is normally required for an enveloped virus is recommended; use EPA-registered hospital disinfectants with a label claim for a non-enveloped virus (e.g., norovirus, rotavirus, adenovirus, poliovirus) to disinfect environmental surfaces.
- Use only a mattress and pillow with plastic or other covering that fluids cannot get through. Do not place patients with suspected or confirmed Ebola virus infection in carpeted rooms and remove all upholstered furniture and decorative curtains from patient rooms before use.
- To reduce exposure among staff to potentially contaminated textiles (cloth products) while laundering, discard all linens, non-fluid-impermeable pillows or mattresses, and textile privacy curtains as a regulated medical waste.<sup>2</sup>

### **EVD Transmission and Clinical Illness**

Transmission of EVD is thought to initially occur after contact with or consumption of an infected animal, such as a bat or chimpanzee. Person-to-person spread of EVD then occurs through contact with body fluid of EVD cases either in healthcare facilities or community settings (e.g., caring for sick individuals, washing and preparing decedents for burial). EVD illness typically presents 4 to 10 days after exposure (range: 2 to 21 days), with the abrupt onset of fever, malaise, and other symptoms, such as myalgia, headache, vomiting and diarrhea. Temperatures of 39 °C to 40 °C (102.2 °F to 104 °F) and relative bradycardia are often reported early in the disease course. An erythematous, non-pruritic, maculopapular or confluent rash, often beginning on the trunk, buttocks, and upper extremities 5 to 7 days after illness onset, has been reported in roughly half of patients. Multiple foci of hemorrhage, most often observed in the conjunctiva, may also be seen and occur at the peak of illness. The most common laboratory abnormalities are thrombocytopenia, leukopenia, lymphocytopenia, with an increased percentage of neutrophils, and elevated transaminases, with aspartate aminotransferase (AST) typically greater than alanine aminotransferase (ALT).. Coagulation disorders, including disseminated intravascular coagulation (DIC), occur frequently. Renal function, generally normal in early disease, may worsen by the second week of illness, when most deaths from EVD occur. Prostration, obtundation, hypotension, renal failure, and shock herald the terminal phase of the illness. In one review, median survival from onset of illness to death was 9 days. The case fatality rate for the current outbreak has been approximately 50-60%.<sup>3,4</sup>

The EVD outbreak in Africa is rapidly evolving. Please check CDC's website regularly for accurate, up-to-date information, and call the Local Health Department about any patients for whom you suspect EVD. As always, we appreciate our partnership with clinical colleagues.

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<sup>2</sup> <http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html>

<sup>3</sup> Kortepeter MG, Bausch DG and Bray M. Basic clinical and laboratory features of filoviral hemorrhagic fever. *J Infect Dis.* 2011; 204(Suppl 4):S810-16.

<sup>4</sup> Feldmann H and Geisbert TW. Ebola haemorrhagic fever. *Lancet.* 2011 Mar 5;377(9768):849-62.



# HEALTH ADVISORY: EBOLA

## Recently in West Africa?

Watch for fever, headaches, and body aches in the next 3 weeks.

3 WEEKS						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4



If you get sick, call a doctor.

Tell the doctor where you traveled.



For more information:  
visit [www.cdc.gov/travel](http://www.cdc.gov/travel)  
or call 800-CDC-INFO.

