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DEPARTMENT OF HEALTH AND HUMAN RESOURCES
Office of the Commissioner

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Earl Ray Tomblin
Governor

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Cabinet Secretary

October 15, 2014

Ebola – Are you Prepared?

Dear Colleague:

This is my third letter to update you on Ebola. I appreciate your time and attention to this letter. The world we live in is getting smaller and nothing brings that home more than two cases of Ebola being diagnosed in the United States. As I am sure you are aware, the second case involves a nurse who was helping take care of the first patient diagnosed with Ebola. Health care workers are at high risk for contracting this disease because we take care of the ill, often putting ourselves in harm's way. Here in the United States we frequently pride ourselves on our health care system, but the diagnosis of an American nurse with Ebola contracted while taking care of an Ebola patient in an American Hospital reminds us only too well that we must be ever vigilant in the use of personal protection equipment and in the identification of possible Ebola patients and quickly place them in isolation.

With this in mind, I want to ask each of you – are you prepared? Do you know what to do if a person who has a suspected case of Ebola enters your emergency room or your office? Do you know who to call? And after you isolate the patient, how do you dispose of any contaminated personal protection equipment or other contaminated supplies? What about cleaning the space? What are you going to tell patients who inquire? How are you going to address their fears and concerns? What if they do not want to come back to your office or hospital because you managed an Ebola patient?

First, please familiarize yourself with your preparedness director at the hospital where you have privileges. Hospitals have been working on plans to address what to do if a patient presents with a suspected Ebola infection and you should be familiar with those plans. If you are unaffiliated with a hospital, please prepare yourself and your staff on the appropriate procedures to follow should a patient be identified as potentially having Ebola.

For your reference, I have attached a copy of the correct sequence for the donning of personal protection equipment (PPE) and the correct sequence for removing PPE. Strict adherence to these sequences is absolutely critical for your safety and the safety of everyone in your office or the hospital. Please share this information with others you work with, particularly those in your office.

It is also crucial that potential cases of Ebola be identified early. This is best accomplished by being familiar with the signs and symptoms of Ebola and asking the correct travel history. The signs and symptoms of Ebola include: a fever of 38.6°C or higher and may also include headache, muscle pain, nausea, vomiting, diarrhea, abdominal pain and unexplained bleeding. Travel history would include travel in the last 21 days to Sierra Leone, Guinea, Liberia, Senegal, Nigeria or the Democratic Republic of Congo. Additionally, a nurse who was working in Africa has been diagnosed in Spain with Ebola. Until this current outbreak in Africa is halted, the Ebola virus will likely be identified in other countries. It would also be important to ask if the patient had contact with anyone who had or was suspected of having Ebola or if they attended any funerals or visited any sick relatives in the hospital. Also inquire about any recent deaths in the patient's family. The Ebola virus has an incubation period of 2 to 21 days, though most symptoms occur between days 6-10. As more information becomes available we will update our website to share it with you. (<http://www.dhhr.wv.gov/bph>)

A patient is not contagious until they start to display symptoms, a fever usually being the presenting symptom. Even then, the patient may not have a viral load large enough to test positive for Ebola until after three days of symptoms. So if you have a strong suspicion and there is a likelihood of the patient having Ebola and the first test comes back negative, repeat the blood test and continue using strict contact and isolation precautions.

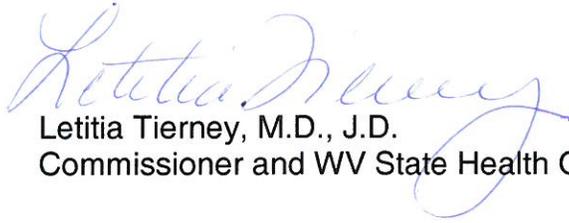
If you are suspicious of a patient having Ebola, after you institute isolation precautions and stabilize the patient, a call should be made to the CDC and to the Bureau for Public Health. The CDC number is 1-800-232-4636. Ask for the Emergency Operations Center. The Bureau for Public Health (BPH) can be reached at 1-800-423-1271, ext. 1. Both of these numbers are manned 24/7/365. Do not let anyone who came with the patient leave, even if they are not displaying any symptoms. Place them in a separate room and notify BPH. To prevent the spread of Ebola, it is critical that contact tracing start immediately. BPH will be able to advise you on a number of issues relating to a patient who is suspected of having Ebola. Our website also has many resources from environmental infection control for your office and/or hospital, how to safely draw blood and transport the same, medical waste information and many many others. Please become familiar with this web page and please visit it often as it will be updated as needed.

Additionally, I have attached to this letter a copy of the checklist created by the CDC for practitioners to use when evaluating a patient for a possible Ebola infection.

Please take the time to review the material that is being provided. You are the front line and we will all need to work together if Ebola comes to West Virginia. Preparation is our best defense.

Thank you for your attention to this important matter.

Sincerely,



Letitia Tierney, M.D., J.D.
Commissioner and WV State Health Officer

LT/jr
Enclosure



An Open Letter to All U.S. Healthcare Professionals

Dear Colleague,

As a frontline healthcare provider, you play an essential role in protecting the health and well-being of our nation. In light of the recent presentation of an Ebola-positive patient in Texas, we wanted to remind all healthcare professionals that simple steps can be taken to prevent the spread of this disease. You can contribute to our country's response by being ready to detect a potentially infected patient; protect yourself, your colleagues, and other patients from exposure; and respond with appropriate patient care. Specifically, you should be ready to:

- **Detect: Ask All Patients with Non-Specific Complaints About Recent Travel**
A travel history should be taken as early as possible in your encounter with all patients. Although the [signs and symptoms](#) of Ebola are nonspecific (e.g., fever, headache, muscle pain, weakness, vomiting, diarrhea, etc.), Ebola can be virtually eliminated from your differential by ruling out travel to the affected area.
- **Protect: Use Good Infection Control Practices**
Consistent and correct use of personal protective equipment ([PPE](#)), frequent hand washing, and proper decontamination of surfaces and equipment are key to reducing or eliminating the transmission of Ebola and other communicable diseases (e.g., HIV, influenza, hepatitis, and Enterovirus-D68).
- **Respond: Have a Plan**
All healthcare workers should know what to do when encountering a suspected Ebola patient. It is critical to know who to notify and to make that notification immediately. Remember, Ebola is a nationally notifiable disease and must be reported to local, state, and federal public health authorities.

The [CDC website](#) has many important resources for clinicians to learn more about Ebola. In addition, the CDC Emergency Operations Center (EOC) is always available at 770-488-7100 or eocreport@cdc.gov.

In the last decade, our nation has made great strides in healthcare system and public health emergency preparedness. As a result of our efforts, we are confident in our collective ability to control the spread of Ebola domestically. Thank you for your continued partnership and dedication to national health security.

Best regards,

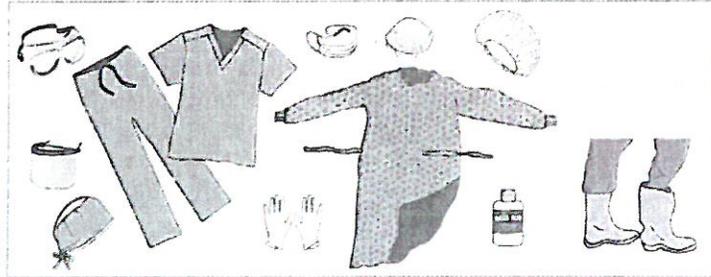
Nicole Lurie, M.D., M.S.P.H.
RADM, U.S. Public Health Service
Assistant Secretary for Preparedness and Response

Steps to put on personal protective equipment (PPE)

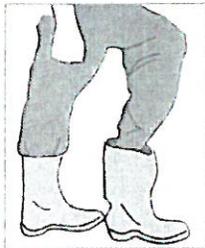
1 Always put on essential required PPE when handling either a suspected, probable or confirmed case of viral haemorrhagic fever.

2 The dressing and undressing of PPE should be supervised by another trained member of the team.

3 Gather all the necessary items of PPE beforehand. Put on the scrub suit in the changing room.



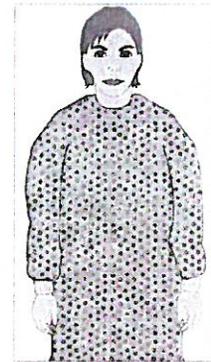
4 Put on rubber boots. If not available, make sure you have closed, puncture and fluid resistant shoes and put on overshoes.



OR, IF BOOTS UNAVAILABLE



5 Place the impermeable gown over the scrubs.



6 Put on face protection:

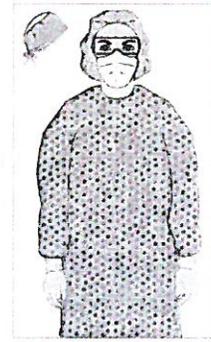
6a Put on a medical mask.



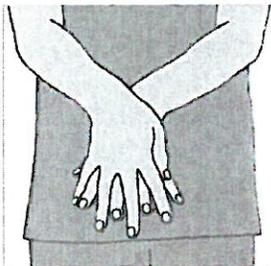
6b Put on goggles or a face shield.



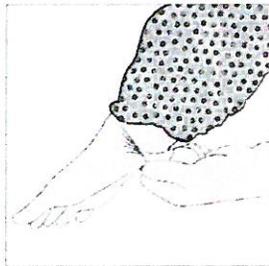
7 If available, put a head cover on at this time.



8 Perform hand hygiene.



9 Put on gloves* (over cuff).



10 If an impermeable gown is not available, place waterproof apron over gown.



While wearing PPE:

- Avoid touching or adjusting PPE
- Change gloves between patients
- Remove gloves if they become torn or damaged
- Perform hand hygiene before putting on new gloves

* Use *double gloves* if any strenuous activity (e.g. carrying a patient or handling a dead body) or tasks in which contact with blood and body fluids are anticipated. Use *heavy duty/rubber gloves* for environmental cleaning and waste management.



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Steps to remove personal protective equipment (PPE)

- 1** Remove waterproof apron and dispose of safely. If the apron is to be reused, place it in a container with disinfectant.



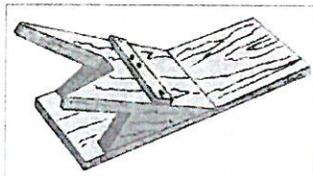
- 2** If wearing overshoes, remove them with your gloves still on (if wearing rubber boots, see step 4).



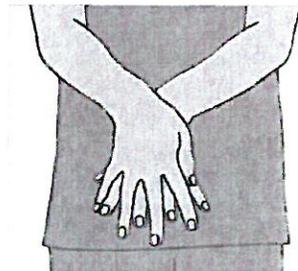
- 3** Remove gown and gloves and roll inside-out and dispose of safely.



- 4** If wearing rubber boots, remove them (ideally using the boot remover) without touching them with your hands. Place them in a container with disinfectant.



- 5** Perform hand hygiene.



- 6** If wearing a head cover, remove it now (from behind the head).



- 7** Remove face protection:

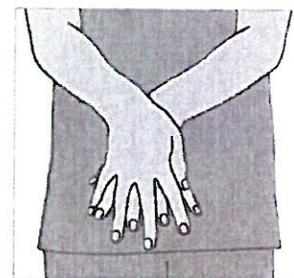
- 7a** Remove face shield or goggles (from behind the head). Place eye protection in a separate container for reprocessing.



- 7b** Remove mask from behind the head. When removing mask, untie the bottom string first and the top string next.



- 8** Perform hand hygiene.



Source: Modified from Clinical Management of Patients with Viral Haemorrhagic Fever: A pocket Guide for the Front-line Health Worker. World Health Organization, 2014



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

Checklist for Patients Being Evaluated for Ebola Virus Disease (EVD) in the United States

Upon arrival to clinical setting/triage

- Does patient have fever (subjective or $\geq 101.5^{\circ}\text{F}$)?
- Does patient have compatible EVD symptoms such as headache, weakness, muscle pain, vomiting, diarrhea, abdominal pain or hemorrhage?
- Has the patient traveled to an Ebola-affected area in the 21 days before illness onset?

Upon initial assessment

- Isolate patient in single room with a private bathroom and with the door to hallway closed
- Implement standard, contact, & droplet precautions
- Notify the hospital Infection Control Program at

- Report to the health department at 1-800-423-1271

Conduct a risk assessment for:

Ex 1

High-risk exposures

- Percutaneous (eg, needle stick) or mucous membrane exposure to blood or body fluids from an EVD patient
- Direct skin contact with skin, blood or body fluids from an EVD patient
- Processing blood or body fluids from an EVD patient without appropriate PPE
- Direct contact with a dead body in an Ebola-affected area without appropriate PPE

Low-risk exposures

- Household members of an EVD patient or others who had brief direct contact (eg, shaking hands) with an EVD patient without appropriate PPE
- Healthcare personnel in facilities with EVD patients who have been in care areas of EVD patients without recommended PPE

Use of personal protective equipment (PPE)

- Use a buddy system to ensure that PPE is put on and removed safely

Before entering patient room, wear:

- Gown (fluid resistant or impermeable)
- Facemask
- Eye protection (goggles or face shield)
- Gloves

If likely to be exposed to blood or body fluids, additional PPE may include but isn't limited to:

- Double gloving
- Disposable shoe covers
- Leg coverings

Upon exiting patient room

- PPE should be carefully removed without contaminating one's eyes, mucous membranes, or clothing with potentially infectious materials
- Discard disposable PPE
- Re-usable PPE should be cleaned and disinfected per the manufacturer's reprocessing instructions
- Hand hygiene should be performed immediately after removal of PPE

During aerosol-generating procedures

- Limit number of personnel present
- Conduct in an airborne infection isolation room
- Don PPE as described above except use a NIOSH certified fit-tested N95 filtering facepiece respirator for respiratory protection or alternative (eg, PAPR) instead of a facemask

Patient placement and care considerations

- Maintain log of all persons entering patient's room
- Use dedicated disposable medical equipment (if possible)
- Limit the use of needles and other sharps
- Limit phlebotomy and laboratory testing to those procedures essential for diagnostics and medical care
- Carefully dispose of all needles and sharps in puncture-proof sealed containers
- Avoid aerosol-generating procedures if possible
- Wear PPE (detailed in center box) during environmental cleaning and use an EPA-registered hospital disinfectant with a label claim for non-enveloped viruses*

Initial patient management

- Consult with health department about diagnostic EVD RT-PCR testing**
- Consider, test for, and treat (when appropriate) other possible infectious causes of symptoms (eg, malaria, bacterial infections)
- Provide aggressive supportive care including aggressive IV fluid resuscitation if warranted
- Assess for electrolyte abnormalities and replete
- Evaluate for evidence of bleeding and assess hematologic and coagulation parameters
- Symptomatic management of fever, nausea, vomiting, diarrhea, and abdominal pain
- Consult health department regarding other treatment options

This checklist is not intended to be comprehensive. Additions and modifications to fit local practice are encouraged.

* see http://www.cdc.gov/eid/content/pdfs/ebola/ebola_guidance_specimen_collection_submission_patient_placement_inpatient_room.html for more information

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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



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 animals, their blood or other body fluids, or their meat.



Ebola Virus Disease (EVD)

Algorithm for Evaluation of the Returned Traveler



FEVER (subjective or $\geq 101.5^{\circ}\text{F}$ or 38.6°C) or compatible EVD symptoms* in patient who has traveled to an Ebola-affected area** in the 21 days before illness onset

* headache, weakness, muscle pain, vomiting, diarrhea, abdominal pain or hemorrhage

NO

Report asymptomatic patients with high- or low-risk exposures (see below) in the past 21 days to the health department

YES

1. Isolate patient in single room with a private bathroom and with the door to hallway closed
2. Implement standard, contact, and droplet precautions (gown, facemask, eye protection, and gloves)
3. Notify the hospital Infection Control Program and other appropriate staff
4. Evaluate for any risk exposures for EVD
5. IMMEDIATELY report to the health department

HIGH-RISK EXPOSURE

Percutaneous (e.g., needle stick) or mucous membrane contact with blood or body fluids from an EVD patient

OR

Direct skin contact with, or exposure to blood or body fluids of, an EVD patient

OR

Processing blood or body fluids from an EVD patient without appropriate personal protective equipment (PPE) or biosafety precautions

OR

Direct contact with a dead body (including during funeral rites) in an Ebola affected area** without appropriate PPE

LOW-RISK EXPOSURE

Household members of an EVD patient and others who had brief direct contact (e.g., shaking hands) with an EVD patient without appropriate PPE

OR

Healthcare personnel in facilities with confirmed or probable EVD patients who have been in the care area for a prolonged period of time while not wearing recommended PPE

NO KNOWN EXPOSURE

Residence in or travel to affected areas** without HIGH- or LOW-risk exposure

Review Case with Health Department Including:

- Severity of illness
- Laboratory findings (e.g., platelet counts)
- Alternative diagnoses

EVD suspected

TESTING IS INDICATED

The health department will arrange specimen transport and testing at a Public Health Laboratory and CDC

The health department, in consultation with CDC, will provide guidance to the hospital on all aspects of patient care and management

EVD not suspected

TESTING IS NOT INDICATED

If patient requires in-hospital management:

Decisions regarding infection control precautions should be based on the patient's clinical situation and in consultation with hospital infection control and the health department

If patient's symptoms progress or change, re-assess need for testing with the health department

If patient does not require in-hospital management

Alert the health department before discharge to arrange appropriate discharge instructions and to determine if the patient should self-monitor for illness

Self-monitoring includes taking their temperature twice a day for 21 days after their last exposure to an Ebola patient

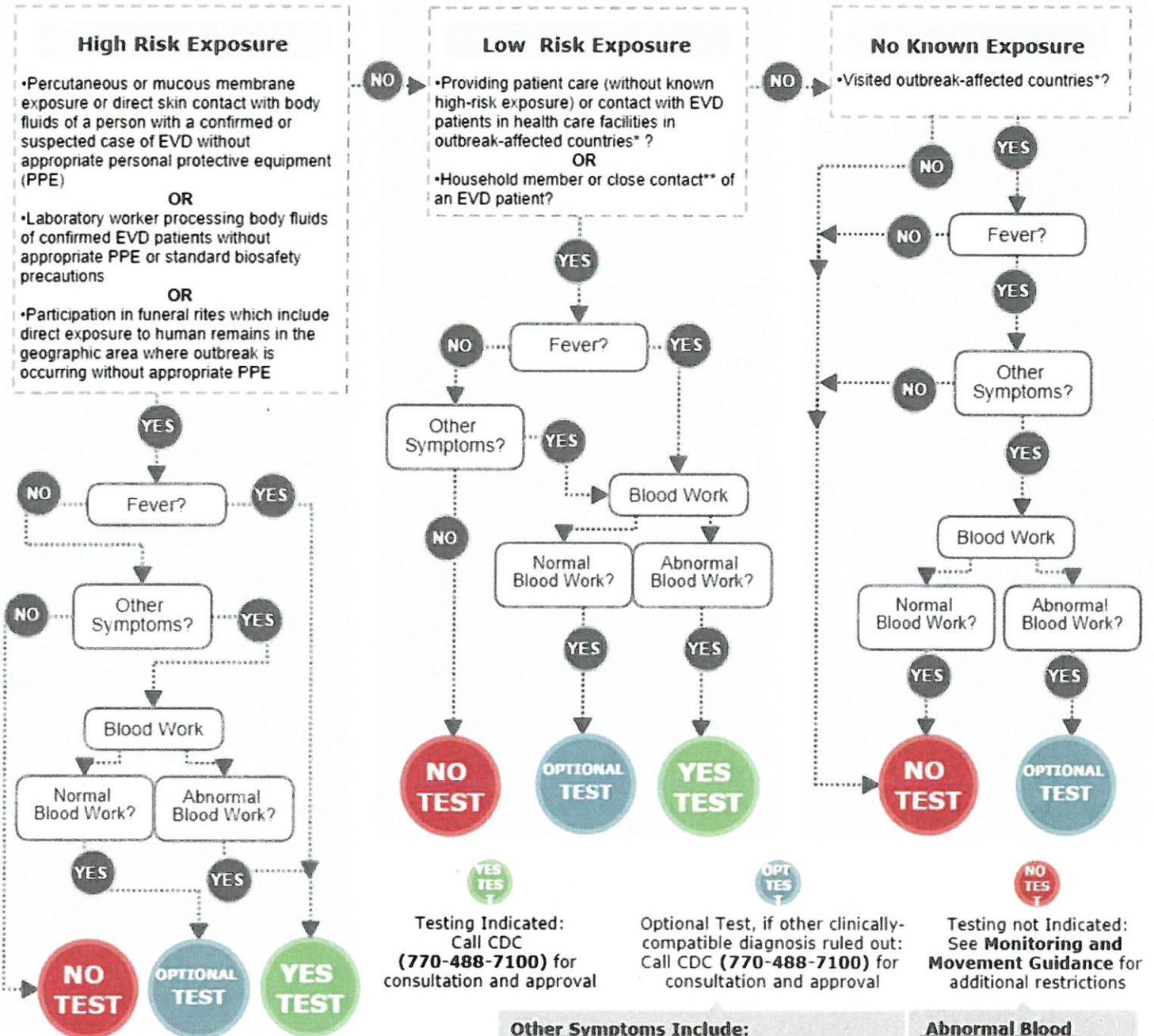


U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

** CDC Website to check current affected areas: www.cdc.gov/vhf/ebola

Decision Guide for CDC Consultation and Ebola Virus Disease (EVD) Testing

Does patient meet **ANY** of the following within 21 days before symptom onset?



DEFINITIONS

Fever:
•Defined as $\geq 101.5^{\circ}\text{F}$
(38.6°C)

Other Symptoms Include:

- Intense weakness
- Headache and sore throat
- Internal or external bleeding
- Impaired kidney and liver function
- Muscle pain
- Vomiting
- Diarrhea

Abnormal Blood Work:

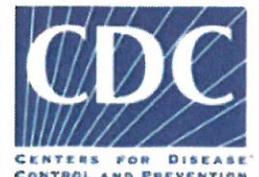
- Platelet count $< 150\text{K}$
- Prolonged PT/PTT
- AST/ALT elevation

Specimens received at CDC without prior consultation will not be tested.

Testing may be delayed if tracking information is not provided.

Note: Malaria diagnostics should be a part of initial testing because it is the most common cause of febrile illness in persons with a travel history to the affected countries.

* Outbreak updates and affected countries found at: <http://www.cdc.gov/vhf/ebola/outbreaks/guinea/index.html>
** Case definitions can be found here: <http://www.cdc.gov/vhf/ebola/hcp/case-definition.html>



+Special thanks to the Michigan Department of Community Health for their work on the decision guide