



County of San Diego

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To: Diagnostic Laboratories in San Diego County
College and University Student Health Services in San Diego County

From: Michael V Lancaster, PhD, HCLD (ABB)

Date: August 20, 2014

GUIDANCE FOR LABORATORY PROCESSING, PACKAGING, AND SHIPPING OF SPECIMENS FOR EBOLA VIRUS TESTING

Disease Overview

Ebola Virus Disease (EVD): This guidance provides an update on the EVD outbreak in West Africa and contains recommendations for local healthcare laboratories.

Outbreak Update: West Africa is currently experiencing the largest Ebola outbreak in history and the first in the region. The severity of the outbreak prompted the World Health Organization (WHO) to declare the outbreak as a Public Health Emergency of International Concern (PHEIC). The Centers for Disease Control and Prevention (CDC) and other agencies and partners, including State and local Public Health Departments are taking steps to respond to this rapidly changing situation. Ebola poses no substantial risk to the U.S. population. To date, no cases have been reported in the U.S., except for two ill healthcare workers who were evacuated from West Africa for treatment of confirmed EVD.

Ebola Disease: Ebola virus is spread through direct contact (through broken skin or mucus membranes) with bodily fluids (blood, urine, feces, saliva, vomit, and other secretions) of a person who is sick with Ebola, or with objects like needles that have been contaminated with the virus. Ebola is not spread by air or food or water. The incubation period is usually 8-10 days (range 2-21 days). Patients are contagious when symptomatic. The most common symptom of EVD is fever. Other symptoms include severe headache, joint and muscle pain, sore throat and weakness, which may be followed by diarrhea, vomiting and stomach pain. Rash, red eyes and internal and external bleeding (hemorrhaging) may also be seen. EVD is a severe, often fatal illness.

Processing Specimens

Laboratory Processing, Packaging, and Shipping of Specimens: It is expected that all laboratorians and other healthcare personnel collecting or handling specimens from a patient with suspect EVD follow established standards compliant with the [OSHA bloodborne pathogens standard](#), which encompasses blood and other potentially infectious materials. This includes wearing appropriate personal protective equipment (PPE) and adhering to engineered safeguards, for all specimens, regardless of whether they are identified as being infectious.

When a laboratory receives a specimen or a specimen collection request for EVD testing, the laboratory will follow this procedure:

- **Immediately contact** the San Diego County Public Health Services Epidemiology Program by phone at 619-692-8499 (Mon –Fri) or 858-565-5255 (after hours).
- **Requesting Laboratory must have available: Patient Name, Patient Date of Birth, Provider Name, Provider Point of Contact Information.**

- **The submitting laboratory shall not open, centrifuge, split, or otherwise process the specimen(s).**
- **The submitting laboratory shall securely store the specimens at 4°C.**
- **San Diego County Public Health Services Epidemiology** will assess the request, and will, if warranted, contact the San Diego County Public Health Services Laboratory, who will provide packaging and shipping services at the requesting laboratory's facility.
- The submitting laboratory will, in turn, be contacted by San Diego County Public Health Services Laboratory personnel to coordinate specimen handling, securing, processing, packaging, and shipping of the specimen(s).
- **San Diego County Public Health Services Laboratory will send a specifically trained public health microbiologist, with packaging and shipping materials, to the submitting laboratory's location, where the trained public health microbiologist will prepare documents, prepare and package specimens, and arrange for shipment to the CDC for testing.**
- **Use the attached Primary Specimen Contact List to record all personnel who come into contact with the specimen, including contact with primary specimen container.**

Recommendations for Specimen Collection: Medical and laboratory personnel shall wear a full face shield or goggles, a face mask to cover all of the nose and mouth, double gloves, and fluid-resistant or impermeable back-closing gowns. Additional personal protective equipment (PPE), such as fluid-resistant leg or shoe protection, may be required in certain situations.

Transporting Specimens within the Hospital / Institution: In compliance with Title 29 Code of Federal Regulations 1910.1030 (*Bloodborne Pathogen*), specimens should be placed in a durable, leak-proof secondary container for transport within a facility. To reduce the risk of breakage or leaks, do not use any pneumatic tube system for transporting specimens from a patient with suspect EVD.

Recommendations for Laboratory Handling: Medical and laboratory personnel shall wear a full face shield or goggles, a face mask to cover all of the nose and mouth, double gloves, fluid resistant or impermeable back-closing gowns and use a certified class II Biosafety Cabinet (BSC) or plexiglass splash guard, as well as manufacturer-installed safety features.

Surface decontamination can be done using any laboratory disinfectant approved for use against enveloped viruses. The disinfectant shall be used according to manufacturer's instructions.

Preferred Specimens for Ebola Testing: A minimum volume of 4mL of whole blood preserved with EDTA, clot activator, sodium polyanethol sulfonate (SPS), or citrate in plastic collection tubes can be submitted for EVD testing. **Do not submit specimens in glass containers. Do not submit specimens preserved in heparin tubes. Blood specimens will be stored at 4°C. Specimens other than blood may be submitted upon consultation with the San Diego County Public Health Services Epidemiology Program and Laboratory.**

CDC forms must be completed and accompany the specimens. The San Diego County Public Health Services Epidemiology Program and Laboratory will assist to ensure documents are completed correctly. Standard labeling must be applied for each specimen. The requested test only needs to be identified on the laboratory test requisition and CDC specimen submission forms.

Packaging and Shipping Specimens to the CDC

Packaging and shipping clinical specimens from a patient with suspect EVD to the CDC will be done by a trained San Diego County Public Health Services Laboratory microbiologist. San Diego County Public Health Services Laboratory personnel will come to the submitting facility to package and ship specimens.

For additional information, please contact the San Diego County Public Health Services Epidemiology Program at 619-692-8499 (Mon–Fri) or 858-565-5255 (after hours) or the San Diego County Public Health Services Laboratory at 619-666-8889 (24/7)

Additional information for healthcare providers is also available on the CDC website at: <http://www.cdc.gov/vhf/ebola/hcp/index.html>

Primary Specimen Contact* List

*Primary Specimen Contact involves collection of the specimen from patient and/or the handling of the specimen in the primary specimen container.

Name	Job Title	Phone Number	Description of Primary Specimen Contact	Notes

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