



UPDATED INTERIM GUIDANCE ON COLLECTION AND TRANSPORTATION OF CLINICAL SAMPLES FOR EBOLA VIRUS TEST

July 31, 2019

This document provides information on the collection and transportation of clinical samples for testing for Ebola virus disease (EVD).

This information is based on currently available scientific evidence and is subject to change as relevant new information becomes available. It should be read in conjunction with relevant national legislation, regulations and policies.

Ebola Virus Disease

In light of the recent WHO declaration that Ebola Virus Disease is currently a Public Health Emergency of International Concern (PHEIC) in the Democratic Republic of Congo¹, CARPHA reminds all member states to strengthen existing biosafety and biosecurity protocols in keeping with international standards for handling all types of clinical specimens e.g. blood, other fluids or tissues as potentially infectious materials.

When to test for Ebola Virus in Persons Under Investigation for EVD

The decision to obtain a sample to test for Ebola Virus must be made in consultation with the latest guidance available in each country including the CARPHA EVD Risk Assessment algorithm and the following parties:

- National authorities (clinical team leader, Chief Medical Officer, International Health Regulations (IHR) National Focal Point)
- PAHO/WHO IHR Focal Point
- CARPHA (contact information **1- 868-472-9451 available 24/7**)

Ebola virus is detected in blood **only after** the onset of symptoms, of which fever is usually the first. It **may take up to 3 days after symptoms appear for the virus to reach detectable levels.**

The virus is generally detectable by real-time RT-PCR from **3-10 days after symptoms appear.**

Specimens should be taken when a **symptomatic patient** reports to a healthcare facility and is suspected of having an Ebola exposure.

However, if the onset of symptoms is <3 days, a later specimen may be needed to completely rule-out Ebola virus, if the first specimen tests negative.

Screening of asymptomatic persons with no documented history of exposure to Ebola virus disease is **NOT** recommended.

How to collect the sample and transfer within the hospital

- **Sample requirement:** minimum of 4mL whole blood preserved with EDTA OR whole blood preserved with sodium polyanethol sulfonate (SPS), citrate, or with clot activator
- **Use only plastic blood collection tubes**
- It is recommended that the **Health Care Worker who is attending to the patient** be responsible for collecting samples
- Any person collecting specimens from a patient with suspected Ebola virus disease should wear appropriate **Personal Protective Equipment (PPE)** as per the Updated 2017 WHO Interim Guidance². Click https://apps.who.int/iris/bitstream/handle/10665/144818/WHO_EVD_GUIDANCE_Lab_14.4_eng.pdf?sequence=2

- **Standard Operating Procedure**

Steps for sample collection and transfer within facility:

- 1) Use a pre-labelled appropriate plastic blood collection tube. Tube must have the following information: name, sex and date of birth of the patient, date of collection and labelled 'Suspected EVD'. (Step 1.c²)
 - 2) Use universal precautions to take the sample from patient. (Step 3²)
 - 3) Dispose of needle and other items used for sample collection in appropriately labelled sharps and waste containers.
 - 4) Remove outer pair of gloves and replace with new pair.
 - 5) Wipe sample with a disinfectant wipe. Dispose of wipe and perform hand hygiene. (Step 4²)
 - 6) Wrap sample in absorbent material (e.g. paper towel/tissue).
 - 7) Ask the designated assistant to approach the patient room with a durable plastic leak-proof packaging container, without entering. (Step 4d²)
 - 8) The phlebotomist inserts the sample tube into the leak-proof container. (Step 4e²)
- Note.** Be careful not to touch outside of leak-proof packaging container
- 9) The gloved designated assistant tightly closes the top of the leak-proof packaging container and disinfects the exterior of the plastic leak-proof packaging container. (Step 4f²)
 - 10) The assistant removes gloves and performs hand hygiene. (Step 4g²)
 - 11) The assistant transfers the contained sample to an external location e.g. the laboratory to be appropriately packaged by a certified shipper.
 - 12) Remove outer pair of gloves and replace with a new pair to continue work as applicable. (Step 5²)

Note. Do not use any pneumatic tube system for transporting suspected EVD specimens.

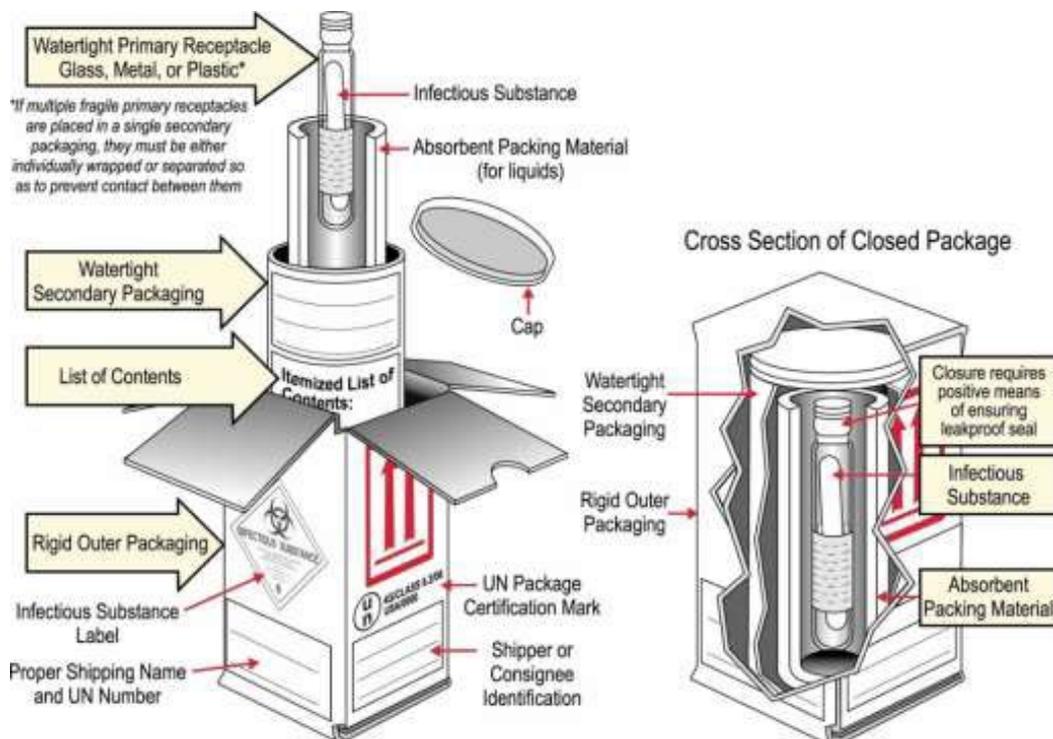
Preparation of Package for shipping to the CARPHA laboratory

- 1) Store the sample at 4°C in an appropriately identified refrigerator if packaging is delayed.
- 2) The package must be prepared by a **certified** Category A, Infectious Substance Shipper using the triple packaging method shown in the diagram below and described in Packaging Instruction 620 for Category A, Infectious Substances³.

A pre-labelled and pre-marked outer box should be readily available e.g. STP-100 or STP-310 packaging systems which must bear the UN specification marking.

- 3) **Refrigeration:** ensure sufficient **frozen ice packs** are placed into the secondary container to maintain the cold chain and integrity of the sample. Mark outer box "**Refrigerate at 4°C**" or other similar marking.

- 4) Ensure all the **appropriate documentation** is completed - Airway Bill (AWB), Dangerous Goods Declaration Form (DGD), CARICOM Invoice and CARPHA Shipper's Declaration Form.



Shipping to the CARPHA Medical Microbiology Laboratory

The shipment is to be addressed as follows:

Dr. Joy St. John
Executive Director
Caribbean Public Health Agency
16 – 18 Jamaica Boulevard
Federation Park, St. Clair
Port-of-Spain
Trinidad and Tobago

REFERENCES

1. WHO Statement: Ebola outbreak in the Democratic Republic of the Congo declared a Public Health Emergency of International Concern July 2019 Available online: <https://www.who.int/news-room/detail/17-07-2019-ebola-outbreak-in-the-democratic-republic-of-the-congo-declared-a-public-health-emergency-of-international-concern>
2. WHO Interim Guidance 2017 “How to safely collect blood samples by phlebotomy from patients suspected to be infected with Ebola or Marburg” Available online: https://apps.who.int/iris/bitstream/handle/10665/144818/WHO_EVD_GUIDANCE_Lab_14.4_eng.pdf?sequence=2
3. WHO Guidance on regulations for the Transport of Infectious Substances 2017-2018 <https://www.who.int/ihr/publications/WHO-WHE-CPI-2017.8/en/>

CARPHA will evaluate new information as it becomes available and update this guidance as needed.