KENYATTA NATIONAL HOSPITAL	SOP/KNH/IPC-EBOLA/005 REVISION: 00 DEPARTMENT:INFECTION PREVENTION & CONTROL

COLLECTION PACKAGING AND TRANSPORTATION OF EBOLA BLOOD SPECIMENS

1. SCOPE

All suspected Ebola patients presenting at KNH.

2. PURPOSE

To collect and transport samples to an appropriate biosafety level 4 laboratory at KEMRI.
To ensure staff safety during collection and transportation of samples to KEMRI.
To liase with KEMRI on prompt testing and result delivery.

3. TERMS & DEFINITIONS

3.1 KEMRI: Kenya Medical Research Institute
3.2 HOD: Head of Department
3.3 CDC: Center for Disease Control
3.4 KNH: Kenyatta National Hospital
3.5 EVD: Ebola Virus Disease
3.6. Suspected case: A patient is suspected of Ebola Virus Disease (EVD) if:

i. They have acute onset of fever (< 3weeks) and any sign of bleeding (haemorrhagic or purpuric rash, epistaxis, haematemesis, haemoptysis, blood in stool, other haemorrhagic manifestations) with no known predisposing factors)
ii. They have any symptom listed above and have an epidemiologic risk factor

4. RESPONSIBILITIES

4.1. The Chairperson of the Ebola Disaster Operations Committee shall ensure overall co-ordination regarding management of Ebola cases. The Chairman, shall alert KEMRI laboratories of an incoming specimen for testing and circulate the results of the test to the authorized personnel.
4.2 The clinician shall collect the blood sample and ensure that all sample collection, testing and disposal are done using the necessary precautions.

5. METHOD

5.1. The Chairperson of the Ebola Disaster Operations Committee Dr Monda (0733754700) shall contact KEMRI laboratories to alert them to receive the packaged specimen for analysis (The KEMRI laboratory contacts are Dr Rosemary Sang 0722759492 or Victor Ofula 0722899066).
5.2. The clinician shall assemble blood collection tools and materials required. This includes

- clean sterile tubes that do not have any anticoagulant which can hold a maximum of 5mls (red top vacutainer)
- alcohol swabs for cleaning the point of puncture
- tourniquet
- dry swabs
- bandage
- needles (G21,G23)

- preferably closed system i.e. vacutainer with sleeves and respective needles
- personal protective equipment (PPE)
- case investigation form or appropriate laboratory request form
- triple packaging materials
- Biohazard stickers

5.3 Collection of blood

5.3.1 Label the vacutainer tube appropriately i.e. patient name and hospital where the sample was collected outside of the high risk area.

5.3.2 Wear full PPE (Refer to SOP on wearing PPE KNH/SON/IPC-EBOLA/001) before entering the patient area.

5.3.3 Inform the patient of the purpose and procedure for drawing blood

5.3.4 Fasten the tourniquet around the patient's arm to visualize the veins

5.3.5 Cleanse the puncture site with alcohol swab in a spiral motion and let it air dry

5.3.6 Fasten the needle in the vacutainer sleeve and get the vacutainer tube in place

5.3.7 Hold the needle at an angle of 45 degrees to the arm, gently direct it with its bevel facing upwards into the vein.

5.3.8 Draw 4-5 mls of blood into the vacutainer by pushing the vacutainer tube into the needle.

5.3.9 Loosen the tourniquet, place a dry swab on top of the injection site as you remove the needle gently holding the swab on the site and apply mild pressure to stop the bleeding.

5.3.10 **DO NOT RECAP** the needle.

5.3.11 Remove the vacutainer from the sleeve and place the tube containing the blood on a rack.

5.3.12 Dispose the needle in a sharps container immediately.

5.3.13 Ensure the patients puncture site is dry, if not place a small bandage on the site to stop bleeding.

5.3.14 Handover the specimen container to the health care worker transporting the sample.

5.3.15 Proceed to degown in the designated doffing area (Refer to SOP on removing PPE KNH/SOP/IPC-EBOLA/001 for the procedure of degowning).

5.4. Packaging the specimen for transportation

5.4.1 Ensure that all the tubes that are being sent are tightly closed to avoid any leakage of the sample

5.4.2 Wrap every tube in an absorbent material like paper towels and place them in a zip lock bag.

5.4.3 Get a plastic container and place the samples in the zip lock bag into it and close it.

5.4.4 Place four frozen ice packs from the -20 degrees Celsius compartment of the refrigerator, on the sides of a small cool box ensuring that the secondary container is in the middle of the ice packs.

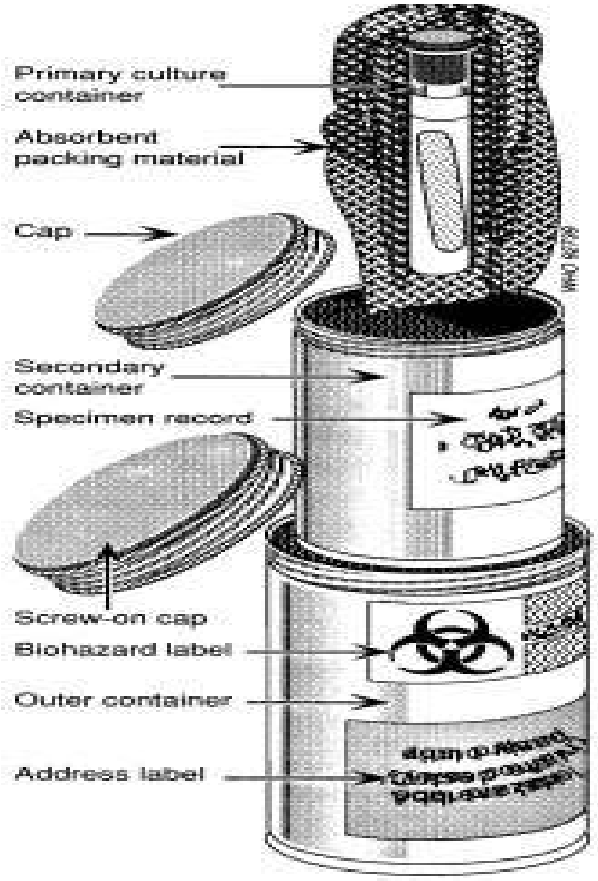
5.4.5 Place absorbent material on top and if necessary between the ice packs.

5.4.6 Place the case investigation forms or appropriate laboratory request forms in a plastic bag to keep from becoming contaminated or destroyed by the wet ice packs.

5.4.7 The cool box is then sealed, addressed to Dr Rosemary Sang, Centre for Virus Research, KEMRI, Off Mbagathi Way.and transported to KEMRI laboratories.

5.4.8 Decontaminate the outer packaging/tertiary container with either 70% Ethanol or 0.5% Chlorine before giving the package to the person who will deliver it to the KEMRI laboratory. We would like to reduce any chance of transmission to the person shipping the sample(s) or receiving them.

Figure 1: Example of triple packaging



5.5 Transportation and receiving of specimen

5.5.1 The specimen shall be transported by a public health officer fully donned in personal protective equipment.

5.5.2 The samples should be transported at 2-8 degrees Celsius preferably within 24 hours after collection.

5.5.3 A specimen inventory log will be prepared in duplicate for each specimen transportation.

5.5.4 The laboratory technologist will sign and record the date, time, and condition of the specimen on the inventory sheet.

5.5.5 The specimen inventory log should be one of the documents that accompany the samples.

5.5.6 Upon receipt of the specimen, the receiving technician will sign and record date, time and temperature on the inventory document. Any discrepancies will be documented and initialed by the receiving technician.

5.5.7 The inventory sheet will be filed on the receiving laboratory's file and a copy sent to the site.

5.5.8 The sample information is logged into the laboratory database.

5.5.9 The samples are processed immediately or stored as per regulations at KEMRI laboratories.

5.5.10 The Chairman of the Ebola committee shall be contacted by KEMRI laboratories once the confirmatory results are obtained. KEMRI personnel will then dispatch a printed copy of the patients' results for inclusion in the patient file.

6.0 References

6.1 Standard Operating Procedure on sample collection, packaging and transportation-KEMRI/CDC