

# How to safely collect blood samples by phlebotomy from patients suspected to be infected with Ebola or Marburg

2017

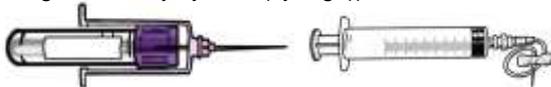
## Step 1: Before entering patient room, assemble all equipment

### Step 1a: Assemble equipment for collecting blood

- ❑ Laboratory sample tubes for blood collection (sterile glass or plastic tubes with rubber caps, vacuum-extraction blood tubes, or glass tubes with screw caps). EDTA tubes are preferred



- ❑ Blood sampling systems (Needle and syringe system, vacuum extraction system with holder, winged butterfly system (vacuum extraction) or winged butterfly system (syringe))



- ❑ Tourniquet (single-use)



- ❑ Skin antiseptic solution: 70% isopropyl alcohol



- ❑ Gauze pads



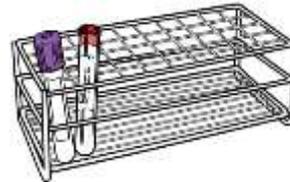
- ❑ Adhesive bandage



- ❑ Tray for assembling blood collection tools



- ❑ Rack for holding blood tubes



- ❑ Durable marker for writing on laboratory samples



### Step 1b: Assemble equipment for preventing infections

#### For hand hygiene use

- ❑ Alcohol-based handrub **OR**
- ❑ Clean running water, soap and disposable (paper) towel



#### Personal Protective Equipment (PPE)

- ❑ Several pairs of disposable gloves (non-sterile, ambidextrous, single layer)
  - One pair for blood collection
  - Additional pairs as a replacement if they become damaged or contaminated



- ❑ Long-sleeved, cuffed gowns (if in hospital) or disposable coverall suit (if in rural area)

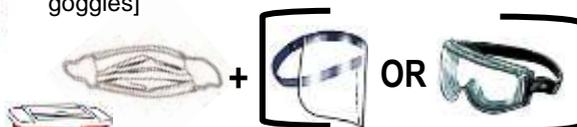
Note: For tasks where contact with blood or body fluid could happen, an impermeable gown or a plastic apron over the non impermeable gown are recommended.



- ❑ Footwear: Rubber boots (wear socks in order to remove easily) or shoes with puncture-resistant soles with disposable overshoes secured around the shoes to prevent direct contact with ground and infected bodily fluid spills



- ❑ Face protection: Face mask + [face shield **OR** goggles]



#### Waste management

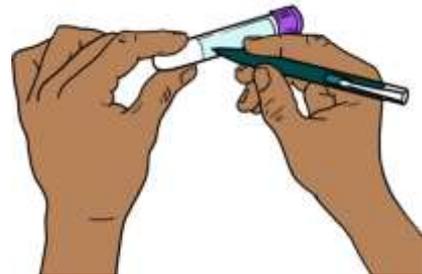
- ❑ Leak-proof and puncture resistant sharps container
- ❑ Two leak-proof infectious waste bags
  - one for disposable material (destruction)
  - one for reusable materials (disinfection)



## Step 1: Before entering patient room, assemble all equipment

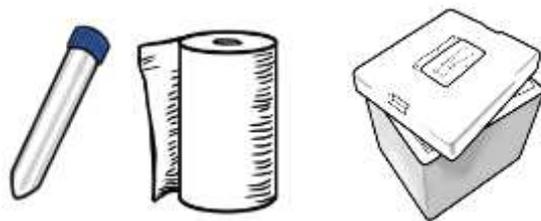
### Step 1c: Fill out patient documentation

- Label blood collection tubes** with date of collection, patient name, and his/her identifier number.
- Do NOT forget to fill out necessary laboratory form and epidemiological questionnaire.**
- If several patients have to be sampled in the same place or during the same investigation, create a line list.** One patient per line. The list should include: patient name, identifier number, sex, age (birthdate), clinical information: symptoms, date of onset, date specimen was collected, type of sample taken.

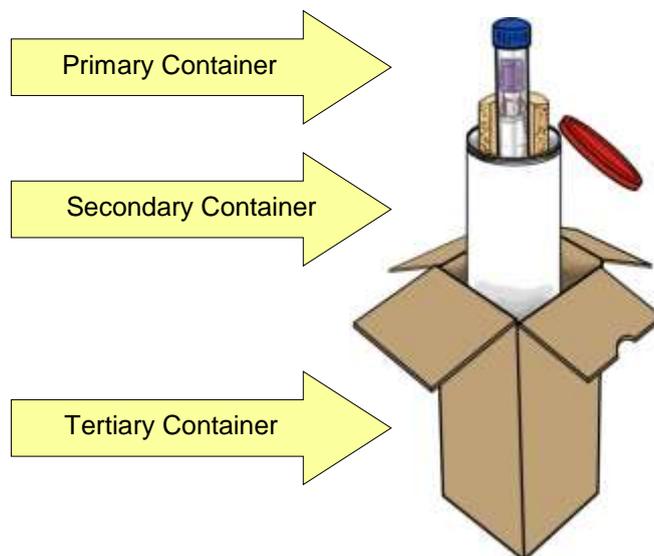


### Step 1d: Assemble materials for packaging of samples

- Plastic leak-proof packaging container
- Disposable (paper) towels
- Cooler or cold box, if sample requires refrigeration



**For the shipment of samples to the National Central Laboratory follow Sample Shipment packaging requirements** (see document "How to safely ship Emerging and Dangerous Pathogen samples")



**Important:** A designated Assistant wearing gloves should be available to help you. This person should stand outside the patient room. He/She will help you prepare the sample for transport. He/She will assist you with putting on the personal protective equipment. He/She will provide any additional equipment you may need.

## Step 2: Put on all personal protective equipment (PPE)

**DO NOT ENTER THE PATIENT AREA IF YOU DO NOT HAVE ALL PROTECTIVE GEAR ON**

**Step 2a: Perform hand hygiene.** Duration of the entire procedure: **40-60 sec** if handwashing with soap and water; **20-30 sec** if handrubbing with an alcohol-based solution.



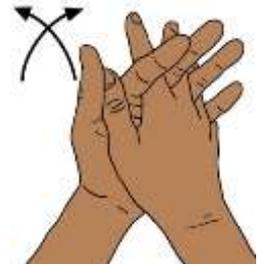
**Wet hands with water and enough soap to cover all hand surfaces**



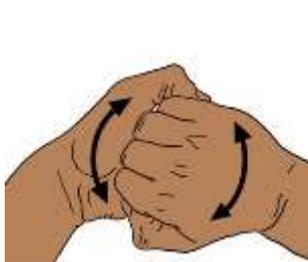
**Rub hands, palm to palm**



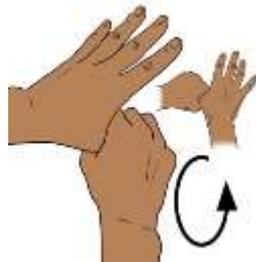
**Right palm over left dorsum with interlaced fingers and vice versa**



**Palm to palm with fingers interlaced**



**Back of fingers to opposing palms with fingers interlocked**



**Rotational rubbing of left thumb clasped in right palm and vice versa**



**Rinse hands with water**



**Dry hands thoroughly with single use towel**

### Step 2b: Put on a gown



### Step 2c: Put on face protection

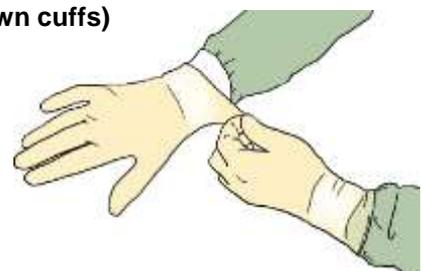
**Put on a medical mask**



**Put on eye protection (face shield OR goggles)**



### Step 2d: Put on gloves (over gown cuffs)



## Step 3: Collect blood sample from patient

### Step 3a: Prepare room

- ✓ Put infectious waste bags and leak-proof and puncture resistant sharps container into patient room and make sure they are ready for use
- ✓ Place all blood collection equipment in a place that is easy to access



Destruction

Disinfection

### Step 3b: Identify and prepare the patient

- ✓ Introduce yourself to the patient and explain what you will do with the blood sample and why
- ✓ Make sure that this is the correct patient from whom you wish to take the blood sample



### Step 3c: Select the site, preferably at the bend of the elbow

- ✓ Palpate the area; locate a vein of good size that is visible, straight and clear
- ✓ The vein should be visible without applying a tourniquet



### Step 3d: Apply a tourniquet around the arm

- ✓ Tie approximately 4–5 finger widths above the selected site



### Step 3e: Ask the patient to form a fist so that the veins are more prominent



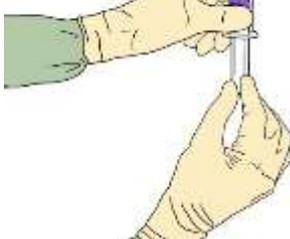
### Step 3f: Disinfect the area where you will put the needle.

- ✓ Use 70% isopropyl alcohol
- ✓ Wait 30 seconds for the alcohol to dry
- ✓ DO NOT touch the site once disinfected



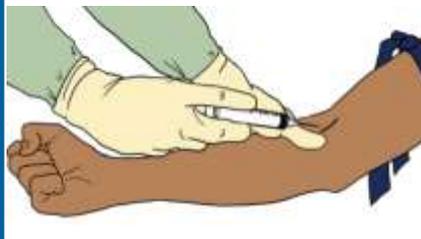
### Step 3g: When using vacuum extraction system with holder, insert the blood collector tube into the holder

- ✓ Avoid pushing the collector tube past the recessed line on the needle holder or you may release the vacuum



### Step 3h: Anchor the vein by holding the patient's arm and placing a thumb BELOW the place where you want to place the needle

- ✓ DO NOT touch the disinfected site
- ✓ DO NOT place a finger over the vein to guide the needle

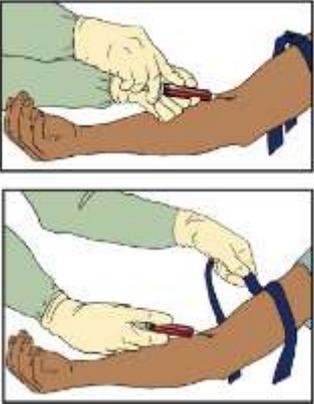
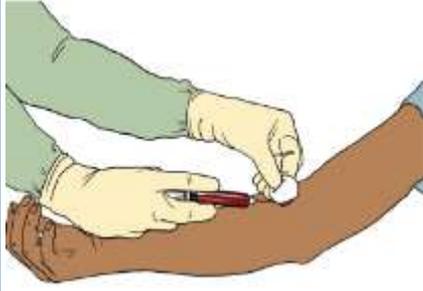
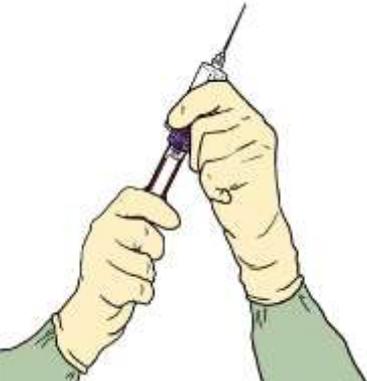


### Step 3i: Perform the blood draw

- ✓ Enter the vein swiftly at a 30° angle



## Step 3: Collect blood sample from patient

<p><b>Step 3j: When blood starts to flow, ask patient to open his/her hand</b></p> 	<p><b>Step 3k: Once sufficient blood has been collected (minimum 5ml), release the tourniquet BEFORE withdrawing the needle</b></p> 	<p><b>Step 3l: Withdraw the needle gently</b></p> <ul style="list-style-type: none"> <li>✓ Give the patient a clean gauze or dry cotton wool ball to press gently on the site</li> <li>✓ Ask the patient NOT to bend the arm</li> </ul> 
<p><b>Step 3m: Remove blood collector tube from holder and put in rack</b></p> 	<p><b>Step 3n: Put needle into leak-proof and puncture resistant sharps container</b></p> <p><b>If the sharps container DOES NOT HAVE a needle remover:</b></p> <ul style="list-style-type: none"> <li>✓ Put the needle and holder into a sharps container</li> <li>✓ Do not remove the needle from the holder</li> <li>✓ <b>Do not reuse the needle</b></li> </ul> <p><b>If the sharps container DOES HAVE a needle remover:</b></p> <ul style="list-style-type: none"> <li>✓ Remove the needle following instructions on the sharps container</li> <li>✓ Put the holder into the infectious waste bag for disinfection</li> </ul>	
<p><b>Step 3o: Stop the bleeding and clean the skin</b></p>	<p><b>Step 3p: Put items that drip blood or have body fluids on</b></p>	<p><b>Quick Tips</b></p>

预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_27661](https://www.yunbaogao.cn/report/index/report?reportId=5_27661)

