

# How to safely collect oral swabs (saliva) from deceased 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 oral swabs

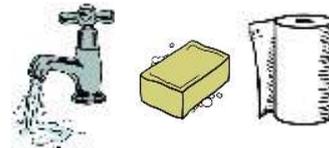
- Viral transport medium (VTM) collection tubes stored at 4°C or room temperature
- Individually wrapped sterile swabs with break point
- Plastic leak-proof primary container
- Waterproof marker



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

#### For hand hygiene

- Alcohol-based handrub (recommended) **OR**
- Clean running water, soap and disposable (paper) towel **OR**
- Chlorine solution 0.05% (when options above are not available)



#### Personal Protective Equipment (PPE)

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



- Disposable coverall suit and plastic apron



- Face protection: Face mask and goggles



- Footwear: Rubber boots or shoes with puncture-resistant soles with disposable overshoes secured around the shoes to prevent direct contact with ground and infected bodily fluid spills



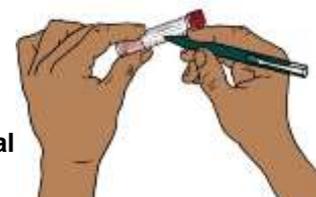
#### Disinfectant and waste management materials

- Disinfectant
  - one hand sprayer (0.05% chlorine solution)
  - one back sprayer (0.5% chlorine solution)
- Leak-proof and puncture-resistant sharps container
- Two leak-proof infectious waste bags
  - one for disposable material (destruction)
  - one for reusable materials (disinfection)



### Step 1c: Fill out patient documentation

- Label VTM collection tubes** with date of collection, patient name, and his/her identifier number
- Do NOT forget to fill out required laboratory forms and epidemiological questionnaire**
- Create a line list if several patients have to be sampled in the same place or during the same investigation.** One patient per line. The list should include: patient name, identifier number, sex, date of birth, clinical information: symptoms, date of onset, date specimen was collected, type of sample taken and travel history.

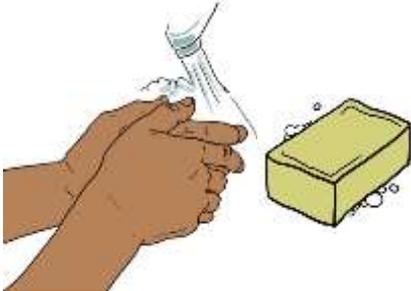


## Step 2: Put on all personal protective equipment (PPE)

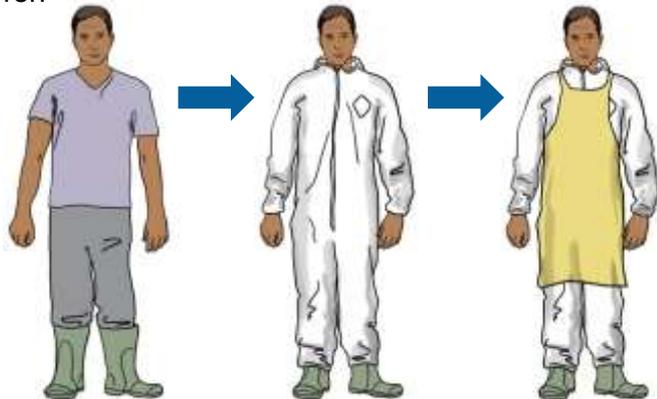
**DO NOT ENTER THE PATIENT AREA IF YOU DO NOT HAVE ALL PROTECTIVE GEAR ON**

### Step 2a: Perform hand hygiene

- ✓ Alcohol-based handrub (20-30 sec) **OR**
- ✓ Soap and water (40-60 sec) **OR**
- ✓ Chlorine solution 0.05% (when options above are not available)



### Step 2b: Put on boots, then coverall suit and apron



### Step 2c: Put on face protection

- ✓ Put on face mask
- ✓ Put on goggles

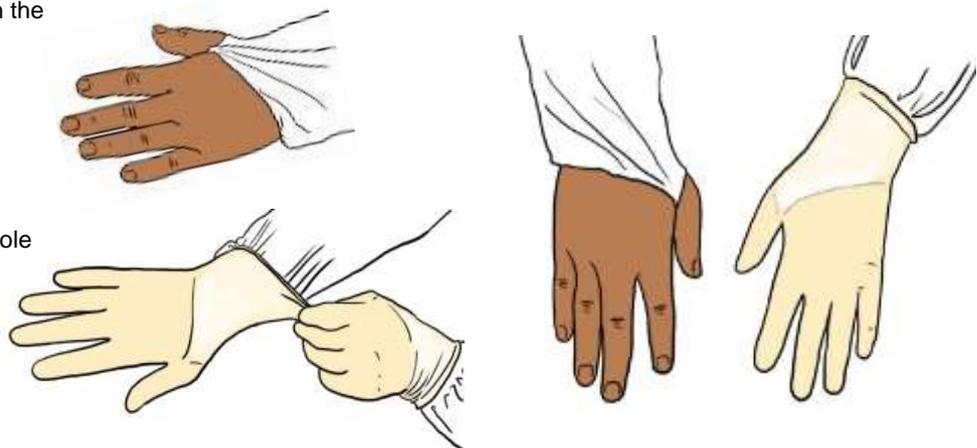


### Step 2d: Put up hood



### Step 2e: Put on gloves (over cuff)

- ✓ Create thumb holes on the cuff of the coverall suit
- ✓ Push thumb through hole and then put on glove

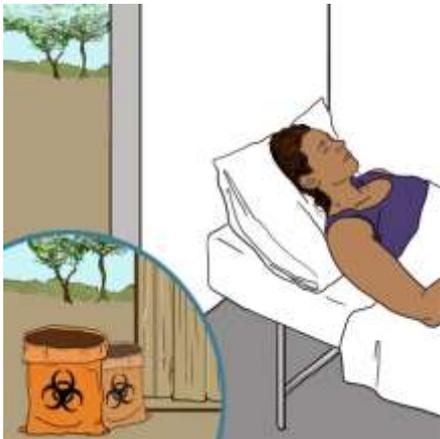


**Important:** A designated Assistant wearing gloves should be available to help you. This person should stand outside the patient room. He/She will help you prepare the sample for transport. He/She will assist you with putting on the personal protective equipment. He/She will provide any additional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

## Step 3: Collect oral swab from deceased patient

### Step 3a: Prepare waste bags

- ✓ Infectious waste bags should be placed outside the house in a safe place under the observation of the medical team



### Step 3b: Enter patient room

- ✓ Take sample collection material
- ✓ Enter into the room where the deceased person is



### Step 3c: Open the oral swab pouch

- ✓ Do not remove the swab from the packaging



### Step 3d: Open the mouth

- ✓ Place the palm of hand onto the chin and press down firmly to open the mouth slightly



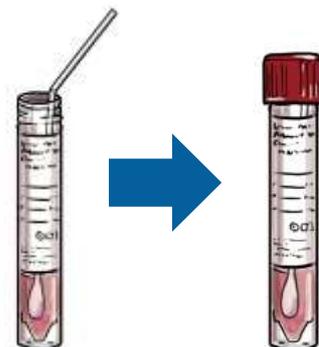
### Step 3e: Swab the mouth

- ✓ Remove swab from packaging and insert into the side of the cheek
- ✓ Using circular motions swab the inside of the cheek to collect saliva and epithelial cells
- ✓ Swab right side
- ✓ Swab left side



### Step 3f: Place the swab into VTM collection tube

- ✓ Snap off the end of the swab at the ribbed breakpoint and close the tube



## Step 4: Prepare VTM collection tube for transport

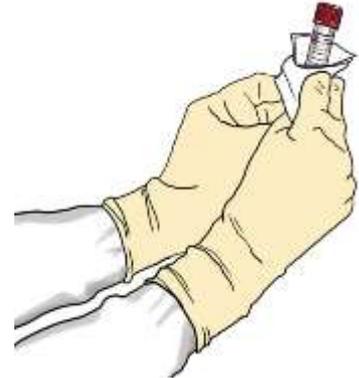
**Step 4a: Wipe the VTM tube with a disposable paper towel**



**Step 4b: Place all items that came into contact with the VTM tube into the infectious waste bag for destruction**



**Step 4c: Protect the sample from breaking or leaking during transport by wrapping the VTM collection tube in a paper towel**



**Step 4d: Ask the designated assistant to approach the patient room, without entering**

- ✓ This person should have gloves on
- ✓ This person should come close to you holding the open plastic leak-proof packaging container
- ✓ This person should **not** enter the patient room



**Step 4e: The person who has collected the VTM tube should put the wrapped VTM tube of blood into the plastic leak-proof packaging container**

- ✓ Be careful not to touch outside of leak-proof packaging container with gloves



**Step 4f: Have the gloved assistant tightly close the top of the plastic leak-proof packaging container**

- ✓ Disinfect the outer side of the plastic leak-proof packaging container with a disinfectant



**Step 4g: The assistant removes gloves and performs hand hygiene**

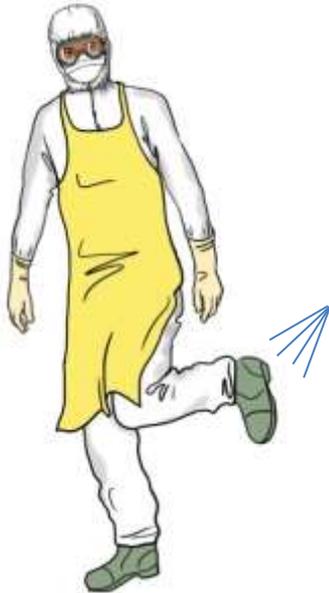
**Note: The sample is now ready for shipment to the National Central Laboratory. Follow Sample Shipment packaging requirements for infectious substances.**

- Store samples at room temperature for up to 24 hours. If you need to store the sample for one week before shipping, store between 0-5° Celsius.
- If you need to store the sample for more than one week before shipping, store at -20 ° Celsius (or better at -70 ° Celsius if available). Avoid freeze-thaw cycles.

## Step 5: Remove Personal Protective Equipment (PPE)

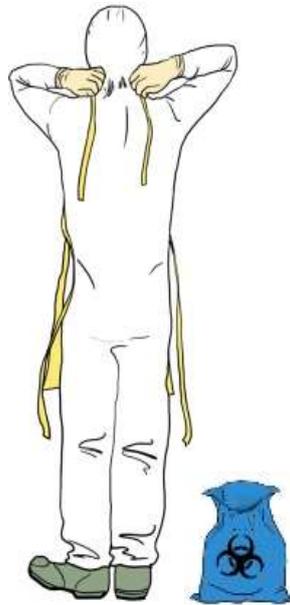
### Step 5a: Disinfect boots

- ✓ While still in full PPE, disinfect boots with 0.5% bleach solution sprayed by an assistant
- ✓ Do not remove boots



### Step 5b: Remove apron

- ✓ Disinfect apron
- ✓ Untie the apron at the waist. Start by removing from the head
- ✓ Place in bag for reusable materials (disinfection)



### Step 5c: Remove gloves

1. Hold the outer edge of the first glove and peel it off
2. Hold the first glove in the gloved hand and drag a bare finger under the second glove
3. Remove second glove from the inside, creating a "bag" for both gloves and put in the infectious waste bag for disposal

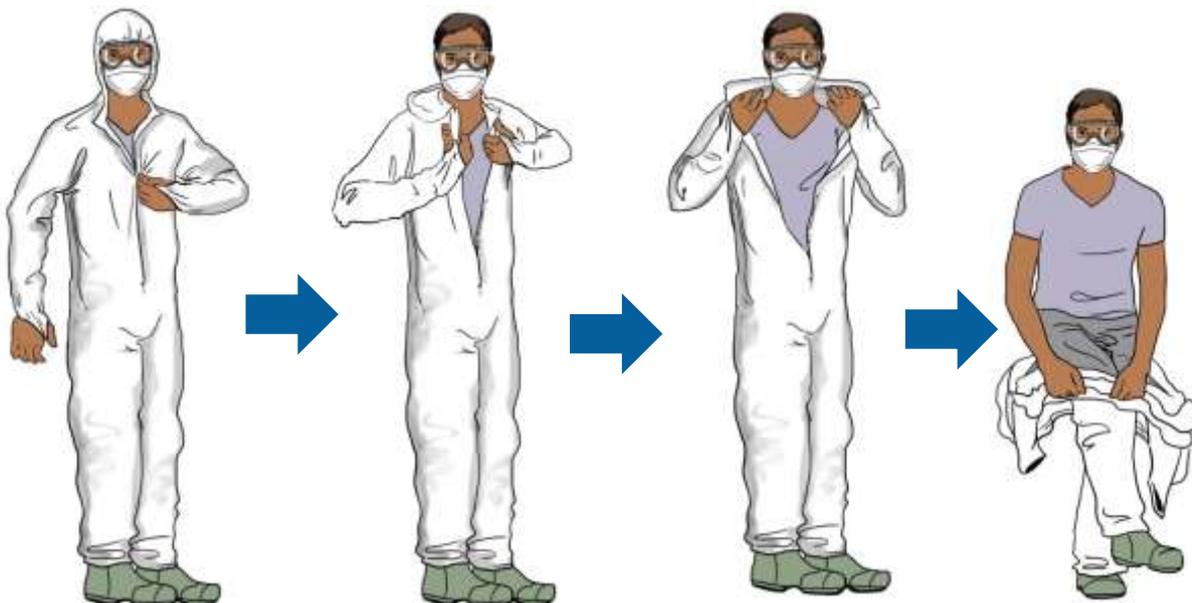


### Step 5d: Perform hand hygiene

- ✓ Alcohol-based handrub solution (20-30 sec) **OR**
- ✓ Soap and water (40-60 sec) **OR**
- ✓ Chlorine solution 0.05% (when options above are not available)

### Step 5e: Remove coverall suit

1. Unzip the suit starting from the neck moving to the waist
2. Remove the hood, then place hands on the inside of the suit against the chest area and carefully remove the suit from the shoulders towards the hands
3. Remove thumbs from the thumb holes and remove hands from the suit
4. Place hands on the inside of the suit, careful not to touch the outer exposed side. Push the suit down towards the boots to just above the ankles.



## Step 5: Remove Personal Protective Equipment (PPE)

### Step 5f: Remove coveralls



1. With the boots still on, step out of the coveralls. Do not use your hands to remove the coveralls from the bottom of the boots.



2. The gloved assistant discards the coveralls into the infectious waste bag

### Step 5g: Perform hand hygiene

- ✓ Alcohol-based handrub solution (20-30 sec) **OR**
- ✓ Soap and water (40-60 sec) **OR**
- ✓ Chlorine solution 0.05% (when options above are not available)



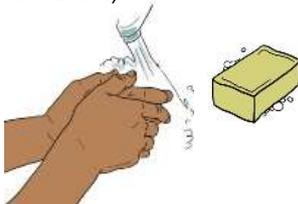
### Step 5h: Remove face protection

- ✓ Remove goggles from behind
  - If reusable goggles, place it in an infectious waste bag for disinfection
  - If disposable goggles, place it in an infectious waste bag for destruction
- ✓ Remove the medical mask from behind, starting with the bottom strap, and place it in an infectious waste bag for destruction



### Step 5i: Perform hand hygiene

- ✓ Alcohol-based handrub solution (20-30 sec) **OR**
- ✓ Soap and water (40-60 sec) **OR**
- ✓ Chlorine solution 0.05% (when options above are not available)



### Quick Tips

- Place all reusable equipment into a separate infectious waste bag for disinfection

When collecting swabs from multiple patients

- **Change gloves between each patient**
- **Wash hands between each patient**
- **DO NOT WASH GLOVED HANDS**
- **DO NOT REUSE GLOVES**

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