

Field Situation - How to safely collect oral swabs (saliva) from deceased patients suspected to be infected with Ebola

Step 1: Before entering patient's room, assemble all equipment

Step 1a : Assemble equipment for collecting oral swabs:

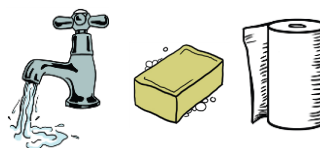
- Viral transport medium (VTM) collection tubes stored at 4°C or room temperature
- Individually wrapped sterile swabs with break point
- Plastic leak-proof primary container
- Waterproof marker



Step 1b : Assemble equipment for preventing infections:

For Hand Hygiene:

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



Personal Protective Equipment (PPE):

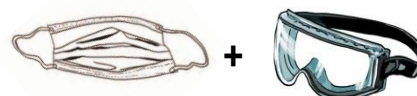
- Several pairs of disposable examination gloves (non-sterile, ambidextrous, single layer)
- ✓ One pair of gloves for sample collection
- ✓ One additional pair as a replacement if they become damaged or contaminated



- Disposable coverall suit and plastic apron



- Face protection: Face Mask and safety goggles



- Footwear: wear 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) and 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.
- 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, date of birth, clinical information: symptoms, date of onset, date specimen was collected, type of sample taken and travel history.



Please send your comments, suggestions and corrections by email to: edpln@who.int and formentyp@who.int



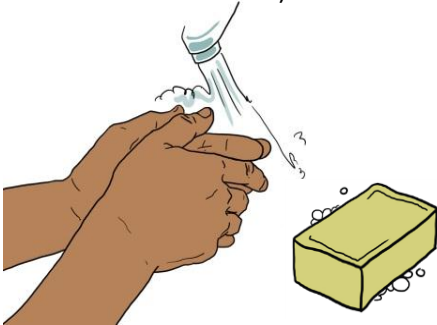
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Step 2: Put on all personal protective equipment (PPE)

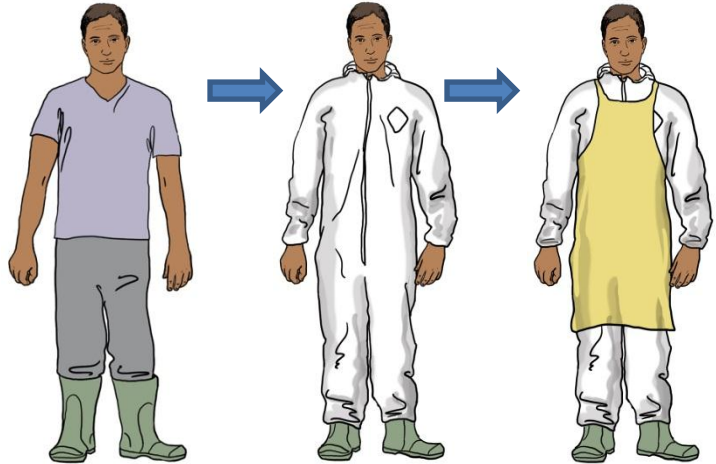
DO NOT ENTER THE PATIENT AREA IF YOU DO NOT HAVE ALL PROTECTIVE GEAR ON

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 a face mask



Put on safety goggles

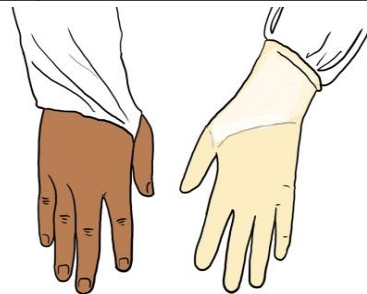


Step 2d: Hood up.



Step 2e: Put on gloves (over cuff)

- ✓ Create thumb holes on the cuff of the suit



- ✓ Push thumb through hole and then put on glove

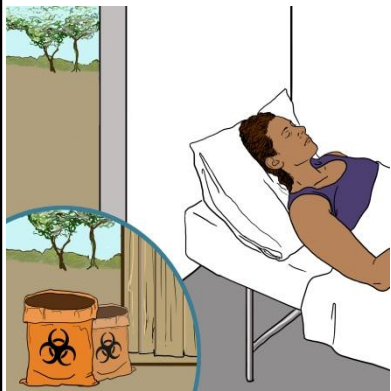


Important: A designated assistant wearing gloves should be available to help you. This person should stand outside the patient room. He/she will help you prepare the sample for transport, assist you with putting on the personal protective equipment, and provide any additional equipment you may need.

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 into 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 packaging



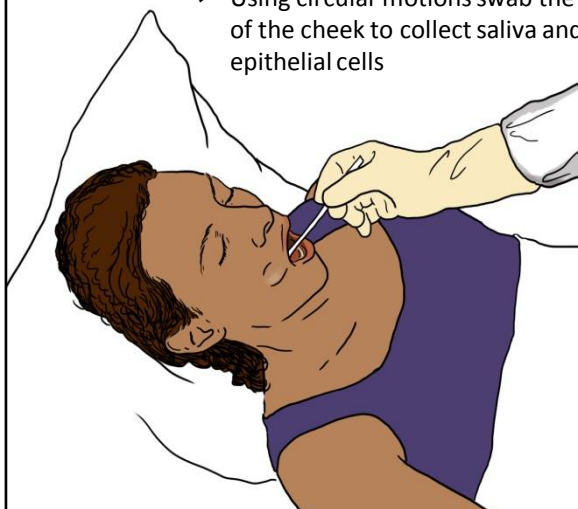
Step 3d: Open the mouth

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



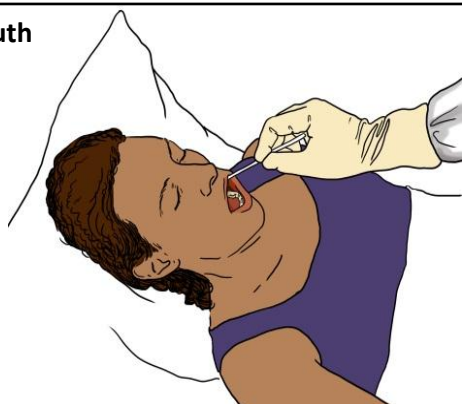
Step 3e: Swab the mouth

- ✓ 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



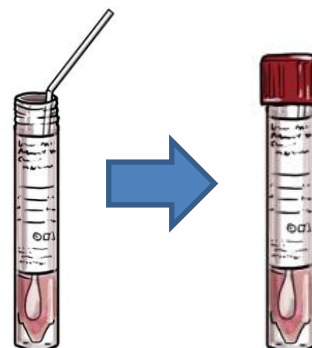
Step 3e: Swab the mouth

- ✓ Swab right side
- ✓ Swab left side



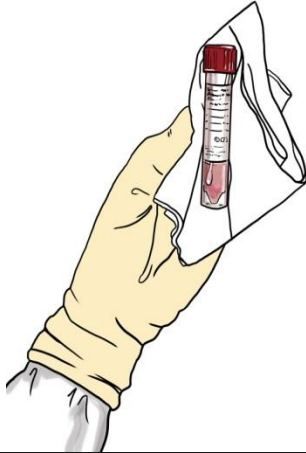
Step 3f: Place the swab into VTM collection tube.

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



Step 4: Prepare VTM collection tube for transport

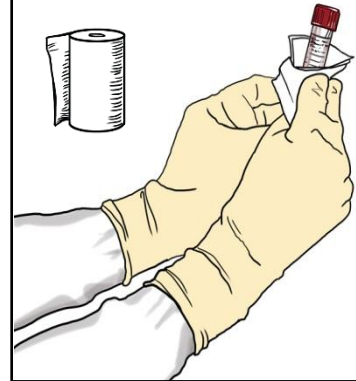
Step 4a: Wipe the VTM tube using a disposable paper towel.



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



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



Step 4d: Ask the assistant to approach the patient's room, without entering.

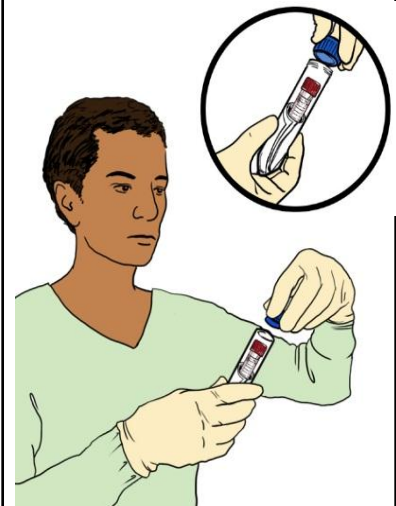
- ✓ This person should have gloves on.
- ✓ This person should come close to you holding the open plastic leak-proof packaging container.
- ✓ This person should not enter the patient's room.

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

- ✓ Be careful not to touch the outside of the leak-proof plastic tube with gloves.

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

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



Step 4g: The assistant removes gloves and perform hand hygiene.

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

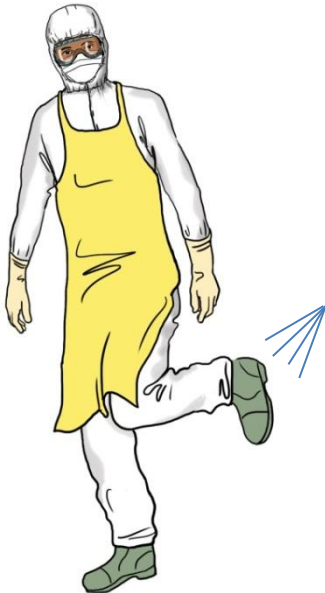
Store samples at room temperature for up to 24 hours. If you need to store the sample for one week before shipping, store between 0-5° Celsius.

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) 1st part

Step 5a: Disinfect boots

- ✓ While still in full PPE, disinfect boots with 0.5% bleach solution. An assistant will spray
- ✓ Do not remove the 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 the gloves.

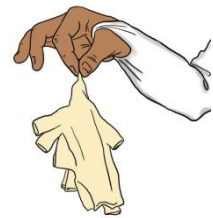
1. Grasp the outer edge of the 1st glove and peel it off.



2. Hold the 1st glove in the gloved hand and drag a bare finger under the 2nd glove.



3. Remove 2nd glove from the inside, creating a "bag" for both gloves and throw it in waste bag for disposal.



4. 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).

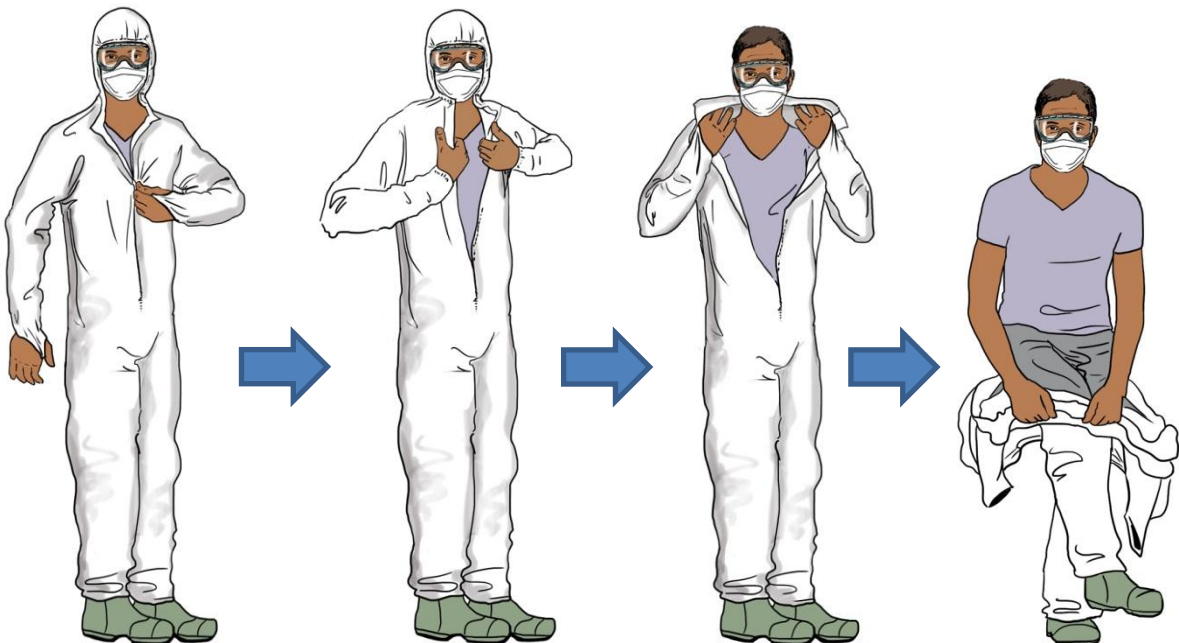
Step 5d: Remove the coverall suit

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 the 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) last part

Step 5e: Remove the suit

- ✓ With the boots still on, step out of the suit. Do not use your hands to remove the suit from the bottom of the boots.



Step 5f: Remove the suit

- ✓ The gloved assistant discards the overall suit into infectious waste bag



Step 5g: 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 5h: Take off face protection



When wearing goggles and a mask:

- ✓ Remove goggles from behind.
- ✓ If the goggles are reusable, place them in an infectious waste bag for disinfection.
- ✓ If the goggles are disposable, place them 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 5j: 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).



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.

Please send your comments, suggestions and corrections by email to: edpln@who.int and formentyp@who.int



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