HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

Department:	Infection Prevention and Control Department		
Document:	Multidisciplinary Policy and Procedure (MPP)		
Title:	Guidelines for Prevention and Control of Ebola and Marburg Viruses		
Applies To:	All MCH Department		
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1. PURPOSE:

1.1 To provide infection prevention and control guidance to healthcare workers (HCWs) managing patients with suspected or confirmed Ebola and Marburg Viruses

2. DEFINITONS:

2.1 Ebola and Marburg are viruses that belong to the Filoviridae viral family. They both can cause haemorrhagic fever that is characterised by extensive bleeding, multi-organ failure and in most cases death. The case fatality rates for both viruses are high and can reach up to 65% in Ebola and 88% in Marburg disease. Incubation Period :2 – 21 days

2.2 TRANSMISSION
A spill-over from animal to human is a rare event, but subsequent human-to-human transmission can sustain large outbreaks.

3. POLICY:

3.1 Suspected/ confirmed cases should be under contact and droplet precautions. Airborne precaution should be taken in case of AGPs.

3.2 Complete restriction of entry to the room and only those who are designated to care for the patient are allowed inside.

3.3 CASE DEFINITION (see appendix **7.1**)

4. PROCEDURE:

4.1 INFECTION CONTROL & PREVENTION

4.1.1 Patient placement and isolation:

4.1.1.1 Suspected/ confirmed cases should be under contact and droplet precautions. Airborne precaution should be taken in case of AGPs.

4.1.1.2 Suspected and confirmed cases should be isolated in single room with designated toilet and hand washing facility.

4.1.1.3 Most of the equipment for routine care should be stored inside the room.

4.1.1.4 Complete restriction of entry to the room and only those who are designated to care for the patient are allowed inside.

4.1.2 Personal Protective Equipment

4.1.2.1 Gowns/Coverall:

4.1.2.1.1 Important to protect the skin and the clothing.

4.1.2.1.2 Gowns should be used in addition to head covers.

4.1.2.1.3 The material should be fluid resistant and impermeable.

4.1.2.1.4 A single use plastic apron can be used when patient is experiencing vomiting or diarrhoea.

4.1.2.2 Full face shield:

4.1.2.2.1 To provide protection to the face and the eyes against splashes and body fluids

4.1.2.3 Mask/respiratory protection:

4.1.2.3.1 Medical masks should be used to protect against respiratory droplets. In AGPs, the upgrade to higher respiratory protection is required (N95).

4.1.2.4 Gloves:

4.1.2.4.1 **Inner and outer gloves should be used, with the outer gloves being longer to cover the cuffs of gowns/coveralls.**

4.1.2.5 Rubber boots:

4.1.2.5.1 Rubber boots should be used if available.

4.1.2.5.2 If not, the shoes should be completely sealed and non-slippery.

4.1.2.6 Inspection and buddy system:

4.1.2.6.1 It's advisable that donning and doffing is done in presence of another provider to help inspect/confirm proper donning and doffing, and to help in the process as well

4.1.2.6.2 Inspection is important when donning and doffing to check the PPEs that they are free of defects such as holes

4.1.3 ENVIRONMENTAL AND WASTES MANAGMENT

4.1.3.1 Filoviruses can survive in liquid or dried material for many days. They are inactivated by gamma irradiation, heating for 60 minutes at 60°C or boiling for five minutes, and are sensitive to lipid solvents, sodium hypochlorite, and other disinfectants. Freezing or refrigeration does not inactivate filoviruses.

4.1.3.2 Diligent environmental cleaning and disinfection and safe handling of potentially contaminated materials are paramount, as blood, sweat, emesis, feces and other body secretions represent potentially infectious materials.

4.1.3.3 HCWs performing environmental cleaning and disinfection should wear recommended PPE (described above) and consider the use of additional barriers (shoe and leg coverings, etc.) if needed.

4.1.3.4 Face protection (face shield or facemask with goggles) should be worn when performing tasks such as liquid waste disposal that can generate splashes.

4.1.3.5 Environmental surfaces and equipment should be disinfected by using approved intermediate-level disinfectants.

4.1.3.6 Follow standard procedures, per MOH policy and manufacturers' instructions, for cleaning and/or disinfection of:

4.1.3.6.1 Environmental surfaces and equipment by using approved intermediate-level disinfectants

4.1.3.6.2 Textiles and laundry

4.1.3.6.3 Food utensils and dishware

4.1.3.7 Routine cleaning of the PPE doffing area should be performed at least once per day and after the doffing of grossly contaminated PPE.

4.1.3.8 Ebola/Marburg-Associated Waste Management should be placed in double, leak-proof bags, and stored in rigid, leak-proof containers.

4.1.3.9 Safe containment and packaging of waste should be performed as close as possible to the point of generation.

4.1.310 Use (PPE) for handling waste until performing the on-site inactivation or transporting the waste away to the offsite inactivation area.

4.1.3.11 The healthcare workers should immediately spray or wipe the outside surfaces of double-bagged waste with an approved MOH disinfectant before removing waste from the room.

4.1.4 DURATION OF INFECTION CONTROL PRECAUTIONS

4.1.4.1 The duration of precautions should be determined on a case-by-case basis. Factors that should be considered include but are not limited to: presence of symptoms related to Ebola/Marburg HF, date symptoms resolved, other

conditions that would require specific precautions (e.g., tuberculosis, Clostridium difficile), and available laboratory information .

4.1.5 MANAGEMENT OF THE DECEASED

4.1.5.1 Only personnel trained in handling body of a person who has died from Ebola/ Marburg

4.1.5.2 When handling the body of a person who has died from Ebola/ Marburg

4.1.5.2.1 Do not wash or clean the body.

4.1.5.2.2 Do not perform an autopsy unless it is necessary.

4.1.5.2.3 Do not remove any inserted medical equipment from the body such as intravenous (IV) lines, endotracheal or other tubing, or implanted electronic medical devices.

4.1.5.2.4 Body of a suspected or confirmed case of Ebola/Marburg must be placed in a double body bag .

4.1.5.2.5 Place the body in the first body bag .

4.1.5.2.6 Wipe over the surface of the first body bag using a hospital-approved disinfectant and seal it .

4.1.5.2.7 Label with the indication of highly infectious material.

4.1.5.2.8 Immediately move the body to the mortuary or the cemetery .

4.1.6 Specifications of Body Bags:

4.1.6.1 Impermeable, vinyl, minimum thickness 400 microns.

4.1.6.2 Should be able to hold 100-125 kilos (200-250 lbs).

4.1.6.3 At least 4 handles included in the body bag to allow safe hand carry.

4.1.6.4 Provide full containment of blood borne pathogens.

4.1.7 Transport the Body Bag to the Cemetery:

4.1.7.1 Wear gloves to transport the body bag to the ambulance that will serve.

4.1.7.2 Transport the body bag should be by 2 or 4 persons (depending on the weight of the body).

4.1.7.3 The body bag is placed (delicately) on the platform of the car that will serve, usually the head towards the front.

4.1.7.4 body bag should be gently placed on the care that will serve.

4.1.7.5 No family member should sit in the car cabin.

4.1.7.6 The ambulance used for the funerals needs to be cleaned and disinfected.

4.1.8 Placement of Body Bag into the Grave:

4.1.8.1 Manually Carry the body bag to the grave, by the carriers wearing gloves (use the handles included in the body bag).

4.1.8.2 Slowly lower the body bag into the grave with individuals wearing gloves who stepped into the graves

4.1.8.3 At the end Place the body bag into the grave

4.1.8.4 Place gloves in an infectious waste bag for dispose in correct way.

4.1.8.5 Organize the incineration of the single-use (disposable) equipment at the hospital or in another designated place for burning this type of equipment

4.1.8.6 The car used for the funerals needs to be cleaned and disinfected

4.1.9 DIAGNOSIS

4.1.9.1 For a patient that meets the clinical criteria andepidemiologic risk factors, Ebola/Marburg virus is detected in blood only after the onset of symptoms and It may take up to 3 days for the virus to be detectable in clinical samples .

4.1.9.2 Therefore, if a test result is negative for samples collected less than 3 days of the onset of symptoms, a later specimen should be collected after 48 hours.

4.1.9.3 Collect two samples with a minimum volume of 4 millilitres of whole blood in EDTA blood collection tubes

4.1.9.4 For paediatric, a minimum of 1 mL whole blood should be collected

4.1.9.5 Use serum separator red top caped tube with gel for antibody testing. Three serum separator tubes are required to be collected for each case.

4.1.9.6 Blood must be collected in plastic tubes. Please do not use glass tubes .

4.1.9.7 Specimens should be labelled with two identifiers on both the tube and the laboratory requisition form, specimen type, date of collection, and test requested

4.1.9.10 HCWs who withdraw samples should completely adhere to contact and droplet precaution and don proper PPEs when taking the samples.

4.1.9.11 Conduct a site-specific risk assessment for transfer of specimens within the facility and develop a protocol for transfer of specimen from site of collection to site of testing.

4.1.9.12 The specimen containers should be decontaminated with an approved disinfectant before transfer outside the collection site.

4.1.9.13 Specimen and should be hand-carried (DO NOT use any pneumatic tube system) to the packing area for preparation for shipment to PHL.

4.1.10 SHIPMENT AND PACKING

4.1.10.1 Triple pack all specimens:

4.1.10.1.1 Specimens for shipment should be packaged following the triple packagingsystem, which should have wrapped with absorbent material, in a watertight, leakproof secondary container and an outer rigid shipping package .

4.1.10.1.2 Each specimen in a Leakproof primary container (a sealable specimen container);

4.1.10.1.3 Leak-proof secondary container, and

4.1.10.1.4 Rigid outer packaging

4.1.10.1.5 If specimen is a liquid, place absorbent material between the primary and secondary container. Place a list of contents and paperwork between the secondary container and outer packaging. Label outer packaging with:

4.1.10.1.5.1 Infectious substance (diamond shaped label) and UN 2814 certification mark

4.1.10.1.5.2 Shipper and consignee identification (name, address, and telephone)

4.1.10.1.5.3 Package orientation arrows if primary container exceeds 50 mL or more

4.1.11 Reporting of suspected cases

4.1.11.1 Ebola and Marburg suspected cases must be reported by all healthcare facilities:

4.1.11.1.1 Health Electronic Surveillance Network (HESN).

4.1.11.1.2 Email the notification form immediately to:

4.1.11.1.3 Communicable diseases program at Clusters and /or Regional Health Directorates.

4.1.11.1.4 Coordinators at the Regional Health Directorate report to the Communicable Disease Department at MOH.

4.1.11.1.5 Coordinate for fieldwork investigation for case and contact tracing either among health care worker or public.

4.1.12 CONTACT TRACING

4.1.12 Contacts are identified as those who:

4.1.12.1 Were in direct physical contact with the patient (dead or alive) such as providing care.

4.1.12.2 Living in the same house as the patient during his symptoms.

4.1.12.3 Had contact with the patient blood, bodily fluids, or clothing.

4.1.12.3 Healthcare workers exposed to the patient or came in contact with his belongings without full PPEs should be listed as contacts, also laboratory staff that handled patient's sample without proper biosafety measures. Contacts should be monitored for 21 days from the last exposure.

5. MATERIALS AND EQUIPMENT:

5.1 **N/A**

6. RESPONSIBILITIES:

6.1 IPCD STAFF

7. APPENDICES:

7.1 CASE DEFINITION

8. REFERENCES:

8.1 Ministry of Health. GUIDELINES FOR PREVENTION AND CONTROL OF EBOLA AND MARBURG VIRUSES. OCTOBER-22 V 1.0

9. APPROVALS:

	Name	Title	Signature	Date
Prepared by:	Ms. Marilou C. Magallano	IPCD Practitioner		August 18, 2024
Prepared by:	Ms. Wadha Mohd Al Shammari	IPCD Coordinator		August 18, 2024
Reviewed by:	Ms. Awatif Hamoud Al Harbi	IPCD Director		August 19, 2024
Reviewed by:	Mr. Sabah Turayhib Al Harbi	Nursing Director		August 20, 2024
Reviewed by:	Mr. Abdulellah Ayed Al Mutairi	Quality & Patient Safety Director		August 21, 2024
Reviewed by:	Dr. Thamer Naguib	Medical Director		August 24, 2024
Approved by:	Mr. Fahad Hazem Al Shammari	Hospital Director		August 25, 2024

Appendix 7.1 (CASE DEFINITION)

Status	Description
Suspected case	Illness in a person who has both consistent symptoms and risk factors as follows: • Clinical criteria, which includes fever of greater than 38.6◦C, and additional symptoms such as severe headache, muscle pain, vomiting, diarrhoea, abdominal pain, or unexplained haemorrhage (gingival, nasal, cutaneous [petechiae, bruises, ecchymosis], gastrointestinal, rectal [gross or occult blood], urinary [gross or microscopic haematuria], vaginal, or puncture sites bleeding). AND • Epidemiologic risk factors within 21days before the onset of symptoms, such as: contact with blood or other body fluids of a patient known to have or suspected to have EVD/Marburg; residence in or travel to an area where EVD/ Marburg transmission is active; or direct handling of dead or alive fruit bats, monkeys, chimpanzees, gorillas, forest antelope and porcupines from disease-endemic areas. Malaria diagnostics should also be a part of initial testing because it is a common cause of febrile illness in persons with a travel history to the affected countries.
Confirmed case	A suspected case with laboratory-confirmed diagnostic evidence of Ebola/ Marburg virus infection.