

Precautions for Handling and Disposal of Dead Bodies

Department of Health
Hospital Authority
Food and Environmental Hygiene Department
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If you have any comment or enquiry, please kindly contact the Secretary of the Editorial Board for “Precautions for Handling and Disposal of Dead Bodies”.

Correspondence Address: Infection Control Branch, G/F Centre for Health Protection, 147C, Argyle Street, Kowloon.

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Introduction

All dead bodies are potentially infectious and “STANDARD PRECAUTIONS” should be implemented for every case. Although most organisms in the dead body are unlikely to infect healthy persons, some infectious agents may be transmitted when persons are in contact with blood, body fluids or tissues of dead body of person with infectious diseases. To minimize the risks of transmission of known and also unsuspected infectious diseases, dead bodies should be handled in such a way that workers’ exposure to blood, body fluids and tissues is reduced. A rational approach should include staff training and education, safe working environment, appropriate safe work practices, the use of recommended safety devices and vaccination against hepatitis B.

There is a need to maintain the confidentiality of a patient’s medical history even after his/her death. At the same time, there is obligation to inform personnel who may be at risk of infection through contact with dead bodies so that appropriate measures may be taken to guard against infection. The discrete use of labels such as “Danger of infection” on the dead body is considered appropriate.

The objectives of drawing up this set of guidelines are: **(1) to enable the deceased’s family to obtain funeral services, and (2) to protect the involved personnel, e.g. workers and relatives.** Hospitals, public mortuaries, funeral workers and staff on board conveyances are urged to adopt them in light of local circumstances and requirements. The adopted precautions should be widely disseminated to all staff involved.

For handling of Dead Bodies of suspected/confirmed Ebola Virus Disease (EVD):

Please refer to the “Supplementary Guidance for Handling of Dead Bodies of suspected/confirmed Ebola Virus Disease (EVD)”

Categorization of Dead Body

Based on the mode of transmission and the risk of infection of different diseases, the following categories of precautions for handling and disposal of dead bodies are advised:

Cat. 1 :	<p>Signified by a BLUE label (Sample attached in Appendix I)</p> <p>Standard precautions are recommended for all dead bodies other than those with infectious diseases as listed under Categories 2 & 3.</p>
Cat. 2 :	<p>Signified by a YELLOW label (Sample attached in Appendix I)</p> <p>In addition to standard precautions, additional precautions are recommended for dead bodies with known:</p> <ul style="list-style-type: none"> (a) Human Immunodeficiency Virus infection (HIV) (b) Hepatitis C (c) Creutzfeldt-Jacob disease (CJD) without necropsy (d) Severe Acute Respiratory Syndrome (SARS) (e) Avian influenza, (f) Middle East Respiratory Syndrome (MERS), and (g) Other infectious diseases as advised by the physician i/c, the infection control officer or microbiologist.
Cat. 3 :	<p>Signified by a RED label (Sample attached in Appendix I)</p> <p>In addition to standard precautions, stringent precautions are recommended for dead bodies with known:</p> <ul style="list-style-type: none"> (a) Anthrax (b) Plague (c) Rabies (d) Viral haemorrhagic fevers (e) Creutzfeldt-Jacob disease (CJD) with necropsy, and (f) Other infectious diseases as advised by the physician i/c, the infection control officer or microbiologist.

Please refer to the summary table at Appendix II for the specific precautionary measures required under respective category.

General Recommendations for All Related Persons

A. Vaccination

Hepatitis B vaccination is recommended for all personnel who are likely to come into contact with dead bodies, such as health care worker, mortuary staff, funeral workers, and etc.

B. Personal hygienic measures and protective equipment

- 1) All staff should be trained in the prevention of infections. A high standard of personal hygiene should be adopted.
- 2) When handling of dead bodies:
 - (a) Avoid direct contact with blood or body fluids from the dead body.
 - (b) Put on personal protective equipment (PPE) including
 - Category 1: Gloves, water repellent gown and surgical mask. Use goggles or face shield to protect eyes, if there may be splashes.
 - Category 2: Gloves, water resistant gown/ plastic apron over water repellent gown, and surgical mask. Use goggles or face shield to protect eyes, if there may be splashes.
 - Category 3: Water resistant gown, surgical mask, eye protection (goggles or face shield), double gloves, shoe covers / boots.
 - (c) Make sure any wounds, cuts and abrasions, are covered with waterproof bandages or dressings.
 - (d) Do NOT smoke, drink or eat. Do NOT touch your eyes, mouth or nose.
 - (e) Observe strict personal hygiene. Hand hygiene could be achieved by washing hands with liquid soap and water or proper use of alcohol-based hand rub.
 - (f) Avoid sharps injury, both in the course of examination of dead body and afterwards in dealing with waste disposal and decontamination.
- 3) Remove personal protective equipment after handling of the dead body. Then, wash hands with liquid soap and water immediately.

C. Accidental exposure to blood or body fluids

- 1) In case of percutaneous injury or mucocutaneous exposure to blood or body fluids of the dead body, the injured or exposed areas should be washed with

copious amount of water.

- 2) All incidents of percutaneous or mucocutaneous exposure should be reported to the supervisor. The injured person should immediately seek medical advice for proper wound care and post-exposure management.

D. Clinical waste management

- 1) The definition of clinical waste and its management has been set out in the Waste Disposal Ordinance (Hong Kong Law Cap.354). For details, please refer to the website of the Environmental Protection Department.
<https://www.epd.gov.hk/epd/clinicalwaste/en/scheme.html>
- 2) Items classified as clinical waste must be handled and disposed of properly according to the legal requirements.

E. Environmental control

- 1) All surfaces which may be contaminated should be wiped with “1 in 49 diluted household bleach”* (mixing 1 part of 5.25% bleach with 49 parts of water), leave it for 15-30 minutes, and then rinse with water. Metal surfaces could be wiped with 70% alcohol.
- 2) Surfaces visibly contaminated with blood and body fluids should be wiped with “1 in 4 diluted household bleach”*(mixing 1 part of 5.25% bleach with 4 parts of water), leave it for 10 minutes, and then rinse with water.

* Bleach solution should be freshly diluted.

Precautions for Specific Groups

F. Health Care Worker

F.1 Last offices

F.1.1. The dead body is classified by the attending physician as category 1, 2 or 3. Tags for classification of categories of dead bodies should be attached to the dead body and the body bag or mortuary sheet.

F.1.2. Staff should put on appropriate personal protective equipment before handling the dead body.

Category 1: Gloves, water repellent gown and surgical mask. Use goggles or face shield to protect eyes, if there may be splashes.

Category 2: Gloves, water resistant gown/ plastic apron over water repellent gown, and surgical mask. Use goggles or face shield to protect eyes, if there may be splashes.

Category 3: cap/hood, face shield/goggles, N95 respirator, water resistant gown, long nitrile gloves/double nitrile gloves, full length shoe covers/ boots.

F.1.3. All tubes, drains and catheters on the dead body should be removed.

F.1.4. Extreme caution should be exercised when removing intravenous catheters and other sharp devices. They should be directly disposed into a sharps container.

F.1.5. Wound drainage and needle puncture holes should be disinfected and dressed with impermeable material.

F.1.6. Secretions in oral and nasal orifices can be cleared by gentle suction if needed.

F.1.7. Oral, nasal and rectal orifices of the dead body have to be plugged to prevent leakage of body fluids.

F.1.8. The body should be cleaned and dried.

F.1.9. **Dead bodies under Category 1:**

The dead body can be either wrapped with a mortuary sheet or placed in an opaque body bag.

Dead bodies under Category 2 or Category 3 :

(a) The dead body should be first placed in a robust and leak-proof

transparent plastic bag of not less than 150 µm thick, which should be zippered closed. Pins are NOT to be used.

- (b) A second layer of cover is required.

Category 2 - The bagged body should be either wrapped with a mortuary sheet or placed in an opaque body bag.

Category 3 - The bagged body should be placed in an opaque body bag.

- (c) The outside of the body bag should be wiped with 1 in 4 diluted household bleach (mixing 1 part of 5.25% bleach with 4 parts of water) and allow to air dry

F.1.10. Remove personal protective equipment after handling of the dead body. Then, perform hand hygiene immediately.

F.2 Environmental control

F.2.1 Items classified as clinical waste must be handled and disposed of properly according to the legal requirements.

F.2.2. All used linen should be handled with standard precautions. Used linen should be handled as little as possible with minimum agitation to prevent possible contamination of the person handling the linen and generation of potentially contaminated lint aerosols in the areas. Laundry bag should be securely tied up. Staff should follow their hospital guidelines on handling of soiled linen.

F.2.3 Used equipment should be autoclaved or decontaminated with disinfectant solutions in accordance with established disinfectant policy.

F.2.4. All surfaces which may be contaminated should be wiped with “1 in 49 diluted household bleach” (mixing 1 part of 5.25% bleach with 49 parts of water), leave it for 15-30 minutes, and then rinse with water. Metal surfaces could be wiped with 70% alcohol.

F.2.5. Surfaces visibly contaminated with blood and body fluids should be wiped with 1 in 4 diluted household bleach (mixing 1 part of 5.25% bleach with 4 parts of water), leave it for 10 minutes, and then rinse with water.

G. Mortuary staff

G.1 Precautions for all dead bodies

Dead body care

- G.1.1. All dead bodies must be identified and correctly labeled with identity labels and category tags.
- G.1.2. Dead body which is found soiled with blood or body fluids should be placed in a disposable plastic bag instead of linen.
- G.1.3. Dead bodies should be stored in cold chambers maintained at approximately 4°C.
- G.1.4. Since each and every dead body brought to autopsy is a potential source of infection, at all times, pathologists and other support staff should observe standard precautions in the performance of any autopsy.

Environmental control

- G.1.5. The mortuary must be kept clean and properly ventilated at all times. Lighting must be adequate. Surfaces and instruments should be made of materials which could be easily disinfected and maintained.
- G.1.6. Storage compartments for dead bodies should be easily accessible for both regular cleaning and maintenance.
- G.1.7. Smoking, drinking and eating are forbidden in autopsy room, body storage and viewing areas.
- G.1.8. All used linen should be handled with standard precautions. Used linen should be handled as little as possible with minimum agitation to prevent possible contamination of the person handling the linen and prevent the generation of potentially contaminated lint aerosols in the areas. Laundry bag should be securely tied up. Staff should follow the established guidelines of their organizations on handling of soiled linen.
- G.1.9. Items classified as clinical waste must be handled and disposed of properly according to the legal requirements.
- G.1.10. Environmental surfaces, instruments and transport trolleys should be properly decontaminated.

G.2 Additional precautions for handling dead bodies under Category 2 or Category 3

- G.2.1. Autopsies on dead bodies which have died with infectious diseases as listed under Category 2 or Category 3 expose staff to unwarranted risk and should generally not be performed. However, if autopsy is to be carried out because of special reasons, the following practices should be adopted:
- (a) It should be performed by a pathologist using recommended barrier techniques and procedures to reduce the risk of infection.
 - (b) The number of people allowed in the autopsy room should be limited to those directly involved in the operation.
 - (c) After completion of examination and local disinfection of skin with “1 in 49 diluted household bleach” (mixing 1 part of 5.25% bleach with 49 parts of water), the dead body should be placed in a robust and leak-proof transparent bag of not less than 150 µm thick. The bagged body should be placed in another opaque bag and zippered closed.
 - (d) The outside of the dead body bags should be wiped with “1 in 4 diluted household bleach”(mixing 1 part of 5.25% bleach with 4 parts of water) and allow to air dry.
 - (e) The appropriate warning tag indicating Category 2 or Category 3 should be attached on the outside of the body bag.
- G.2.2. Mortuary staff should ensure that good liaison is maintained between themselves and those who collect the dead bodies for disposal. It is essential that the funeral workers and all others involved in handling the dead body are informed of the potential risk of infection and the categorization of the dead body.

H. Funeral workers

H.1 Precautions for all dead bodies

Dead body care

H.1.1. When handling of dead bodies:

- (a) Avoid direct contact with blood or body fluids from the dead body.
- (b) Observe strict personal hygiene and put on appropriate personal protective equipment (PPE) including gloves, water repellent gown and surgical masks. Use goggles or face shield to protect eyes, if there may be splashes.
- (c) Make sure any wounds are covered with waterproof bandages or dressings.
- (d) Do NOT smoke, drink or eat. Do NOT touch your eyes, mouth or nose.

H.1.2. Remove personal protective equipment after handling of the dead body. Then, wash hands with liquid soap and water immediately.

Environmental control

H.1.3. Make sure that supply of disposable gloves, protective equipment, alcohol-based hand rub and disinfectant such as household bleach is readily available.

H.1.4. After use, the disposable items such as gloves and protective clothing should be disposed of in a plastic bag.

H.1.5. Linen contaminated with blood or body fluids should be laundered in a washing machine with hot washing cycle (>70°C), otherwise, they should be soaked in freshly prepared “1 in 49 diluted household bleach” (mixing 1 part of 5.25% bleach with 49 parts of water) for 30 minutes before washing.

H.1.6. All surfaces which may be contaminated should be wiped with “1 in 49 diluted household bleach” (mixing 1 part of 5.25% bleach with 49 parts of water), leave it for 15-30 minutes, and then rinse with water. Metal surfaces could be wiped with 70% alcohol.

H.1.7. Surfaces visibly contaminated with blood and body fluids should be wiped with “1 in 4 diluted household bleach” (mixing 1 part of 5.25% bleach with 4 parts of water), leave it for 10 minutes, and then rinse with water.

H.2 Specific for dead bodies under Category 1

H.2.1. Viewing in funeral parlour, embalming and hygienic preparation of the Category 1 dead bodies are allowed.

H.3 Specific for dead bodies under Category 2

H.3.1. Viewing in funeral parlour and hygienic preparation are allowed.

H.3.2. Embalming is NOT allowed.

H.3.3. Cremation is advisable.

H.4 Specific for dead bodies under Category 3

H.4.1. Viewing in funeral parlour, embalming and hygienic preparation are NOT allowed.

H.4.2. The dead body should NOT be removed from the body bag.

H.4.3. Unzipping of the body bag is NOT allowed.

H.4.4. Cremation is strongly advisable.

I. Staff handling dead bodies of unknown category

Staff such as Food and Environmental Hygiene Department (FEHD) may need to handle dead bodies of unknown categories. For example, dead bodies found on board conveyances from land, sea or air, with unclear history or suspected infectious disease.

Dead body care

I.1. When handling of dead bodies:

- (a) Avoid direct contact with blood or body fluids from the dead body.
- (b) Observe strict personal hygiene and put on appropriate personal protective equipment (PPE) including gloves, water resistant gown / plastic apron over water repellent gown, and surgical masks. Use goggles or face shield to protect eyes, if there may be splashes.
- (c) Make sure any wounds are covered with waterproof bandages or dressings.
- (d) Do NOT smoke, drink or eat. Do NOT touch your eyes, mouth or nose.

I.2. Place the dead body in a robust and leak-proof opaque plastic bag of not less than 150 µm thick, which should be zippered closed. Pins are NOT to be used. (The bagged body should be placed in another opaque body bag if the deceased was suspected to be suffering from highly infectious diseases).

I.3. Attach an appropriate identity label to the body bag before transport to public mortuary or funeral parlour as the case may warrant.

I.4. Remove personal protective equipment after handling of the dead body. Then, wash hands with liquid soap and water immediately.

Environmental control

I.5. Make sure that supply of disposable gloves, protective equipment, alcohol-based hand rub and disinfectant such as household bleach is readily available.

I.6. After use, the disposable items such as gloves and protective clothing should be disposed of in a plastic bag.

I.7. Linen contaminated with blood or body fluids should be laundered in a washing machine with hot washing cycle (>70°C), otherwise, they should be soaked in freshly prepared “1 in 49 diluted household bleach” (mixing 1 part of 5.25% bleach with 49 parts of water) for 30 minutes before washing.

I.8. All surfaces may be contaminated should be wiped with “1 in 49 diluted household bleach” (mixing 1 part of 5.25% bleach with 49 parts of water), leave it for 15-30 minutes, and then rinse with water. Metal surfaces could be wiped with 70% alcohol.

I.9. Surfaces visibly contaminated with blood and body fluids should be wiped with “1 in 4 diluted household bleach” (mixing 1 part of 5.25% bleach with 4

parts of water), leave it for 10 minutes, and then rinse with water.

Appendix I: Samples of Dead body Category Tags

Danger of Infection 小心傳染			Category 類別
1			
In handling dead bodies, Standard Precautions are required. 處理屍體時需要採取標準預防措施。			
Bagging 入屍袋	Viewing in funeral parlour 殯儀館內瞻仰遺容	Embalming 防腐處理	Hygienic preparation in funeral parlour 殯儀館內裝身及化妝
Not necessary 不需要	Allowed 可以	Allowed with disposable gloves, water repellent gown and surgical mask 可以，但必須戴上用後即棄的手套、抗水保護衣和外科口罩	

Danger of Infection 小心傳染			Category 類別
2			
In handling dead bodies, Standard Precautions are required. 處理屍體時需要採取標準預防措施。			
In addition, the following precautions are also required: 此外，下列附加的預防措施亦必須採納：			
Bagging 入屍袋	Viewing in funeral parlour 殯儀館內瞻仰遺容	Embalming 防腐處理	Hygienic preparation in funeral parlour 殯儀館內裝身及化妝
Must 必須	Allowed 可以	Not allowed 不可以	Allowed with disposable gloves, water resistant gown / plastic apron over water repellent gown, surgical mask 可以，但必須戴上用後即棄的手套、防水保護衣/抗水保護衣外加膠圍裙和外科口罩

Danger of Infection 小心傳染			Category 類別
3			
In handling dead bodies, Standard Precautions are required. 處理屍體時需要採取標準預防措施。			
In addition, the following precautions are also required: 此外，下列附加的預防措施亦必須採納：			
Bagging 入屍袋	Viewing in funeral parlour 殯儀館內瞻仰遺容	Embalming 防腐處理	Hygienic preparation in funeral parlour 殯儀館內裝身及化妝
Must 必須	Not allowed 不可以	Not allowed 不可以	Not allowed 不可以

Appendix II: Summary table on precautionary measures for handling and disposal of dead bodies

Risk category	Bagging	Viewing in funeral parlour	Embalming	Hygienic preparation in funeral parlour	Disposal of dead body
Cat. 1 Other than those specified in Cat 2 & Cat 3 below	<u>NOT</u> necessary	Allowed	Allowed with PPE*	Allowed with PPE*	Coffin burial or cremation is optional
Cat. 2 1) Human Immunodeficiency Virus infection (HIV) 2) Hepatitis C 3) Creutzfeldt-Jacob disease without necropsy 4) Severe Acute Respiratory Syndrome (SARS) 5) Avian influenza 6) Middle East Respiratory Syndrome (MERS) 7) Others**:	Must	Allowed	<u>NOT</u> allowed	Allowed with PPE*	Cremation is advisable
Cat. 3 1) Anthrax 2) Plague 3) Rabies 4) Viral haemorrhagic fevers 5) Creutzfeldt-Jacob disease with necropsy 6) Others**:	Must	<u>NOT</u> allowed	<u>NOT</u> allowed	<u>NOT</u> allowed	Cremation is strongly advisable

* PPE: Including disposable gloves, water repellent gown and surgical mask.

** Including other infectious diseases as advised by the physician i/c, the infection control officer or microbiologist.


Explanatory Note:

- Bagging: placing the dead body in a plastic body bag for storage and transport.
- Viewing in funeral parlour: allowing the bereaved to see, and spend time with the dead before encoffining.
- Embalming: injecting preservatives into the dead body to slow down the process of decay.
- Hygienic preparation in funeral parlour: cleaning and tidying the body so that it presents a suitable appearance for viewing. Applying makeup may be included.
- Disposal of dead body: usually by coffin burial or cremation.

Appendix III:

Recommended precautions for relatives when handling dead bodies under Category 1, Category 2 and Category 3


Recommended precautions for relatives when handling dead bodies under Category 1

	Danger of Infection 小心傳染			Category 類別 1
	In handling dead bodies, Standard Precautions are required. 處理屍體時需要採取標準預防措施。			
	Bagging 入屍袋	Viewing in funeral parlour 殯儀館內瞻仰遺容	Embalming 防腐處理	Hygienic preparation in funeral parlour 殯儀館內裝身及化妝
Not necessary 不需要	Allowed 可以	Allowed with disposable gloves, water repellent gown and surgical mask 可以，但必須戴上用後即棄的手套、抗水保護衣和外科口罩		

You are advised of the following measures for your health protection:

- 1) Viewing in funeral parlour, embalming and hygienic preparation of the dead body are allowed.
- 2) There should be minimal contact with/handling of the dead body. When there is a need to do so, you should:-
 - Avoid direct contact with blood or body fluids when handling the dead body.
 - Observe strict personal hygiene and put on appropriate personal protective equipment including gloves, water repellent gown and surgical mask. Use goggles or face shield to protect eyes, if there may be splashes.
 - Make sure that any wounds are covered with waterproof bandages or dressings.
 - Do NOT smoke, drink or eat. Do NOT touch your eyes, mouth or nose.
- 3) Remove personal protective equipment after contact with/handling of the dead body. Then, wash hands with liquid soap and water immediately.

Recommended precautions for relatives when handling dead bodies under Category 2

Danger of Infection 小心傳染			Category 類別
2			
 <p>In handling dead bodies, Standard Precautions are required. 處理屍體時需要採取標準預防措施。 In addition, the following precautions are also required: 此外，下列附加的預防措施亦必須採納：</p>			
Bagging 入屍袋	Viewing in funeral parlour 殯儀館內瞻仰遺容	Embalming 防腐處理	Hygienic preparation in funeral parlour 殯儀館內裝身及化妝
Must 必須	Allowed 可以	Not allowed 不可以	Allowed with disposable gloves, water resistant gown / plastic apron over water repellent gown & surgical mask 可以，但必須戴上用後即棄的手套、防水保護衣 / 抗水保護衣外加膠圍裙和外科口罩

You are advised of the following measures for your health protection:

- 1) Viewing in funeral parlour and hygienic preparation are allowed.
- 2) Embalming is NOT allowed.
- 3) There should be minimal contact with/handling of the dead body. When there is a need to do so, you should:-
 - Avoid direct contact with blood or body fluids when handling the dead body.
 - Observe strict personal hygiene and put on appropriate personal protective equipment including gloves, water resistant gown / plastic apron over water repellent gown, and surgical mask. Use goggles or face shield to protect eyes, if there may be splashes.
 - Make sure that any wounds are covered with waterproof bandages or dressings.
 - Do NOT smoke, drink or eat. Do NOT touch your eyes, mouth or nose.
- 4) Remove personal protective equipment after contact with/handling of the dead body. Then, wash hands with liquid soap and water immediately.

Recommended precautions for relatives when handling dead bodies under Category 3

Danger of Infection 小心傳染		Category 3 類別	
In handling dead bodies, Standard Precautions are required. 處理屍體時需要採取標準預防措施。 In addition, the following precautions are also required: 此外，下列附加的預防措施亦必須採納：			
 Bagging 入屍袋	Viewing in funeral parlour 殯儀館內瞻仰遺容	Embalming 防腐處理	Hygienic preparation in funeral parlour 殯儀館內裝身及化妝
Must 必須	Not allowed 不可以	Not allowed 不可以	Not allowed 不可以

You are advised of the following measures for your health protection:

- 1) Viewing in funeral parlour, embalming and hygienic preparation are **NOT** allowed.
- 2) The dead body should **NOT** be removed from the body bag.
- 3) Unzipping of the body bag is **NOT** allowed.
- 4) Wash hands immediately with liquid soap and water if accidentally have contact with blood or body fluids from the dead body.

Supplementary Guidance
for Handling of Dead Bodies of suspected/confirmed Ebola Virus Disease (EVD)

This is a supplementary guidance of “Guideline for Handling and Disposal of Dead Bodies” prepared by Department of Health, Hospital Authority and Food Environmental Hygiene Department. These recommendations give guidance on the safe handling of Dead Bodies (DB) that may contain Ebola virus and are for use by personnel working in Clinical Area, Food and Environmental Hygiene Department (FEHD), Mortuary and Funeral. Ebola virus can be transmitted by laceration and puncture with contaminated instruments used during postmortem care, through direct handling of dead bodies without appropriate personal protective equipment, and through splashes of blood or other body fluids (e.g. urine, saliva, feces) to unprotected mucosa (e.g., eyes, nose, or mouth) which occur during postmortem care.

- The coordinator and/or the infection prevention and control staff should be consulted for any decision making on movement and burial of dead bodies.
- The handling of human remains should be kept to a minimum.
- The following recommendations should be adhered to in principle, but may need some adaptation to take account of cultural and religious concerns:
 - Only trained personnel should handle dead bodies.
 - Wear appropriate Personal Protective Equipment (PPE) before handle the dead body of a suspected or confirmed case of EVD. (Different settings may select additional PPE based on their risk assessment).
 - Place the body in double bags. Absorbent material should be put under the body and placed in the first bag. Wipe over the surface of each body bag with a suitable disinfectant (10,000 ppm sodium hypochlorite solution) e.g.1 in 4 diluted household bleach (mixing 1 part of 5.25% bleach with 4 parts of water).
 - Seal and label with the indication of highly-infectious material (Category 3 tag).
 - Immediately move the body to the mortuary.
 - PPE should be put on at the site of collection of body, worn during the process of collection and placement in body bags, and should be removed immediately afterward.
 - Hand hygiene should be performed immediately following the removal of PPE.
 - Dead body should not be sprayed, washed or embalmed. Any practice of washing the dead bodies in preparation of “clean burials” should be discouraged.

- The environment where the body is placed should be clean and decontaminated with 10,000 ppm sodium hypochlorite solution, e.g. 1 in 4 diluted household bleach (mixing 1 part of 5.25% bleach with 4 parts of water) and allow to air dry.
- In the event of leakage of fluids from the body bag, thoroughly clean and decontaminate areas of the environment with 10,000 ppm sodium hypochlorite solution, e.g. 1 in 4 diluted household bleach (mixing 1 part of 5.25% bleach with 4 parts of water) and allow to air dry.
- Reusable equipment should be cleaned and disinfected according to standard procedures.
- The DB should be cremated or buried promptly.

Department of Health, Hospital Authority, Food and Environmental Hygiene Department

19 Sep 2014

References

1. Centers for Disease Control and Prevention. Guidance for Safe Handling of Human Remains of Ebola Patients in U. S. Hospitals and Mortuaries. [Internet] 2014 [cited 2014 Aug 26]. Available from: <http://www.cdc.gov/vhf/ebola/hcp/guidance-safe-handling-human-remains-ebola-patients-us-hospitals-mortuaries.html>
2. World Health Organization. Interim Infection Prevention and Control Guidance for Care of Patients with Suspected or Confirmed Filovirus Haemorrhagic Fever in Health-Care Settings, with Focus on Ebola [Internet] 2014 [cited 2014 Aug 26]. Available from: http://apps.who.int/iris/bitstream/10665/130596/1/WHO_HIS_SDS_2014.4_eng.pdf?ua=1
3. Department of Health.UK. Management of Hazard Group 4 viral haemorrhagic fevers and similar human infectious diseases of high consequence. [Internet] 2014 [cited 2014 Aug 26]. Available from: http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1194947382005
4. Médecins Sans Frontières. FILOVIRUS HAEMORRHAGIC FEVER GUIDELINE. [Internet] 2008 [cited 2014 Aug 26]. Available from: <https://ebolacommunicationnetwork.org/ebolacomresource/filovirus-haemorrhagic-fever-guideline/>

Supplementary Guidance for Handling of Dead Bodies of suspected/confirmed Ebola Virus Disease (EVD)

Precautions for Handling and Disposal of Dead Body (DB) of suspected or confirmed EVD
For personnel working in Clinical Area, Food and Environmental Hygiene Department (FEHD), Mortuary and Funeral

a) Clinical area

Last office

- Wear PPE (cap/hood, face shield/goggles, N95 respirator, water resistant gown, long nitrile gloves/double nitrile gloves, and full length shoe covers/ boots).
- Absorbent material should be put under the DB and placed in 1st bag (a robust& leak-proof transparent plastic bag of not less than 150 µm thick) and zippered closed
- Wipe surface of 1st body bag with 10,000 ppm sodium hypochlorite solution#.
- The bagged body should be placed in another opaque body bag and zippered closed
- Wipe surface of 2nd body bag with 10,000 ppm sodium hypochlorite solution#.
- Attach category 3 tag & identification tag outside the opaque bag
- Move the DB to the mortuary immediately
- Disinfect the environment #
- Handle and dispose clinical waste properly according to the legal requirements

b) Board conveyances from sea, land or air

- Wear PPE (water resistant gown, surgical mask, eye protection, double gloves, shoe covers / boots).
- Absorbent material should be put under the DB and placed in 1st bag (a robust& leak-proof opaque body bag of not less than 150 µm thick) and zippered closed
- Wipe surface of 1st body bag with 10,000 ppm sodium hypochlorite solution#.
- The bagged body should be placed in another opaque body bag and zippered closed
- Wipe surface of 2nd body bag with 10,000 ppm sodium hypochlorite solution#.
- Attach category 3 tag & identification tag outside the opaque bag
- Move the DB to the mortuary immediately
- Disinfect the environment #
- Handle and dispose infectious waste properly

c) Mortuary (Hospital & Public)

- Wear PPE (water resistant gown, surgical mask, eye protection, double gloves, shoe covers / boots)
- Precautions should be taken in procedures of DB identification at time of body receipt into mortuary
- Follow steps in (a) if DB is received without last office (Public mortuary)
- Place the bagged body directly to designated DB storage rack
- Disinfect the container & body transport trolley#
- Autopsies on DB should be avoided
- Relatives should be advised not to handle the DB during identification and collection of body*
- Place bagged body directly into a coffin, and wipe the surface of coffin with 10,000 ppm sodium hypochlorite solution# before send out {perform by undertaker}
- Disinfect body storage rack and environment #
- Handle and dispose clinical waste properly according to the legal requirements.

**Relatives should wear PPE if they want to see the body, open the outside opaque body bag and show the inner transparent bag with face only. Then wipe surface of outside opaque body bag with 10,000 ppm sodium hypochlorite solution*

d) Funeral

- No direct handling of DB
- DB should be kept inside a coffin and in a designated area
- Following below measures:
 - Viewing in funeral parlour, embalming and hygienic preparation are **NOT** allowed
 - The DB should **NOT** be removed from the body bag
 - Unzipping of the body bag is **NOT** allowed
 - Cremation is strongly advisable
- The DB should be cremated or buried promptly

Notes

- Handling of dead bodies should be kept to a minimum
- Perform hand hygiene immediately after removal of PPE
- #Surface decontamination: All surfaces should be wiped with 10,000 ppm sodium hypochlorite solution, e.g. 1 in 4 diluted household bleach (mixing 1 part of 5.25% bleach with 4 parts of water) and allow to air dry. Use heavy duty rubber gloves for environmental cleaning & disinfection