

VCH Guidelines for the Management of Human Remains Infected with a Viral Hemorrhagic Fever (VHF)

Please refer to ipac.vch.ca for the most current version; updates are made without notification.

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1.0 Background

In patients infected with a communicable VHF (e.g. Ebola Virus Disease), there is a high risk of transmission when handling remains after death. Transmission can occur through direct handling of the body without appropriate personal protective equipment (PPE), through splashes of blood and bodily fluids onto unprotected mucosa, and through lacerations and puncture with contaminated instruments used during post-mortem care.

This document outlines procedures to be used in the care of deceased persons at any VCH site, based on the Office of the Provincial Health Officer's [B.C. Ebola Virus Disease Guidelines for the Management of Human Remains](#), the Center for Disease Control [Guidance for Safe Handling of Human Remains](#), and VGH Ebola Virus Disease, Standard Operating Procedure, 2015.

2.0 Notification

The medical microbiologist on call must be notified immediately of death in a patient with suspected or confirmed communicable VHF, who will notify the hospital morgue personnel and Public Health. The medical microbiologist and/or medical health officer on call should be consulted for any decision making on movement and burial of human remains of a deceased EVD patient.

3.0 Post-mortem care on the unit (ED and ICU)

3.1 Required supplies/equipment

- High level PPE as outlined in the [Health Care Worker - Checklist for Donning/Doffing Personal Protective Equipment \(PPE\) for Viral Hemorrhagic Fever](#)
- Appropriate body bags:
 - Hermetically sealed body bag (e.g. BioSeal) if available, or
 - Two regular leak-proof body bags, not less than 150µm (6 mil) thick
- Hospital grade disinfectant wipes (ACCEL INTERvention)
- Waste management supplies (i.e. large blue drum or 30 L red pail)
- Disposable digital camera or mobile phone, if possible
- Zip tie and waterproof tape for securing zipper of outer bag
- Adhesive backed pouch for attaching documentation to disinfected outer bag in cold zone

3.2 Procedure

1. Pronounce death at the site of the deceased.
2. Discuss with the medical health officer about retaining personal items on the body of sentimental value to the family. Disinfect any items removed from the body as directed. Appendix 1 outlines an example.
3. A minimum of 2 RNs should be donned in high level PPE to prepare the body for transfer to the morgue.
4. If possible, use digital camera or mobile phone to take a photograph of the deceased's face. Send photo via Wi-Fi, e-mail, or text message to a team member securely. Discard camera in biohazardous waste container.
5. Position gurney with two pre-opened body bags next to hospital bed.
6. Pull bed sheet(s) up and around body. Do not wash or clean body. Do not remove inserted medical equipment from body.
7. Remove first bag from gurney. Gently roll body wrapped in sheets while sliding first bag under body.
8. Complete transfer of body to first bag. Cover body with 3 Ultrasorb pads. Zip up the bag, minimizing air in the bag.
9. Disinfect gloved hands using alcohol-based hand rub (ABHR). If any areas of PPE have visible contamination, disinfect with ACCEL INTERvention disinfectant wipes.
10. Disinfect the outside of the first bag with ACCEL INTERvention disinfectant wipes.
11. Transfer first bag with body to gurney, placing it on top of second bag.
12. Disinfect gloved hands with ABHR.
13. Work second bag around the first bag. Zip up second bag, minimizing air in the bag. Zip tie the second bag shut.
14. Disinfect gloved hands using ABHR.
15. Move gurney away from bed, towards door.
16. Carefully apply waterproof tape to seal zipper

17. Decontaminate surface of body bag with ACCEL INTERVention.
 - Begin by applying ACCEL INTERVention to top of bag and exposed areas of gurney's cot.
 - Roll bag to one side to decontaminate half of bottom of bag and newly exposed portion of gurney's cot.
 - Repeat with other side of bag and gurney.
 - After visible soil has been removed, reapply ACCEL INTERVention and allow a minimum one minute contact time.
18. Disinfect surfaces of gurney from handles to wheels with ACCEL INTERVention.
19. Disinfect gloved hands using ABHR.
20. Push gurney so only gurney and decontaminated body bag enter cold zone. Do not enter cold zone. A new set of workers will receive the body, rolling the gurney over disinfectant soaked mats.
21. Proceed to PPE removal area.

At this point, the body bag has been decontaminated and the potential for further contamination has been eliminated as long as the body is handled carefully. Workers who handle the body bag from this point until the body is cremated or placed into a metal casket should wear single-use disposable gloves with extended cuffs and a long-sleeved disposable gown.² If there is no evidence that the body bag has been compromised by a tear or puncture or liquid coming from the bag, gloves and gowns used for transfer to morgue can be disposed of as regular trash.

4.0 Transfer to Morgue

1. All movement of the body must be coordinated by the MMOC.
2. A new set of workers in the cold zone will receive the decontaminated body bag, wearing disposable gloves and isolation gown.
3. Place patient identification and any other documents that need to accompany the body, including the photo if taken, in an adhesive-backed pouch that is attached to the body bag.
4. Notify the morgue if the body has any implanted electronic medical devices.
5. Affix label "**Highly Infectious, DO NOT OPEN**"

5.0 Morgue Procedures

1. Ensure anyone handling the body bag wears single-use disposable gloves with extended cuffs and a long-sleeved disposable gown.
2. Do not open body bags.
3. Do not remove any implanted medical devices.
4. The transportation of remains that contain (or are suspected to contain) EVD must be kept to a minimum. For guidelines regarding transportation to funeral home and final disposition, see the PHO's [*B.C. Ebola Virus Disease Guidelines for the Management of Human Remains*](#).

Appendix 1: Disinfection of Personal Items

Any queries about retaining personal items of sentimental value to the family must be discussed with the medical health officer (MHO). The MHO will determine if requested items can be effectively disinfected. The following is an example of a procedure that may be used if approved by the MHO.

- 1) Bedside RN inspects items to be cleaned, using Accel Intervention to remove any visible body fluids and organic matter.
- 2) Donning/Doffing Assistant, wearing appropriate PPE, fills a disposable basin with accelerated hydrogen peroxide solution $\frac{3}{4}$ full.
- 3) Bedside RN disinfects gloves using accelerated hydrogen peroxide wipes.
- 4) Bedside RN disinfects door opening mechanism using a new accelerated hydrogen peroxide wipe, and then opens after 1 minute contact time.
- 5) Donning/Doffing Assistant passes the filled basin to the bedside RN.
- 6) Bedside RN will place items in the solution and allows them to soak as per manufacturer's recommendation for viruses.
- 7) Bedside RN disinfects gloves using accelerated hydrogen peroxide wipes.
- 8) Bedside RN disinfects door opening mechanism using new accelerated hydrogen peroxide wipe, and then opens after 1 minute contact time.
- 9) Bedside RN holds the basin near the opened door and the Donning/Doffing Assistant reaches into the solution and retrieves the items placing them in new disposable tray.
- 10) Bedside RN will use absorbent pad from emesis bag to solidify liquid and place disposable basin in VHF waste container.
- 11) Donning/Doffing Assistant will disinfect their gloves using an accelerated hydrogen peroxide wipe, remove, and perform hand hygiene using alcohol based hand rub or soap and water.
- 12) Items are now considered clean and safe to remove from area.