Vancouver General Hospital Emergency Department Viral Hemorrhagic Fever (VHF) Standard Operating Procedure

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

Updated: November 2022

Contents

1. PREAMBLE

Definition:
Viral Hemorrhagic Fever (VHF) is a serious, frequently fatal, viral syndrome caused by many different viral pathogens. Some of these infections are communicable and can be easily spread from person to person, particularly in healthcare settings. Initial symptoms are often non-specific and include high fever, myalgia, headache, pharyngitis, diarrhea, vomiting, and chest pain. Later signs are more specific to VHF, such as conjunctivitis, petechiae, morbilliform rash and progression to hemorrhagic shock and end-organ damage.

Provincial Response Measures:
Since 2014, strategies have been developed to manage potential cases of VHF arriving in British Columbia and can be found on the BC Office of the Provincial Health Officer (PHO) site.

The BC Office of the PHO has defined three levels of facility types and roles to care for possible cases of VHF:

1. A *Type One* facility must be prepared to assess, isolate, stabilize and transfer.
2. A *Type Two* facility must be prepared as above, and additionally, to perform initial testing and provide necessary care and treatment while VHF is ruled out.
3. A *Type Three* is able to accept any suspect or confirmed cases from Type One or Two facilities, and provide ongoing diagnostics and care through to resolution.

Any highly suspect cases should be transferred directly to a Type Three facility, in consultation with the expert risk assessment team (typically the Medical Health Officer (MHO), Medical Microbiologist On Call (MMOC), and Infectious Diseases (ID)). Acute care facility designations can be found on the PHO site, *Roles of Provincial Facilities for Care of Persons Under Investigation or Confirmed Ebola Virus Disease Patients*, as can the *B.C. Ebola Virus Disease Transportation Policy*.

2. TRIAGE

It is imperative that any suspect patient who presents at triage with a complaint of fever and/or malaise must be assessed using the *VA Algorithm for Assessment of Potential Viral Hemorrhagic Fever* early in the patient encounter. BCEHS have been trained to assess for VHF, and to isolate patients promptly. As VGH is a testing site we must be prepared to accept and care for potential VHF patients from both BCEHS and those who self-present.

Ambulance with Pre-Notification

If a pre-notification call from paramedics is received, the Charge Nurse (CN), or designate, should use the *VA Algorithm for Assessment of Potential Viral Hemorrhagic Fever* screening questions to determine if the patient is appropriate for activation of the VHF procedure. The CN should initiate the pre-registration protocol. BCEHS personnel should be asked to continue isolating the patient within their ambulance until A10 and staff are prepared for the patient's arrival. Once the room is prepared and staff are donned in Personal Protective Equipment (PPE), the primary RN will meet the paramedics and patient within the

paramedic entrance vestibule at triage with the prepared stretcher from A10. The patient will walk to the stretcher or be unloaded by BCEHS, surgical mask applied and covered with a sheet. This patient will travel directly through triage with primary RN to A10 without pause. BCEHS personnel who have been caring for the patient will not enter the department until their doffing procedure is complete. Security should be involved to ensure that hallways are clear, and to deny access to the paramedic entrance vestibule until it can be terminally cleaned.

Ambulance without Notification

If the patient is suspected of having VHF by triage RN, BCEHS should be directed to take the patient to Interview Room 1 immediately, leaving the patient on their stretcher. The RN should then screen the patient using the *VA Algorithm for Assessment of Potential Viral Hemorrhagic Fever* maintaining a 2 meter distance from the patient. If the screening is positive, BCEHS should immediately return to their ambulance and initiate their own VHF protocols, and the RN is to initiate the Triage Procedure below.

Self-Presentation

If a patient is suspected of having VHF, while at the triage window or during triage assessment, they should be directed to Interview Room 1 immediately (as the RN will not be donned in PPE, they should maintain a 2 meter distance from the patient). The nurse should ask other patients to step back from window and/or booth and contact Security to immediately secure the area. The RN should then screen the patient using the *VA Algorithm for Assessment of Potential Viral Hemorrhagic Fever* maintaining a 2 meter distance from the patient. If screened positive the following Triage Procedure should be initiated.

Triage Procedure

1. The triage nurse must notify the Charge Nurse (CN) and fellow triage staff immediately.
2. Ensure Security is maintaining areas at triage requiring terminal clean (window and/or booth) as well as a security personnel posted outside of Interview Room 1 to ensure limited access. The triage nurse does not need to contact housekeeping as housekeeping will already be dispatched as per the VHF notification process.
3. Complete the triage assessment, while maintaining 2 meter distance from patient (vitals will not be obtained at this point).
4. Provide specialty emesis bag (Go-Vom or Hygie) as appropriate.
5. Do not order any diagnostic testing or blood work while the patient is at triage.
6. Await notification that A10 is ready for patient arrival.
7. The assigned primary nurse will don PPE and using the prepared stretcher from A10 will transfer the patient from Interview Room 1. Security will ensure a safe perimeter is maintained around the patient as they are transported through the department.
8. Once the patient is moved to A10, ensure security personnel remains outside of Interview Room 1 until terminal clean is completed.

The triage procedure is summarized in Appendix II, the *VGH ED – VHF – Triage Quick Reference Guide*. Printed copies of the quick reference guide are posted at triage.

Visitors and/or Family Members

Move non-symptomatic accompanying persons to separate area for further assessment and referral to Medical Health Officer (MHO). No visitors will be allowed in patient room. Exceptions may be considered on a case by case basis in consultation with the expert risk assessment team (may include the MHO, MMOC, ID).

If the individual is symptomatic, follow the instructions described above in the self-presentation section. Dependent upon the patient's clinical status, the patient and the visitor or family member may share the same isolation room.

3. NOTIFICATION

Charge Nurse

The CN is responsible for notifying the Emergency Physician in charge (EPIC) and switchboard of the VHF Activation as soon as a patient has screened positive at triage or if there has been pre-notification of a suspect case by BCEHS. Refer to Appendix III for the *VGH Emergency - VHF - Notification Algorithms* and Appendix IV for the *VGH ED – VHF – Charge Nurse Duty List*.

Emergency Physician

After assessing the patient the EP will participate in a conference call with the MHO, the Medical Microbiologist on Call (MMOC), and Infectious Diseases Attending Physician (ID). The MHO will arrange the teleconference and provide the instructions to the EP during their initial call back as per Appendix III *VGH Emergency - Ebola Virus Disease - Notification Algorithms*.

Nursing Unit Clerk

The acute care Nursing Unit Clerk (NUC) will use the *VGH ED - EVD - Notification Call Back Log* (Appendix V) to document return call times of notified individual to the ED and transfer them to either the CN or EPIC, as appropriate.

4. PREPARATION

Once the CN has been notified that there is a potential or suspected VHF patient at triage, he or she must complete the steps as detailed in Appendix IV the *VGH ED – VHF – Charge Nurse Duty List*.

Anteroom Doors

If during the completion of the *Room Preparation Checklists* (Appendix VI) staff note that there are any issues with the functioning of the anteroom doors, refer to the following:

The automatic doors have safety sensors within the door alcoves, to prevent people and/or equipment from having the door shut on them. If a person happens to step within, or wave an arm, or place a piece of equipment inside the alcove the doors will automatically open. Healthcare workers (HCWs) within the

room should be aware of this so they can navigate around the alcoves, and prevent a door from opening inadvertently and exposing persons who are not wearing appropriate PPE. Should you have any issues with the doors, a maintenance requisition should be initiated, and the maintenance department should be called (Monday to Friday 0730-1530 call 54171, all other hours and holidays call 62601) to escalate it to a STAT request.

5. PERSONAL PROTECTIVE EQUIPMENT

For each entry and exit of a HCW to the patient's care space a Trained Observer and PPE Donning/Doffing Assistant must be engaged. Each individual has different roles and responsibilities to perform to ensure safe PPE donning and doffing. A separate *Healthcare Worker Checklist for Donning/Doffing PPE* is to be completed by a Trained Observer for each HCW who enters and exits the patient's room. Blank copies can be found in each VHF Kit. A separate *Doffing Assistant Checklist for Donning/Doffing PPE* is to be completed by a Trained Observer each time a Donning/Doffing Assistant dons and doffs to assist a HCW. Blank copies of these can be found in the anteroom. All completed check lists will be faxed to the Provincial Workplace Health Call Center at 604-953-5138. Paper copies to be maintained by the Patient Services Manager.

Trained Observer

A Trained Observer's roles are:

- To read off the *Healthcare Worker Checklist for Donning/Doffing PPE*, and have the HCW repeat back steps while performing the instruction.
- To observe the donning and doffing process and document on the checklist.
- To observe the HCW while they are in the patient's room, watching for any PPE breaches.
- To read off the *Doffing Assistant Checklist for donning/Doffing PPE*, and have the Donning/Doffing Assistant repeat back steps while performing the instruction. If a Donning/Doffing Assistant is donning PPE while the HCW is in the patients room an additional trained observer will be required to complete this task, as the HCWs Trained Observer must watch the HCW at all times.

A Trained Observer must not provide any hands-on assistance but rather watch to ensure that all PPE processes are performed correctly.

Donning/Doffing Assistant

A Donning/Doffing Assistant's roles are:

- To be prepared to offer hands-on assistance while the HCW is donning and doffing; assisting with doffing will be done while wearing PPE, as per the *Healthcare Worker Checklist for Donning/Doffing PPE*.
- To document interventions and findings in the patient's chart, on behalf of the HCW
- To prepare the anteroom to accept the HCW, by using Appendix VII *VCH ED – VHF – Doffing Area Preparation*.

Healthcare Worker

Any HCW exiting the room must engage the Trained Observer and ensure that the Donning/Doffing Assistant is donned and ready to assist. The HCW must be trained in VHF donning and doffing and have been fit tested for a N95 respirator within the last year.

PPE Supply

If the patient remains in the ED for a prolonged period of time, specialized VHF PPE supplies may become depleted within the department. Additional supplies will be located in the VGH ED Vault (accessed by the HN, CN or PCA); ensure that Special Order Cards are delivered to the Re-Order Bin at the CN desk if required. There are also fully stocked VHF kits on all isolation carts in the department that could be used, if necessary. If the stock of a supply is depleted from the department there are additional VHF specific hoods, gowns, boot covers, gloves and face shields available from Stat Stores in the basement of VGH. If access is required to the supplies within Stat Stores please contact the following:

- Mon – Fri (0700-1500): Area Supply Team Lead – local 68879 or pager 604-871-1229.
- Sat – Sun (0700-1530): Weekend Supervisor – local 63197 or pager 604-877-3830.
- Mon - Sun (1500-2300): OR Evening Area Supply Technician – pager 604-320-3174.
- Mon – Sun (2300-0700): Call Security for access to the door of Stat Stores B780. The supplies are on a marked cart to the left of the door. Please ensure that CN notifies PSM if this has occurred so that area supply can be notified to charge our department appropriately, and replenish their supply.

6. ISOLATION

When A10 is ready the patient should be transferred by the assigned primary RN to the care space. The prepared stretcher should be brought from A10 to either the ambulance entrance or Interview Room 1 by the nurse donned in PPE. The patient will transfer to the stretcher and then security personnel will escort the RN and patient to A10, to ensure that hallways are clear.

The patient should not be allowed to leave their room for any reason. The patient should be provided a urinal, bedpan, or commode as appropriate with Hygie covers/bags (in anteroom) to solidify waste for disposal in large blue drum. Note that any equipment brought into the patient's care space must remain in the room until the patient is confirmed VHF negative or the patient is transferred from the ED and a terminal clean of the care space has been completed.

7. ASSESSMENT / ONGOING CARE / WASTE MANAGEMENT

The primary nurse will complete an initial assessment, prepare the patient for EP assessment, and initiate interventions, as appropriate. The nurse may initiate IV access if clinically indicated. At this time it is suggested that he or she also obtain blood samples from the IV site so as to reduce the number of interactions with patient bodily fluids. See *Phlebotomy and specimen Delivery Guideline – VGH ED and*

ICU for specific blood collection instructions.

The EP will initiate a thorough assessment of the patient's risk for VHF and/or other potential communicable infections promptly. The EP will be responsible for ordering all laboratory and diagnostic testing in consultation with the ID physician.

No residents, medical students, nursing students, or students of any kind are allowed to provide care to the patient. The number of staff interactions of any kind with these patients should be limited to absolutely necessary interactions.

The HCW should always try to group tasks, so he or she can spend minimal time inside the patient's care space, and minimize frequency of donning and doffing. The HCW should activate the intercom system to speak with staff members outside of the room, by pressing the button on the speaker close to the anteroom exit door, and then speaking over the intercom. If staff outside of the room need to speak to the HCW inside the room or the patient, they must press and hold the white button on the speaker on the external wall between A10 and the anteroom. While care is being provided to the patient the Trained Observer should remain outside the window of A10 monitoring for breaches of the HCW's PPE. The Donning/Doffing Assistant will also remain outside the room, available to provide and pass any necessary supplies to the HCW and chart on the HCW's clinical record as required. **Nothing** can be removed from the room without consultation with the Infection Control Practitioner (ICP), MMOC or MHO.

Patient Waste

All garbage and/or soiled linen that have come in contact with the patient must to be disposed of. All materials should be placed in the VHF waste container within the patient's room. The VHF waste container should be filled to no more than 3/4 capacity. In the case that the waste container reaches 3/4 full the HCW should cover the waste container with the provided lid and request an additional VHF waste container be brought to the room. Note that all VHF waste containers must remain in the patient's room until the patient is confirmed VHF negative or transferred from the ED.

8. BLOOD OR BODILY FLUID SPILL

Spill clean-up kits can be found on the floor below the supply shelves at Triage Booth A, and under the sink in the dirty anteroom. The kits contains the following: 1 red bio hazardous waste pail, 1 roll of paper towel, 1 package of absorbent pads, 1 bottle of accelerated hydrogen peroxide, and 1 container of accelerated hydrogen peroxide wipes. Note that Housekeeping staff will **not** enter the patient's room until the patient is deemed VHF negative or transferred from the ED.

Spill Clean Up Procedure

For complete guideline see *Recommendations for Environmental Services, Biohazardous Waste Management, and Food and Linen Management for Persons under Investigation and Confirmed Cases of Ebola Virus Disease*: SOP #10 (page 42).

1. Ensure HCW is donned in full PPE.
2. Place absorbent pads over the spill, use as many as required to absorb all of the visible fluid. Place pads gently attempting to not contaminate your PPE with any of the spilled fluids.
3. Place paper towel over top of the pads.
4. Soak the paper towel with accelerated hydrogen peroxide. Allow 10 minute contact time.
5. Pick up all absorbent pads and paper towels and place into biohazard drum. Use a red biohazardous pail if the drum is not immediately available.
6. Clean the exterior of your gloves, using an accelerated hydrogen peroxide wipe, and allow one minute dwell time.
7. Using a new accelerated hydrogen peroxide wipe, wipe the surface where the spill occurred using a side to side motion, and allow a one minute contact time.
8. Using a second accelerated hydrogen peroxide wipe, re-wipe the surface, allowing a second one minute of contact.
9. Place the lid on the pail.
10. Walk the pail to the nearest VHF waste container (If outside of the patient's care space, walk with security escort to ensure clear hallways).

If a nurse has donned PPE to clean up a spill at Triage they will doff their PPE in Interview Room 1. See Appendix VII, *VCH ED – VHF – Doffing Area Preparation* for specific instructions.

9. TESTING

The EP in conjunction with the MMOC and ID will order testing appropriate to the patient's condition.

Blood Work

Within CERNER the order set *Unusual Communicable Disease Orders – Ebola Lab Orders* contains orders for the only blood work that can be processed for a suspected VHF patient, and therefore should be all that is ordered for such a patient.

The Emergency Department Medical Laboratory Assistant (MLA) will provide all necessary collection and transport devices, and will also be responsible for packaging and transporting the samples to the lab.

The nurse will draw the blood work, and when possible take samples from the IV, as per the procedure outlined in *Phlebotomy and specimen Delivery Guideline – VGH ED and ICU*.

Imaging

Under no circumstances should a patient with suspected VHF be sent for imaging of any kind, nor should any portable/bedside diagnostics be completed.

10. TRANSFER

Positive Blood Result (transfer to Type 3 Facility)

As per Appendix III, the *VGH ED – VHF – Notification Algorithms* the MMOC will inform the EPIC of the test result and the EPIC will call the Patient Transfer Network (PTN) to arrange transfer of care and transport to a Type 3 facility. A specialized BCEHS VHF crew will perform the transfer and collect the patient from the hallway outside of A10 into their isolation pod stretcher, using the following procedures. Ensure security is engaged to restrict all hallway access during transfer activity.

- **Ambulatory Patient Transfer Procedure:**
  a. Position BCEHS stretcher outside of A10 (as close to the exit door as possible), ensure all BCEHS staff are donned in PPE.
  b. Patient should be provided with fresh surgical mask, gown and socks.
  c. The patient should then transfer independently onto the stretcher.
- **Non-Ambulatory Patient Transfer Procedure:**
  a. Position BCEHS stretcher outside of A10, ensure all BCEHS staff are donned in PPE.
  b. Position an incontinent pad outside the external door to the hallway from A10. Soak with accelerated hydrogen peroxide.
  c. The bedside nurse will wipe all plastic and metal surfaces of the ED stretcher using accelerated hydrogen peroxide wipes.
  d. The nurse will open the external door of A10 to the hallway, and roll the front two wheels of the stretcher onto the accelerated hydrogen peroxide saturated mat.
  e. The BCEHS staff will wipe the exposed surface of both wheels of the ED stretcher using accelerated hydrogen peroxide wipes.
  f. After a one minute contact time with the mat, the bedside nurse will push the second set of stretcher wheels out onto the mat, where again, the BCEHS staff will wipe the exposed portion of the wheels using accelerated hydrogen peroxide wipes.
  g. After another one minute of contact time with the accelerated hydrogen peroxide saturated mats, the BCEHS staff will roll the ED stretcher adjacent to their stretcher, and transfer the patient.
  h. Once transferred, the BCEHS staff will return the ED stretcher to the door of A10 where the bedside nurse will pull it back into A10, and close the door.

Negative Blood Result (potential transfer to ICU)

If the result is negative, the patient could still be in the "window period" and may later convert to a positive result; therefore repeat testing may be indicated. Based on the patient's clinical condition, a decision will be made by the MHO, the MMOC, the EPIC, and ID as to whether the patient will await re-testing in hospital or at home. If it is deemed necessary that the patient remain in hospital, independent of their clinical status, the patient will be transferred to ICU. ICU staff will perform the transfer and

collect the patient from the hallway outside of A10, using the following procedures. Ensure security are engaged to restrict all hallway access during transfer activity.

- **Ambulatory Patient Transfer Procedure:**
  a. Position ICU bed outside of A10 (as close to the exit door as possible), ensure all ICU staff are donned in PPE.
  b. Patient should be provided with fresh surgical mask, gown and socks.
  c. The patient should then transfer independently onto the bed.
- **Non-Ambulatory Patient Transfer Procedure:**
  a. Position ICU bed outside of A10, ensure all ICU staff are donned in PPE.
  b. Position an incontinence pad outside the external door to the hallway from A10. Soak with accelerated hydrogen peroxide.
  c. The bedside nurse will wipe all plastic and metal surfaces of the ED stretcher using accelerated hydrogen peroxide wipes.
  d. The nurse will open the external door of A10 to the hallway, and roll the front two wheels of the stretcher onto the accelerated hydrogen peroxide saturated mat.
  e. The ICU staff will wipe the exposed surface of both wheels of the ED stretcher using accelerated hydrogen peroxide wipes.
  f. After a one minute contact time with the mat, the bedside nurse will push the second set of stretcher wheels out onto the mat, where again, the ICU staff will wipe the exposed portion of the wheels using accelerated hydrogen peroxide wipes.
  g. After another one minute of contact time with the accelerated hydrogen peroxide saturated mats, the ICU staff will roll the ED stretcher adjacent to their bed, and transfer the patient.
  h. Once transferred, the ICU staff will return the ED stretcher to the door of A10 where the bedside nurse will pull it back into A10, and close the door.
  i. ICU staff will arrange security escort to ICU to ensure hallways are cleared and elevator secured.
- **Deceased Patient:**
  a. If a confirmed or suspected VHF patient expires in the ED, refer to VCH *Guidelines for the Management of Human Remains*

11. DISCHARGE CLEANING

Upon transfer from the ED of an VHF positive or unconfirmed patient to a *Type Three* facility or the ICU the CN will ensure the tasks as outlined in Appendix IV the *Charge Nurse Duty Checklist* are completed prior to the care space being used for another patient, including the completion of Appendix VIII, the *VGH ED – VHF – Discharge Room Checklists*.

12. STAND DOWN

It is important that when a patient is found to be VHF negative that the CN complete the steps as outlined in Appendix IV, the *VGH ED – VHF – Charge Nurse Duty Checklist*, including the completion of Appendix VIII, the *VGH ED – VHF – Discharge Room Checklists*.

Appendix I: VHF Patient History

VGH Emergency Department **VIRAL HEMORRHAGIC FEVER (i.e. EBOLA) PATIENT HISTORY**	CERNER LABEL

Travel History		
Country Visited:		
Arrival Date:		
Departure Date:		
Type of Travel:	☐ Pleasure ☐ Work ☐ Healthcare Work ☐ Resident of Country	☐ Pleasure ☐ Work ☐ Healthcare Work ☐ Resident of Country
Types of Places Visited:	☐ City ☐ Country	☐ City ☐ Country
Contact with known/suspected EVD:	☐ Person ☐ Animal	☐ Person ☐ Animal
If contact, via:	☐ Blood ☐ Body Fluid ☐ Personal Care ☐ Sexual Relations	☐ Blood ☐ Body Fluid ☐ Personal Care ☐ Sexual Relations
Visited a Cave or Mine?	☐ Yes ☐ No	☐ Yes ☐ No
Contact with?	☐ Non-Human Primate ☐ Bat ☐ Rodent	☐ Non-Human Primate ☐ Bat ☐ Rodent
Worked in Lab?	☐ Yes ☐ No	☐ Yes ☐ No
Needle Stick Injury?	☐ Yes ☐ No	☐ Yes ☐ No
Participated in a Funeral?	☐ Yes ☐ No	☐ Yes ☐ No
Visited a Healthcare Facility?	☐ Yes ☐ No	☐ Yes ☐ No

Contact with Known or Suspected VHF Case Without Personal Travel History			
Name of Contact		Date of Return to Canada	
Relation		Number of Contact Days Since Return	
Nature of Contact	☐ Household Member ☐ Casual Contact ☐ Personal Care ☐ Sexual Relations ☐ Other: _____		

Complete the section "Travel History" (above), on behalf of the contact.

	VHF Symptom	Date of Onset	Resolved
☐	Fever > 38° C		Date: ☐ No
☐	Muscle Aches/Pains		Date: ☐ No
☐	Malaise		Date: ☐ No
☐	Headache		Date: ☐ No
☐	Bloodshot or Red Eyes		Date: ☐ No
☐	Sore Throat		Date: ☐ No
☐	Abdominal Pain		Date: ☐ No
☐	Vomiting		Date: ☐ No
☐	Diarrhea		Date: ☐ No
☐	Unexplained Bleeding		Date: ☐ No
☐	Rash		Date: ☐ No

Appendix II – VGH ED – VHF – Triage Quick Reference Guide

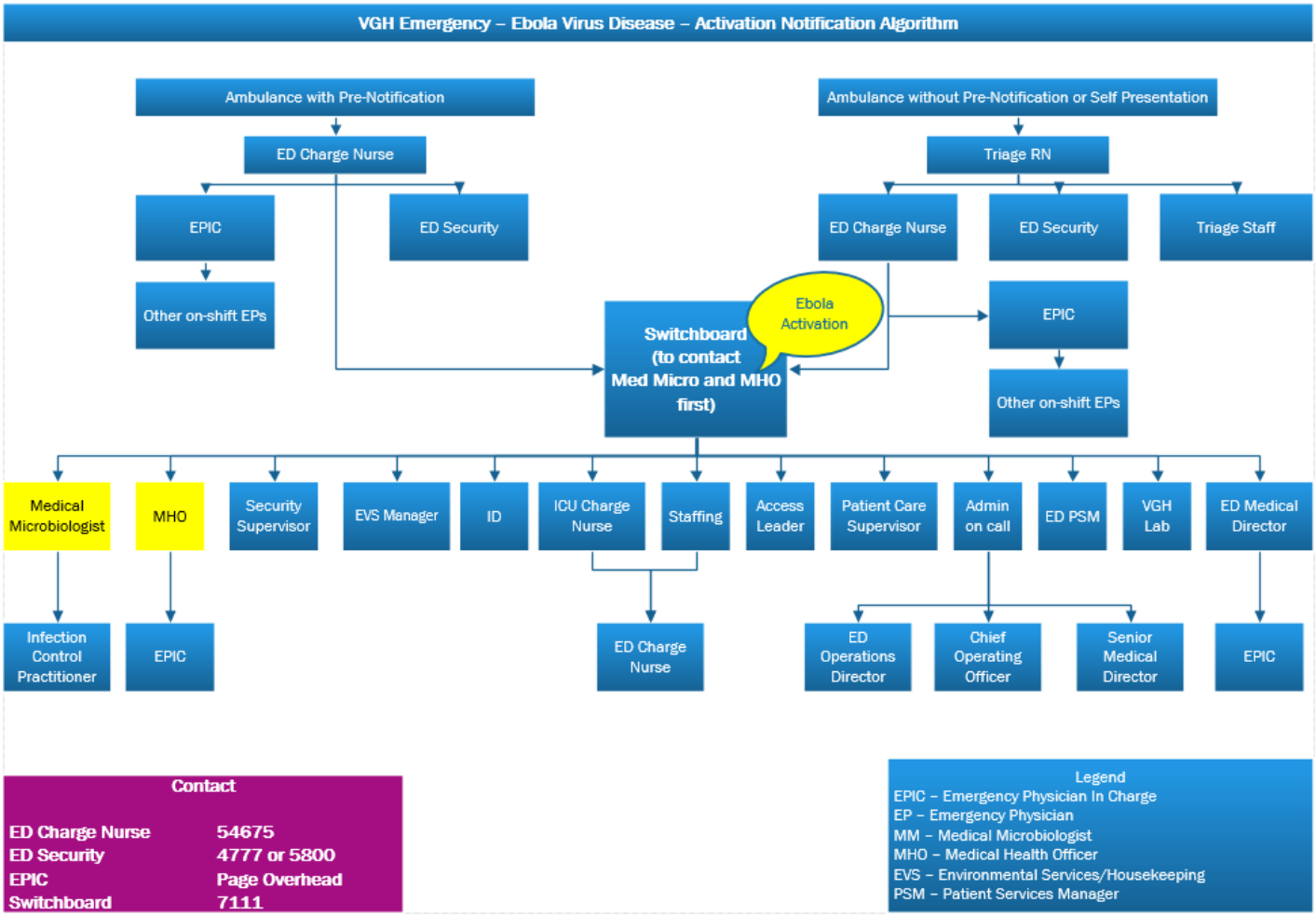
Ambulance with Pre-Notification
▪ CN will initiate Pre-Notification Protocol. ▪ BCEHS will isolate patient in ambulance until notified by CN that A10 prepared. ▪ Primary nurse will meet the paramedics and patient in paramedic entrance vestibule and escort to A10.

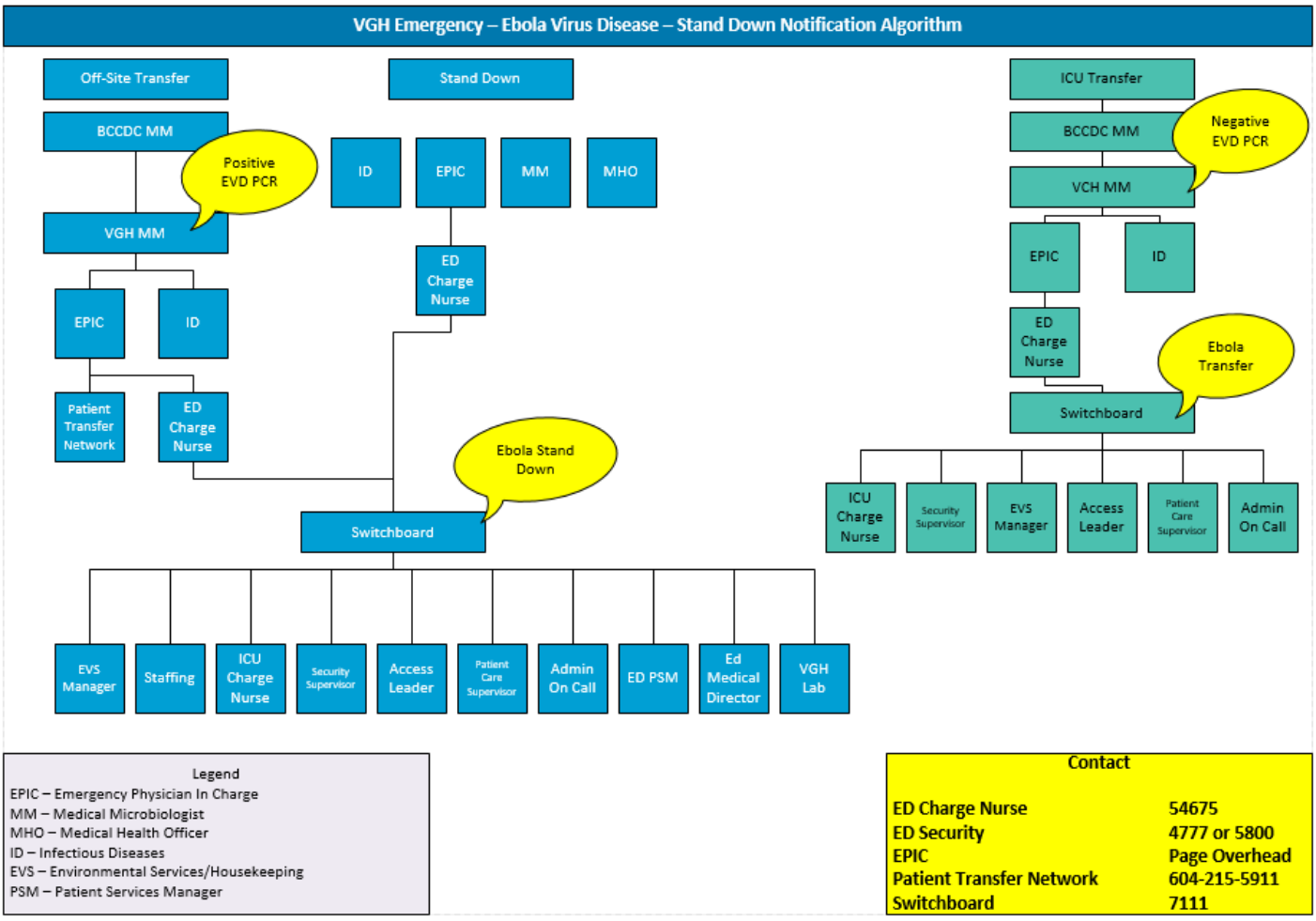
Self-Presentation	**Ambulance without Notification**
▪ Upon suspicion of VHF, the triage nurse should ask the screening questions, as per the *VA Algorithm for Assessment of Potential Viral Hemorrhagic Fever*. ▪ If triage screen is positive, move patient to Interview Room 1 immediately. ▪ Follow Triage Procedure.	▪ Upon suspicion of VHF, the triage nurse should ask the screening questions, as per the *VA Algorithm for Assessment of Potential Viral Hemorrhagic Fever*. ▪ If triage screen is positive, move patient to Interview Room 1 immediately. ▪ BCEHS staff should immediately return to their ambulance and initiate BCEHS VHF protocol.

Triage Procedure

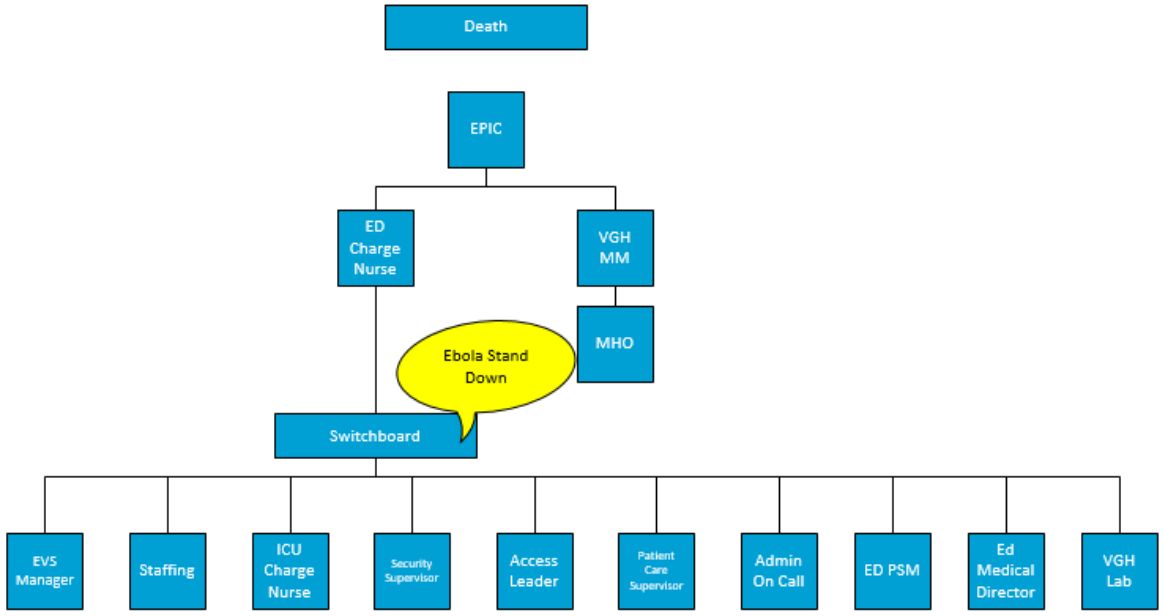
- **Notify the CN.**
- Notify fellow triage staff members.
- Alert security so security personnel can be posted outside of Interview Room 1. Have them clear and secure window area and/or booth if patient presented there.
- Complete triage and VCH ED VHF Patient History assessments from the hallway outside Interview Room 1, ensure a 2 meter distance is kept from patient. Do not obtain vital signs.
- Once A10 ready, the primary nurse, donned in PPE, escorts patient from Interview Room 1 to A10, while security clears hallway.
- Security personnel to remain at their posts until cleaning procedure of affected areas complete.
- Ensure 2 meter distance from patient maintained at all times unless donned in PPE.
- Do not order any diagnostic testing or blood work.
- Provide patient with *Go-Vom* emesis bag if nauseous or vomiting (found with supplies at Booth B)
- Move accompanying persons to a separate area for further evaluation and follow-up with MHO

Appendix III – VGH ED - VHF – Activation and Stand-down Notification Algorithms




VGH Emergency – Ebola Virus Disease – Stand Down Notification Algorithm
Off-Site Transfer
BCCDC MM
Positive EVD PCR
VGH MM
EPIC
ID
Patient Transfer Network
ED Charge Nurse
Stand Down
ID
EPIC
MM
MHO
ED Charge Nurse
Ebola Stand Down
Switchboard
EVS Manager
Staffing
ICU Charge Nurse
Security Supervisor
Access Leader
Patient Care Supervisor
Admin On Call
ED PSM
Ed Medical Director
VGH Lab
ICU Transfer
BCCDC MM
Negative EVD PCR
VCH MM
EPIC
ID
ED Charge Nurse
Ebola Transfer
Switchboard
ICU Charge Nurse
Security Supervisor
EVS Manager
Access Leader
Patient Care Supervisor
Admin On Call
Legend
EPIC – Emergency Physician In Charge
MM – Medical Microbiologist
MHO – Medical Health Officer
ID – Infectious Diseases
EVS – Environmental Services/Housekeeping
PSM – Patient Services Manager
Contact
ED Charge Nurse 54675
ED Security 4777 or 5800
EPIC Page Overhead
Patient Transfer Network 604-215-5911
Switchboard 7111

VGH Emergency – Ebola Virus Disease – Stand Down Notification Algorithm



Legend
EPIC – Emergency Physician In Charge
MM – Medical Microbiologist
MHO – Medical Health Officer
ID – Infectious Diseases
EVS – Environmental Services/Housekeeping
PSM – Patient Services Manager

Contact	
ED Charge Nurse	54675
ED Security	4777 or 5800
EPIC	Page Overhead
Medical Microbiologist	Switchboard
Switchboard	7111

Appendix IV – VGH ED – VHF – Charge Nurse Duty Checklist

Charge Nurse Notification

Notification from Triage	Notification from Ambulance
• Notify, as per the *VGH ED – VHF- Activation Notification Algorithm*: ▪ Switchboard, and state "Ebola/VHF Activation". Give a copy of the *VGH ED – VHF – Notification Call Back Log* to the Acute NUC (Appendix 5). ▪ The EPIC • If patient had contact at window and/or triage booth, ensure security are securing area(s) while awaiting housekeeping.	• Notify, as per the *VGH ED – VHF- Activation Notification Algorithm:* ▪ Switchboard, and state "Ebola/VHF Activation". Give a copy of the *VGH ED – VHF – Notification Call Back Log* to the Acute NUC (Appendix 5). ▪ The EPIC ▪ ED Security

Pre-Transfer Preparation

- Find new care spaces for patients currently in A10 and A11, delegate movement of these patients.
- Upon activation of the protocol additional staff will be required:
  - Consider closing the DTU to reallocate staff.
  - Expect a return call from staffing, as per the *VGH Emergency - VHF - Notification Algorithms.* Tell them how many workload nurse(s) you require.
  - Expect a return call from the ICU CN as per the *VGH Emergency - VHF - Notification Algorithms*. Ask how many nurses they can provide, at what time, and tell them how many you want. Upon arrival to the ED the CN will assign the ICU nurses to a role, this can be related to the direct care of the Ebola/VHF patient and/or another task at the CN's discretion.
- Ensure A10 and A11 cleaned Stat, have them clean A10 first, if unable to be cleaned simultaneously.
- Ask a PCA to obtain the VHF Team Organization Board from the vault storage room, G15. This should be placed close to your desk in Acute Care.
  - It is the CN's responsibility over the course of the patient's stay in the ED to assign roles and organize involved staff members. As team members arrive to the ED they will report to the CN to obtain a role and associated lanyard, ensure their name and a contact number are documented on the VHF team Organization Board.
- Delegate a nurse to become the primary care giver of the suspected VHF patient. This will be a 1:1 assignment. They must be an experienced nurse who is trained in donning and doffing for VHF patients and has been fit tested in the last year. Record this on the VHF Team Organization Board.
- Re-assign care of patient in A12, to another acute care assignment.

- Assign a Donning/Doffing Assistant to the primary nurse. This should be an experienced nurse who is trained in donning and doffing for VHF patients. Document the name of the donning and doffing assistant on the VHF Team Organization Board.
- Assign a Trained Observer to the primary nurse. This should be an experienced nurse who is trained in donning and doffing for VHF patients. Document the name of the Trained Observer on the VHF Team Organization Board.
- Ensure the primary nurse, Donning/Doffing Assistant and Trained Observer are aware that together they must complete the preparation of A10, A11 and the anteroom using the *VGH ED - VHF - Room Preparation Checklists* (Appendix 6).

The CN will need to continue to delegate both Trained Observers and Donning/Doffing Assistants as necessary. These should be experienced staff members with extra training in donning and doffing for VHF patients. Note that, as staff with more expertise arrive, these tasks may be reassigned to either a Clinical Nurse Educator (CNE) or Infection Control Practitioner (ICP). Ensure to always document the names of Trained Observers and Donning/Doffing Assistants on the VHF Team Organization Board.

Triage Stand Down

- Notify the housekeeping manager that the patient has left the triage area, and that a VHF clean of Interview Room 1 (and Interview Room 1, if used) or the Ambulance Entrance Vestibule are required.

Transfer from the ED (skip to 5, if VHF no longer suspected, and Stand Down procedure initiated).

Transfer to SMH/Funeral Home	Transfer to ICU
□ Notify switchboard, as per the *VGH ED – VHF-Activation Notification Algorithm*, and state "Ebola/VHF Stand Down". □ Expect a return phone call from the housekeeping manager; advise them that a VHF clean is required of A10, A11 and the Anteroom.	□ Notify switchboard, as per the *VGH ED – VHF-Activation Notification Algorithm*, and state "Ebola/VHF Transfer". □ Expect the housekeeping manager to arrive to the department, to facilitate the VHF clean of A10, A11 and the Anteroom.

- Ensure the primary nurse, Donning/Doffing Assistant and Trained Observer are aware that together they must complete the Transfer portion of the *VGH ED - VHF – Discharge Room Checklists* (Appendix 8) in preparation of A10, A11 and the anteroom being used for other patients.
- Notify the Housekeeping manager once the nursing staff have completed the *VGH ED - VHF – Discharge Room Checklists*, so they can begin their VHF terminal clean.
- Once notified by Housekeeping that the VHF terminal clean complete, do a walk-through of A10, A11 and the Anteroom with the housekeeping manager, to ensure that VHF clean has been completed to your satisfaction.
- Notify area supply supervisor that restocking can be completed. The area supply technicians will restock the care space, after the terminal clean, at their earliest convenience.

  - Mon – Fri (0700-1500): Area Supply Team Lead – local 68879 or pager 604-871-1229.
  - Sat – Sun (0700-1530): Weekend Supervisor – local 63197 or pager 604-877-3830.
- Gather VHF ID tags from staff, have PCA return the VHF Team Organization Board to the vault storage room, G15.
- Ensure housekeeping delivers replacement VHF waste containers to the ED.

Stand Down (only complete the following if step 4 above was skipped).

- Notify switchboard, as per the *VGH ED – VHF- Activation Notification Algorithm* (Appendix 3), and state "Ebola/VHF Stand Down".
- Ensure the primary nurse, Donning/Doffing Assistant and Trained Observer are aware that together they must complete the stand down portion of the *VGH ED - VHF – Discharge Room Checklists* in preparation of A10, A11 and the anteroom being used for other patients.
- Expect a return phone call from the housekeeping manager; advise them that we are standing down from VHF.
- Ensure housekeeping delivers replacement or empties used VHF waste containers in the ED.
- Gather VHF ID tags from staff, have PCA return the VHF Team Organization Board to the vault storage room, G15.

Appendix V – VGH ED – VHF – Notification Call Back Log

After the initiation of the VGH ED VHF Notification Activation Algorithm the ED NUC should expect phone calls from the following individuals. He or she should document the time the call is received and transfer the call as per below. The log should be provided to the ED Manager once complete.

Time Switchboard Ebola Activation Notification Initiated by CN:		
Expected Calls	**Time Call Received**	**Action**
Medical Health Officer		Transfer to EPIC
ICU Charge Nurse		Transfer to CN
Staffing		Transfer to CN
ED Medical Director		Transfer to EPIC

Appendix VI – VGH ED - VHF - Room Preparation Checklists and Diagram

Care Space (A10-A11) Preparation

- Activate Negative Pressure Isolation.
  - Enter Password: 1111
  - Press Unit Setup
  - Press Room Setup
  - Press Isolation Mode
  - Press Negative Pressure
- Decrease temperature to lowest setting.
  The thermostat is next to the Isolation console, outside of the room.
- Place Contact, Droplet and Airborne Precaution signs on external door of A10.
- Place Restricted Access signs on external door of room, and on external and internal sliding doors of anteroom.
  Obtain Restricted Access signs from VHF Kit.
- Place a Contact list on the door between the "clean" anteroom and A10.
- Remove garbage can(s) from room.
- Place one VHF waste container (large blue drum) in the room.
  Waste container can be found in the anteroom. Ensure absorbent pad in bottom and is lined with two red bags. Drum lid to be stored in close proximity and labelled "Quarantine Patient #, Bin #" with silver Sharpie. Infection Preventionist will maintain list of bins.
- Remove all curtains from within A10.
- Remove any excess equipment, such as IV poles, and furniture, such as chairs, from room, if present.
- Remove 6 boxes of gloves from bedhead.
  All other regularly stocked supplies should remain at bedside.
- Ensure there is a container of *accelerated hydrogen peroxide* in the room by the exit door.
- Place three *Ultrasorb* pads onto the stretcher. *Ultrasorb pads can be found in the anteroom.*
- Obtain blood collection vials, plastic blood culture collection bottles, absorbent wick (for cleaning tops of blood tubes) and list of blood vial collection order (all contained in a Zip Lock bag) from MLA and place in patient room.
- Place a whiteboard and a package of white fluid containment pads within the patient room. *Whiteboard and pads can be found in anteroom.*
- If the patient is vomiting, a box of specialty emesis bags should be placed within the patient room. *Hygie or Go-Vom specialty emesis bags can be found within the anteroom.*

Anteroom Preparation

- Ensure an isolation cart is within the first anteroom.
  - *A VHF Kit can be found on the bottom shelf of any isolation cart.*
- Remove yellow isolation gowns and 3 boxes of gloves from top of isolation cart and replace with impermeable gowns and long-cuff gloves.

- *Impermeable gowns and long-cuff gloves are found in the VHF Kits.*

- Remove garbage can(s) and linen hamper(s) from the "dirty" anteroom.
- Move garbage can into the "clean" anteroom.

  This garbage can is for any waste generated during the donning process.
- Ensure both accelerated hydrogen peroxide wipe brackets have a full container of accelerated hydrogen peroxide wipes.
- Place a *Do not use for suspected VHF patients* sign over the door of the hopper.

  The sign can be found on the shelf in the anteroom and will need to be placed over the door (ensure it is not over the sensor, or the hopper will open automatically).
- Remove any excess equipment or furniture from anteroom, if present.
- Check anteroom doors for correct settings. The toggle switches on the six sliding doors (external anteroom, internal anteroom and the four doors between the A10 and A11and the anteroom) should be set as follows:
  - AUT/CLS/OPN – this stitch should be set to AUT.
  - POWER ON/OFF – this should be set to ON.
  - ENTER YES/NO – this should be set to YES.
  - RED/OPEN – this should be set to OPEN.

  Refer to SOP Section 4 for instructions on how to proceed if doors are found to be malfunctioning.

Post-Doffing Room (A11) Preparation

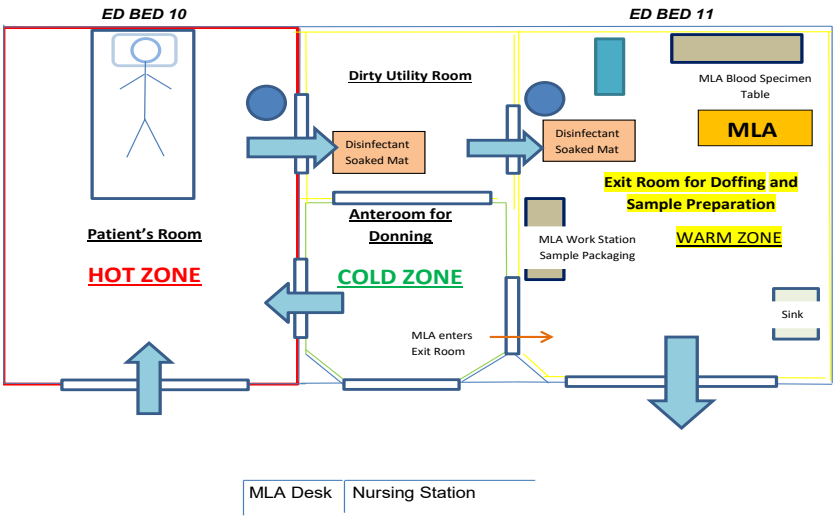
- Remove garbage can(s) from room.
- Place one VHF waste container in the room.

  Waste container can be found in the anteroom. Ensure it is lined with two red bags.
- Place over-bed table for doffing supplies
- Remove any excess equipment, such as IV poles, furniture, and the stretcher; leave an over-bed table and a chair.
- Place bin of additional scrubs in room.

  Bin of additional scrubs can be found in anteroom.
- Ensure there is a container of accelerated hydrogen peroxide wipes placed on the over-bed table, open with first wipe ready to be dispensed.

VGH Emergency Unit Biocontainment Room Set-Up

VGH –ED – Beds 10 and 11:



Appendix VII – VCH ED – VHF – Doffing Area Preparation

The doffing assistant will perform these tasks prior to the HCW exiting the patient care space. The required tasks are slightly different for the two designated doffing spaces in the ED: A11 and Interview Room 1. Copies of this form can be found on the front of each Doffing Assistant checklist.

Doffing Area Preparation – A11				
	Step	**Required**	**Required Supply**	**Supply Location**
☐	1. The HCW notifies they are ready to exit the care space.	HCW		
☐	2. Lay patient soaker pad on floor, one directly outside of door between A10 and the "Dirty" Anteroom & one just inside A11.	Doffing Assistant	Soaker pad	Linen cart
☐	3. Soak entire surface of each soaker pad with accelerated hydrogen peroxide (approx. 2/3 of bottle).	Doffing Assistant	Accelerated hydrogen peroxide	"Dirty" Anteroom
☐	4. Obtain bottle of pump hand sanitizer	Doffing Assistant	Pump hand sanitizer	"Dirty" Anteroom
☐	5. Obtain 1 pair of additional gloves in the HCW's size.	Doffing Assistant	Long Cuff Gloves	"Clean" Anteroom
☐	6. If the HCW has worn eye glasses into the care space, obtain 2 save-a-day trays and 1 additional pair of gloves.	Doffing Assistant	Save-a-day Trays and Long Cuff Gloves	"Dirty" and "Clean" Anterooms
☐	7. Don PPE	Doffing Assistant and Observer	Doffing Assistant PPE and PPE Checklist	"Clean" Anteroom
Commence Doffing Portion of *VCH Ebola Virus Disease HCW PPE Checklist/Sign In-Out Sheet*				

Doffing Area Preparation – Interview Room 1				
	Step	**Required**	**Required Supply**	**Supply Location**
☐	1. The HCW notifies they are ready to exit Interview Room 1.	HCW		
☐	2. Remove all excess furniture and/or equipment from room.	Doffing Assistant		
☐	3. Don PPE	Doffing Assistant and Trained	Doffing Assistant PPE and Doffing Assistant PPE	Triage Isolation Cart
☐	4. Open door between Interview Room 1 and 2, secure open with door stop.	Doffing Assistant		
☐	5. Lay 2 soaker pads on floor inside Interview Room 1 (one directly inside the door and one to the right of the door).	Doffing Assistant	Soaker pad	Linen cart

☐	6. Soak the entire surface of both soaker pads with accelerated hydrogen peroxide (will take approx. 2/3 of bottle for each mat).	Doffing Assistant	Accelerated hydrogen peroxide	Interview Room 1
☐	7. Obtain bottle of pump hand sanitizer	Doffing Assistant	Pump hand sanitizer	Interview Room 1
☐	8. Obtain 1 pair of additional gloves in the HCW's size.	Doffing Assistant	Long Cuff Gloves	Triage Isolation Cart
☐	9. If the HCW has worn eye glasses into the care space, obtain 2 save-a-day trays and 1 additional pair of gloves.	Doffing Assistant	Save-a-day Trays and Long Cuff Gloves	Interview Room 1 and Triage Isolation Cart
Commence "In Patient Room" Doffing section of *VCH Ebola Virus Disease HCW PPE Checklist/Sign In-Out Sheet*				
HCW exits Interview Room 2 into Interview Room 1.				
☐	10. Instruct HCW to walk from first soaked mat to second soaked mat.	Trained Observer		
☐	11. Instruct HCW to roll up and dispose of first mat in VHF waste container.	Trained Observer		
☐	12. Disengage door stop to close door between Interview Room 1 and 2.	Doffing Assistant		
☐	13. Instruct HCW to perform hand hygiene using alcohol based hand rub.	Trained Observer	Pump hand sanitizer	Interview Room 1
Continue "In PPE Removal Area" Doffing section of *VCH Ebola Virus Disease HCW PPE Checklist/Sign In-Out Sheet*				

Appendix VIII – VGH ED - VHF – Discharge Room Checklists

The CN will notify the bedside RN and his or her Trained Observer and Donning/Doffing Assistant when one of the two following checklists should be initiated. They are responsible for ensuring all steps of the checklists are completed, and should notify the CN once done.

Discharge Room Checklist: Patient Transferred from the ED

Complete the following tasks prior to Housekeeping entering the room:

- Dispose of all items on the *Bedside Supply Disposal List* (found in the anteroom), into an VHF waste container.
- Dispose of all visibly soiled items and all items containing blood or bodily fluids in to the VHF waste container. Including the following:
  - The sharps container, after it is securely closed.
  - Suction canisters and tubing.
  - Commode liners and emesis bags.
  - All linens, including the pillow.
  - All IV bags and tubing.
- Using accelerated hydrogen peroxide wipes, wipe all visibly contaminated surfaces.
  VHF waste containers are to be filled no more than ¾ full and an additional bin may be required to be brought into the room to complete these tasks.

Complete the following tasks after Housekeeping have completed the VHF

Terminal Clean and UV light disinfection:

- Remove Restricted Access and all isolation signage from the exterior of rooms.
- Remove the Contact list from the door between the “clean” anteroom and A10, and deliver it to the ED Manager.
- Remove VHF supplies from the top of the Isolation Carts, and restock used VHF kits.
- Ensure garbage cans and linen hampers have been replaced in A10, A11 and the anteroom.
- Deactivate Negative Isolation, and return to “No Isolation” setting.
- *Key can be found with ‘A-side Keys’ hanging close to A-side RN phone, at side of chart rack, close to A4.*
- Increase temperature back to 21^{o}C.
- *The thermostat is next to the Isolation console, outside of the room.*
- Remove the *Do not use for suspected VHF patients* sign from over the door of the hopper.
- Remove the over-bed table from the “dirty” anteroom.
- Return bin of additional scrubs to the top of the shelf in the anteroom.

Discharge Room Checklist: VHF Stand Down

- Remove Restricted Access and all isolation signage from the exterior of rooms.
- Remove and discard the Contact list on the door between the "clean" anteroom and A10.
- Remove VHF supplies from the top of the Isolation Carts, and restock used VHF kits.
- Ensure garbage cans and linen hampers have been replaced in A10, A11 and the anteroom.
- Deactivate Negative Isolation, and return to "No Isolation" setting.
- *Key can be found with 'A-side Keys' hanging close to A-side RN phone, at side of chart rack, close to A4.*
- Increase temperature back to 21^{o}C.
- *The thermostat is next to the Isolation console, outside of the room.*
- Remove the *Do not use for suspected VHF patients* sign from over the door of the hopper.
- Remove the over-bed table from the "dirty" anteroom.
- Return bin of additional scrubs to the top of the shelf in the anteroom.
- Ensure that Special Order Cards are delivered to the Re-Order Bin at the CN desk if required.