Viral Hemorrhagic Fever (i.e. Ebola Viral Disease) Standard Operating Procedures for Richmond Hospital

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

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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, Medical Microbiology, and Infectious Diseases). 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 patient who presents at triage with a complaint of fever and/or malaise must be assessed using the *RH Assessment of Potential Viral Hemorrhagic Fever* early in the patient encounter. As RH is a Type Two 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 BC Emergency Health Services (BCEHS) is received, the Patient Care coordinator (PCC), or designate, should use the *RH Assessment of Potential Viral Hemorrhagic Fever* screening questions to determine if the patient is appropriate for activation of the VHF procedure. The PCC should initiate the pre-registration protocol and notify EP, Security, and Infection Prevention and Control (IPAC). BCEHS personnel should be asked to continue isolating the patient within their ambulance until beds 3 and 4, and staff, are prepared for the patient's arrival. Once the rooms are prepared and staff donned in Personal Protective Equipment (PPE), the primary RN will meet the

paramedics and patient in the ambulance bay and direct patient into department through the outer decontamination door. BCEHS must doff PPE prior to entering the department.

Ambulance without Pre-Notification

If a suspect case is identified at triage in the ambulance bay, the triage nurse will:

- Provide a mask and hand sanitizer to the patient
- Notify Security, PCC, EP
- Maintain the patient in the ambulance until room 4 is ready
- Direct patient to enter through the outer decontamination door

Self-Presentation

If a suspect case is identified at:

1. Pre-Registration
   In the event of a known outbreak of international concern, screening questions will be developed. If a patient screens positive, the pre-registration clerk will ask the patient to step back to the "STOP" sign station, sanitize their hands with Microsan, and put on a surgical mask. The patient and accompanying persons must be advised to wait in the vestibule for the triage nurse to come and speak with them. The pre-registration clerk must notify the triage nurse and Security.

2. Triage Station
   The triage nurse must maintain 2 meter distance to complete screen with the *RH Assessment of Potential Viral Hemorrhagic Fever*. Triage patient with a critical look, no interventions such as vital signs are to be done. If screen positive, the triage nurse must initiate the Triage Procedure below.

3. EP Assessment
   Provide patient with a mask and hand sanitizer, and keep curtains drawn. Notify PCC. PCC to contain area and restrict any entry to patient care area until staff with appropriate PPE can move patient into prepared room 4. Notify housekeeping to clean/disinfect area. PCC to identify and record names of staff that were in contact with patient prior to identification for reporting to the Medical Health Officer and Workplace Health Call Center.

Triage Procedure

1. Direct patient to step back from the triage desk, sanitize hands and don a surgical mask
2. Triage nurse must notify the PCC, Security, and fellow triage staff immediately
3. Security must clear the immediate area, directing all other patients/visitors to a different entrance (such as the ambulance bay), or back to the waiting room. Any area used by the patient (entrance vestibule, triage area etc.) is to be secured and not used until housekeeping has attended and cleaned/disinfected. Accompanying persons must be monitored until assessed by Medical Health Officer.
4. Triage nurse will don biocontainment PPE under the supervision of the Trained Observer, using

the *Health Care Worker Checklist for Donning/Doffing PPE*

5. Provide specialty emesis bag (Go-vom or Hygie) as appropriate
6. If patient appears stable, the triage nurse will escort them to the outside entrance of the decontamination room and wait for rooms 3 and 4 to be prepared
7. If the patient appears unstable, place them in a wheelchair or stretcher, escort them to the outside entrance of the decontamination room and wait for rooms 3 and 4 to be prepared
8. Once patient admitted to bed 4, triage will partner with primary nurse to provide care
9. Accompanying persons will be asked to clean their hands with ABHR and put on a surgical mask. Triage RN will screen visitors with the *RH Assessment of Potential Viral Hemorrhagic Fever*. If the visitor screens positive, the triage nurse will escort them to room 4 with the patient; if negative, the triage RN will ask Security to escort them to the Quiet Room. Visitors will be asked to remain in the Quiet Room with the door closed for further assessment/direction from the MHO.

3. Notification

The following notifications will be made:

PCC

- Staff Support Coordinator (SSC) – 604-671-8181
- ED Manager - 604-244-5553. After Hours PCC will contact ED Manager.
- Infection Preventionist (IP) – 604-244-5156, Weekend Charge RN 604-220-5813 (0800 – 1600), After Hours contact Medical Microbiologist on Call (MMOC) – through locating at 604-875-5000
- EVS Manager – 778-389-7834

SCC

- Administrator on Call - paged through switchboard
- Manager, Respiratory Therapy – 604-244-5154
- Site Supervisor, Laboratory – 604-244-5236
- Site Coordinator, Diagnostic Imaging - 604-837-4130
- Communications will be notified by the AOC

EP

- Medical Microbiologist on Call (MMOC) – through locating at 604-875-5000
- Medical Health Officer (MHO) - 604-527-4893

Patient Care Coordinator

After notifications complete, the PCC will:

- Assign Primary RN (RN assigned to beds 3-6), must be trained in donning and doffing biocontainment PPE and fit tested in the past year
- Assign Trained Observer (eg. Educator, IP, experienced RN) and Donning/Doffing Assistant, both must be trained in donning and doffing biocontainment PPE
- Reallocate resources within department as needed
- Review department resources with the Manager and/ or SSC to determine workload needs.
- Complete PCIS triage process and assign “Airborne Precautions”
- Ensure cleaning/disinfection of pre-registration/triage/other used areas has been completed as per *Recommendations for Environmental Services, Biohazardous Waste Management, and Food*

and Linen Management for Persons under Investigation and Confirmed Cases of Ebola Virus Disease, SOP #12.

- Direct Unit Clerk to maintain a log of returned calls and times

4. Biocontainment Isolation Preparation

Once patients in rooms 3 and 4 have been relocated, the assigned RN will set up the biocontainment isolation area as follows:

Outside Room Set Up

1. Place VHF PPE cart outside decontamination room
2. Post "Restricted Access" sign on door of patient's room and decontamination room
3. Post "Airborne/Contact" and "Droplet" Precautions signs
4. Ensure "Contact Sign In Sheet" and Donning/Doffing Checklists are available on PPE cart
5. Relocate pediatric blue cart and any other excess equipment that is not needed from the area

Exit (Doffing) Room Set Up (Room 3)

1. Remove all excess equipment and furniture in Room 3 and the decontamination room, including the decontam black cart
2. Ensure there is soap and paper towels available at the sink
3. Ensure that housekeeping has set up the blue VHF waste drum, lined with two red plastic bags
4. Place a bedside table in room 3 with disinfectant wipes (i.e. Accel Intervention) and alcohol based hand sanitizer
5. Turn on negative air
6. Create a cubicle as close to the hallway door as possible with dividers for staff changing area
7. Provide a supply of clean scrubs

Patient Room Set Up (Room 4)

1. Remove excess equipment such as blue bedside cart, supplies at head of bed, thermometer, chairs, privacy curtain, garbage can outside of room
2. Ensure one NP, one oxygen mask, and all oral airways are left in room
3. Place 3 disposable thermometer strips in the room
4. Place a gown and blanket on the stretcher
5. Post "Do Not Use In-room Toilet" poster above sink
6. Ensure there is soap and paper towels available at the sink
7. Place a bedside table with disinfectant wipes (Accel Intervention) and hand sanitizer at the door to the decontam room
8. Turn on negative air
9. Cover equipment that cannot be removed with plastic as much as possible
10. Set up walkie talkies for communication

5. Personal Protective Equipment (PPE)

Every person entering the patient room must wear appropriate PPE including:

- Scrubs (disposable if available, non-disposable scrubs will be discarded)
- Fluid impermeable leg and foot coverings inside rubber boots (preferred) **OR** Healthcare appropriate footwear and fluid impermeable leg and foot coverings
- Long-sleeved, cuffed, fluid-impermeable gown that provides sufficient overlap across the back, and long enough to provide overlap with foot and leg coverings
- Fluid impermeable surgical hood
- Face shields – full face shield
- Fit-tested N95 respirator
- Double gloves – long cuff gloves, first pair under and second pair over gown

Every access into the patient room requires three people, the HCW, Trained Observer, and Donning and Doffing Assistant. Each individual has different roles and responsibilities to ensure safe PPE donning and doffing, and must be trained to fulfill these roles. Every effort should be made to assign individuals to each of these roles, however it is recognized that local resources may require one person to perform both the Trained Observer and Assistant roles.

1) The HCW
    - Follows the direction of the Trained Observer to safely don and doff PPE
    - Must be trained in donning and donning high level PPE, and have recent respirator fit test (in the past year)
    - Reports and follows up any breach
    - Sign "Contact List" daily
2) The Trained Observer (could be an Infection Preventionist [IP], Educator, or other trained RN/RT)
    - Does not wear PPE
    - Guides HCW (and Assistant) in correct donning and doffing procedures using the *Health Care Worker - Checklist for Donning/Doffing Personal Protective Equipment (PPE)*. Paper copies also available with biocontainment PPE supplies
    - Maintains a minimum distance of 2 meters, preferably behind a barrier, when guiding HCW in doffing procedure
    - Monitors HCW while in patient room providing care
    - Documents critical or time sensitive nursing interventions and findings in the patient's chart as necessary
    - Completes documentation of *Contact Sign In Sheet* and PPE checklists.
    - Sends completed forms to **Provincial Workplace Health Call Centre-OHN at 604-953-5138**
3) The Donning and Doffing Assistant (could be IP, Educator, or other trained RN/RT)
    - Supports the HCW by ensuring all supplies are set up and ready

- Prepares to assist HCW doff PPE wearing appropriate PPE as outlined in *Doffing Assistant – Checklist for Donning/Doffing Personal Protective Equipment (PPE)*.

PPE supply is maintained on a dedicated cart. Additional supplies can be accessed through Distribution.

6. Assessment/On-going Care/Waste Management

- Emergency physician (EP) will initiate a thorough assessment of the patient's risk for the pathogen of concern and /or other communicable infections and consult with the MHO/MMOC and the expert risk assessment team with respect to on-going patient management and diagnostics. Also see "Recommendations for Emergency Departments".
- Staff entering the room will be severely restricted - no residents, medical students, or students of any kind are allowed to provide care
- Group tasks in order to minimize frequency of donning and doffing
- Patient must not leave their room for any reason
- Do not use in-room toilet, patient may use a dedicated commode/bedpan with Hygie products
- Disposable meal trays must be used
- Disposable temperature probes should be used
- Minimal equipment to be brought into patient room – any equipment in the care space must remain in the room (or quarantine area) until testing results for the pathogen of concern are known
- Bed linens should be managed in a manner that minimizes risk of aerosolization
- All patient waste, garbage, and linens are to be disposed of in blue drums (required) or red 20 liter pails (until blue drums available)
- The blue waste drum must be filled no more than ¾ full. Contact housekeeping when a new drum is required
- Nothing, including the blue waste drum, is to be removed from the room until high consequence pathogen is ruled out, or until removal can be coordinated with housekeeping and IP
- Prior to leaving the patient room, all HCWs must clean and disinfect (using disinfectant wipes) high touch areas such as bed rails, overbed table, light switches
- All procedures must be limited to those strictly necessary and in consultation with Medical Microbiologist. Only the most experienced personnel available should perform bronchoscopy and intubation procedures, and the number of HCWs in the room kept to a minimum. Avoid the use of CPAP and BiPAP.
- If Ebola Virus Disease (or other high consequence pathogen) is confirmed, prepare for patient transport by contacting the Patient Transfer Network under the direction of the MHO and IP/MMOC.
- Equipment and waste must be quarantined in locked secure area while ruling out high consequence pathogen. Movement of waste to be coordinated with IP and Environmental Services (EVS) in accordance with PHO document, *Recommendations for Environmental Services, Biohazardous Waste Management, and Food and Linen Management for Persons Under Investigation and Confirmed Cases of Ebola Virus Disease* (SOP #11).

7. Visitors

No visitors will be allowed in the patient room. Every effort should be made to assist a designated family member or support person to communicate with their loved one via electronic devices. Exceptions may be made in consultation with the MHO and IPAC.

8. Testing

Blood Work

Minimum blood work is available for suspect VHF patients, and these tests are all that should be ordered. Phlebotomy should be performed by experienced staff as outlined in the *RH Phlebotomy and Specimen Delivery Guidelines*.

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.

9. Environmental Cleaning

Standard hospital disinfectants that have a virucidal claim can be used to clean the environment of suspect or confirmed VHF patients. Disinfectants must not be sprayed during the cleaning process. Rooms will be cleaned and disinfected with accelerated hydrogen peroxide (Accel Intervention) as outlined by the PHO document, *Recommendations for Environmental Services, Biohazardous Waste Management, and Food and Linen Management for Persons Under Investigation and Confirmed Cases of Ebola Virus Disease*. Note: Routine room cleaning will be the responsibility of HCWs caring for the patient, Environmental Services will be responsible for areas occupied prior to admission to the isolation space (i.e. triage), and on discharge/transfer.

Spill Clean Up protocols can be found in the PHO document, Standard Operating Procedure #10.

10. Transfers

In consultation with the MHO, the Patient Transfer Network (PTN) will arrange transfer of care and transport to a Type 3 Facility. A specialized BC Emergency Health Services (BCEHS) crew will perform the transfer and collect the patient from the hallway outside of patient room into their isolation pod stretcher, using the following procedures. If regular stretcher is used, patient to wear a surgical mask and be covered by a clean sheet. Restrict all hallway access during transfer activity.

Ambulatory Patient Transfer Procedure:

a) Position BCEHS stretcher outside patient room (as close to the exit door as possible), ensure all BCEHS staff are donned in PPE.
b) The patient will exit the room and transfer independently onto the stretcher.

Non-Ambulatory Patient Transfer Procedure:

a) Position BCEHS stretcher outside patient room, ensure all BCEHS staff are donned in PPE.

b) Position an incontinence pad outside the door to patient room. Soak with accelerated hydrogen peroxide.
c) The bedside RN will wipe all plastic and metal surfaces of the ED stretcher using accelerated hydrogen peroxide wipes.
d) The RN will open the door of the patient room 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 RN 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 patient room where the bedside nurse will pull it back into the room, and close the door.

11. Stand Down and Decontamination

Office of the Provincial Health Officer guidelines can be found in *"Recommendations for Isolation Precaution Step Down and Discharge of Persons Under Investigation or Confirmed Ebola Virus Disease Patients"*. Staff can "stand down" when suspect patient is transferred out of area or if VHF has been ruled out by the expert risk assessment team.

a) If patient has been transferred out:

- □ Dispose of all waste (eg. IV bags and tubing, securely closed sharps container, suction equipment, linens) in blue biohazardous waste drum (filled no more than ¾ full)
- □ Wipe all visibly contaminated surfaces with Accel Intervention wipes
- □ Notify the Housekeeping Supervisor for VHF terminal clean
- □ Once notified by Housekeeping that the VHF terminal clean complete, do a walk-through of with the housekeeping supervisor and Infection Control, to ensure that EVD clean has been completed appropriately
- □ Notify management as per site specific SOPs, Section 3 "Notification"
- □ After VHF clean is complete: remove all signs and clean supplies specific to VHF, ensure carts are restocked

b) If VHF has been ruled out:

- □ Notify management as per section 3 "Notification"
- □ All equipment and waste can be managed as per usual IPAC guidelines

12. Management of Exposures

A potential exposure occurs whenever a breach in PPE or procedure occurs (i.e. torn glove, gap in PPE resulting in exposed skin, percutaneous or mucocutaneous exposure to body fluids, error in doffing PPE). The following procedure must be followed for any suspected breach:

1. Go to designated doffing area immediately. Remain calm and work slowly through each step outlined in this document.
2. Work with Trained Observer to remove PPE as per the step-by-step instructions for doffing.
3. If exposed area is intact skin, wash the affected area well with soap and water.
4. If exposed area is damaged skin, mucous membrane or eye, flush the area with generous amounts of water.
5. If a percutaneous injury occurs, do not promote bleeding by squeezing the wound and do not soak the wound in bleach or disinfectant. Wash the area with soap and water.
6. Immediately report to the MHO and WH.

    - Notify the Medical Health Officer (604-675-3900) after-hours reporting is via pager at (604-527-4893).

Notify the Workplace Health Call Centre (1-866-922-9464). Note: If the HCW is medically unable or in quarantine, the immediate supervisor will make the call.

13. Management of Human Remains

VCH Guideline for the Management of Human Remains

B.C. Ebola Virus Disease Guidelines for the Management of Human Remains