

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p> <p>Operational Directive</p>	Acute Care Infection Prevention and Control Program	
	Infection Prevention & Control Management of Ebola Virus Disease (EVD) in NON EVD-Designated Areas	Page 1 of 39
	Approval Signature:	Supercedes:
	Date of Approval:	
Review Date: <i>January 30, 2015</i>		

Table of Contents

- I. [Preface](#)
- II. [Operational Directives](#)
- III. [Infection Prevention and Control Measures – Acute Care](#)
 - A. [Routine Practices](#)
 - B. [Exposure Risk Assessment](#)
 - C. [Signs and Symptoms](#)
 - D. [Enhanced Droplet/Contact Precautions plus additional IP&C measures for EVD](#)
 - E. [Triage](#)
 - F. [Staffing](#)
 - G. [Diagnostic Tests and Examinations](#)
 - H. [Equipment and Supplies](#)
 - I. [Environment](#)
 - J. [Reprocessing \(Cleaning, Disinfection and Sterilization\) of Medical Equipment](#)
 - K. [Transport within the Facility](#)
 - L. [Transport between Facilities](#)
 - M. [Dietary](#)
 - N. [Linen](#)
 - O. [Handling of Sharps](#)
 - P. [Spill Management](#)
 - Q. [Waste Management](#)
 - R. [Special Considerations](#)
 - S. [Visitors](#)
 - T. [Duration of Precautions](#)
 - U. [Handling Deceased Bodies](#)

- V. [Blood and Body Fluid Exposures](#)
- W. [Monitoring of Staff](#)
- X. [Facilities Management](#)
- IV. [Roles and Responsibilities](#)
 - A. [Unit/Area Nurse](#)
 - B. [Unit/Area Manager/Designate](#)
 - C. [Medical Director, IP&C/Site Director, IP&C Child Health/Site Director, IP&C/St. Boniface/Designate](#)
 - D. [Infectious Diseases Specialist](#)
 - E. [Security Services](#)
 - F. [Infection Prevention and Control](#)
 - G. [Occupational and Environmental Safety and Health](#)
 - H. [Trained Monitor](#)
- V. [National EVD Case Definitions](#)
 - A. [Person Under Investigation](#)
 - B. [Confirmed Case](#)
- VI. [References](#)
- VII. [EVD Room Entrance Log](#)
- VIII. [Putting On and Taking Off PPE](#)
- IX. [Decontamination Process: Soiled Scrubs](#)
- X. [Process Flow for PUI or Confirmed EVD Body](#)
- XI. [EVD Incident Log](#)
- XII. [Sizing Recommendations for Coveralls](#)

I. PREFACE

The information in this operational directive is current at the time of distribution, based on currently available scientific evidence. This document is subject to review and change as new information becomes available. This document is specific to the NON EVD-designated areas (e.g., Emergency Rooms/Urgent Care, Community Health Services).

The Ebola virus belongs to Filoviridae family. Filoviruses are thread-like RNA viruses that cause hemorrhagic fever. People with EVD are not infectious during the incubation period. The Ebola virus can be transmitted through direct contact (e.g., through broken skin or mucous membranes) with blood or other bodily fluids or secretions (e.g., stool, urine, emesis, saliva, semen) and/or indirect contact with environment and fomites/objects (e.g., needles) contaminated with infected body fluids. The Ebola virus can also be transmitted through contact with infected animals. Airborne transmission has not been documented. The risk for person-to-person transmission is highest during the latter stages of illness, characterized by vomiting, diarrhea, shock, and hemorrhage. Infectivity persists after death. Ebola virus has been detected in semen for up to 3 months in men with EVD. Otherwise, once someone has recovered from EVD, they can no longer spread the infection. **Transmission can be prevented.** It is believed the Filovirus is not capable of surviving a long time outside the body of an infected host. The virus is thought to be able to survive up to some days in a liquid (e.g., blood, vomit, corpses). However the virus is fragile due to a lipid envelop. Chlorine disinfection, heat, direct sunlight (UV light), soaps and detergents all destroy the lipid envelop of the virus, thereby killing the virus.

While Ebola virus disease (EVD) is not indigenous to Canada, international travel and the presence of the National Microbiology Laboratory (NML) in Winnipeg may provide the opportunity for the transport and introduction of these agents or infected individuals.

Implement this operational directive in **close liaison** with Infection Prevention and Control (IP&C) staff, Infectious Diseases (ID) staff, Occupational and Environmental Safety & Health (OESH) staff, hospital and local Public Health authorities, and Federal Public Health authorities.

II. OPERATIONAL DIRECTIVES

1. All staff must be aware of and comply with the mandatory guidelines described in this operational directive, including those for personal protective equipment (PPE).
2. Isolation of patients under investigation for, or with confirmed EVD, or patients in the incubation period, shall take precedence over all other patients where there is limited availability of isolation rooms with characteristics suitable for EVD isolation.
 - i. The designated isolation room shall be vacated at once to facilitate the prompt admission of the person under investigation or confirmed EVD case.
3. At least one Ebola Site Manager will be onsite at all times in the location where an EVD patient is being cared for. This person is responsible to oversee safe and effective delivery of EVD patient care, with responsibility for all aspects of EVD in a facility.
4. Trained staff at each site will be a resource for on-site care of EVD positive patients until transportation to the appropriate designated unit occurs.
5. Staff shall immediately triage and isolate persons (using **Enhanced Droplet/Contact Precautions plus additional Infection Prevention and Control measures for EVD**) who are symptomatic and have had recent travel history to an affected area or have a history of contact with an ill individual who has traveled to an area affected by an outbreak or had occupational or laboratory exposure.
6. Clinical and non-clinical staff shall not care for persons under investigation for, or confirmed cases of EVD **at the same time** as caring for persons where EVD is not being considered. Movement while caring for these patients is limited (not moving freely between the EVD patient and other patients and clinical areas). Students shall only provide care for these patients when their

involvement is essential.

7. All non-essential staff shall be restricted from EVD patient care areas.
8. Staff shall immediately notify the individuals listed in [Section IV, Roles and Responsibilities](#) below, as appropriate, if there is suspicion of a patient meeting the criteria of a person under investigation or a confirmed case. See [Section V, National EVD Case Definitions](#).
9. Actively consult Infection Prevention and Control (IP&C) staff. IP&C staff shall assist in all decisions regarding patient isolation, use of PPE, and patient transport.
10. Actively consult Occupational and Environmental Safety & Health (OESH) staff. OESH staff shall assist in all decisions regarding staff exposure, staff self-monitoring, staff post exposure follow-up and staff monitoring.
11. **Consultation of an Attending Infectious Diseases (ID) specialist is mandatory.** This specialist must complete a risk assessment of the patient to determine if clinical presentation and epidemiology are consistent with EVD.
 - i. If consistent with EVD, the ID specialist will notify/liaise with the
 - a. Medical Officer of Health (MOH) at (204) 788-8666
 - b. Cadham Provincial Laboratory (CPL) on call physician through HSC paging at (204) 787-2071
 - c. Diagnostic Services of Manitoba (DSM) Medical Administrator On Call (AOC) at (204) 931-5253 to initiate appropriate specimen collection and testing; and
 - d. Ebola physician through HSC paging at (204) 787-2071.

III. INFECTION PREVENTION AND CONTROL MEASURES – ACUTE CARE

Staff safety is of utmost importance; strict compliance with IP&C precautions, including appropriate use of PPE, is mandatory to avoid potential exposure to infectious material. Transmission to healthcare workers has been documented when Infection Prevention and Control precautions are not strictly practiced. It is important to exercise extreme caution at all times when caring for persons under investigation or confirmed Ebola cases.

A. Routine Practices

- i. Strengthen knowledge of, and consistently apply Routine Practices when providing care to ALL patients regardless of the signs and symptoms they present with. This is especially important because the initial manifestations of EVD are non-specific.
 - a. Routine Practices includes (but is not limited to) the practice of hand hygiene according to the 4 moments of hand hygiene, cleaning and disinfection of all non-critical reusable items/equipment, regular environmental cleaning using a facility-approved disinfectant, meticulous attention to safety around the use of needles and sharps, and a complete and risk assessment performed prior to any patient encounter.
- ii. Avoid touching mucous membranes of the eyes, nose and mouth with hands to prevent self-contamination.

B. Exposure Risk Assessment

Within the past 21 days the patient has:

- i. Traveled from Guinea, Liberia, or Sierra Leone **and/or**
- ii. Been in contact with an EVD case, **and/or**
- iii. Been advised to self-monitor for EVD

Note: Countries with EVD cases may change. Current information is available from the Public Health Agency of Canada at: www.who.int/csr/disease/ebola/situation-reports/en/

C. Signs and Symptoms

Individuals with signs and symptoms consistent with EVD **must** have exposure risk to be considered further for EVD.

- i. Symptoms of infection with EVD are similar to those of other viral hemorrhagic fevers (e.g.,

Marburg), and of infectious diseases like malaria or typhoid. Symptoms can start off as mild flu-like illness and then progress to fulminant multi-system failure. Diagnosis can be difficult, especially where only a single case is involved.

- ii. EVD is a severe acute viral illness that begins with fever, often with malaise, myalgia, and headache, and is typically followed by progressive gastrointestinal symptoms that include anorexia, nausea, and abdominal discomfort, followed by vomiting and diarrhea. The diarrhea and vomiting is often profuse in later stages of the illness and, without treatment, leads to severe volume depletion, electrolyte abnormalities, and shock. While hemorrhage may occur, usually from the gastrointestinal tract, it is a late manifestation and occurs in a minority of patients.
- iii. Laboratory findings include low white blood cell and platelet counts and elevated liver enzymes.

D. Implement **Enhanced Droplet/Contact Precautions plus additional Infection Prevention and Control measures for EVD** immediately upon suspicion of a case of EVD

- i. Utilize 'no touch' approach for patient movement and management. Maintain spatial separation of 2 metres/6 feet.
- ii. Place patient in a single room with dedicated bathroom facilities or a commode. Door to remain closed.
 - a. Avoid aerosol-generating medical procedures (AGMPs) unless absolutely necessary. If AGMPs are performed, conduct in an airborne infection isolation room (AIIR) with the minimum number of required people present and conduct environmental surface cleaning of horizontal surfaces within the room following procedures with Oxivir TB RTU/wipes.
 - i. An AGMP is any procedure conducted on a patient that can induce production of aerosols of various sizes, including droplet nuclei. Examples include:
 - Intubation and related procedures (e.g., manual ventilation, open endotracheal suctioning)
 - Cardiopulmonary resuscitation
 - Bronchoscopy
 - Sputum induction
 - Nebulized therapy
 - Autopsy
 - Non-invasive positive pressure ventilation (CPAP, BiPAP)
 - b. Although EVD is not transmitted by the airborne route, it may be practical for facilities with AIIRs to isolate patients in an AIIR to allow AGMPs to be performed if required, without moving the patient.
- iii. Utilize 3-person team approach:
 - a. Primary: healthcare worker(s) who are entering the patient room to provide patient care.
 - b. Assistant: healthcare worker who is physically assisting with the donning and doffing of personal protective equipment.
 - c. Monitor: healthcare worker who is guiding donning and doffing processes, as well as observing processes within the patient room, to monitor for and prevent possible breaches.
- iv. Personal Protective Equipment (PPE)
Basic principles of safe and effective PPE use: it must be correctly in place before entering the patient care area; it must remain in place and be worn correctly for the duration of exposure to potentially contaminated areas; it should not be adjusted during patient care; and if a breach in PPE occurs, the HCW must immediately leave the patient care area. Ensure sufficient and undisturbed time to don PPE correctly.
In situations where a 'no touch' approach is not possible:

- a. Use disposable PPE wherever possible.
- b. Remove lanyards, jewelry, or other similar items that can hang/dangle and become contaminated during the course of patient care.
Note: where jewelry that can become contaminated or increase risk to the HCW cannot be removed, it will be cut off and the employer will reimburse the cost of repair.
- c. Pull back hair from face and neck and securely tie/pin back if required.
- d. Ensure footwear is closed toe and heel, can tolerate disinfection (i.e., not canvas/fabric), and is not easily removed during doffing.
 - If contaminated surfaces of the coveralls contact shoes during removal, wipe shoes with Oxivir TB disinfectant wipes. Ensure contact time of 1 minute; allow to air dry.
- e. A trained monitor should observe from outside the anteroom (if available), to prevent/note any breaches in PPE and address with remedial actions.
 - i. Monitor to assess PPE donning, then indicate to primary he/she is safe to enter the patient room (following donning).
 - ii. Monitor to indicate when it is clear to enter the anteroom/doffing area prior to exiting patient room.
- f. PPE Items (refer to [Section IX, Putting On and Taking Off PPE](#), for directions regarding order of PPE application and removal)
 - i. Visually inspect the PPE to be worn to ensure that it is in serviceable condition, that all required PPE and supplies are available, and that the sizes selected are correct for the healthcare worker. Refer to Section XII, Sizing Recommendations for Coveralls.
 - ii. Gloves:
 - Perform hand hygiene prior to applying gloves. Ensure nails are no longer than 1/4” so they do not puncture gloves.
 - Apply extended cuff gloves. Ensure the wrist is not exposed and cuff of the gown is fully covered
 - Double glove
 - Double gloving provides an extra layer of safety during direct patient care and during the PPE removal process. Beyond this, more layers of PPE may make it more difficult to perform patient care duties and put healthcare workers at greater risk for percutaneous injury (e.g., needlesticks), self-contamination during care or doffing, or other exposures to Ebola.
 - Wear gloves of differing colours; this allows easier visualization if a tear/breach in the gloves occurs.
 - a. The ‘very’ extended cuff, closer-fitting BLUE nitrile gloves shall be worn as the inner glove.
 - b. The extended cuff GREEN nitrile gloves shall be worn as the outer glove.
 - Change gloves if heavily soiled with blood or any body fluids while providing care to the same patient (perform hand hygiene immediately after removal)
 - If soiling of outer gloves takes place:
 - a. Remove excess soiling using Oxivir TB wipe(s)
 - b. Remove outer gloves with caution; discard in no-touch waste receptacle
 - c. Immerse gloved hands (inner gloves) in Oxivir TB RTU solution and carefully rub together
 - d. Pat dry inner gloves with Oxivir TB wipe(s)
 - e. Apply new outer gloves
 - If soiling of inner gloves takes place:
 - a. Immerse gloved hands in basin of Oxivir TB solution and

- carefully rub together
 - b. Pat dry gloves with Oxivir TB wipe(s)
 - c. Apply new outer gloves
 - Always perform hand hygiene immediately after inner glove removal; do not remove inner gloves within the patient room.
 - iii. Coveralls:
 - Disposable; fluid resistant; head and foot covering attached
 - Remove disposable coveralls in a manner minimizing self-contamination prior to leaving EVD anteroom
 - iv. N95 Respirator:
 - Apply N95 respirator prior to entering the patient room
 - Staff must be fit tested in advance (within the previous two years or sooner with significant facial changes) to determine the appropriate size N95 respirator. Seal check the respirator when applied.
 - v. Procedure or Surgical Mask (Assistant PPE):
 - Assistant to apply a procedure or surgical masks prior to entering the anteroom
 - vi. Face protection
 - Disposable full face shields
 - Note: masks with visors are not acceptable protection; face shields should be long enough to prevent splashing underneath; eye glasses are not adequate as eye protection.
 - g. Additionally PPE that might be required if gross soiling is likely:
 - i. Gowns:
 - Long sleeved; fluid repellent
 - NOTE: these are not the 'regular' isolation gowns. These are fluid repellent and disposable.
 - ii. Shoe/leg covers: fluid resistant
 - h. If there is any evidence of soiling of scrubs, refer to [Section X, Decontamination Process: Soiled Scrubs](#).
- v. Doffing PPE presents the point of highest risk of contamination. Therefore manage this as a two-person (i.e., assistant and primary) process to improve safety.
- vi. Doff and dispose of PPE safely. Refer to [Section IX, Putting On and Taking Off PPE](#). Doffing of PPE presents a high-risk for self-contamination; it requires a structured and monitored process and must be done slowly and deliberately.
 - a. Visually inspect PPE prior to exiting patient room for obvious signs of contamination. If present, wipe the surface of the PPE with Oxivir TB wipe(s).
 - b. Doff PPE slowly and deliberately in the correct sequence to reduce the possibility of self-contamination or other exposure to Ebola virus.
 - c. Ensure sufficient and undisturbed time to don and doff PPE correctly.
 - d. A second healthcare worker shall assist in the donning and doffing of PPE to help prevent inadvertent contamination of eyes, mucous membranes, skin or clothing.
 - e. If an anteroom is not available, doff PPE at the doorway upon exiting the room. Discard PPE in the patient room.
- vii. Eating or drinking is not permitted in areas where these patients are cared for, including the nursing station, or in reprocessing or laboratory areas.
- viii. Do not bring patient health records or mobile computers into isolation room(s).

E. Triage

- i. Ensure the following triage measures are in place:
 - a. Direct patients to the appropriate care area and initiate necessary IP&C precautions for those who have called ahead (doctor's office, clinic, home, or ER) to notify they are

- symptomatic with EVD and have a travel history to an Ebola affected area.
 - b. Post signs in waiting areas to direct patients with fever, difficulty breathing, and a new or worsening cough to clean hands, apply a procedure or surgical mask, and to inform health care providers (Cover Your Cough signs).
 - c. Locate a physical barrier (e.g., appropriate PPE, plastic partition at triage desk) between infectious sources (e.g., patients with symptoms of respiratory infection) and susceptible hosts.
 - d. Ensure supplies for respiratory hygiene as well as emesis management are accessible (masks, tissues, emesis bags, hand hygiene products, designated hand washing sinks and no-touch waste receptacles).
 - ii. Utilize 'hands-off' approach for patient movement and management.
 - a. If patient requires a mask, provide mask to patient (or accompanying individual) to apply
 - b. Provide patient (or accompanying individual) thermometer to take temperature.
 - c. The triage nurse should not examine the patient or ask detailed questions; rather he/she should focus on isolating the patient.
 - iii. Give patients with signs/symptoms of respiratory infections a mask to wear and walk them into an appropriate isolation room (without handling the patient) as soon as possible.
 - a. The recommended spatial separation for suspect respiratory infections is 2 metres/6 feet between patients.
 - b. The patient may remove the mask when in the room. Instruct patient to adhere to respiratory hygiene, including hand hygiene.
 - iv. Consider advance preparation of the room prior to patient placement (e.g., removal of non-essential equipment, paper, upholstered items, and so on). If not possible, anything that cannot be appropriately cleaned and disinfected must be disposed as biomedical waste.
 - v. Place patients with an acute diarrheal illness into a single exam room with dedicated toilet/commode/elimination facilities/supplies whenever possible and as soon as possible.
 - a. Instruct the patient to perform hand hygiene after using the toilet.
 - vi. Consider patient placement in an appropriate isolation room with communication devices present (e.g., phone, intercom), via which the interview of a stable patient can occur.
 - vii. If the patient, via quick visual triage, appears to require resuscitation
 - a. Move the patient directly to Resus or another appropriate designated area.
 - b. Inform on-duty staff of the patient's status as a 'person under investigation' for EVD. Ensure the patient's privacy is protected in accordance with the Personal Health Information Act (PHIA).
 - c. Implement precautions immediately.
 - d. Only the minimum number of required staff shall participate.
 - viii. For patients brought in via ambulance
 - a. These patients will be directly transported to HSC
 - b. Patients will be pre-identified by an EMS screening tool; the site will be pre-notified and given time to prepare.
 - c. In an emergency response, the site will receive as much notice as possible.
 - d. EMS staff will deliver the patient directly to the appropriate room and hand off care to the site staff.
 - ix. Secure area until cleaned/disinfected; no patients or staff to enter without PPE until this is completed. Clean and disinfect all contaminated surfaces once the patient has left the station/area with Oxivir TB RTU prior to seating the next patient within that station/area.

F. Staffing

- i. Use 'closed loop communication' to govern both direct patient care communication and daily team huddles. This enables the team to hold each other accountable for safe and effective practices, as effective and assertive communication is central to safety of the team.

- a. 'Closed loop communication' empower all members of the team, regardless of role, to develop shared accountability for strict adherence to operational directives and safe work procedures. The team commits to:
 - i. Follow all operational directives and safe work procedures to the best of their ability.
 - ii. Ensure others follow the operational directives and safe work procedures.
 - iii. Report all accidents and/or near misses as appropriate.
 - iv. Report any symptoms that may indicate EVD to OESH.
 - v. Report any new medical conditions that may affect a staff member's ability to work with these patients to OESH.
- ii. Limit staff caring for patients to designated staff.
 - a. Students shall only provide care for these patients when their involvement is essential.
 - b. Clinical and non-clinical staff do not care for persons under investigation for, or confirmed cases of EVD at the same time as caring for persons where EVD is not being considered.
 - i. Movement while caring for these patients is limited (not moving freely between the EVD patient and other patients and clinical areas).
 - ii. Once the patient has left/been transported out of the area; staff have appropriately removed PPE without any breaches in protocol as per the checklist; and then staff have performed hand hygiene, they may return to caring for other patients in the area.
 - c. Non-essential staff and visitors shall be restricted from entering the isolation anteroom/patient room.
 - d. Care is provided by at least two registered nurses at all times. The two nurses do not need to be in the room at the same time or all the time – this depends on the patient care activities. These nurses must have no other duties while caring for suspect or confirmed cases.
 - e. In addition to the two registered nurses, a trained monitor with experience in the use of PPE shall be assigned outside the entrance to the isolation room (outside the anteroom if available) to record, on a log sheet (refer to [Section VIII for EVD Room Entrance Log Sheet](#)), all people entering the room, as well as to monitor for breaches in the protocol for selection and donning/doffing of PPE to minimize risk of self-contamination.
 - i. No additional PPE is required for the trained monitor provided he/she remains outside the anteroom (if available).
 - ii. A safe and effective method of communication should be available for the monitor to communicate with staff inside the isolation room as well as inside the anteroom.
- iii. Staff caring for these patients shall self-monitor for EVD symptoms beginning the first day of assignment and continuing for 21 days after last patient contact as per [Section W, Monitoring of Staff](#).
- iv. Staff shall immediately notify the individuals listed in [Section IV](#) below, as appropriate, if there is suspicion of a patient meeting the criteria of a person under investigation or a confirmed case of EVD. See [Section V, National EVD Case Definitions](#).
- v. Staff shall self-report to OESH the presence of their own significant travel history as outlined above in [Section B\(ii\)](#).
- vi. Staff shall self-report to OESH any medical condition which may affect their ability to safely follow the requirements outlined in this Operational Directive.
- vii. Pregnant healthcare workers shall not have contact with patients under investigation or confirmed cases of EVD or their environment.
- viii. Healthcare workers with open skin areas/lesions on hands or forearms, as assessed by OESH, shall not have contact with patients under investigation or confirmed cases of EVD or their environment.

- a. Healthcare workers are responsible to
 - i. Self-identify open skin areas/lesions on hands or forearms
 - ii. Report the same to the unit/area manager/designate
 - iii. Discuss with OESH to determine suitability to provide patient care on the designated unit(s).

G. Diagnostic Tests and Examinations

- i. Do not draw specimens.
 - a. If specimen collection is required, consult the Attending ID specialist on-call (available 24/7).
 - i. St. Boniface Hospital: call St. Boniface ID at (204) 237-2053
 - ii. Children's Hospital: call Pediatric ID through HSC paging at (204) 787-2071
 - iii. All other sites: call HSC ID through HSC paging at (204) 787-2071
 - b. Specimens will only be collected outside of JK3 and PICU for essential diagnosis and monitoring that cannot wait until patient transfer (e.g., labouring mother).
 - i. Balance the need to perform additional tests against the possible danger to laboratory and patient care staff to minimize risk.
 - ii. Where specimen collection is required, follow the process outlined in Section F, WRHA Operational Directive, Infection Prevention & Control Management of Ebola Virus Disease (EVD) in EVD-Designated Units (*HSC: JK3 and PICU*) available at: <http://www.wrha.mb.ca/prog/ipc/files/EVDMgmt-OD.pdf>.
- ii. Do not perform diagnostic examinations.

H. Equipment and Supplies

- i. Adhere rigorously to the use of dedicated patient equipment on a single patient only.
- ii. Keep dedicated patient equipment within the patient isolation room until the diagnosis of EVD is excluded, the patient is discharged or the precautions are discontinued. When this occurs:
 - a. Thoroughly clean and disinfect reusable non-critical patient care equipment with Oxivir TB RTU/wipes. This shall occur according to established schedules and as needed between patients or when soiled. Non critical items are those that touch only intact skin but not mucous membranes.
 - b. Allow to air dry completely prior to removal from room.
 - c. Once removed from the isolation room (and anteroom if present), wipe equipment with disinfectant wipes again, and allow to air dry before use with/on another patient.
- iii. When it is not possible to dedicate patient equipment to a single patient, equipment must be cleaned and disinfected, and allowed to air dry completely prior to removal from room. Once removed from the isolation room (and anteroom if present), wipe equipment with disinfectant wipes again, and allow to air dry before use with/on another patient.
- iv. Where the use of the medical vacuum system for suctioning is required, implement a two in-series canister system and confirm the functioning and presence of the canister overflow prevention mechanism.
 - a. Should fluid be observed in the second canister, immediately stop use and notify Facility Management.
- v. Utilize single-patient-use elimination systems.
- vi. Disinfect commodes during routine cleaning, and as required (e.g., after each use if gross soiling).
- vii. Equipment that cannot be effectively cleaned and disinfected shall be disposed of as biomedical waste.
- viii. Upon discharge, dispose of commodes as biomedical waste.

- I. Environment
 - i. Assign experienced Housekeeping staff trained in IP&C measures and the use of PPE to perform environmental cleaning.
 - ii. Housekeeping shall implement twice daily cleaning and disinfection of all horizontal and frequently touched surfaces with Oxivir TB RTU.
 - a. Additional cleaning and disinfection is required on surfaces likely to be touched in the patient care environment.
 - b. Additional cleaning measures or frequency may be warranted in situations where environmental soiling has occurred.
 - c. If applicable, include basins of Oxivir TB RTU solution x 3 (2 in anteroom, 1 in patient room) as well as walk-off mat in twice daily and as needed (e.g., visible contamination) cleaning and disinfection *if the basins and mats are used*. Discard disposable basins with each emptying of solution, once solution is carefully disposed.
 - iii. Housekeeping equipment shall be disposable or remain in the room for the duration of the patient admission.
 - a. Use heavy duty/rubber gloves for environmental cleaning, in addition to extended cuff gloves. Discard heavy duty gloves after each use.
 - b. Do not bring Housekeeping Carts into the isolation room or anteroom.
 - c. Use several disposable cloths to clean and disinfect a room. Use a new disposable cloth for different surfaces or zones within the room. Do not reuse cloths.
 - d. Where gross soiling is likely (e.g., imminent delivery for labouring patient), basins of Oxivir TB RTU and walk-off mats are required.
 - e. Clean and disinfect all Housekeeping equipment before returning into general use.
 - i. Discard textiles (e.g., cleaning cloths, mop heads, wipes, linens, and privacy curtains) used in the patient room as biomedical waste.
 - iv. Upon patient discharge, discharge/terminal cleaning of the room should follow the recommended practice for discharge/terminal cleaning of a room on Enhanced Droplet/Contact Precautions plus additional Infection Prevention and Control measures for EVD. In addition to routine cleaning:
 - a. Remove and discard (as biomedical waste) all dirty/used items (e.g., suction container, disposable items).
 - b. Remove and discard (as biomedical waste) curtains (e.g., privacy, window, shower) before starting to clean the room.
 - c. Discard everything in the room that cannot be cleaned, as biomedical waste.
 - d. Use fresh cloths, mop, supplies and solutions to clean the room.
 - e. Use several cloths to clean a room. Use each cloth one time only; do not dip a cloth back into disinfectant solution after use. Do not re-use cloths.
 - f. Clean and disinfect all surfaces and allow for the appropriate contact time with the disinfectant.
 - g. Clean and disinfect all Housekeeping equipment before putting back into general use.
- J. Reprocessing (Cleaning, Disinfection and Sterilization) of Medical Equipment
 - i. Do not send items involved in the care of EVD patients to Medical Device Reprocessing; discard items as biomedical waste.
 - a. Consult IP&C PRIOR to discarding the item if this (discarding) will result in significant operational impact.
- K. Transport within the Facility
 - i. **Avoid non-essential transport of the patient.** If an internal transfer cannot be avoided, ensure the new room is ready before transfer to minimize time outside of the patient room.
 - ii. Instruct Patient Transport and receiving staff on the required precautions prior to moving the patient or transporting other items.

- iii. Contact Security Services to provide security during transport and on the unit, if necessary (e.g., to clear the elevators and transit corridors of all persons non-essential to the transport of the patient in advance of patient transport).
 - a. For transport, Security Services staff shall apply double gloves, impermeable gown, N95 respirator, and face shield. Shoe and leg covers for Security Services staff are required when there is (or there is anticipated) uncontrolled blood or body fluid drainage.
- iv. Staff providing transport must discard PPE as they leave the room, and put on new PPE prior to transporting patient. Refer to [Section IX, Putting On and Taking Off PPE](#), for directions regarding order of PPE application and removal.
 - a. For transport, the trained monitor shall apply double gloves, impermeable gown, N95 respirator, and face shield. Shoe and leg covers for the trained monitor are required when there is (or there is anticipated) uncontrolled blood or body fluid drainage.
- v. Transport the patient or other items in a manner that minimizes patient contact with others who are non-essential to the transport of the patient. Use the most direct route to the destination.
- vi. Provide patient with a procedure or surgical mask during essential transport. Provide patient with a clean gown and bedding. Cover all wounds; take measures to contain body fluids (e.g., vomit, urine, feces, blood). Assist patient to perform hand hygiene before leaving the room.

L. Transport between Facilities

- i. **Avoid non-essential transport of the patient.** Transport of patients is only to occur to transport patients to the designated EVD site.
- ii. Transport of stable patients:
 - a. Contact Winnipeg Fire Paramedic Service (WFPS) at (204) 986-6336 for the transport of these patients.
 - b. Notify WRHA Patient Transport Regional Director/designate at (204) 794-2192 or pager (204) 931-4886 for the transport of these patients.
 - c. Contact HSC Central Support Services
 - i. Monday – Friday, 0800-1600 at (204) 612-7795 or via HSC paging (204) 787-2071
 - ii. Monday – Friday, 1600 – 0800, and weekends/statutory holidays, contact the HSC Nursing Supervisor via HSC paging (204) 787-2071
- iii. Transport of unstable patients:
 - a. Contact Emergency Medical Services (EMS) at 911 and advise of need to transport patient who will be investigated for EVD and the need to transport to HSC (JK3 or PICU).
 - b. Notify WRHA Patient Transport Regional Director/designate at (204) 794-2192 or pager (204) 931-4886 for the transport of these patients.
 - c. Contact HSC Central Support Services
 - i. Monday – Friday, 0800-1600 at (204) 612-7795 or via HSC paging (204) 787-2071
 - ii. Monday – Friday, 1600 – 0800, and weekends/statutory holidays, contact the HSC Nursing Supervisor via HSC paging (204) 787-2071
- iv. Adhere to Enhanced Droplet/Contact Precautions for the patient transport.
- v. Instruct Transport staff and receiving staff on the required precautions prior to moving the patient.

M. Dietary

- i. Use disposable dishes/cutlery and dispose as biomedical waste at the point-of-use.

N. Linen

- i. Ensure safe handling of linen.
- ii. Contain linen at point of use.
- iii. Double bag soiled linen.
- iv. Dispose of linen/textiles used within the patient room as biomedical waste. Place in a no-touch, leak-proof receptacle/container.
 - a. Use only a mattress and pillow with plastic or other covering that fluids cannot get through.
- v. Staff handling contaminated linen shall wear appropriate PPE.
- vi. Handle linen with a minimum of agitation to avoid contamination of air, surfaces, and persons. Slowly and carefully remove linen from the patient and bed to minimize agitation and air currents.
- vii. Roll or fold heavily soiled linen to contain the heaviest soil in the bundle's centre.
- viii. Change patient bed linen regularly, when soiled, upon discontinuation of precautions, and following patient discharge.
- ix. Ensure external container is disinfected with Oxivir TB RTU/wipes and allowed one minute contact time.
 - a. Clearly label the external container as biomedical waste.
- x. Never carry soiled linen or soiled linen bags against the body.
- xi. Transfer on carts with guard rails or raised edges and load in a manner to prevent large or heavy items from tipping.
- xii. For persons under investigation (i.e., awaiting test results), Facilities Management shall store in a designated area until test results available.
 - a. If test results for Ebola are negative, disposal of linen is not necessary. Regular laundering is adequate for stored linen
- xiii. If test results for Ebola are positive, linen must be transported off-site in accordance with Transport Canada's, Transportation of Dangerous Goods Regulations, and disposed of in accordance with local or regional requirements and regulations and/or bylaws for regulated biosafety (infectious) waste.

O. Handling of Sharps

- i. Limit use of needles and other sharps as much as possible.
- ii. Use safety-engineered devices wherever available.
- iii. Do not recap used needles.
- iv. Discard used needles and other used single-use sharp items immediately into designated puncture-resistant containers at the point-of-care.
- v. Handle used needles and other sharp instruments with care to avoid injuries during disposal.
- vi. Clean and disinfect used sharps containers once sealed. Allow to air dry prior to removal from patient room.
- vii. Use dedicated single-use sharps containers that are leak-proof/impervious, puncture resistant, and fitted with securely closed lids in rooms where these patients are being cared for.
- viii. Do not fill sharps containers more than 2/3 full.

P. Spill Management

- i. Make 'spill kits' available for use in designated assessment/care areas.
- ii. Alert assistant and trained monitor.
- iii. Clean all spilled blood and other body fluids immediately once fluid and droplets have been allowed to settle wearing EVD PPE.
- iv. When cleaning spills, bring an extra pair of gloves into the room in a sealed bag (see 7g below).

- v. Establish a spill parameter (contain the spill and section off the area immediately, as appropriate).
 - vi. Avoid using product application methods that cause splashing or generate aerosols (e.g., spraying disinfectant).
 - vii. Clean the spill area removing the organic material, cleaning the area, and disinfecting the area
 - a. Gently covering the spill with dry absorbent pad(s); **remove** organic material. Discard.
 - b. Covering spills of potentially contaminated material with an incontinence/absorbent pad saturated with Oxivir TB RTU.
 - c. Cover spill outside-in. Allow pad to soak for a minimum of 10 minutes.
 - d. Immerse gloved hands (outer gloves) in Oxivir TB RTU solution and carefully rub together.
 - e. Remove outer gloves with caution; discard.
 - f. Immerse gloved hands (inner gloves) in Oxivir TB RTU solution and carefully rub together.
 - g. Pat dry inner gloves with Oxivir TB wipe(s).
 - h. Apply new outer gloves.
 - i. Wipe up with absorbent material soaked in Oxivir TB RTU.
 - j. **Clean** up spill from outside-in. Start at one end of the affected area and move in one direction until all surfaces have been disinfected. Do not use a circular motion.
 - viii. Dispose as biomedical waste.
 - ix. Immerse gloved hands (outer gloves) in Oxivir TB RTU solution and carefully rub together.
 - x. Remove outer gloves with caution; discard.
 - xi. Immerse gloved hands (inner gloves) in Oxivir TB RTU solution and carefully rub together.
 - xii. Pat dry inner gloves with Oxivir TB wipe(s).
 - xiii. Apply new outer gloves.
- NOTE: if shoe/leg covers are grossly soiled, they should be safely removed and a new clean pair worn. To remove:
- a. In patient room:
 - i. Use an Oxivir TB wipe to remove any gross soiling that may be present.
 - ii. Immerse gloved hands into basin and carefully rub together; wipe door handle with Oxivir TB wipe; allow 1 minute drying time before exiting patient room.
 - b. Enter anteroom staying in the half closest to the patient room (delineated by tape); ensure contact with walk-off mat.
 - iii. Immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution.
 - c. After door closes, assistant to
 - i. Enter staying on the half closest to hallway.
 - ii. Safely remove contaminated shoe/leg coverings.
 - iii. Immerse gloved hands and carefully rub together in Oxivir TB RTU solution.
 - iv. Remove outer gloves with caution; discard.
 - v. Immerse gloved hands (inner gloves) in Oxivir TB RTU solution and carefully rub together.
 - vi. Pat dry inner gloves with Oxivir TB wipe(s).
 - vii. Apply new outer gloves.
 - viii. Apply clean shoe/leg covers for primary.
 - d. Primary may then re-enter patient room.
- xiv. **Disinfect** after cleaning by pouring Oxivir TB RTU directly onto the spill area. Allow required contact time.
 - a. Cover and saturate the spill area.
 - b. Wipe the area with disposable absorbent material and dispose of as biomedical waste.

- c. Remove outer gloves with caution; discard.
 - d. Immerse gloved hands (inner gloves) in Oxivir TB RTU solution and carefully rub together.
 - e. Pat dry inner gloves with Oxivir TB wipe(s).
 - f. Apply new outer gloves.
- xv. Mop area with facility-approved disinfectant. Allow surface to air dry completely.
 - xvi. The trained monitor is to record the incident on the EVD Incident log.

Q. Waste Management

The Ebola virus is categorized as a Risk Group 4, under PHAC's Biosafety Programs and Resources, and requires special handling.

- i. Waste management shall comply with municipal regulations and site policy/procedure.
- ii. Management of liquid waste requires addition of a solidifier prior to disposal. Treat as biomedical waste.
- iii. Contain waste within the patient's environment at point of generation.
- iv. Use no-touch waste receptacles. A supply of designated biomedical waste containers and other supplies required for management of biomedical waste shall be available at all times.
- v. Place waste immediately into a waste receptacle lined with sturdy, leak and tear resistant waste-disposal biomedical waste bag; securely seal.
 - a. Do not over-fill waste bags; only fill until 2/3 full.
 - b. Balloon tie, tape, or zip tie (required by the DOT Special Permit) the bags to prevent the release of any material from the bag if inverted (goose-necking with tape or zip ties is permitted). The closure method must not tear, puncture or otherwise damage the bags.
 - c. Pick-up bags by the neck and carry away from the body; never throw or compress. Do not carry a bag over the shoulder where it could drip and create an exposure. Do not drag a bag on the floor.
- vi. While holding the bag over the container it was in, wipe the exterior of the bag using a disinfectant with Oxivir TB RTU/wipes.
 - a. If it was not in a container or is too heavy, place on an absorbent pad to capture possible disinfectant drips from the bag and/or support the weight of the bag, place the bag on the pad and wipe the bag. Dispose of the absorbent pad and wipe(s) as EVD waste in a new waste bag.
- vii. Move the bag into the anteroom once the secondary bag has been prepared in the anteroom
 - a. Line a large trash can with a red biomedical waste bag; this will be the secondary bag.
 - b. Place primary bag into secondary bag and balloon tie, or tape, or zip tie (required by the DOT Special Permit) the bags to prevent the release of any material from the bag if inverted (goose-necking with tape or zip ties is permitted). The closure method must not tear, puncture or otherwise damage the bags.
 - c. Remove the bag from the trash container and while holding the bag over the trash container, decontaminate by wiping using Oxivir TB RTU/wipes. If necessary, set the bag on an absorbent pad(s) to capture drips off the bag. Dispose of the absorbent pad(s) as EVD waste in a no-touch waste receptacle.
 - d. Mark the secondary bag with the words 'EVD Waste' using a permanent marker. Dispose of marker as EVD waste in a no-touch waste receptacle.
- viii. Place the double-bagged waste in a designated leak-proof/impervious, puncture-resistant plastic or metal single-use container to remove.
 - a. Locate the container at the periphery/outside of the area for doffing PPE to avoid risk of recontamination of the container during PPE removal.
 - b. Securely seal and clearly label the container indicating there is EVD-associated biomedical waste.
 - c. Disinfect the outside of the container by wiping with Oxivir TB RTU/wipes immediately

before removing waste containers from the anteroom.

- ix. Place waste into the biomedical waste container. Do not re-open containers. Place an “incinerate only” sticker on the outer packaging.
- x. Use heavy duty/rubber gloves for waste pick up.
- xi. Staff removing waste from the area should only handle the outer container and transport carts.
 - a. Transfer on carts with guard rails or raised edges and load in a manner to prevent large or heavy items from tipping.
- xii. Disinfect carts after each use with Oxivir TB RTU/wipes and allow to air dry before reuse.
- xiii. For persons under investigation (i.e., awaiting test results), move the container to a designated, locked holding area with restricted access until test results are available.
 - a. The quarantine area for the storage of EVD waste shall be identified prior to the identification of a person under investigation or confirmed case of EVD.
 - b. Clearly mark waste storage areas with a biohazard symbol, and keep separate from other storage areas.
- xiv. Security shall close public areas during cart movement until movement is complete and floors are disinfected.
 - a. Transport the EVD waste in the cart directly from the patient care area via the shortest, most appropriate route to the storage area and unload.
 - b. Once unloaded, move the cart to the designated disinfection area and disinfect.
- xv. Storage of biomedical waste other than sharps shall be at 4°C or lower if stored for more than 4 days.
- xvi. Where there has been a breach in safe handling and containment during the management of Ebola-associated waste with subsequent potential exposure, staff should safely and immediately leave the isolation room, remove PPE, thoroughly rinse the area of body exposed, and report potential exposure immediately to OESH at (204) 232-9075.
- xvii. **Sharps Disposal:**
 - a. Wipe the container using Oxivir TB RTU/wipes.
 - b. Place sharps container into a second biohazard container.
 - c. Securely seal the second container; clearly label and identify as EVD-biomedical material.
 - d. Wipe the outer container with Oxivir TB RTU/wipes.
 - e. Transport as outlined above.

R. Special Considerations

- i. **Breastfeeding:** women under investigation for or confirmed case of EVD shall not breast feed as EVD is transmitted in breast milk.

S. Visitors

- i. Stop visitor access to the patient.
 - a. If this is not possible, limit the number of visitors to include only those necessary for the patient’s well-being and care (e.g., parent, guardian or primary caregiver).
- ii. Instruct visitors to speak with a nurse before entering the patient room in order to evaluate the risk to the health of the visitor, and the ability of the visitor to comply with precautions.
 - a. Before allowing visitors of EVD patients to enter the facility, screen them for signs and symptoms of EVD.
- iii. Restrict visitors to visiting only one patient.
- iv. Unit staff to instruct designated visitors on the isolation precautions required.
- v. Do not allow other visitors to enter the EVD patient care area.
- vi. Educate patients, their visitors, families and their decision makers about the precautions being used and the appropriate use of PPE, the duration of precautions, as well as the

prevention of transmission of disease to others, with a particular focus on hand hygiene and respiratory hygiene. Visitors should also be educated on self-screening for fever.

- vii. Visitor activities and compliance with use and removal of PPE will be monitored in the same manner as health care workers.
- viii. Include visitors on EVD Room Entrance Log; ensure current contact information is provided.
- ix. Visitor/accompanying individual management:
 - a. Asymptomatic accompanying individual
 - i. Once the Attending ID specialist has conducted the patient assessment and identifies the need to isolate patient and investigate for possibility of EVD infection
 - ID notifies the MOH per the above direction
 - Site staff to ask the accompanying individual to go home (exception: person needed for patient's well-being, e.g., parent, guardian, care-giver). WRHA Population and Public Health will follow-up contacts
 - PPE not required for transport for the accompanying person who stays; is necessary if resuscitation required for the initial transport from Children's Emergency to PICU.
 - b. Symptomatic accompanying individual
 - i. Attending ID specialist assessment is required
 - Location of interview will depend on where patient is admitted to – e.g., directly to JK3/PICU, through ER, in ambulatory care, but should happen in the same room as the patient
 - PPE would be required for transport – same as required for the symptomatic patient (i.e., procedure or surgical mask). PPE is also required if resuscitation required

T. Duration of Precautions

- i. For **persons under investigation**, precautions remain in effect until EVD is excluded. As real-time reverse transcriptase polymerase chain reaction (RT-PCR) testing for Ebola virus in blood may be negative within the first 72 hours of symptom onset, a second test may be required (depending on clinical situation) before an EVD diagnosis can be excluded.
 - a. A single negative RT-PCR test result for Ebola virus from a blood specimen collected more than 72 hours after symptom onset, rules out EVD.
- ii. Negative testing for EVD does not rule out infection with another Viral Hemorrhagic Fever (VHF). Patients with appropriate epidemiological history and symptoms compatible with other VHF should remain in appropriate isolation precautions.
- iii. The decision to resume routine testing practices will only be done in consultation with the DSM AOC, public health representatives and the patient's primary care provider.
- iv. The decision to modify or discontinue isolation precautions shall rest with the Medical Director, Infection Prevention and Control (all sites except Child Health and St. Boniface) or Site Director, Child Health Infection Prevention and Control, or Site Director, St. Boniface Infection Prevention and Control, in consultation with the Infection Prevention and Control staff and a MOH/delegate.
 - a. In every case where there is modification of precautions, written documentation in the patient health record shall justify the action.
 - b. Unit/area staff are to notify affected departments of any modifications to isolation precautions.

U. Handling Deceased Bodies

- i. Prior to handling the remains, contact the Office of the Chief Medical Examiner (OCME) at (204) 945-2088. Refer to [Section X, Process Flow for PUI or Confirmed EVD Body](#).
 - a. If after hours, listen to the message to obtain the on-call Medical Examiner

Investigator's (MEI) contact information and contact the MEI directly. Where EVD has not already been confirmed, the OCME will consult with an Attending ID Specialist to determine if cadaveric sampling for EVD is recommended (i.e., person meets the person under investigation case definition).

- ii. Comply with the Public Health Act Dead Bodies Regulation (available at: <https://www.canlii.org/en/mb/laws/regu/man-reg-27-2009/latest/part-1/man-reg-27-2009-part-1.pdf>)
 - a. Bodies must be wrapped and securely sealed in two leak-proof body bags. *These bags have handles to facilitate safe handling.*
- iii. Keep the handling of human remains to a minimum.
- iv. Follow Routine Practices and Contact Precautions for handling deceased bodies or for transfer to mortuary services. Routine Practices includes PPE to protect against splashing and sprays of blood and body fluids; mask and facial protection are recommended for handling deceased bodies.
 - a. Droplet or Airborne Precautions are not required.
- v. Leave medical devices (i.e., intravenous catheters, urinary catheter, or endotracheal tubes) in place.
- vi. Wrap the body in a plastic shroud at the site of the death. Take care to prevent the contamination of the exterior surface of the shroud.
- vii. Wrap the shroud-covered body in a leak-proof bag (internal leak-proof bag) at the site of the death. Take care to prevent the contamination of the exterior surface of the bag.
- viii. Place into a second (outer) leak proof bag with an absorbent pad. Once closed, do not re-open the body bag.
- ix. Attach a red colour-coded 'toe tag' to the outer body bag indicating the individual was under investigation for, or confirmed case of EVD.
- x. Perform surface decontamination of the outer bag by removing visible soil on outer surfaces with the Oxivir TB RTU/wipes.
- xi. Keep transportation of human remains to a minimum.
- xii. Notify mortician
 - a. The body has EVD.
 - b. Transport the remains of confirmed cases directly to the mortuary facility.
 - c. Use Routine Practices and Contact Precautions during transport.
 - d. Viewing of the body is not permitted.
 - e. The body bag is not to be opened.
 - f. Embalming must not occur. Cremation or immediate burial in a hermetically sealed casket constructed of, or lined with, metal or other impervious material is required.
 - g. Autopsies will not be performed on cases under investigation for, or those with confirmed EVD. The presence of EVD will be confirmed before autopsy on persons under investigation.
 - h. Cadaveric sampling is required in rare circumstances where EVD is suspected after consultation with ID, but no prior testing for EVD has been performed. Contact the DSM Medical AOC at (204) 931-5253 to advise cadaveric sampling is required. Where cadaveric sampling is required, DSM will instruct the mortuary service where to pick up the body after sampling has occurred.
 - i. The body must be buried or cremated as soon as possible after death (within 48 hours), unless written permission to postpone burial or cremation has been obtained from a Medical Officer of Health. The body must not be accompanied by any contaminated articles (excluding medical devices that have been left in place). If the body is cremated, the ashes are not an infectious risk and can be released to the family.
 - i. Bodies not destined for cremation must be enclosed in a coffin at the earliest time possible after death

- Constructed of or lined with, metal or other impervious material and hermetically sealed OR
 - Placed in a tightly constructed outer container that is constructed of, or lined with, metal or other impervious material and is hermetically sealed.
 - ii. Attach a label to the head of the coffin or to the outer container (whichever is hermetically sealed) as soon as practically possible that states
 - PUBLIC HEALTH NOTICE
This body is or is suspected to be infected with a designated disease specified in the Dead Bodies Regulation under *The Public Health Act* and must be handled in accordance with that regulation.
Do not open the hermetically sealed container.
Do not remove this label.
- xiii. Clean and disinfect all equipment used in the transport of the body with Oxivir TB RTU/wipes immediately after use and allowed to air dry.

V. Blood and Body Fluid Exposures

- i. Immediately apply first aid and seek medical attention if there has been a percutaneous or muco-cutaneous (i.e., mucous membranes of the eyes, nose, or mouth) exposure to blood, body fluids, secretions, or excretions. Staff shall *immediately and safely stop any current tasks, leave the patient care area, and safely remove PPE.*
 - a. Remove PPE carefully because exposure during PPE removal can be just as dangerous for transmission of EVD.
 - b. Express wound. Thoroughly rinse the site of a percutaneous injury with running water for at least 5 minutes; gently cleanse any wound with soap and water immediately after leaving the patient care area.
 - c. Flush mucous membranes of the eyes, nose, or mouth with copious amounts of water or an eyewash solution, as outlined in the Blood and Body Fluid Exposure Safe Work Procedure.
- ii. Immediately report to manager/supervisor, who will ensure the Source Risk Assessment and Source Testing are completed as per the Blood and Body Fluid Post Exposure Protocol.
- iii. Immediately report the incident to OESH by calling (204) 232-9075. This is a time-sensitive task and must be performed as soon as the healthcare worker leaves the patient care unit. *Note: The window period between exposure and development of symptoms is thought to be a minimum of 48hrs. The incubation period begins two days following the exposure.*
 - a. Exposed persons will be *medically evaluated* including for other potential exposures (e.g., HIV, HCV) and *receive follow-up care*, including fever monitoring, twice daily for 21 days after the incident.
 - b. OESH will consult with an Attending ID specialist. Dependent upon the severity of the exposure, the ID Specialist will recommend one or a combination of the following: self-monitoring, direct active monitoring, or restriction of activities/self-isolation under the direction of OESH.

W. Monitoring of Staff

- i. Staff identified below shall receive direction and review the process for monitoring. This includes:
 - a. Recording of baseline temperature.
 - b. Correct usage of the supplied thermometer.
 - c. When to begin temperature self-monitoring, and how to record and/or report temperatures.
 - d. When, and to whom, temperature readings should be reported, including the necessary contact information.
 - e. A reminder that any change in health status should be immediately reported to OESH

- for further evaluation.
 - ii. OESH will interview any healthcare worker who has self-reported a positive travel history and determine if further action is required in addition to the monitoring of travelers from these areas conducted by Public Health.
 - iii. OESH will direct any healthcare worker who has cared for patients under investigation, as well as confirmed cases of EVD, to
 - a. Self-monitor for early signs and symptoms of EVD including fever, severe headache, muscle pain, malaise, chest pain, sore throat, vomiting, diarrhea and rash beginning the first day of contact and continuing for 21 days after last patient contact. Self-monitoring includes:
 - i. Record temperature twice daily on the provided Temperature Monitoring Form
 - ii. Report any fever to OESH immediately by calling (204) 232-9075.
 - iii. Refrain from taking any antipyretic medication during the monitoring period if possible.
 - iv. If any signs/symptoms listed above arise self-isolate as quickly as possible and immediately notify OESH at (204) 232-9075.
 - v. OESH will immediately consult an Attending ID Specialist for any exposed person who develops fever or other symptoms within 21 days of exposure.
 - iv. OESH will interview any healthcare worker who has had exposure to a PUI or confirmed case of EVD without appropriate PPE, **OR** had a percutaneous or muco-cutaneous injury, and will immediately consult an Attending ID specialist to discuss the setting and information gathered regarding the HCW exposure. Dependent upon the severity of the exposure as determined by this information, the ID specialist will recommend one or a combination of the following:
 - a. Self-monitor as outlined above
 - b. Direct active monitor for early signs and symptoms of EVD including fever, severe headache, muscle pain, malaise, chest pain, sore throat, vomiting, diarrhea and rash beginning the first day of contact and continuing for 21 days after last patient contact. Direct active monitoring includes:
 - i. Direct observation by the Occupational Health Nurse (OHN) of the staff member at least once a day to review possible early signs and symptoms and temperature check.
 - ii. Second follow up per day done by telephone.
 - iii. Recording of temperatures twice daily on the Temperature Monitoring Form, which is kept on the Occupational Health file.
 - iv. Reporting of any fever to OESH immediately by calling (204) 232-9075.
 - v. Refraining from taking any antipyretic medication during the monitoring period if possible.
 - vi. If any signs/symptoms listed above arise self-isolate as quickly as possible and immediately notify OESH at (204) 232-9075.
 - vii. OESH will immediately consult an Attending ID specialist for any exposed person who develops fever or other symptoms within 21 days of exposure.
 - c. Restrict activities and self-isolate as determined by the Attending ID specialist and Public Health.
 - v. OESH will manage healthcare workers while asymptomatic during the self-monitoring period following the recommendations outlined in this document.
 - a. If a HCW becomes symptomatic, OESH will immediately consult an Attending ID specialist.
 - b. If the Attending ID specialist, after assessment, indicates treatment or admission is required, the processes outlined in this document will be followed.
6. Contact tracing and follow-up of family, friends, and other patients, who may have been exposed to a confirmed case of Ebola virus will be managed through Public Health.

7. Contact tracing and follow-up of co-workers who may have been exposed to a confirmed case of Ebola virus will be managed through OESH.

X. Facilities Management

1. Conduct initial assessment of airborne infection isolation rooms to ensure appropriate functioning of the room.
2. Monitor airborne infection isolation room *as required and document status of unidirectional airflow functioning.*
3. Provide ventilation-monitoring report to IP&C on a daily basis, or as required.

IV. ROLES and RESPONSIBILITIES

A. Unit/Area nurse shall IMMEDIATELY, upon consideration of a person under investigation for EVD

- i. Implement **Enhanced Droplet/Contact Precautions plus additional Infection Prevention and Control measures for EVD**
 - a. Apply the following PPE (refer to [Section IX, Putting On and Taking Off PPE](#), for directions regarding order of PPE application and removal)
 - i. Visually inspect the PPE to be worn to ensure that it is in serviceable condition, that all required PPE and supplies are available, and that the sizes selected are correct for the healthcare provider.
 - ii. Apply disposable coveralls over scrubs.
Remove disposable coveralls in a manner minimizing self-contamination prior to leaving EVD anteroom.
 - iii. Gloves (long gloves that fit securely over gown cuff without rolling over; different colours; pulled over the cuff of the gown so there is not exposed skin or clothing). Double glove. Ensure nails are no longer than 1/4" so they do not puncture gloves.
 - The 'very' extended cuff, closer-fitting BLUE nitrile gloves shall be worn as the inner glove.
 - The extended cuff GREEN nitrile gloves shall be worn as the outer glove.
 - iv. N95 Respirator:
 - Apply N95 respirator prior to entering the patient room
 - Staff must be fit tested to determine the appropriate size N95 respirator. Seal check these respirators when applied.
 - v. Procedure or Surgical Mask (Assistant PPE):
Assistant to apply a procedure or surgical masks prior to entering the anteroom
 - vi. Face protection (disposable face shields)
Note: masks with visors are not suitable; face shields should be long enough to prevent splashing underneath; eye glasses are not suitable eye protection.
 - b. Avoid AGMPs unless absolutely necessary. If AGMPs are to be performed a N95 respirator is required for all persons in attendance. Staff must be fit tested to determine the appropriate size of respirator. These respirators must be seal checked when applied.
- ii. Consult the Emergency Department/Attending Physician.
- iii. Notify Unit/Area Manager.

B. Emergency Department/Attending Physician shall

- i. Assess patient to determine if he/she fits the criteria for a person under investigation for EVD.
- ii. Consult the Attending ID Specialist on call; *consultation is mandatory for all cases.* When calling paging, indicate call is Ebola-related.
 - a. St. Boniface Hospital: call St. Boniface ID at (204) 237-2053
 - b. Children's Hospital: call Pediatric ID through HSC paging at (204) 787-2071

- c. All other sites: call HSC Attending ID through HSC paging at (204) 787-2071
- iii. Coordinate care of patient in consultation with Attending ID specialist on call

C. Unit/Area Manager/designate shall

- i. Confirm notification/consultation of the appropriate Attending ID Specialist on call service.
- ii. Notify Medical Director(s) of the Adult and/or Children's Emergency Department(s).
- iii. Notify Medical Director, Infection Prevention and Control (all sites except Child Health and St. Boniface) or Site Director, Child Health Infection Prevention and Control or Site Director, St. Boniface Infection Prevention and Control or designate if Medical/Site Directors are not available).
- iv. Notify Occupational and Environmental Safety and Health by calling 204-232-9075.
- v. Notify Administrator On Call/designate.
- vi. Notify Infection Prevention and Control Professionals (ICPs) with responsibility for the area/unit.
- vii. Ensure the Source Risk Assessment and Source Testing is completed post-blood/body fluid exposure, as per the Blood and Body Fluid Post Exposure Protocol.

D. Medical Director, Infection Prevention and Control (all sites except Child Health and St. Boniface) or Site Director, Child Health Infection Prevention and Control or Site Director, St. Boniface Infection Prevention and Control (or designate) shall

- i. Notify site Chief Medical Officer if there is a potential for patient under investigation or confirmed case(s). Decisions to implement the Hospital Incident Command System (HICS) will be communicated by site Executive.
- ii. Coordinate and direct site IP&C measures in coordination with WRHA IP&C, ensuring liaison with the hospital departments and personnel for whom the events have impact (e.g., laboratories, Diagnostic Imaging).
- iii. Discontinue Enhanced Droplet/Contact Precautions and additional IP&C practices following resolution of symptoms and case-by-case patient assessment, in consultation with the Chief Medical Officer of Health/delegate.
 - a. Precautions shall remain in place until symptoms resolve.
 - b. In every case where there is modification of precautions, written documentation in the patient health record shall justify the action.

E. Attending Infectious Diseases Specialist shall

- i. Respond to '25*' followed by the call back number in a timely manner. This code reflects EVD-related calls.
- ii. Complete a risk assessment of the patient to determine if the clinical presentation and epidemiology are consistent with EVD. If consistent, the Attending ID Specialist shall
 - a. Notify the MOH at (204) 788-8666.
 - b. Notify CPL to initiate appropriate specimen collection and testing through HSC paging at (204) 787-2071.
 - c. Notify the DSM Medical AOC at (204) 931-5253 to initiate appropriate specimen collection and testing.
 - i. Where a patient presents to a WRHA facility other than HSC and the patient is too unstable to transport, contact the DSM AOC immediately at (204) 931-5253.
 - d. Notify/liaise with the Ebola physician through HSC paging at (204) 787-2071.
 - e. Liaise with appropriate Medical/Site Infection Prevention and Control Director and ICPs.
 - f. Liaise with appropriate Manager of Occupational Health and Occupational Health Nurses if patient is also a staff member.

- F. Security Services Staff shall
 - i. Provide security during patient transport as well as on the unit if required, i.e., clear the elevator and transit corridors of all persons non-essential to the transfer of the patient prior to patient transport.
- G. Infection Prevention and Control Staff shall
 - i. Communicate with appropriate authorities, administrative personnel, department heads, and other affected personnel on an ongoing basis.
 - ii. Collaborate with appropriate Public Health departments where patient, significant others, or other contact follow-up or investigation may be required due to exposure.
 - iii. Notify any appropriate receiving facility, physician, other involved health care agencies, or health care departments of an inter-hospital patient transfer/discharge, where indicated.
 - iv. Introduce further recommendations if required on an ongoing basis in consultation with appropriate individuals.
 - v. Provide training with respect to IP&C precautions for designated individuals.
- H. Occupational and Environmental Safety and Health (OESH) shall
 - i. Assist staff with the self, or direct active monitoring process beginning the date of first exposure and continuing for 21 days after the last patient exposure.
 - ii. Contact an ID Specialist immediately if any staff who is being monitored reports any signs/symptoms.
 - iii. Promptly evaluate and care for healthcare workers exposed to blood or body fluids.
 - iv. Provide fit testing of N95 respirators.
 - v. Provide training related to self-monitoring and OESH safe work procedures for designated individuals.
- I. Ebola Site Manager shall
 - i. Oversee the overall safe and effective delivery of EVD patient care at all times.
 - ii. Maintain responsibility for all aspects of EVD management in a facility.
 - iii. Oversee implementation of administrative and engineering controls.
 - iv. Evaluate care before, during and after staff enter an isolation or treatment area.
 - v. Provide immediate corrective instruction in real-time if staff are not following recommended steps.
 - vi. Know and apply the EVD decontamination plan in event of breach in procedure.
 - vii. Monitor and evaluate supplies.
 - viii. Limit entry to room/space to only essential staff.
- J. Trained Monitor shall
 - i. Act as the dedicated individual with the sole responsibilities of guiding staff through the entire donning and doffing process; observing healthcare worker interactions in the patient environment; and logging all individuals who enter the anteroom/patient room.
 - ii. Be knowledgeable about all PPE recommended in the facility's protocol and the correct donning and doffing procedures, including disposal of used PPE.
 - iii. Provide guidance and technique recommendations to the healthcare worker(s).
 - iv. Use closed-loop communication for clarity (i.e., when giving a command, have the healthcare worker repeat the command back so there are no misunderstandings).
 - v. Guide staff through donning and doffing procedures, providing directions and immediate corrective instruction if the healthcare worker is not following the recommended steps.
 - a. Guide/read aloud to HCW, each step in putting on the PPE (use checklist). Keep staff calm and proceeding at a slow and deliberate pace.
 - b. Visually confirm and document that each step was completed correctly for PPE use

- and removal.
- c. Ensure PPE fits correctly and all skin is covered before the HCW enters patient room.
- d. During PPE removal, observe and assist with removal of specific components of PPE as indicated in the PPE checklist.
- vi. Monitor healthcare worker interactions and technique in the care environment constantly for safe practice and worker fatigue.
- vii. Know and direct the decontamination process in the event of a break in procedure.
- viii. Complete EVD Incident Log as required.
- ix. Work with healthcare workers to establish 'red flag' words so any situations can be handled by all parties involved.
- x. Provide cueing when glove changes or immersion is required while in isolation room.
- xi. Utilize communication devices as needed (e.g., intercom system, Vocera).
- xii. Not enter the patient room or anteroom.

V. National EVD Case Definitions

A person with EVD-compatible symptoms is defined as an individual presenting with fever (temperature $\geq 38.0^{\circ}\text{C}$) **OR** at least one of the following symptoms/signs:

- subjective fever
- malaise
- myalgia
- headache
- arthralgia
- fatigue
- loss of appetite
- conjunctival redness
- sore throat
- chest pain
- abdominal pain
- nausea
- vomiting
- diarrhea that can be bloody
- hemorrhage
- erythematous maculopapular rash on the trunk

Epidemiological Risk Factors:

- Individual who cared for a case of Ebola Virus Disease (EVD)
- Laboratory worker handling Ebola virus or processing body fluids from a case of EVD
- Individual who spent time in a healthcare facility where cases of EVD are being treated in a country/region with widespread and intense Ebola virus transmission
- Sexual contact with an EVD case
- Close contact in households, healthcare facilities, or community settings with a person with Ebola while the person was symptomatic - close contact is defined as being for a prolonged period of time within approximately 2 meters (6 feet) of a person with Ebola
- Contact with any human remains of a case of EVD or contact with human remains in a country/region with widespread and intense Ebola virus transmission
- Contact with bats, primates or wild animal bush meat from affected countries/regions
- A travel history to a country/region with widespread and intense Ebola virus transmission within 21 days constitutes a low risk factor

Person Under Investigation (PUI):

A person with EVD-compatible symptoms (as defined above) **AND** EVD has not been ruled out.

- A travel history to a country/region with widespread and intense EVD transmission within 21 days of symptom onset **OR** exposure to one of the epidemiological risk factors within 21 days of symptom onset
- With or without pending laboratory results for EVD

Confirmed Case:

A person with laboratory confirmation of EVD infection using at least one of the methods below:

- Isolation and identification of virus from an appropriate clinical specimen (e.g., blood, serum, tissue, urine specimens or throat secretions) (performed at the NML)
OR
- Detection of virus-specific RNA by reverse-transcriptase PCR from an appropriate clinical specimen (e.g., blood, serum, tissue) using two independent targets or two independent samples **AND** confirmed by the NML by nucleic acid testing or serology
OR
- Demonstration of virus antigen in tissue (e.g., skin, liver or spleen) by immunohistochemical or immunofluorescent techniques **AND** another test (e.g., PCR)
OR
- Demonstration of specific IgM **AND** IgG antibody by EIA, immunofluorescent assay or Western Blot by the NML or an approved WHO collaboration centre
OR
- Demonstration of a fourfold rise in IgG titre by EIA, immunofluorescent assay from an acute versus a convalescent serum sample (performed at the NML)

VI. References

1. Public Health Agency of Canada (August 2014). DRAFT interim guidance: Ebola viral disease (EVD); Infection prevention and control (IPC) measures for all settings.
2. Manitoba Health (August 2014). Ebola virus disease (EVD) infection prevention and control interim guidelines.
3. World Health Organization (August 2014). 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. Available at: <http://www.who.int/csr/resources/who-ipc-guidance-ebolafinal-09082014.pdf>
4. Pan American Health Organization/World Health Organization (August 2014). Ebola virus disease (EVD), implications of introduction in the Americas. Available at: http://www.paho.org/hq/index.php?option=com_docman&task=doc_view&qid=26416&Itemid=
5. Government of Manitoba Public Health Act (C.C.S.M. c. P210) Dead Bodies Regulation (February 17, 2009). Available at: <https://www.canlii.org/en/mb/laws/regu/man-reg-27-2009/latest/part-1/man-reg-27-2009-part-1.pdf>
6. Public Health Agency of Canada (January 2015). National case definition: Ebola virus disease.
7. Public Health Ontario (August 14, 2014). Infection prevention and control guidance for patients with suspected or confirmed Ebola virus disease (EVD) in Ontario health care settings. Available at: http://www.publichealthontario.ca/en/eRepository/EVD_IPAC_Guidance.pdf
8. Centers for Disease Control and Prevention (August 19, 2014). Interim guidance for environmental infection control in hospitals for Ebola virus. Available at: <http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html>
9. Manitoba Health (August 2014). Communicable disease management protocol: Ebola virus disease (EVD) interim protocol. Available at: <http://www.gov.mb.ca/health/publichealth/cdc/protocol/ebola.pdf>

10. Government of Manitoba. (2010). The Workplace Safety and Health Act – W210. Winnipeg: Queen’s Printer. <http://web2.gov.mb.ca/laws/statutes/ccsm/w210e.php>
11. Government of Manitoba. (2010). The Workplace Safety and Health Regulation – 217/2006. Winnipeg: Queen’s Printer. Specifically Part 6.15
http://safemanitoba.com/sites/default/files/files/2014%20WHS%20WorkPlaceSafety%20Act%20and%20Regs_web.pdf
12. CSA Standard - CAN/CSA-Z94.4-02, Selection, Use, and Care of Respirators.
13. Public Health Ontario (August 29, 2014). Infection prevention and control guidance for patients with suspected or confirmed Ebola virus disease (EVD) in Ontario health care settings. Available at: http://www.ochu.on.ca/resources/Resources/EVD_IPAC_Guidance.pdf
14. Médecins Sans Frontières (2008). Filovirus haemorrhagic fever guideline.
15. World Health Organization (August 2014). Infection prevention and control (IPC) guidance summary. Available at:
http://apps.who.int/iris/bitstream/10665/131828/1/WHO_EVD_Guidance_IPC_14.1_eng.pdf?ua=1
16. Centers for Disease Control and Prevention (October 20, 2014). Guidance on personal protective equipment to be used by healthcare workers during management of patients with Ebola virus disease in U.S. hospitals, including procedures for putting on (donning) and removing (doffing). Available at: <http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html>
17. Canadian Critical Care Society (October 28, 2014). Ebola clinical care guidelines – Report #2. Available at: <http://www.canadiancriticalcare.org/>
18. WRHA Infection Prevention and Control Program (2012). Cleaning blood and body fluid spills. Available at: http://www.wrha.mb.ca/extranet/ipc/files/manuals/acutecare/ManualHospital_Full.pdf
19. Emory Healthcare (October 2014). Emory healthcare Ebola preparedness protocols. Available at: <http://www.emoryhealthcare.org/ebola-protocol/pdf/ehc-evd-protocols.pdf>
20. Ontario Chief Medical Officer of Health (October 30, 2014). Ebola virus disease directive #1 update. Available at:
<http://www.cmlto.com/images/stories/Resources/cmoh%20directive%201%20acute%20care%20settings%20>
21. Public Health Agency of Canada (November 2014). DRAFT Interim Guidance – Infection Prevention and Control Measures for Ebola Virus Disease Environmental Management – Waste and Linen.

VIII. PUTTING ON AND TAKING OFF PPE

EQUIPMENT REQUIRED

- Fluid-resistant coveralls with attached hood and shoe/leg covers
- Long gloves (differing colours) with secure cuff x2
- N95 respirator
- Procedure/Surgical mask for Assistant
- Full face shield
- Overshoes (single use) or shoe/leg covers *if slipping hazard anticipated*
- Oxivir TB wipes

ADDITIONAL EQUIPMENT REQUIRED WHERE GROSS SOILING HAS OCCURRED

- Basin for Oxivir TB RTU solution x 3 (2 in anteroom, 1 in patient room)
 - Basins should be filled to where gloved hands can be safely immersed and carefully rubbed together without overflow or splashing
- Oxivir TB RTU solution
- Impermeable gown(s)
- Mayo stands, table or counter to support basins with solution
- Tape for marking anteroom floor (identify space for contaminated staff and assist staff)
- Walk-off mat for disinfectant

The monitor will initiate the process to set up basins of Oxivir TB solution and walk-off mat as necessary

PRE-DONNING CONSIDERATIONS

- Introduce self/assigned staff and clarify roles
- Wearing makeup is not recommended as it impairs user comfort due to facial sweat.
- Consider using the toilet before putting on the PPE.
- Drink 1–2 litres of water before putting on the PPE to prevent dehydration. Profuse sweating is unavoidable while working with PPE so this won't cause the HCW to need to use the toilet.
- Fasting is not recommended before working with PPE.
- Check PPE items before starting the donning process; look for damage and irregularities like holes and cracks, and correct sizing
- Has EVD PPE training/N95 fit test/ been completed? Have any exclusion criteria been met? (pregnant, open skin/lesions to forearms, medical conditions as determined by Occupational and Environmental Safety and Health)
- Is it necessary to enter the room?
- Establish closed loop communication: e.g., establish eye contact and verbal prompt prior to activity; hand signals; code or red flag words

Donning PPE – Outside Anteroom

Primary PPE	Key Points/Considerations	Comments	✓
Remove lanyards, watches, rings, pocket contents, and other unnecessary items/items that can dangle	<ul style="list-style-type: none"> • Staff to place with clothing in designated area 		
Pull back hair from face and neck and securely tie/pin back as required	<ul style="list-style-type: none"> • Hair to be away from face and neck and securely tied back as required 		
Perform hand hygiene (HH)	<ul style="list-style-type: none"> • Alcohol-based hand rub (ABHR) unless visibly soiled, wash if soiled 		
Visually inspect PPE	<ul style="list-style-type: none"> • Ensure is in serviceable condition • Ensure all required PPE/supplies are available • Ensure sizes selected are correct for PPE user 		
Perform HH	<ul style="list-style-type: none"> • ABHR unless visibly soiled, wash if soiled 		
Don inner set of BLUE 'very' extended cuff, closer-fitting gloves	<ul style="list-style-type: none"> • Good fit, no tears, pulled up completely 		
Don coveralls	<ul style="list-style-type: none"> • Hood up, zipped up, adhesive over zipper • Pull built-in foot cover securely over feet to avoid risk of tripping • Secure hood over head • Ensure cuffs of BLUE gloves are under the coveralls 		
<i>Don overshoes (or shoe/leg covers if overshoes not available) if slipping hazard anticipated</i>	<ul style="list-style-type: none"> • <i>Ensure secure fit to avoid risk of tripping</i> 		
<i>Don impermeable gown if gross soiling highly anticipated</i>	<ul style="list-style-type: none"> • <i>E.g., imminent delivery for labouring patient</i> • <i>Ensure gown edges overlap to completely cover clothing, front and back</i> • <i>If not covered completely, first don a gown as a housecoat; then</i> 		

	<p><i>don second gown as usual</i></p> <ul style="list-style-type: none"> • <i>Ensure cuffs of BLUE gloves are under the gown</i> 		
Don N95 respirator over hood	<ul style="list-style-type: none"> • Seal check successful while monitor observes <ul style="list-style-type: none"> - Respirator will bulge slightly if there is a good seal - If air escapes there is <u>not</u> a good seal - Adjust respirator until good seal achieved 		
Don full face shield over hood	<ul style="list-style-type: none"> • Ensure full coverage of face • Remove protective plastic coating if present 		
Don outer set of GREEN extended cuff gloves	<ul style="list-style-type: none"> • Good fit, no tears, pulled up completely • Place over cuff of coverall (or outer gown if worn) 		
Check PPE placement/integrity	<ul style="list-style-type: none"> • Monitor to check • Adjust facial protection before entering • Advise PPE user not to touch his/her face once in room 		

Assistant PPE	Key points	Comments	✓
Remove lanyards, watches, rings, pocket contents, and other unnecessary items/items that can dangle	<ul style="list-style-type: none"> Staff to place in designated area 		
Pull back hair from face and neck and securely tie/pin back as required	<ul style="list-style-type: none"> Hair to be away from face and neck and securely tied back as required 		
Perform hand hygiene (HH)	<ul style="list-style-type: none"> Alcohol-based hand rub (ABHR) unless visibly soiled, wash if soiled 		
Visually inspect PPE	<ul style="list-style-type: none"> Ensure is in serviceable condition Ensure all required PPE/supplies are available Ensure sizes selected are correct for PPE user 		
Perform HH	<ul style="list-style-type: none"> ABHR unless visibly soiled, wash if soiled 		
Don inner set of BLUE 'very' extended cuff, closer-fitting gloves	<ul style="list-style-type: none"> Good fit, no tears, pulled up completely 		
Don impermeable gown	<ul style="list-style-type: none"> Secure ties Ensure cuffs of BLUE gloves are under the gown 		
Don procedure or surgical mask	<ul style="list-style-type: none"> Shape the metal piece to the nose bridge Ensure mask is secured 		
Don full face shield	<ul style="list-style-type: none"> Ensure full coverage of face Remove protective plastic coating if present 		
Don outer set of GREEN extended cuff gloves	<ul style="list-style-type: none"> Good fit, no tears, pulled up completely Place over cuff of gown 		
Check PPE placement/integrity	<ul style="list-style-type: none"> Monitor to check Adjust facial protection before entering Advise PPE user not to touch his/her face once in the room 		

1. *FINAL CHECK PRIOR TO ENTRY OF BOTH CAREGIVERS*
2. *REINFORCE: DO NOT TOUCH FACE OR ADJUST PPE AFTER ENTRY*
3. *REINFORCE: CLOSED LOOP COMMUNICATION*

DOFFING PPE

PRIMARY INDICATES HE/SHE IS READY TO EXIT, OR MONITOR NOTES FATIGUE IN ACTIONS OF THE PRIMARY

Monitor Pre-Doffing Considerations:

- Prompt staff prior to doffing
- Remind staff not to touch their face during PPE removal
- Ensure communication is closed loop and staff are connected
- If there are multiple primary staff, one at a time exits
- Monitor to signal to primary he/she is clear to enter anteroom/doffing area prior to exiting patient room
- Assess set-up requirements for Oxivir TB RTU and basins due to gross soiling
- Assess set-up requirements for walk-off mat(s) due to gross soiling

Primary Pre-Doffing Considerations:

- Only 1 person shall exit patient room at a time
- PPE must be removed completely and the anteroom exited before the next person enters anteroom
- Monitor to signal to primary he/she is clear to enter anteroom/doffing area prior to exiting patient room

Assistant Pre-Doffing Considerations:

- Assistant can remove PPE alone; assistance from primary with untying gown may be needed
- If assistant to aide multiple individuals (i.e., one after another), new PPE required between each person being assisted
- If assistant to provide break relief and therefore become the primary, primary PPE may be worn to assist with current primary's doffing. This allows the assistant to directly enter the patient room after assisting with doffing of the current primary (rather than doffing assistant PPE, exiting anteroom, and applying primary PPE)

DOFFING – ONE PERSON AT A TIME

Immerse gloves in Oxivir TB solution/perform HH whenever possible hand contamination has occurred, at any point during PPE removal

Primary EVD PPE Doffing	Key Points	Comments	✓
Visually inspect PPE prior to exiting patient room for obvious signs of contamination	<ul style="list-style-type: none"> Look for obvious signs of contamination. If evident, wipe PPE surface(s) with Oxivir TB wipe(s) 		
<i>When required, perform glove hygiene with Oxivir TB RTU</i>	<ul style="list-style-type: none"> <i>Immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution</i> <i>No splashing</i> 		
In patient room, disinfect door handle with Oxivir TB wipe(s)	<ul style="list-style-type: none"> Wait one minute after disinfection, then exit 		
Enter anteroom space staying in the half of the room closest to the patient room (delineated with tape)	<p>Primary</p> <ul style="list-style-type: none"> Stand facing anteroom exit <i>When required, ensure contact with walk-off mat</i> <p>Monitor</p> <ul style="list-style-type: none"> Remind Primary you are there to assist Reassure Primary to use slow pace and remain focused 		
Assistant enters anteroom staying in the half of the room closest to the hallway (anteroom exit)	<ul style="list-style-type: none"> After door to patient room closes (following Primary's entrance) 		
<i>If worn, remove overshoes</i>	<ul style="list-style-type: none"> <i>Use toe to heel technique to carefully remove overshoes</i> Assistant: <i>place in no-touch waste receptacle</i> 		
Doff outer GREEN gloves	<ul style="list-style-type: none"> Glove to glove, skin to skin technique Grasp first glove at palm and remove glove Scoop fingers under cuff of remaining GREEN glove and remove it, pulling it inside-out on removal Place in no-touch waste 		

	receptacle <ul style="list-style-type: none"> • When required, immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution 		
<i>If worn, doff gown with assistance</i>	<p>Primary:</p> <ul style="list-style-type: none"> • Turn and face away from the Assistant <p>Assistant:</p> <ul style="list-style-type: none"> • Undo neck (top) and then waist (middle) ties • Grasp gown at the shoulders • Ease gown to midway down upper arm • Step to the side • When required, immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution <p>Primary:</p> <ul style="list-style-type: none"> • Turn and face Assistant • Hook fingers under opposite cuff • Pull gown over hand • Use gown covered hand to pull gown over other hand • Pull gown off without touching outside of gown • Roll up inside out • Place in no-touch waste receptacle • When required, immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution 		
<i>If double gown worn</i>	<p>To Remove Outer Gown:</p> <p>Primary</p> <ul style="list-style-type: none"> • Turn and face way from the Assistant <p>Assistant</p> <ul style="list-style-type: none"> • Undo neck (top) and then waist (middle) ties • Grasp gown at the shoulders • Ease gown to midway down upper arm 		

	<ul style="list-style-type: none"> • <i>Step to the side</i> • <i>When required, immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution</i> <p>Primary</p> <ul style="list-style-type: none"> • <i>Turn and face Assistant</i> • <i>Hook fingers under opposite cuff</i> • <i>Pull gown over hand</i> • <i>Use gown covered hand to pull gown over other hand</i> • <i>Pull gown off without touching outside of gown</i> • <i>Roll up inside out</i> • <i>Place in no-touch waste receptacle</i> • <i>When required, immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution</i> <p>To Remove Inner Gown:</p> <p>Primary</p> <ul style="list-style-type: none"> • <i>Turn and face away from the Assistant</i> <p>Assistant</p> <ul style="list-style-type: none"> • <i>Grasp second (inner) gown by the shoulders and peel it partway down upper arm</i> • <i>One sleeve at a time grasp at the cuff and remove gown rolling outside to inside</i> • <i>Place in no-touch waste receptacle</i> • <i>When required, immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution</i> 		
<p><i>If worn, doff shoe/leg covers with assistance</i></p>	<p>Primary</p> <ul style="list-style-type: none"> • <i>Follow direction of the assistant</i> <p>Assistant</p> <ul style="list-style-type: none"> • <i>Peel leg covers down by handling the outside</i> • <i>Direct primary to lift heel; assistant to remove shoe cover</i> 		

	<ul style="list-style-type: none"> • <i>Do not touch coverall</i> • <i>Place in no-touch waste receptacle</i> • <i>Repeat with other shoe/leg cover</i> • <i>When required, immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution</i> 		
Doff full face shield	<ul style="list-style-type: none"> • Face the anteroom exit • Primary to lean forward and grasp strap at the back of the head • Close eyes • Slowly remove in forward and down motion • Place in no-touch waste receptacle • <i>When required, immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution</i> 		
Doff N95 respirator	<ul style="list-style-type: none"> • Face the anteroom exit • Primary to grasp elastics at the back of the head • Close eyes • Slowly remove in a forward and down motion • Place in no-touch waste receptacle • <i>When required, immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution</i> 		
Doff coveralls with assistance	<p>Primary</p> <ul style="list-style-type: none"> • Face the Assistant • Tilt head/chin upward; keep eyes closed <p>Assistant</p> <ul style="list-style-type: none"> • Keep hands away from Primary's face • Undo adhesive • Carefully unzip to lower abdomen by pulling front of coveralls down while Primary tilts 		

	<p>head/chin upwards</p> <ul style="list-style-type: none"> • Continue to unzip • Use outside of hood to carefully uncover hood from head <ul style="list-style-type: none"> – Peel hood cover off by grasping on both sides of the head. Keep hands away from the Primary’s unprotected face • Grasp suit by the shoulders • Peel suit downwards to expose shoulders, partway down the upper arm, allowing hood to be further away from the neck • Use outside of sleeves, remove one sleeve at a time; only contact outside of coveralls • Carefully roll downward and remove leg portion similar to remove of the shoe/leg covers above; avoid contamination of scrubs • Remove coveralls • If contaminated surfaces of coveralls contact shoes during removal, wipe shoes with Oxivir TB disinfectant wipes. Ensure 1 minute contact time; allow to air dry • Place in no-touch waste receptacle • <i>When required, immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution</i> 		
<p>Doff inner BLUE gloves</p>	<ul style="list-style-type: none"> • Glove to glove; skin to skin technique • Grasp first glove at palm and remove glove • Scoop fingers under cuff of remaining BLUE glove and remove it, pulling it inside-out on removal • Place in no-touch waste receptacle • Perform hand hygiene with 		

	ABHR		
Exit Anteroom	<p>Assistant</p> <ul style="list-style-type: none"> • Turn and face the wall <p>Primary</p> <ul style="list-style-type: none"> • Primary exits anteroom. In this movement, primary unties neck then waist ties of Assistant • Perform hand hygiene with ABHR 		

A shower is recommended at the end of each shift for the comfort of the healthcare worker. Use the designated shower and bathe with soap and water.

ASSISTANT PPE DOFFING

Immerse gloves in Oxivir TB solution/perform HH whenever possible hand contamination has occurred, at any point during PPE removal

Assistant PPE Doffing	Key Points	Comments	✓
Doff outer GREEN gloves	<ul style="list-style-type: none"> • Glove to glove, skin to skin technique • Grasp first glove at palm and remove glove • Scoop fingers under cuff of remaining GREEN glove and remove it, pulling it inside-out on removal • Place in no-touch waste receptacle • <i>When required, immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution</i> <ul style="list-style-type: none"> – <i>No splashing</i> – <i>Pat dry with Oxivir TB wipe</i> 		
Doff gown	<ul style="list-style-type: none"> • Face the anteroom exit • Undo neck (top) and then waist (middle) ties if not undone by primary • Hook fingers under opposite cuff • Pull gown over hand • Use gown covered hand to pull gown over other hand • Pull gown off without touching outside of gown • Roll up inside out • Place in no-touch waste receptacle • <i>When required, immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution</i> <ul style="list-style-type: none"> – <i>No splashing</i> – <i>Pat dry with Oxivir TB wipe</i> 		
Doff full face shield	<ul style="list-style-type: none"> • Face the anteroom exit • Lean forward and grasp strap at the back of the head 		

	<ul style="list-style-type: none"> • Close eyes • Slowly remove in forward and down motion • Place in no-touch waste receptacle • <i>When required, immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution</i> <ul style="list-style-type: none"> – <i>No splashing</i> – <i>Pat dry with Oxivir TB wipe</i> 		
Doff procedure or surgical mask	<ul style="list-style-type: none"> • Face the Monitor • Close eyes • Procedure masks: <ul style="list-style-type: none"> – Remove using loops or ties behind ears/head – Do not touch front of mask • Slowly remove in a forward and down motion • Place in no-touch waste receptacle • <i>When required, immerse gloved hands into basin and carefully rub together in Oxivir TB RTU solution</i> <ul style="list-style-type: none"> – <i>No splashing</i> – <i>Pat dry with Oxivir TB wipe</i> 		
Doff inner BLUE gloves	<ul style="list-style-type: none"> • Glove to glove; skin to skin technique • Grasp first glove at palm and remove glove • Scoop fingers under cuff of remaining BLUE glove and remove it, pulling it inside-out on removal • Place in no-touch waste receptacle 		
Perform Hand Hygiene	<ul style="list-style-type: none"> • Perform hand hygiene with ABHR and exit room • Perform hand hygiene after exiting room 		

A shower is recommended at the end of each shift for the comfort of the healthcare worker. Use the designated shower and bathe with soap and water.

IX. DECONTAMINATION PROCESS: SOILED SCRUBS

If there is any evidence of soiling of scrubs:

- i. Assistant shall
 - Immediately and safely assist primary with PPE removal. Use caution to remove PPE carefully as exposure during PPE removal may result in transmission of EVD
 - Remove own PPE
 - Apply clean PPE. Double gloves may be required if gross soiling is present.
 - If primary's shoes/socks are soiled, carefully remove in the anteroom; discard and apply OR shoe covers
 - Escort primary to staff designated shower area
 - Safely cut soiled scrubs off primary
 - Instruct primary to turn away from assistant (back will face assistant)
 - Starting at bottom of scrubs top, cut straight up until top is split in half
 - Peel scrub top downwards off arms and allow it to fall to floor (an option is for monitor to roll the top into a ball)
 - Discard scissors and scrubs
 - Remove PPE in shower area prior to leaving room
 - Perform hand hygiene
- ii. Monitor shall
 - Designate HCW to prepare shower area with biomedical waste bag (red)
- iii. Primary shall
 - Thoroughly rinse the site of soiling with running water; cleanse with soap and water immediately
 - Immediately report the incident to OESH by calling (204) 232-9075

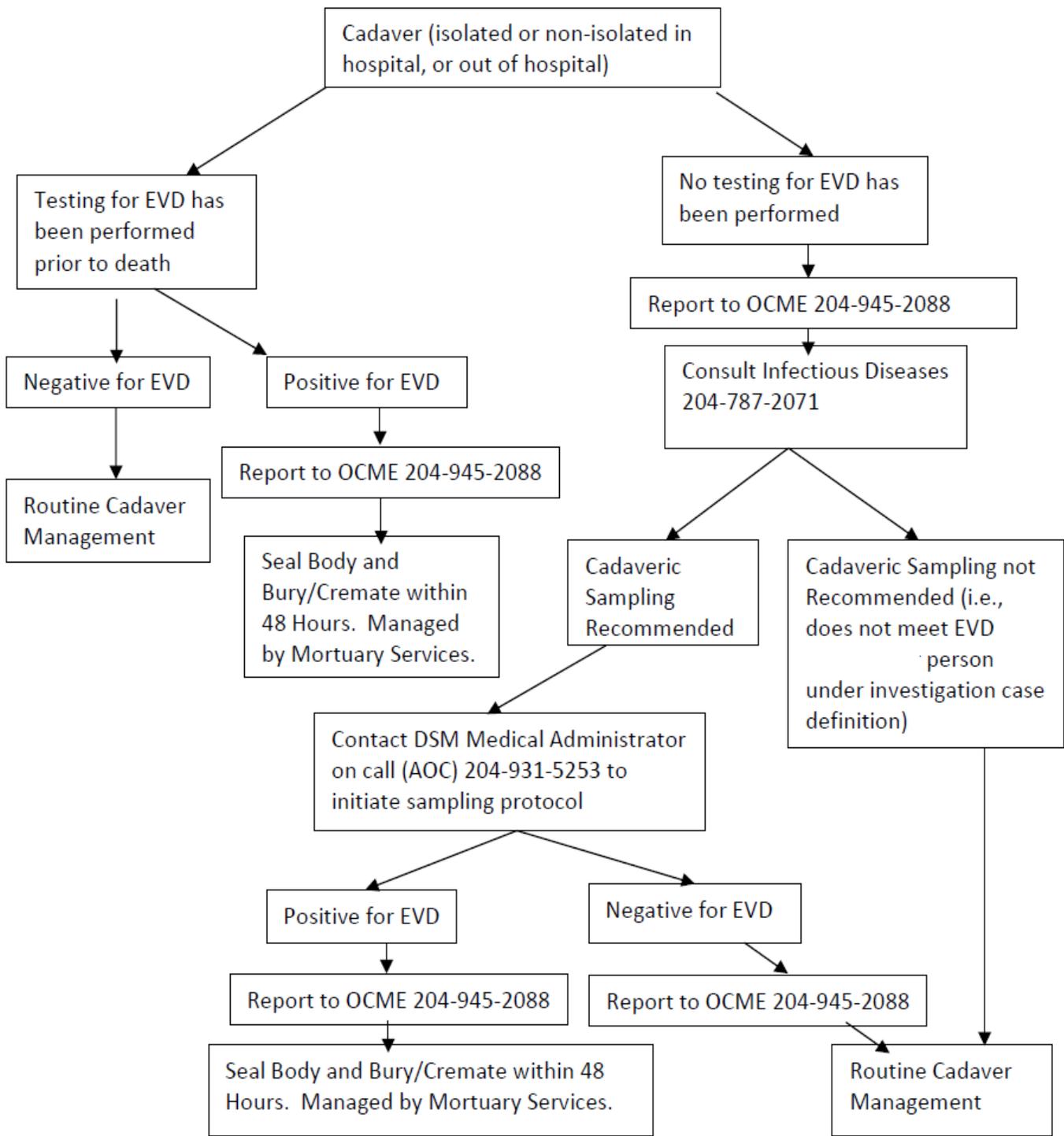
If evidence of soiling of hair is observed:

- Follow steps outlined above
- Consider goggles to protect eyes
- Wash hair with head tilted back
- Keep mouth and eyes closed

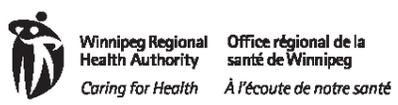
4. OESH shall

- Facilitate medical evaluation of the primary person including for other potential exposures (e.g., HIV, HCV) and provide follow-up care as required, including fever monitoring, twice daily for 21 days after the incident
- Immediately consult an Attending ID Specialist for any exposed person who develops fever within 21 days of exposure

X. PROCESS FLOW FOR PUI OR CONFIRMED EVD BODY



XI. EVD INCIDENT LOG



EBOLA VIRUS DISEASE INCIDENT LOG

Room Number: _____

Date	First Name	Last Name	Department	Contact Number
D D M M Y Y Y Y				
Incident Type and Description				
Corrective Action(s)				
Incident Type and Description				
Corrective Action(s)				
Incident Type and Description				
Corrective Action(s)				
Incident Type and Description				
Corrective Action(s)				
Incident Type and Description				
Corrective Action(s)				
Incident Type and Description				
Corrective Action(s)				
Incident Type and Description				
Corrective Action(s)				

XII. SIZING RECOMMENDATIONS FOR COVERALLS

- Coveralls that are easily removed reduce the risk of contamination. Therefore, coveralls should be appropriately sized so that excessive tugging or pulling does not occur during their removal
- When height/weight are borderline or lie within two size ranges, choose the larger size
- After choosing the estimated coverall size on the sizing chart, take the time to try this size on in the demonstration coveralls to ensure an appropriate fit
- The sizing charts are meant to give you a starting point when choosing a size. You may decide to go up or down a size depending on your body type/size. The most reliable way to determine the correct size is to test for an appropriate fit

To Test for an Appropriate Fit:

- Request the help of an assistant
- Don coveralls with the hood up and the zipper pulled all the way to the top
- Tilt head back and have assistant unzip zipper. There should be no tightness through the length of the coverall.
- Turn your back to assistant. Tilt head back and drop arms to sides. Have assistant remove hood. There should be no excess of tugging to remove hood.
- Maintaining same position, have assistant lower coveralls off of your shoulders. Assistant should be able to gently lower coveralls with no excess of tugging or pulling.
- Progress with doffing process for removing coveralls. Booties should not be overly tight or require an excess of tugging or pulling to remove.

Dupont Tychem QC Footed Coveralls

	Height*	Weight*	Estimated Coverall Size
	5'– 5'7"	125-160 lbs	Large
	5'5"–5'10"	140-200 lbs	XL
	5'9"–6'	180-230 lbs	3XL
	6'2" – 6'5"	230-260 lbs	4XL

**If height/weight is borderline or falls between two sizes, choose the larger size.
Note that with Dupont Coveralls shoe size should not be an issue.*

Lakeland Saranex Coated Chemmax 2 Footed Coveralls

	Height*	Weight*	Shoe Size	Estimated Coverall Size
	5' – 5'7"	125-160 lbs		XL
	5'5" -5'10"	140-200 lbs	Fits male shoe size <8	2XL
	5'7" -6'2"	150-220 lbs	Fits male shoe size ≤ 10	3XL

**If height/weight is borderline or falls between two sizes, choose the larger size*

Kimberly Clark KleenGuard A60 Non-Footed Coveralls

	Height*	Weight*	Estimated Coverall Size
	<5'	<110 lbs	M
	<5'-5'2"	100-120 lbs	L
	5' – 5'4"	115-140 lbs	XL
	5'2" – 5'7"	125-160 lbs	2XL
	5'3"- 5'8"	150-175 lbs	3XL
	5'3"-5'8"	175-220 lbs	4XL
5'3- 6'0	200-250 lbs	5XL	

**If height/weight is borderline or falls between two sizes, choose the larger size*