PICNet
PROVINCIAL INFECTION CONTROL NETWORK OF BRITISH COLUMBIA
A program of the Provincial Health Services Authority

BRITISH COLUMBIA | Office of the Provincial Health Officer

Provincial Recommendations for Environmental Services, Biohazardous Waste Management, and Food and Linen Management for High Threat Pathogens

June 18, 2026

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Acknowledgement

This document was developed by the Provincial Infection Control Network of British Columbia (PICNet) in collaboration with the Infection Prevention and Control (IPC) High Threat Pathogens Sub-Working Group which includes members from IPC programs across all health authorities, the BC Biocontainment Team, and the Ministry of Health. Review and/or approval was provided by the following committees, organizations, and working groups:

- Provincial Environmental Services Tech Team (Provincial EVS Working Group)
- Provincial Infection Prevention and Control/Workplace Health & Safety COVID-19 Working Group
- Provincial Infection Prevention and Control Steering Committee
- Office of the Provincial Health Officer

Introduction

This document provides guidance for personnel (i.e., environmental services workers, health care workers (HCWs), contractors) responsible for environmental cleaning, disinfection, and waste management (including liquid waste, used personal protective equipment (PPE), food, and linen) for patients with a suspected or confirmed high threat pathogen (HTP). This guidance applies to the following settings:

- Acute care settings, including emergency departments and outpatient/ambulatory care within acute care facilities,
- Urgent and primary care centers (UPCCs)
- Primary health care settings, including primary care centers/clinics, walk-in clinics, etc.
- Community settings (home or public spaces)

For the purpose of this guidance and in the context of British Columbia (BC), a HTP is defined as:

- Viral hemorrhagic fevers (VHFs) [these include Ebola, Lassa, Marburg, and Crimean Congo Hemorrhagic Fever]; or
- Unknown/newly emerging pathogens that are transmissible from human to human.

For additional information on HTPs and guidance on safe assessment and management of individuals who present with a suspected or confirmed HTP:

- In acute care settings and health authority (HA)-operated UPCCs, refer to Provincial Infection Prevention and Control Guidance for the Management of a High Threat Pathogen in Acute Care Settings.
- In primary care settings and non-HA operated UPCCs, refer to Provincial Infection Prevention and Control Guidance for the Management of a High Threat Pathogen in Community-based Clinic Settings.

While the probability of a HTP occurring in BC is low, preparedness is essential to ensure those working in these settings can safely and effectively care for patients. Preparedness relies on clear processes, appropriate personal protective equipment supply and deployment, and appropriate training for staff in the processes and equipment.

The recommendations and information contained in this document are subject to change as new evidence emerges. For supplementary information, see the BCCDC High Threat Pathogens website and Key Resources section below.

Notes:

- Where the term ***patient*** is used in this document, it also refers to clients.
- Where the term ***patient room*** is used, it also refers to examination rooms (in primary care settings) and homes or public spaces where an individual with a HTP could have been while potentially infectious.

- **Health care worker (HCW):** for the purpose of this guidance, HCW refers to individuals providing or supporting health-care services for patients with suspected or confirmed HTP. This includes, emergency service providers, physicians, nurses, laboratory personnel, respiratory therapists and other allied health professionals allowed in the **Warm Zone** or **Hot Zone**.
- **Environmental service workers (ESW):** individual responsible for environmental cleaning and disinfection, and waste management. This includes in-house as well as contracted housekeeping services. Due to the different workflow recommendations from other HCWs, ESWs have been defined separately.
- **Hot zone**: the patient room or Hot zone is the well-ventilated, controlled-access patient room where a patient with suspected or confirmed HTP resides/is located and receives treatment, e.g., a single room or airborne infection isolation room (AIIR). This is an area that is known or suspected to be contaminated and has a high risk of exposure.
- **Warm zone:** the quarantine room/area or Warm zone is a well-ventilated, controlled-access room or designated exit area, preferably adjacent to the patient/isolation room. This area is considered to have a moderate risk of exposure.
- **Cold zone:** the Cold zone or clean room/area is a designated clean space (e.g., anteroom) that is used for donning PPE, where there is low potential for contaminants to be present.

General Recommendations

The information provided in this section is relevant to VHFs and will need to be adapted for unknown or newly emerging pathogens as new information becomes available.

- Health authorities/organizations will assign responsibility and accountability for environmental cleaning, disinfection of patient care environment and waste management in rooms for patients with a suspected or confirmed HTP (**Hot zone**).
    - Cleaning and disinfection while a patient with a suspected or confirmed HTP is present in the room and undergoing care will be done by HCWs already providing care for that patient to minimize the number of HCWs entering the room.
    - ESWs will only provide services in two situations related to HTP patients:
        - Any spill of blood or body fluids, which occurs **outside** the patient room (**Hot zone**).
        - Completing the discharge or terminal clean (after initial decontamination) when a patient with a HTP has been discharged from the room.
- Ensure all HCWs responsible for environmental cleaning and waste management (including liquid waste, used PPE, food and linen) working in rooms with patients on Additional Precautions for HTPs receive additional education, hands-on training, repeated practice, and observation of ability to adhere to correct processes and procedures.
    - This includes proper handling and potential hazards of HTP-associated waste, type and quality of waste containers, PPE selection and appropriate use, and donning and doffing procedures for HTP PPE.

- Develop standard operating procedures outlining specific responsibilities and tasks related to all environmental cleaning and disinfection and waste management activities for each setting. Please refer to Recommendations for Environmental Services, Biohazardous Waste Management, and Food and Linen Management for High Threat Pathogens – Standard Operating Procedures for more information.
- Personnel involved in environmental cleaning, disinfection and waste management in spaces used for patients with a suspected or confirmed HTP must use approved PPE. This is necessary to protect skin and mucous membranes against exposure to cleaning chemicals, contamination, and splashes that occur during environmental cleaning, disinfection, and waste management activities.
    - Develop and implement a monitoring and documentation system to ensure donning and doffing of PPE is done safely, using a Trained Observer and a Doffing Assistant.
    - Refer to Provincial Infection Prevention and Control Guidance for the Management of a High Threat Pathogen in Acute Care Settings for more information on PPE recommendations, role of the Trained Observer and Doffing Assistant, and steps to take following exposures or PPE breaches (potential or known).
- Remove all non-essential equipment and furniture from the room prior to moving patient with suspected or confirmed HTP into a private room/designated assessment area.
- Each site must have a designated area for holding infectious/biohazardous waste generated by a patient with suspected or confirmed HTP. The area must be locked and in a secure place.
- Ensure adequate supplies of biohazard waste bags and containers, hand hygiene products, cleaning supplies and disinfectants, and PPE are available.

Pre-Event Planning

Health authorities should plan for:

- Isolating and securing a contaminated space(s) to ensure no people or animals enter it. Securing the space can be done by local law enforcement, security resources or others.
- Appropriate communications.
- The use of statutory powers of the *Public Health Act* if non-compliance with public health measures is likely.
- For health authority settings, including **acute care settings**, the provincial contract for biomedical waste removal is with Daniels.

In **community and primary care settings**, an Environmental Services Provider will need to be deployed as early as possible to clean and transport waste collected after the clean-up of a patient with confirmed HTP, to their facility to incinerate or autoclave to make it non-infectious.

- The Service Provider shall comply with all applicable federal, provincial, and local laws, regulations, and guidelines related to biohazard cleaning, including but not limited to:
    - The recommendations outlined in this guidance document, as applicable to the setting.
    - **Occupational Health and Safety Regulations**: The Service Provider shall adhere to WorkSafeBC regulations, including those related to the handling of hazardous materials and the use of PPE as outlined in the Occupational Health and Safety Regulation (OHSR).

- **Environmental Management Act (EMA)**: The Service Provider shall comply with the EMA and the Hazardous Waste Regulation (HWR), which govern the proper handling, transportation, and disposal of hazardous waste in British Columbia.
- **Canadian Biosafety Standards and Guidelines**: The Service Provider shall follow the Canadian Biosafety Standards and Guidelines for the safe handling and disposal of biohazardous materials[2].
- **Training and Certification**: The Service Provider certifies that all personnel involved in biohazard cleaning are properly trained and certified in accordance with WorkSafeBC and other relevant regulatory requirements.
- **Documentation and Reporting**: The Service Provider shall maintain accurate records of all biohazard cleaning activities, including waste disposal manifests, training records, and incident reports, and shall provide such documentation to the Client upon request.
- **Personal Protective Equipment (PPE)**: The Service Provider shall ensure that all personnel use appropriate PPE, such as gloves, gowns, masks, and eye protection, as required by WorkSafeBC and other relevant regulations.
- **Emergency Procedures**: The Service Provider shall have established emergency procedures in place for handling accidental exposures, spills, and other incidents involving biohazardous materials, and shall ensure that all personnel are trained in these procedures.

Recommendations for Patient Room Set-up in Acute Care Settings

Implement the following measures after a risk assessment of the likelihood of the patient having a HTP has been completed to help direct the next steps. Clean and disinfect as per usual protocol if the patient does not meet the case definition for suspected or confirmed HTP.

- For each patient with suspected or confirmed HTP, special safeguards must be taken with respect to setting up the patient room to effectively manage the patient on HTP precautions and prevent the transmission of disease.
- Advanced planning is required to identify and/or modify areas to meet the requirements outlined below and should be part of the organizational risk assessment. Refer to Provincial Infection Prevention and Control Guidance for the Management of a High Threat Pathogen in Acute Care Settings for more information on organizational risk assessments.
- Ideally, each room will have two doorways – one to be used for clean entry and the other to be used for soiled exit.

Cold Zone

- The **Cold zone or clean room/area** is a designated clean space where there is low potential for contaminants to be present.
    - This area is used as the designated PPE donning area (e.g., anteroom) and is the area from where the Trained Observer will be located to monitor and document donning and doffing of PPE (doffing is occurring in the quarantine area only).
    - Clean PPE will be stored in this room/area. Regular hospital waste receptacles will be used for waste generated in this room.

Warm Zone

- The **quarantine room/area or Warm zone** is a well-ventilated, controlled-access room or designated exit area, preferably adjacent to the patient/isolation room.
    - This area is used as the designated PPE doffing area and may be used for quarantine or transfer of contaminated equipment (used in the patient room) as part of the cleaning and disinfection process, if required. This area is considered to have a moderate risk of exposure.
    - Ideally this space will include a window and an intercom, so the trained observer can observe from outside the room. If this is not possible the space should be large enough for the trained observer to maintain a reasonable distance from the HCW or ESW doffing PPE.
    - Where possible, the room or space chosen should be free of distractions and noise to allow for complete focus on the PPE doffing process.

- The exit doorway is only to be used for exiting the patient room. Entry to the patient room is only through the clean zone.
- It is recognized that some facilities/settings do not have patient rooms with two doors, or with anterooms.
- In these situations, facilities will work with Facilities and Maintenance and others (i.e., IPC, WHS), as required, to develop modified structures which meet the intent of the guidelines for effectively isolating the patient and preventing transmission of disease. For example, this can be accomplished by using two adjacent patient rooms for the designated clean and soiled spaces, or by constructing temporary walls to create such spaces.

Hot Zone

- The **Patient Room or Hot Zone** is the well-ventilated, controlled-access patient room where a patient with suspected or confirmed HTP resides/is located and receives treatment, e.g., a single room or airborne infection isolation room (AIIR). This is an area that is known or suspected to be contaminated and has a high risk of exposure.
- Once the designated clean and soiled areas outside the patient room have been prepared, remove all unnecessary equipment and furniture (including curtains) prior to placing the patient in the room. Implement the following:

    - Use single-use, disposable equipment whenever possible.
        - If not possible, reusable equipment must be dedicated and not used on other patients.
        - For information on cleaning and disinfection of medical equipment used in the care of patients with a suspected or confirmed HTP, see Recommendations for Cleaning and Disinfection of Medical Equipment for High Threat Pathogens.
    - Use only a mattress and pillow with impervious covering that fluids cannot get through. Seams should also be impervious to prevent fluid ingress into the inner materials of pillows and mattress.
        - If there is any risk that fluids could penetrate, dispose of the mattress and pillow upon patient discharge.
    - Place patients with suspected or confirmed HTP in rooms with flooring that is easily cleaned and disinfected.

- Remove all damaged or upholstered furniture and decorative curtains from patient rooms before use. Use materials that are tolerant of hospital/heath care grade cleaning and disinfection.
- If a dedicated bathroom is not available, provide a bedside commode or urinal. Ensure personal hygiene supplies are available for patient use (e.g., hand hygiene, personal cleansing wipes).
- For information on cleaning and disinfection of medical equipment, refer to Provincial Recommendations for Cleaning and Disinfection of Medical Equipment for High Threat Pathogens for more information.
- For information on how to optimize ventilation, refer to Indoor Ventilation Resources on PICNet's webpage.

Recommendations for Initial Steps in Community and Primary Care Settings

The medical health officer (MHO) will perform a risk assessment of the likelihood of the person having a HTP to help direct the next steps. Clean and disinfect as per usual protocol if the person does not meet the case definition for suspected or confirmed HTP.

Continue with the following steps, if the person meets the case definition for suspected or confirmed HTP:

- Where possible, isolate the area and do not allow family members and public to use areas that are contaminated or potentially contaminated with blood and/or body fluids of a person with a suspected HTP (e.g., living space, washrooms, and patient examination rooms). Secure the area until the test results confirm or exclude HTP.
- If this is difficult to achieve or out of proportion to the amount of contamination or potential contamination (e.g., single exam room in a clinic, a highly used public space, small amount of material), follow the direction of the MHO.
- If HTP is likely, cleaning and disinfection follows the protocol described in section below on Recommendations for Environmental Cleaning and Disinfection.
- If HTP is unlikely or there is small amount of contamination/potential contamination, clean and disinfect as per regular protocol for management of blood and body fluid spills.

Site preparation

- Waste management kits (including red bags, labels and blue drums) are available in each health authority. Bags, puncture proof containers and plastic wraps will be needed to collect waste. Contact Daniels if your site requires more supplies.
- Set up a **clean room/area or Cold zone** outside the contaminated area. This is a designated clean space where there is low potential for contaminants to be present. This is an admission-restricted clean zone. This area is where clean PPE will be stored, and the donning of PPE occurs under the supervision of a Trained Observer.
    - The Trained Observer will monitor and document donning of PPE and provide instruction on use of PPE when required (to avoid breaches).
    - Regular waste receptacles will be used for waste generated in this room.

- Entry to the contaminated area is only through the clean room/area.

- Set up a **quarantine room/area or Warm zone** right outside the contaminated area. This is a designated, controlled-access decontamination or exit space where the doffing of PPE occurs under the supervision of a Trained Observer.
  - The Trained Observer will monitor and document doffing of PPE and provide instruction on use of PPE when required.
  - This area may be used for quarantine or transfer of contaminated equipment (used in the contaminated area) as part of the cleaning and disinfection process, if required.
  - Empty clean/unused drums can be stored here.
  - Exit from the contaminated area is only through the quarantine room/area.
- Set up a locked, segregated holding area with restricted access for bins containing waste prior to their transport offsite. Ensure the area is clearly marked with a biohazard symbol and kept separate from other storage areas.

Key PPE Recommendations

- Follow **Additional Precautions for HTPs** for patients with suspected or confirmed HTP.
- Only essential HCWs with appropriate PPE and training should enter the patient room (**Hot zone**).
- Develop and implement a monitoring system to ensure donning and doffing of PPE is carried out safely, using a Trained Observer and Doffing Assistant.
  - Refer to Provincial Infection Prevention and Control Guidance for the Management of a High Threat Pathogen in Acute Care Settings for more information on PPE recommendations, role of the Trained Observer and Doffing Assistant, and steps to take following exposures or PPE breaches (potential or known).
- To protect skin and mucous membranes against exposure to cleaning chemicals, contamination, and splashes or spatters that occur during environmental cleaning and disinfection and waste management activities, implement the following:
  - HCWs (in acute care settings) or contracted personnel (in primary care and community settings) involved in environmental cleaning, disinfection, and waste management in the patient room (or **Hot zone**) for patients with a suspected or confirmed HTP, must use PPE approved for use in this area. This includes, at minimum, wearing the same level of protection as HCWs providing care to the patient and PPE.
  - HCWs or ESWs (in acute care settings) or contracted personnel (in primary care and community settings) involved in environmental cleaning, disinfection, and waste management activities in the quarantine room/area (**Warm zone**) must use PPE approved for use in this area. ESW working in this area must wear the same PPE as the Doffing Assistant.
  - ESW (in acute care settings) or contracted personnel (in primary care and community settings) involved in environmental cleaning, disinfection, and waste management activities in the clean room/area (**Cold zone**) must use PPE approved for use in this area (if indicated) based on the tasks being performed.
- If reusable heavy-duty gloves are used for cleaning and disinfecting, they should be cleaned, disinfected and kept in the room or anteroom[3].

- Dedicate environmental housekeeping equipment (e.g., mop handle and head, mop bucket,wipes) to the patient room for the duration of the patient's stay.
    - Use disposable equipment where possible and dispose in leak-proof bags. Use a rigid waste receptacle designed to support the bag to help minimize contamination of the bag's exterior[3].
    - Discard all housekeeping products and equipment in biohazardous waste container when the patient is discharged. See section below on Additional precautions discharge clean and disinfection for more information.
    - In community settings, discard all disposable items (e.g., plastic bags) and items of little or no value (e.g., magazines) that cannot be cleaned. See section on Recommendations for Infectious/Biohazardous Waste Management for more information.
- Ensure cleaning and disinfectant supplies are readily available close to the point of use.
- Use a disinfectant with a Health Canada issued Drug Identification Number (DIN) with broad spectrum virucidal and/or specific HTP (if pathogen is known) claims.
    - Follow the manufacturer's instructions for use (MIFU) regarding dilution and contact time.
- Use two-step process for cleaning and disinfection.
    - Clean all surfaces from clean to dirty areas, to remove dirt, organic material, and debris and prepare equipment and surfaces for disinfection to be effective in killing microorganisms.
    - When organic matter is present (e.g., blood, sputum, vomitus), it must be removed and surfaces cleaned with a detergent or cleaning agent prior to disinfection.
    - Use firm contact and friction during cleaning to reduce the numbers of microorganisms.
    - Ensure the disinfectant remains wet on the surface for the specified contact time. Reapply disinfectant if needed to achieve the required contact time.
- Change cleaning and disinfection cloths frequently to prevent spreading microorganisms from surface to surface. Use cleaning cloths, wipes, etc., only once and after use, discard all cleaning items immediately into biohazardous waste container.
    - Do not re-dip soiled/used cloths into cleaning/disinfectant solution.
    - Never use the same surface of a cloth to wipe more than one object.
    - Use separate cloths for clean and dirty tasks.
- Ensure adequate ventilation when disinfecting areas with chlorine-based products or other disinfectants as required by the Safety Data Sheet (i.e., open windows where necessary).

Additional precautions patient room daily cleaning and disinfection in acute care settings

- In the patient room (**Hot zone**), the following are to be done by HCWs already caring for the patient:
    - The minimum standard for environmental cleaning and disinfection of the patient room is once a day, with a second daily clean of high touch surfaces (e.g., doorknobs and surfaces in the patient's bathroom) while the patient is admitted.
    - Any spills or contamination with blood or body fluids should be cleaned up as soon as they occur.
- In the quarantine room/area (**Warm zone**), the following are to be done by HCWs allowed in this area

(e.g., Doffing assistant):

- The Doffing Assistant participates in cleaning and disinfection, and management of waste removal and reusable equipment in the Warm zone.
- Routine cleaning and disinfection of the PPE doffing area in the quarantine room/area should be performed at least once a day, after doffing of visibly contaminated PPE and if the area becomes visibly soiled or contaminated by other means (e.g., removal of waste).

Additional precautions discharge clean and disinfection in acute and primary care settings

To be conducted by ESW when Additional Precautions for HTPs are discontinued and/or a patient with confirmed HTP (or unknown HTP status) leaves the room (i.e., is discharged or moved/transferred). Also referred to as terminal clean.

1. Discard all disposable supplies (unused/opened/used) and everything in the room that cannot be cleaned and disinfected in a designated biohazardous waste container.
2. Discard all housekeeping products and equipment in biohazardous waste container when the additional precautions discharge clean and disinfection is completed.
3. Environmental services and IPC must perform a visual inspection of the room after the additional precautions discharge clean and disinfection, before it is used for another patient.
4. Equipment used in the patient room is not to be moved from the room or used for another patient, until it has been cleaned and disinfected as follows:
   a) For patients with confirmed (positive) HTP, cleaning and disinfection must be conducted according to an approved process. Please see Recommendations for Cleaning and Disinfection of Medical Equipment for High Threat Pathogen Isolation Rooms for more information.
   b) For patients that test negative for HTP, cleaning and disinfection must be done according to usual protocols.

Management of Environmental Contamination Due to Blood and Body Fluids Spills

- Only trained HCWs (hot zone) and ESWs (warm and cold zones) in acute care settings, or contracted personnel in primary care and community settings, who are responsible for environmental cleaning should be involved in the clean up of on-site spills containing HTP-associated human fluids (blood, emesis, urine, stool, etc.). The spills should be contained, cleaned and the area disinfected immediately.
- Spill kits should be made available for use in designated assessment/care areas. These include paper towels, solidifying agents, cleaning and virucidal disinfectant supplies, dustpan/scoop (for large spill), yellow or red biohazardous waste bags with zip ties.
- Use cleaning cloths, wipes, etc., only once and after use, discard all cleaning items immediately into biohazardous waste container.
- The following measures should be followed:
  - HCWs must use HTP approved PPE. Please see Key PPE Recommendations section above for

more information.
- Ensure affected area is blocked off from access to other individuals until cleaning and disinfection is completed.
- Use absorbent materials, such as disposable paper towels to cover the spill so it does not spread further. Remove and place all used absorbent and organic soil into biohazardous waste bin.
- Clean the area with a cleaning agent, followed by disinfection.
- Follow manufacturer's instructions and contact time for the disinfectant to stay wet on the surface. To avoid any splashes and splatter, do not spray disinfectant onto spill and do not use a wet vacuum.
- Disinfect the floor/surface area a second time. Start at one end of the affected area and move in one direction until the whole surface has been disinfected. Do not use a circular motion.
- Allow the area to air dry, remove PPE and perform hand hygiene.

Please refer to Recommendations for Environmental Services, Biohazardous Waste Management, and Food and Linen Management for High Threat Pathogens – Standard Operating Procedures for more information and step by step instructions on management of blood or body fluid (BBF) spills.

Recommendations for Infectious/Biohazardous Waste Management

The information provided in this section is relevant to VHFs and will need to be adapted for unknown or newly emerging pathogens as new information becomes available.

VHF-associated waste is considered biohazardous (or infectious) waste and includes items such as linen and sharps contaminated with human blood and body fluids (i.e., respiratory secretions, saliva, emesis, feces, urine, dialysate/effluent) that warrants special handling and disposal as they may in certain situations present a risk of disease transmission[4].

- VHFs are categorized as Risk Group 4 agents according to Public Health Agency of Canada (PHAC)[5–8], requiring special handling and disposal of VHF-contaminated waste to prevent exposure[9].
- VHF-contaminated waste that has been appropriately incinerated or autoclaved is not infectious and does not post a health risk and is not considered to be regulated medical waste or a biohazardous material.

Ensure the following measures are in place:
- Keep records of the quantities of VHF-associated waste generated and disposed of[4,9].
- Develop and implement protocols for the containment and storage of VHF-associated waste as per organization's biohazardous materials policy, and for off-site transport in accordance with applicable legislation, including the Transport Canada's Transportation of Dangerous Goods Regulations (TDGR).

For information on management of breaches or exposures during handling or containment of waste, refer to Provincial Infection Prevention and Control Guidance for the Management of a High Threat Pathogen in

- The blue drum referred to in the following section is the container approved by Transport Canada for the transportation and disposal of EVD waste (pictured right). It is the only container accepted for HTPs.
- Any other containers must be placed inside the blue drum for disposal. Containers placed inside the drum must be leak proof and puncture resistant.

- Use the 20 litre red bucket (pictured left) for all waste in the patient room or for sites or instances where the blue drum is not immediately available.
- Once the red bucket is ¾ full, close and secure bags lining the bucket followed by the lid, wipe down the exterior of the bucket and store in the patient room. Place the red bucket with lid and place inside the blue drum.
- Use clips to attach bags to the waste containers so bags do not fall into the container when waste is added.

Drum Preparation

All drums are prepared by environmental services. Two blue drums are required for the warm zone(one for use and another on standby) if space permits.

- All drums will be lined with two red bags, which will drape over the edge of the drum.
- Two zip ties will be included for final tie off. Each red bag must be closed by zip tie independently. Tape them to the edge of the drum, underneath the drape.
- Every blue drum must have a lid and fastener clamp in the room located near the drum.

Waste Management inside the Patient Room (Hot Zone)

In acute care settings:

- Ensure the patient's room is prepared with waste management supplies and processes set up prior to patient arrival/admission to patient room.
- Remove all existing waste receptacles from the patient room. Place a sharps container in the patient room.

Place red buckets with two red bag liners for each bucket in the patient room for patient care waste. These are recommended to be used in the hot zone over using the large blue drums.

In community and primary care settings:

- Prepare supplies. Red buckets lined with two red liners should be used similarly to acute care settings. Two zip ties should be included for final tie off. Each red bag must be closed by zip tie independently.

- Not all sites will have blue drums immediately available. Keep waste in the red buckets to contain and store waste in the contaminated area until blue drums are available. Hold red buckets in the patient room until guidance is provided by the MHO based on risk assessment and confirmed results.

For all settings:

- Contain all contaminated waste, including linen, clothing, discarded paper towels and personal protective equipment in bags and puncture proof containers (if needed).
    - Discard soiled disposable items (e.g., plastic bags) and soiled items of little or no value (e.g., magazines).
    - Discard soiled items which may have value but cannot be cleaned (e.g., mattress, sofa).
- The red buckets lined with red liners will be the primary containers for all waste in the patient room. All waste products generated in this room will be discarded into these buckets , including the sealed sharps container.
    - Wrap large items that do not fit into the red buckets (e.g., mattresses) in plastic sheeting for disposal.
    - Dispose of items that are damaged or cannot be cleaned and disinfected.
- In the patient room, the red buckets are only filled to the ¾ fill mark. There will be no compacting of waste.
- Use solidifier for patient bodily fluids within collection devices, then seal and place directly into red buckets. This ensures that free fluid will not likely leak from the containers.
- When the red bucket is ¾ full, red bag liners will be closed and zip tied.
- In acute care settings, closed red buckets can either be stored in the hot zone until patient is discharged or transferred to the warm zone to be placed in a blue drum. The blue drums will remain in the warm zone until patient diagnosis is confirmed, or the patient is discharged.
    - If this is not possible, or in community/primary care settings, the blue drum should be moved immediately and directly to a designated, locked holding area with restricted access and stored as per the organization's biohazardous materials policy until test results are available that confirm whether the patient has a HTP.
    - Refer to next section below for information on moving the drum to the segregated holding area.

Waste Management Outside the Patient room (Quarantine/Exit area or Warm Zone)

- The blue drums inside the designated quarantine or exit room/area (**Warm Zone**) are the waste receptacles for the doffing of PPE and waste generated from disinfecting this drum (cloth soaker and paper towels). It can also hold waste generated by the patient or during patient care contained in closed red buckets.
- Before placing a new blue drum into the warm zone, Environmental Services will designate each drum with the ID numbers as Bin #1, Bin #2, Bin #3, etc.
    - The blue drum and lid must be labelled with the same ID number with a metallic silver permanent marker. ID numbers need to correspond with the tracking log for the drums.
- When ready for disposal/removal, the full blue drum will be retrieved by Environmental Services, requiring two HCWs/ESWs as well as a Trained Observer.

- Replace with a clean blue drum.
- Implement the following steps for removal of the blue drum:

1. Wearing the required PPE, ensure each of the two red bags liners are closed and zip tied independently, and the lid is secured.
    - The lid itself does not snap onto the drum. It is the closure device when applied that pulls the lid and drum together to create the seal.
    - The closure device must be placed right side up to allow the small secondary metal safety lock mechanism to be set. Holding the clamp fastener at nine o'clock and three o'clock, the HCW will then attach the clamp fastener and secure it.
2. Place the drum on a cloth soaker pad saturated with hospital grade disinfectant.

A cloth soaker pad that has been saturated with a hospital grade disinfectant is placed onthe floor. The blue drum is then positioned on top of the soaker pad.

A new soaker pad is used for each new bin.

3. Wipe down the outside of the drum with hospital grade disinfectant, following the manufacturer's instructions for use (MIFU) regarding contact time.
4. A second HCW/ESW (in required PPE) will retrieve the drum, wipe down outside of the drum on a second soaker pad for the second time (as close to the outside of the quarantine/exit room as feasible), observing required contact time and then transferring to a designated barrel dolly/cart.
5. Both workers will then doff their PPE in the quarantine or exit room/area (**Warm Zone**).
6. Both workers will now don clean gowns and gloves and transport the drum to the locked, restricted, segregated holding area.
7. Do not leave the drum unattended enroute to the secure segregated holding area. After delivery of the drum, both workers will doff PPE and perform hand hygiene.
8. Inform and coordinate with Daniels for the removal and transport of waste.

Designated storage area for HTP-associated waste

- Ensure this designated, locked holding area with restricted access is clearly marked with a biohazard symbol and kept separate from other storage areas.
- If the test result for HTP is ***negative***: no further special handling of the stored waste is required. Regular waste disposal process as per organization's protocol for biohazardous waste is appropriate.
- If the test result for HTP is ***positive***: stored waste containers must be packaged and transported separately off-site and disposed of in accordance with applicable legislation[1] for regulated biohazardous waste.

[1] Transportation of Dangerous Goods Regulations for packaging and transportation. Local/municipal/regional regulations and/or bylaws for disposal.

Management of waste from a patient CONFIRMED to have HTP

- Once laboratory confirmation has been received as positive for HTP, IPC will advise environmental services.
- For positive HTP waste (classified as Category A infectious substance), a "UN 2814" label and an "Incinerate Only" label must be applied to the blue drum. These labels are supplied in the waste management kit.

Management of waste from a patient confirmed to be NEGATIVE for HTP

- Once laboratory confirmation has been received as negative for HTP, IPC will advise environmental services.
- For negative HTP waste (classified as Category B biological substance), a "UN 3733" label must be attached to the blue drum.
- This waste can then be moved to the regular holding/storage area for all other biohazardous waste.

Refer to Transport Canada bulletin on shipping infectious substances for more information.

Disposal of Human Waste

- Liquid waste (e.g., urine, stool, and emesis) can be disposed of through the normal sanitary sewer system (i.e. toilets), or in accordance with municipal/regional regulations[1].
    - Where municipal regulatory restrictions exist on disposal through the normal sanitary sewer system, consider use of a solidifier for liquid waste (with bedpans - disposable or with liners, and/or disposable emesis basins/receptacle) and dispose as biohazardous waste in blue drum.
- Consider cleaning and disinfection of the toilet lid with hospital grade disinfectant before and after disposal of liquid waste. The lid can be placed down, or a pad can be used to cover the toilet bowl to prevent aerosolization.
- Human waste handling should occur in the patient room by HCWs providing care for the patient.
- Some workers[2] may come into contact with untreated sewage before it enters the wastewater treatment plant and could be at very low risk of exposure to the HTP.
    - Communication with these workers/departments should be planned in the event of patient(s) with HTP being cared for in the hospital/facility.
    - Appropriate PPE should be worn by workers handling untreated sewage from individuals with HTP.

In settings where on-site sewage disposal systems are used (i.e., septic tanks), no specific measures are needed as long as the system is adequately operating according to local regulations. Most septic systems rely on settling and pumping the tank to dispose of the waste.

- Consult the MHO for further guidance if there's concerns about an inadequately operating septic system.

[2]These workers include plumbers in hospitals that are currently treating a patient with HTP, sewer maintenance workers working on the active sewer lines serving the hospital with a patient with HTP, construction workers who repair/replace active sewer lines serving the hospital with a patient with HTP.

- Only a disposable leak and puncture proof gasket closing designated sharps container must be used in the patient room.
- Once 2/3 full, ensure the sharps container is sealed and placed directly as-is into the red bucket.

Food and Linen Management

- All food must be delivered with disposable dishes/cutlery/trays and brought into the patient room by HCWs already providing care for the patient, wearing appropriate PPE.
    - Dispose waste into the red buckets in the patient room.
- Handling and containing linen should occur in the care area by HCWs already providing care for the patient, wearing appropriate PPE.
    - Handle soiled linen with minimum agitation to avoid contamination of air, surfaces and persons.
    - If the test result for HTP is ***positive***, discard all linens and any non-fluid impermeable pillows and other items into the red buckets in the patient room.
        - Wrap large items that do not fit into the red buckets (e.g., mattresses) in plastic sheeting for disposal.
    - If the test result for HTP is ***negative***, handle linens using usual protocols.

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- Infection Prevention and Control Measures for Ebola Disease in Acute Care Settings 2023.
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- Guidance for Managers and Workers Handling Untreated Sewage from Patients with Ebola Disease in the United States.

US Environmental Protection Agency

- Emerging Viral Pathogen Guidance and Status for Antimicrobial Pesticides

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- Infection prevention and control guideline for Ebola and Marburg disease, August 2023.
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