

# Infection Control Precautions for Patients with Suspected Viral Hemorrhagic Fever/Ebola Virus Disease (EVD): Phlebotomy Orientation





# Ebola Virus Outbreak

- Largest outbreak recorded
  - >3000 cases and 1500 deaths since March, 2014
  - Affected countries:
    - Guinea, Liberia, Sierra Leone and Nigeria
- Transmission of virus by contact with infected blood or body fluids



<http://www.cdc.gov/vhf/ebola/resources/distribution-map-guinea-outbreak.html>



## Risk of EVD Low in Canada

- In patients returning from Africa with fever, the most common diagnosis is malaria
- Precautions are in place in the unlikely event that a patient is infected with Ebola given the current outbreak in Western Africa



## Patients with suspected EVD at PHC

- ED triage will be screening for high-risk patients
- Any patients meeting case definition will be immediately placed on precautions, and IPAC will be notified
- Laboratory testing will be minimized in high-risk patients
  - Needs to be approved by a laboratory physician or Medical Microbiologist on-call



# Infection Control Precautions for Suspected VHF/EVD

- Standard, contact and droplet precautions
- Recommended Personal Protective Equipment (PPE):
  - Gloves
  - Fluid impermeable gown
  - Procedure mask
  - Faceshield
  - Hair Cover (if staff have long hair)
  - \*if the patient has copious secretions, leg and boot covering will be available





# Infection Control Precautions for Suspected VHF/EVD

- Airborne precautions are only recommended for aerosol generating procedures (eg. endotracheal intubation or bronchoscopy)
- If such a procedure is performed, the number of healthcare workers in the room should be minimized
  - Collect the bloodwork before or after the procedure
  - If there is confusion, liaise with Infection Control



## Recommended Laboratory Orders

- 1 light green top (lithium heparin) tube
- 1 light blue top (citrate) tube
- 4 purple top (EDTA) tubes
- 2 sets of blood cultures
  - 2 aerobic and 2 anaerobic bottles



## Supplies for Phlebotomy

- Follow routine procedures for patients in isolation
- To prepare before entering the room:
  - 3 empty Save-a-day trays with phlebotomy supplies
  - 2 biohazard bags
  - 2 plastic leak-proof containers with screw cap (TDG container) with absorbable material in the bottom
  - Multiple disinfectant (Caviwipes) wipes to disinfect the outside of the tubes after collection





# Before Entering the Patient's Room

- Sign the contact list which will be posted outside of the room

## Infection Prevention and Control Contact List

All Staff and Visitors to Sign Upon Entry (each day)  
PLEASE PRINT CLEARLY

Please FAX to Infection Prevention and Control (68165) daily

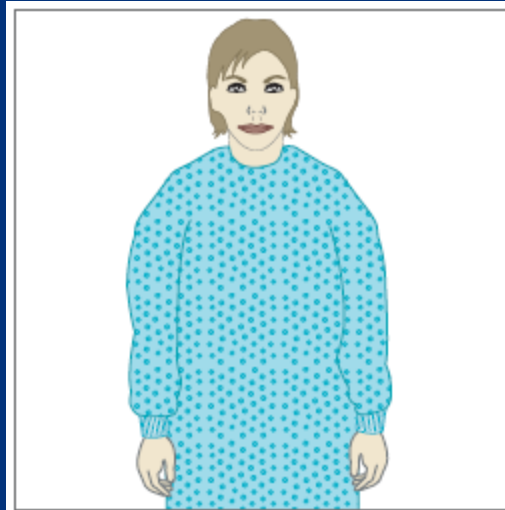
Date	Time	Last Name (Print)	First Name (Print)	Occupation/ Relationship	Home Phone	Cell Phone

# Donning of PPE



## Step 1

- Identify hazards & manage risk. Gather the necessary PPE.
- Plan where to put on & take off PPE.
- Do you have a buddy? Mirror?
- Do you know how you will deal with waste?



## Step 2

- Put on a gown.

# Donning of PPE



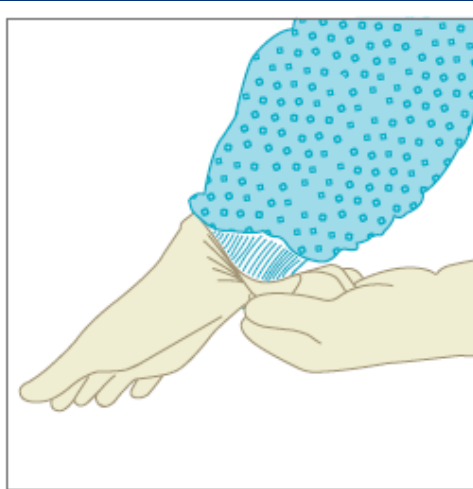
INFECTION PREVENTION AND CONTROL  
PROVIDENCE HEALTH CARE

## Step 3b

- Put on medical mask and eye protection (e.g. eye visor/goggles)



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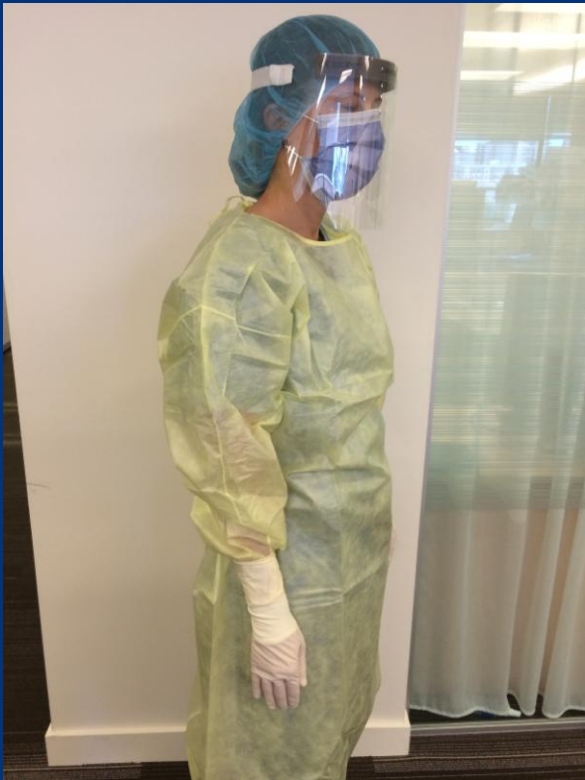


## Step 4

- Put on gloves (over cuff).



# PPE at PHC





## Ensure that gloves overlap gowns





## Phlebotomy

- Blood tubes and blood culture bottles are placed in the first Save-a-day tray.
- Venipuncture supplies and sharps must be immediately placed in the second Save-a-day tray. Discard the contents into the sharps buckets, and the tray in the biohazard bag.



## Disinfecting the Specimens

- While still in the patient room:
  - The outside of the specimens should be wiped with disinfectant wipes. Place specimens into a biohazard bag.
  - Specimens will be placed in the rigid plastic container (TDG). Screw the lid onto the TDG container and ensure that it is completely closed/sealed.
  - Wipe the outside of the TDG container with disinfectant wipes.
- Note: Gloves should not be soiled when disinfecting the specimens and TDG container





# Doffing PPE (in the patient's room)

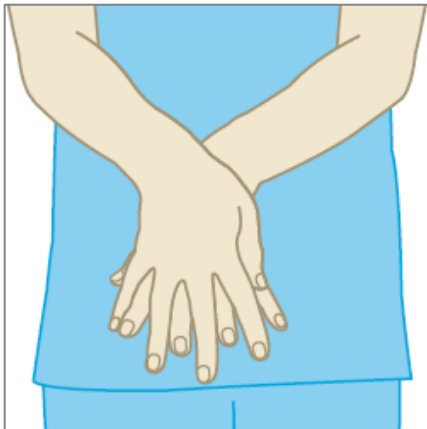


## Step 1

- Avoid contamination of self, others & the environment
- Remove the most heavily contaminated items first

### ***Remove gloves & gown***

- Peel off gown & gloves and roll inside, out
- Dispose gloves and gown safely



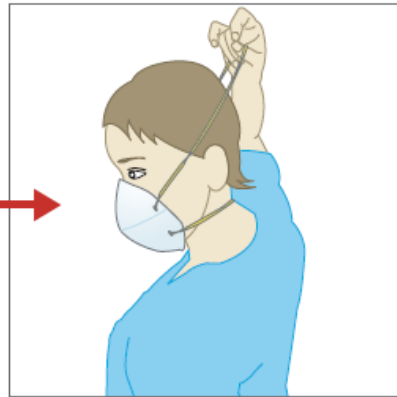
## Step 2

- Perform hand hygiene





# Doffing PPE (after leaving the patient's room)



## Step 3b

### If wearing eye protection and mask:

- Remove goggles from behind
- Put goggles in a separate container for reprocessing
- Remove mask from behind and dispose of safely



## Step 4

- Perform hand hygiene



## Transport of the Specimen to the Laboratory

- No additional PPE required
- Should be directly carried to the Microbiology TB Laboratory by the phlebotomist
- Do **NOT** use the pneumatic tube system



## If there is a spill...

- Accidental spills of potentially contaminated material should be
  - Covered with an incontinence pad saturated with 1:10 dilution of 5.25% hypochlorite (bleach)
  - Soak 15 for minutes
  - Wiped up with absorbent material soaked in 1:10 dilution of 5.25% hypochlorite solution
  - Waste should be placed in a biohazard bag.



## If a bottle drops and breaks...

- Leave the room and notify the charge nurse, laboratory supervisor and infection control for further instructions
- Negative pressure will be turned on in the patient's room
- Return after 1 hour and proceed with spills protocol



## Contact Information

- Infection Prevention and Control Office – 69357
- Medical Microbiologist on-call (through PHC Switchboard)



## Links

- PHC Infection Control Intranet (Viral Hemorrhagic Fever)
- World Health Organization. How to put on and off PPE.  
([http://www.who.int/csr/resources/publications/PPE\\_EN\\_A1sl.pdf?ua=1](http://www.who.int/csr/resources/publications/PPE_EN_A1sl.pdf?ua=1))
- CDC. Specimen Collection Guidance.  
(<http://www.cdc.gov/vhf/ebola/hcp/interim-guidance-specimen-collection-submission-patients-suspected-infection-ebola.html>)

