

## **Rutgers, The State University of New Jersey Ebola Virus Guidelines for Clinics and Healthcare Staff**

These guidelines are provided to supplement your existing clinic or health center plans and are consistent with the Centers for Disease Control and Prevention (CDC) and New Jersey Department of Health (NJDOH) guidelines on Ebola response and worker protection. As guidance from the state and federal level change, these guidelines will be revised and re-distributed. Any questions should be directed to Rutgers Environmental Health and Safety (REHS) at 848-445-2550 or at [biosafety@aps.rutgers.edu](mailto:biosafety@aps.rutgers.edu).

### **What is Ebola Virus?**

Ebola hemorrhagic fever (HF) virus is a severe, often fatal disease in humans and nonhuman primates (such as monkeys, gorillas, and chimpanzees). When infection occurs, symptoms usually begin abruptly. Please note, Ebola infection can be referred to as Ebola virus infection, EVD (Ebola virus disease) or Ebola HF.

Symptoms of Ebola infection typically include:

- Fever (Greater than 38°C or 100.4°F)
- Severe headache
- Muscle pain
- Weakness
- Diarrhea
- Vomiting
- Abdominal (stomach) pain
- Lack of appetite

Symptoms may appear anywhere from 2 to 21 days after exposure to Ebola virus, although 8-10 days is most common.

### **How is Ebola Transmitted?**

When an infection does occur in humans, the virus is spread through direct contact (through broken skin or mucous membranes) with:

- a sick person's blood or body fluids (urine, saliva, feces, vomit, and semen)
- objects (such as needles) that have been contaminated with infected body fluids
- infected animals

Healthcare workers and the family and friends in close contact with Ebola patients are at the highest risk of becoming sick as they may come in contact with infected blood or body fluids.

During outbreaks of Ebola HF, the disease can spread quickly within healthcare settings (such as a clinic or hospital). Exposure to Ebola virus can occur when appropriate protective equipment, such as masks, gowns, and gloves, is not worn or used incorrectly.

### **How should clinics pre-screen patients?**

All clinical care sites should pre-screen patients making appointments on the phone, prior to the visit. If a patient answers yes to any of the pre-screening questions, the patient should be instructed **not to come to the clinic**, remain where they are and call 9-1-1 to arrange medical treatment. The clinic should also contact the local health department with information regarding the patient.

Persons entering the clinical area need to also be pre-screened with the following questions:

- Have you traveled outside the country within the past 21 days?  
If yes, please ask them whether they traveled back from any country on the travel advisory list for Ebola. (As of 11/16/2014, CDC identified Sierra Leone, Liberia, Mali and Guinea with Ebola Outbreak)
- Have you been in direct contact with anyone with confirmed Ebola virus infection? Direct contact includes contact with bodily fluid.

If a patient answers no to both questions, the patient is not infected with the Ebola virus and no additional screening is required.

If a patient answers yes to either question, please contact the Local Health Department and further screen the patient utilizing the CDC - Identify, Isolate, Inform: Ambulatory Care Evaluation of Patients with Possible Ebola Virus Disease (Ebola) or the CDC - Identify, Isolate, Inform: Emergency Department Evaluation and Management for Patients Who Present with Possible Ebola Virus Disease (Appendix A).

### **What to do if a person with suspected Ebola virus infection enters your clinic or mobile outreach unit?**

All clinical care sites and mobile units have the potential to encounter such a patient. Patients can present with a variety of symptoms, which may include potential blood and body fluid exposure. If after screening the patient presents with possible Ebola virus disease, the following should be performed:

Isolate patient immediately: Avoid unnecessary direct contact

- Place patient in private room or area, preferably enclosed with private bathroom or covered commode.
- Avoid unnecessary direct contact.
- If direct contact is necessary, personal protective equipment (PPE) and dedicated equipment must be used to minimize transmission risk.
- Only essential personnel with designated roles should evaluate patient.
- If patient is exhibiting obvious bleeding, vomiting or copious diarrhea, then do not re-enter room until EMS personnel trained to transport Person Under Investigation for Ebola arrive.
- Do not perform phlebotomy or any other procedures unless urgently required for patient care or stabilization.
- Consult with REHS before cleaning up blood or body fluids. Any reusable equipment should not be reused until it has been appropriately cleaned and disinfected

Inform Health Department and prepare for safe transport.

- Notify Local Health Department IMMEDIATELY.
- Prepare for transfer to a hospital identified by the health department for evaluation of possible Ebola.
- Do not transfer without first notifying the health department.
- Coordinate with health department regarding:
  - Who will notify the receiving emergency department or hospital about the transfer, and
  - Arrangements for safe transport to accepting facility designated by public health officials.

PERSONS UNDER INVESTIGATION FOR EBOLA SHOULD ONLY BE SENT TO HOSPITALS AND FACILITIES SPECIFICALLY DESIGNATED BY PUBLIC HEALTH OFFICIALS.

### **How do I protect myself if a patient is suspected to have Ebola virus infection?**

Once in isolation, personnel should not enter the room if possible. If personnel is required to enter the room and provide direct patient care, the following minimum personal protective equipment (PPE) must be worn:

- Rear closing, fluid resistant or impermeable gown/coverall (e.g. Tyvek). (Gowns should come down to knees/ past knees of the health care worker)
- Double Gloves (non-latex)
- Face shield
- Surgical mask (or N-95 respirator - all respirator use requires medical clearance, fit testing and training for all personnel).

All staff wearing PPE must be trained and demonstrate proficiency in donning and doffing these materials with a buddy and/or observe utilizing a check list (Appendix B - PPE Donning/Doffing Checklist). Inadequate training may contribute to exposure risk of health care personnel. In addition, all selected PPE must be appropriately sized to fit for the individual donning and adequate supplies should be maintained to ensure protection.

Ref: PPE Selection Matrix for Occupational Exposure to Ebola Virus – OSHA  
([http://www.dol.gov/osh/pdfs/OSHA\\_FS-3761\\_PPE\\_Selection\\_Matrix\\_-\\_Ebola\\_\(11-24-14\).pdf](http://www.dol.gov/osh/pdfs/OSHA_FS-3761_PPE_Selection_Matrix_-_Ebola_(11-24-14).pdf))

### **Who is responsible for cleaning the room after a patient, determined to have suspected Ebola virus infection, has been evaluated?**

- If the patient is asymptomatic, but has traveled in areas affected by the Ebola virus as identified by the CDC, your normal infection control/ prevention cleaning procedures are sufficient for the room and surfaces.
- If the patient meets the screening criteria and is symptomatic, isolate and restrict the area(s) where the patient had been. Contact REHS to coordinate designated staff or contractor to clean the area(s).

### **How do we clean a room after someone with suspected Ebola virus infection has been isolated?**

- An U.S. Environmental Protection Agency (EPA)-registered hospital disinfectant (see Appendix C) with a label claim for a non-enveloped virus (e.g., norovirus, rotavirus, adenovirus, poliovirus) shall be used to disinfect environmental surfaces in rooms of patients with suspected or confirmed Ebola virus infection.
- The floor should be mopped, and all surfaces cleaned with an approved disinfectant.
- Personnel should not spray disinfectant onto surfaces, since this could create aerosols of any potentially infectious materials. Rags or paper towels should be saturated with disinfectant and used for cleaning. Door handles, chairs, and any other surface should also be cleaned. Disinfectant needs to be applied copiously and allowed to sit for the appropriate contact time (will differ based on disinfectant used).
- All materials used for cleaning shall be collected in a red bag and disposed as regulated medical waste.
- To minimize potential exposure and reduce the items requiring cleaning, the following is recommended;

- Discard all linens, non-fluid-impermeable pillows or mattresses, and textile privacy curtains as a regulated medical waste.
- Avoid contamination of reusable porous surfaces that cannot be made single use.
- Use only a mattress and pillow with plastic or other covering that fluids cannot penetrate.
- Do not place patients with suspected or confirmed Ebola virus infection in carpeted rooms and remove all upholstered furniture and decorative curtains from patient rooms before use.

### **How do I handle any potential waste related to Ebola?**

- ALL materials that come into contact with a patient with known or suspected Ebola virus infection must be disposed of in red bags, including, but are not limited to: thermometer probe covers, patient gowns, paper covering exam table, gloves and other PPE, and any other equipment used to assess the patient.
- The waste must be bagged immediately, the bag closed and wiped with a disinfectant (EPA approved), and separated and stored in a separate container.
- REHS must be notified immediately to assist clinical areas with appropriate medical waste transport containers for disposal.
- Waste from Ebola infected or suspect patients must be packaged according to Category A requirements for the Department of Transportation and CANNOT be co-mingled with other regulated medical waste, please contact REHS Specific Guidance).

### **What if I was exposed to someone with potential Ebola virus infection?**

All persons that have had contact with someone with suspected Ebola infection must contact their supervisor and Occupational Health Department physician immediately after transport.

#### **Faculty and Staff**

Rutgers University – New Brunswick	Occupational Health Department: 848-932-8254
Rutgers University – Camden	Occupational Health Department: 848-932-8254
Rutgers University – Newark	Occupational Health Department: 848-932-8254
RBHS - Newark	Occupational Medicine Service: 973-972-2900
RBHS - New Brunswick/Piscataway	Employee Health Services: 848-445-0123 ext. 2
RBHS - Camden/Stratford	Student and Employee Health: 856-566-6825

#### **Students**

Rutgers University – New Brunswick	Health Services: 848-932-7402
Rutgers University – Camden	Student Health Services: 856-225-6005
Rutgers University – Newark	Health Services: 973-353-5231
RBHS - Camden/Stratford	Student and Employee Health - 856-566-6825
RBHS - Newark	Student Health Services – 973-972-8219
RBHS - New Brunswick/Piscataway	Student Health – 732-235-8993

### **Where can I find additional information related to the CDC, OSHA and NJDOH guidelines on Ebola response?**

Centers for Disease Control and Prevention	<a href="http://www.cdc.gov/vhf/ebola/">http://www.cdc.gov/vhf/ebola/</a>
New Jersey Department of Health	<a href="http://www.state.nj.us/health/cd/vhf/">http://www.state.nj.us/health/cd/vhf/</a>
Directory of NJ Local Health Departments	<a href="http://localhealth.nj.gov">http://localhealth.nj.gov</a>
Occupational Safety & Health Administration	<a href="https://www.osha.gov/SLTC/ebola/">https://www.osha.gov/SLTC/ebola/</a>

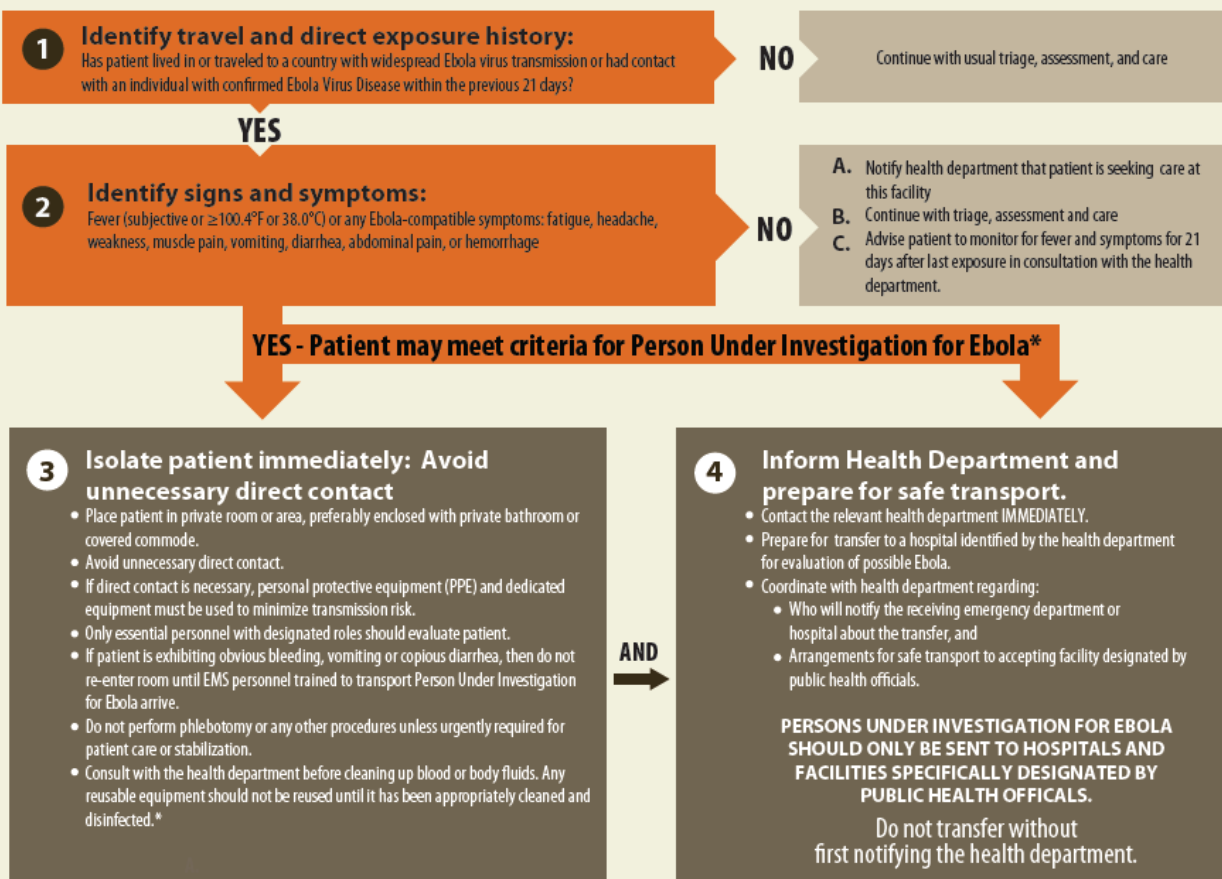
## Appendix A

### CDC - Identify, Isolate, Inform: Ambulatory Care Evaluation of Patients with Possible Ebola Virus Disease (Ebola)

## Identify, Isolate, Inform: Ambulatory Care Evaluation of Patients with Possible Ebola Virus Disease (Ebola)



The majority of febrile patients in ambulatory settings do not have Ebola Virus Disease (Ebola), and the risk posed by Ebola patients with early, limited symptoms is lower than that from a patient hospitalized with severe disease. Nevertheless, because early Ebola symptoms are similar to those seen with other febrile illnesses, triage and evaluation processes should consider and systematically assess patients for the possibility of Ebola.



#### PPE in the ambulatory care setting\*\*:

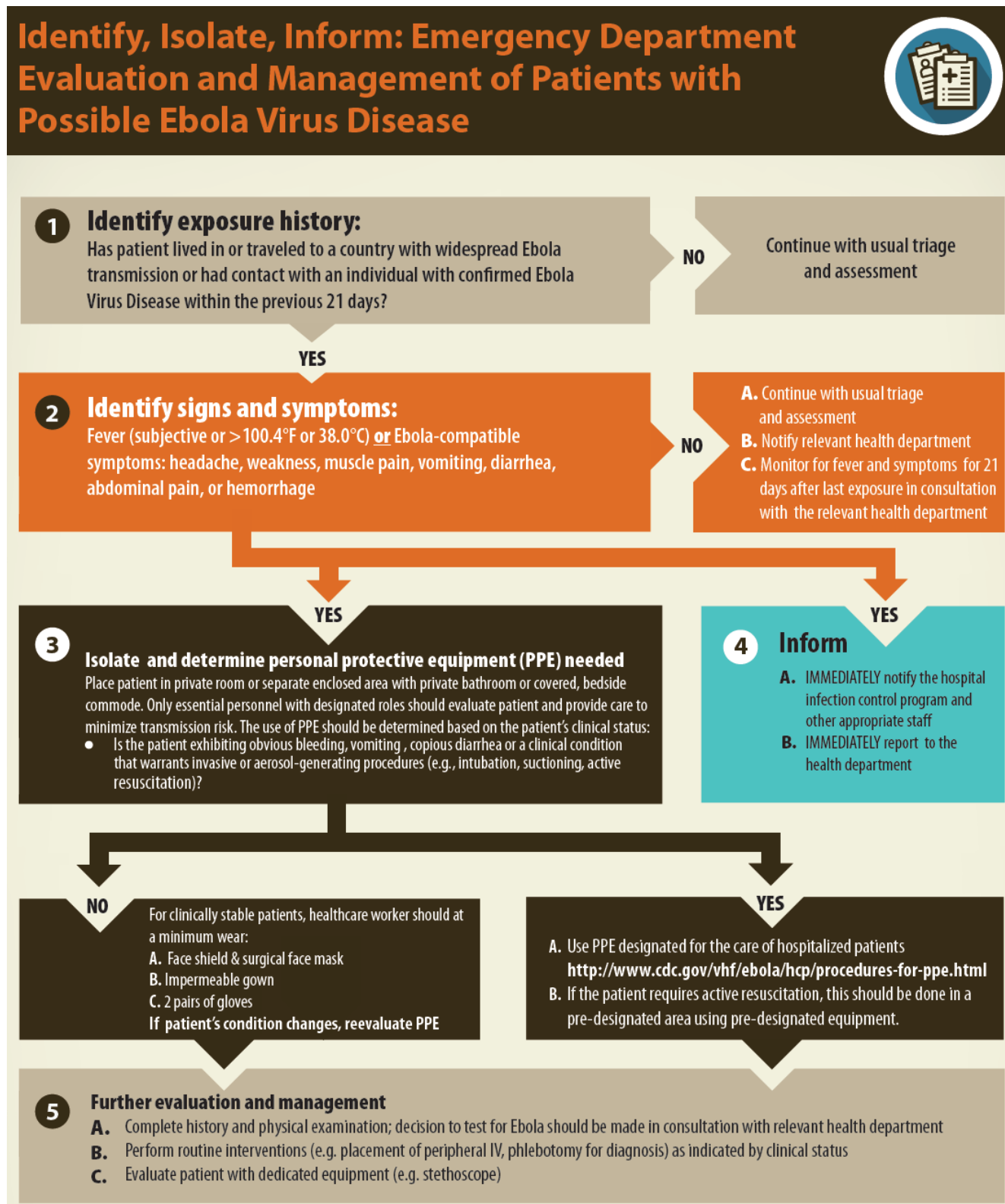
- No one should have direct contact with a Person Under Investigation for Ebola without wearing appropriate personal protective equipment (PPE).
- If PPE is available and direct patient contact necessary, a single staff member (trained in proper donning and removal of PPE) should be designated to interact with the Person Under Investigation.
- At a minimum, health care workers should use the following PPE before direct patient contact:
  - A. Face shield & surgical face mask,
  - B. Impermeable gown, and
  - C. Two pairs of gloves.
- The designated staff member should refrain from direct interaction with other staff and patients in the office until PPE has been safely removed in a designated, confined area. Examples of safe donning and removal of PPE should be reviewed: [http://www.cdc.gov/hicpac/2007IP/2007ip\\_fig.html](http://www.cdc.gov/hicpac/2007IP/2007ip_fig.html)

NOTE: Patients with exposure history and Ebola-compatible symptoms seeking care by phone should be advised to remain in place, minimize exposure of body fluids to household members or others near them, and given the phone number to notify the health department. The ambulatory care facility must also inform the health department. If the clinical situation is an emergency, the ambulatory care facility or patient should call 911 and tell EMS personnel the patient's Ebola risk factors so they can arrive at the location with the correct PPE.

\*Refer to <http://www.cdc.gov/vhf/ebola/> for the most up-to-date guidance on the Case Definition for Ebola, Environmental Infection Control and Ebola-Associated Waste Management;

\*\*Refer to <http://www.cdc.gov/hai/settings/outpatient/outpatient-care-guidelines.html> for a summary guide of infection prevention recommendations for outpatient settings.

**CDC - Identify, Isolate, Inform: Emergency Department Evaluation and Management for Patients Who Present with Possible Ebola Virus Disease**



## Appendix B

### Donning/Doffing Checklist

All selected PPE must be appropriately sized to fit for the individual donning and adequate supplies should be maintained to ensure protection

#### PPE donning procedures:

<input type="checkbox"/>	1.	Remove jewelry, phone, pens or any other item that will interfere with your PPE
<input type="checkbox"/>	2.	Wear long hair in a bun, tie it back or cover with a cap or hairnet
<input type="checkbox"/>	3.	Put on inner gloves.
<input type="checkbox"/>	4.	Put on leg coverings/booties (sit in a chair to ensure balance). (if available)
<input type="checkbox"/>	5.	Put on gown/Tyvek.
<input type="checkbox"/>	6.	Put on surgical mask or N95 respirator
<input type="checkbox"/>	7.	Put on head covering. Be certain that the hood covers all hair and skin. (if available)
<input type="checkbox"/>	8.	Put on outer gloves and tape to provide a seal
<input type="checkbox"/>	9.	Put on faceshield.
<input type="checkbox"/>	10.	Verify that all PPE has been donned and is intact.

#### PPE doffing (removal) procedures:

<input type="checkbox"/>	1.	All PPE & material utilized for the disinfecting process must be removed in an anteroom or right at the door to the patient room and immediately disposed in a regulated medical waste container.
<input type="checkbox"/>	2.	Disinfect outer gloves with disinfectant wipes.
<input type="checkbox"/>	3.	Remove leg coverings (sit down if possible in designated chair that can be disinfected) (if used)
<input type="checkbox"/>	4.	Disinfect and then remove tape and outer gloves.
<input type="checkbox"/>	5.	Disinfect inner gloves.
<input type="checkbox"/>	6.	Remove face shield. Do this by tilting head forward, grabbing the rear strap (not by the face shield) and pulling it gently over the face.
<input type="checkbox"/>	7.	Disinfect inner gloves.
<input type="checkbox"/>	8.	Remove the surgical hood gently and discard. (if used)
<input type="checkbox"/>	9.	Disinfect inner gloves.
<input type="checkbox"/>	10.	Remove gown/Tyvek.
<input type="checkbox"/>	11.	Disinfect and change inner gloves.
<input type="checkbox"/>	12.	Remove N95 or surgical mask.
<input type="checkbox"/>	13.	Disinfect and remove gloves.
<input type="checkbox"/>	14.	Wash hands with soap and water.

#### Materials Suggested:

- Rear closing, fluid resistant or impermeable gown/Tyvek. (Gowns should come down to knees/ past knees of person)
- Gloves (non-latex), nitrile preferred, available at donning and doffing areas
- Face shield
- Surgical mask (or N-95 respirator - all respirator use requires medical clearance, fit testing and training for all personnel)
- EPA-registered disinfectant with a label claim for a non-enveloped viruses
- Paper towels
- Tape
- A chair that can be disinfected
- Additional PPE may include leg covers, head covers

## **Appendix C**

### **U.S. Environmental Protection Agency registered disinfectants for a non-enveloped virus (e.g. norovirus)**

Although there are no products with specific label claims against the Ebola virus, enveloped viruses such as Ebola are susceptible to a broad range of hospital disinfectants used to disinfect hard, non-porous surfaces. In contrast, non-enveloped viruses are more resistant to disinfectants. As a precaution, selection of a disinfectant product with a higher potency than what is normally required for an enveloped virus is being recommended at this time. EPA-registered hospital disinfectants with label claims against non-enveloped viruses (e.g., norovirus, rotavirus, adenovirus, poliovirus) are broadly antiviral and capable of inactivating both enveloped and non-enveloped viruses.

See the following link for registered disinfectants meeting this requirement:

[http://www.epa.gov/oppad001/list\\_g\\_norovirus.pdf](http://www.epa.gov/oppad001/list_g_norovirus.pdf) . Please note that not all commercially available products are contained on this list and may meet these requirements by having the same active ingredients. If you have questions as to which product to use or if your current disinfectant meets this requirement, please contact REHS at (848) 445-2550 or [biosafety@aps.rutgers.edu](mailto:biosafety@aps.rutgers.edu) . The products must be used in accordance to the manufacturer's recommendations, including minimum contact time.

In addition, a 1:10 bleach solution may be used.