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## Camden County Ebola Response Recommendation for EMS/Pre Hospital Agencies

### Ebola Virus Disease (EVD) Screening for EMS:

EMS patient assessment criteria for isolation/hospital notification are likely to be:

1. Fever of greater than 38.6 degrees Celsius or 101.5 degrees Fahrenheit, and additional symptoms such as severe headache, muscle pain, vomiting, diarrhea, abdominal pain, or unexplained hemorrhage. AND
2. Travel to West Africa (Guinea, Liberia, Sierra Leone or other countries where EVD transmission has been reported by WHO) within 21 days (3 weeks) of symptom onset.

If both criteria are met:

- A. The patient should be isolated and STANDARD, CONTACT, and DROPLET precautions followed during further assessment, treatment, and transport.
- B. IMMEDIATELY report suspected Ebola case to receiving facility.

If patient is not transported (refusal, pronouncement, etc.):

- A. Inform County Health Department at 856-374-6037 or 1800-999-9045 and State Public Health Authorities 609-826-5964: and ask the patient to wait.
- B. Inform the U.S. Centers for Disease Control and Prevention (CDC), available 24/7 at 770-488-7100, or via the CDC Emergency Operations Center (EOC) or via email at [eocreport@cdc.gov](mailto:eocreport@cdc.gov).

Sources: <http://www.cdc.gov/vhf/ebola/hcp/case-definition.html>, <http://www.bt.cdc.gov/han/han00364.asp>, <http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html>

### Principles of PPE

Healthcare workers must understand the following basic principles to ensure safe and effective PPE use, which include that no skin may be exposed while working in PPE:

- Donning
  - PPE must be donned correctly in proper order before entry into the patient care area and not be later modified while in the patient care area. The donning activities must be directly observed by a trained observer.
- During Patient Care
  - PPE must remain in place and be worn correctly for the duration of exposure to potentially contaminated areas. PPE should not be adjusted during patient care.
  - Healthcare workers should perform frequent disinfection of gloved hands using an ABHR, particularly after handling body fluids.

- If during patient care a partial or total breach in PPE (e.g., gloves separate from sleeves leaving exposed skin, a tear develops in an outer glove, a needle stick) occurs, the healthcare worker must move immediately to the doffing area to assess the exposure. Implement the facility exposure plan, if indicated by assessment.
- Doffing
  - The removal of used PPE is a high-risk process that requires a structured procedure, a trained observer, and a designated area for removal to ensure protection
  - PPE must be removed slowly and deliberately in the correct sequence to reduce the possibility of self-contamination or other exposure to Ebola virus
  - A stepwise process should be developed and used during training and daily practice

### **Use of Personal protective equipment (PPE)**

Use of standard, contact, and droplet precautions is sufficient for most situations when treating a patient with a suspected case of Ebola as defined above. EMS personnel should wear:

- Gloves
- Gown (fluid resistant or impermeable)
- Eye protection (goggles or face shield that fully covers the front and sides of the face)
- Facemask
- Additional PPE might be required in certain situations (e.g., large amounts of blood and body fluids present in the environment), including but not limited to double gloving, disposable shoe covers, and leg coverings.

### **Training on Correct Use of PPE**

Healthcare workers should be required to demonstrate competency in the use of PPE, including donning and doffing while being observed by a trained observer, before working with Ebola patients. In addition, during practice, healthcare workers and their trainers should assess their proficiency and comfort with performing required duties while wearing PPE. Training should be available in formats accessible to individuals with disabilities or limited English proficiency. Target training to the educational level of the intended audience.

### **Use of a Trained Observer**

Because the sequence and actions involved in each donning and doffing step are critical to avoiding exposure, a trained observer will read aloud to the healthcare worker each step in the procedure checklist and visually confirm and document that the step has been completed correctly. The trained observer is a dedicated

individual with the sole responsibility of ensuring adherence to the entire donning and doffing process. The trained observer will be knowledgeable about all PPE recommended in the facility's protocol and the correct donning and doffing procedures, including disposal of used PPE, and will be qualified to provide guidance and technique recommendations to the healthcare worker. The trained observer will monitor and document successful donning and doffing procedures, providing immediate corrective instruction if the healthcare worker is not following the recommended steps. The trained observer should know the exposure management plan in the event of an unintentional break in procedure.

Camden County HAZMAT Personnel can be used as the designated qualified individual for doing and doffing of PPE's. HAZMAT TEAM can be reached at 856-374-6049 or at 856-783-4808

**Pre-hospital** resuscitation procedures such as endotracheal intubation, open suctioning of airways, and cardiopulmonary resuscitation frequently result in a large amount of body fluids, such as saliva and vomit. Performing these procedures in a less controlled environment (e.g., moving vehicle) increases risk of exposure for EMS personnel. If conducted, perform these procedures under safer circumstances (e.g., stopped vehicle, hospital destination).

During pre-hospital resuscitation procedures (intubation, open suctioning of airways, cardiopulmonary resuscitation):

- In addition to recommended PPE, respiratory protection that is at least as protective as a NIOSH-certified fit-tested N95 filtering face piece respirator or higher should be worn (instead of a facemask).
- Additional PPE must be considered for these situations due to the potential increased risk for contact with blood and body fluids including, but not limited to, double gloving, disposable shoe covers, and leg coverings. **Follow updated CDC guidelines.**

If blood, body fluids, secretions, or excretions from a patient with suspected Ebola come into direct contact with the EMS provider's skin or mucous membranes, then the EMS provider should immediately stop working. They should wash the affected skin surfaces with soap and water and report exposure to an occupational health provider or supervisor for follow-up.

#### **Recommended PPE should be used by EMS personnel as follows:**

- PPE should be worn upon entry into the scene and continued to be worn until personnel are no longer in contact with the patient.
- PPE should be carefully removed without contaminating one's eyes, mucous membranes, or clothing with potentially infectious materials.

- It is recommended that a chlorine solution should be used to wipe down all exterior surfaces of the used PPE before removing PPE. See new CDC guidelines.
- PPE should be placed into a medical waste container at the hospital or double bagged and held in a secure location.
- Re-useable PPE should be cleaned and disinfected according to the manufacturer's reprocessing instructions and EMS agency policies.
- Instructions for putting on and removing PPE have been published online at <http://www.cdc.gov/HAI/prevent/ppe.html> and <http://www.cdc.gov/vhf/ebola/pdf/ppe-poster.pdf> [PDF - 2 pages] (<http://www.cdc.gov/vhf/ebola/pdf/ppe-poster.pdf>).
- Hand hygiene should be performed immediately after removal of PPE.

### **Environmental infection control**

Environmental cleaning and disinfection, and safe handling of potentially contaminated materials is essential to reduce the risk of contact with blood, saliva, feces, and other body fluids that can soil the patient care environment. EMS personnel should always practice standard environmental infection control procedures, including vehicle/equipment decontamination, hand hygiene, cough and respiratory hygiene, and proper use of U.S. Food and Drug Administration (FDA) cleared or authorized medical PPE. For additional information, see CDC's [Interim Guidance for Environmental Infection Control in Hospitals for Ebola Virus](http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html) (<http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html>).

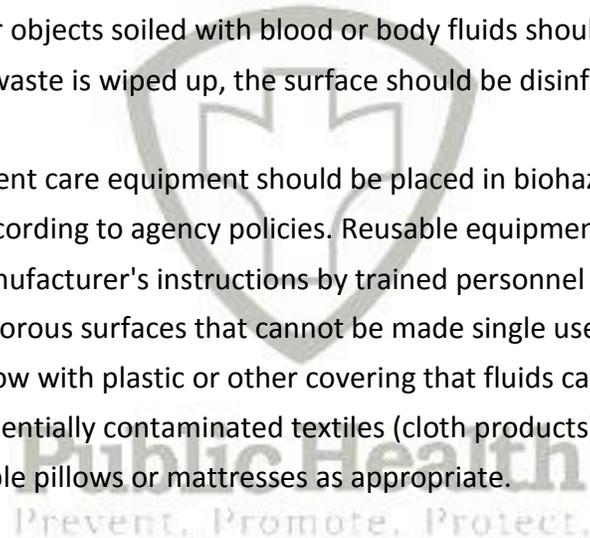
EMS personnel performing environmental cleaning and disinfection should:

- Wear recommended PPE (described above) and consider use of additional barriers (e.g., shoe and leg coverings) if needed.
- Wear face protection (facemask with goggles or face shield) when performing tasks such as liquid waste disposal that can generate splashes.
- Use an EPA-registered hospital disinfectant with a label claim for one of the non-enveloped viruses (e.g., norovirus, rotavirus, adenovirus, poliovirus) to disinfect environmental surfaces. Disinfectant should be available in spray bottles or as commercially prepared wipes for use during transport.
- Spray and wipe clean any surface that becomes potentially contaminated during transport. These surfaces should be immediately sprayed and wiped clean (if using a commercially prepared disinfectant wipe) and the process repeated to limit environmental contamination.

### **Cleaning EMS Transport Vehicles after Transporting a Patient with Suspected or Confirmed Ebola**

The following are general guidelines for cleaning or maintaining EMS transport vehicles and equipment after transporting a patient with suspected or confirmed Ebola:

- EMS personnel performing cleaning and disinfection should wear recommended PPE (described above) and consider use of additional barriers (e.g., rubber boots or shoe and leg coverings) if needed. Face protection (facemask with goggles or face shield) should be worn since tasks such as liquid waste disposal can generate splashes.
- Patient-care surfaces (including stretchers, railings, medical equipment control panels, and adjacent flooring, walls and work surfaces) are likely to become contaminated and should be cleaned and disinfected after transport.
- A blood spill or spill of other body fluid or substance (e.g., feces or vomit) should be managed through removal of bulk spill matter, cleaning the site, and then disinfecting the site. For large spills, a chemical disinfectant with sufficient potency is needed to overcome the tendency of proteins in blood and other body substances to neutralize the disinfectant's active ingredient.
- An EPA-registered hospital disinfectant with label claims for viruses that share some technical similarities to Ebola (such as, norovirus, rotavirus, adenovirus, poliovirus) and instructions for cleaning and decontaminating surfaces or objects soiled with blood or body fluids should be used according to those instructions. After the bulk waste is wiped up, the surface should be disinfected as described in the bullet above.
- Contaminated reusable patient care equipment should be placed in biohazard bags and labeled for cleaning and disinfection according to agency policies. Reusable equipment should be cleaned and disinfected according to manufacturer's instructions by trained personnel wearing correct PPE. 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 get through. To reduce exposure among staff to potentially contaminated textiles (cloth products) while laundering, discard all linens, non-fluid-impermeable pillows or mattresses as appropriate.



The Ebola virus is a Category A infectious substance regulated by the U.S. Department of Transportation's (DOT) Hazardous Materials Regulations (HMR, 49 C.F.R., Parts 171-180). Any item transported for disposal that is contaminated or suspected of being contaminated with a Category A infectious substance must be packaged and transported in accordance with the HMR. This includes medical equipment, sharps, linens, and used health care products (such as soiled absorbent pads or dressings, kidney-shaped emesis pans, portable toilets, used Personal Protection Equipment [e.g., gowns, masks, gloves, goggles, face shields, respirators, booties] or byproducts of cleaning) contaminated or suspected of being contaminated with a Category A infectious substance.

**Follow-up and/or reporting measures by EMS personnel after caring for a suspected or confirmed Ebola patient**

- EMS personnel should be aware of the follow-up and/or reporting measures they should take after caring for a suspected or confirmed Ebola patient.
- EMS agencies should develop policies for monitoring and management of EMS personnel potentially exposed to Ebola.
- EMS agencies should develop sick leave policies for EMS personnel that are non-punitive, flexible and consistent with public health guidance
- Ensure that all EMS personnel, including staff who are not directly employed by the healthcare facility but provide essential daily services, are aware of the sick leave policies.
- EMS personnel with exposure to blood, bodily fluids, secretions, or excretions from a patient with suspected or confirmed Ebola should immediately:
  - Stop working and wash the affected skin surfaces with soap and water. Mucous membranes (e.g., conjunctiva) should be irrigated with a large amount of water or eyewash solution;
  - Contact occupational health/supervisor for assessment and access to post-exposure management services; and
  - Receive medical evaluation and follow-up care, including fever monitoring twice daily for 21 days, after the last known exposure. They may continue to work while receiving twice daily fever checks, based upon EMS agency policy and discussion with local, state, and federal public health authorities.
- EMS personnel who develop sudden onset of fever, intense weakness or muscle pains, vomiting, diarrhea, or any signs of hemorrhage after an unprotected exposure (i.e., not wearing recommended PPE at the time of patient contact or through direct contact to blood or body fluids) to a patient with suspected or confirmed Ebola should:
  - Not report to work or immediately stop working and isolate themselves;
  - Notify their supervisor, who should notify local and state health departments;
  - Contact occupational health/supervisor for assessment and access to post-exposure management services; and
  - Comply with work exclusions until they are deemed no longer infectious to others.

<sup>1</sup> <http://www.cdc.gov/vhf/ebola/hcp/patient-management-us-hospitals.html>(<http://www.cdc.gov/vhf/ebola/hcp/patient-management-us-hospitals.html>)

<sup>2</sup> <http://www.cdc.gov/vhf/ebola/hcp/case-definition.html>(<http://www.cdc.gov/vhf/ebola/hcp/case-definition.html>)

<sup>3</sup><http://www.cdc.gov/vhf/ebola/hcp/clinician-information-us-healthcare-settings.html>(<http://www.cdc.gov/vhf/ebola/hcp/clinician-information-us-healthcare-settings.html>)<http://phmsa.dot.gov/portal/site/PHMSA/menuitem.6f23687cf7b00b0f22e4c6962d9c8789/?vgnextoid=4d1800e36b978410VgnVCM100000d2c97898RCRD&vgnnextchannel=d248724dd7d6c010VgnVCM1000080e8a8c0RCRD&vgnnextfmt=print>

## **NJDOH and CDC Ebola Information Web Links**

### **New Jersey Department of Health (NJDOH)**

NJDOH - Communicable Disease Service - Viral Hemorrhagic Fevers

<http://www.nj.gov/health/cd/vhf/index.shtml>

NJDOH Ebola Frequently Asked Questions (FAQs)

[http://www.nj.gov/health/cd/vhf/documents/ebola\\_faq.pdf](http://www.nj.gov/health/cd/vhf/documents/ebola_faq.pdf)

NJDOH Ebola Information for Friends and Family Returning to NJ from West Africa

[http://www.nj.gov/health/cd/vhf/documents/West\\_Afr.pdf](http://www.nj.gov/health/cd/vhf/documents/West_Afr.pdf)

NJDOH Questions and Answers on Ebola

<http://www.nj.gov/health/cd/vhf/qa.shtml>



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## **CDC Ebola Information Web Links**

Interim Guidance for Monitoring and Movement of Persons with Ebola Virus Disease Exposure  
<http://www.cdc.gov/vhf/ebola/hcp/monitoring-and-movement-of-persons-with-exposure.html>

CDC Case Definition for Ebola Virus Disease (EVD)  
<http://www.cdc.gov/vhf/ebola/hcp/case-definition.html>

CDC Ebola Fact Sheet  
<http://www.cdc.gov/vhf/ebola/pdf/ebola-factsheet.pdf>

CDC Ebola Virus Disease  
<http://www.cdc.gov/vhf/ebola/>

CDC Questions and Answers on Ebola  
<http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/qa.html>

CDC About Ebola Virus Disease  
<http://www.cdc.gov/vhf/ebola/about.html>

CDC Ebola Signs and Symptoms  
<http://www.cdc.gov/vhf/ebola/symptoms/index.html>

CDC Ebola Transmission  
<http://www.cdc.gov/vhf/ebola/transmission/index.html>

CDC Risk of Ebola Exposure  
<http://www.cdc.gov/vhf/ebola/exposure/index.html>

CDC Prevention of Ebola  
<http://www.cdc.gov/vhf/ebola/prevention/index.html>

CDC Ebola Diagnosis  
<http://www.cdc.gov/vhf/ebola/diagnosis/index.html>

CDC Treatment of Ebola  
<http://www.cdc.gov/vhf/ebola/treatment/index.html>

CDC Information for Healthcare Workers and Settings  
<http://www.cdc.gov/vhf/ebola/hcp/index.html>

CDC Ebola Communication Resources  
<http://www.cdc.gov/vhf/ebola/resources/index.html>

Infection Prevention and Control Recommendations for Hospitalized Patients with Known or Suspected Ebola Virus Disease  
<http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html>

Questions and Answers about Ebola and Pets  
<http://www.cdc.gov/vhf/ebola/transmission/gas-pets.html>



**NOTE: EMS Personnel must make contact with specific healthcare facilities to know if they have the capability to accept a suspected Ebola patient before transporting that patient to the specific healthcare facility. Some hospitals can request that Ebola patients be transported to a specific facility within their network that has the capability to handle such cases.**

For More Information contact [www.camdencounty.com](http://www.camdencounty.com)  
Camden County Department of Health & Human Services  
512 Lakeland Road  
Blackwood NJ 08012  
856-374-6037  
1800-999-9045



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