



**Interim Guidance for First Responders (Emergency Medical Service [EMS], Firefighters, and Law Enforcement) Who Provide Pre-Hospital Emergency Medical Management:  
Environmental Infection Control**

**Purpose**

To increase awareness of all first responders and provide recommendations regarding the appropriate environmental infection control procedures after transport of patients who may have Ebola virus disease (EVD)

**Background**

- EVD is a fragile virus and can ONLY be transmitted through *DIRECT CONTACT* with *BLOOD OR BODY FLUIDS*, or through contaminated sharps injuries (i.e., needle sticks). Potential airborne transmission may be possible during aerosol-generating procedures (e.g., intubation, tracheal suctioning, nebulizer treatment).
- Patients are NOT CONTAGIOUS WHEN they have NO SYMPTOMS; disease transmission is possible only AT THE ONSET OF FEVER and lasts through the course of the disease as well as post mortem.
- EVD symptoms usually appear 8–10 days after a person has been infected with the range being 2–21 days.
- Symptoms include
  - FEVER (>38 C or 100.5 F)
  - Severe headache
  - Muscle pain
  - Weakness
  - Diarrhea
  - Vomiting
  - Abdominal (stomach) pain
 Some patients may develop rash, eye redness, cough, sore throat, and unexplained bleeding
- The current EVD outbreak occurring in the West African countries of Guinea, Liberia, and Sierra Leone is the largest recorded and continues unabated despite international response efforts. (<http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/index.html>)
- While the risk of an actual Ebola virus infected person in Hawaii is *extremely low*, we must prepare to ensure that we will respond appropriately to limit the potential risk to our community.
  - Healthcare providers who care for patients with known EVD and utilize appropriate PPE are at low risk per the current Centers for Disease Control and Prevention guidelines



(<http://www.cdc.gov/vhf/ebola/exposure/monitoring-and-movement-of-persons-with-exposure.html>).

## Procedure

### PPE

- PPE should be worn BEFORE entry on scene for patients identified by dispatch as possible EVD case, continued to be worn until no longer in contact with the patient, and then removed carefully in the appropriate sequence to prevent contamination of one's eyes, mucus membranes, or clothing.
- Choice of PPE should follow CDC's "[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 \(Doffing\)](#)" and each Local First Responder Agency's policy and procedure for donning and doffing.
- Place all PPE into designated medical waste container at the receiving hospital or, if handing off to special transport team, double-bag in red biohazard bags, balloon-tie, and hand off to transport team to consolidate all waste at the receiving hospital. Be careful to not touch/contaminate the outside of containers or bags.
- Wash hands immediately after removing PPE.
- All PPE should be single use/disposable. Avoid re-useable PPE; if must be used, should be cleaned and disinfected *immediately* according to manufacturer's reprocessing instructions and EMS agency policies.

### TRANSPORT VEHICLE AND OTHER MATERIALS

- Organize materials and equipment in vehicles to minimize potential for contamination and need for disinfecting or discarding.
- Any personnel performing cleaning and disinfection should wear recommended PPE as noted above to prevent exposure to infectious materials (e.g., as may occur from 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.
- Clean and disinfect patient-care surfaces (e.g., stretchers, railings, medical equipment control panels, and adjacent flooring, walls, and work surfaces) immediately after transport.



- Manage a blood spill or spill of other body fluid or substance (e.g., feces or vomit) through removal of bulk spill matter, cleaning the site, and then disinfecting the site. For large spills, a chemical disinfectant (i.e., EPA-registered hospital disinfectant as noted above) may be necessary.
- Place all contaminated reusable patient care equipment in biohazard bags and labeled for cleaning and disinfection according to agency policies. Clean and disinfect reusable equipment according to manufacturer's instructions by trained personnel wearing correct PPE. Avoid contamination of reusable porous surfaces of items that cannot be made single use.
- Use only a mattress and pillow with plastic or other covering that is fluid impermeable. DISCARD all linens, non-fluid-impermeable pillows, or mattresses with used PPE in designated medical waste container at the receiving hospital or, if handing off to special transport team, double-bag in red biohazard bags, balloon-tie, and hand off to transport team to consolidate all waste at the receiving hospital. Do NOT place linens in the hospital laundry.
- Note that all nonreusable materials used in the care of the patient (i.e., PPE, any bedding, medical waste including sharps) should be consolidated and placed in designated medical waste container at the receiving hospital.