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EDMUND G. BROWN JR.  
Governor

November 12, 2014

AFL 14-29

**TO:** Acute Psychiatric Hospitals  
General Acute Care Hospitals

**SUBJECT:** Updated: Ebola Virus Disease Medical Waste Management Guidelines

This All Facilities Letter (AFL) is intended to notify all hospitals that the California Department of Public Health (CDPH) has revised guidelines for Ebola Virus Disease medical waste management. The guidelines provide both general and specific guidance for the management of Ebola contaminated medical waste based on federal guidelines and standards including specific guidance regarding packaging, labeling, and treatment. The attached interim guidelines can be found at the following link:

<http://www.cdph.ca.gov/certlic/medicalwaste/Pages/default.aspx>

On-site treatment of Ebola medical waste (by steam sterilization) may be performed in compliance with the interim guidelines. If on-site treatment is not available, a hospital may package the waste to be transported to an incinerator at an out-of-state facility. California allows for the incineration of Ebola hospital waste; however, California's last medical waste incinerator closed in 2001. The states that currently have operating incinerators are Alabama, Maryland, North Dakota, Oklahoma, Utah and Texas.

CDPH recommends that all hospital Environmental Services personnel and Infection Control staff work together to develop facility-specific protocols for safe handling of Ebola-related medical waste.

Additional information can be found on the Centers for Disease Control and Prevention (CDC) Ebola Medical Waste Management Website at:

<http://www.cdc.gov/vhf/ebola/hcp/medical-waste-management.html>

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If you have any further questions, please contact the CDPH Medical Waste Management Program at (916) 449-5671.

Sincerely,

**Original signed by Jean Iacino**

Jean Iacino  
Interim Deputy Director  
Center for Health Care Quality

Attachment



RON CHAPMAN, MD, MPH  
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**California Department of Public Health**



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**Ebola Virus Disease  
Medical Waste Management – Interim Guidelines  
October 28, 2014**

This California Department of Public Health (CDPH) document provides both general and specific guidance for the management of Ebola contaminated medical waste based on federal guidelines and standards including specific guidance regarding packaging, labeling, and treatment.

CDPH recommends that all health care facility Environmental Services personnel and Infection Control staff work together to develop facility-specific protocols for the safe handling and management of Ebola related medical waste.

**General Guidance**

Ebola medical waste management guidance provided by the federal Centers for Disease Control and Prevention (CDC) (<http://www.cdc.gov/vhf/ebola/hcp/medical-waste-management.html>) should be reviewed closely and checked regularly, including appropriate infection control practices (<http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html>) for the handling and packaging of medical waste. Facilities may also consult with their Local Enforcement Agency (LEA), County Health Director, and CDPH on Ebola waste management issues.

**Disinfecting Agents**

CDC provides guidance for the disinfection of environmental surfaces (<http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html>). CDC recommends the use of a U.S. Environmental Protection Agency (EPA)-registered hospital disinfectant with a label claim for a non-enveloped virus (e.g., norovirus, rotavirus, adenovirus, poliovirus). 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 are broadly antiviral and capable of inactivating both enveloped and non-enveloped viruses.

**Packaging for Onsite Treatment**

Place waste into a red biohazard bag that meets the federal Department of Transportation (DOT) requirements for impact and tear resistance. Disinfect the waste. CDC provides guidance for disinfecting Ebola contaminated waste or your facility may

implement its own specific Ebola disinfection policies and procedures consistent with CDC guidelines. Do not overfill the biohazard bag. It is suggested that the biohazard bag only be filled with Ebola contaminated waste no more than half of its total volume. This will ensure that there is adequate room for staff to securely close the bag with a knot or other equally effective positive means of closure that will not tear or puncture the outer bag and ensure that any liquid contents (if present) will not leak from the packaging. After securely tying off the bag, disinfect the exterior surface of the bag, place it into a second red biohazard bag, tie off the second biohazard bag, disinfect the exterior surface of the second bag, and place the combination package into a rigid container with a tight-fitting lid. Transport immediately to a dedicated, locked or secure storage area that is not accessible to the public or other unauthorized personnel. Do not store this waste in an intermediate storage area.

Unsolidified suction canister waste may be treated onsite. Do not use reusable suction canister systems. Seal/close the suction canister and disinfect the outside surface of the canister. Place the sealed canister into a red biohazard bag, securely tie off the bag, disinfect the exterior surface of the bag, and place into a rigid container with a tight-fitting lid. Do not add a solidifier to the liquid contents of a suction canister and agitate to mix because of the potential to create aerosols. If the suction canister is already pre-filled with a solidifying agent, seal the canister and follow the same waste management/containment procedure as outlined above for unsolidified suction canisters. Solidified suction canister waste shall be managed as an incinerable waste (follow DOT packaging requirements for offsite transportation).

Ebola contaminated sharps waste shall be placed into a single use sharps container. Do not use reusable sharps container systems. When the sharps container is ready for disposal, close and securely lock the container, disinfect the exterior surface of the sharps waste container, and place into a red biohazard bag. Securely tie off the biohazard bag, disinfect the exterior surface of the biohazard bag, and place into a rigid container with a tight-fitting lid for transportation to the dedicated, locked or secure storage/treatment area.

For facilities who choose to combine Ebola contaminated sharps and pharmaceutical waste into a single waste container, the combined waste container shall be single use only. The combined Ebola sharps and pharmaceutical waste shall be transported to an offsite treatment facility for treatment by incineration.

Sheets, curtains, pillows, and other linens contaminated with or suspected to be contaminated with the Ebola virus should also be handled as Category A waste and contained in primary and secondary red biohazard bags, whose respective outside surfaces have been disinfected and placed into a rigid container with a tight-fitting lid.

### **Transportation from the Isolation Room to the Onsite Storage Area**

Because facility operations and logistics differ among health care facilities, each facility should develop an Ebola waste management plan specifically tailored to address their own waste management situation during an Ebola event. CDPH has some general suggestions or considerations for the safe handling and management of Ebola contaminated waste from the Isolation Room:

- Facilities should develop a detailed waste management plan/procedure for the safe collection of waste at the patient's bedside and managing it from the isolation area to the designated storage area. The detailed waste management plan/procedure should also specify the type of personal protection equipment (PPE) required based on the activity performed.
- Careful consideration should be given to the size of the waste container(s) to be used because of the volume and/or weight of the waste that will be placed into it and the mechanics/manual activity associated with the use of multiple waste bag containment, external surface disinfection, and the possible removal/transfer of the waste bags from the original waste container into a subsequent waste container.
- Disinfection procedures should be developed, which include identifying the type of disinfectant to be used and the specific instructions as to its proper application.
- A specific logistics plan should be included as an integral part of the overall waste management plan/procedure that details the exact path within the facility that the waste will be transported to the designated storage area.

### **Labeling Waste Containers**

Whether Ebola contaminated waste is treated onsite or offsite, facilities may want to consider the use of additional warning labels on the Ebola waste containers (in addition to the required biohazardous waste labels) to distinguish between the special waste containers and the facility's other medical waste containers while the Ebola contaminated waste is being accumulated and stored onsite. These additional warning labels could include the use of words or combination of words such as "Infectious Isolation Waste," "Infectious Isolation Waste, for Incineration Only," or other words that the facility deems appropriate. It should be noted that if Ebola contaminated waste is to be packaged for transport offsite, DOT labeling requirements will apply to the outer packaging.

### **Storage of Waste Containers**

In the situation where a suspected or known case of Ebola is occurring, health care facilities should be prepared to manage and store a large volume of Ebola contaminated waste generated from patient treatment and management. Such a situation may generate as much as eight, 55-gallon drums of Ebola contaminated waste per day.

Each health care facility should have a designated storage area with adequate capacity to accumulate and store the large volumes of waste generated in the management and treatment of an Ebola patient. The designated storage area should be locked and/or secured in a manner that prohibits access by the public or other unauthorized personnel. Health care facilities could also consider bringing lockable storage units or containers onsite if needed. Health care facilities should work with their Local Enforcement Agency (LEA) or CDPH when identifying these designated storage locations and implementing the procedures and/or processes in their use. A procedure should also be in place to notify the LEA or CDPH if a temporary extension or variance is required for extended storage in excess of the storage time requirements.

### **Onsite Treatment**

For autoclaving onsite:

- Appropriate infection control measures are necessary prior to handling the waste (see <http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html> and <http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html>).
- Do not overfill the red biohazard bags. It is suggested that the biohazard bag only be filled no more than half of its total volume with Ebola contaminated waste.
- Do not toss or compress (compact) the biohazard bags when loading the autoclave chamber. The facility may consider filling the autoclave chamber less than its full capacity to allow for more efficacious treatment especially when treating dense materials such as linens.
- Place the biological indicator into the center of the load.
- Observe the standard treatment time for autoclave treatment (steam sterilization) with a minimum of 30 minutes at 250°F.
- Direct efficacy questions for medical waste treatment to your LEA and/or to the CDPH, Medical Waste Management Program at (916) 449-5671.

### **Offsite Treatment**

If onsite treatment is not available or the health care facility chooses not to treat the Ebola contaminated waste onsite, the facility should package the waste appropriately for transport offsite to a medical waste incinerator.

DOT classifies Ebola contaminated waste as a Category A infectious substance. Current safety regulations governing the transport of Category A infectious substances require packaging that may not always be suited for the transport of larger quantities of contaminated waste that would be generated in the treatment and management of an Ebola patient. DOT has the authority to grant special permits that allow alternative packaging from the requirements of the Hazardous Materials Regulations for transportation. In addition to the alternative packaging, additional preparation and operational controls will apply to ensure an equivalent level of safety. Special permits are issued to individual companies to ensure that each holder is fit to conduct the activity authorized. Currently, DOT has authorized special permits for the transportation of Ebola waste to five transportation companies. DOT has posted the special permit authorizations and guidance on packaging Ebola contaminated waste (see <http://phmsa.dot.gov/portal/site/PHMSA/menuitem.c078b89b7940f5f756f2cee62d9c8789/?vgnextoid=4274da9cb54e8410VgnVCM100000d2c97898RCRD&vgnnextchannel=4274da9cb54e8410VgnVCM100000d2c97898RCRD&vgnnextfmt=print>).

Autoclave treatment and incineration have both been shown to efficaciously treat the Ebola virus. For incineration, facilities will have to work with their specific medical waste management companies to find a medical waste treatment facility that will accept their waste. California sends its incinerable waste to Alabama, Maryland, North Dakota, Oklahoma, Utah, and Texas.

#### **Safe Handling of Human Remains in Hospitals and Mortuaries**

CDC has guidance on the safe handling of human remains of Ebola patients in U.S. hospitals and mortuaries (<http://www.cdc.gov/vhf/ebola/hcp/guidance-safe-handling-human-remains-ebola-patients-us-hospitals-mortuaries.html>).

Additional information will be provided by CDPH as it becomes available.