Arizona Department of Health Services

State Public Health Laboratory

Ebola Virus Disease and Public Health Laboratory Operations

LRN LABORATORY RESPONSE NETWORK

This fact sheet has been compiled from information made available by the CDC in response to questions we have been receiving regarding how Ebola Virus Disease will effect procedures in clinical health laboratories. The information was collected from the CDC website on October 3, 2014, and reflects the most up to date information available at that time. If you wish to visit the website directly, please go to http://www.cdc.gov/vhf/ebola/hcp/interim-guidance-specimen-collection-submission-patients-suspected-infection-ebola.html#update1

Infection Control When Handling Specimens

All laboratorians and other healthcare personnel handling specimens must follow established standards compliant with the OSHA bloodborne pathogens standard, which includes blood and other potentially infectious materials. These standards include wearing appropriate personal protective equipment (PPE) and following all safety rules for all specimens regardless of whether they are identified as being infectious.

Recommendations for risk assessment to staff: Risk assessments should be conducted by each laboratory director, biosafety officer, or other responsible personnel to determine the potential for sprays, splashes, or aerosols generated from laboratory procedures. They should adjust, as needed, PPE requirements, practices, and safety equipment controls to protect the laboratorian's skin, eyes, and mucous membranes.

Recommendations for laboratory testing by staff: Any person testing specimens from a patient with a suspected case of Ebola virus disease should wear gloves, water-resistant gowns, full face shield or goggles, and masks to cover all of nose and mouth, and as an added precaution use a certified class II Biosafety cabinet or Plexiglass splash guard with PPE to protect skin and mucous membranes. All manufacturer-installed safety features for laboratory instruments should be used.

Specimen Handling for Routine Laboratory Testing (not for Ebola Diagnosis)

Routine laboratory testing includes traditional chemistry, hematology, and other laboratory testing used to support and treat patients. Precautions as described above offer appropriate protection for healthcare personnel performing laboratory testing on specimens from patients with suspected infection with Ebola virus. These precautions include both manufacturer installed safety features for instruments and the laboratory environment as well as PPE specified in the box above.

Environmental Cleaning and Disinfection

See the Interim Guidance for Environmental Infection Control in Hospitals for Ebola Virus (http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html) for recommendations regarding the cleaning and disinfection of patient care area surfaces including the management of blood and body fluid spills. These recommendations also apply to cleaning and disinfecting in a laboratory where specimens are being processed from persons under investigation, or with probable or confirmed Ebola virus infections.

In the case of a spill in the laboratory, the basic principles for blood or body substance spill management are outlined in the United States OSHA Blood Borne Pathogens Standards. There are no disinfection 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 an added precaution, use a disinfectant with a higher potency than what is normally required for an enveloped virus to disinfect potentially Ebola-contaminated surfaces. 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.

Management of Laboratory Waste

Waste generated during laboratory testing should be placed in leak-proof containment and discarded as regulated medical waste. To minimize contamination of the exterior of the waste bag, place this bag in a rigid waste container designed for this use. If available, steam sterilization (autoclave) or incineration as a waste treatment process can inactivate the virus and reduces waste volume. For equipment that drains directly into the sewer system, the United States sanitary sewer system handling processes (e.g., anaerobic digestion, composting, disinfection) are designed to safely inactivate infectious agents. However, check with your state's regulated medical waste program for more guidance and coordinate your waste management activities for the laboratory area with your medical waste contractor.