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**CDPH GUIDANCE ON PERSONAL PROTECTIVE EQUIPMENT TO BE
USED BY HEALTHCARE WORKERS IN THE INPATIENT SETTING
DURING MANAGEMENT OF PATIENTS WITH EBOLA VIRUS DISEASE
(EVD)
IN CALIFORNIA HOSPITALS**

November 25, 2014 - Revised

On October 20, 2014, the Centers for Disease Control and Prevention (CDC) issued updated infection control guidance entitled: "[Guidance on Personal Protective Equipment To Be Used by Healthcare Workers During Management of Patients with Ebola Virus Disease \(EVD\) in U.S. Hospitals, Including Procedures for Putting On \(Donning\) and Removing \(Doffing\)](http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html)" (available at: <http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html>).

Key features of this guidance include recommendations for enhancement of healthcare worker protection through:

- The use of an updated ensemble of personal protective equipment (PPE), including gloves, fluid-resistant or impermeable body coverings, hood, and eye and respiratory protection (face shield, not goggles) intended to prevent skin exposure and inhalation of infectious aerosols;
- The implementation of rigorous and repeated employee training on the correct use of PPE, particularly when removing (doffing) PPE;
- The use of a trained observer to ensure that PPE is donned, used, and doffed correctly; and
- The designation and management of specific areas for PPE donning and doffing.

The California Department of Public Health (CDPH) recognizes that the exposure risk of a healthcare worker in ***an inpatient hospital setting*** while caring for individuals with suspected or confirmed Ebola virus disease (EVD) is higher than the risk to the community at large.

Broadly, CDPH endorses CDC recommendations for infection control for the care of EVD patients in the inpatient hospital setting as a basic framework for California hospitals. Several points in CDC guidance are important to recognize:

- It is essential that health care workers receive repeated training in the use of PPE and have demonstrated competency in performing Ebola-related infection control practices and procedures.
- Donning and doffing of PPE is complex and requires specific physical space.
- Respiratory protection should be used for aerosol generating procedures.
 - Aerosol generating procedures may be unexpected. Therefore, respiratory protection is recommended at all times when there is a possibility that an aerosol generating procedure might be necessary.
 - Health care provider safety and comfort are very important and should be considered in designing a PPE ensemble.
- Airborne infection isolation rooms (AIIR) are the preferred location for aerosol generating procedures.

In addition, CDPH is issuing the following three more specific recommendations for California hospitals:

- CDPH recommends airborne infection isolation (AIIR*) for individuals with suspected or confirmed EVD. CDPH is making this recommendation because:
 - Following CDC guidance, the need for aerosol generating procedures is unpredictable and those procedures should ideally be carried out in an AIIR.
 - In order to avoid patient transport within the healthcare facility and associated potential exposures, initial placement in an AIIR is preferable.
 - Due to the complexity of the PPE donning and doffing process and the needs for specific physical space for that process, using a single location for the full spectrum of care (including aerosol generating procedures) is preferable.
- CDPH recommends the use of a respirator (e.g., fit-tested N95 respirator, NIOSH approved) as a minimum standard for airway protection during the care of EVD patients when the patient is **not exhibiting symptoms, indicating that the employee is not at risk of exposure** to an aerosol-generating procedure performed on an EVD patient or exposure to another type of aerosol-generating event.
 - CDC recommends the use of a respirator for the care of EVD patients because of the possibility of unexpected aerosol generating procedures being needed.

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- CDPH recommends that when aerosol-generating procedures are conducted on suspected or confirmed EVD inpatients, a powered air-purifying respirator (PAPR) should be used. These procedures may include suctioning, intubation, other procedures that generate aerosols and cleaning procedures that may generate aerosols (e.g., spraying disinfectant). CDPH also recommends that PAPRs should be considered for any contact with body fluids. CDPH has made this recommendation because:
 - CDC recommends respiratory protection for aerosol generating procedures.
 - CDC offers the use of PAPRs as one of the recommended alternatives for the care of Ebola patients.
 - PAPRs offer healthcare workers a higher level of protection against inhalation of infectious aerosols.
 - PAPRs offer significantly increased comfort while caring for the EVD patient compared to N95 respirators. Health care worker comfort is an important element to be considered in determining a PPE ensemble.
 - PAPRs are required for aerosol-generating procedures on suspected or confirmed EVD inpatients under the Cal/OSHA Aerosol Transmissible Diseases Standard. ‡

*A single-occupancy patient-care room used to isolate persons with a suspected or confirmed airborne infectious disease. Environmental factors are controlled in AIIRs to minimize the transmission of infectious agents. AIIRs should provide negative pressure in the room and meet ventilation requirements set by the California Department of Industrial Relations 8 CCR §5199

‡ 8 CCR §5199. Aerosol Transmissible Diseases. See: <http://www.dir.ca.gov/Title8/5199.html>