

	<b>COUNTY OF SACRAMENTO</b> EMERGENCY MEDICAL SERVICES AGENCY	Document #	5200.02
	<u>PROGRAM DOCUMENT:</u> <b>Emerging Viruses/Infectious Diseases</b>	Draft Date:	11/24/14
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 EMS Medical Director

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 EMS Administrator

**Purpose:**

- A. To specify the procedures to be followed when highly pathogenic emerging viruses are suspected during emergency call taking and response; or confirmed prior to interfacility transport.

**Authority:**

- A. California Health and Safety Code, Division 2.5
- B. California Code of Regulations, Title 22, Division 9

**Protocol:**

- A. This Policy will only be in effect when designated by the Sacramento County Emergency Medical Services Agency (SCEMSA) Medical Director or Public Health Officer (PHO) and shall remain in effect until terminated by the Medial Director or PHO.

**Procedures for Call-Takers:**

- A. Identification of which patients need special precautions when in contact with EMS personnel involves both the assessment of potential risk factors, and questioning of patients on the presence or absence of an emerging virus/disease symptoms. Risk factors and symptoms will vary from one potential emerging disease to another, and specific screening question guidelines will be determined at the time of a potential or real outbreak.
  1. In general, if the call takers suspect a caller is reporting symptoms of an emerging virus, they shall screen callers for risk factors. If there are symptoms AND risk factors present, immediately inform the responding EMS personnel that the patient has a suspected emerging virus, using standard operating procedures for the individual responding agency.
  2. If there are NO symptoms and NO risk factors present, proceed with normal call taking and dispatch duties.
  3. Field crews are responsible for notification of the Sacramento County Division of Public Health at (916) 875-5881 (ask to speak with the PHO or on duty Public Health Nurse) on initial contact when a patient meets criteria for suspect Ebola.

**AMPDS SCREENING QUESTIONS:**

- A. The following is required if your agency utilizes the International Academy of Emergency Dispatch (IAED) – Medical Priority Dispatch System (MPDS), Advanced Emergency

Medical Dispatch (EMD) protocol in dispatch centers serving in the Sacramento County EMS Agency. For many Emerging Infectious Diseases or Outbreaks, MPDS may develop a standardized screening process for dispatch centers which may specify specific protocols which require screening as well as the specific questions to ask. The LEMSA will review and amend as needed these screening questions for implementation during a potential or real outbreak.

For any call which screens “positive” as per the criteria set forth for that specific Emerging Infectious Disease, immediately inform the responding EMS personnel that the patient is a suspected Infectious Disease case. Recommended procedure to advise crews is; “Contact dispatch for further details via phone.” Field crews are responsible for early notification of the receiving hospital so that they can adequately prepare their staff for a patient with a possible contagious disease.

**If the call screens “negative” for the disease specific criteria, complete management of call as per existing procedure.**

#### **Recommended Employer Actions:**

- A. If available, contact the AMPDS Company to obtain the disease specific screening questions software for your dispatch center if the company has not already provided it to you. Start using the AMPDS disease specific screening questions as soon as possible.
- B. Train ALL EMS call takers in these guidelines.
- C. Review and implement any Infection Control and PPE disease specific guidelines issued by the CDC, CDPH, and/or the Sacramento County EMSA.
- D. Check your PPE supplies to ensure items are present and in good working order. Review manufactures training materials if that was provided.
- E. Ensure that EMS personnel with patient contact have been properly fit-tested and provided the proper N-95 mask, face mask, shoe covers etc.
- F. Staff wearing respirators must be medically evaluated to see if it’s safe for them to wear the respirator.
- G. Staff must be trained on the practice of PPE donning and doffing as specified for the given infectious disease threat. Integrate the “buddy system” to spot technique as recommended by the CDC. Do refresher trainings.
- H. Work closely with your Occupational Health staff to ensure the health of your workforce.

#### **Procedures for First Response and Transport Personnel Patient Assessment Appropriate for all Emerging Infectious Diseases:**

- A. Address scene safety:
  - 1. If the dispatch center advises that the patient is suspected of having an emerging virus, first response and transport personnel shall follow any disease specific policy issued by the LEMSA, and put on the personal protective equipment (PPE) appropriate for suspected cases of the emerging virus before entering the scene.
  - 2. Keep the patient separated from other persons as much as possible.
  - 3. Use appropriate disease specific Infection Control procedures when approaching a patient with a potential Emerging Infectious Disease. If available, follow any LEMSA

specific protocol for the assessment and management of patients suspected of having an Emerging Infectious Disease.

4. Any patient who meets the criteria defined for the specific Emerging Infectious Disease shall be managed by LEMSA defined guidelines for first responder PPE, Infection Control, treatment guidelines and destination.
5. If the patient does not meet screening criteria for the specific Emerging Infectious Disease proceed with normal EMS care.
6. If patient is not transported or refuses transport, notify Sacramento County Division of Public Health at (916) 875-5881 (ask to speak with the Public Health Officer or on duty Public Health Nurse) prior to departing the scene.

### **EMS Transport:**

#### **A. Infectious Disease Ambulance Response Team (IDART):**

The IDART Program is intended to provide a strategic ambulance asset, supported by appropriate medical oversight, to the pre-hospital and medical community facing the challenges of managing emerging infectious diseases.

1. All personnel training will comply with the CDC standards, at a minimum, when transporting a patient with an Emerging Infectious Disease. For the 2014-15 Ebola outbreak, these can be found at: <http://www.cdc.gov/vhf/ebola/hcp/index.html>
2. Adhere to SCEMSA Policy 2511.01;
3. Adhere to the minimum standards set forth in this policy;
4. Teams of three (3) fully trained responders.

**Highly virulent and highly lethal emerging infectious diseases may require extensive infection control ambulance preparations and PPE for first responders to protect against contact, droplet, and/or airborne transmission risk. The remaining sections of this policy apply specifically to the 2014-2015 Ebola outbreaks, and will be applicable to future highly virulent and highly lethal emerging infectious diseases with possible disease specific modifications.**

### **AMBULANCE PATIENT COMPARTMENT PREPARATION:**

- A. Ambulance preparation will be done with the purpose of segregating the cab from the patient compartment and covering the cabinetry/shelving, ceiling, seating and floor with an impermeable barrier. The standards below are required minimum standards.
  1. Ambulance Patient Compartment Wrap:
    - a) 6 mil clear plastic sheeting (10' X 100')
    - b) Duct Tape (Note duct tape has a rating scale for adhesiveness and weather ability so choose a 4 or higher for adhesiveness and weather ability based upon local climate humidity factors.)
    - c) Scissors
    - d) Large plastic sheeting if needed for seat at patient's head (Jump Seat/Captain's chair).

2. Ambulance Patient Compartment Wrap:

- a) All sheeting should overlap prior sheets of plastic by a minimum of 1 inch. All seams should be sealed completely by duct tape.
- b) From the patient compartment, seal openings to the cab using plastic sheeting and duct tape.
- c) Place plastic along the top edge of the wall and attach with duct tape.
- d) Any overlapping layers of wall sheeting should overlap with the upper portion over the lower portion to prevent any body fluid from leaking between sheets by gravity. Wall sheeting will continue down and over bench and jump seats being formed to the seat using folding, cutting, taping etc.
- e) Leave openings around ventilation ports to allow proper air flow and exchange.
- f) Cover the ceiling of the patient compartment with plastic sheeting and affix with duct tape to the top of the wall sheet.
- g) Place sheeting on the floor of the rig and affix to bench seat, jump seat and walls to create a slight bowl affect in an effort to channel any body fluids towards the center of the floor which will cause fluids to collect in one area. The sheeting on the sides should overlap the floor sheeting and be sealed with duct tape to keep fluids flowing down.
- h) The gurney antlers will need to be attached through the plastic sheeting on the floor for safe transport of the gurney and patient. Seal these openings generously with duct tape so that all fluids flow to the sheeting on the floor.
- i) The gurney side clamp will need to protrude through the side wall sheeting for safe securement of the gurney. Be sure to seal any cut plastic/seams with duct tape to prevent contamination of the wall.
- j) Cut slits around gurney arm catch on the floor of the unit to allow gurney to catch when unloading.
- k) 10. Cover rear doors with plastic sheeting and duct tape.

3. Gurney Preparation:

- a) Impermeable mattress cover and Duct Tape
- b) Cover mattress pad with fitted impermeable mattress cover. If no impermeable mattress cover is available then use plastic sheeting and over each end overlapping and sealing with duct tape.

4. Ambulance CAB:

- a) Spare PPE based upon selection for transport as noted in "Personal Protection" section as noted above"
- b) Impermeable Decontamination Disposal Sheet
- c) Multiple Red Biohazard Bags
- d) Extra Gloves and Boot Covers
- e) MEDS Computer

5. Crew Preparation:

- a) EVD patient transports will be done by three person crews. The third crew member "Driver" will assume no patient contact nor enter the patient compartment, so as to remain uncontaminated during the transport and to avoid contamination of the cab

area. Prior to patient contact, each patient caregiver will don the PPE using Ebola Donning Procedures while the third crew member assists by both checking for integrity issues, improper fit, exposed body surfaces.

**Supplies:**

- A. PPE based upon the selection from the “Personal Protection” section below.

**Infection Control:**

- A. First response and transport personnel can safely manage a patient with a suspected or confirmed emerging virus by following recommended isolation and infection control procedures, including standard, contact, and droplet precautions. Various means of protection will include protecting the Caregiver from all routes of entry through the use of PPE, barriers in the patient compartment of the ambulance, proper decontamination of the ambulance/equipment and proper disposal of the waste generated. Early recognition and identification of patients with a potentially infectious disease is critical. The following minimum standards will be observed during these processes:
  - 1. Isolation of the ambulance surfaces in the Patient compartment while making available necessary patient care equipment.
  - 2. Wearing of appropriate PPE for a known infectious disease patient.
  - 3. Limit activities, especially during transport that can increase the risk of exposure to infectious material (e.g., airway management, cardiopulmonary resuscitation, use of needles).
  - 4. Limit the use of needles and other sharps as much as possible. All needles and sharps shall be handled with extreme care and disposed in puncture-proof, sealed containers.
  - 5. Phlebotomy, procedures, and laboratory testing shall be limited to the minimum necessary for essential diagnostic evaluation and medical care.
  - 6. Prudent hand hygiene including hand washing and/or alcohol based hand rub.
  - 7. If blood, body fluids, secretions, or excretions from a patient with a suspected emerging virus come into direct contact with the provider’s skin or mucous membranes, then the provider shall immediately stop working. They shall wash the affected skin surfaces with soap and water and report exposure to a supervisor for follow-up.

**Personal Protective Equipment (PPE):**

- A. Use of standard, contact, and droplet precautions is sufficient for most situations when treating a patient with EVD in the absence of a directive from the PHO, personnel shall wear:
  - 1. Gown (fluid resistant or impermeable)
  - 2. Eye protection (goggles or face shield that fully covers the front and sides of the face)
  - 3. Facemask
- B. 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.

- C. 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. If conducted, perform these procedures under safer circumstances (e.g., stopped vehicle, hospital destination).
- D. Ebola Virus Disease-Personal Protective Equipment (“EVD-PPE”) with the N-95/P-100 and full face shield.
  - 1. Fluid impermeable coveralls without integrated hood
  - 2. Single use (disposable) hood extending to shoulders
  - 3. Single use disposable shoe covers, hi-top booties
  - 4. One single-use full face shield
  - 5. Single-use N-95 or P-100 Respirator
  - 6. Pair of nitrile gloves-regular length
  - 7. Pair of nitrile gloves-extended length
- E. EVD- PPE with the Powered Air Purifying Respirator (“PAPR”)
  - 1. Fluid impermeable surgical type coveralls without integrated hood
  - 2. Single use disposable shoe covers, hi-top booties
  - 3. Pair of nitrile gloves-regular length
  - 4. Pair of nitrile gloves-extended length
  - 5. PAPR Assembly: PAPR belt, Double –bib, Hood, Breathing tube, Filter

*\*Note PAPR is reusable if decontaminated properly. Battery Charger is reusable.*

*Instructions for putting on and removing PPE have been published online at:*

<https://www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance.html>

<https://www.cdc.gov/vhf/ebola/hcp/ppe-training/index.html>

**Transfer to a Receiving Facility:**

- A. Transport personnel shall do early notification to the receiving hospital when transporting a patient with a suspected or confirmed infectious disease, so that appropriate infection control precautions may be prepared prior to patient arrival. All Sacramento area hospitals are capable of safely managing a patient with an emerging virus and are capable of isolating the patient in a private room. Interfacility transfers or confirmed patients with Ebola go directly to UC Davis Medical Center or Kaiser Hospital South Sacramento as coordinated by the Sacramento PHO.

**Arrival at the Hospital:**

- A. The driver should take all precautions to remain in a safe distance from the patient to avoid contamination. The driver may assist by opening doors and clearing the path for patient movement.
- B. The driver will take decontamination and disposal sheet placing it on the ground at rear of unit with a change of shoe coverings and gloves available for the patient crew.
- C. Anybody fluid contamination on gurney wheels will be disinfected with an EPA-registered hospital disinfectant with label claims against non-enveloped viruses (e.g., norovirus,

rotavirus, adenovirus, poliovirus) or using a 1:10 bleach to water solution and allowed to dry for 10 minutes.

- D. Patient crew will unload patient and then remove current shoe covering, outer gloves and put on clean ones so as not to track potential contamination into the receiving facility. Dispose of used PPE in Red Biohazard Bag.
- E. Patient will be transferred into hospital by patient crew at the direction of hospital staff
- F. Patient crew will remove and dispose of PPE at the hospital at the direction of the Hazardous Materials Personnel, Hospital Epidemiologist, and Health Department or after being transported to the designated decontamination site or on the decontamination sheet at the rear of the unit based upon the current transport plan and local regulations. PPE will be removed using the CDC's PPE Doffing Procedures.  
<https://www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance.html>
- G. The gurney and all equipment will be considered infectious and handled with the appropriate PPE until properly decontaminated.
- H. The decontamination sheet, PPE, materials, and equipment will be collected and double bagged with Red Biohazard Bags at the ambulance observing body fluid precautions and disposed of in a properly labeled and hard sided Infectious Waste container.

#### **Cleaning Equipment and Transport Vehicles:**

- A. The following are general guidelines for cleaning or maintaining equipment and transport vehicles after contact with a patient with a suspected or confirmed emerging virus:
  - 1. Personnel performing cleaning and disinfection shall 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) shall be worn since tasks such as liquid waste disposal can generate splashes.
  - 2. A blood spill or spill of other body fluid or substance (e.g., feces or vomit) shall 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.
  - 3. An EPA-registered hospital disinfectant with label claims for viruses that share some technical similarities to the emerging virus and instructions for cleaning and decontaminating surfaces or objects soiled with blood or body fluids shall be used according to those instructions. After the bulk waste is wiped up, the surface shall be disinfected as described above.
  - 4. Contaminated reusable patient care equipment shall be placed in biohazard bags and labeled for cleaning and disinfection according to agency policies. Reusable equipment shall 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.
  - 5. Patient-care surfaces (including stretchers, railings, medical equipment control panels, and adjacent flooring, walls and work surfaces) are likely to become contaminated and shall be cleaned and disinfected after transport.

6. 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.

**Decontamination Procedures:**

- A. Don necessary EVD PPE according to CDC's Ebola Donning & Doffing Procedures.
- B. Lay impermeable decontamination sheet on the ground at the back of the ambulance and side doors and have Infectious Waste containers available.
- C. Clean up any body fluids and double bag (Red Biohazard Bags) cleaning materials placing those materials in Infectious Waste containers.
- D. Infectious Waste containers should be containers labelled "Class A Infectious Waste" and maintained separate from all other red bag waste.
- E. Double bag (Red Biohazard Bags) and treat bags and all disposable materials/equipment according to Class - A Waste Handling procedures and place into Infectious Waste containers.
- F. Place equipment including gurney antlers on decontamination sheet for proper disinfecting.
- G. Remove any contaminated materials from equipment and disinfect equipment using recommended disinfectant and place on clean sheet for drying.
- H. Properly treat and double bag (Red Biohazard Bags) all contaminated rags/wipes.
- I. Remove impermeable barriers from unit and double bag (Red Biohazard Bags) placing those properly labeled Infectious Waste containers.
- J. Fold decontamination sheets and properly dispose of in double red bag according to Class - A waste procedures.
- K. Place new contamination sheets out.
- L. Wipe down all surfaces inside ambulance and outside door handles with recommended disinfectant and dispose of according to Class - A waste procedures.
- M. Remove PPE following CDC Ebola PPE Doffing Procedures and dispose of according to Class - A waste Procedures.
- N. Using gloves fold decontamination sheets keeping the potentially contaminated top side on the inside of the folds and depose of according to Class-A waste procedures.
- O. Wash outside of ambulance in normal fashion and location using PPE.
- P. Leave all waste from transport with the receiving hospital for disposal.

**Follow-up and/or Reporting Measures:**

- A. First response and transport personnel shall be aware of the follow-up and/or reporting measures they shall take after caring for a suspected or confirmed emerging virus patient.
- B. First response agencies and transport services shall develop policies for monitoring and management of personnel potentially exposed to an emerging virus.
- C. Personnel with exposure to blood, bodily fluids, secretions, or excretions from a patient with a suspected or confirmed emerging virus shall immediately:



1. Stop working and wash the affected skin surfaces with soap and water. Mucous membranes (e.g., conjunctiva) shall be irrigated with a large amount of water or eyewash solution;
  2. Contact their supervisor and occupational health provider for assessment and access to post-exposure management services; and
  3. Report potential exposures to the Sacramento County Division of Public Health at (916) 875-5881
- D. Personnel who develop symptoms after an unprotected exposure (i.e., not wearing recommended PPE) at the time of contact with a suspected or confirmed emerging virus patient shall:
1. Not report to work or immediately stop working and isolate themselves;
  2. Notify their supervisor, who must notify the Sacramento County Division of Public Health at (916) 875-5881
  3. Contact occupational health/supervisor for assessment and access to post-exposure management services; and
  4. Comply with work exclusions until they are deemed no longer infectious to others.