

	1216	Ebola Virus Disease - Prevention and Control
Nor-Cal EMS Policy & Procedure Manual		Treatment Guidelines
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Approval: Jeffrey Kepple MD – MEDICAL DIRECTOR		SIGNATURE ON FILE

Authority

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

Resources

Protocol [14-0101 Infectious Disease Control Measures](#)

CDC – [“Interim Guidance for Emergency Medical Services \(EMS\)”](#) (dated October 28, 2014 and updated September 10, 2015)

Introduction

This protocol provides direction for all EMS providers to identify and protect themselves from patients with symptoms consistent with Ebola Viral Hemorrhagic Fever during emergency and non-emergency requests for service and transport. This policy has been revised in accordance with the Center for Disease Control (CDC) “Interim Guidance for Emergency Medical Services (EMS)”, dated October 28, 2014. The approach to Ebola Viral Disease is the template for all hemorrhagic viral diseases. Further, these guidelines can be modified for any emerging infectious disease. To this end, the CDC has designated an “Agent X” which stands for the next highly infectious and dangerous infectious disease.

*Please note if these patients need to be transported then refer to the Region III Transportation Plan which needs to be followed. Only as a last resort after consultation with the RDMHS, MHOAC, and EMS Medical Director shall local EMS providers transport these high-risk patients.

Background

1. Ebola is a viral hemorrhagic fever which reached epidemic levels in the countries of: Sierra Leone, Guinea, Liberia and Mali in 2014. The initial symptoms of Ebola appear suddenly and include:
 - A. Fever greater than 100.4°F.
 - B. Body aches.
 - C. Headache.
 - D. Fatigue.
 - E. Vomiting and/or diarrhea.
 - F. Abdominal pain.
 - G. Unexplained hemorrhage.
2. Patients with these symptoms who have recently traveled, within the last twenty-one (21) days, to or from the countries where EVD is epidemic, or are in close contact with persons who have recently visited countries where EVD is epidemic, are considered at high risk for Ebola.
3. The Ebola virus incubation period ranges from 2 to 21 days, from time of exposure to when signs and symptoms appear.
4. Ebola is spread through contact transmission, with infection resulting primarily from direct contact (through broken skin or mucous membranes) with blood, secretions, sweat, emesis, diarrhea, or other bodily fluids of infected people, and indirect contact with environments contaminated with such fluids.
5. Ebola does not enter intact skin, but those with breaks or cuts are more susceptible to infection. The Ebola virus cannot be spread via airborne transmission. The presence of upper respiratory symptoms (e.g. cough, sore throat, sneezing, nasal congestion, runny nose) lowers the clinical suspicion of Ebola.
6. EMS personnel shall consider a patient with signs and symptoms infectious. A patient without signs or symptoms is not contagious.
7. All prehospital providers involved in the care of a known Ebola patient must have received appropriate training and demonstrate competency in all Ebola related infection control practices and procedures; including but not limited to; donning and doffing personal protective equipment (PPE).
8. All prehospital providers involved in the care of a suspected Ebola patient or a high-risk patient must utilize all personal protective equipment prescribed in this policy, including but not limited to; covering all skin with appropriate impermeable devices.

Patient Assessment Procedure

1. Patient assessment begins with scene safety and use of proper personal protective equipment (PPE) on every patient encounter.
2. The use of standard PPE precautions, including eye protection and nitrile gloves, will be used on every patient contact.
3. To minimize potential exposures from droplet transmission, prehospital personnel shall remain at least three feet from the patient, while one person asks the "EVD (Ebola Viral Disease) Health Screening Questions" from at least three (3) feet away.
4. All prehospital providers shall ask the following two (2) "EVD (Ebola Viral Disease) Health Screening Questions," in order, at the start of every patient contact during epidemic outbreak:
 - A. **Has the patient traveled to or had contact with anyone who has traveled to Sierra Leone, Guinea, Liberia, Mali, or current epidemic outbreak regions in the last twenty-one (21) days?**
 - B. **Does the patient have any of the symptoms listed below?**
 - a. Fever.
 - b. Body aches.
 - c. Headache.
 - d. Fatigue.
 - e. Vomiting and/or diarrhea.
 - f. Abdominal pain.
 - g. Unexplained hemorrhage.

If the answer to questions 1 and 2 above is yes, then the patient has screened positive for the EVD (Ebola Viral Disease) health screening questions.

5. If a patient has screen positive for the health screening questions, the prehospital provider will immediately:
 - A. Don High Risk PPE, ensuring that all exposed skin is covered as described further in this protocol.
 - B. Ensure other prehospital providers have donned High Risk PPE.
 - C. Reduce unnecessary exposure of patient to others.
6. If the patient has screened negative to the health EVD (Ebola Viral Disease) screening questions, continue treating the patient per appropriate treatment protocol(s) and policy(s) as necessary.
7. In order to reduce potential exposures, the first arriving prehospital provider that determines a patient is positive for the EVD (Ebola Viral Disease) health screening questions shall don high risk PPE and may maintain care of the patient through transfer of care at the hospital.

The use of more than one or two prehospital personnel to provide direct patient care must be clearly necessary.
8. Upon arrival on scene, any additional providers will ask the first responding prehospital provider the results of EVD (Ebola Viral Disease) health screening questions, prior to moving within three feet of the patient. If the answers to the EVD (Ebola Viral Disease) Health Screening Questions are positive, only the initial care provider if possible, shall provide patient care.
9. Every prehospital provider shall ensure that every patient is asked the EVD (Ebola Viral Disease) Health Screening Questions.
10. Every ambulance transport crew shall assure that the results of every patient's EVD (Ebola Viral Disease) Health Screening Questions are communicated in the hospital report. The ambulance transport crew shall also document the time of the hospital notification report in their patient care report.
11. Every EMS provider shall document that the patient was asked the EVD Health Screening Questions, the responses provided by the patient, the full name and organization of those who asked the EVD Health Screening Questions and/or those who were advised of the results of the EVD (Ebola Viral Disease) Health Screening Questions in the patient care report.

Routine Patient Treatment Procedure

1. If the patient's EVD (Ebola Viral Disease) Health Screening Questions are positive, the patient is considered to be at high risk for Ebola. All prehospital personnel shall take the following actions:
2. All prehospital providers must don high risk PPE, including, but not limited to:
 - A. Surgical hood, extending to the shoulders (exempt if coveralls or suit provides).
 - B. Face shield.
 - C. Eye protection.
 - D. N-95 mask or P-100 particle respirator (mask).

- E. Impermeable coveralls or suit.
 - F. Impermeable gown.
 - G. Double glove with high cuff (high cuff second glove).
 - H. Have confirmed radio communications capability.
 - I. Leg and shoe coverings (exempt if coveralls or suit provides).
3. No skin shall be showing once a provider is in full High-Risk PPE.
 4. Prehospital providers shall designate roles and responsibilities to each provider on scene:
 - A. Safety Officer (Trained Observer):
 - a. This Safety Officer is familiar with the use of high-risk PPE and does not provide any direct patient care.
 - b. They monitor the donning of PPE, ensure safety of responders while engaging in patient care on scene, and monitor the safe doffing of PPE.
 - c. They are to remain separate from the patient by a minimum of three (3) feet.
 - B. Patient Care Leader:

The Patient Care Leader is responsible for providing direct patient care while in full high-risk PPE.
 - C. Patient Care Support:
 - a. The Patient Care Support position supports the patient care leader when a second care provider is needed.
 - b. This person shall don full high-risk PPE.
 - D. Ambulance Operator:
 - a. The Ambulance Operator drives the ambulance to the receiving facility. This person shall not provide any direct care and shall only don standard precautions.
 - b. The Ambulance Operator will remain with the ambulance while on scene of the event and prepare the ambulance prior to the patient being loaded (i.e. activating the exhaust vent, seal the operator's compartment, etc.).
 - c. The operator's compartment of the ambulance shall be separated from the patient care compartment by either closing all connections or separating with fluid impermeable shielding and activating the exhaust vent.
 - d. The Ambulance Operator assumes the role of Safety Officer once the patient is secured in the ambulance at the scene until arriving at the hospital and being relieved by hospital staff.
 5. Prehospital providers shall immediately notify the MHOAC, if their patient's EVD (Ebola Viral Disease) Health Screening Questions are positive. Contact shall be made while on-scene over the phone. This information shall not be transmitted over any radio channel.
 6. The first arriving prehospital providers who have made patient contact and donned the appropriate high-risk PPE shall maintain patient care throughout the transport, to minimize potential provider exposure to the patient.
 7. Treat the patient according to the appropriate protocol. Use caution when performing invasive procedures (e.g. intubation, IV placement). Base hospital contact shall be made to clarify any clinical questions.
 8. While Ebola is transmitted through bodily secretions, prehospital providers must be aware that some procedures such as nebulization treatments, the use of suction devices, and CPAP can aerosolize bodily fluids such as saliva, causing the virus to be transmitted through aerosols. If it is clinically necessary to perform these treatments, always wear a face shield and safety glasses, as well as an N-95 or P-100 particle respirator and fluid impermeable gown.
 9. Prehospital transport providers shall notify the receiving hospital via telephone as soon as practical after determining that patient's EVD (Ebola Viral Disease) Health Screening Questions are positive.
 10. Prehospital transport providers shall ask the hospital for any special arrival instructions, such as; parking location.
 11. In order to reduce the risk of potential exposure, family members or companions shall not be allowed to travel with the patient to the hospital in the ambulance.
 12. 911 EMS patients that have positive EVD (Ebola Viral Disease) Health Screening Questions shall be transported to the closest appropriate emergency department in accordance with destination policy. This may necessitate base hospital contact.

Special Considerations

Presence of Biological Fluids and Positive Health Screening

In the event that a patient has responded positively to the EVD Health Screening Questions and there are bodily fluids present, the risk to the provider is increased. In such cases, the following actions apply in addition to those described above:

1. The presence of biological fluids represents an increased risk to providers. Therefore, the initial provider shall retain patient care only using extreme caution.
2. A specially designed transport ambulance may be dispatched to the scene. This unit shall be request through the 911 ambulance communication center of the jurisdiction in which the call takes place.

Monitored Patients

1. Monitored Patients are those patients that are under the supervision of the Public Health Officer but are not necessarily symptomatic for Ebola.
2. In the event that the Public Health Officer orders transfer of a Monitored Patient to a designed hospital. The EMS Duty Chief shall initiate and support the transfer process.
3. The monitored patient shall be transported to a destination that has been prescribed by the Public Health Officer.

Interfacility Transfers

1. Transfers to Designated Regional Ebola Assessment Hospitals.

In some instances, patients may be transferred to regional Ebola specialty centers from local Hospitals.

Refusal to Seek Care

In the event that a patient meets screening criteria refuses treatment and/or transport, the Incident Commander shall immediately contact the Law Enforcement and the Public Health Officer or MHOAC.

Arrival at Hospital Destination

1. Upon arrival at the hospital, prehospital transport providers shall maintain patient care in the closed ambulance until offload instructions are given to them by the designated EMS Crew Liaison (from the hospital).
2. Prehospital transport providers shall follow all instructions given by the EMS Crew Liaison, until they have completed turnover of patient care and been relieved.
3. After being in contact with a high-risk patient, prehospital personnel shall only remove PPE after decontamination and when instructed to do so by the EMS Crew Liaison and while under the observation of a Trained Observer, in an area designated by the hospital.
4. The transport ambulance shall be considered out of service and provide any further patient transportation until it has been properly decontaminated in accordance with all applicable state and federal regulations.

Exposure and Potential Exposure

If prehospital provider's exposed skin or mucous membranes come into direct contact with a suspected Ebola patient's blood, body fluids, secretions, or excretions, the prehospital provider should immediately take the following actions:

1. Immediately transfer patient care to a qualified provider in full High-Risk PPE.
2. Wash the affected skin surfaces with soap and water and mucous membranes (e.g., conjunctiva) should be irrigated with a large amount of water or eyewash solution.
3. Report exposure to their direct supervisor and their organization's designated infection control officer, based on their organization's Illness and Injury Prevention Program and Blood Borne Pathogen Protection Program practices.
4. Take whatever steps as directed by their employing organization or health care provider.

Vehicle and Personnel Decontamination

1. The initial prehospital personnel that have entered the scene and do not remain in patient care shall doff PPE under the observation of a trained observer. This may necessitate requesting additional resources at the discretion of the Incident Commander.
2. The Public Health Officer or MHOAC will provide specific guidance to the prehospital provider.

3. This guidance will be determined on a case by case basis.
4. This guidance will be the minimum protective actions that crews are expected to follow, based on the latest CDC and Cal-OSHA standards.

Transport Ambulance and Personnel

1. Prehospital transport providers will secure the ambulance and its contents, after the patient transport is complete. This includes placing all used equipment into the vehicle and locking all doors and compartments with the keys inside on the driver's seat. Prehospital care providers shall not re-enter the vehicle and may not allow others to access the ambulance.
2. The Public Health Officer or MHOAC will provide specific guidance to the prehospital transport provider.
3. This guidance will be determined on a case by case basis.
4. This guidance will be the minimum protective actions that crews are expected to follow, based on the latest CDC and Cal-OSHA standards.

Equipment

1. The prehospital provider agency is responsible for ensuring that the vehicle and all equipment is decontaminated in accordance with Federal, State, and Local requirements.
2. Provider agencies should consider hiring a medical or hazardous material waste decontamination service to properly clean their vehicles and equipment. Cal-OSHA recommends a professional cleaning company with the ability to clean Level A contaminants disinfect transporting vehicles and equipment.
3. Neither the ambulance nor equipment may be placed back into service until it has been properly decontaminated or replaced.

Required Reporting

1. Each EMS provider agency treating a patient under the provisions of this protocol shall provide copies of the patient care records, and any additional documents or reports that were utilized (ICS 214's etc.).
2. Because of the high risk and unusual nature of these responses. Each response shall be reviewed by the Public Health Officer or MHOAC and EMS Medical Director to determine protocol compliance and to assess if any modifications should be made this or related policies in order to ensure provider safety.