5th District Medical Response Coalition – Model Emergency Protocol

EMERGENCY PROTOCOL
Supplement to State Communicable Disease Protocol

Special Considerations for Suspected Patients with Ebola Virus Disease (EVD)

**Purpose:** This emergency protocol is an addendum to the Michigan State Communicable Disease Protocol and is intended for patients that meet the current case definition for suspected Ebola Virus Disease (EVD) as established by the Centers for Disease Control and Prevention (CDC).

**Authority:** Michigan Public Health Code (MCL 333.20919)

**Background:** EVD is a viral infection that is known to be contagious and associated with a high mortality rate. It is transmitted between people through direct contact with an EVD patient’s blood or other body fluids. There is no evidence that EVD is transmitted by the airborne route or through casual exposure. As such, current personal protective equipment (PPE) guidelines call for standard contact and droplet precautions to be followed with certain enhancements recommended by the CDC. CDC guidelines for healthcare worker PPE use may be revised. EMS personnel and agencies should frequently monitor the CDC website for updates on PPE and other related guidance at [www.cdc.gov/vhf/ebola](http://www.cdc.gov/vhf/ebola). Additional information on EVD is available through the Michigan Department of Community Health at [www.michigan.gov/ebola](http://www.michigan.gov/ebola). EMS agencies should monitor the Michigan Health Alert Network (MI-HAN) for further communications.

**Indications:** This protocol should be implemented for any case meeting the following criteria or for expanded/revised criteria as subsequently published by the CDC.

1. **Clinical criteria**, which include feeling feverish (subjective) or a fever of greater than 38.0 degrees Celsius or 100.4 degrees Fahrenheit, OR Ebola-compatible symptoms such as headache, weakness, muscle pain, vomiting, diarrhea, abdominal pain, or hemorrhage; **AND**
2. **EVD Risk Factors**
   a. Within the past 21 days, the patient has traveled to West Africa (Sierra Leon, Liberia or Guinea) or other EVD outbreak areas as identified by the CDC; **OR**
   b. Within the 21 days prior to the onset of symptoms, the patient has had close contact with a patient known or suspected to have EVD. This includes household contacts of patients with EVD as well as healthcare workers caring for an EVD patient. It also includes patients having brief direct contact (e.g., shaking hands) while not wearing PPE. The CDC does not consider casual contact such as walking by a patient with EVD to constitute a close contact.

NOTE: If in doubt, contact Medical Control for guidance.
PSAP/EMD Screening: Public Safety Answering Points (PSAPs) and/or Emergency Medical Dispatch (EMD) Centers should adopt a screening process for EVD as approved by the EMS Medical Director. Any PSAP/EMD with a suspected EVD patient should be communicated to all responders, preferably by electronic messaging as available.

Asymptomatic Individuals in EVD quarantine: There is a potential for asymptomatic individuals who are in EVD quarantine to experience a medical emergency unrelated to EVD. In such cases, after confirmation that they do not meet initial screening criteria, care should proceed in accordance with standard EMS protocols (including CPR, if indicated) using appropriate PPE based on the clinical circumstances.

MRF/EMT/SPECIALIST/PARAMEDIC

1. **Detection:** Initiate EVD screening for any patient complaining of a fever and headache, muscle pain, vomiting, diarrhea, abdominal pain, or unexplained bleeding by asking:
   a. Have you traveled to or been in West Africa (Sierra Leon, Liberia or Guinea) within the past 21 days? (or other CDC-identified active Ebola country).
   b. Have you been in close contact with anyone that has Ebola or any body fluids of anyone with Ebola? (See above Indications Section for clarification)

   If the answer to either question is yes, initiate this protocol

2. **Isolation:** Immediately isolate the patient from all others.
   a. Do not touch the patient, come within 3 feet of the patient, or contact any blood or body fluids without proper PPE.
   b. Limit number of EMS personnel in the area to the absolute minimum needed (rarely more than one).
   c. Direct all other persons (e.g., family members, bystanders) to leave the patient area.
      i. Advise people with close contacts to patient to remain in general area for interviews with local public health agency.
      ii. EMS personnel should obtain initial contact information for people with close contact with patient for use by local public health agency.

3. **Protection:** The proper and safe donning, decontamination, doffing, and disposal of PPE is important for personnel to remain safe. Follow current CDC guidelines.
   a. Don proper PPE
      i. If patient is clinically stable and no visible evidence of blood or body fluids, EMS personnel should at a minimum wear:
         1. Face shield & surgical face mask
         2. Impermeable gown, Tyvek®/Tychem® suit, or firefighter turnout gear
         3. 2 pairs of gloves
      ii. If patient is unstable and/or with evidence of blood or body fluid exposure risk, personnel should use:
         1. Tyvek® or Tychem® (preferred) suit with hood and integral boots
         2. Additional foot/leg covers
         3. Double gloves
4. Hooded, Powered Air Purifying Respirator (PAPR), fit-tested N-95 respirator with full-face shield, or fit-tested air purifying respirator (APR).

5. A full-length gown (to below knee) may be used in place of full-body suit or may be added for additional protection.

   iii. Firefighter PPE Option: Firefighter turnout gear may be worn for the initial assessment of a possible EVD patient and when the patient does not present any visible blood or body fluid exposure risk provided all skin is covered. PPE use includes firefighting coat, pants, boots, hood and double gloves. Respiratory protection should include a fit-tested N-95 with a full-face shield. The use of self-contained breathing apparatus is not recommended.

b. Decontamination and Doffing of PPE
   i. Safe and proper doffing (removal) of PPE is considered one of the most important personnel protection actions and should be performed carefully. There is no need for hasty doffing of PPE.
   ii. Frequent washing of gloved hands using alcohol-based hand rub (ABHR) should be used frequently prior to doffing and at each stage of the doffing procedure.
   iii. A separate individual should supervise and direct all aspects of the decontamination and doffing process.
   iv. Prior to doffing of PPE, personnel should undergo decontamination using an appropriate virucidal agent considered effective for a non-envelope virus (if available) on any area of the PPE that may have become contaminated with blood or body fluids. Alternatively, standard (10%) bleach solution may be used but should remain in place for 10-minutes.
   v. Following PPE decontamination (if indicated), doffing should be done in a systematic, and step-wise process under the direction of a dedicated doffing supervisor.
   vi. All disposable PPE items should be double bagged in a biohazard bag and secured. Reusable PPE should be double bagged separately and should undergo terminal decontamination.
   vii. As soon as practical, personnel who have cared for an expected EVD patient should shower with soap and water.

4. Treatment: Care provided to a suspected EVD patient should consist of the minimal treatment needed for the clinical condition. It is anticipated that most patients will present early and will have minimal need for pre-hospital care.
   a. In general, current EMS protocols should be followed as indicated
   b. If patient has no shortness of breath, consider asking patient to don a surgical (not N-95) mask to minimize exposure to EMS personnel.
   c. If patient is short of breath or if hypoxia is suspected
      i. Apply a non-rebreather mask.
      ii. Avoid use of nasal cannula unless able to be used with surgical mask.
      iii. Monitor oxygen supply, especially if extended scene time.
   d. Use extreme caution to minimize body fluid exposure if performing suctioning or if patient is vomiting.
e. **CARDIAC ARREST:** It is very unlikely an EVD patient will present in cardiac arrest. However, if a suspected EVD patient develops cardiac arrest, CPR shall **not** be performed provided BOTH indications for this protocol (Clinical **AND** EVD Risk Factors) are met. Contact Medical Control.

5. **Notification:** If a patient meets the indications for this protocol, EMS personnel should make the following notifications as soon as possible.
   a. Notify all other responding units
   b. Notify Medical Control
   c. Contact 5th District Regional Medical Coordination Center (MEDCOM)
      i. By Telephone: 269-226-3366 (preferred)
      ii. By MPSCS Radio: MEDCOM5
   d. **Medical Control should notify the local public health agency and MDCH**

6. **Transportation:**
   a. It is anticipated that most suspected EVD patients will be clinically stable and be able to remain on scene until a specialized Biosafety Transportation Unit (BTU) arrives on scene (see below).
   b. Unless patient is determined to be unstable (after consultation with medical control), the BTU should be used to transport the patient to a designated EVD Treatment Facility.
      i. Contact the Regional Medical Coordination Center to request the nearest RMCC.
      ii. The EVD Treatment Facility destination should be determined in consultation with Medical Control and the Regional Medical Coordination Center.
      iii. Note: EMS personnel should be prepared for the patient to remain on scene for up to 2-hours until arrival of the BTU.
   c. If patient is considered unstable AND after consultation with Medical Control, a suspected EVD patient may be transported to an EVD Receiving Facility (see below).

**PARAMEDIC**

7. **Treatment:** Paramedic treatment should be the minimum required to address life threatening medical problems.
   a. Routine IV/IO access should **not** be performed.
   b. Avoid administering nebulized medications unless clearly indicated.
   c. Minimize all procedures involving needles.
   d. Administer acetaminophen per protocol for fever.
   e. Contact Medical Control for additional direction.

8. **Transportation:** It is anticipated that most suspected EVD patients will be sufficiently clinically stable to await transportation by a specially trained and equipped Biohazard Transportation Unit (BTU).
   a. Transportation should be to a designated EVD Treatment Facility in consultation with Medical Control and the Regional Medical Coordination Center (MEDCOM).
   b. Use of a Biosafety Transportation Unit
i. The BTU will be provided by regional EMS agencies using guidelines developed in collaboration with the 5th District Medical Response Coalition.

ii. The appropriate BTU should be requested via the Regional Medical Coordination Center (MEDCOM).

iii. The ambulance being used for transport should be configured to minimize potential vehicle contamination in accordance with agency policies.
   1. Remove all non-essential equipment from patient care compartment.
   2. Fully isolate the patient care compartment from the vehicle cab.
   3. Install protective sheeting in patient care compartment in accordance with agency policies.

iv. BTU Paramedics transporting a suspected EVD patient should don PPE as follows:
   1. Scrubs (or similar clothing) should be worn instead of standard EMS uniform.
   2. All personal items (jewelry, watch, etc.) should be removed and placed in vehicle cab.
   3. Tychem® (not Tyvek®) full-body hooded suit.
   4. Preferred respiratory protection is a hooded Powered Air-Purifying Respirator (PAPR) instead of an N-95.
   5. Disposable boots/foot covers.
   6. Double gloves.
   7. An additional fluid impermeable surgical gown should be used.
   8. Upon completion of the transport, paramedics should perform decontamination and careful, supervised doffing of PPE as described above and in accordance with agency policies.

v. Two specially trained BTU paramedics wearing appropriate PPE (see above) should accompany the suspected EVD patient in the patient care compartment.

vi. If possible, the patient should don a Tyvek® (not Tychem®) suit for transport. If not practical, patient should be wrapped in a fluid impermeable sheet.

vii. Ambulatory patients should be permitted to walk to ambulance.

viii. Both the patient and paramedics should utilize all appropriate protective restraint systems in the ambulance.

ix. No procedures involving needles shall be performed in a moving ambulance.

x. Transportation should not be initiated until the EVD Treatment Facility is confirmed and has indicated readiness to receive the patient.

xi. Upon arrival at EVD Treatment Facility, the patient should be transferred to receiving personnel in accordance with Treatment Facility policies, typically outside of the facility.

xii. Once transportation has been completed, the EMS vehicle should be decontaminated in accordance with EMS agency and CDC guidelines.

c. Transportation of unstable patients by non-BTU ambulance.

i. After consultation with Medical Control, unstable suspected EVD patients may be transported by a non-BTU ambulance to an EVD Treatment Facility with vehicle decontamination as noted above.
ii. To the extent practical, the transporting ambulance and crew should follow the protocol described above for the BTU.

iii. Transportation should be to a designated EVD Treatment Facility unless otherwise directed by Medical Control.