

EMS EBOLA / INFECTION CONTROL GUIDELINES

Last Updated: October 21, 2014

Changes Since Last (10/17/2014) Distribution

1. These changes incorporate the changes in the CDC advisory of 10/21/2014.
2. Our goal now is to provide complete full skin coverage for medics in these situations.
3. A Tyvek suit with PAPR, double glove and shoe covers is now our best practice. (page 3)
4. Supervisor will bring a supply of Tyvek suites/PAPRs to the scene. (page 3)
5. No family members will be allowed to accompany a suspected Ebola patient in the ambulance. Student participation in care of these patients will be avoided. (page 3)
6. Use a trained observer (your supervisor or an experienced medic) to coach and monitor PPE application and removal. This is a CDC best practice.
7. County health departments and Emergent occupational health can be used as resources.
8. Additional hands-on-training is being set up. Completion by 12/31.
9. We are establishing a company-wide Infectious Disease Team. *[Policy changes are highlighted]*

There continues to be much publicity about Ebola in the media. This document is a guide about our approach to caring for patients who we suspect have the Ebola virus.

Risk

The risk for Ebola exposure in Michigan is extremely small. As of this writing, there have been 2 patients (both healthcare workers) who were infected in the United States (in Texas) out of 300 million people. An handful of other patients have been brought to the U.S. for inpatient treatment. These numbers may change and we should all continue to monitor the situation.

Identification of Ebola – Communications Center:

EMD Questions. On October 16th, we implemented additional questions in our EMD protocols in an attempt to identify patients who are exhibiting signs and symptoms of the disease. As a part of our initial EMD case entry, some patients are being asked about flu-like symptoms or fever. If the answer to these questions is yes, the caller is then asked about travel outside of the country. If any of this leads to a concern about Ebola, it will be put in the CAD notes and the dispatcher will instruct the crew to check the notes on their MDT. If there is an MDT failure, the dispatcher will advise the crew by radio.

Neither communications center staff nor responding paramedics/EMTs have the tests necessary to actually diagnose Ebola. We want to avoid using a diagnosis of “Ebola” on the radio. However, dispatchers should make sure that the symptoms are given to the responding crew: Example: *“Your patient has flu-like symptoms, a fever of 102° and has travelled from West Africa within the last week”*.

First responder agencies will also be notified of this information in the same way.

Responding medics should understand that we do not provide EMD instructions in some of the communities we cover. (Calhoun, Lenawee and Monroe counties, as well as several Oakland County cities do not transfer calls to us for EMD). However, any information they give us will be forwarded to the crew in the CAD notes.

Note: When the HIV/AIDS epidemic occurred 30 years ago, some patients did not volunteer the information about their condition out of fear they would not be treated. This may occur with Ebola symptoms as well. As a result, accurate information may not be received from the caller.

Identification – Road Medics:

According to the Centers for Disease Control, the following indicators are consistent with Ebola:

- Flu like symptoms (fever, muscle pain, vomiting, diarrhea, abdominal pain, unexplained hemorrhage/bruising). If any of these are present...↓
- Ask if the patient has travelled to West Africa in the last three weeks, or has been in contact with anyone who has traveled there. If this is confirmed...↓
- Take the patient's temperature. If it is greater than 100.4°... the patient is presenting consistent with a patient who might have the Ebola virus. Isolation and universal precautions should be applied/used.
- If all three indicators are present, you should back away and don personal protective equipment (PPE). See below. Thermometer probe cover to be disposed of in the sharps container.
- If all three indicators are not present, your patient is not displaying with symptoms of Ebola. Handle like you would other patients.

If Indicators Are Present, What to do?

Disease transmission.

- The CDC advises that Ebola does not spread through the air. (It also does not spread through casual contact, air, water or food).
- The current science indicates that it is transmitted by direct contact with the body fluids of a person who is sick with symptoms. Body fluids include saliva, mucus, vomit, feces, sweat, tears, breast milk, urine and semen. It can enter the body through broken skin or unprotected mucous membranes (your eyes, nose and mouth).
- Infected body fluids can be temporarily transmitted to surfaces (floor, walls, furniture, objects, your stretcher or linen, and utensils) and then retransmitted to health care

workers. Note: The virus survives for only a few hours on dry surfaces. It can also be transmitted through a needle stick.

Preparation for a suspected Ebola during a planned, non-emergency transfer .

- This might include a hospital to hospital, or airport to hospital transport.
- It will be known in advance.
- Your supervisor will be notified and he or she will assist you in preparing the patient compartment of your ambulance by placing plastic covering on walls, floor, window between the driver and patient compartments, stretcher and equipment. This will make ambulance decon easier at the end of the transport and it will keep the driver compartment clean.
- This additional vehicle protection may not be practical during an unplanned 9-1-1 call.

Isolation.

- You should minimize the number of personnel in contact with the patient and the local environment. No family members will generally be allowed to accompany the patient in the ambulance to the hospital. EMT/Paramedic student exposure should be avoided – have supervisor bring the student back.

Precautions – Tyvek, PAPR and more.

- Notify your supervisor so that he or she can respond to the scene and to the hospital to assist you with decontamination.
- Seal window between driver and patient compartment to maintain a clean drivers compartment. Consider asking fire or police to drive the ambulance to hospital with our medics in back.
- Gown up using a Tyvek suit with hood and a PAPR (Powered Air Purifying Respirator). The goal is to have no skin exposure. In the absence of a Tyvek suit, cover up with gown, PAPR, disposable surgical mask/face shield and head cover. In all cases, double glove and wear boot covers. (Each ambulance currently has gowns, PAPR and other protective items. Your supervisor will bring out Tyvek suits and additional supplies for you). Your goal is to have complete skin coverage.
- Due to an insufficient supply of Tyvek suits and PAPRs, your supervisor will stock multiple sizes of these suits and bring them to you at the scene. We have more on order but there is a national backlog.
- Put on your PPE (Personal Protective Equipment) in a separate area outside of the patient location, even outside. Use a trained individual to monitor your application of PPE and safe removal (this is your supervisor or an experienced partner).

- Always use safe infection control PPE practices. Avoid direct skin contact with blood or other body fluids.

Treatment, medical direction, notification.

- Temporarily treat the patient in place and contact on-line medical direction prior to transport. This contact will be for notification purposes and to receive instructions about the appropriate destination. Then transport the patient to the designated destination. Limit the number of care givers as well as the use of needles and other sharps as much as possible. Handle sharps with extreme care. **Put them in the sharps container.**
- Notify the receiving hospital as soon as possible by radio before arriving. These patients will be handled differently by the hospital. Do not bring the patient out of the ambulance until instructed by the hospital to do so. Follow their specific instructions.
- Other people involved. Make note of anyone you know who has been with the patient or provided pre-hospital medical care. This may be provided to the CDC in the event an infectious disease is confirmed.
- **Unresolved public health questions.** Supervisors are encouraged to contact the county public health department for further information and/or guidance, day or night.

Decontamination:

Your vehicle will be taken out of service when you arrive at the hospital. Your supervisor will respond to the hospital with additional decontamination supplies. You will need to clean/decon your ambulance at the hospital before leaving.

- If you have visible body fluids on your person, you should begin decontamination procedures with guidance by hospital leadership. If not, you should remain gowned up and proceed with decon of your vehicle after the supervisor arrives.
- Vehicle decontamination. You will need to wear PPE for vehicle decon. (If you have already removed your PPE, **one medic should** don new PPE again.) The supervisor will bring additional cleaning supplies and bags to you.
 - **If the window (between front and back) has been pre-sealed, the drivers compartment from the ambulance is likely not contaminated.**
 - Clean any spills of blood or bodily fluids with germicide spray until all are removed. Soak with germicide and allow to sit wet for at least 10 minutes before drying.
 - Clean any equipment used or exposed the same way.

- Use **germicide** spray on the floor, walls, stretcher, stretcher cushion, compartments, seats, handrails, ceiling and door handles.
- Clean windows with window cleaner. Remove all laundry and waste; dispose of it properly.
- **Personal decon.** Use the buddy system if possible. **Use a trained monitor (your supervisor or an experienced partner) to monitor safe removal of your PPE.** Remove your Tyvek suit, gloves, face mask, eye protection, head cover and shoe covers **very carefully**, and in accordance with CDC guidelines. These guidelines have been added to the Emergent LMS system and all road staff must view this video. For additional information, you can view the CDC guidelines at:

<http://www.cdc.gov/vhf/ebola/pdf/ppe-poster.pdf>

Again, use the buddy system/**monitor** when possible for removing PPE. Your uniforms should be removed and will be replaced. The hospital or your supervisor will provide you with temporary clothing (possibly scrubs). Dispose of your uniform, and all gowns, gloves, etc. in a special hospital-provided container. These will be destroyed. If the special container is unavailable, use the large-size red bag provided in your ambulance and seal it. Turn it over to your supervisor for proper disposal.

Wash up thoroughly at the hospital emergency department **in accordance with their instructions.**

We encourage all staff members to review all of our infection control policies and procedures on the Staff Intranet: www.hva-staff.org

- **Vehicle Quarantine at division support facility.** **If the drivers compartment of the ambulance has remained a clean area, it should be driven back to the central support facility (Jackson, Ann Arbor, Plymouth, Troy).** If the driver compartment has been contaminated, one medic will remain **in PPE** and drive the vehicle in. The vehicle will be quarantined for 72 hours – or – it may be subject to additional cleaning or application of a Zimek machine, if available. If quarantined, the vehicle should be clearly marked and dated by the Supervisor (using tape, signs). Following vehicle decontamination, proceed with the final personal decontamination practices above.

Follow Up by Emergent Health Partners, the Hospital and the CDC.

We will communicate with the hospital, **the county health department**, the CDC, **and our occupational health consultants (Heaney Group)** and with you about any additional precautions you must take. Your patient will be tested for Ebola and other infectious diseases and the results will be shared with you as soon as possible.

Practice careful hygiene day to day, stay healthy.

- Wash your hands with soap and water or an alcohol-based hand sanitizer frequently.

- Avoid direct skin/membrane contact with blood and body fluids.
- Stay healthy. Consider receiving a flu shot (provided free by EHP to all employees and spouses).

Other Questions and Answers:

Q. What are the specific countries of origin in west Africa?

A. The specific countries in west Africa and number of cases are Liberia – 3,924, Sierra Leone (2,789), Guinea (1,298), Nigeria (20) and Senegal (1). About half of all cases result in death. Half of the patients have survived.

Q. How long has the disease been known?

A. It was first discovered in 1976. The first confirmed case in the United States was on September 30th of this year.

Q. How is the virus spread?

A. It is spread through broken skin or unprotected mucous membranes.

Q. What are the symptoms?

A. Symptoms may appear anywhere from 2 to 21 days after exposure to Ebola. The average is 8 to 10 days after exposure. Symptoms include fever greater than 100.4°F, severe headache, muscle pain, weakness, diarrhea, vomiting, abdominal pain, or unexplained bleeding/bruising. Other symptoms may include chest pain, shortness of breath, or confusion. Severe symptoms may include jaundice, severe weight loss, shock and multi-organ failure.

Q. Other than the patient, where can the virus exist?

A. The virus can exist on other surfaces for as few as 3 hours or as long as 72 hours, depending on quantity, and whether it is dry or in liquid form. It can survive post-mortem for a longer period.

Surfaces include needles/syringes, bandages, clothing, pillows, sheets and other bedding, surfaces such as furniture, stretchers, walls (home and interior of ambulance), floors.

Q. What cleaners kill the virus?

A. **Our germicide cleaners** kill viruses and also kill Ebola. A 10/1 water/bleach solution also works (but also ruins biomedical equipment such as Lifepak cases, etc.)

Germicide should be used liberally to coat the contaminated items and it should be allowed to soak for at least 10 minutes or longer.

Q. How will our treatments evolve?

A. The CDC guidelines are evolving. We continue to define our own procedures based on evolving best practices as more information becomes known.

Q. How many Tyvek suits do we have in stock?

A. In total, we have about 400 Tyvek suits in stock, companywide. These suits come in 6 sizes. Given the different sizes, there are not enough suits to stock every ambulance. As a result, supervisors in each area will stock a variety of suits and bring them to you at the scene. As a backup, ambulances carry gowns, masks/face shields, N95 masks, shoe covers, head covers and gloves. All of these provide protections. The goal is to have complete skin/membrane coverage.

Q. How will we train on PPE?

A. We are currently determining the best and fastest way to provide training safely in donning and doffing these suits for our paramedics and EMTs. You should view on-line CDC training videos and slide presentations about this topic. Additional training information/schedules will be provided shortly and our goal will be to have everyone receive hands-on PPE training by 12/31. The CDC has now requires mandatory training for all healthcare workers and we will provide that training for you.

Q. Infectious Disease Team.

A. In addition to these guidelines, Emergent will be forming a company-wide *Infectious Disease Team*. The team will be specially trained and equipped to transport patients with known communicable disease. This team will be multi-county, and will be activated like our TEMS, HAZMAT or confined space teams. Although the team might not have time to respond to a 9-1-1 call, it will be used for inter-facility infectious disease patient transfers. These medics will be experts in the use of PPE, vehicle protection, and decontamination. They might also lead ongoing paramedic and EMT PPE education and compliance training.

If you have suggestions about this team, or if you would like to participate in this multi-county team, contact your division vice president or manager.

Questions and Suggestions from Staff:

As always we encourage questions, information and suggestions from everyone on our staff about this topic. The information about Ebola is developing and this policy will be updated over time. Please share your questions or input with your Supervisor, Manager or Division Vice President.

Web links for further information:

Ebola: #FactsNotFear – Dispelling Myths About Ebola – WZZM Television

<http://www.wzzm13.com/longform/news/health/2014/10/15/ebola-facts-not-fear/17249617/>

CDC Ebola Website:

www.cdc.gov/ebola

World Health Organization Ebola Website:

www.who.int/csr/disease/ebola/en/

Medical Control websites for additional information and local recommendations:

Washtenaw-Livingston

http://www.ewashtenaw.org/government/departments/medical_control_authority

HEMS (Wayne County)

<http://www.hems.org>

Monroe County MCA:

<http://www.mercymemorial.org/Main/MonroeProtocols.aspx>

Oakland County

<http://ocmca.org>