HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

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Title:	Emergency Medical Services / Ambulance Services		
Applies To:	Ambulance Staff / Health Care Workers		
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1. PURPOSE:

1.1 This document provides Emergency Medical Service (EMS) providers in implementing best infection prevention and control recommendations and practices in their daily routines and work environment, and protect EMS providers, patients, and other healthcare workers from potential infections.

1.2 To prevent exposure of personnel to blood and other body fluids, and infectious agents during transportation and provision of care

2. DEFINITONS:

2.1 Emergency Medical Service (EMS) is at the front line of medical care, having high risk of exposure to patients with known or unknown infectious diseases.

2.2 The ambulance is a mobile patient care environment. It is generally divided into two spaces: the driver area and the patient care area. Patient care equipment are stored in enclosed compartments in the ambulance. Air circulation in the vehicle is generally rapid, low-velocity airflow. Some ambulances have built-in high-efficiency particulate air (HEPA) filters which vary among ambulance manufacturers. There is also an exhaust fan to assist in air exchange. These air handling systems basically place EMS providers at low-risk for Mycobacterium Tuberculosis (MTB). The floor and walls of the ambulance are constructed for ease of cleaning.

3. POLICY:

3.1 Standard Precautions must be observed by ED Healthcare worker for protection against exposure to the blood-borne pathogens especially Hepatitis B and C and HIV.

3.2 Airborne Precautions must be utilized in cases of pulmonary tuberculosis, Chickenpox and measles.

3.3 Droplet Precautions must be utilized in cases of meningitis and other droplet transmissible infections

3.4 The individuals exposed are not only the paramedics and emergency care personnel associated with the transport of patients but also the various first responder components. Besides an officer incurring direct contact with individuals during restraint for arrest, those individuals involved in the collection and inventory of property and evidence may have contact with infectious agents.

4. PROCEDURE:

4.1 En Route Communication

4.1.1 As part of the initial response protocol, most communication dispatch centers will provide basic incident information to the responding units. Instruct all providers to adhere to Standard Precautions, which include treating all patients and body fluids as potentially infectious.Transmit information suggestive of an airborne/droplet disease.

EMS personnel will give the Emergency Department (ED) the patient history, physical assessment vital signs, medication listing, and all elements of care provided during the transport.

4.2 Field Care: Care is frequently in the outdoors and in all types of weather and circumstances. Such circumstances may increase the risk for patient infection because of wound contamination or equipment contamination at the location. Due to the environment in which care must be rendered, Intravenous (IV) starts and wound care may be undertaken in less-than-ideal (aseptic) conditions.

4.2.1 Exert all efforts in properly preparing the insertion site for IV start.

4.2.2 Instruct field personnel to communicate to the ED when circumstances of IV access have been particularly difficult.

4.2.3 Generally, remove IV lines and dressings placed in the field in the ED and replace within 24 hours

4.2.4 ED staff need to assess each patient carefully for wound contamination (i.e., oil, chemical, debris) in all patients transported from an accident scene.

4.2.5 Endotracheal tubes and laryngoscopes are used under difficult conditions in most cases. Blades and scopes are stored in a variety of ways:

4.2.5.1 Employ a method of storing and carrying equipment in a way that would minimize potential contamination and compromise of aseptic field.

4.2.5.2 Clean and disinfect non-disposable blades using high level disinfection.

4.2.6 Follow safe injection practices.

4.2.7 Consider newer airway management equipment and procedures that reduce the complications of infections, such as the use of non-invasive ventilators like the continuous positive airway pressure (CPAP) devices.

4.3 Use of personal protective equipment (PPE). Standard Precautions

4.3.1 Gloves

4.3.1.1 Wear gloves when anticipating any contact with blood or other potentially infectious materials, mucous membranes, and non-intact skin; when performing patient care procedures; or when handling or touching contaminated items.

4.3.102 Use heavy-duty utility gloves when cleaning contaminated equipment or surfaces or when disposable gloves are insufficient.

4.3.1.3 Use leather gloves for extrication and urban search activities.

4.3.2 Mask

. 4.3.2.1 Wear mask when there is suspicion that a patient may have airborne- or droplet-transmissible disease. The basic rule is "fever and a rash, use a mask".

4.3.2.2 Make all efforts to contain aerosolized particles exhaled from patients.

4.3.2.3 Place a mask on patient suspected or having or diagnosed with MTB.

4.3.2.4 Administer oxygen via a non-breather facemask for patients exhibiting acute respiratory distress. For those who are not in distress, place a surgical mask.

4.3.3 Eyewear

4.3.3.1 Wear protective eyewear in conjunction with masks when it is reasonably anticipated that there may be the opportunity for gross splatter of blood and other potentially infectious materials into the eyes, nose, or mouth.

4.3.3.2 Use full respiratory protection (i.e., surgical mask, eye protection, and gloves) when examining or treating potentially high-risk respiratory patients. Wear all these three items as an ensemble to qualify as full respiratory protection.

4.3.4 Protective clothing: Wear appropriate protective clothing, such as cover gowns in exposure situations.

4.3.5 Pocket mask: Train all EMS personnel in the application of cardiopulmonary resuscitation (CPR) using either a latex free bag valve mask device or a pocket mask.

4.4 Multi-patient or mass casualty incidents. When faced with a multi-patients or mass casualty incident, providers should attempt to adhere to the basic principles of infection prevention: prevent contamination and exposure of the provider to the body fluids of the patient(s).

4.5 fection prevention consideration should stress steps that providers can implement to deal with the need to rapidly change gloves as follows:

4.5.1 Place additional spare gloves in a fanny pack or pants.

4.5.2 Make sure that any open areas on hands or arms are covered with an occlusive dressing.

4.5.3 Apply three or four pairs of gloves and use a shedding process of removing the top layer as it becomes overly soiled with liquefied body fluids or the structural integrity of the glove is recommended.

4.5.4 Use 4x4 in. gauze to wipe the accumulated fluid from the gloves to decrease cross-contamination to the next patient.

4.6 Bioterrorism

4.6.1 EMS providers play an important role in identifying potential outbreaks, by raising the index of suspicion as early as possible upon contact with a patient and upon recognizing an increased number of patients with similar response so isolation can begin.

4.6.1.1 Apply appropriate use of PPEs, proper patient packaging, and early facility notification.

4.6.1.2 Plan to maintain a large-volume contingency inventory of PPEs and ensure that PPE is used appropriately for patient.

4.6.1.3 Train EMS personnel to assess patients for signs and symptoms of biological illnesses by focusing on obtaining a good patient history, including travel history.

4.6.1.4 Have a heightened level of suspicion to the signs and symptoms of communicable disease, particularly when other cases present with similar symptoms.

4.6.1.5 Develop a mechanism to ensure that information is shared with the transporting unit, the receiving medical facility, and the appropriate health department.

4.6.1.6 On arrival at the medical facility, the EMS providers should disembark the patient only when it is clear where the patient will be taken.

4.7 Ambulance Cleaning and Disinfection

4.7.1 Cleaning is the physical removal of foreign and organic materials on objects or surfaces with the use water, soap or detergents, and mechanical friction (scrubbing action).

4.7.2 Disinfection is the process that kills and prevents microbial growth on surfaces and equipment using appropriate disinfectants.

4.7.2.1 After the patient has left and prior to cleaning, exhaust the air within the patient care compartment by opening the doors and windows of the vehicle while ventilation system is running. This should be done outdoors and away from pedestrian traffic.

4.7.2.2 Wear PPEs prior to start of cleaning session.

4.7.2.3 In decontaminating an ambulance, thorough cleaning must be performed first before effective disinfection can take place.

4.7.2.3.1 Remove visible soil, blood, and other organic debris from the item or surface before applying disinfectant.

4.7.2.3.2 Clean and disinfect items and surfaces as soon as possible after use.

4.7.2.3.3 Focus on high-risk (frequently-touched) items/surfaces in the patient-care compartment that have been directly or potentially contaminated with blood or body fluids during patient care, followed by low-risk (non-frequently touched) surfaces.

4.7.2.3.4 Clean and disinfect non-patient care areas of the vehicle (driver's compartment) may become indirectly contaminated as per vehicle manufacturer's recommendations

4.7.2.3.5 Wear gloves when using disinfectants and immediately perform hand hygiene after glove removal.

4.7.2.3.6 Place in a clearly marked biohazardous bags contaminated reusable patient care equipment and devices for appropriate cleaning, disinfection and/or sterilization. Clean and disinfect these items according to manufacturer's recommendations.

4.7.2.3.7 Manage spills of blood or bodily fluids as per policy.

4.7.2.3.8 Contaminated linen should be appropriately bagged and sent to laundering facility

4.7.2.3.9 After cleaning, remove and dispose PPE in a leak-proof bag or waste container. Immediately perform hand hygiene. Avoid touching face with gloved or unwashed hands.

4.7.2.4 High-risk objects/surfaces are frequently touched with hands (both gloved and ungloved), therefore are the most contaminated parts of the ambulance. They require cleaning and disinfection between every patient encounter or use at most. Examples are, but not limited to:

4.7.2.4.1 Stretchers / railings;
4.7.2.4.2 Door handles;
4.7.2.4.3 Stethoscopes;
4.7.2.4.4 Electronic patient care equipment and control panels;
4.7.2.4.5 Steering wheels;
4.7.2.4.6 Radios/Cellphones;
4.7.2.4.7 Light switches;
4.7.2.4.8 Adjacent flooring, walls, and ceilings; and
4.7.2.4.9 Handles, outer surfaces of cabinets/compartments where medical equipment are stored

4.7.2.5 Low-risk objects/surfaces are minimally contacted with hands. They require cleaning and disinfection on a regular basis or when contamination occurs. Examples are, but not limited to:

4.7.2.5.1 Other floor, walls, ceiling surfaces;
4.7.2.5.2 Windows; and
4.7.2.5.3 Inner surfaces of cabinets/compartments where medical equipment are stored

4.7.2.6 Wipe down equipment that was in contact with a patient before the next call, focusing on what was used or what was in contact with the patient during care.

4.7.2.7 Clean the entire ambulance at the end of the day. The entire vehicle may be emptied on regular intervals (i.e., weekly).

4.7.2.8 Use disinfectants according to manufacturers' instructions. Adhere to recommended contact/kill times (length of time the disinfectant must remain on object/surface). Adhere to safety precautions (PPE use, adequate ventilation, proper disposal, etc.) as directed.

4.7.2.9 Clean and dry reusable cleaning equipment after use, disposable items such as wipes can be disposed as general waste.

4.7.2.10 Maintain a cleaning plan, schedule log, or checklist.

4.8 Infection Prevention and Control Recommendations for Patients Hands-off or Transfer

4.8.1 Develop an inter-facility transfer procedure that establishes practical and effective measures for isolating the disease organisms, not the patient.

4.8.2 Communication between EMS and hospital/facility staff. Safe and effective transport of patients on isolation precautions begins with identification and communication of these precautions to all healthcare workers involved in the transfer process.

4.8.2.1 Determine if a patient is on isolation precautions prior to patient contact. This may require requesting additional information from facility staff.

4.8.2.2 Request as much information as possible related to the patient's isolation status, including information related to:

4.8.2.2.1 Presence of the following signs and symptoms: cough (especially productive), bowel and urinary incontinence, vomiting, rashes, open or weeping wounds, fever.
4.8.2.2.2 Special isolation precautions and recommended PPEs.
4.8.2.2.3 Additional information related to patient's condition.
4.8.2.2.4 When transporting a patient with suspected or confirmed infection, EMS providers should ALWAYS convey the above information to the receiving facility immediately upon arrival.

4.8.3 Transport of patients on Isolation Precautions.

4.8.3.1 In order to reduce spread of infection, observe Standard Precautions at all times, regardless of the patient's infection status.

4.8.3.2 Alcohol-based hand rub must be made available to ensure proper hand hygiene on events at which water is not readily available.

4.8.3.3 In some cases, Isolation Precautions are required in addition to Standard Precautions.

4.8.3.4 If patient to be transported can tolerate a face mask, its use can help minimize spread of infectious droplets in the patient care compartment. Patients exhibiting acute respiratory distress should be administered oxygen via a non-rebreather mask.

4.8.4 Infection prevention and control transport tools. To promote effective communication between the facility and EMS providers, provide guidelines for the identification or flagging patients on isolation precautions and the appropriate PPEs needed for patient transport. EMS can request a facility staff to complete this tool prior to patient contact.This tool can be modified to meet organizational needs.

4.9 EMS Provider Vaccination and Testing Recommendations

4.9.1 Due to frequent contact with many patients, EMS providers are at risk for exposure to, and possible spread of, vaccine-preventable diseases. Therefore, it is imperative that EMS providers participate in a comprehensive healthcare personnel immunization and TB screening program.

4.10 Staff Education

4.10.1 EMS personnel should undergo regular infection prevention and control education sessions for continuing education and skills appraisal. EMS personnel must have basic knowledge on preventing and controlling spread of infectious agents, as well as the ability to implement them during the course of their duty. Records of staff attendance must be documented and filed.

5. MATERIALS AND EQUIPMENT:

5.1 **Forms and Records:**

5.1.1 N/A

5.2 **Materials and Equipment**

5.2.1 N/A

6. RESPONSIBILITIES:

6.1 Ambulance Staff and Health Care Workers

7. APPENDICES:

7.1 N/A

8. REFERENCES:

8.1 GCC Infection Prevention and Control Manual. 3rd Edition. 2018

8.2 Association for Professionals in Infection Control (APIC) and Epidemiology, Inc. (2014). Chapter 54: Emergency and other Pre-hospital Medical Services. APIC Text of Infection Control and Epidemiology (4th ed.).

9. APPROVALS:

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