

# **TSA-B Regional High Consequence Infectious Disease Concept of Operations**



**As of September 15, 2016**

**Version 1.48**

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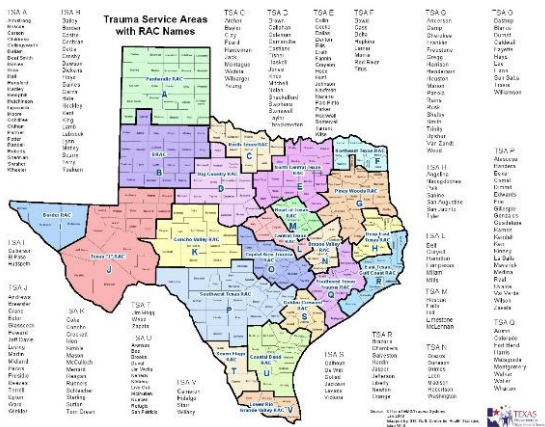
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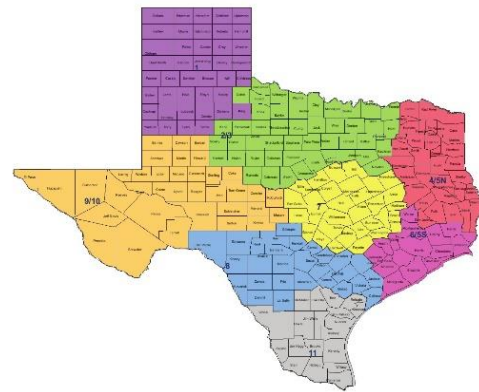
## 2. PURPOSE AND SUMMARY OF CONOPS

### 2.1. PURPOSE

This Concept of Operations (CONOPS) has been developed to give guidelines to First Responders and Healthcare Facilities within Trauma Service Area – B (TSA-B) on dealing with high consequence infectious diseases (HCID) that threaten TSA-B and the State of Texas. TSA-B consists of twenty-two counties on the Texas South Plains, Panhandle, Rolling Plains and Permian Basin. The counties covered by this plan include, Bailey, Castro, Lamb, Hale, Floyd, Motley, Cottle, Cochran, Hockley, Lubbock, Crosby, Dickens, King, Yoakum, Terry, Lynn, Garza, Kent, Gaines, Dawson, Borden and Scurry. This region also falls into three Texas Department of State Health Services (DSHS) Public Health Regions, Region 1, Region 2/3 and Region 9/10. With the diversity of the region, this plan has been developed to give each of the public health regions knowledge of how high consequence infectious diseases will be handled in TSA-B, in coordination with these regional offices.



Trauma Service Area Map



DSHS Health Regions

### 2.2. SCOPE

This CONOPS is limited to describing operational intent when responding to a person under investigation (PUI) or patients confirmed with a high consequence infectious disease. Jurisdictions have plans for bioterrorism and infectious diseases already in place and consistency between these plans should be maintained. This plan supports the plans of the jurisdictions in TSA-B.

The initial portion of the CONOPS deals with how the patient enters the healthcare system. Once the patient is in the healthcare system the CONOPS deals with isolation, assessment, and transportation. Transportation can be to the frontline hospital, the assessment hospital or a treatment hospital. Key components of the plan are recognition of a possible patient, isolation procedures, proper personal protective equipment (PPE), assessment procedures, contaminated waste, decontamination and handling of deceased. The appendix of this plan contains disease specific information and should be referred to as needed for specific information. This plan cannot cover every situation that might arise, but the general guidelines should be followed and then if unsure of a situation contact either local health department, your regional DSHS Health Region office or the TSA-B office.

### 2.3. SITUATION OVERVIEW

A high consequence infectious disease may spread rapidly through a population if there is not a system in place to identify, treat and mitigate the threat. The TSA-B region has two avenues by which infected individuals can enter our area, one is by air travel and the other being ground transportation. The healthcare system, both acute and public, must be prepared to respond as needed to any threat.

### 2.4. DEFINITION OF HCID

A high consequence infectious disease is an infectious disease that:

Presents an immediate threat;

Poses a high risk of death or serious long-term disability to a large number of people; and

Creates a substantial risk of public exposure because of the disease's high level of contagion or the method by which the disease is transmitted.

(Notably the HCID definition is closely tied to the Texas Health and Safety Code definition of a "public health disaster" found in Section 81.003. Definitions (7).)

### 2.5. ACRONYMS

CDC – Centers for Disease Control and Prevention, US Department of Health & Human Services

CONOPS – Concept of Operations

DBH – Disaster Behavioral Health

DC – District Coordinator

DDC – District Disaster Committee or District Disaster Chair

DSHS – Department of State Health Services

EMC – Emergency Management Coordinator

EMS – Emergency Medical Services

EMTF – Emergency Medical Task Force

EOC – Emergency Operations Center

ER – Emergency Room

EVD – Ebola Virus Disease

DOT – US Department of Transportation

DPS – Texas Department of Public Safety

HCC – Hospital Command Center

ICS – Incident Command System

IDRU – Infectious Disease Response Unit

HCID – High Consequence Infectious Disease

JIC – Joint Information Center

LE – Law Enforcement

LRN – Lab Response Network

PAPR – Powered Air Purifying Respirator

PHEP – Public Health Emergency Preparedness

PIO – Public Information Officer

PPE – Personal Protective Equipment

PSAP – Public Safety Answering Point

PUI – Person Under Investigation

PUM - Person Under Monitoring

RAC – Regional Advisory Council

RHMOC – Regional Health and Medical Operations Center - DSHS

RMOC – Regional Medical Operations Center

SMOC – State Medical Operations Center

SOC – State Operations Center

TIEHH – The Institute of Environmental and Human Health – Texas Tech University

TCEQ – Texas Commission on Environmental Quality

TSA – Trauma Service Area

## 3. ENTRY TO HEALTHCARE SYSTEM

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### 3.1. SELF-PRESENTATION TO CLINIC, FREESTANDING ER OR PHYSICIAN'S OFFICE

Each patient should be triaged for a high consequence infectious disease using the appropriate questions as set out in the Appendix for known disease threats in our region.

If the patient is positive for a disease through the triage process, they should be isolated as directed for that disease.

The local health department, if applicable, or your DSHS Regional office should be contacted to discuss the next step for the patient.

### 3.2. SELF-PRESENTATION TO AN ACUTE CARE FACILITY ER

#### 3.2.1. Frontline Hospital

A Frontline Hospital, is any acute care facility that takes patients in an emergency department setting.

It is imperative that all patients presenting to Triage be asked travel questions or other questions as set out by the Centers for Disease Control (CDC). The current triage questions can be found in the Appendix section of this document.

If the patient is positive for a disease through the triage process, they should be isolated as directed for that disease.

The local health department, if applicable, or your DSHS Regional office should be contacted to discuss the next step for the patient.

After discussions with the local health department and DSHS Regional office, a decision will be made whether to move the patient to an Assessment or Treatment hospital, or to hold the patient in the Frontline hospital. If the patient is held and there is confirmation of a HCID, a determination will be made for requesting the Infectious Disease Response Unit (IDRU) through the local Emergency Management Coordinator (EMC). Your EMC will then submit the request through the District Disaster Committee (DDC) for this state resource.



### 3.2.2. Assessment Hospital

An Assessment Hospital is a facility designated by the Texas DSHS to assess and hold a patient under suspicion for a high consequence infectious disease. The Assessment Hospital will hold the patient until the disease is confirmed or ruled out. If the patient is confirmed to have a HCID consultation with DSHS and the Assessment Hospital take place to determine whether to transfer to a Treatment Hospital or treat at the Assessment Hospital.

It is imperative that all patients presenting to Triage be asked travel questions or other questions as set out by the CDC. The current triage questions can be found in the Appendix section of this document.

If the patient is positive for a disease through the triage process, they should be isolated as directed for that disease.

The local health department, if applicable, or your DSHS Regional office should be contacted to discuss the next step for the patient.

University Medical Center in Lubbock has been designated as an Assessment Hospital. This is the only Assessment Hospital, currently, in TSA-B, TSA-A and TSA-J. Other facilities can function in this role without being named an Assessment Hospital.

### 3.3. ARRIVAL AT AIRPORT AND SYMPTOMATIC

Persons entering from a foreign country should be asked questions as directed by CDC for the disease threats in the region.

Appropriate authorities will be notified as directed for the disease, including local Health Department and EMS.

### 3.4. 9-1-1 CALL FOR ASSISTANCE

#### 3.4.1. Public Safety Answering Point (PSAP) procedures, including medical dispatching.

PSAP and dispatch centers should follow the CDC recommended guidelines for questioning callers, if there is a known threat in the region.

Pertinent information should be passed to first responders in order for them to make the best decision on approaching the patient. This information should not be broadcast over the open radio system.

Policies should be in place on who to contact if a call has been received about a suspected HCID patient.

### 3.4.2. Response procedures (EMS/Fire/LE)

All first responder agencies should have policy or protocol in place to deal with HCID.

This policy or protocol should contain information on how the EMS service will respond.  
Should the initial responders approach the scene to evaluate it, or should they don appropriate PPE prior to approaching?

If PPE is warranted, select the appropriate level for the suspected disease.

If public health is not on the scene, make sure a person is assigned to get information for any persons the patient has had contact with. This information should be passed on to your local health department or DSHS.

### 3.5. CALL TO LOCAL HEALTH DEPARTMENT

Your local health department should be contacted if there is a suspected patient with a HCID. If your jurisdiction does not have a local health department, contact the DSHS regional office.

Any patient contact information gathered at the scene should be handed off to the health department officials.

## 4. TRANSPORT TO ASSESSMENT HOSPITAL

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### 4.1. EMS

EMS will be utilized for transport from the Frontline Hospital to a designated Assessment Hospital within the region. Specific EMS services have been identified to do these transfers and are being equipped with appropriate equipment to provide safe transport for a PUI. Requests for transport of a PUI will be made by the Assessment Hospital to the regional medical operations center (RMOC) or Regional Preparedness Coordinator (RPC) after the transfer is accepted. The RMOC or RPC will contact the closest transport agency capable of making the transfer and have them contact the sending facility to coordinate the transport. The RMOC will be activated and monitor the entire transport process.

#### 4.1.1. Identify EMS providers and appropriate contacts

UMC EMS – (806) 775-9911 or (800) 345-9911

The 911 EMS provider for the city of Lubbock and some parts of Lubbock County. Equipped with appropriate PPE, including suits and powered air purifying respirator (PAPR) helmets. Isopod will also be available, if needed, to allow for safe transport of the patient. Has extra ambulances so that transports can be performed without pulling down an on-duty unit. Staff will be trained on proper donning and doffing of PPE as well as transport vehicle preparations. Disease specific information will be given to the crew prior to transport.

Scurry County EMS – (325) 573-1912

The 911 EMS provider for Scurry County, including the city of Snyder. Equipped with appropriate PPE, including suits and PAPR helmets. Isopod will also be available, if needed, to allow for safe transport of the patient. Has an extra ambulance so that transports can be performed without pulling down an on-duty unit? Staff will be trained on proper donning and doffing of PPE as well as transport vehicle preparations. Disease specific information will be given to the crew prior to transport.

#### 4.1.2. Recommendations for PPE

PPE utilized for PUI or confirmed patients will, **at a minimum**, meet the guidelines and recommendations of the CDC for that specific disease. The Texas Emergency Task Force Infectious Disease Response Unit has determined a set of PPE for EMS transport of a HCID patient. A cache of this recommended PPE is planned to be maintained by TSA-B. If the patient is a confirmed HCID patient, the EMTF IDRU may be activated to provide supplies for the EMS response.

#### 4.1.3. Recommendations of training

Training of the transporting personnel will consist of proper donning and doffing of PPE, proper PPE selection, specific symptoms for the disease they will encounter, and treatment & procedures that will be allowed for the patient while in the ambulance. Specific training will be detailed in the Appendix of this CONOPS.

#### 4.1.4. Donning and Doffing of PPE

The donning and doffing of PPE should be done with an observer present who is utilizing a checklist. This provides safety in that all steps are insured they are completed every time the procedure is done and there is a visual check throughout the process.

#### 4.1.5. Decon and waste management

Decon of the transporting ambulance and crew will be performed at the receiving Assessment Hospital. Waste will be bagged and contained as directed for the specific disease and left with the Assessment Hospital for final disposition.

#### 4.1.6. Security

Information regarding this type of transfer will be between the two facilities, the RMOC and the transporting agency. If security is needed to support the transport, it will be coordinated by the RMOC after reasons are evaluated.

### 4.2. TRANSPORT TO FRONTLINE HOSPITAL

EMS services should have, at least, the minimum required PPE for transport of a suspected patient. Once a patient is suspected to have a high consequence contagious disease, they should deploy the appropriate PPE and precautions. Notification of the receiving facility should be done as soon as possible to allow the time prepare for the patient.

If the patient is stable, discussions may take place on transporting the patient directly to the Assessment Hospital. These discussions should include public health officials, EMS, physicians at Frontline and Assessment hospitals and the Regional Preparedness Coordinator.

## 5. PATIENT ASSESSMENT AT HOSPITAL

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### 5.1. IDENTIFY ASSESSMENT HOSPITALS AND APPROPRIATE CONTACTS

#### 5.1.1. Identify gaps/needs as compared to the eleven domains

A site visit has been conducted to assess any gaps in the eleven domains.

The Assessment Hospital will then review the recommendations from the site visit team and determine what changes, if any need to be made in processes, policies or equipment.

#### 5.1.2. Assessment Hospital in TSA-B – University Medical Center, Lubbock

University Medical Center (UMC) in Lubbock has been designated as an Assessment Hospital. This will be the only Assessment Hospital in the TSA-A and TSA-B regions, at this time. To coordinate a transport to UMC for assessment, contact the house supervisor at UMC and the Regional Preparedness Coordinator.

Assessment Hospitals have been designated by the Texas Department of State Health Service Epidemiology Division, having met all criteria as set out by the CDC. These facilities have shown the willingness and capabilities to house and care for a person of interest, until verification that the patient has a high consequence infectious disease, and make arrangements for transfer to a Treatment Hospital.

### 5.2. PPE CACHES – LOCATION(S) AND CONDITIONS OF STORAGE, INVENTORY, & PROCESS FOR REQUESTING

#### 5.2.1. TSA-B Cache

TSA-B has limited quantities of additional PPE stored in the region. This equipment is available to supplement the recommended 96-hour cache that each facility should have on hand. See Figure 1 in Section 5.4.6.

#### 5.2.2. Location

This cache is stored at the TSA-B warehouse site. The equipment is secured in rolling cages so that it can be loaded quickly on a trailer and moved to where needed.

#### 5.2.3. Process for Requesting Cache

Since this cache is a scarce resource, requests must be made through your local EMC to the DDC. The DDC will then call the TSA-B Regional Preparedness Coordinator to request the equipment. This allows for a paper trail as well as a process for allocation if there is more than one PUI at a time.

## 5.3. TESTING

### 5.3.1. Identify nearest laboratory response network (LRN) lab with testing capability

The Institute of Environmental and Human Health (TIEHH) operates a lab in Lubbock with the capability to do initial testing on select agents. TIEHH currently has the ability to do initial testing for Ebola.

### 5.3.2. Authorization to submit a specimen

Your local health department and DSHS must be coordinated with prior to submitting a specimen to the LRN lab.

### 5.3.3. Specimen packaging and transport plan

CDC and Department of Transportation (DOT) regulations must be followed in transporting specimens for testing. For more information on shipping specimens go to <http://www.cdc.gov/vhf/ebola/healthcare-us/laboratories/specimens.html>.

## 5.4. SUPPORT SYSTEMS

### 5.4.1. Public Information Officer (PIO)

Public information must be a coordinated effort for HCID incidents. It is highly recommended that a Joint Information System (JIS) be established and all information be sent from here. The JIS will contain representatives from all entities involved so that a coordinated position and information may be presented.

### 5.4.2. Disaster Behavioral Health

The mental well-being of responders, practitioners, and others involved directly with a HCID patient is important. If a need for behavioral health is needed, please request through the RMOC of Regional Preparedness Coordinator.

### 5.4.3. Liaison from Incident Command System (ICS) structure

Liaisons from the RMOC, or entities involved may be requested to be at emergency operation centers (EOC), hospital command center (HCC), the regional health and medical operations center (RHMO) or the DDC. Every effort should be made to have this position filled if requested.

### 5.4.4. Waste management

Hospitals should have a waste management provider for their bio waste. Each facility should check to verify if their provider can handle HCID waste. If they cannot, the facility should have contact information for a provider that can handle this level of waste.

EMS providers that transport a HCID patient will be allowed to leave their waste at the receiving facility.

Waste should be handled and packaged as set out by the provider.

Waste at the scene, should be handled through the local EMC. Texas Commission on Environmental Quality (TCEQ) can be a resource to request for this type of waste.

#### 5.4.5. Security

Law enforcement assistance should be requested at the scene and then at any facility receiving HCID patients. Each facility should pre-plan what level of security that they will be needing and request it through local processes.

#### 5.4.6. IDRU

The IDRU is an element of the Texas Emergency Medical Task Force (EMTF) program. The IDRU is comprised of equipment and supply caches, personnel available to assist at Frontline hospitals and EMS agencies to provide transport. The IDRU has to be activated through the state medical operations center (SMOC). See Figure 1.

There are three (3) levels of equipment and supply caches. The first is a twenty-four-hour cache which is held within the EMTF region, there will be eight (8) of these caches across the state. The second cache is a seventy-two-hour cache. There will be four (4) of these across the state located at; Dallas, El Paso, Houston and San Antonio. Then there will be one (1) ten-day cache in the state and it will be located in San Antonio. Once the activation order is given, the closest of each type of cache will begin moving towards the requesting facility. The fourteen (14) days of supplies in the three caches was developed to allow enough lead time for suppliers to get orders to the facility. So, order still need to be placed for additional PPE through the normal vendors, but these caches supplement a facility's supplies. See Figure 2.

Planning Note: These caches should not be relied upon as a facility's primary source of PPE. Sufficient quantities should be available for 96 hours at least.

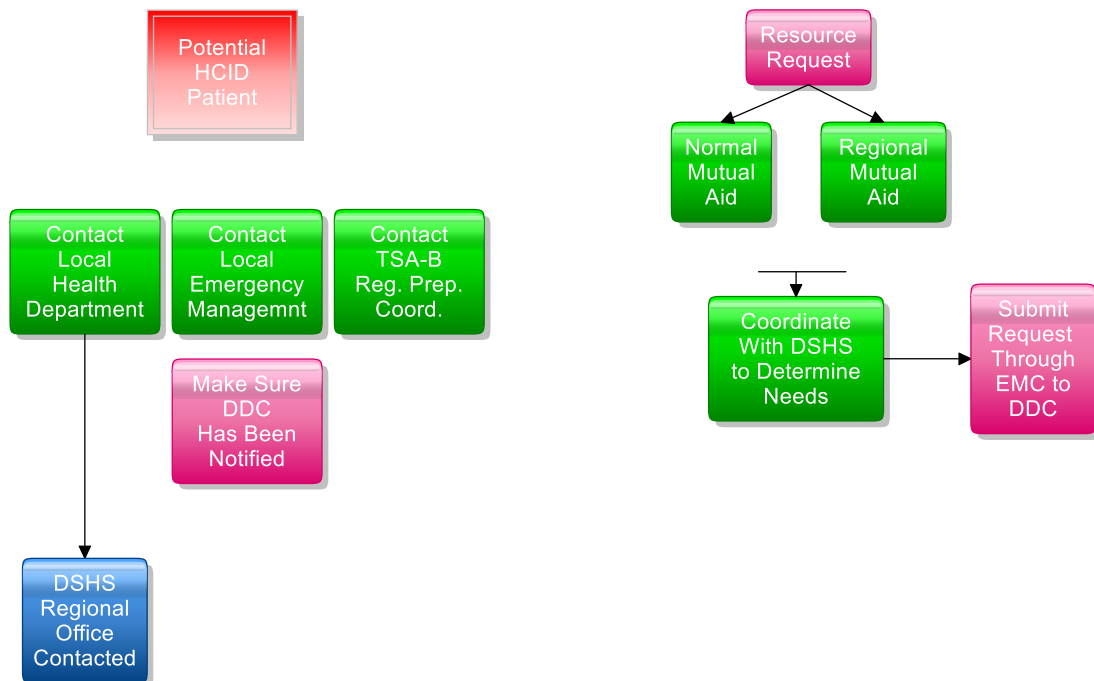
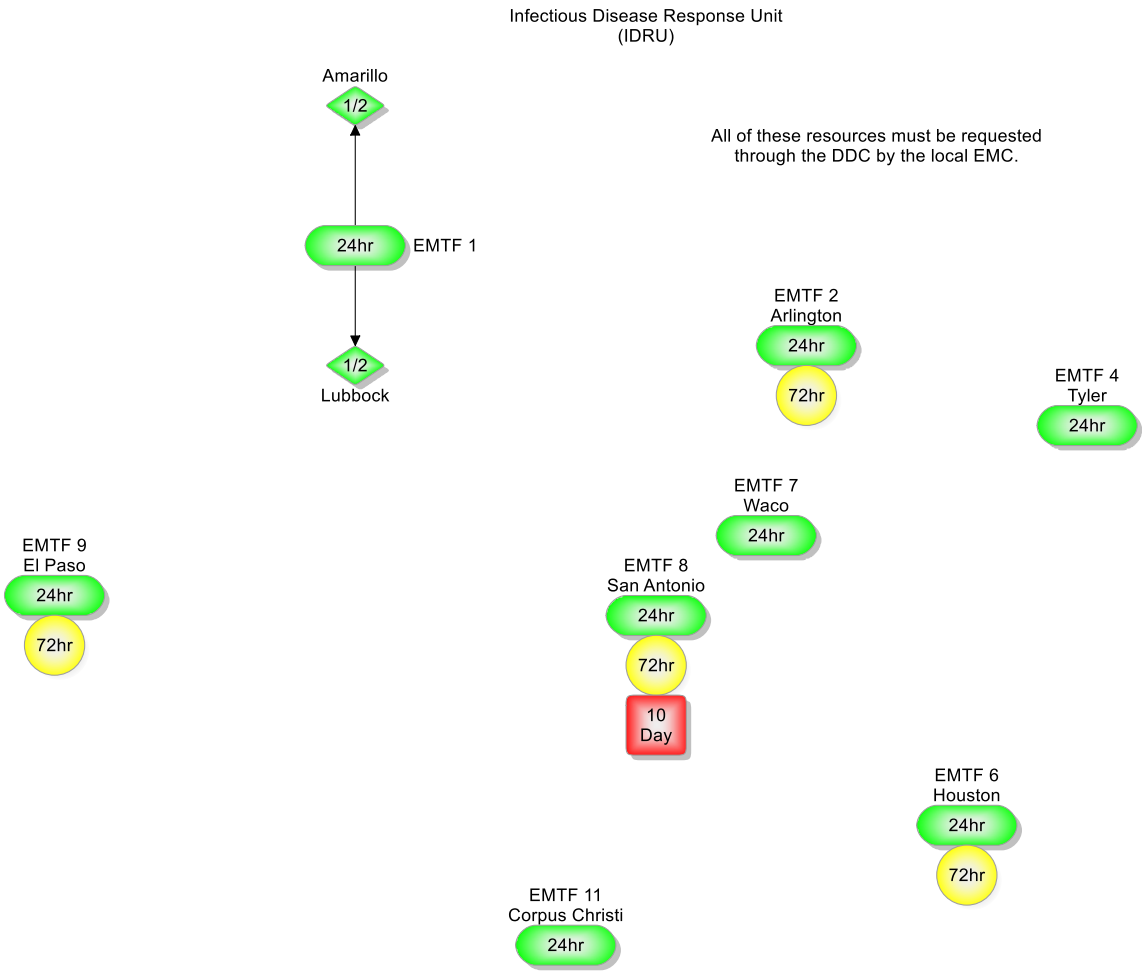


Figure 1. HCID Notification and Support Request



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Figure 2. IDRU Cache Concept



## 6. POSITIVE CASE

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### 6.1. GROUND TRANSPORTATION

#### 6.1.1. Timing considerations (traffic, weather, etc.)

Ground transportation coordination should be coordinated through the RMOC and the transporting EMS agency. A specified route should be established taking weather and traffic into consideration. If time allows, the transfer should take place at a time of day when there is the lowest volume of traffic.

#### 6.1.2. Security

Security during the transport of the patient will be coordinated with DSHS, transporting service and RMOC. If Department of Public Safety (DPS) assistance will be needed, submit request through the local EMC.

Contact will be maintained with the transporting units at all times, monitoring the location of the transporting units at the RMOC in coordination with the transporting agency.

### 6.2. AIR TRANSPORTATION

Air transportation will be arranged through DSHS for a patient who is located greater than 200 miles from a Treatment Hospital. If air transportation is authorized, it will be carried out by the Federal contactor.

#### 6.2.1. Identify airfield

The most appropriate airfield in close proximity of the patient's location that can handle the aircraft being used, will be selected in coordination with DSHS and the RMOC.

#### 6.2.2. Ground checklist

Will be provided by the federal agency securing the air transportation.

#### 6.2.3. Security

Security during the transport of the patient will be coordinated with DSHS. The airfield will be secured during the time of the patient transfer.

## 7. MORTUARY SERVICES

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### 7.1. IDENTIFY PROVIDER OF MORTUARY SERVICES

List of providers as provided by DSHS.

Miller Mortuary - Panhandle Area  
202 Avenue Q,  
Lubbock, TX 79415  
[806.763.9411](tel:806.763.9411)  
Benny or Matthew Miller

Global Mortuary Affairs, LLC - Entire State  
424 S. Bryan Belt Line Rd  
Mesquite, TX 75149  
[877.216.2708](tel:877.216.2708)  
David Patterson

Heritage Cremation - Cremation ONLY  
101 E Park Blvd,  
Plano, TX 75074  
[214.887.3555](tel:214.887.3555)  
Scott Smith

### 7.2. SUPPLIES

Each acute care facility in TSA-B has been supplied with a BioSeal system capable of handling a minimum of 25 bodies. There is additional BioSeal film in storage in the region and can be deployed as needed. Each facility also has a supply of heavy body bags on site.

### 7.3. HANDLING OF DECEASED

The handling of the deceased will be done in accordance with CDC guidelines in coordination with the mortuary provider.

TSA-B acute care facilities have BioSeal systems on site. This is a recognized system for containment of remains.

## 8. CONTACT LIST

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### 8.1. HEALTH DEPARTMENTS (24-HOUR CONTACT NUMBER)

Texas Department of State Health Services

Region 1 – 806-778-7391

Region 2/3 – 817-822-6786

Region 9/10 – 888-847-6892 Alt# - 915-834-7842

City of Lubbock Health Department – 806-535-9047

Plainview-Hale County Health Department -

South Plains Public Health District – Daytime – 432-758-4021 After Hours – 800-360-6510

### 8.2. TSA-B (BRAC)

Tim Berry 806-535-6004 [tim.berry@b-rac.org](mailto:tim.berry@b-rac.org) – Regional Preparedness Coordinator

Jim Waters 806-535-2638 [spems@aol.com](mailto:spems@aol.com) – Executive Director

### 8.3. LRN LAB – LUBBOCK

806-885-0235

# Appendix

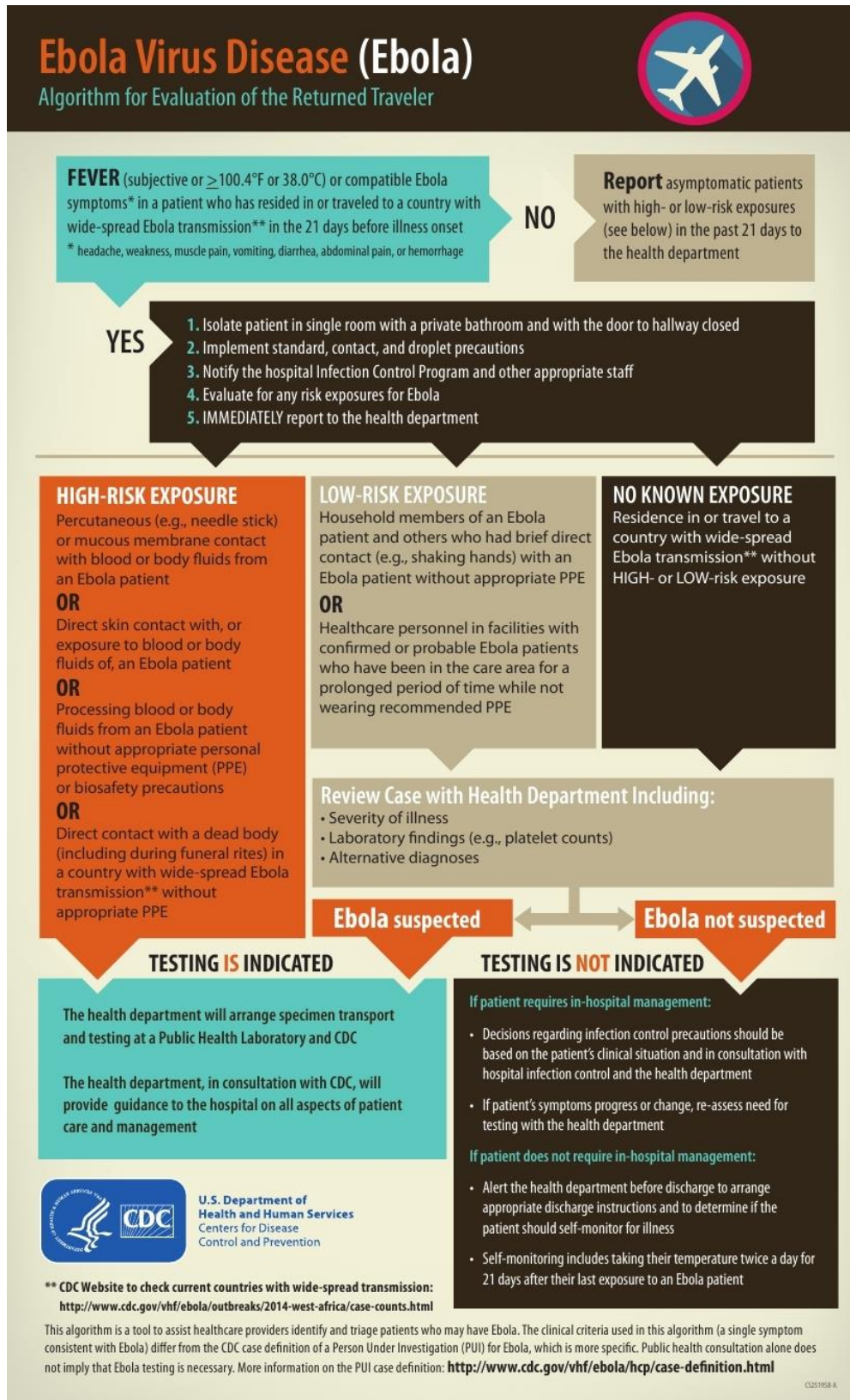
## A. EBOLA VIRUS DISEASE (EVD)

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1. About EVD
  - a. Ebola, previously known as Ebola hemorrhagic fever, is a rare and deadly disease caused by infection with one of the Ebola virus species. Ebola can cause disease in humans and nonhuman primates (monkeys, gorillas, and chimpanzees).
  - b. Ebola is caused by infection with a virus of the family *Filoviridae*, genus *Ebolavirus*. There are five identified Ebola virus species, four of which are known to cause disease in humans: Ebola virus (*Zaire ebolavirus*); Sudan virus (*Sudan ebolavirus*); Tai Forest virus (*Tai Forest ebolavirus*, formerly *Côte d'Ivoire ebolavirus*); and Bundibugyo virus (*Bundibugyo ebolavirus*). The fifth, Reston virus (*Reston ebolavirus*), has caused disease in nonhuman primates, but not in humans.
  - c. People get Ebola through direct contact (through broken skin or mucous membranes in, for example, the eyes, nose, or mouth) with:
    - i. blood or body fluids (including but not limited to urine, saliva, sweat, feces, vomit, breast milk, and semen) of a person who is sick with or has died from Ebola,
    - ii. objects (like needles and syringes) that have been contaminated with body fluids from a person who is sick with Ebola or the body of a person who has died from Ebola,
    - iii. infected fruit bats or primates (apes and monkeys), and
    - iv. possibly from contact with semen from a man who has recovered from Ebola (for example, by having oral, vaginal, or anal sex)
2. Signs and Symptoms
  - a. Symptoms of EVD include:
    - i. Fever
    - ii. Severe Headache
    - iii. Muscle Pain
    - iv. Weakness
    - v. Fatigue
    - vi. Diarrhea
    - vii. Vomiting
    - viii. Abdominal Pain
    - ix. Unexplained Hemorrhage
  - b. Symptoms may appear anywhere from 2 to 21 days after exposure to EVD, but the average is 8 to 10 days.
  - c. Recovery from EVD depends on good supportive clinical care and the patient's immune response.

### 3. Key Points

- a. EVD can be confused with other more common infectious diseases such as malaria, typhoid fever, meningococemia, and other bacterial infections.
  - b. Gastrointestinal symptoms may develop after about 5 days to develop symptoms such as severe watery diarrhea, nausea, vomiting, and abdominal pain.
  - c. Ebola virus enters the patient through mucous membranes, breaks in the skin, or parenterally. Healthcare personnel must prevent direct contact or splashes with blood and body fluids, contaminated equipment, and soiled environmental surfaces.
  - d. Travelers with possible exposure to Ebola virus may need public health monitoring and movement controls depending on the risk of exposure and clinical presentation. Clinicians should contact local or state health departments for more information.
4. Triage patients presenting to healthcare facilities, clinics, freestanding EDs, **physician's** office, arrival at airport, caller for 9-1-1 assistance or calls to local and regional health departments with the most current version of the Algorithm for Evaluation of the Returned Traveler as set out by CDC, which can be found on page 12 and at <http://www.cdc.gov/vhf/ebola/>. Algorithm for 911 Answering Points and First Responders can be found starting on page 13 and at <http://www.cdc.gov/vhf/ebola/>.
  5. PPE for EVD has been set out by the CDC. TSA-B will follow these guidelines as a minimum, and may elect to use a higher level during contact with EVD patients. The most current recommendations and guidelines are listed on page x.
  6. Along with PPE, the proper donning and doffing of the PPE is critical to safety of the healthcare worker and to prevent the spreading of the disease.



# Identify, Isolate, Inform: Emergency Medical Services (EMS) Systems and 9-1-1 Public Safety Answering Points (PSAPs) for Management of Patients Who Present with Possible Ebola Virus Disease (Ebola) in the United States



**SCOPE:** Applies to emergency medical services providers (including emergency medical technicians (EMTs), paramedics, and medical first responders who could be providing patient care in the field—such as law enforcement and fire service personnel). For more detailed information, reference "Interim Guidance for Emergency Medical Services (EMS) Systems and 9-1-1 Public Safety Answering Points (PSAPs) for Management of Patients Who Present with Possible Ebola Virus Disease in the United States" (<http://www.cdc.gov/vhf/ebola/hcp/interim-guidance-emergency-medical-services-systems-911-public-safety-answering-points-management-patients-known-suspected-united-states.html>).

## DISPATCH/9-1-1 PSAPS

### 1 Inquire about travel and direct exposure history within the previous 21 days.

- Has patient traveled to, or lived in, a country with widespread Ebola virus transmission or uncertain control measures (a list of countries can be accessed at the following link: <http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/distribution-map.html>)?
- Has patient had contact with blood or body fluids (such as urine, saliva, vomit, sweat, or diarrhea) of a person who is confirmed or suspected to have Ebola?

NO

If ALL responses for Box #1 are "No," continue with usual triage, assessment, and instructions

YES TO ANY

### 2 Ask about signs and symptoms.

Does the patient have signs or symptoms of Ebola: Fever, severe headache, muscle pain, weakness, fatigue, diarrhea, vomiting, abdominal (stomach) pain, or unexplained hemorrhage (bleeding or bruising)?

NO

- If ALL responses for Box #2 are "No," continue with usual triage, assessment, and instructions
- Contact public health authority, if appropriate

YES – Patient may meet criteria for suspected Ebola Infection

### 3 Provide Instructions to Patients and EMS Providers.

- Instruct other people at the scene to restrict contact with patient unless wearing appropriate personal protective equipment (PPE).
- Alert any first responders and EMS providers being dispatched of potential for a patient with possible exposure/signs and symptoms of Ebola **before they arrive on scene**.
- Advise EMS providers that at a minimum, they should use the following PPE before direct contact with a patient has any of these symptoms: fever, fatigue, headache, muscle pain, or weakness (<http://www.cdc.gov/vhf/ebola/hcp/ed-management-patients-possible-ebola.html>):
  - Face shield and surgical face mask,
  - Impermeable gown, and
  - Two pairs of gloves.
- If a patient is exhibiting obvious bleeding, vomiting, copious diarrhea or there is a concern for bleeding, vomiting, or diarrhea, advise EMS providers before entering the scene to wear PPE recommended for use by healthcare workers managing Ebola patients in U.S. hospitals (<http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html>).
- If responding at an airport or other port of entry to the United States, the PSAP or EMS unit should notify the CDC Quarantine Station for the port of entry. Contact information for CDC Quarantine Stations can be accessed at <http://www.cdc.gov/quarantine/quarantinationcontactlistfull.html>.

4 Medical director may consider additional questions/ actions specific to the local area/region.

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#### Additional Resources

CDC's Case Definition for Ebola Virus Disease (EVD): <http://www.cdc.gov/vhf/ebola/hcp/case-definition.html>.

International Academy of Emergency Dispatch protocols: [http://www.emergencydispatch.org/sites/default/files/pdf/ebola\\_updates/MPDS-EIDS Tool \(Ebola\) v5.0.1 NAE.pdf](http://www.emergencydispatch.org/sites/default/files/pdf/ebola_updates/MPDS-EIDS Tool (Ebola) v5.0.1 NAE.pdf).



U.S. Department of Health and Human Services  
Centers for Disease Control and Prevention

EMS dispatched

January 12, 2015 CS243646

## EMS—PRIOR TO ARRIVAL AT PATIENT

### Considerations for Infection Control and PPE

- If 9-1-1 PSAP call takers advise that the patient is suspected to have Ebola, EMS providers should put on the PPE appropriate for suspected or confirmed cases of Ebola before entering the scene.
- Avoid direct contact with a patient who may have Ebola without wearing appropriate PPE.
- PPE should be put on before entering a scene to attend to a suspected Ebola patient and continued to be worn until providers are no longer in contact with the patient. PPE should be carefully put on and taken off under the supervision of a trained observer as described in the *“Guidance on Personal Protective Equipment To Be Used by Healthcare Workers During Management of Patients with Ebola Virus Disease in U.S. Hospitals, Including Procedures for Putting On (Donning) and Removing (Doffing)”* (<http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html>).
- If, based on the initial screening, the EMS provider suspects the patient has Ebola then level of PPE should be reassessed before coming within 3 feet of the patient.
- **To minimize potential exposure,**
  - Limit the number of EMS providers to essential personnel only who provide care for a patient with suspected Ebola. All EMS providers having direct contact with a suspected Ebola patient must wear PPE.
  - One EMS provider should approach the patient and perform the initial screening from at least 3 feet away from the patient.
  - Keep the other emergency responders further away, while assuring they are still able to support the provider with primary assessment duties. Consider the strategy of one provider putting on PPE and managing the patient while the other provider does not engage in patient care but serves in the role of trained observer.
  - Use caution when approaching a patient with possible Ebola. On rare occasions, illness can cause delirium, with erratic behavior (e.g., flailing or staggering) that can place EMS providers at additional risk of exposure.
- There may be situations where a patient must be carried and multiple providers are required to put on PPE. EMS providers wearing PPE who have cared for the patient must remain in the back of the ambulance and should not serve as the driver.
- If needed, consider requesting additional resources, such as a dedicated driver.

### Occupational Exposure

- If blood, body fluids, secretions, or excretions from a patient with suspected Ebola come into direct contact with an EMS provider’s unprotected skin or mucous membranes, then the EMS provider should immediately stop working and:
  - Immediately wash the affected skin surfaces with a cleansing or antiseptic solution. Mucous membranes (e.g., conjunctiva) should be irrigated with a large amount of water or eyewash solution, as per usual protocols.
- All wipes and solution should be placed in a biohazard bag.
- Place all waste in a biohazard bag.
- Notify your chain of command and report exposure to an occupational health provider, supervisor or designated infection control officer for follow-up as soon as possible.
- Follow agency policy for medical evaluation and follow-up care and monitoring.



## EMS ARRIVAL AT SCENE

Has PSAP call taker advised that the patient is suspected to have Ebola and EMS personnel should put on the PPE appropriate for suspected or confirmed cases of Ebola before entering the scene?

NO

**YES – Patient meets criteria for suspected Ebola Infection**

### 1 Consider appropriate PPE in the EMS setting for a person with suspected Ebola.

Is the patient exhibiting obvious bleeding, vomiting, or diarrhea or has a clinical condition that warrants invasive or aerosol-generating procedures (e.g., intubation, suctioning, active resuscitation)?

If no, then EMS personnel should at a minimum wear the following PPE (link: <http://www.cdc.gov/vhf/ebola/hcp/ed-management-patients-possible-ebola.html>):

- Face shield and surgical face mask
- Impermeable gown, and
- Two pairs of gloves

If yes, then use PPE recommended for use by healthcare workers managing Ebola patients in U.S. hospitals (<http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html>).

### 2 Inquire about travel and direct exposure history within the previous 21 days.

- Has patient traveled to, or lived in, a country with widespread Ebola virus transmission or uncertain control measures (a list of countries can be accessed at the following link: <http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/distribution-map.html>)?
- Has patient had contact with blood or body fluids (such as urine, saliva, vomit, sweat, or diarrhea) of a person who is confirmed or suspected to have Ebola?

NO

If ALL responses for Box #2 are “no,” continue with usual triage, assessment, and care

**YES TO ANY**

### 3 Assess signs and symptoms.

- Does the patient have fever, severe headache, muscle pain, weakness, fatigue, diarrhea, vomiting, abdominal (stomach) pain, diarrhea, or unexplained hemorrhage (bleeding or bruising)?

NO

- Continue with usual triage, assessment, and care
- Contact appropriate public health authority

**YES – Patient meets criteria for suspected Ebola Infection**

### 4 Isolate patient immediately and revisit Step #1 from EMS Arrival at Scene. Consider:

If you anticipate performing pre-hospital resuscitation procedures such as endotracheal intubation, open suctioning of airways, or cardiopulmonary resuscitation, conduct these procedures while wearing the PPE recommended for use by healthcare workers managing Ebola patients in U.S. hospitals (<http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html>).

### 5 Avoid unnecessary direct contact while managing patient, then prepare to transfer to an appropriate facility.

- Limit the number of providers to essential personnel only who provide care for a patient with suspected Ebola. All EMS providers having direct contact with a suspected Ebola patient must wear PPE.
- Remove and keep nonessential equipment away from the patient, so as to minimize contamination, on the scene and in the ambulance.
- Do not perform phlebotomy or any other invasive procedures unless urgently required for patient care or stabilization. Handle any needles and sharps with extreme care and dispose in puncture-proof, sealed containers that are specific to the care of this patient, in accordance with OSHA's Bloodborne Pathogens Standard. Do not dispose of used needles and sharps in containers that have sharps from other patients in them.
- Consider giving the patient oral medicine to reduce nausea, per medical director protocols and consistent with scope of practice.
- If patient is vomiting, give them a large red biohazard bag to contain any emesis. For profuse diarrhea, consider wrapping the patient in an impermeable sheet to reduce contamination of other surfaces.

**Suspected Ebola Patients Should Only be Transported to a Healthcare Facility Prepared to Further Evaluate and Manage the Patient According to the Community's Predefined Transportation/Destination Plan Developed by Public Health Officials, Hospital, Medical and EMS Personnel.**

## TRANSPORT TO A HEALTHCARE FACILITY

### 6 Prepare for transport according to agency/local protocol.

- Separate the driver from the patient compartment.
- The driver should contact the receiving emergency department or hospital and follow previously agreed upon local or regional protocols to transport the patient to the receiving hospital. This will allow the facility to prepare for receipt of the patient.

### 7 Follow infection control principles during transport to the hospital.

- Avoid contamination of reusable porous surfaces that are not designated for single use. Use only a mattress and pillow with plastic or other covering that fluids cannot penetrate. Cover the stretcher with an impermeable material.
- During transport, ensure that an appropriate disinfectant U.S. Environmental Protection Agency (EPA) - approved hospital grade disinfectant with a [non-enveloped virus claim](#) is available (for example, in spray bottles or as commercially prepared wipes).
- Provide patient care, as needed, to minimize the contact with patient and following infection control guidelines as noted below. If performing pre-hospital resuscitation procedures such as endotracheal intubation, open suctioning of airways, and cardiopulmonary resuscitation, conduct these procedures under safer circumstances (e.g., stopped vehicle, hospital destination) and wear the PPE recommended by CDC to use during aerosol generating procedures (<http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html>).

## AT HOSPITAL

### 8 After patient transfer, perform supervised/observed doffing of PPE.

In collaboration with the receiving hospital, EMS agencies should consider how best to facilitate

- A supervised doffing process. Doffing of PPE must
  - Be performed in a designated location
  - Adhere to established procedures and in the presence of a trained observer in order to prevent self-contamination or other exposure to Ebola virus.
- A shower for EMS providers, if available, or an area to change into clean clothing.

See guidance on PPE doffing for more information: <http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html>.

### 9 Decontaminate and disinfect (clean) vehicle and equipment while wearing appropriate PPE. Address disposal of waste.

- Consider repositioning a trained crew wearing appropriate PPE to perform these operations, so that EMS personnel can focus on doffing PPE, communicating with hospital, and finishing appropriate documentation.
- Put on fresh PPE as recommended by CDC before decontaminating and disinfecting the vehicle when body fluids from a patient with suspected Ebola are present. If no body fluids are present then minimal PPE should be worn, including face shield and surgical mask; impermeable gown, and two pairs of gloves.
- Use an EPA-registered hospital disinfectant with a label claiming inactivation for a non-enveloped virus (e.g., norovirus, rotavirus, adenovirus, poliovirus) to disinfect environmental surfaces of vehicle and equipment used with suspected or confirmed Ebola virus infection. (<http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html>).
  - Follow instructions for cleaning and decontaminating surfaces or objects soiled with blood or body fluids.
  - After the bulk waste is wiped up, the surface should be disinfected as described below. There should be the same careful attention to the safety of the EMS providers during the cleaning and disinfection of the transport vehicle as there is during the care of the patient.
- A blood spill or spill of other body fluid or substance should be managed by personnel wearing correct PPE, and includes 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. (<http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html>).
- Clean and disinfect patient-care surfaces and equipment, and other areas that are likely to become contaminated after each transport. Avoid contamination of reusable porous surfaces that are not designated as single use.
- Place contaminated reusable patient care equipment (e.g., glucometer, blood pressure cuff) in biohazard bags and label for cleaning and disinfection. Clean and disinfect reusable equipment according to agency policies and manufacturer's instructions by trained personnel wearing correct PPE.
- Discard any bodily secretions (such as urine or vomit) as directed by hospital staff.
- EMS systems should work with designated receiving hospitals to dispose of waste from suspected Ebola patients. Discarded materials suspected of being contaminated with Ebola (i.e., used PPE, used linens, non-fluid-impermeable pillows or mattresses and bulk waste) that are transported to an off-site disposal facility must be packaged and transported in accordance with the Hazardous Materials Regulations (HMR, 49 C.F.R. Parts 171-180).
- Leave vehicle to dry as normal.
- Once cleaning is complete, doff PPE using same procedures and trained observer in a designated area as with the patient care crew.

## B. MIDDLE EAST RESPIRATORY SYNDROME (MERS)

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### People Who May Be at Increased Risk for MERS

#### Recent Travelers from the Arabian Peninsula

If you develop a fever\* and symptoms of respiratory illness, such as cough or shortness of breath, within 14 days after traveling from countries in or near the Arabian Peninsula\*\*, you should call ahead to a healthcare provider and mention your recent travel. While sick, stay home from work or school and delay future travel to reduce the possibility of spreading illness to others.

#### Close Contacts of an Ill Traveler from the Arabian Peninsula

If you have had close contact\*\*\* with someone within 14 days after they traveled from a country in or near the Arabian Peninsula\*\*, and the traveler has/had fever\* and symptoms of respiratory illness, such as cough or shortness of breath, you should monitor your health for 14 days, starting from the day you were last exposed to the ill person.

If you develop fever\* and symptoms of respiratory illness, such as cough or shortness of breath, you should call ahead to a healthcare provider and mention your recent contact with the traveler. While sick, stay home from work or school and delay future travel to reduce the possibility of spreading illness to others.

#### Close Contacts of a Confirmed Case of MERS

If you have had close contact\*\*\* with someone who has a confirmed MERS-CoV infection, you should contact a healthcare provider for an evaluation. Your healthcare provider may request laboratory testing and outline additional recommendations, depending on the findings of your evaluation and whether you have symptoms. You most likely will be asked to monitor your health for 14 days, starting from the day you were last exposed to the ill person. Watch for these symptoms:

Fever\*. Take your temperature twice a day.

Coughing

Shortness of breath

Other early symptoms to watch for are chills, body aches, sore throat, headache, diarrhea, nausea/vomiting, and runny nose.

If you develop symptoms, call ahead to your healthcare provider as soon as possible and tell him or her about your possible exposure to MERS-CoV so the office can take steps to keep other people from getting infected. Ask your healthcare provider to call the local or state health department.

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#### Healthcare Personnel Not Using Recommended Infection-Control Precautions

Healthcare personnel should adhere to recommended infection control measures, including standard, contact, and airborne precautions, while managing symptomatic close contacts, patients under investigation, and patients who have probable or confirmed MERS-CoV infections. Recommended infection control precautions should also be utilized when collecting specimens.

Healthcare personnel who had close contact\*\*\* with a confirmed case of MERS while the case was ill, if not using recommended infection control precautions (e.g. appropriate use of personal protective equipment), are at increased risk of developing MERS-CoV infection and should be evaluated and monitored by a healthcare professional with a higher index of suspicion. For more information, see [Interim Infection Prevention and Control Recommendations for Hospitalized Patients with Middle East Respiratory Syndrome Coronavirus \(MERS-CoV\)](#).

#### People with Exposure to Camels

MERS-CoV has been found in some camels, and some MERS patients have reported contact with camels. However, we do not know exactly how people become infected with MERS-CoV—many people with MERS have had close contact with a person sick with MERS.

The World Health Organization has posted a general precaution for anyone visiting farms, markets, barns, or other places where animals are present. Travelers should practice general hygiene measures, including regular handwashing before and after touching animals, and avoid contact with sick animals. Travelers should also avoid consumption of raw or undercooked animal products. For more information, see WHO's [Frequently Asked Questions on MERS-CoV. \(Should people avoid contact with camels or camel products? Is it safe to visit farms, markets, or camel fairs?\)](#)

The World Health Organization considers certain groups to be at high risk for severe MERS; these groups include people with diabetes, kidney failure, or chronic lung disease and people who have weakened immune systems. The World Health Organization recommends that these groups take additional precautions:

Avoid contact with camels

Do not drink raw camel milk or raw camel urine

Do not eat undercooked meat, particularly camel meat

For more information, see WHO's [MERS-CoV Summary and Literature Update, June 11, 2014 \[8 pages\]](#). (See page 8 for recommendations.)

\*Fever may not be present in some patients, such as those who are very young, elderly, immunosuppressed, or taking certain medications. Clinical judgement should be used to guide testing of patients in such situations.

\*\*Countries considered in the Arabian Peninsula and neighboring include: Bahrain; Iraq; Iran; Israel, the West Bank, and Gaza; Jordan; Kuwait; Lebanon; Oman; Qatar; Saudi Arabia; Syria; the United Arab Emirates (UAE); and Yemen.

\*\*\*Close contact is defined as a) being within approximately 6 feet (2 meters) or within the room or care area for a prolonged period of time (e.g., healthcare personnel, household members) while not wearing recommended personal protective equipment (i.e., gowns, gloves, respirator, eye protection—see [Infection Prevention and Control Recommendations](#)); or b) having direct contact with infectious secretions (e.g., being coughed on) while not wearing recommended personal protective equipment (i.e., gowns, gloves, respirator, eye protection—see [Infection Prevention and Control Recommendations](#)). Data to inform the definition of close contact are limited. At this time, brief interactions, such as walking by a person, are considered low risk and do not constitute close contact.