KANSAS EBOLA VIRUS PREPAREDNESS AND RESPONSE PLAN
Version 9.0
January 2017

Kansas Response Plan
Biological Incident Annex
Attachment 2

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Introduction

In response to the outbreaks of Ebola virus disease (EVD) in West Africa in 2014 - 2015 and the potential for travel-associated cases occurring in Kansas, the Kansas Department of Health and Environment (KDHE) has developed this preparedness and response plan. The first version was published as a standalone plan on 18 August 2014. The document has been periodically updated as needed.

Starting with version 9.0, the KDHE Ebola Virus Preparedness and Response Plan has been incorporated as Attachment 2 to the Biological Incident Annex of the Kansas Response Plan. In addition, the KDHE Bureau of Epidemiology and Public Health Informatics has updated its Viral Hemorrhagic Fever Disease Investigation Guideline.

Ebola virus causes Ebola hemorrhagic fever (Ebola HF), one of numerous viral hemorrhagic fevers. Ebola HF is a severe, often fatal disease in humans and nonhuman primates (such as monkeys, gorillas, and chimpanzees) that is caused by infection with a virus of the family *Filoviridae*, genus *Ebolavirus*. The first *Ebolavirus* species was discovered in 1976 in what is now the Democratic Republic of the Congo near the Ebola River. Since first being discovered in 1976, there have been more than 30 events of cases and outbreaks of Ebola virus disease (range: 1 human case to 425 human cases prior to the outbreaks in West Africa that began in 2014).

There are five identified subspecies of *Ebolavirus*. Four of the five have caused disease in humans: Ebola virus (*Zaire ebolavirus*); Sudan virus (*Sudan ebolavirus*); Taï Forest virus (*Taï 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.

The natural reservoir host of Ebola virus remains unknown. However, on the basis of available evidence and the nature of similar viruses, researchers believe that the virus is zoonotic (animal-borne) with bats being the most likely reservoir. Four of the five subtypes occur in an animal host native to Africa.

A host of similar species is probably associated with Reston virus, which was isolated from infected cynomolgous monkeys imported to the United States and Italy from the Philippines. Several workers in the Philippines and in U.S. holding facility outbreaks became infected with the virus, but did not become ill.

Policies

Situation and Assumptions

Situation

The epidemic of Ebola virus disease (EVD) that began in West Africa in 2014 was the largest in history. It was first reported in March, 2014 in the West African nations of Guinea, Liberia, and Sierra Leone. Although some travel-associated cases with limited secondary transmission subsequently appeared in Nigeria, Senegal, Spain, the United States, Mali, the United Kingdom, and Italy, the epidemic was primarily focused in Guinea, Liberia, and Sierra Leone. As of 03 February 2016, 28,639 total cases and 11,316 deaths had been reported in all affected countries. The World Health Organization has declared the end of human-to-human transmission in all three primarily-affected countries in West Africa. However, these declarations have been followed by a 90-day period of enhanced surveillance to ensure

the rapid detection of any further cases. And at the time of publication of this document, sporadic cases have continued to occur; case counts for the epidemic are frequently updated and available from the U.S. Centers for Disease Control and Prevention (CDC) website at http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/index.html.

A map of Africa is provided in Figure 1. The CDC Advisories for Liberia, Guinea, and Sierra Leone, which can be found at http://wwwnc.cdc.gov/travel/diseases/ebola, are at Watch – Level 1, Practice Usual Precautions. Humanitarian assistance is considered essential travel.

Figure 1: Map of Africa (Courtesy Nations Online Project)

On 30 September 2014, the CDC confirmed the first imported case of EVD in the United States in a person in Dallas, Texas who had traveled from Liberia. This patient was hospitalized at Texas Presbyterian Hospital, and died on Wednesday, 08 October 2014. On 12 October 2014, a health care worker at Texas Presbyterian Hospital who provided care for the index patient tested positive for EVD.

On 15 October 2014, a second health care provider who had provided care to the same index patient tested positive for EVD.

Although *Ebolavirus* transmission from an infected patient to two health care providers has now been documented in the Texas case, sustained transmission of EVD in Kansas or the United States is highly unlikely. However, in the event of future outbreaks of EVD, cases among persons with recent travel to EVD-affected countries is possible.

Health care workers are advised when evaluating any patient with signs and symptoms compatible with an infectious disease to obtain a thorough travel and exposure history, and ensure that such history is communicated to the entire care team to assist with clinical decision-making. If a patient meets the case definition for EVD, has signs and symptoms compatible with EVD, and traveled within one of the affected countries in the preceding 21 days, they should be immediately isolated with appropriate protections put in place to protect public and personal health.

Assumptions

Signs and Symptoms

Symptoms of Ebola HF typically include fever, headache, joint and muscle aches, weakness, diarrhea, vomiting, stomach pain, and loss of appetite. Some patients may also experience a rash, red eyes, hiccups, cough, sore throat, chest pain, difficulty breathing, difficulty swallowing, and bleeding inside and outside of the body.

The typical incubation period (time between exposure and onset of symptoms) is eight to 10 days, though the range is two days to 21 days.

Transmission of Ebola Virus

The natural reservoir (i.e., host species) of Ebola virus and the manner by which the first human infection(s) occur at the beginning of an outbreak have not been definitively determined. The prevailing hypothesis is that human infections first occur through contact with an infected animal.

Ebola virus can be transmitted from person to person by:

- Direct contact with the blood or secretions of an infected person
- Exposure to objects (such as needles) that have been contaminated with infected secretions

Ebola virus is not transmitted from person to person through the air, water, or food.

Diagnosis

Diagnosis of EVD during the early course of illness may be difficult because the symptoms are not specific to EVD. If EVD is suspected, several laboratory tests are available to confirm the diagnosis. Additional details regarding laboratory testing are presented in the “Evaluation and Management of Suspected EVD Cases: Information for Health Care Providers, Emergency Medical Services Personnel, and Public Health Officials” section below.

Treatment

Standard treatment for EVD is still limited to supportive therapy. This consists of:

- Balancing the patient’s fluids and electrolytes

- Maintaining their oxygen status and blood pressure
- Treating them for any complicating infections

Concept of Operations

There are three phases of EVD preparedness and response:

- EVD preparedness phase
- EVD Person(s) Under Investigation (PUI) phase
- EVD Confirmed Case phase

These phases may occur independently or concurrently to one another depending on presentation of suspected, possible, and confirmed cases in Kansas along with national and international EVD activities. The actions described below may take place in any or all of the phases of EVD preparedness and response.

As with a majority of disease outbreaks, specific trigger points for decisions based on suspected case counts is not advisable, but rather decisions to initiate agency and state incident management protocols will be determined based upon disease epidemiology, resource implications and consultation between the KDHE Secretary and appropriate local, state and federal leadership. It is not anticipated that a limited number of PUI within Kansas would necessitate activation of KDHE's Incident Command System (ICS) or would necessitate a declaration of state disaster. Limited numbers of confirmed EVD patients would likely necessitate activation of the KDHE ICS including requesting Liaison Officers from supporting agencies like the Kansas Highway Patrol (KHP), Major Emergency Response Group (MERGe), and the Kansas Division of Emergency Management (KDEM). A significant number of confirmed EVD patients within Kansas would likely necessitate a declaration of state disaster to aid in multi-jurisdictional situational awareness, resource management and provide additional resources to responding agencies.

Organization

The KDHE Secretary, who serves as the Director of the Division of Public Health and as the State Health Officer, or his or her designee, will lead the state response to Ebola Virus Disease (EVD) or any other highly infectious disease emergency in Kansas. The KDHE Secretary has designated an Ebola Virus Preparedness Committee to develop this Kansas Ebola Virus Preparedness and Response Plan and to provide guidance to local health departments, hospitals, emergency medical services, coroners, funeral homes and other health, medical and emergency management entities regarding local plan development. The members of the Ebola Virus Preparedness Committee will advise the KDHE Secretary on issues related to their specific areas of expertise for implementation of the state's response to Ebola Virus Disease. Members of the Ebola Virus Preparedness Committee are listed in Table 1.

Table 1 – Ebola Virus Preparedness Committee Members	
KDHE Secretary, Director of the Division of Public Health, State Health Officer	Deputy Secretary for Public Health and Health Care Finance, KDHE
Director, Division of Environment	Director, Bureau of Epidemiology and Public Health Informatics and State Epidemiologist
Director, Kansas Health and Environmental Laboratories	Director, Bureau of Waste Management
Director, Office of Communications	Director, Infectious Disease Epidemiology and Response

Director, Preparedness Program	Director, Healthcare Associated Infections Program
Associate General Counsel for Public Health	Director, Bureau of Community Health Systems and Deputy Director of Public Health

All of the members of the Ebola Virus Preparedness Committee are housed within KDHE. Many other subject matter experts within and outside of KDHE are available to provide advice and support to the Ebola Virus Preparedness Committee. The Ebola Virus Planning Committee reviews lessons learned, after action reports, improvement plans and new Ebola planning guidance to further develop this plan. The Kansas Ebola Virus Preparedness and Response Plan is reviewed and updated as important information warrants.

Notifications

In October, 2014 CDC and Customs and Border Protection (CBP) initiated enhanced entry screening of travelers who traveled from or through Guinea, Liberia, or Sierra Leone. This enhanced entry screening process has included CDC distributing contact information for screened passengers to the state health department based on the passenger's designation.

The enhanced entry screening process has been modified and then discontinued as the WHO has declared the end of transmission of EVD in the affected countries. Kansas has requested to continue receiving notifications for travelers undergoing any enhanced screening process and will relay this information to the appropriate local health department. Depending on the circumstances in EVD-affected countries, travelers will either be subject to public health monitoring or self-observation for a period of 21 days. KDHE will communicate recommendations to local health departments, hospitals, and other stakeholders via KS-HAN.

KDHE recommends that local health departments make initial contact with travelers entering the United States and undergoing enhanced entry screening to establish a line of communication and to reinforce the need to contact them if fever or other symptoms of concern develop during the 21-day public health monitoring or self-observation period. The CDC has released "Clinical Considerations for the Evaluation of Ill Travelers from Liberia to the United States" via the Health Alert Network (available at http://emergency.cdc.gov/han/han00381.asp).

For persons arriving in Kansas with known travel to or residence in a country with current EVD transmission within the previous 21 days, KDHE or the local health department will conduct a risk assessment (Appendix 1). This risk assessment is based on exposure guidelines recommended by the CDC. The health care facility and public health actions to be taken are based on three defined levels of exposure risk and whether or not persons are experiencing any potential signs or symptoms of EVD. There are special considerations for health care and laboratory workers.

The risk assessment will focus on contact with persons known or suspected to have EVD, including visiting or working in health care facilities, household contact with or providing in-home care to persons with potential EVD, or other activities that could pose a risk of transmission.

Those at highest risk of EVD are health care workers and family and other close contacts of patients with EVD. The risk assessment includes details for health care workers regarding contact with patients known or suspected to have EVD and infection prevention practices, including use of personal protective equipment and potential breaches in infection prevention practices.

Persons undergoing a risk assessment will be classified into one of four exposure categories:

1) high risk;
2) some risk of exposure;
3) low (but not zero) risk; and
4) no identifiable risk.

Health care facility / provider and public health actions to be taken will be based on the exposure category, clinical criteria, and other factors. Details regarding exposure category definitions and actions to be taken are provided in Appendix 2. Hospitals should contact KDHE (Epidemiology Hotline: 877-427-7317) for notification and consultation for Ebola testing requests before contacting the CDC. The CDC will not accept any specimens without prior consultations with KDHE.

Direction and Control

As the Ebola situation continues to change, KDHE will continue to lead the preparedness efforts for a comprehensive local and state health and medical response. As a novel disease in Kansas, the secretary of KDHE is authorized to "take action to prevent the introduction of infectious or contagious disease into this state and to prevent the spread of infectious or contagious disease within the state…" by K.S.A. 65-101(a)(5).

Actions

The key elements for effective preparation and response to EVD in Kansas include (in non-sequential order):

1. Efficient monitoring of Persons Under Investigation (PUI) by local, state and federal public health authorities.
2. Provision of guidance to all hospitals regarding infectious disease preparedness including Ebola.
3. Identification of State-designated Centers of Excellence for Infectious Disease Preparedness.
4. Development and maintenance of Regional Medical Bio-Response Teams.
5. Staffing and training of the KDHE Bio-Strike Team.
6. Protection of the health and medical workforce through development and maintenance of regional and state personal protective equipment (PPE) caches.
7. Dissemination of timely and accurate information to the public about Ebola to reduce fear and induce compliance with health and medical recommendations.
8. Timely laboratory testing of specimens to confirm or rule-out EVD.
9. Protection of the population and environment through appropriate use of environmental controls and waste management authorities.

Community Preparedness

By serving as the state's health authority, KDHE provides direction, guidance, technical assistance, and other support to communities to mitigate, prepare for, respond to, and recover from infectious disease emergencies. Novel diseases, such as Ebola virus disease, require KDHE to promote sound scientifically-based public health preparedness measures for all health and medical sector entities and the general population.

Federal Cooperative Agreement Funding

KDHE has been awarded a total of $3,546,642 in federal cooperative agreements to enhance preparedness and capacity for response to EVD and other high-consequence infectious pathogens

throughout the public health and healthcare systems. A brief summary of each of these programs is provided here.

Epidemiology and Laboratory Capacity for Infectious Diseases (ELC): $788,118 (supplement)
The Epidemiology and Laboratory Capacity for Infectious Diseases (ELC) cooperative agreement is an ongoing program in the Bureau of Epidemiology and Public Health Informatics. It provides funding to support crosscutting infectious disease epidemiology, laboratory, and health information systems as well as specific funding for foodborne illness, healthcare-associated infections, West Nile virus and other arboviral diseases, influenza surveillance, vaccine-preventable diseases, rabies, and others.

The Ebola virus supplemental funding is being utilized to enhance infection prevention capacity in hospitals and biosafety and biosecurity in clinical laboratories. Specific components include working with hospitals to conduct comprehensive assessments of infectious disease preparedness and infection prevention capabilities, improving outbreak detection and reporting, developing and implementing a validation plan for healthcare-associated infections, and conducting risk assessments at the Kansas Health and Environmental Laboratories and sentinel laboratories throughout the state and developing action plans to mitigate identified gaps.

Public Health Emergency Preparedness (PHEP): $1,678,016 (supplements)
Two supplemental cooperative agreement awards were provided by the PHEP program. Funding from these awards provided additional support for further development and implementation of Ebola virus and other infectious disease preparedness and planning activities, as well as support for public health monitoring of travelers from Ebola virus-affected countries and other preventive measures, purchase of personal protective equipment, laboratory equipment and supplies, securing a safe transport mechanism for suspected or confirmed patients with EVD, provision of technical assistance and training, and enhancing community-level preparedness. Local health departments received a total of $1,099,914 in contractual awards.

Hospital Preparedness Program: $1,080,508 (stand-alone award)
The primary objectives of the Hospital Preparedness Program Ebola virus cooperative agreement include: 1) Expansion of the current Ebola Preparedness and Response Plan to include the tiered approach for response, Just in Time training, transport of patients, and Ebola virus disease patient care; 2) Development of MOU(s) with the regions' Ebola Treatment Center(s) to be shared with assessment hospitals and healthcare coalitions; 3) Further development of Ebola/highly infectious disease exercise materials to include a secret shopper scenario and patient care simulation; 4) PPE purchase and sustainment PPE trainings; 5) Purchase a cache of corrugated drums to have on hand for hospitals when needed; and 6) Development of a Standard Operating Procedure template to assist EMS providers and local hospitals to develop an Ebola virus waste disposal plan.

Planning Seminar and Tabletop Exercises

On 28 October 2014, KDHE, in conjunction with the Kansas Division of Emergency Management (KDEM), conducted an executive state-level Ebola virus disease planning seminar. This seminar included senior staff representatives from 20 state agencies and focused primarily on state response activities.

A state-level tabletop exercise, planned by KDHE and KDEM staff, was conducted on 20 November 2014. This exercise also focused on state-level response activities should a case of Ebola virus disease be reported in Kansas. A second state-level tabletop exercise is scheduled for 09 January 2015. The second exercise will focus on additional preparedness and response capabilities. Additionally, KDHE and KDEM

staff members have worked with local and regional emergency partners to develop, conduct, and evaluate community-based exercises related to Ebola. The intent of these exercises is to improve the coordination and communication internally within healthcare organizations and between healthcare organizations and public health.

Emergency Operations Coordination

Incident coordination between local medical organizations, local public health entities, and KDHE will be critical to ensure efficient management of PUIs and any suspected or confirmed cases of Ebola. Coordination activities are outlined by capability in this plan. Each of these capabilities and activities must work in conjunction with one another to promote effective situational awareness and overall incident coordination.

Depending on the circumstances in EVD-affected countries, travelers will either be subject to public health monitoring or self-observation for a period of 21 days. KDHE will communicate recommendations to local health departments, hospitals, and other stakeholders via KS-HAN.
Any person undergoing either active monitoring or self-monitoring who develops a fever (≥ 38.0°C / 100.4°F **OR** subjective history of fever) ***or other symptoms of EVD*** shall immediately contact their local health department or the **KDHE Epidemiology Hotline at 877-427-7317**. If such persons contact a health care provider or local health department worker first, then the health care provider or local health department worker shall have the responsibility for contacting KDHE. The local health department or KDHE on-call epidemiologist will make notification to the person's preferred Ebola Assessment Facility. If the person is able to self-transport to the Assessment Facility, the local health department or KDHE will make notification to the facility with an estimated time of arrival of the person. If the person is unable to self-transport to the Assessment Facility, the local health department or KDHE will make notification to EMS and MERGe for transport to the Assessment Facility. The local health department or KDHE will then also make notification to the Assessment Facility with an estimated time of arrival of the person.

In most situations the impacted facilities, organizations and local government will utilize resources, contracts and mutual aid to meet resource needs. When the resources of local government are exhausted or when a needed capability does not exist within a local government, assistance is requested from the state. The Comprehensive Resource Management and Credentialing System (CRMCS) is a resource management tool that allows the state emergency management community the ability to credential personnel, provide information on availability of equipment and personnel during an emergency, the ability to track assets in use, and provide improved incident situational awareness. All state and federally funded caches are entered into CRMCS and can be utilized by the state to support any approved resource needs. For more information on Kansas emergency resource management processes see section 6.7 of the Kansas Response Plan.

Public Health Management of Suspected EVD Cases

Pursuant to K.S.A. 65-118 and K.A.R. 28-1-2, Ebola virus is considered a "…disease unusual in incidence or behavior…" [as delineated in K.A.R. 28-1-2(a)(52)] and suspected cases of Ebola virus disease must be reported to KDHE by telephone within four (4) hours (Epidemiology Hotline: 877-427-7317). The KDHE-BEPHI will work with the local health department to immediately initiate case and contact investigations so public health measures to prevent potential transmission of Ebola virus can be implemented.

As noted above, KDHE-BEPHI has a detailed Disease Investigation Guideline (DIG) for viral hemorrhagic fever that should be utilized by KDHE and local health department staff (www.kdheks.gov/epi/Investigation_Guidelines/VHF_Disease_Investigation_Guideline.pdf).

Persons with suspected EVD shall be managed as described in this document to minimize transmission to health care workers or other contacts. There are no specific Kansas regulations related to isolation of persons with EVD or quarantine of persons exposed to Ebola virus. Therefore, the provisions of K.A.R. 28-1-5, which specifies that the secretary of Kansas Department of Health and Environment or the local health officer shall order and enforce isolation and quarantine based on current medical knowledge of the particular infectious agent, apply. Statutory authority is provided in K.S.A. 65-101, 65-119, 65-128, and 65-202.

Persons in Kansas who have potential exposures to Ebola virus from a patient with EVD in Kansas or elsewhere in the United States shall be managed in a similar manner as those persons potentially exposed to Ebola virus in other countries; however, contact investigations and associated risk assessments shall be the responsibility of KDHE or the local health department.

Management of Animals Exposed to Ebola Virus

The ongoing epidemic of Ebola in West Africa has raised several questions about how the disease affects the animal population, and in particular, the risk to household pets. While the information available suggests that the virus may be found in several kinds of animals, the CDC, the US Department of Agriculture (USDA), and the American Veterinary Medical Association (AVMA) do not believe that pets are at significant risk for Ebola in the United States.[1]

The following guidance is provided to manage animals exposed to the Ebola virus. This guidance will be updated as new information is made available by the CDC, USDA, and AVMA. An animal will be considered exposed if it has been in direct contact with a person with confirmed Ebola virus infection from the onset of symptoms of the disease in the person.

Quarantine and Handling Procedures – The animal will be quarantined for a minimum of 21 days. The following management procedures will be observed:

- The animal will be quarantined in the residence of the patient with confirmed Ebola virus disease. The animal should be confined to the home and only allowed outside to urinate or defecate. When outside, the animal will be kept on a leash. Solid waste should be removed and disposed of in a waste receptacle. The waste can be disposed of through regular trash removal.
- Humans who are household contacts of the confirmed Ebola patient, and who live in the residence of the patient, should care for the animal contact(s). Exposure to the animal should be minimized. If the patient does not have another caregiver for the animal, it will be quarantined at an alternate location determined by KDHE or the local health officer.
- Monitor the animal daily for changes in behavior or health for 21 days following the last potential exposure.
- Potential signs of illness include decreased appetite, lethargy, vomiting, and diarrhea.
- Report any change in behavior or health immediately to KDHE at 1-877-427-7317.
- The animal will be evaluated by a veterinarian to determine the cause of illness. If the veterinarian cannot rule out Ebola virus infection, KDHE will then consult with the CDC for diagnostic recommendations.

The animal will be released from quarantine after 21 days, or more, as long as the animal appears clinically normal. There are currently no approved diagnostic tests for pets for Ebola virus infection;

therefore, testing is not recommended at this time. Final disposition of the animal will be determined by the Kansas Animal Health Commissioner and the Secretary of KDHE.

Volunteer Management

Regional Medical Bio-Response Teams and KDHE Bio-Strike Team

KDHE has utilized the Kansas System for the Early Registration of Volunteers (K-SERV) to recruit health care workers and other staff who would be willing to volunteer their services to respond in the event a case of Ebola virus disease occurs in Kansas. Teams would deploy to assist local facilities that receive a patient with Ebola when requested by those facilities and their duties would depend on their skills, credentials and training.

KDHE additionally has identified a Bio-Strike Team comprised of KDHE staff that would be able to provide technical assistance to and help identify resources for a facility with an EVD patient. The KDHE Bio-Strike Team includes members to assist communities with: incident coordination, disease investigation, incident documentation, behavioral health, laboratory operations, laboratory packing and shipping, communications and liaison, personal protective equipment, nursing, and waste management.

Public Information and Warning

KDHE will share information about Ebola and the response to the outbreak on its website at http://www.kdheks.gov/ebola/ as needed. For a suspected or confirmed case of EVD in Kansas, KDHE would utilize the agency's internal Crisis Risk Emergency Communications Plan. Public information outlets such as traditional print, radio, and television media may be used as well as social media including the KDHE Facebook and Twitter pages. Information will be coordinated with the medical facility and local health department.

Fatality Management

See section 207.1 of the Mass Fatalities Appendix for general concept of operations for fatality management. The District Coroner is the responsible local authority for managing fatalities in an incident where an individual dies in any suspicious or unusual manner or when the determination of the cause of death is held to be in the public interest. Specific refinements to fatality management processes including transportation, burial, and mortuary care will be consistent with CDC guidance at the time of the incident.

The CDC has issued "Guidance for Safe Handling of Human Remains of Ebola Patients in U. S. Hospitals and Mortuaries" (available at http://www.cdc.gov/vhf/ebola/hcp/guidance-safe-handling-human-remains-ebola-patients-us-hospitals-mortuaries.html). KDHE has reviewed the CDC guidance and is adopting it by reference.

Information Sharing

On 10 October 2014 KDHE held its first update meeting for stakeholders. The purpose of the meeting was to present the KDHE Ebola Preparedness and Response Plan. The meeting was well attended, with participants joining in person and via telephone / webinar.

Beginning 16 October 2014 KDHE initiated weekly teleconferences with population health partners (including local health departments, hospitals, and others) focusing exclusively on Ebola virus. During these teleconferences, KDHE provided situational updates, revisions to the KDHE Ebola Virus Preparedness and Response Plan, documents and other resources, and responded to participant questions. These teleconferences continued through 20 November 2014. Participation in these

teleconferences ranged from 140 lines on 20 November to 750 lines on 16 October. Beginning November 25, 2014, KDHE resumed its regular schedule for population health teleconferences, with an update on Ebola virus being included as part of the agenda. Also on 16 October 2014, KDHE established a dedicated email address (Response2014@kdheks.gov) for interested parties to utilize to submit questions, comments, or concerns.

Senior KDHE staff involved in developing and managing the Ebola Preparedness and Response Plan attended the first in a series of meetings with each of the seven Regional Health Care Coalitions throughout the state on 17 November 2014. These meetings have been well attended, ranging from 74 participants to 118 participants to date.

Medical Material Management and Distribution

The primary medical material likely to be distributed during a suspected or confirmed case of EVD in Kansas is PPE. KDHE will follow the standard process for requesting medical material from state and Strategic National Stockpile (SNS) caches as outlined in the BIA and Emergency Support Function 8 – Health and Medical Annex. Requests for support from local medical facilities and health departments should be made to their county emergency manager.

Medical Surge

If a suspected or confirmed case of EVD is identified in Kansas, the ability for medical facilities and state systems to surge to control the spread of the disease and provide safe patient care is of utmost importance. The University of Nebraska Medical Center (UNMC) serves as the multi-state regional treatment facility for confirmed EVD patients. Safely transporting the patients to the treatment facility will require coordination between healthcare, public health, emergency medical services, and law enforcement officials. Should transfer to UNMC or other Ebola Treatment Center not be available, the Kansas hospitals identified as Centers of Excellence for Infectious Disease Preparedness need to have the capability to treat the patient.

State-designated Centers of Excellence for Infectious Disease Preparedness and Frontline Hospitals

All hospitals in Kansas have an important responsibility regarding preparedness for infectious diseases, including Ebola virus and other high-consequence pathogens. As part of the domestic Ebola virus preparedness and response effort, the CDC has developed a framework for a tiered approach for hospitals in the U.S. Full details are available at http://www.cdc.gov/vhf/ebola/healthcare-us/preparing/hospitals.html. In this framework, hospitals can serve one of three roles:

- Frontline healthcare facilities
- Ebola assessment hospitals
- Ebola treatment centers

Most hospitals in the U.S. and in Kansas are considered as frontline healthcare facilities. Briefly, frontline hospitals should be able to rapidly identify and triage patients with relevant exposure history and signs or symptoms compatible with EVD, appropriately isolate and manage such patients using appropriate PPE and other infection prevention protocols, notify KDHE of suspect case, and initiate appropriate testing (including for other, more common acute conditions consistent with the signs and symptoms for patients in the low risk category).

As part of the Hospital Preparedness Program Ebola virus cooperative agreement, state health departments are required to designate at least one hospital in the state capable of serving as an Ebola

assessment hospital. KDHE engaged regional hospital preparedness coordinators in a planning process to consider the best designation strategy for Kansas. Through this consensus process, it was determined that Kansas would best be served by one designated hospital in each of the Kansas City and Wichita metropolitan areas, respectively. With the recognition that hospital preparedness for high-consequence infectious diseases encompasses much more than Ebola virus, KDHE has designated two assessment hospitals in Kansas as *Centers of Excellence for Infectious Disease Preparedness:*

The University of Kansas Hospital	**Via Christi Hospital St. Francis**
3901 Rainbow Blvd.	929 St Francis N
Kansas City, KS 66160	Wichita, KS 67214

Through a self-assessment process and discussions with KDHE staff, each of the designated assessment hospitals has demonstrated a high degree of preparedness for managing and caring for patients with suspected Ebola virus disease and other high consequence infectious pathogens. In addition, the designated hospitals will engage in intensive planning, exercising, and training activities to enhance their preparedness capabilities.

Persons under public health monitoring who develop symptoms consistent with EVD will be managed according to their exposure risk category and clinical signs and symptoms as indicated in Appendix 2. In general, persons in the "Low (but not zero) Risk" exposure category who are clinically stable and do not have bleeding, vomiting, or diarrhea will be encouraged to seek care at the local hospital of their choice, which in some cases may be frontline healthcare facilities.

Patients who are experiencing bleeding, vomiting, or diarrhea or who are in higher exposure risk categories will be encouraged to seek care at a designated Center of Excellence for Infectious Disease Preparedness or, depending on geographic factors, a designated Ebola Assessment Hospital in a neighboring state. Any such action will depend on the circumstances and will be closely coordinated between the patient, local health department, state health department(s), and designated hospital.

Coordination of patient care at must take into consideration several factors, including the wishes of the patient. All hospitals should be familiar with the KDHE Ebola Virus Disease Preparedness and Response plan (this document), the CDC tiered framework for hospitals, and requirements under the Emergency Medical Treatment and Labor Act (EMTALA). The U.S. Centers for Medicare and Medicaid Services (CMS) issued a memorandum regarding EVD and implications for EVD. (See Appendix 9.)

Infection Prevention and Control Recommendations for Hospitalized Patients with Known or Suspected Ebola Virus Disease in U.S. Hospitals

In this guidance health care personnel (HCP) refers to all persons, paid and unpaid, working in health care settings who have the potential for exposure to patients or to infectious materials, including body substances, contaminated medical supplies and equipment, contaminated environmental surfaces, or aerosols generated during certain medical procedures. HCP include, but are not limited to, first responders, physicians, nurses, nursing assistants, therapists, technicians, emergency medical service personnel, morticians, dental personnel, pharmacists, laboratory personnel, autopsy personnel, students and trainees, contractual personnel, home health care personnel, and persons not directly involved in patient care (e.g., clerical, dietary, house-keeping, laundry, security, maintenance, billing, chaplains, and volunteers) but potentially exposed to infectious agents that can be transmitted to and from HCP and patients. However, there are special considerations for outpatient settings as provided below. This guidance is not intended to apply to persons outside of health care settings.

All persons entering the hospital room of a patient with suspected or confirmed Ebola should adhere to the PPE guidance as detailed in Appendix 4.

As new information becomes available, these recommendations will be re-evaluated and updated as needed. These recommendations are based upon the most current information available and the following considerations:

- High rate of morbidity and mortality among infected patients
- Risk of human-to-human transmission
- Lack of FDA-approved vaccine and therapeutics

If a patient in a Kansas health care facility is suspected or known to have EVD, health care facilities should:

- Isolate the patient: Patients should be isolated in a single patient room (containing a private bathroom whenever possible) with the door closed.
- Wear appropriate PPE as recommended in Appendix 4, including the use of a trained observer.
- Restrict visitors: Avoid entry of visitors into the patient's room. Exceptions may be considered on a case-by-case basis for those who are essential for the patient's wellbeing. Ensure that visitors wear appropriate PPE. A logbook should be kept to document all persons entering the patient's room. See CDC's infection control guidance on procedures for monitoring, managing, and training of visitors.
- Avoid aerosol-generating procedures: If performing these procedures is necessary, they should be performed in an airborne infection isolation room.
- Implement environmental infection control measures: Diligent environmental cleaning and disinfection and safe handling of potentially contaminated materials are of paramount importance, as blood, sweat, vomit, feces, urine, and other body secretions represent potentially infectious materials and should be handled following hospital protocols.

Additional guidance and information can be found in Appendix 4, including a one-page guide for PPE.

Transport of Patients with Suspected or Confirmed Ebola Virus Disease

KDHE has entered into an agreement with the Major Emergency Response Group (MERGe), which is a state resource operated by the Region III EMS Council. As part of this group, the Sedgwick County EMS Biosafety Transport Team provides safe transport of patients with serious infectious diseases, including Ebola virus disease. The team is comprised of three different groups: the transport group, a decontamination group, and safety officers to ensure isolation procedures are properly followed.

In the event an EVD case in Kansas (confirmed or strongly suspected) is identified and needs to be transported, KDHE will authorize such transfer on a case by case basis. Additional details are provided in Appendix 8.

Transfers to ETC will be coordinated by KDHE, the receiving state's Department of Health, the sending facility, the Sedgwick County EMS Biosafety Transport Team and the receiving ETC. This coordination will include an emergency conference call, hosted by KDHE, to be conducted within 30 minutes of a decision to transfer the patient. This will include, at a minimum, the patient's condition, prognosis, and any transportation concerns. Should law enforcement escort of ground transportation be required, KDHE's Preparedness Program will coordinate with the Kansas Highway Patrol Emergency Operations Troop for

such escort. Kansas is working on identification of one or more airports to transport patients should it be medically necessary.

Special Considerations for Outpatient Settings

Patients with suspected Ebola virus disease (i.e., those with pertinent travel history and symptoms consistent with EVD) should be immediately given a surgical mask to don (if tolerated and not medically contraindicated), placed in an isolation gown and isolated in a private patient room. If feasible, facilities should consider utilizing a bathroom for this purpose to facilitate environmental cleaning and decontamination. A chair or two can be placed in the bathroom for the patient to sit; however, if they are ill and require lying down, the facility should identify the best room to do this and prevent other staff/visitors from entering until the final disposition of the patient is determined.

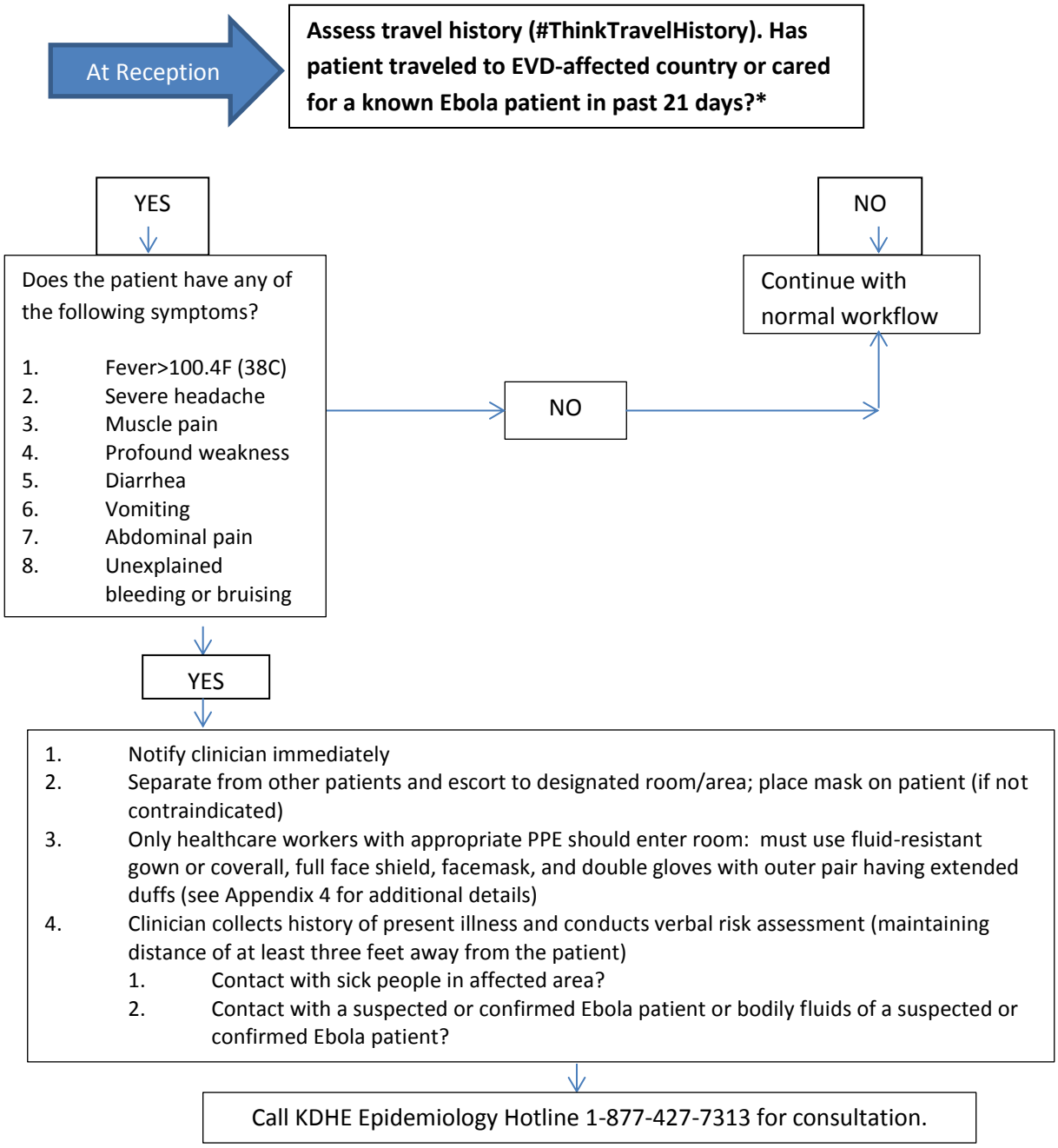
Health care workers in outpatient settings should minimize potential exposure to a patient with suspected EVD by maintaining a distance of at least three feet from patient and avoiding provision of direct, hands-on patient care. If direct patient care is required until the patient is transferred, a single staff member who is trained in proper donning and doffing of PPE should be designated to interact with the patient. The appropriate level of PPE should be utilized as designated in Appendix 4.

Suspected EVD patients should be transported to an appropriate referral hospital in the private vehicle they arrived in with law enforcement escort, if feasible. The outpatient clinic should first notify the referral hospital prior to transporting the patient and make arrangements to be called to confirm the patient arrived. A flowchart for evaluating suspected Ebola virus disease patients is presented in Figure 2.

Figure 2: KDHE Interim Guidelines for Evaluation of Suspected EVD Patients at Outpatient Clinic and Physician's Offices

Preparation Activities:

- Post signage at front door
- Identify designated room/area to separate patient for evaluation
- Ensure proper PPE is available:
  - Fluid-resistant gown or coverall, full face shield, facemask, and gloves (see Appendix 4 for additional details)



* http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/distribution-map.html#areas

Public Health Laboratory Testing

Provision of laboratory analysis is critical to effective patient care and disease control. The following table presents some applicable diagnostic tests available by time of infection to aid medical, public health and laboratory personnel in patient management.

Timeline of Infection	Diagnostic tests available
Within a few days after symptoms begin	Antigen-capture enzyme-linked immunosorbent assay (ELISA) testing IgM ELISA Polymerase chain reaction (PCR) Virus isolation
Later in disease course or after recovery	IgM and IgG antibodies
Retrospectively in deceased patients	Immunohistochemistry testing PCR Virus isolation

Specimen Collection

Ebola is detected in the blood only after the onset of symptoms (may take up to three days). Specimens should be collected when a symptomatic patient reports to a health care facility and is suspected of having an Ebola virus exposure. If the onset of symptoms is less than three days, a subsequent specimen may be needed to rule out Ebola virus if the first specimen tests negative. A minimum volume of four milliliters of whole blood preserved with EDTA is preferred, but whole blood preserved with sodium polyanethol sulfonate (SPS), citrate, or clot activator can be submitted for Ebola testing. Specimens should be shipped at 2-8 degrees C on cold packs. Do not freeze specimens (differs from CDC guidance as we are concerned a specimen that is frozen but cycles from frozen to thawed may not render an accurate test result). Do not submit glass containers. Do not submit specimens preserved in heparin tubes.

Packing and Shipping Specimens for Ebola Virus Testing

Specimens collected for Ebola virus disease testing should be packaged and shipped without opening collection tubes or aliquot specimens. Specimens for shipment should be packaged following the basic triple packaging system, which consists of a primary container (a sealable specimen bag) wrapped with absorbent material, secondary container (watertight, leak-proof), and an outer shipping package. See Appendix 5 for packaging guidance. Persons responsible for packing and shipping any specimen for Ebola testing should be trained to ship Category A infectious substances. Contact the KDHE Epidemiology Hotline for required submission documents and additional shipping guidance.

Note: In most cases, KDHE anticipates advising submitting laboratories to send specimens directly to the CDC rather than to the Kansas Health and Environmental Laboratories (KHEL). This will be managed on a case-by-case basis.

Transporting specimens within the hospital / institution

In compliance with 29 CFR 1910.1030, specimens should be placed in a durable, leak-proof secondary container for transport within a facility. To reduce the risk of breakage or leaks, do not use any pneumatic tube system for transporting suspected Ebola virus disease specimens.

Centers for Disease Control and Prevention Guidelines

The CDC published its latest guidelines regarding managing and testing routine clinical specimens when there is a concern about EVD in March, 2015. This guidance stresses that the likelihood of EVD is very low among travelers returning from affected countries and consideration of EVD should not delay diagnostic assessments, laboratory testing, and appropriate care for other, more likely medical conditions. The CDC guidance also includes information regarding the appropriate selection of laboratory equipment, including considerations for point of care testing. Companion CDC guidance regarding collection, transport, and submission of specimens for Ebola virus testing was updated in January, 2015. These documents are available at http://www.cdc.gov/vhf/ebola/healthcare-us/laboratories/index.html and are also included as Appendix 6. KDHE is replacing its previous guidance from the American Society for Microbiology with the more recent CDC guidance.

Public Health Surveillance and Epidemiological Investigation

For persons with potential exposure to EVD, monitoring for EVD symptoms with daily follow-up and reporting to the local health department or KDHE may be indicated. Persons undergoing public health monitoring shall be given information about EVD and an instruction sheet for self-monitoring (Appendix 3).

Active monitoring will entail self-monitoring for fever and other potential symptoms of Ebola virus infection twice per day until 21 days since last potential exposure, with the requirement of ***daily*** public health follow-up via telephone or other means of regular communication. For direct active monitoring, a public health worker from the local health department or KDHE will directly observe the individual at least once daily to review symptoms and monitor temperature measurement. It is recommended that an initial visit by a public health worker be conducted in person early in the direct active monitoring process to help build rapport. This initial visit should be preceded by a telephone call to ensure the individual is well and is not experiencing any symptoms of EVD. Subsequent visits throughout the 21-day period may be conducted via videoconference at the discretion of the local health department or KDHE. The information from the monitoring process shall be recorded on a log sheet (Appendix 3). The public health monitoring process will help to ensure compliance with self-monitoring, assess and identify symptoms early, reduce risks of transmission if the individual develops EVD, and to address any potential concerns.

Asymptomatic persons classified as having either a high-risk exposure or at some risk of exposure within the preceding 21 days will undergo direct active monitoring. Persons with no symptoms in the low (but not zero) risk and no identifiable risk categories will undergo active monitoring. However, in-person, direct active monitoring may be indicated in some circumstances for these individuals as determined by the local health officer or KDHE.

Although the potential risk of exposure to Ebola virus for public health workers conducting in-person, direct active monitoring would be low, public health workers should minimize any potential exposure by maintaining a distance of at least three feet from the person under monitoring and avoiding any direct, hands-on patient care.

Any person undergoing either active monitoring or self-monitoring who develops a fever (≥ 38.0°C / 100.4°F **OR** subjective history of fever) ***or other symptoms of EVD*** shall immediately contact their local health department or the **KDHE Epidemiology Hotline at 877-427-7317**. If such persons contact a health care provider or local health department worker first, then the health care provider or local health

department worker shall have the responsibility for contacting KDHE. A KDHE Epidemiologist is on call 24 hours per day. The on-call Epidemiologist shall assess self-reported symptoms to determine appropriate public health actions.

Non-Pharmaceutical Interventions

Restricted movement may also be indicated for some individuals. Most persons in the high risk exposure and some risk of exposure categories will be subjected to restricted movement and will be requested to remain at their residence or other living location as determined by KDHE or the local health officer for a period of 21 days following their last potential exposure; any movement outside the residence or other living location must be approved in advance by KDHE or the local health officer on a case-by-case basis. During this 21-day period of restricted movement, there shall be no visitors to the residence or living location except those approved by KDHE or the local health officer in advance.

Failure to comply with the provisions of active monitoring or restricted movement may result in the issuance of more restrictive quarantine orders pursuant to K.S.A. 65-119, K.S.A. 65-128 and K.A.R. 28-1-5.

Most persons in the low (but not zero) risk category shall also be subjected to active monitoring, but the only restrictions regarding travel will be the requirement to notify the local health officer or KDHE before any overnight travel outside the state of Kansas. This requirement is in place to ensure appropriate notification to other states and coordination of the active monitoring process. U.S.-based health care workers caring for Ebola patients while wearing appropriate personal protective equipment (as indicated in Appendix 4) and travelers on an aircraft with, and sitting within three feet of, a person with Ebola virus disease will be subjected to direct active monitoring.

Mass Care

Local health departments and other agencies should develop local plans to ensure basic needs of those persons whose movement is restricted are met. Such needs likely include food and other household necessities, etc.

Responder Safety and Health

During an infectious disease emergency, the ability to adequately protect the medical and public health work force is of paramount concern. Local and state medical and health organizations should review their organizational infection control plans, employee medical screenings, respiratory protection plans, fit testing records and other applicable mandated worker protection plans and procedures. Local, regional, and state PPE caches are developed to help assure equipment is available to health and medical responders during an infectious disease emergency.

Special Considerations for Health Care Workers and Other Potential Occupational Exposure to Ebola Virus

United States-based health care workers, broadly defined as any person working in a health care setting (including laboratory workers and emergency responders), and other workers who are potentially exposed to Ebola virus while caring for a patient with EVD or during environmental cleanup activities will be subject to the same requirements for active monitoring and restricted movement as any other person, with the following exceptions.

Workers who utilize appropriate personal protective equipment (PPE) as detailed in Appendix 4 will be exempt from the 21-day restricted movement period that begins after their last contact with the patient

or potentially infectious materials. These workers will be subjected to direct active monitoring and the requirement to notify the local health officer or KDHE before any overnight travel outside the state of Kansas for 21 days after last potential exposure. However, if the employee reports or is observed by a PPE trained observer to have experienced a needle stick or breach in PPE protocol, the full 21-day restricted movement period will apply.

Health care workers potentially exposed to Ebola virus who do not utilize the appropriate level of PPE during patient care will be subjected to direct active monitoring and restricted movement, depending on a risk assessment, until 21 days after the last known potential exposure. The risk assessment will include consideration of whether or not the patient was exhibiting vomiting, diarrhea, or obvious bleeding which would increase the risk of transmission of Ebola virus.

Evaluation and Management of Suspected EVD Cases: Information for Health Care Providers, Emergency Medical Services Personnel, and Public Health Officials

It is important to consider that infectious diseases can be acquired and carried by travelers to, or from, any destination in the world. Assessing a patient's travel history is a critical step to understanding how to best address a patient's chief concerns and health issues. An active dialogue between patients and clinicians to accurately assess travel experiences and exposures can be vital to the understanding of many conditions. Diseases occurring at any given time in geographic locations around the world vary greatly and are continuously changing, so keeping up to date with disease trends and knowing where to look for information can be vital. The CDC's Traveler's Health Website (http://wwwnc.cdc.gov/travel) and "Yellow Book" (http://wwwnc.cdc.gov/travel/page/yellowbook-home) provide current information on current situations in other countries. In addition, KDHE has developed an information campaign to encourage a comprehensive approach to increasing awareness of global infectious disease threats. Additional information is available at http://www.kdheks.gov/epi/thinktravelhistory.htm (including downloadable posters) and on Twitter or Facebook by searching #ThinkTravelHistory.

Patients with recent travel (i.e., within the previous 21 days) from countries with current outbreaks or local transmission of EVD who present with fever are more likely to have other potentially serious infectious diseases that should be considered in the differential diagnoses – including but not limited to malaria, typhoid fever, viral respiratory infections, and bacterial infections such as pneumonia – than they are to have EVD. However, effective patient and public health management require prompt reporting of any potential EVD case to KDHE.

Environmental Infection Control

Although risk factors for environmental transmission of Ebola virus are not well understood, there is limited evidence from laboratory studies that Ebola virus can remain viable on solid surfaces under certain environmental conditions for several days. According to the CDC, there is no epidemiologic evidence of environmental Ebola virus transmission via fomites (e.g., bed rails, door knobs, laundry, etc.). However, environmental infection control measures are prudent given the low infectious dose, the potential of high virus titers in blood (and other bodily fluids like vomitus and stool) of ill patients, and the severity of EVD.

There is likely to be considerable amounts of medical waste generated during the course of providing care for a patient with EVD and other waste generated during environmental cleaning and disinfection in health care settings and in community settings.

The U.S. Department of Transportation (DOT) has classified Ebola virus as a Category A infectious substance per its Hazardous Materials Regulations (HMR, 49 C.F.R., Parts 171-180). Any item transported offsite for disposal that is contaminated or suspected of being contaminated with a Category A infectious substance must be packaged and transported in accordance with the HMR. This includes medical equipment, sharps, linens, and used health care products (such as soiled absorbent pads or dressings, kidney-shaped emesis pans, portable toilets, used personal protection equipment (gowns, masks, gloves, goggles, face shields, respirators, booties, etc.) or byproducts of cleaning) contaminated or suspected of being contaminated with a Category A infectious substance.

On 06 October 2014, KDHE issued a written policy pursuant to K.S.A. 65-3430(e)(1)(B) and K.S.A. 65-101(a)(2) and (5) that defines Ebola virus and other hemorrhagic fever viruses as hazardous waste. A revised policy was issued on 29 December 2014 that allows for secure transport of waste materials contaminated with Ebola virus and other hemorrhagic fever viruses within or through the state of Kansas. This change provides hospitals and other health care providers with viable options for safely managing waste.

This guidance regarding the treatment, storage, and disposal of Ebola waste is based upon guidance and requirements established by KDHE, World Health Organization, CDC, and DOT.

For the purposes of this document, Ebola waste means any untreated medical waste generated in the care of patients with known or suspected Ebola virus disease (EVD) including, but not limited to, medical equipment, sharps, linens, and used health care products, used PPE, and all absorbent or uncleanable items contaminated or potentially contaminated by a suspected EVD patient. Ebola waste is a Category A infectious substance and a Resource Conservation and Recovery Act (RCRA) hazardous waste in the State of Kansas. A RCRA hazardous waste must be transported by a registered hazardous waste transporter and disposed of at a permitted hazardous waste facility (an incinerator).

Ebola waste that has been treated (sterilized) by the generator using effective (autoclaving) procedures may be managed as other Category B Regulated Medical Waste (RMW) in accordance with state and federal transportation and disposal requirements. Such waste may be treated in permitted medical waste disposal facilities. Chemical treatment alone does not remove the Ebola waste (Category A) designation, nor does it eliminate the hazardous waste classification.

Hospitals and Other Medical Facilities

Hospitals or other medical facilities that have the capability to sterilize Ebola waste in an on-site autoclave should do so as waste is generated to avoid the accumulation of large volumes of untreated Ebola waste on-site. Prior to sterilization in an autoclave, any confirmed or suspect Ebola waste must be properly packaged and labeled while held in temporary storage (see storage requirements below).

Hospitals or other medical facilities without autoclaving capabilities should package the waste following DOT requirements (Title 49, Part 173.196, and other associated DOT guidance). The packaged waste should be properly labeled and placed into secure storage. As soon as such waste handling processes are initiated, the facility should contact KDHE to obtain assistance in identifying and selecting a waste transporter and disposal facility.

Human body fluids from a patient in isolation should be collected for disposal as Ebola waste or collected and treated with 1 part of household bleach to 9 parts water for at least 10 minutes or longer prior to discharge to the sanitary sewer. Facilities should discuss preferred concentrations and

treatment time for bodily fluid wastes utilizing this method with their Public Waste Water Treatment facility director and local emergency manager.

Toilet bowls should be primed with a 9:1 (water:bleach) solution prior to introduction of any wastes (i.e., prior to patient use) to ensure wastes voided during toilet equilibrium actions are appropriately treated. Body fluids expelled directly from the patient into a toilet must be treated again with 1 part of household bleach to 9 parts water for at least 10 minutes prior to discharge to the sanitary sewer; this will require consideration of the toilet bowl water volume to ensure a 9:1 (water:bleach) solution is achieved during treatment.

Onsite Storage of Ebola Waste

The DOT shipping packaging adequately satisfies the hazardous waste packaging requirement for untreated Ebola waste. It is recommended that the outer packaging be rigid plastic 55-gallon drums or larger over-pack plastic drums. These containers are capable of being incinerated with the contained waste. All DOT labeling requirements can be included on the “Hazardous Waste” label which must also include the date that the container was placed into storage (there is a 90-day storage time limit). The DOT “Infectious Substance” label should also be adhered to the outer package. The labeling information includes the following: DOT shipping name - "Infectious substances, affecting humans (Ebola Hazardous Waste)", hazardous class/division 6.2 (DOT), DOT ID # UN2814. The hazardous waste code is “EBOLA” to be put into the waste code section of the uniform hazardous waste manifest.

Autoclave Guidelines for Sterilization of Ebola Waste

If the facility uses an autoclave to sterilize the Ebola waste; they should include the following in their procedure to ensure effectiveness:

- All waste should be in biohazard autoclave bags and should be no more than three-fourths full.
- Bags should be tied loosely and about 50 mL of water added to each bag.
- Tape a biological indicator ampoule to the outside of the bag and place bag in a metal autoclave pan or tray. (Note that effectiveness is increased with metal trays.)
- A chemical indicator strip may also be used near the mouth of the bag.
- Autoclave contents for a minimum of 60 min, at 121°C, and 15psi, with slow exhaust.
- The Autoclave log should document the contents, duration, time, pressure, and temperature for the autoclave cycle.
- Document that the chemical indicator strip indicates a successful run. If the chemical indicator fails, then the sterilization should be repeated with fresh indicator. (The chemical indicator provides an initial evaluation of run success. The biological indicator provides confirmation and should be included in every run of the autoclave.)
- Label the bag with the date and time of run or other tracking system that corresponds with the biological indicator ampoule, autoclave log and chemical indicator for that run.
- Hold labeled autoclaved waste until the biological ampoule indicates successful sterilization. (NOTE: The biological indicator must be incubated according to manufacturer’s directions for 48 hours to confirm effectiveness of the autoclave to inactivate organisms.)
- Once successful sterilization has been confirmed with the biological indicator, document that bags associated with that run are ready for storage and disposal as Category B Regulated Medical Waste.

NOTES:
Sterilization indicator tape is not equivalent to the biological indicator and chemical strip indicator described above.

The chemical indicators and biological indicators should be used with every autoclave run and their location within the autoclave varied to ensure uniform sterilization throughout the autoclave.
Do not overfill the bags, the secondary containers, or the autoclave itself. Steam must be able to penetrate all areas of the waste material to ensure effectiveness of the sterilization.

Disposal of Ebola Waste

If the facility does not already have a hazardous waste generator ID, KDHE can provide a special ID to allow the waste to be shipped off-site using a uniform hazardous waste manifest. This manifest satisfies both the hazardous waste and DOT shipping paper requirements. KDHE will work with the facility to identify a waste transporter and permitted incineration facility.

Other Generators of Ebola Waste

All other generators of Ebola waste should follow the same packaging and labeling procedures as hospitals that do not have treatment (sterilization) capabilities. Clean-up contractors should coordinate storage and disposal procedures with KDHE. Movement to a temporary secure storage area may be approved by KDHE, if necessary, pending the selection of a permitted disposal facility. Direct loading and transfer to a disposal facility is preferred if this can be pre-arranged.

Handling of Bulky Contaminated Items

Some contaminated or potentially contaminated items that cannot be appropriately cleaned and disinfected may be large and unable to be treated in an autoclave or packed into the approved DOT shipping containers without size reduction. Items may include things such as bedding, chairs, mattresses, etc. It will be necessary to reduce the size of such items using mechanical procedures. The surfaces of these items must first be treated with a U.S. Environmental Protection Agency (EPA)-registered hospital disinfectant with a label claim for a non-enveloped virus (e.g., norovirus, rotavirus, adenovirus, poliovirus) or a 9:1 (water:bleach) solution). Note: 9:1 (water:bleach) solution is caustic. Avoid direct contact with skin and eyes. Prepare the bleach solutions in a well-ventilated area. Care must be taken to avoid exposures and the additional spread of contamination during these steps.

All items being prepared for delayed on-site treatment or off-site shipments must be placed in rigid containers that are no larger than 55-gallon drums or larger over-pack containers.

Special DOT Permits

If a disposal facility requires outer packaging that differs from the DOT requirements in Part 173.196, a Special Permit may be requested.

Community Recovery

Appropriate recovery and community decontamination actions will help promote a return to normalcy for the community affected by suspected or confirmed case(s) of Ebola. Additionally, an available and sustained behavioral health support network within the community will help reduce the stress caused by an identified case and associated disease control measures.

Community Environmental / Decontamination Issues

Local health departments and other local agencies are advised to discuss and plan for how local resources will be identified and utilized to address any potential needs for environmental decontamination of a confirmed case-patient's residence or other structures. Such resources might include local or regional hazardous materials response teams or private contractors. These units are primarily present to isolate a threat and monitor the environmental decontamination and not for clean-up. KDHE is working to develop a resource guide to environmental clean-up organizations familiar with

proper PPE and handling of potentially infected blood and fluids. Refer to Environmental Infection Control section above for information on management of waste generated from cleanup activities.

A one-page waste management guide is available in Appendix 7.

Responsibilities

Primary Agency

Kansas Department of Health and Environment

Preparedness

- Maintain an up-to-date Kansas Ebola Preparedness and Response Plan with current information from state, national, and international sources.
- Review and revise Ebola related policies to ensure that the most current scientific knowledge is correctly applied to federal and state statutes.
- Develop, train, and exercise the KDHE Bio-Strike Team to support local health and medical entities in case of a suspected Ebola patient.
- Administer Ebola related cooperative agreements to enhance local and state capabilities and capacities for responding to a highly infectious disease.
- Assess and provide technical assistance to Kansas Centers of Excellence for Infectious Disease Preparedness

Response

- Ensure appropriate active monitoring level is being conducted by the local health department for each traveler returning from a country of concern.
- Activate the KDHE ICS to promote proper disease control activities within Kansas and ensure operational coordination with local, state, and federal response organizations.
- Make the KDHE Bio-Strike Team available to facilities and communities impacted by an Ebola patient.
- Coordinate patient transport to an appropriate Center of Excellence for Infectious Disease Preparedness or Ebola Treatment Unit

Kansas Health and Environmental Laboratories

Preparedness

- Provide recommendations on laboratory preparedness efforts and needs to Ebola Virus Preparedness Committee.
- Maintain adequate supplies to package and ship suspect samples to appropriate national laboratories.
- Maintain proficiency on analyses needed to support an Ebola patient.
- Assess and provide technical assistance to Kansas Centers of Excellence for Infectious Disease Preparedness

Response

- Provide packing and shipping guidance to local organizations for specimens related to Ebola patients.
- Provide analysis of samples for which KHEL has appropriate equipment, staffing, reagents, and proficiency to conduct.

Support Agencies

Kansas Division of Emergency Management

Preparedness

- Participate in Ebola exercise opportunities, as applicable.

Response

- Activate the State Emergency Operations Center to assist KDHE if requested.

Major Emergency Response Group (MERGe)

Preparedness

- Participate in Ebola exercise opportunities, as applicable.

Response

- Transport patient(s) with suspected or confirmed EVD as approved by KDHE.

Kansas National Guard – 73rd Civil Support Team

Preparedness

- Provide Ebola related PPE training to community health and medical partners on behalf of KDHE.

Response

Kansas Highway Patrol

Preparedness

- Participate in Ebola planning activities including coordination of multi-state law enforcement concerns.
- Participate in Ebola exercise opportunities, as applicable.

Response

- Provide law enforcement escort to ground transportation of KDHE approved suspected Ebola patient transfers.

Kansas Department of Agriculture

Preparedness

- Participate in Ebola exercise opportunities, as applicable.

Acronyms, Abbreviations, References and Definitions

Acronyms and Abbreviations

ASM	American Society for Microbiology
AVMA	American Veterinary Medical Association
BEPHI	Bureau of Epidemiology and Public Health Informatics
CDC	Centers for Disease Control and Prevention
CMS	Center for Medicare Services
DOT	Department of Transportation
EDTA	Ethylenediaminetetraacetic acid
ELC	Epidemiology and Laboratory Capacity for Infectious Diseases
EMS	Emergency Medical Service
EMTALA	Emergency Medical Treatment and Labor Act
EPA	Environmental Protection Agency
EVD	Ebola Virus Disease
HCP	Health Care Provider
KDEM	Kansas Division of Emergency Management
KDHE	Kansas Department of Health and Environment
K-SERV	Kansas System for the Early Registration of Volunteers
MERGe	Major Emergency Response Group
MOU	Memorandum of Understanding
PPE	Personal Protective Equipment
SPS	Sodium Polyanethol Sulfonate
USDA	United States Department of Agriculture
WHO	World Health Organization

References

Management of Animals Exposed to Ebola Virus

1. Centers for Disease Control and Prevention. Questions and Answers about Ebola and Pets. Accessed on October 15, 2014 at; http://www.cdc.gov/vhf/ebola/transmission/qas-pets.html.
2. Allela, L., Bourry, O., Pouillot, R., et al. Ebola Virus Antibody Prevalence in Dogs and Human Risk. Emerging Infectious Diseases. 2005: 11(3); 385-390.

Definitions

Close contact	Close contact is defined as being within approximately 3 feet (1 meter) of a person with Ebola while the person was symptomatic for a prolonged period of time while not using appropriate PPE.
Active and Direct Active Monitoring	Active monitoring will entail self-monitoring for fever and other potential symptoms of Ebola virus infection twice per day until 21 days since last potential exposure, with the requirement of daily public health follow-up via telephone or other means of regular communication. For direct active monitoring, a public health worker from the local health department or KDHE will directly observe the individual at least once daily to review symptoms and monitor temperature

	measurement. It is recommended that an initial visit by a public health worker be conducted in person early in the direct active monitoring process to help build rapport. This initial visit should be preceded by a telephone call to ensure the individual is well and is not experiencing any symptoms of EVD. Subsequent visits throughout the 21-day period may be conducted via videoconference at the discretion of the local health department or KDHE. The information from the monitoring process shall be recorded on a log sheet (Appendix 3). The public health monitoring process will help to ensure compliance with self-monitoring, assess and identify symptoms early, reduce risks of transmission if the individual develops EVD, and to discuss any potential concerns.
Restricted movement	Persons must remain at their residence or other living location as determined by KDHE or the local health officer for a period of 21 days following their last potential exposure; any movement outside the residence or other living location must be approved in advance by KDHE or the local health officer on a case-by-case basis. During this 21-day period of restricted movement, there shall be no visitors to the residence or living location except those approved by KDHE or the local health officer in advance.
Special Considerations for Health Care Workers	Health care workers, broadly defined as any person working in a health care setting (including laboratory workers and emergency responders), and other workers who are potentially exposed to Ebola virus while caring for a patient with EVD or during environmental cleanup activities will be subject to the same requirements for active monitoring and restricted movement as any other person, with the following exceptions. Workers who utilize appropriate personal protective equipment (PPE) as detailed in Appendix 4 will be exempt from the 21-day restricted movement period that begins after their last contact with the patient or potentially infectious materials. These workers will be subjected to direct active monitoring and the requirement to notify the local health officer or KDHE before any overnight travel outside the state of Kansas for 21 days after last potential exposure. However, if the employee reports or is observed by a PPE trained observer to have experienced a needle stick or breach in PPE protocol, the full 21-day restricted movement period will apply.

Appendices

Appendix 1 – Risk Assessment for Individuals Returning from Ebola Affected Areas

An ongoing outbreak of Ebola in West Africa has prompted the need for careful evaluation and management of individuals returning from outbreak affected areas (map available at http://www.who.int/csr/disease/ebola/evd-outbreak.jpg). Entry screening of all passengers is being conducted at the five US airports for all passengers arriving from the affected countries.
Risk Assessments should be performed for all individuals identified who have been in the affected areas in the past 21 days.

Demographics

Name (last, first): _____

Address (mailing): _____

Address (physical): _____

City/State/Zip: _____

Phone (home): _____ **Phone** (work/cell): _____

Alternate contact: □*Parent/Guardian* □*Spouse* □*Other*

Name: _____ Phone: _____

Birth date: __/__/____ **Age:** _____ **Sex**: □Male □Female □Unknown

Travel History

Were you in a country were an Ebola outbreak is occurring within the last 21 days? □Yes □No
If yes please continue the assessment, if no then the person was not considered exposed.

List the cities, countries, travel dates and reason for travel while the person was in West Africa

City	Country	Arrival Date	Departure Date	Reason for Travel

Exposures
Ask the person the following exposure questions.

1. Did you come into contact with blood or other body fluids of a person with Ebola while the person was symptomatic? □Yes □No
   If yes, did the contact include any of the following? (**YES to any of these = HIGH RISK**)
   a. Stuck with needle or other sharp object? □Yes □No
   b. Splashed in the eye, nose, or mouth? □Yes □No
   c. Blood or other body fluids directly on your skin? □Yes □No

2. Did you provide direct care to anyone with Ebola while that person was symptomatic or enter an area where Ebola patient care was taking place? This includes household or healthcare settings. □Yes □No
    a. **If yes**, document setting:
        i. □ Household member providing care (**HIGH RISK**)
        ii. □Healthcare worker
    b. For healthcare worker: did you wear appropriate personal protective equipment (PPE) (as described in Appendix 4 at all times?□Yes □No
        NO (to appropriate PPE use) = HIGH RISK
        YES (to appropriate PPE use) = SOME RISK

3. Did you work in a laboratory in any country processing body fluids of a person with Ebola? □Yes □No
    If yes, did you wear appropriate personal protective equipment (PPE) as described in Appendix 4 and follow standard biosafety precautions at all times? □Yes □No
    NO (to appropriate PPE use and standard biosafety precautions) = HIGH RISK
    YES (to appropriate PPE use and biosafety precautions) in laboratories deemed by CDC to <u>not have</u> appropriate biosafety precautions in place = SOME RISK
    YES (to appropriate PPE use and biosafety precautions) in laboratories deemed by CDC <u>to have</u> appropriate biosafety precautions in place = LOW RISK

4. Did you have direct contact with a dead body, have contact with water used to wash dead bodies, or the cloth that covered a dead body in a country with widespread transmission or cases in urban settings with uncertain control measures (http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/distribution-map.html)? □Yes □No
    If yes, did you wear appropriate personal protective equipment (PPE) as described in Appendix 4 at all times? □Yes □No
        NO (to appropriate PPE use) =HIGH RISK
        YES (to appropriate PPE use) = SOME RISK

5. Did you provide direct patient care to persons without Ebola in a country with widespread transmission of cases in urban settings with uncertain control measures? □Yes □No
    YES = SOME RISK

6. Did you spend any time in the same room with any person with Ebola while the person was symptomatic? □Yes □No
    If YES: Were you wearing appropriate personal protective equipment (PPE) as described in Appendix 4 at all times? □Yes □No
    YES = LOW (BUT NOT ZERO)
    If NO: ask the following questions:
    a. Did you have any direct contact with the person with Ebola (e.g., shaking hands)? □Yes □No
        i. What stage of illness?
            □ Early = **LOW (BUT NOT ZERO)** □Late (SEVERLY ILL) = **HIGH RISK**
    b. Were you within 3 feet (1 meter) of a person with Ebola for an extended period of time? □Yes □No
        YES = SOME RISK **NO = LOW (BUT NOT ZERO)**

c. Did you have any other contact with a person with Ebola? □Yes □No
Describe contact: _____
Consult with KDHE to determine risk level

7. Did individual travel on an aircraft with a person with Ebola while the person was symptomatic?
□Yes □No

8. **Personal protective equipment: For health care workers, please provide details regarding the PPE utilized while caring for patients with known or suspected Ebola virus disease**:
   a. Suit/body protection
      i. □ Impermeable gown
      ii. □ Impermeable coverall
      iii. □ Other (describe): _____
   b. Gloves
      i. □ Single
      ii. □ Double
   c. Respiratory protection (check all that apply)
      i. □ Powered Air Purifying Respirator (PAPR) with a full face shield, helmet, or headpiece, with attached HEPA filter
      ii. □ N95 respirator
      iii. □ Surgical mask
   d. Face protection
      i. □ PAPR with full face shield, helmet, or headpiece, with attached HEPA filter
      ii. □ Full face shield
      iii. □ Goggles
   e. Head cover
      i. □ PAPR with full face shield, helmet, or headpiece, with attached HEPA filter
      ii. □ Surgical hood
   f. Footwear
      i. □ Latex or rubber boot
      ii. □ Impermeable boot covers that extend to mid-calf

EXPOSURE ASSESSMENT:
□ High Risk □ Some Risk □ Low (But Not Zero) □ No Identifiable Risk

Medical Information
1. Were you ill within the past month during your time in West Africa? □Yes □No
   a. If so, were you seen by a physician or did you visit a health care facility in West Africa?
      □Yes □No
   b. Name of facility: _____ Location of facility: _____
   c. What date did your symptoms begin? __/__/____
   d. What was your diagnosis? _____
   e. Did you have any of the following symptoms?

Fever	□Yes □No
Significant headaches	□Yes □No
Joint of muscle aches	□Yes □No
Nausea or vomiting	□Yes □No
Diarrhea	□Yes □No

Abdominal pains □Yes □No
Unexplained hemorrhage or bleeding □Yes □No

2. Have you been ill since your arrival in the United States? □Yes □No
   a. If yes, what date did your symptoms begin? __/__/____
   b. Did you have any of the following symptoms?
      Fever □Yes □No
         What date did your fever develop? __/__/____
         What was the highest recorded temperature? _____
      Significant headaches □Yes □No
      Joint of muscle aches □Yes □No
      Nausea or vomiting □Yes □No
      Diarrhea □Yes □No
      Abdominal pains □Yes □No
      Unexplained hemorrhage or bleeding □Yes □No

3. Have you consulted your personal physician? □Yes □No
   a. If yes, did he or she order any lab tests? □Yes □No
   b. May we have his/her name and phone number? _____

4. Have your symptoms resolved? □Yes □No
   a. What date did your symptoms resolve? __/__/____

5. When was your last influenza immunization? __/__/____

6. Were you prescribed medication to take while travelling to prevent malaria? □Yes □No
   a. If yes, did you take all medication as prescribed? □Yes □No

Hospital Planning

If you develop a fever or other symptoms of Ebola virus disease during your 21-day monitoring period, what is your preferred hospital?

Name: _____
City/State: _____

Appendix 2 – Interim Guidance for Evaluation

Exposure Level	Clinical Criteria	Health Care Facility and Public Health Actions
High Risk In any country Percutaneous (e.g., needle stick) or mucous membrane exposure to blood or body fluids (including but not limited to feces, saliva, sweat, urine, vomit, and semen[1]) from a person with Ebola who has symptoms Direct contact with a person with Ebola who has symptoms, or the person's body fluids, while not wearing appropriate personal protective equipment (PPE) Laboratory processing of blood or body fluids from a person with Ebola who has symptoms while not wearing appropriate PPE or without using standard biosafety precautions Providing direct care to a person showing symptoms of Ebola in a household setting In countries with widespread transmission or cases in urban settings with uncertain control measures Direct contact with a dead body while not wearing appropriate PPE.	Fever (subjective or measured as ≥100.4 degrees F or 38.0 degrees C) OR other symptoms consistent with EVD: Severe headache Muscle pain Vomiting Diarrhea Stomach pain Unexplained bruising or bleeding	Consideration as a probable case (http://www.cdc.gov/vhf/ebola/hcp/case-definition.html#probable) Medical evaluation using infection control precautions (Appendix 4) for suspected Ebola, consultation with KDHE (Epidemiology Hotline: 877-427-7317), and testing if indicated Patients in the "High Risk Exposure" category will be encouraged to seek care at one of Kansas's two designated Centers of Excellence for Infectious Disease Preparedness The University of Kansas Hospital (Kansas City, KS) Via Christi Hospital St. Francis (Wichita, KS) Depending on geographic location of patient, care at a designated Ebola Assessment Hospital in a neighboring state may be indicated If air transport is clinically appropriate and indicated, only air medical transport (http://www.cdc.gov/vhf/ebola/hcp/guidance-air-medical-transport-patients.html) (no travel on commercial conveyances permitted) If infection control precautions are determined not to be indicated: direct active monitoring and restricted movement until 21 days after last known potential exposure
	Asymptomatic	Direct active monitoring Restricted movement until 21 days after last known potential exposure
Some Risk of Exposure In any country	Fever (subjective or measured as ≥100.4 degrees F or 38.0	Consideration as a probable case (http://www.cdc.gov/vhf/ebola/hcp/case-definition.html#probable)

Being in close contact[2] with a person with Ebola who has symptoms while not wearing appropriate PPE (for example, in households, healthcare facilities, or community settings) *In non-U.S. laboratories that CDC has <u>not</u> deemed as having appropriate biosafety precautions in place,* laboratory processing of blood or body fluids from a person with Ebola who has symptoms while wearing appropriate PPE and using standard biosafety precautions *Assessment of laboratory facility will be conducted on returning travelers by CDC Division of Global Migration and Quarantine*	degrees C) OR other symptoms consistent with EVD: Severe headache Muscle pain Vomiting Diarrhea Stomach pain Unexplained bruising or bleeding	Medical evaluation using infection control precautions (Appendix 4) for suspected Ebola, consultation with KDHE (Epidemiology Hotline: 877-427-7317), and testing if indicated Patients in the "Some Risk of Exposure" category will be encouraged to seek care at one of Kansas's two designated Centers of Excellence for Infectious Disease Preparedness The University of Kansas Hospital (Kansas City, KS) Via Christi Hospital St. Francis (Wichita, KS) Depending on geographic location of patient, care at a designated Ebola Assessment Hospital in a neighboring state may be indicated If air transport is clinically appropriate and indicated, only air medical transport (http://www.cdc.gov/vhf/ebola/hcp/guidance-air-medical-transport-patients.html) (no travel on commercial conveyances permitted) If infection control precautions are determined not to be indicated: active monitoring and restricted movement until 21 days after last known potential exposure
<u>In countries with widespread transmission</u> Direct contact with a person with Ebola who has symptoms, or the person's body fluids, while wearing appropriate PPE Being in the patient-care area of an Ebola treatment unit Providing any direct patient care in non-Ebola healthcare settings	Asymptomatic	Direct active monitoring Restricted movement until 21 days after last known potential exposure Special considerations for U.S.-based health care workers caring for EVD patients Health care workers who utilize the appropriate level of personal protective equipment (PPE) as detailed in Appendix 4 will be exempt from the 21-day restricted movement period Health care workers potentially exposed to Ebola virus who do not utilize the appropriate level of PPE or who experience a breach in infection prevention protocols will be subjected to restricted movement, dependent on a risk assessment, until 21 days after the last known potential exposure.
Low (but not zero) risk <u>In any country</u>	Fever (subjective or measured as $\geq$100.4 degrees F or 38.0	Consideration as a probable case (http://www.cdc.gov/vhf/ebola/hcp/case-definition.html#probable)

Brief direct contact (such as shaking hands) with a person in the early stages of Ebola, while not wearing appropriate PPE. Early signs can include fever, fatigue, or headache. Brief proximity with a person with Ebola who has symptoms (such as being in the same room, but not in close contact) while not wearing appropriate PPE *In non U.S. laboratories that CDC has deemed as having appropriate biosafety precautions in place,* laboratory processing of blood or body fluids from a person with Ebola who has symptoms while wearing appropriate PPE and using standard biosafety precautions *Assessment of laboratory facility will be conducted on returning travelers by CDC Division of Global Migration and Quarantine* Traveling on an airplane with a person with Ebola who has symptoms and having had no identified *some* or *high* risk exposures <u>In countries with widespread transmission, cases in urban settings with uncertain control measures, or former widespread transmission and current, established control measures</u> Having been in one of these countries and having had no known exposures	degrees C) OR other symptoms consistent with EVD: Severe headache Muscle pain Vomiting Diarrhea Stomach pain Unexplained bruising or bleeding	Medical evaluation using infection control precautions (Appendix 4) for suspected Ebola, consultation with KDHE (Epidemiology Hotline: 877-427-7317), and testing if indicated Patients in the "Low (but not zero) Risk" category who are clinically stable and do not have bleeding, vomiting, or diarrhea will be encouraged to seek care at the local hospital of their choice Patients in the "Low (but not zero) Risk" category who are clinically unstable or who have bleeding, vomiting, or diarrhea will be encouraged to seek care at one of Kansas's two designated Centers of Excellence for Infectious Disease Preparedness The University of Kansas Hospital (Kansas City, KS) Via Christi Hospital St. Francis (Wichita, KS) Depending on geographic location of patient, care at a designated Ebola Assessment Hospital in a neighboring state may be indicated If air transport is clinically appropriate and indicated, only air medical transport (http://www.cdc.gov/vhf/ebola/hcp/guidance-air-medical-transport-patients.html) (no travel on commercial conveyances permitted) If infection control precautions are determined not to be indicated: active monitoring and restricted movement until 21 days after last known potential exposure
	Asymptomatic	Direct active monitoring for: U.S.-based health care workers caring for symptomatic Ebola patients while wearing appropriate PPE as described in Appendix 4 Travelers on an aircraft with, and sitting within 3 feet of, a person with Ebola Active monitoring until 21 days after leaving country for all others in this category

<u>In any country other than those with widespread transmission</u> Direct contact with a person with Ebola who has symptoms, or the person's body fluids, while wearing appropriate PPE Being in the patient-care area of an Ebola treatment unit		No movement restrictions except the requirement to notify the local health officer or KDHE before any overnight travel outside the state of Kansas for 21 days after last potential exposure. Travelers from Liberia (with no travel in Guinea or Sierra Leone) Will be requested to conduct self-observation until 21 days after leaving Liberia Report any symptoms consistent with EVD to local health department or KDHE
No identifiable risk Laboratory processing of Ebola-containing specimens in a Biosafety Level 4 facility Any contact with a person who isn't showing symptoms of Ebola, even if the person had potential exposure to Ebola virus Contact with a person with Ebola before the person developed symptoms Any potential exposure to Ebola virus that occurred more than 21 days previously Having been in a country with Ebola cases, but without widespread transmission, cases in urban settings with uncertain control measures, or former widespread transmission and now established control measures, and not having had any other exposures Having stayed on or very close to an airplane or ship (for example, to inspect the outside of the ship or plane or to	Symptomatic (any)	Routine medical evaluation and management of ill persons, as needed
	Asymptomatic	No actions needed

load or unload supplies) during the entire time that the airplane or ship was in a country with widespread transmission or a country with cases in urban settings with uncertain control measures, and having had no direct contact with anyone from the community Having had laboratory-confirmed Ebola and subsequently been determined by public health authorities to no longer be infectious (i.e., Ebola survivors)		

Appendix 3 – Guidance for Persons Departing a Country with Widespread Ebola Virus Disease to Kansas

This is guidance for persons who have departed from a country with widespread EVD transmission within the past 21 days and are now returning to Kansas.

Symptoms of EVD typically include an abrupt onset of fever, headache, joint and muscle aches, weakness, diarrhea, vomiting, stomach pain, and loss of appetite. Some patients may also experience a rash, red eyes, hiccups, cough, sore throat, chest pain, difficulty breathing, difficulty swallowing, and bleeding inside and outside of the body. The typical incubation period (time between exposure and onset of symptoms) is eight to 10 days, though the range is two to 21 days.

Ebola virus can be transmitted from person-to-person by:

- Direct contact with the blood or body fluids of an infected person
- Exposure to objects (such as needles) that have been contaminated with blood or other body fluids from an infected person

Ebola virus is **not** transmitted from person-to-person through the air, water, or food.

If you returned within the previous 21 days from a country with widespread Ebola virus disease transmission; have had any of the following high or low risk exposures; have a fever (subjective or measured as ≥100.4°F or 38.0°C) and additional symptoms such as severe headache, muscle pain, vomiting, diarrhea, abdominal pain, or unexplained hemorrhage, call the Kansas Department of Health and Environment (KDHE) at 877-427-7317 and your local hospital's emergency department if needed prior to seeking care.

Check your temperature twice daily and monitor for other signs and symptoms of EVD for 21 days after your exposure. Use the medical monitoring log on the next page. If you develop fever and other symptoms of EVD within 21 days of your exposure, call the KDHE Epidemiology Hotline at 877-427-7317. KDHE or the local health department will make ***daily*** contact with you to discuss and document temperature, symptoms, and to discuss any concerns.

Ebola Health Advisory Infographic: http://www.kdheks.gov/ebola/download/Ebola_Health_Advisory_Infographic.pdf
Temperature Monitoring Instructions Infographic: http://www.kdheks.gov/ebola/download/Temperature_Monitoring_Instructions.pdf

Appendix 3.1 – Daily Monitoring Log

Monitor yourself for fever twice daily for 21 days after returning from an Ebola-affected country. Mark the date, time you took your temperature (mark whether it was AM or PM), and temperature. If you develop a fever (either feeling feverish or measured as ≥100.4°F or 38.0°C) note the other symptoms you are experiencing and immediately call your local health department or the Kansas Department of Health and Environment's Epidemiology Hotline at 877-427-7317.

Day	Date	Time Taken	Temperature	Day	Date	Time Taken	Temperature
1		_____□AM□PM	_____°F	12		_____□AM□PM	_____°F
		_____□AM□PM	_____°F			_____□AM□PM	_____°F
2		_____□AM□PM	_____°F	13		_____□AM□PM	_____°F
		_____□AM□PM	_____°F			_____□AM□PM	_____°F
3		_____□AM□PM	_____°F	14		_____□AM□PM	_____°F
		_____□AM□PM	_____°F			_____□AM□PM	_____°F
4		_____□AM□PM	_____°F	15		_____□AM□PM	_____°F
		_____□AM□PM	_____°F			_____□AM□PM	_____°F
5		_____□AM□PM	_____°F	16		_____□AM□PM	_____°F
		_____□AM□PM	_____°F			_____□AM□PM	_____°F
6		_____□AM□PM	_____°F	17		_____□AM□PM	_____°F
		_____□AM□PM	_____°F			_____□AM□PM	_____°F
7		_____□AM□PM	_____°F	18		_____□AM□PM	_____°F
		_____□AM□PM	_____°F			_____□AM□PM	_____°F
8		_____□AM□PM	_____°F	19		_____□AM□PM	_____°F
		_____□AM□PM	_____°F			_____□AM□PM	_____°F
9		_____□AM□PM	_____°F	20		_____□AM□PM	_____°F
		_____□AM□PM	_____°F			_____□AM□PM	_____°F
10		_____□AM□PM	_____°F	21		_____□AM□PM	_____°F
		_____□AM□PM	_____°F			_____□AM□PM	_____°F
11		_____□AM□PM	_____°F				
		_____□AM□PM	_____°F				

If you have developed a fever please check the boxes of any symptoms you are experiencing.

☐ Headache ☐Joint or Muscle Aches ☐Weakness ☐Vomiting ☐Diarrhea ☐ Stomach or Abdominal Pain ☐ Lack of Appetite ☐Cough

☐ Sore throat ☐Rash ☐Shortness of Breath ☐Chest Pain

Appendix 4 – Personal Protective Equipment (PPE) Guidelines

For U.S. Healthcare Settings: Donning and Doffing Personal Protective Equipment (PPE) for Evaluating Persons Under Investigation (PUIs) for Ebola Who Are Clinically Stable and Do Not Have Bleeding, Vomiting, or Diarrhea available at http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance-clinically-stable-puis.html

Guidance on Personal Protective Equipment (PPE) To Be Used By Healthcare Workers during Management of Patients with Confirmed Ebola or Persons under Investigation (PUIs) for Ebola who are Clinically Unstable or Have Bleeding, Vomiting, or Diarrhea in U.S. Hospitals, Including Procedures for Donning and Doffing PPE available at http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance.html

Appendix 5 – KHEL Suspected Ebola Specimen Packaging and Shipping Pictorial Guide

Kansas Department of Health and Environment

Kansas Health and Environmental Laboratories – Suspected Ebola Specimen Packaging and Shipping System Pictorial Guide

Note: Category A: An infectious substance in a form capable of causing permanent disability or life-threatening or fatal disease in otherwise healthy humans or animals when exposure to it occurs. An exposure occurs when an infectious substance is released outside of its protective packaging, resulting in physical contact with humans or animals. A list of Category A, Infectious Substances can be found in 49 CFR Parts 171-175 Hazardous Materials. Examples: Ebola Virus, Bacillus anthracis cultures, Brucella cultures, HIV cultures

Kansas
Department of Health and Environment

Kansas Health and Environmental Laboratories – Suspected Ebola Specimen Packaging and Shipping System Guide

1

1) Fiberboard and Styrofoam Infectious Shipping System with cold packs; Secondary Containers (95 kPa bags); Absorbent sleeves; Instruction Sheet; Shipper's Declaration.

2

2) Carefully read the Instruction Sheet provided in the Infectious Shipper.

3

3) Lavender (EDTA) Vacutainer with patient information.

NOTE: Do Not use Glass Tubes. Container must be secured with ParaFilm to prevent leaks.

4

4) Place primary container into absorbent sleeves. No more than 50mLs are allowed per shipping system.

5

5) Wrap and insert specimen into 95 kPa biohazard bag (secondary container). DO NOT put any paperwork inside secondary container.

6

6) Place bagged specimen on frozen cold pack inside Styrofoam Shipper.

7

7) Place second cold pack on top of specimen bag then replace Styrofoam container top.

8

8) Additional information can be placed on top of Styrofoam lid. Paperwork should be placed in a baggie and placed on the cooler lid.

9

9) Secure the flaps on the outer package of the system with tape and complete the mailing labels. 24-hr emergency telephone number is mandatory.

10

10) Proper Shipping Name is "Infectious Substance, Affecting Humans". In parentheses "Suspect Category A Infectious Substance".

11

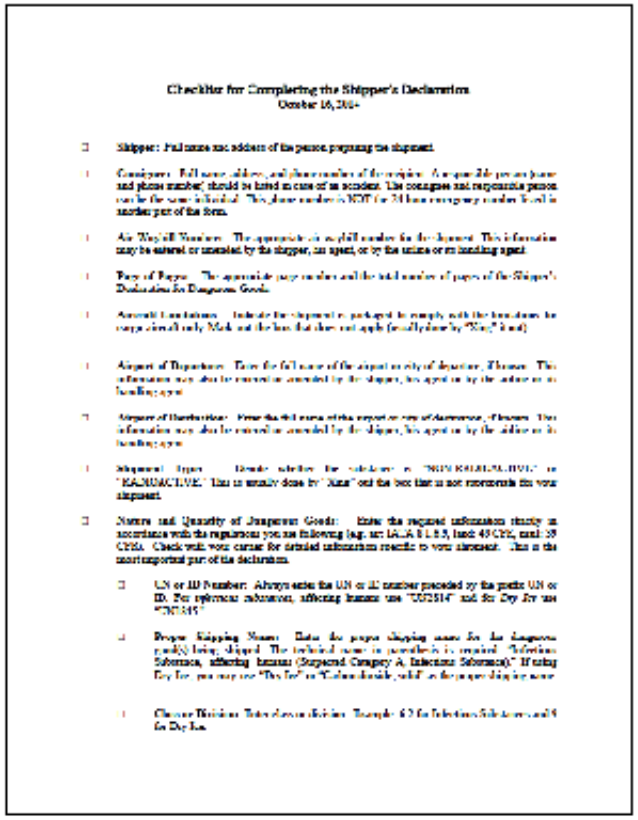
11) Complete the Shipper's Declaration (see attached Checklist) and place in plastic pouch located on back of Infectious Shipper; seal the pouch.

12

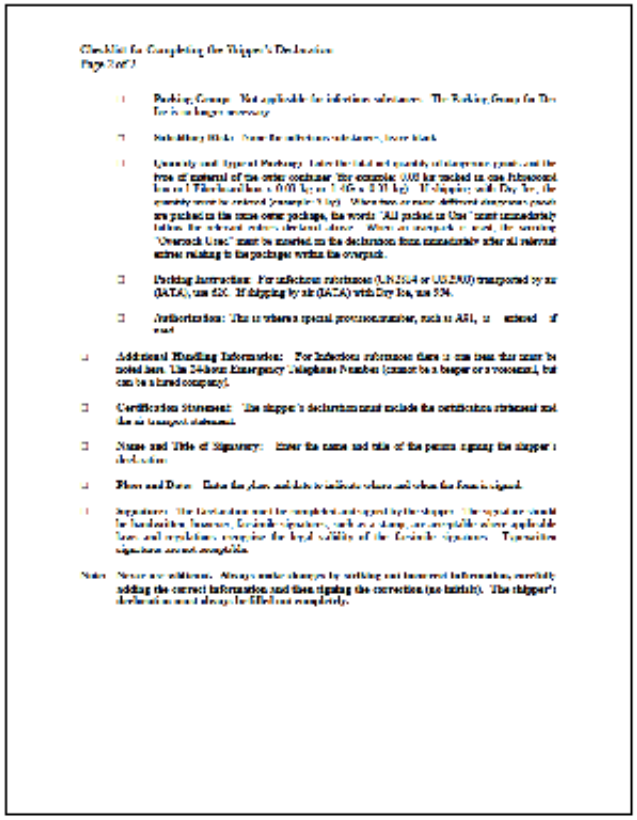
12) Outer labeling includes: UN2814, orientation labels, class 6.2 infectious substance.

Kansas Health and Environmental Laboratories – Suspected Ebola Specimen Packaging and Shipping System Pictorial Guide

- Checklist



Checklist for Completing the Shipper's Declaration
October 16, 2014



Checklist for Completing the Shipper's Declaration
Page 2 of 3

Checklist may also be found at the KDHE's website: http://www.kdheks.gov/labs/packaging_and_shipping.html

Appendix 6 – American Society for Microbiology Interim Laboratory Guidelines for Handling/Testing Specimens from Cases or Supected Cases of Hemorrhagic Fever Virus (HFV)

Available at https://www.asm.org/images/PSAB/Ebola9-10-14.pdf

Appendix 7 – Waste Management Guidelines for Ebola Response

Available at
http://www.kdheks.gov/ebola/download/KDHE_Waste_Management_Guidelines_for_Ebola_Response.pdf

Flow chart available at
http://www.kdheks.gov/ebola/download/Ebola_Waste_Flow_Chart.pdf

Biohazardous (Ebola) Waste Storage at Generating Medical Facilities guidance available at
http://www.kdheks.gov/ebola/download/Biohazardous_Waste_Storage.pdf

Appendix 8 – Sedgwick County EMS Biosafety Transport Team

Emergency Medical Service

Sedgwick County... working for you

FACTS & Details

November 2014

EMS Biosafety Transport Team

What is the Mission of the Sedgwick County EMS Biosafety Transport Team?

The mission of the Sedgwick County EMS Biosafety Transport Team (SCEMS BSTT) is to provide safe transport and quality care of patients with suspected or confirmed potentially serious infectious diseases. The SCEMS BSTT will locally provide emergency scene response for suspected patients of serious infectious diseases. Additionally the SCEMS BSTT is a Kansas deployable resource for inter-facility transports or to air evacuation points.

What are their capabilities?

The SCEMS BSTT can deploy a 7 person team to aid in the transport of a patient with a serious infectious disease to definitive care. The team is comprised of three different groups, the transport group, a decontamination group and safety officers to ensure isolation procedures are properly followed. The team is configured for the transport of a single patient and can modify their response dependent upon the suspected pathogen.

How does an agency or facility request the EMS Biosafety Transport Team?

The Kansas Department of Health and Environment must authorize the transport of an infectious patient. Contact the KDHE Epidemiology Hotline
1-877-427-7317

Once authorization has been obtained, contact the Kansas MERCs Team Dispatch at:
1-800-435-7573

What type of equipment does the SCEMS Biosafety Transport Team use?

The BSTT is specially equipped to modify isolation precautions dependent upon the pathogens ranging from standard precautions to level III airborne precautions. Types of deployed instrumentation and equipment include:

- Dedicated ambulance with patient compartment pre-draped with isolation materials.

- Patient ISO-CHAMBER with HEPA Filtration Air Extraction System.
- 3M Breathe Easy PAPR 2.2.4 MSR Advantage 1000 Full Face Air Purifying Respirator
- Personal protective equipment including Tycham and Tyvek suits
- UV Decontamination Light
- Decontamination and waste disposal materials

Why would an agency need to request the SCEMS Biosafety Transport Team?

Prevention of disease transmission during EMS transport of patients with highly infectious diseases involves more than the proper use of personal protective equipment (PPE). It also depends on the development and implementation of appropriate administrative policies, work practices, and environmental controls accompanied by focused education, training, and supervision. The SCEMS BSTT has undertaken those tasks to ensure the safety of our clinicians and the general public by meticulous adherence to published CDC and KDHE guidance.

For more information on the team contact:
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Appendix 9 – Emergency Medical Treatment and Labor Act (EMTALA) Requirements and Implications Related to Ebola Virus Disease (Ebola)

Memorandum Summary

- Ebola and EMTALA requirements: This Memorandum conveys information useful in responding to inquiries from hospitals concerning implications of Ebola for their compliance with EMTALA.
- EMTALA Screening Obligation: Every hospital or critical access hospital (CAH) with a dedicated emergency department (ED) is required to conduct an appropriate medical screening examination (MSE) of all individuals who come to the ED, including individuals who are suspected of having been exposed to Ebola, and regardless of whether they arrive by ambulance or are walk-ins. Every ED is expected to have the capability to apply appropriate Ebola screening criteria when applicable, to immediately isolate individuals who meet the screening criteria to be a potential Ebola case, to contact their state or local public health officials to determine if Ebola testing is needed, and, when a decision to test is made, to provide treatment to the individual, using appropriate isolation precautions, until a determination is made whether the individual has Ebola.
- EMTALA Stabilization, Transfer & Recipient Hospital Obligations: In the case of individuals who have Ebola, hospitals and CAHs are expected to consider current guidance of public health officials in determining whether they have the capability to provide appropriate isolation required for stabilizing treatment and/or to accept appropriate transfers. In the event of any EMTALA complaints alleging inappropriate transfers or refusal to accept appropriate transfers, CMS will take into consideration the public health guidance in effect at the time.
- Centers for Disease Control and Prevention (CDC) Website: CMS strongly urges State Survey Agencies (SAs), hospitals and CAHs to monitor the CDC website at http://www.cdc.gov/vhf/ebola/ for the most current guidance and information concerning Ebola identification, treatment, and precautions to prevent the spread of the disease, as well as their State public health website.

For full text of the Memorandum visit https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/Survey-and-Cert-Letter-15-10.pdf.