EBOLAVIRUS DISEASE Overview for EMS Professionals and EMS Systems

10/27/2022

Continuing Education – 1.0 hour Site Code: 150010E1023 IDPH Dates: 10/2022 – 10/2023



Selcome & Administrative Details

- 1. Mute audio.
- 2. Utilize the chat function for questions.
- 3. This will be recorded. By attending the webinar, you consent to being recorded.
- 4. Slides and recording will be shared after the webinar.
- 5. Continuing Education is offered for this webinar

Objectives

During this presentation participants will:

- I. Gain an understanding of the current Ebola Virus Disease Outbreak
- II. Receive an overview of the state's Ebola Virus Disease Response Plan
- III. Understand how to identify, isolate, and inform when encountering a person under suspicion for EVD or other special pathogens
- IV. Understand the role of EMS when encountering a person who may be under investigation for Ebola or other special pathogens.
- V. Understand next steps in High Consequence Infectious Disease Planning

EBOLAVIRUS DISEASE Situation Overview

10/27/2022





Sudan *ebolavirus*



28 DEATHS

Increasing capability to test

- 2 vaccine clinical trials *limited supply*
- Monoclonal therapy trial in production
- Suspected cases of Zaire strain

Oct 24 A media source reports up to 9 new cases in Kampala





Report all suspected cases to the nearest health facility immediately. OR send a FREE SMS to Ureport on: 8500 or call toll free on: 0800 100066 / 0800 203 033

Ebola Virus Disease (EVD) is a rare, but severe, often fatal illness



Incubation period, from exposure to symptoms, is 2-21 days. People with EVD cannot spread the disease until symptoms develop

Reporting in Kampala

Kampala Capital City Authority (KCCA) hotlines to report any suspected cases of Ebola or seek information related to Ebola:

Toll free: 0800299000 WhatsApp: 0708970194 and 0776140454 used

CDC updates as of 10/19/2022

- Exit screening being conducted in Uganda and entry screening of passengers in South Sundan Kenya, Rwanda, and the US
- US Travel level 2 advisory in place since 10/4; "practice enhanced precautions"
- No direct flights from Uganda to U.S. currently150 travelers originating from Uganda arrive in U.S. each day
- CDC will identify travelers with broken itineraries as well (anyone with origin from Uganda over the prior 21 days)
- Entry health screening is occurring at 5 select airports since 10/10 (NYC JFK, CHI ORD, Newark, Washington Dulles, Atlanta)Screening: temp and visual illness checks, questions about symptoms and known exposures; skilled clinician at Ohare
- Travelers with high-risk exposures identified during screening may not be allowed to continue travel
- Traveler contact information to be confirmed at airport and provided to States
- States and locals reaching out to travelers (monitoring 21 days)
- There are approved countermeasures for Ebola Zaire, but these medical countermeasures are not effective for Sudan strain BARDA has a candidate (Sabin/NIAID single dose vaccine)
- Serum Institute of India planning to make 20-30K disease of Oxford University vaccine
- Lead candidate for therapeutic is a 2 monoclonal antibody cocktail
- IDPH Chicago and Springfield labs have received the BioFire Film Array Warrior Platform; CLIA verified and ready to test for Sudan ebolavirus

Palm cards at O'Hare Airport

HEALTH ALERT: EBOLA

If you were recently in Uganda—

Watch for Ebola symptoms for 21 days:

- Fever
- Headache or body aches
- Weakness or tiredness
- Sore throat
- Diarrhea
- Vomiting
- Stomach pain
- Unexplained bleeding or bruising





If you get sick, separate yourself from others, and call a doctor.

Tell the doctor where you traveled.





www.cdc.gov/ebolatravel

Table. Summary of Post-arrival Management Recommendations for Asymptomatic Travelers by Exposure Category

Intervention	Reported High- risk Exposure	Present in Designated Outbreak Area	Present in Outbreak Country but not Designated Outbreak Area
Initial Risk Assessment	Yes	Yes	Yes
Health education	Yes	Yes	Yes
Symptom monitoring	Daily	At least twice weekly until 21 days after departure from Uganda	At least weekly until 21 days after departure from Uganda
Movement restrictions	Quarantine	None	None
Travel	Not permitted	Advance notification to health department and coordination with destination health department	Advance notification to health department and coordination with destination health department



EBOLAVIRUS DISEASE State Plan Review

10/27/2022



IDPH's Focus During an EVD Incident



Plan and prepare to identify, test, and treat a patient with EVD.



Ensure monitoring is in place to track travelers and symptoms.



Provide effective messaging, training, and education to key stakeholder groups and develop a messaging strategy to keep the provider network and public informed.

IDPH's EVD Preparedness & Response Plan

ILLINOIS DEPARTMENT OF PUBLIC HEALTH

EBOLA VIRUS DISEASE (EVD) PREPAREDNESS AND RESPONSE PLAN

June 2019

- Last Updated June 2019
- Developed to account for a possibility of EVD importation to Illinois
- EVD can pose a serious threat and understanding of disease and coordination is a priority at all levels of public health and healthcare
- Planning elements include:
 - The assumption of local planning also occurring
 - EMTALA requires all hospitals to provide basic screening, isolation, and stabilization for ANY patient
 - LHDs monitor persons with exposure history, perform contact tracing, and implement isolation and quarantine, when required
 - EMS will transport if requested
 - Healthcare workers providing care are educated and trained

Preparing the Healthcare System

	•Northwestern Hospital (adults)	Capabilities	PPE ¹ Needs
Ebola Treatment Centers	 Rush Medical Center (adults) Lurie Children's Hospital (children) 	 Care for and manage patient throughout disease process 	 Maintain Ebola PPE² sufficient for at least 7 days of patient care
Ebola Assessment Hospitals (status update in progress)		 Evaluate and care for patient for up to 96 hours or until discharged or transferred Initiate Ebola testing and transport patient to Ebola treatment Center if lab-confirmed EVD Staff trained and proficient in donning/doffing, proper waste management, infection control practices and specimen transport 	 The use of PPE should be based on the patient's clinical status³ Maintain Ebola PPE² sufficient for 4-5 days of patient care
Frontline Healthcar Facilities	•IL acute care facilities that are equipped for emergency care	 Identify patients with relevant exposure history⁵ and Ebola-compatible symptoms Isolate patients Inform health department Initiate testing if low risk; high risk should be transferred for evaluation and testing Staff trained on specimen transport, waste management, Standard Precautions; proficient in donning/doffing 	 The use of PPE should be based on the patient's clinical status³ PPE for clinically stable patients³ should be sufficient for most patients Maintain access to Ebola PPE² sufficient for 12-24 hours of patient care, to be used if needed

EBOLAVIRUS DISEASE Preparing EMS Professionals

10/27/2022



Gap Analysis, 2018

- Gap-analysis survey concerning HID preparedness among U.S. EMS was conducted.
- Knowledge deficits for exposure routes of notable select HIDs were identified.
- Results indicate practitioners could gain from updated HID training and education.
- Conclusion
 - Strengthening EMS preparedness in response to suspected or confirmed HID cases may not only improve patient outcomes, but also worker and community safety.



Contents lists available at ScienceDirect

American Journal of Infection Control

journal homepage: www.ajicjournal.org

Major Article

Determining training and education needs pertaining to highly infectious disease preparedness and response: A gap analysis survey of US emergency medical services practitioners CrossMark

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Source: Determining training and education needs pertaining to highly infectious disease preparedness and response: A gap analysis survey of US emergency medical services practitioners (ajicjournal.org)

Transport and Management of a Patient

- Introduction and overview of transport of patients with serious communicable disease
 - Education and training
 - Equipment
 - Concept of operations
- Tenets of infection control
 - Standard precautions
 - Hand hygiene
 - PPE
 - Patient care equipment
 - Environmental controls
 - Injury prevention
 - Transmission-based precautions (contact, droplet, aerosol)
 - PPE
 - Patient care equipment
 - Patient placement
 - Categorization of common pathogens
- Education about serious communicable pathogens
 - Epidemiology of illness
 - Microbiology of pathogen
 - o Methods of acquisition/transmission

- Natural disease course
- Incubation
- Signs and symptoms
- Transmission
- Recovery
- Preventing transmission/infection cor
- Treatment
- Vaccine/prophylaxis
- · Operational planning and procedures
 - o Clinical care guidelines
 - o Crew composition and roles
 - Vehicle preparation
 - Special equipment
 - PPE
 - Selection
 - Donning
 - Doffing
 - o Decontamination and disinfection pr
 - Waste management
 - o Partnership with receiving facilities
 - Postmission surveillance



Background

Spread through direct contact (broken skin or mucous membranes, etc.) from a sick person

Can present similar to other travel-related illnesses

Key safe work practices include avoiding

- Unprotected exposure to blood or body fluids of patients with EVD through contact with skin, mucous membranes of the eyes, nose, or mouth.
- Injuries with contaminated needles or other sharp objects.
- Aerosol-generating procedures when possible.

Interim Guidance for Emergency Medical Services (EMS) Systems and 9-1-1 Emergency Communications Centers/Public Safety Answering Points (ECC/PSAPs) for Management of Patients Under Investigation (PUIs) for Ebola Virus Disease (EVD) in the United States

Print

Page Summary

Who this is for: EMS clinicians (including emergency medical responders (EMR), emergency medical technicians (EMTs), advanced EMTs (AEMTs), paramedics, and other medical first responders who could be providing patient care in the field, such as law enforcement and fire service personnel), managers of 9-1-1 ECC/PSAPS, EMS agencies, EMS systems, and agencies with medical first responders.

What this is for: Guidance to assure EMS and first responders are safe and patients are appropriately managed while handling inquiries and responding to PUIs for EVD. The information contained in this document is intended to complement existing guidance for healthcare personnel.

How to use: Employers and supervisors should use this information to understand and explain to staff how to respond and stay safe. Supervisors can use this information to prepare, educate, and train EMS personnel. Individuals can use this information to stay safe when responding to PUIs.

Interim Guidance for Emergency Medical Services (EMS) Systems and 9-1-1 Emergency Communications Centers/Public Safety Answering Points (ECC/PSAPs) for Management of Patients Under Investigation (PUIs) for Ebola Virus Disease (EVD) in the United States | Emergency Services | Clinicians | Ebola (Ebola Virus Disease) | CDC

IDENTIFY -Screening in the Pre-hospital setting

Case Definitions

- Early recognition of Ebola is critical for infection control. Individuals can be classified as *Persons Under Investigation (PUI)* or *Confirmed Cases.*
 - Persons Under Investigation (PUI) Individuals can be classified as a PUI if they have
 - Signs and symptoms consistent with Ebola virus infection.
 - AND
 - An <u>epidemiological risk factor</u> within 21 days before the onset of symptoms.
 - Confirmed Case

Laboratory-confirmed diagnostic evidence of Ebola virus infection.

911 Calls

911 PSAPs and Call Takers

- Having traveled internationally to a country with ongoing EVD transmission or having had contact with a person with suspected or confirmed EVD within the previous 21 days; AND
- Signs and symptoms of EVD (such as fever, severe headache, muscle pain, weakness, fatigue, diarrhea, vomiting, abdominal pain, and unexplained hemorrhage).

PSAPS, EMS, Fire, Police, and LHDs should all collaborate to develop local plans for responding to a PUI in a local jurisdiction

When risk levels increase it may be recommended to modify practices

ISOLATE -Pre-hospital response

- If call takers advise EMS that the person is suspected of having Ebola virus, PPE should be donned before entering the scene
- Limited exposed personnel if possible

Appropriate use of PPE by EMS Personnel

- Clinically Stable DRY
 - No bleeding, vomiting, diarrhea
 - Single use PPE (disposable)
 - fluid-resistant gown that extends to at least mid-calf or single-use (disposable) fluidresistant coveralls without integrated hood
 - full face shield
 - facemask
 - gloves with extended cuffs. Two pairs of gloves should be worn. At a minimum, outer gloves should have extended cuffs.

- Clinically Unstable Wet
 - Vomiting, bleeding, diarrhea
 - Impermeable gowns or coveralls
 - Respiratory, Head, Face Protection
 - (PAPR, N95 Respirator)
 - Exam gloves with extended cuffs
 - Boot covers
 - Apron
- Use Trained observers

<u>Guidance on Personal Protective Equipment (PPE) | Personal Protective Equipment (PPE) |</u> <u>Public Health Planners | Ebola (Ebola Virus Disease) | CDC</u>

Infectious Disease Considerations

Transmitted through close contact with people that are infected and through exposure of their bodily fluids

Blood, saliva, vomit, diarrhea, urine, sweat

Incubation period can be between 2-21 days but typically 8-10 days and then symptoms begin to develop

Patients are not contagious until symptoms develop

INFORM –

Communicate with receiving hospital



After initial assessment is completed – inform other responders on scene and contact receiving hospital ASAP so they can prepare

Inform supervisory personnel



Protect privacy of the patient when communicating – radio traffic, phone etc.

PREPARE for Transport of Patient

In a situation of an interfacility transport

- Separate driver and patient compartment
- Adjust air handling to introduce fresh air into both compartments
- Turn on exhaust fans to high in the patient compartment
- Drape interior of ambulance to protect environmental surfaces from exposure of bodily fluids

Prepare the Patient

- Source control mask the patient
- Wrap with impervious sheet
- Pre-treat with anti-nausea medication to decrease risk for vomiting



Pictures of a Prepped CFD Ambulance

MOBILE ISOLATED TRANSPORT SYSTEM - M.I.T.S.

EMS Personnel Protection

Protective Behaviors

- Stay at least 6 feet away to reduce transmission
- Limit EMS personnel exposure
- Implement procedures where driver does not encounter patient

Safe clinical care

- Be careful using sharps
- Limit aerosolizing procedures
- Implement standard precautions plus transmission-based precautions
 - Contact, droplet, and airborne precautions

Cleaning and Disinfection After Transport

Clean and disinfect after transport

Use of an <u>EPA registered hospital grade</u> <u>disinfectant</u>

Waste is considered Category A

Ensure there is a procedure in place for properly disposing of waste (leave with receiving facility)

Evaluate Personnel for Signs and Symptoms

Observe for 21 days for signs and symptoms OR until patient has been ruled out

Collaborate with LOCAL public health on monitoring

Prevention and Treatment

There is currently no licensed vaccine for the *Sudan ebolavirus*.

Supportive care is the mainstay of treatment

There are monoclonal antibody therapies that are effective against Ebola

Currently the fatality rate in countries of outbreak is 50% or higher

Outcomes are much better in areas with higher resources for critical care

Next Steps

Immediate Needs

- Identify at least ONE EMS transport provider agency in each region that can transport a PUI or confirmed EVD
- Ensure training and education is completed for provider agencies
- Ensure collaboration and coordination with Assessment and Treatment hospitals and local public health
- Perform exercises to test capabilities and identify gaps

Long Term Needs

• Ensure sustainment of capabilities

Resources for EMS

- EMS Strategies for Ebola
- NETEC Education and Training
- NETEC Free CE Resources
- Interim Guidance for Emergency Medical Services (EMS) Systems and 9-1-1 Emergency Communications Centers/Public Safety Answering Points (ECC/PSAPs) for Management of Patients Under Investigation (PUIs) for Ebola Virus Disease (EVD) in the United States
- Infographic Identify, Isolate, and Inform
- NETEC Research Policies and Procedures
- NETEC <u>Preparing Frontline Health Care Workers for Ebola</u> (youtube video)

Questions?

FOUO-preliminary draft/notes