

Ebola Basics and Policy Overview: Coordinating Within Public Health

**Satellite Conference and Live Webcast
Thursday, March 19, 2015
10:00 – 12:00 pm Central Time**

Produced by the Alabama Department of Public Health
Video Communications and Distance Learning Division

Faculty

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Objectives

- **Verbalize basic information about Ebola Virus Disease (EVD)**
- **Explain assignment of risk category for exposure to EVD**
- **Delineate the role of Bureau of Communicable Disease (BCD) Staff in the EVD monitoring process**

Objectives

- **Identify criteria for Active and Direct Active Monitoring**
- **Verbalize documentation required for Active and Direct Active Monitoring**
- **Verbalize required documentation for EVD traveler going from state to state**

Objectives

- **Verbalize similarities between Directly Observed Therapy (DOT) and Direct Active Monitoring (DAM)**
- **Verbalize the role of the BCD field staff in the EVD monitoring process**

Ebola Basics: What We Need to Know

- **Ebola Virus Disease is a rare and deadly viral illness**
- **First identified in 1976 near the Ebola River**

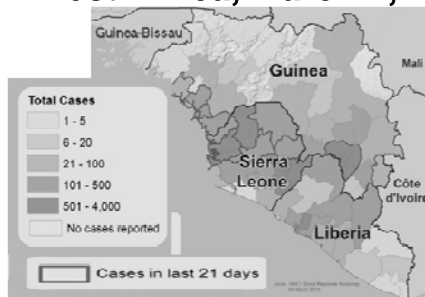
Source CDC: <http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/case-counts.html> - Accessed March 11, 2015

Ebola Basics: What We Need to Know

- As of March 8, there were 24,247 total cases (Suspected, Probable, and Confirmed) with 9,961 deaths in three West African countries:
 - Guinea, Liberia and Sierra Leone

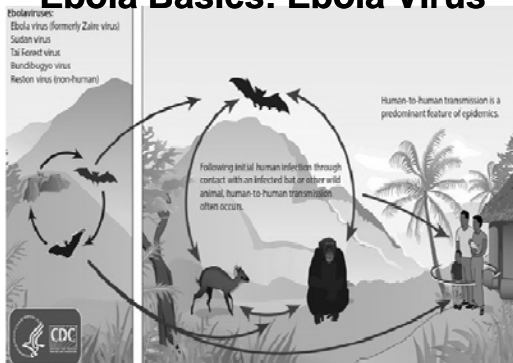
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Outbreak Distribution – West Africa, March 4, 2015



Map includes total confirmed EVD cases reported to WHO

Ebola Basics: Ebola Virus



Ebola Basics: Ebola Virus Disease Infectious Agent

- > 20 previous Ebola and Marburg virus outbreaks
- 2014 West Africa Ebola outbreak caused by *Zaire ebolavirus* species (five known Ebola virus species)



Ebola Basics: Experience in the United States

- United States has treated 10 patients
- 8 of the 10 patients acquired Ebola in West Africa
- 2 of the 10 patients were healthcare workers who survived after acquiring Ebola in the United States while caring for an infected patient

Ebola Basics: Experience in the United States

- 2 of the 10 patients who acquired Ebola in West Africa and were transported to the United States for treatment succumbed to their disease

Ebola Basics: How the Disease is NOT Spread

- Ebola virus is not spread through:
 - Casual contact
 - Air
 - Water
 - Food grown or legally purchased in the United States

Ebola Basics: How the Disease IS Spread

- Direct contact with:
 - Body fluids of a person sick with or has died from Ebola
 - blood, vomitus, urine, feces, semen, saliva, other body fluids
 - Contaminated objects
 - needles, medical equipment

Ebola Basics: Early Signs and Symptoms

- Fever of 100.4 Fahrenheit or Greater
 - 87%
 - Fatigue
 - 76%
 - Vomiting
 - 68%
- “Ebola Virus Disease in West Africa - The First Nine Months and Forward Projections.”
NEJM-2014, Sept 22

Ebola Basics: Early Signs and Symptoms

- Diarrhea
 - 66%
 - Anorexia
 - 65%
 - Severe Headache
 - 53%
- “Ebola Virus Disease in West Africa - The First Nine Months and Forward Projections.”
NEJM-2014, Sept 22

Ebola Basics: Early Signs and Symptoms

- Abdominal Pain
 - 44%
 - Myalgias
 - 38%
 - Difficulty Swallowing
 - 32%
- “Ebola Virus Disease in West Africa - The First Nine Months and Forward Projections.”
NEJM-2014, Sept 22

Ebola Basics: Early Signs and Symptoms

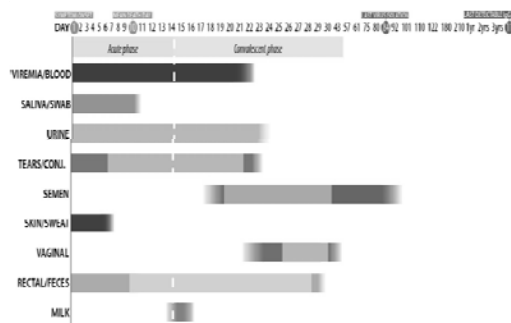
- Cough
 - 29%
 - Difficulty Breathing
 - 23%
 - Sore Throat
 - 21%
- “Ebola Virus Disease in West Africa - The First Nine Months and Forward Projections.”
NEJM-2014, Sept 22

Ebola Basics: Early Signs and Symptoms

- Conjunctivitis
 - 20%
- Unexplained Bleeding
 - 18%

“Ebola Virus Disease in West Africa - The First Nine Months and Forward Projections.”
NEJM-2014, Sept 22

Ebola Basics: Detection of Ebola Virus in Different Human

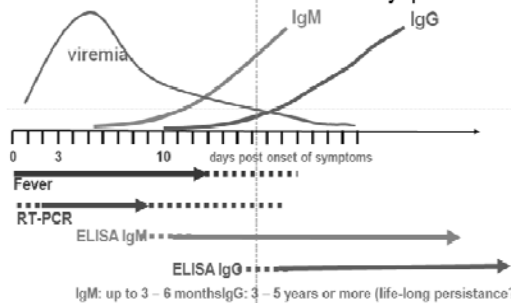


Ebola Basics: Other Important Information About Ebola

- Ebola can only be spread to others after symptoms begin
- Symptoms can appear 2 - 21 days after exposure to Ebola
- Ebola virus load increases as the patient becomes more ill

Ebola Basics: Expected Diagnostic Test Results for EVD Over Time

Critical information: Date of onset of fever/symptoms



Ebola Basics: Ebola Virus Laboratory Diagnosis

- Real Time PCR (RT - PCR)
 - Used to diagnose acute infection
 - More sensitive than antigen detection ELISA
 - Identification of specific viral genetic fragments
 - Performed in select CLIA - certified laboratories

Ebola Basics: Ebola Virus Laboratory Diagnosis

- RT - PCR sample collection
 - Volume: minimum volume of 4mL whole blood
 - Plastic collection tubes
 - Not glass or heparinized tubes

Ebola Basics: Case Definition for Ebola Virus Disease

- A person with an epidemiologic risk factor within 21 days before onset of symptoms

AND

- A person who has both consistent signs or symptoms and risk factors for EVD

Ebola Basics: Case Definition for Ebola Virus Disease

- Elevated body temperature or subjective fever or symptoms, including severe headache, fatigue, muscle pain, vomiting, diarrhea, abdominal pain or unexplained hemorrhage

Ebola Basics: Take Home Message About Transmission

- Ebola only spreads when patients are ill with symptoms of the disease
- If a person has not become ill with symptoms 21 days after exposure to Ebola, they will not become sick from the exposure

Outbreak Distribution – West Africa, March 4, 2015



Map includes total confirmed EVD cases reported to WHO

Policy Overview: Why is Ebola Information Important to Disease Control Staff?

- To carry out our mission:
 - To Protect The Public's Health

Policy Overview: Top Ten Ebola Response Planning Tips from CDC

1. Healthcare System Preparedness
2. Risk Communication
3. Information Sharing
4. Travel Related Information and Public Health Interventions

Policy Overview: Top Ten Ebola Response Planning Tips from CDC

5. Public Health Laboratory Guidance
6. Lab Safety Protocols / Procedures / PPE
7. Public Health Surveillance Definitions

Policy Overview: Top Ten Ebola Response Planning Tips from CDC

8. Epidemiological Tools and Implementation
9. Responder Safety
10. Clinician and Responder CDC Guidance on Worker Safety

Policy Overview: Active Post Arrival Monitoring for EVD

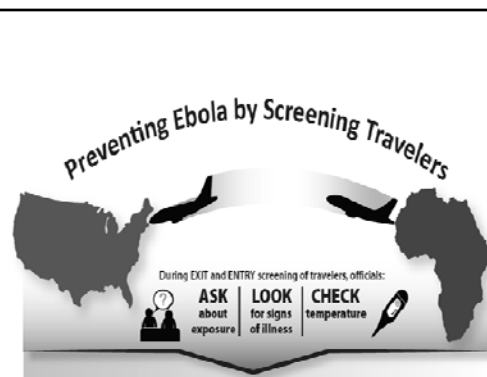
- Implemented October 27, 2014
- Affects travelers arriving from Guinea, Liberia, Sierra Leone and Mali
- Involves 5 airports where approximately 70% of travelers from West Africa arrive

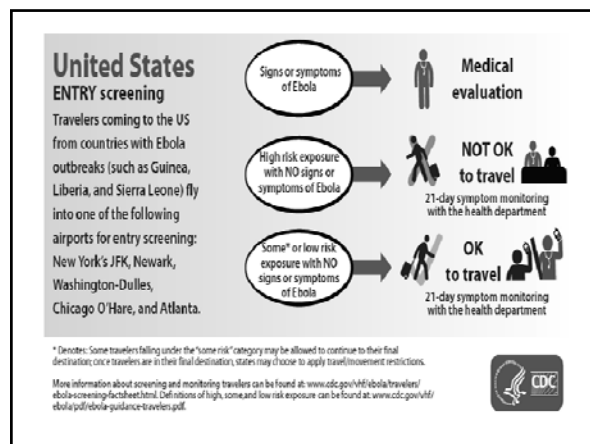
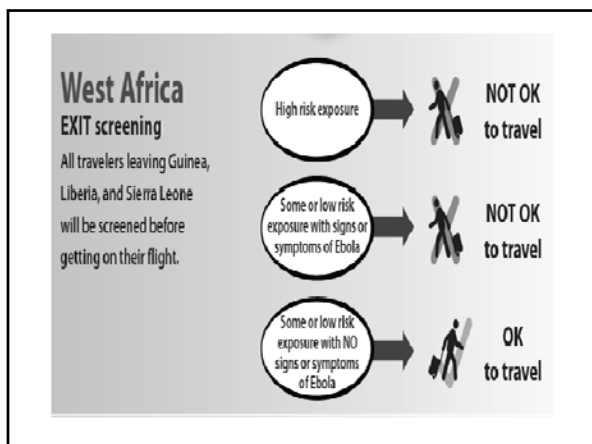
Policy Overview: Active Post Arrival Monitoring for EVD

- New York - JFK International (JFK)
- Washington - Dulles International (IAD)
- Newark - Liberty International (EWR)
- Chicago - O'Hare International (ORD)
- Atlanta Hartsfield - Jackson International (ATL)

Policy Overview: Active Post Arrival Monitoring for EVD

- Monitoring is coordinated with the state where the traveler will arrive for the final destination





Policy Overview: Categories for Evaluating Levels of Risk for EVD

- High Risk
- Some Risk
- Low Risk
- No Risk

Policy Overview: Interim Guidance for Monitoring and Movement of Persons With EVD Exposure

- CDC has created guidance for monitoring people exposed to Ebola virus but without symptoms

Policy Overview: Interim Guidance for Monitoring and Movement of Persons With EVD Exposure

RISK LEVEL	PUBLIC HEALTH ACTION		
	Monitoring	Restricted Public Activities	Restricted Travel
HIGH risk	Direct Active Monitoring	Yes	Yes
SOME risk	Direct Active Monitoring	Case-by-case assessment	Case-by-case assessment
LOW risk	Active Monitoring for some; Direct Active Monitoring for others	No	No
NO risk	No	No	No

www.cdc.gov/hiv/ebola/hcp/monitoring-and-movement-of-persons-with-exposure.html

Policy Overview: Post Arrival Monitoring

- Added safeguard to protect the public's health
- Notifies state and local authorities of patient arrival and risk category
- Allows state public health to establish daily contact with patients

Policy Overview: Post Arrival Monitoring

- Allows state and local public health to gather health information daily during 21 days to screen for EVD and take action if needed

National Monitoring Numbers

- Weekly reports submitted by all 50 states, NYC, D.C. and 8 territories
- States now receive CDC Ebola Weekly Monitoring Report

National Monitoring Numbers

- As of March 9, 2015, report received for Week 17 (Reporting dates: February 16 - 22, 2015)
 - Overall 1,484 persons in active or direct active monitoring
 - Persons in some or high risk category = 116

United States Contact Tracing

- Monitoring Status: Completed
- Texas: 177
- Ohio: 164
- New York: 117
- Zero additional infections occurred

Source CDC: <http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/united-states-imported-case.html>. Accessed March 11, 2015

Alabama Monitoring Numbers As of March 16, 2015

- Cumulative Total = 44
- Completed 21 day monitoring or transferred to a new jurisdiction = 42
- Active Monitoring = 2
- Direct Active Monitoring = 0

Policy Overview: Direct Active Monitoring Participation by Disease Control Staff

- Disease Control staff will be assigned Direct Active Monitoring patients in coordination with the Division of Epidemiology
- Disease Control staff work load and schedules will be considered and prioritized as needed

Policy Overview: Direct Active Monitoring Participation by Disease Control Staff

- Disease Control staff will be supported within their respective programs, between other Disease Control disciplines, and by Area / Local staff
- Disease Control staff will have immediate, direct access to expert guidance as needed

Policy Overview: Practical Information

- Call patient prior to each daily visit for EVD Direct Active Monitoring
 - If the patient reports no symptoms of EVD, proceed with daily visit
 - If the patient reports any symptoms of EVD, do not make the visit and call EPI for referral of patient to assessment center

Policy Overview: Practical Instruction

- Stand at least 3 feet away or greater distance from EVD monitoring patient
- Wear gloves in case you need to touch the thermometer as the patient holds for examiner to read
- Perform hand hygiene after removing gloves and take gloves in zip closure type bag to health department for disposal

Ebola Basics and Policy Overview

- Questions from the audience?