Ebola Update

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Outline

• Status update
• Florida Department of Health’s case finding efforts
• Incident management team activities
• Issues of particular concern to first responders
2014 Ebola Outbreak, West Africa

This is the largest Ebola outbreak in history and the first Ebola epidemic the world has ever known.

7470 cases/ 3431 deaths (Oct 3)
Outbreak Challenges

- Overburdened public health and healthcare systems
  - Unpaid healthcare workers
  - Insufficient treatment centers, beds, medical supplies, and personal protective equipment (PPE)
Outbreak Challenges: Lack of acceptance of Ebola

Not overcome by education

Fear and superstition
  Health posters

Stigma
  Needing to share negative test results to return to work

Distrust of outsiders
  Brought Ebola to make money

Role of war exposure
Outbreak Challenges, West Africa

- Porous borders
- High population mobility
- Geographic breadth
First Imported Case of Ebola in U.S.

- On Sept 30, 2014, CDC confirmed, through laboratory tests, the first travel-associated case of Ebola in the US.
  - The patient traveled to Dallas, Texas from Liberia, West Africa
  - The patient developed symptoms approximately five days after arriving in the United States
- Local public health officials have identified close contacts of the person for further daily monitoring for 21 days after exposure
  - No additional cases have been identified
• Estimates 20k cases by 2 Nov.
• CDC says 1.4 M by Jan. 20
• Up to 70% fatality rate
• Ages 14 – 44, older are most fatal
• Most who die, do so within 4 days
• Those who live, leave care in 11 days
• ? Those who receive care live longer
• 300 HCW’s infected with 50% CFR
Ebola is a rare and deadly disease.

- First discovered in 1976 near the Ebola River in the Democratic Republic of the Congo
- Outbreaks occur sporadically in Africa
- Family of animal-borne RNA viruses
  - Filoviridae
• Previously called Ebola hemorrhagic fever
• 5 species of *Ebolavirus*
• All but *Reston ebolavirus* known to cause disease in humans
• Death rates for Ebola range from 50%-90%
Ebola virus is spread through direct contact (through broken skin or unprotected mucous membranes) with:

A sick person’s blood or body fluids, including but not limited to urine, saliva, feces, vomit, and semen
Contaminated objects (like needles and syringes)
African bats and primates (by contact with their blood, fluids, or infected meat)
Signs of Ebola include fever (greater than 38.6°C or 101.5°F) and symptoms such as:

- Severe headache
- Muscle pain
- Vomiting
- Diarrhea
- Abdominal pain
- Unexplained hemorrhage

**Time from exposure to symptoms:**

2 to 21 days

**Average time is 8 to 10 days.**

A person infected with Ebola virus is not contagious until symptoms appear.
Treatment

• No FDA-approved vaccine or medicine (e.g., antiviral drug) is available for Ebola

• Symptoms of Ebola are treated as they appear. Providing intravenous fluids and balancing electrolytes (body salts)
  — Maintaining oxygen status and blood pressure
  — Treating other infections if they occur

• Experimental vaccines and treatments for Ebola are under development, but they have not yet been fully tested for safety or effectiveness
IMT activities

• Guidance on case identification and infection control
• Case investigations
• Laboratory testing
• Establish guidance for environmental clean up
• Establish process for transport of waste
• Work with JIC to coordinate internal and external communication
• Situation monitoring
Emergency Department screening criteria for EVD patient isolation and notification:

Fever, headache, joint and muscle aches, weakness, fatigue, diarrhea, vomiting, stomach pain and lack of appetite, and in some cases bleeding. AND

2. Travel to West Africa (Guinea, Liberia, Nigeria, Senegal, Sierra Leone or other countries where EVD transmission has been reported by WHO) or the Democratic Republic of Congo within 21 days (3 weeks) of symptom onset.

If both criteria are met, then the patient should be moved to a private room with a bathroom, and STANDARD, CONTACT, and DROPLET precautions followed during further assessment.

IMMEDIATELY Report Person Under Investigation (PUI) for Ebola to Discuss EVD Testing:

1. Hospital Leadership: Add Name and Phone Number

2. XXX County Health Department: Add Phone Number
   or the Bureau of Epidemiology 24/7 at 850-245-4401
Case investigations

• Public Health officials work closely with health care providers to identify cases and prevent further transmission
  – Symptoms
  – Travel history

• Presumptive testing available through the Department of Health laboratory
  – Limited supply nationally-CDC approval needed
  – Confirmation at CDC
  – No commercial tests available
Infection Control is Key

Early recognition

Early recognition is critical-patient intake

Patient Placement

Patients should be placed in a single patient room containing a private bathroom with the door closed

Only use a mattress and pillow with waterproof plastic or other waterproof covering

Protecting healthcare providers

All people entering the patient room should at least wear: gloves, gown, eye protection and a facemask

Healthcare providers should frequently perform hand hygiene before and after all patient contact, contact with potentially infectious material, and before putting on and upon removal of PPE
Environmental Cleaning Guidance is Available

Daily cleaning and disinfection of hard, non-porous surfaces should be done using a U.S. Environmental Protection Agency (EPA)-registered hospital disinfectant with a label claim for a non-enveloped virus.

Staff performing environmental cleaning and disinfection should wear recommended PPE and consider the use of additional barriers (e.g., shoe and leg coverings).
Close communication between responders and local health department-key
Likely first responder activities

- EMS transport of suspect Ebola patients
- Assist in monitoring of (restraining) healthy contacts under quarantine
- Assist in restraining Ebola patients exhibiting unsafe behaviors
- 9-1-1 Public Safety Answering Points trained to screen callers for Ebola symptoms and risk factors key
Personal Protective Equipment

The tools are there:

• Masks
• Gloves
• Impermeable Gowns
• Eye protection

Pre-hospital resuscitation procedures require additional safety procedures to minimize splash exposure
• http://www.who.int/features/2005/marburg/en/
Dr. Brantley Arriving at Emory (Early August, 2014)
WEST AFRICA

Ebola Outbreak

1st Ebola outbreak in West Africa
4 countries:
- Guinea
- Sierra Leone
- Liberia
- Nigeria

Likely host = bats
Ebola is fatal in 55-60% of cases reported in this outbreak.
Isolation Ward - Cohorting