EBOLA VIRUS DISEASE UPDATE

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Ebola virus disease (EVD)

- Ebola first appeared in 1976 in 2 simultaneous outbreaks
  - Nzara, Sudan
  - Yambuku, Democratic Republic of Congo
- The latter was in a village situated near the Ebola River
Filoviridae family (filovirus)
- Genus Ebolavirus
  - 5 species
    - Bundibugyo ebolavirus (BDBV)
    - Zaire ebolavirus (EBOV)
    - Reston ebolavirus (RESTV)
    - Sudan ebolavirus (SUDV)
    - Taï Forest ebolavirus (TAFV)
- Genus Marburgvirus
- Genus Cuevavirus
Ebola virus disease (EVD) is formerly known as Ebola hemorrhagic fever.

EVD outbreaks occur primarily in remote villages in Central and West Africa, near tropical rainforests.
EVD

- The virus is transmitted to people from wild animals and spreads in the human population through human-to-human transmission
- Fruit bats of the *Pteropodidae* family are considered to be the natural host of the Ebola virus
- Severely ill patients require intensive supportive care
- No licensed specific treatment or vaccine is available for use in people or animals
Signs and Symptoms

 EVD is a severe acute viral illness often characterized by the sudden onset of fever, intense weakness, muscle pain, headache and sore throat
 This is followed by vomiting, diarrhea, rash, impaired kidney and liver function, and in some cases, both internal and external bleeding
 People are infectious as long as their blood and secretions contain the virus
 The incubation period is 2 to 21 days
Diagnosis

- Ebola virus infections can be diagnosed definitively in a laboratory through several types of tests.
- Samples from patients are an extreme biohazard risk.
- Testing should be conducted under maximum biological containment conditions.
Treatment

- Licensed vaccine for EVD is currently in development
- Severely ill patients require intensive supportive care
- No specific treatment is available
- New drug therapies are being evaluated
- ZMapp
Ebola in West Africa

- **Total Cases:** 13,268
- **Laboratory-Confirmed Cases:** 8,168
- **Total Deaths:** 4,960

New cases continue to be reported from Guinea, Liberia, and Sierra Leone.

Nigeria and Senegal have not reported any new cases since September 5, 2014, and August 29, 2014, respectively.
Hot Zone
US Cases

- No epidemic
- No outbreak
- 2 imported cases
- 2 healthcare providers infected
Ebola Plan Priorities

- Surveillance
  - CDC Quarantine Stations
  - Healthcare Systems
    - Providers, Clinics, Hospitals
  - Regional partners
- Isolation and Containment
- Clinical Support
- Healthcare System Integrity
  - All Staff Protection
Post Arrival

- CDC Quarantine Units
- Screening
- DOH Contacted
- Isolation if needed*
- Post Arrival Monitoring
- Clinical Intervention*

* if needed
Hospital

- Screening & Placement
- Infection & Quality Control
- Monitoring & Management
- Patient Care Considerations
  - Personnel, Procedures
- Clinical Guidelines
- Waste Management & Environmental Infection Control
- Laboratory
- Staff Monitoring and Support
Protocol for Monitoring DOH Incoming Calls

Risk Stratification

- Call To DOH
  - Discuss Case plus MATCH name and info to DOH list and CDC List
    - If High or Medium Risk or Travel History
      - Action Plans (see Ebola algorithms)
        - ER
        - EMS
        - Outpatient
        - Nursing Home
        - School Nurse
    - If No Risk or Travel History
      - Continue Standard Workup
Protocols for Monitoring Recent Travelers

- DC DOH Epi on-call receives traveler list daily from CDC
  - Traveler contacted via telephone ASAP
    - Risk/exposure assessment conducted
      - NO: Health Care Provider or Aid Worker
        - DC DOH conducts active surveillance for 21 days
      - YES: Patient involvement (regardless of risk)
        - Home isolation, public transit restriction, & active monitoring for 21 days
      - Patient involvement
        - No patient involvement
          - DC DOH conducts active surveillance for 21 days
  - If symptoms or fever develop at any stage of active monitoring then controlled transfer to treating facility
EMERGENCY ROOM EVALUATION PROTOCOLS

Patient Presents to ER

Recent travel to Liberia, Sierra Leone, Guinea or self identified exposure risk* (within previous 21 days)

Yes

Contact DC DOH for further guidance & evaluate for Low Risk- or High Risk-Exposure*

Patient has fever* or symptoms*

Low Risk- or High Risk-Exposure*

Isolate patient in single room using your institutions established hospital Ebola management protocols

Report to DC DOH to discuss case management & coordination of lab testing

No

No risk of Ebola

Proceed with standard workup

Patient does not have fever* or symptoms*

Low Risk- or High Risk-Exposure*

Report to DC DOH & notify of potential Ebola exposure but NO SYMPTOMS

No Known Exposure*
Ebola Cases in Institutions

If positive in screening hospital:

✓ Isolate and contain
✓ Start transfer (controlled transfer to treating institution)
✓ Epidemiological investigation
✓ All health care providers and ancillary personnel monitored for 21 days
Additional Ebola Protocols

- Death of Patient
- Unexpected Death of Patient
- Ebola Epidemiological Investigations
- Media Communications for Positive Cases
- Outpatient Clinic, Nursing Home, & School Nurse
Most likely scenario

- Patient on list calls the public health officer on call at DOH
- Based on history
  - Transfer to Hospital
  - Screening and isolation
  - Clinical evaluation & testing if needed
  - Treatment as indicate
  - Epidemiological investigation
Working Together

- Educate
- Communicate
- Protect
- NO Stigmatization
Please visit ebola.dc.gov

Toll-Free 1-(844) 49-EBOLA (32652)