NJDOH EBOLA PLAN AND INFECTIOUS DISEASE PLANNING
Outline

• Background: 2014-2016 Ebola epidemic
• Current DRC outbreak
• Current U.S. and NJ plan
  • What has changed from 2014?
  • What is same?
• Summary and recommendations
2014-2016 Ebola Epidemic (1)

- Index patient in Guinea reported in December 2013 → spread in Guinea and bordering countries, Liberia and Sierra Leone
- August 2014: WHO declaration of Public Health Emergency of International Concern
- June 2016: outbreak ended with more than 28,600 cases and 11,325 deaths

https://www.cdc.gov/vhf/ebola/history/2014-2016-outbreak/index.html
• Eleven people treated for Ebola in U.S.
  • Travel-association, including among returning health care workers
  • Secondary cases among health care workers treating cases

https://www.cdc.gov/vhf/ebola/history/2014-2016-outbreak/index.html

- Begun in October 2014, for travelers arriving in U.S. from countries with Ebola outbreaks
- Homeland Security’s Customs and Border Protection limited entry of air travelers to five airports, including Newark Liberty International and JFK

FIGURE 1. CDC CARE kit distributed to travelers to facilitate monitoring and reporting to health departments during the 2014–2016 Ebola epidemic in West Africa

https://www.cdc.gov/mmwr/volumes/65/su/su6503a9.htm

https://www.cdc.gov/mmwr/volumes/65/wr/mm6549a4.htm

FIGURE 2. Number of persons (N = 29,789) with potential exposure who were monitored for Ebola virus, by jurisdiction — United States, November 3, 2014–December 28, 2015

Abbreviations: DC = District of Columbia; NYC = New York City.
FIGURE 1. Number of persons (N = 29,789) with potential exposure who were monitored for Ebola virus, by epidemiologic risk category and week — United States, November 3, 2014–December 27, 2015

Abbreviations: AM/DAM = active monitoring/direct active monitoring; WHO = World Health Organization.

https://www.cdc.gov/mmwr/volumes/65/wr/mm6549a4.htm
2018 Eastern Democratic Republic of the Congo Ebola Outbreak Map

https://www.cdc.gov/vhf/ebola/outbreaks/drc/east-drc-map.html
DRC Outbreak, 2018-Present (as of April 2019)

- As of April 1, 2019: 1,383 Ebola cases including 683 deaths (81 cases in healthcare workers)
  - 7,760 contacts under surveillance
- Ring vaccination began August 8, 2018; 93,689 persons vaccinated
- 5 treatments approved under expanded access protocol
- April 12, 2019: WHO maintains current outbreak is not Public Health Emergency of International Concern but deep concern about recent increase in transmission in specific areas

https://www.who.int/news-room/
DRC Outbreak Challenges

• Outbreak area borders Uganda, Rwanda, and South Sudan; area of active civil unrest and violence
• High cross-border movement due to trade and relocation due to violence
• Community resistance and distrust of government and Ebola response
• Violence against healthcare facilities and aid workers
• Safe access to affected population is difficult
• WHO considers risk of spread to be very high at national and regional levels but low globally
What has changed since 2014? (1)

• Risk to most travelers to DRC is low
  • Potential increased risk to travelers going in or near outbreak area
  • Family and friends caring for people with Ebola and health care workers who do not use correct infection control precautions are at highest risk

• Entry and exit screening has been implemented at multiple points of entry in DRC and surrounding countries
  • No direct flights from DRC to U.S.
  • Very limited direct flights from Central African Region to U.S.
What has changed since 2014? (2)

• CDC’s interim guidance for monitoring and movement of persons with potential Ebola virus exposure was specific to 2014 epidemic; most Ebola outbreaks will not require such extensive measures.

• No U.S.-based active monitoring program for Ebola (or other infectious disease) at this time.
  • Most travelers from affected areas are not known to public health.
  • Ill residents and visitors may seek medical care at any healthcare facility.

https://www.cdc.gov/mmwr/volumes/65/su/su6503a9.htm
Recommendations for Travelers to DRC:
CDC Travel Advisory, Level 2
Practice Enhanced Precautions

- While in DRC, avoid contact with blood/body fluids, bats, non-human primates, and human remains; use frequent hand hygiene
- Pay attention to your health during travel and for 21 days after leaving outbreak area
- Separate yourself from others and seek medical care immediately if you have been in an area where Ebola is spreading and develop fever or other symptoms of Ebola
- If you are in DRC for work and become ill, contact your employer or sponsoring organization

CDC Special Guidance for Organizations Sending Workers to Outbreak Area (as of March 29, 2019)

- Sponsoring organizations (SO) should implement health and exposure assessments before workers leave DRC to U.S.
- SOs will advise personnel to self-monitor for fever and Ebola symptoms for 21 days after departure AND to notify SO if fever/symptoms develop
- If in NJ during the self-monitoring period, SO will notify NJDOH
  - Should symptoms develop, NJDOH will coordinate transport to an Ebola Assessment/Treatment facility
- No SO travelers reported to NJDOH to date

Frontline Hospitals

All NJ acute care hospitals are capable of accepting and Ebola-infected patients

Think EBOLA
Early recognition is critical for infection control

INITIATE
Think Ebola when you approach a patient. Start the steps for basic infection control before assessing the patient for risks.
- Always use standard precautions
- If there are concerns that the patient could meet the criteria for Ebola, immediately separate the patient from others

IDENTIFY
Assess your patient for:
- International travel OR
- Contact with someone with Ebola within the last 21 days AND
  - Had a fever at home, or has a current temperature >100.4°F (>38°C)
- Other symptoms:
  - Severe headache
  - Muscle pain
  - Weakness
  - Fatigue
  - Diarrhea
  - Vomiting
  - Abdominal (stomach) pain
  - Unexplained hemorrhage (bleeding or bruising)
- If the patient has both exposure and symptoms, immediately isolate the patient and inform others (see INFORM)

ISOLATE
If assessment indicates possible Ebola virus infection, take action.
- Isolate the patient in a private room with a private bathroom or covered bedside commode and close the door
- Wear appropriate personal protective equipment (PPE): http://go.usa.gov/2zg8
- Limit the healthcare personnel who enter the room
- Keep a log of everyone who enters and leaves the patient’s room
- Consider alternative diagnoses, and evaluate appropriately
- Only perform necessary tests and procedures
- Avoid aerosol-generating procedures
- Follow CDC guidelines for cleaning, disinfecting, and managing waste: http://go.usa.gov/2zVA

INFORM
Alert others, including public health authorities.
- Notify your facility’s infection control program and other appropriate staff
- Contact your state or local public health authorities
- Consult with state or local public health authorities about testing for Ebola
- For a list of state and local health department numbers, visit: http://go.usa.gov/7AV

For more information, visit: www.cdc.gov/vhf/ebola/hcp
IDENTIFY

• All hospitals need to be able to IDENTIFY persons at risk for Ebola and other travel-associated infectious diseases (MERS, yellow fever, Lassa fever, etc.)

• At initial triage, ask all patients about travel history
  • CDC Travel Health Notices: https://wwwnc.cdc.gov/travel/notices
  • CDC Current Outbreak List: https://www.cdc.gov/outbreaks/index.html

• Some outbreaks are focal, some are widespread; ask about specific travel locations in past 21 days
DRC Outbreak Zones (April 2019)

https://www.cdc.gov/vhf/ebola/outbreaks/drc/east-drc-map.html
Ask About Ebola Exposure Risk

- Travel to area with current outbreak
- Contact with blood or body fluids of someone ill with Ebola virus disease (EVD), or who died of EVD
- Participation in funeral rituals
- Laboratorian where human specimens are handled
- Handling wild animals or carcasses that may be infected with Ebola virus (e.g., non-human primates, fruit bats)
- Contact with semen from man who has recovered from EVD
Evaluate Patient Symptoms

- Common Ebola symptoms include:
  - Fever > 100.4 F
  - Severe headache
  - Myalgia
  - Fatigue
  - Weakness
  - Diarrhea
  - Vomiting
  - Abdominal pain
  - Unexplained hemorrhage
ISOLATE (1)

• If a patient has compatible symptoms and exposure risk for Ebola, immediately isolate the patient
  • Private room with a private bathroom and closed door
• Limit healthcare personnel who provide care
• Keep log of personnel entering and leaving room
• Consider alternative diagnoses and evaluate appropriately

Key Infection Control Precautions Recommended for Preventing Ebola Transmission in U.S. Hospitals:
https://www.cdc.gov/vhf/ebola/clinicians/evd/infection-control.html

Interim Guidance for Environmental Infection Control in Hospitals for Ebola Virus
https://www.cdc.gov/vhf/ebola/clinicians/cleaning/hospitals.html
ISOLATE (2)

- Only perform necessary tests and procedures
- Use dedicated medical equipment (disposable when possible)
- Avoid aerosol-generating procedures (conduct in airborne isolation when feasible)
- Limit visitors
Appropriate PPE (1)

- Always consult latest CDC guidance
- PPE must completely cover clothing and skin and completely protect mucous membranes
- PPE recommendations *differ based on patient condition*
- Refer to specific donning and doffing instructions and use a trained observer!
Appropriate PPE (2)

  • Single-use (disposable) fluid-resistant gown that extends to at least mid-calf OR single-use (disposable) fluid-resistant coveralls without integrated hood
  • Single-use (disposable) full face shield
  • Single-use (disposable) facemask
  • Single-use (disposable) gloves with extended cuffs; two pairs of gloves should be worn; at a minimum, outer gloves should have extended cuffs
Appropriate PPE (3)

• Clinically Unstable Persons OR With Bleeding, Vomiting, Diarrhea: https://www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance.html
  - Impermeable garment: single-use (disposable) impermeable gown extending to at least mid-calf OR single-use (disposable) impermeable coverall
  - Respiratory protection: PAPR OR disposable, NIOSH-certified N95 respirator
  - Single-use (disposable) gloves with extended cuffs
    - Two pairs of gloves should be worn; at minimum, outer gloves should have extended cuffs
  - Single-use (disposable) boot covers that extend to at least mid-calf
  - Single-use (disposable) apron that covers the torso to level of mid-calf should be used over gown or coveralls
INFORM

- Notify facility Infection Preventionist and other appropriate staff per facility protocol
- Notify local health department/NJDOH CDS immediately by telephone if EVD is suspected
  - www.localhealth.nj.gov
  - NJDOH CDS: 609-826-5964
- Document clinical and exposure information on NJDOH Ebola Investigation Worksheet (https://nj.gov/health/cd/topics/vhf.shtml) and submit via secure e-mail to CDSvectorteam@doh.nj.gov
Clinical Laboratory Testing

• Perform routine interventions (e.g., placement of peripheral IV, phlebotomy) as indicated
• Early Ebola symptoms are non-specific and often seen in more common diseases (malaria, typhoid fever)
• Diagnostic testing can assist in patient evaluation
  • Blood culture
  • Chemistry (BMPs LFTs, Mg, etc.)
  • Malaria (smear or antigen test)
  • CBC
  • PT/INR
  • Influenza (seasonal)
• Specific testing for Ebola will be determined after consultation with NJDOH/CDS
If Ebola testing is indicated, NJDOH/PHEL will contact hospital laboratory to discuss specimen submission protocol (e.g., courier, Lab-5 form) and specimen handling/shipping recommendations.


Transport

• High-risk patients or who are more severely ill will be transferred to either Ebola Assessment Hospital or Treatment Center.

• Low-risk patients (clinical and epidemiologic factors) and who have mild illness may remain at Frontline Hospital while Ebola testing is conducted.

• If transport is indicated, NJDOH will coordinate transport through conference calls with sending and receiving facilities.
  • When feasible, receiving facility will provide EMS transport.
Assessment Hospitals

- Prepared to receive and isolate patients under investigation and care for patients until Ebola diagnosis can be confirmed or ruled out and until discharge or transfer is completed
- In New Jersey, Hackensack University Medical Center (Hackensack) and University Medical Center (Newark)
Treatment Centers

• Prepared to provide comprehensive care to Ebola patients
• In New Jersey, Robert Wood Johnson University Hospital (New Brunswick)
• National Regional for ASPR and FEMA Region II, Bellevue Hospital (New York, NY)
Summary

- 2014-2016 Ebola response was significant
- Current national responses do not include airport screening and active monitoring
- While emerging infectious diseases can be unpredictable, it is inevitable that NJ will encounter novel situations (e.g., imported viral hemorrhagic fever, pandemic influenza, resurgence of travel-associated measles)
- Health care systems and public health need to maintain preparedness for everything!
BE PREPARED FOR EBOLA...
OR WHATEVER COMES NEXT

- Review and test facility preparedness plans
- Identify critical patient care functions and essential healthcare workers
- Review and update triage protocols
- Maintain adequate supplies of PPE
- Ensure staff is trained in PPE donning and doffing, infection control, and waste management
- Review laboratory testing protocols
- Inform staff routinely about outbreaks of concern
  - Sign up staff to receive NJDOH alerts through LINCS: http://njlincs.net/default.aspx
- Verify internal/external notification procedures and contact information
Resources

• Directory of NJ local health departments: www.localhealth.nj.gov
• NJDOH/Communicable Disease Service: (609) 826-5964
• NJDOH Ebola/Viral Hemorrhagic Fever webpage, https://www.state.nj.us/health/cd/topics/vhf.shtml
• “Ebola Update,” NJLINCS message, March 5, 2019