Concept of Operations (CONOPs) Planning & Response for Emerging Infectious Disease Patients: The NYC Health + Hospitals / Bellevue Experience

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Assistant Vice President
Emergency Management

Bottom Line

A large, public, urban, U.S. healthcare delivery system can safely and effectively treat an Ebola patient and myriad persons under investigation directly from its community.
The Ebola Preparedness & Response Paradox

- Low patient count
- High resource demand
- Low resource capacity
- High risk perception
- No experience
By the numbers

- Staffed Beds: 6,684
- Clinic Visits: 4.4 Million
- ED Visits: 1.1 Million
- Discharges: 206,000
- Births: 18,500

Our mission

- To extend equally to all New Yorkers, regardless of their ability to pay or immigration status, comprehensive health services
- To promote and protect the health, welfare and safety of the people of the City of New York
- To join with other health workers and with communities to promote and protect health in its fullest sense – the total physical, mental and social well-being of the people.
Leading From the Front

“Meticulous coordination and preparation leads to great outcomes for patients. I have never before seen the level of collaboration and coordination that went on behind the scenes to prepare NYC for Ebola.”

Ram Raju, MD, MBA, FACS, FACHE
President and CEO
NYC Health + Hospitals
November 11, 2014
April, May 2014

- Worsening situation in West Africa demanded an increase in our domestic & international EVD situational awareness

June, July 2014

- Centralize all EVD care @ Bellevue’s 7W Isolation & Quarantine Unit in collaboration with NYC DOHMH
- Implement fever/travel history screening @ all 11 system acute care hospitals (ACHs) in collaboration with FDNY*EMS
August 2014

- Begin twice-daily surveillance of adult & peds suspected & confirmed EVD cases @ all 11 ACHs
- Participate in GNYHA Emergency Preparedness Coordinating Council
- Convene system wide executive leadership call
- Focus Corporate Emergency Management Council on EVD
- Begin HSEEP-compliant tabletop exercises @ all 11 ACHs

September 2014

- Revise PPE guidance to ensure zero skin exposure
- Procure additional PAPRs for Bellevue 7W
- Present @ GNYHA EVD roundtable
- NYC Health + Hospitals’ Institute for Medical Simulation & Advanced Learning (IMSAL) commences no-notice EVD patient drills @ all 11 ACHs
- Collaboration with NYC Office of Chief Medical Examiner on EVD decedent management
October 2014

- NYC DOHMH, Bellevue & Emergency Management lead initial planning call for EVD tabletop exercise
- NYC Health + Hospitals leadership establishes EVD Tiger Team & meets twice daily in Central Office EOC
  - Corporate CMO, Corporate Deputy CMO, Corporate CNO
  - Senior AVP, Operations & Senior AVP, Supply Chain
  - Assistant VP, Lab Ops & Assistant VP, Emergency Management
  - Senior Director, Internal Communications
  - Infectious Disease Physician SME
- NYS Governor issues exec order on prevention and control of Ebola
- Confirmed case admitted to Bellevue on October 23rd

Keys to Success

- Communication
- Coordination
- Collaboration
Communication

A message from
Bob Wilens, MD
Corporate Chief Medical Officer

Ebola Virus Disease (EVD)

I am sure that many HHC staff members have been following news about the outbreak of Ebola virus with some concern. I would like to share with you the important facts about this disease.

Ebola Virus Disease (EVD) is an acute viral illness first identified in 1976. Since that time there have been sporadic outbreaks occurring primarily in remote villages near tropical rainforests in Central and West Africa.

The West African countries of Guinea, Sierra Leone, Liberia, and Nigeria are experiencing an outbreak of EVD that was first reported in March 2014. So far there have been 1,323 reported cases of which 729 persons have died. The majority of these deaths have occurred in places without the sophisticated medical facilities that we have here in New York.

EVD is not an airborne disease, so it is not contracted the same way as the flu. Ebola spreads through direct contact with the bodily fluids of infected persons, such as blood, urine, saliva, semen, and breast milk. Symptoms present anywhere from two to 21 days from initial exposure. EVD is characterized by the sudden onset of fever, weakness, muscle pain, headache, and sore throat. Good adherence to infection control isolation measures is critical to preventing spread to healthcare workers and others. There is no specific treatment or vaccine available for EVD.

The Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) are working closely with government agencies in West Africa and several international organizations to help investigate and control the spread of EVD. The CDC has determined that at this time, EVD poses no current risk to us here in the USA. But the CDC has issued a Travel Warning Level 3, urging all US residents to avoid nonessential travel to Sierra Leone, Guinea, and Liberia.

Although we have been informed that the threat to our communities, our patients, and ourselves remains negligible, HHC leadership continues to closely monitor information from all state, local, federal, and international agencies that are involved in the response to this outbreak. Clinical leadership and staff at our facilities have been briefed and have well-developed plans for rapidly instituting isolation.
HHC Ebola Readiness

Electronic Town Hall

Wednesday, November 5, 2014
11:00 a.m. - noon

Ram Raju, MD
President and CEO

Ross Wilson, MD
Chief Medical Officer

Lauren Johnston, RN
Corporate Chief Nurse Executive

A message from
Ross Wilson, MD
Corporate Chief Medical Officer

HHC Ebola Readiness Update

November 7, 2014

We have some new and useful visual tools available on the Ebola Readiness site for Covered Personnel using Level D PPE. Go to the Policies and Guidelines section to find:

- Level D Donning/Doffing Procedures - a training video
- Level D EVD PPE Donning - Poster
- Level D EVD PPE Doffing - Poster

Have questions or comments?

While all urgent or emergent issues around Ebola virus should be directed to your HHC supervisor or your facility Administrator on Duty, you can direct any questions, comments, or suggestions to ebolareadiness@nychc.org, or call the HHC Ebola Readiness Info and Suggestion Line at (212) 442-4160. Your message will be referred to HHC clinical leadership for response or action as appropriate.

Sincerely,

Ross Wilson, MD
Coordination

Notifications

- FDNY*EMS or DOHMH confirms PUI; notifies:
  - NYC Emergency Management
  - City Hall
  - NYC Health + Hospitals
    - System & Bellevue executive leadership
    - Emergency Management
  - Greater NY Hospital Association
  - NYPD
Central Office EOC

Collaboration
Question

- How does a healthcare delivery system safely & effectively manage suspected & confirmed EID incidents:
  - Clinical
  - Operational
  - Financial demands…
  - ...to avoid Never Events?

Answer: Concept of Operations (CONOPs)

- Systems approach
- Quantitative & qualitative data
- Stakeholder 3 Cs
- Evolves from concepts (macro) to structures & processes (micro) to meet goals
- Visual
- Algorithmic
CONOPs (Umbrella; Thread; Sheet Music)

- Single, system-wide tiered plan
  - 2 of 3 service lines
    - Hospitals
    - Ambulatory Care
  - Patient recognition, evaluation & treatment
    - Personal Protective Equipment (PPE)
    - Labs
    - Transfer / transport
  - Logistics / Supply Chain
  - Training & Exercises
CONOPs vs. IRG

Concept of Operations (CONOPS)

CDC’s Tiered System

Incident Response Guide (IRG)
### NYC Health + Hospitals’ Tiered System

![Diagram of NYC Health + Hospitals’ Tiered System]

### CONOPs Essential Elements of Information

<table>
<thead>
<tr>
<th>Agency/Organization</th>
<th>Type of Information</th>
<th>Sent to Agency by NYC Health + Hospitals</th>
<th>Received by NYC Health + Hospitals</th>
<th>Within NYC Health + Hospitals</th>
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<tbody>
<tr>
<td>All of NYC Health + Hospitals integrated healthcare facilities</td>
<td>Notification of suspected or confirmed EVD case</td>
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<tr>
<td>New York City Fire Department (FDNY)</td>
<td>Transportation of PUI(s) from external healthcare facility to one of NYC Health + Hospitals facilities OR intra-system transportation</td>
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<tr>
<td>New York City Department of Health and Mental Hygiene (NYC DOHMH) – Laboratory</td>
<td>Clinical laboratory specimen to rule out or confirm EVD</td>
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<tr>
<td>Department of Health and Mental Hygiene (DOHMH)</td>
<td>Situational Update</td>
<td>x</td>
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<tr>
<td>Centers for Disease Control and Prevention (CDC)</td>
<td>Situational Update</td>
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<td>Federal Emergency Management Agency Region (FEMA)</td>
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<td>New York City Emergency Management (NYCEM)</td>
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<tr>
<td>New York State Department of Health (NYSDOH)</td>
<td>Situational Update</td>
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EMS Transport from Ambulatory Site Checklist

Ambulatory Site Requirements:
- Assemble Transfer Team
- Identify Transfer location and S/M
- Identify/Label Location on E-111 11:008
- Identify Initial Coordination Point for Transfer of Patient to Non-Personal Protective Equipment (PPE)
- Transfer Team: Don PPE, if necessary, Transfer Team will assist EMS in patient transfer to ambulance
- Secure & Control Transfer Area
- Transfer Area
- Secure & Control Area
- Secure & Control Area
- Secure & Control Area
- Patient Transfer: Instruct EMS upon arrival
- Secure & Control Elevator for EMS to move from 1st Floor to 2nd Floor and hold for transport of Patient to Ambulance
- After Patient Transfer, identify Decontamination Area clearly and Close Off Area (if UHS is involved)

EMT Requirements (PPE):
- EMT: Responsible for Securing Facility
- EMT: Responsible for Patient, Assessing History, Symptomology, & Pediatric Information
- Transfer Point Confirmed with Liaison
- EMT: Personnel Don PPE
- EMT: Offsite Transfer
- EMT: Report to Offsite Transfer
- EMT: Ambulances Driven by Clear Personnel ONLY

FDNY Contacts

CONOPs Internal & External Communications

A. Internal Communication
1. Identified Patient Placed in Isolated Room with Airborne Contact & Droplet Precautions as per Ebola Screening Algorithm
2. Triage Nurse Notifies Lead Physician and Don Appropriate PPE
3. Lead Physician Does Appropriate PPE and evaluates PUI
4. Lead Physician Follows NYS DOD's Health & Hospitals Algorithm to Assess Risk

B. Suspected PUI

C. Internal Communication
1. The Following Internal Contacts are Notified:
   - Administrators
   - Infection Prevention (by AGD)
   - Medical and Nursing Directors of ED
   - Chief Medical Officer
   - Chief Nursing Officer
   - Chief Operating Officer
   - Hospital Police
   - AGD/EOA Activates Incident Command
   - NYC Health & Hospitals Leadership
   - EVS/SWAT Team

D. Transportation of PUI

NYC Health + Hospitals

NYC Health + Hospitals

NYC Health + Hospitals
Patient transfer determined by NYCDOHMH:
- FDNYEMS notified
- CMO at Bellevue Hospital Center notified
- NYC Health + Hospitals Leadership notified

Transfer Hospital Facility
- Transfer Team Don PPE
- Control of Transfer Area via Hospital Police/Security
- Hospital Liaison reports to the Command Post
- Identify Transfer Location
- Presenting CMO of Hospital where patient is transferred
- Await HazTac Personnel to hand-off Patient
- HazTac Transport Patient to Treatment Facility (Bellevue)

Receiving Hospital Facility
- Activation of the Special Pathogens Unit via DOHMH/FDNY Transfer to Bellevue
- Assemble SPP Receiving Team
- Prepare 55 Gallon Bio-Waste Drums
- SPP Liaison Report to the Command Post
- SPP Team Don PPE to Receive Patient from FDNY
- Standby at the Transfer Point

FDNY EMS arrival at Transfer Hospital Facility:
- HazTac Officer meets Hospital Liaison
- Transfer Point Confirmed with Liaison
- HazTac Personnel Don PPE
- HazTac Officer supervises transfer
- Ensure response of Clean Ambulance
- Both Ambulances driven by clean personnel ONLY
- HazTac Doffing and Decon per FDNY EMS protocols

Note 1: Any patient assessment and treatment shall be initiated according to FDNY EMS policies, procedures and protocols.

Note 2: DOHMH shall notify the OLMC Physician of patient results determined by treatment hospital facility.

FDNY EMS annual at Transfer Hospital Facility:
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Intra-System Transportation Protocol
- See Appendix H: NYC Health + Hospitals Facility-Specific Bio Isolation Transfer Cards

Beyond Ebola: Special Pathogens

1. Systemwide Special Pathogens Program
   - Serving our patients

2. Region 2 Ebola and Special Pathogen Treatment Center
   - Serving our region

3. National Ebola Training and Education Center (NETEC)
   - Serving our country
SAVE THE DATE!

Highly Infectious Disease Exercise Planning Tools Webinar
March 8, 2017

The U.S. has recently seen much more severe outbreaks, and healthcare facilities must also be prepared for highly communicable, severe diseases such as Middle East Respiratory Syndrome Coronavirus (MERS-CoV), and other highly communicable nosocomial diseases. As containing and treating cases based upon the established national framework set forth by the U.S. Department of Health and Human Services (DHHS), and state and local health departments, the Aspire-TRACe Exercise prepare a toolkit for a national emergency response system in support of a system of care for special pathogens which have the potential to pose significant burden or threat to the healthcare delivery system. The Aspire-TRACe exercise prepared a toolkit for a national emergency response system in support of a system of care for special pathogens which have the potential to pose significant burden or threat to the healthcare delivery system.

PARTICIPANTS

Introduction: Richard Hart, MD, Senior Medical Advisor, ASPR National Healthcare Preparedness Programs

Speaker:
- Michelle Coghlan, DrPH, MPH, Assistant Vice President, Emergency Management, New York City Health & Hospitals
- Richard Hart, MD, Associate Director, New York City Health & Hospitals Emergency Management Division
- Anne Marie Nieman, MD, Associate Professor, University of Nebraska Medical Center, Center for Disaster Medicine, and Emerging Infectious Diseases
- Steve McManus, PhD, MHA, Director, National Training Program for Biosafety, NBTI, and Executive Director, NEA

Target Audiences:
- Regional Ebola and Special Pathogens Treatment Centers
- State-designated Ebola Treatment Centers
- Assessment Hospitals
- Frontline Facilities
- Healthcare Coalitions
- Regional Training Plan Partners

REGISTRATION

REGISTER HERE: For this webinar, it will be recorded and archived on the ASPR-TRACe website. Please note that this webinar will be open to the first 500 registrants.

Audio: You can use your computer microphone and speakers or dial for telephone. A phone number and PIN will be provided after logging into the webinar.

QUESTIONS?

ASPR-TRACe Help Desk:
(908) 833-6464
(888) 833-6464

For more information at: ASPR-TRACe:

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Emerging Infectious Disease Preparedness Training
March 21-28, 2017
Omaha, NE
April 27-28, 2017
Atlanta, GA

Course topics:
- Pathogens of Concern
- Standard Operating Procedures
- Hands-on Simulation Skills Sessions
- Emergency Management
- Leadership Strategies to Sustain Readiness
- State and Regional Operational Planning

A COLLABORATION BETWEEN: FUNDED BY:

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Image credit: CDC/NCID