

THE HHC / BELLEVUE EBOLA EXPERIENCE

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SESSION OBJECTIVE

Share Bellevue's approach
to Ebola response and
preparedness

NEW YORK CITY HEALTH AND HOSPITALS CORPORATION

Staffed Beds: 6,684
 Clinic Visits: 4.4 Million
 E. D. Visits : 1.1 Million
 Discharges: 206,000
 Births: 18,500



| | | | |
|---|--|--|--|
| <p>11 acute care hospitals</p> | <p>70+ community-based clinics, a home care agency, and HHC's managed care health plan, MetroPlus</p> | <p>6 large diagnostic and treatment centers</p> | <p>5 skilled nursing facilities</p> |
|---|--|--|--|



HEALTH AND HOSPITALS CORPORATION

Mission:

Quality Care for All Without Exception

Vision:

Coordinated Safe Care that Exceeds Expectations

We are the
Largest Municipal
Healthcare
System in the
U.S.

BELLEVUE HOSPITAL CENTER

- America's oldest Hospital est. 1736
- Level 1 Trauma Center
- Region II Designated ESPTC
- Affiliated with NYU School of Medicine
- Full NETEC Partners with Emory and Nebraska University

- Operating Beds: 844
- Clinic Visits: 503,000
- E.D. Visits: 117,000
- Discharges: 30,200



 **Bellevue Hospital Center**
Caring for New York Since 1736

HHC NEW YORK CITY
HEALTH AND
HOSPITALS
CORPORATION  **Bellevue**
SOUTH MANHATTAN HEALTHCARE NETWORK

BOTTOM LINE

A large, public, urban, U.S. healthcare system can safely and effectively treat an Ebola virus disease (EVD) patient and myriad Persons Under Investigation (PUIs) directly from its community.

COORDINATION, COMMUNICATION, COLLABORATION

- ▶ Emergency Management-Centered Approach
- ▶ Centralized Decisionmaking / Incident Command System
 - ▶ Policy
 - ▶ Operations
- ▶ Internal & External Partners
- ▶ Clinical, Operational & Financial Resources

COORDINATION, COMMUNICATION, COLLABORATION

FDNY HAZTAC / HAZMAT



OCME



EVD PREPAREDNESS AND RESPONSE CHALLENGE

- ▶ Low Patient Count
- ▶ High Resource Demand
- ▶ Low Resource Capacity
- ▶ High Risk Perception
- ▶ No Experience!

EVD RESPONSE TIMELINE

JANUARY – JULY 2014

Emerging Threat of EVD

- ▶ Index case occurs in Guinea (12/28/13)
- ▶ Liberia, Sierra Leone and Nigeria report cases (3/22 – 7/25)
- ▶ Bellevue sees first PUI (7/28)
- ▶ Level 3 Travel Notice issued (7/31)

HHC / Bellevue Response

- ▶ Centralize all EVD care at Bellevue's 7 West Isolation and Quarantine Unit
- ▶ Implement fever/travel history screening at all 11 HHC Acute Care Facilities
- ▶ Enhance our situational awareness through twice daily reporting of screening

EVD RESPONSE TIMELINE

AUGUST – SEPTEMBER 2014

Emerging Threat of EVD

- ▶ CDC Interim Guidance for monitoring and movement of potential EVD patients is released (8/7)
- ▶ WHO declares Ebola an “International Health Emergency” (8/8)
- ▶ Work begins to identify additional U.S. treatment hospitals to care for confirmed EVD cases (9/10)

HHC / Bellevue Response

- ▶ Made the decision to use an All Hazards Approach to Ebola
- ▶ Established Bellevue EVD Workgroup to Develop an Ebola Incident Response Guide
- ▶ Conducted scores of mini-simulations to test and improve our preparation and response
- ▶ Worked collaboratively with our Public Health Partners to Develop “Best Known” Approach

EVD RESPONSE TIMELINE

AUGUST – SEPTEMBER 2014 - CONTINUED

Developed Satellite Lab Capabilities

7 West Rapid Response Lab

| Lab Section | Test (s) | Instrument |
|--------------|--|---------------------|
| Chemistry | Electrolytes, Blood Gases, Lactic Ac. | iSTAT |
| Chemistry | Chem profile, Liver function tests, Mg | Abaxis Piccolo |
| Chemistry | PT/INR | iSTAT |
| Hematology | CBC w/ partial diff | Beckman Coulter AcT |
| Microbiology | Malaria Antigen | Binax Now Kit |
| Microbiology | Blood Culture | BD Bactec FX40 |
| Microbiology | Rapid HIV | OraQuick kit |
| Microbiology | GI Panel | BioFire |
| Microbiology | Respiratory Panel | BioFire |
| Nursing | Urine Dipstick | POC Bedside |



EVD RESPONSE TIMELINE

AUGUST – SEPTEMBER 2014 - CONTINUED

Emerging Threat of EVD

- ▶ Begin conducting HSEEP-compliant tabletop exercises at all 11 Acute Care Hospitals
- ▶ HHC standardized Personalized Protective Equipment (PPE) guidance to ensure zero skin exposure
- ▶ Level C with Powered Air-Purifying Respirator (PAPR) established as standard for Bellevue treatment facility





7 WEST ISOLATION

EVD RESPONSE TIMELINE

OCTOBER 2014

Threat Now Reality

- ▶ ASPR releases guidance for Public Health and Medical Professionals (10/6)
- ▶ EVD screening begins at 5 U.S. airports for travelers from affected countries (10/8)
- ▶ First case of domestic transmission to healthcare worker reported (10/10)
- ▶ NYS Commissioners order on EVD preparedness and response issued (10/16)
- ▶ Interim guidance on PPE released (10/20)

What We Did

- ▶ NYC DOHMH, Bellevue, HHC Emergency Management conduct preparedness planning calls
- ▶ HHC Establishes EVD “Tiger Team” for preparedness and response
- ▶ Bellevue protocol refined for clean patient transfer at door
- ▶ First confirmed case admitted to Bellevue on October 23, 2014

FULL ACTIVATIONS OF SPECIAL PATHOGENS UNIT

| Patient | Demographics | Country | Admit | Discharge | Reported T-Max | Comments |
|-------------|--------------|--------------|------------|------------|----------------|---|
| Patient #1 | 32M | Liberia | 7/30/2014 | 8/5/2014 | 100.8 | Prisoner with fever arrested upon arrival to JFK (old traffic citation) - Malaria |
| Patient #2 | 48F | Liberia | 9/22/2014 | 9/23/2014 | 100.4 | UNICEF worker in proximity with child with Ebola |
| Patient #3 | 37M | Uganda | 10/13/2014 | 10/15/2014 | Unknown | Prisoner with diarrhea arrested upon arrival to JFK (domestic dispute) |
| Patient #4 | 33M | Guinea | 10/23/2014 | 11/11/2014 | 100.3 | MSF worker positive for Ebola |
| Patient #5 | 5M | Guinea | 10/27/2014 | 10/30/2014 | 102.6 | 5 yo boy from Guinea |
| Patient #6 | 56M | Mali | 11/20/2014 | 12/5/2014 | Unknown | Renal Failure |
| Patient #7 | 58M | Liberia | 12/23/2014 | 1/2/2015 | 99.0 | Cerebral Malaria |
| Patient #8 | 5F | Sierra Leone | 2/24/2015 | 2/15/2015 | 101.4 | 5 yo girl from Sierra Leone |
| Patient #9 | 42M | Guinea | 3/25/2015 | 3/27/2015 | 100.7 | Viral Syndrome |
| Patient #10 | 67F | Guinea | 7/1/2015 | 7/3/2015 | 102.0 | Malaria |
| Patient #11 | 33M | Guinea | 7/20/2015 | 7/21/2015 | 101.2 | Malaria |
| Patient #12 | 81M | Guinea | 7/25/2015 | 7/25/2015 | 100.2 | Pneumonia |
| Patient #13 | 22 Month F | Guinea | 8/9/2015 | 8/10/2015 | Unknown | E.Coli Gastroenteritis |
| Patient #14 | 47M | Guinea | 8/19/2015 | 8/19/2015 | 102.2 | Malaria |
| Patient #15 | 44F | Guinea | 8/31/2015 | 9/1/2015 | 103.0 | Malaria |
| Patient #16 | 12M | Guinea | 9/17/2015 | 9/18/2015 | 104.1 | Malaria |

- ▶ Patients with a wide range of severity of illness including critically ill with multiorgan failure
- ▶ Need to be prepared for all contingencies including advance life support, mechanical ventilation and dialysis

WHAT WE LEARNED ALONG THE WAY

Key Elements of Success:

- ▶ Coordination / Communication / Collaboration
- ▶ Clear standards and protocols developed by those that do the work
- ▶ Strict adherence to standards
- ▶ Include labor and community partners in all aspects
- ▶ Recognition of infinite level of detail
- ▶ Steal shamelessly and share willingly

COMMUNICATION



WHAT SURPRISED US

- ▶ Public and media interest in Ebola
- ▶ Short attention span of what was a consuming challenge
- ▶ Challenge of managing the stigma of Ebola
- ▶ Difficulties associated with active monitoring of staff
- ▶ Incredible logistics and cost of managing waste
- ▶ Enormous task of sustaining readiness





WHAT SURPRISED US

YEEEEOW!

EXPECT THE UNEXPECTED

EVOLVING ROLES: REGION 2 ESPTC AND NETEC

Regional Ebola and Special Pathogens Treatment Center (ESPTC)

- Expansion of scope to respond to any dangerous pathogen
- Heightened state of readiness
- Accept patients with Ebola and other highly infectious diseases from across the region
- Conduct quarterly training exercises

National Ebola Training and Education Center (NETEC)

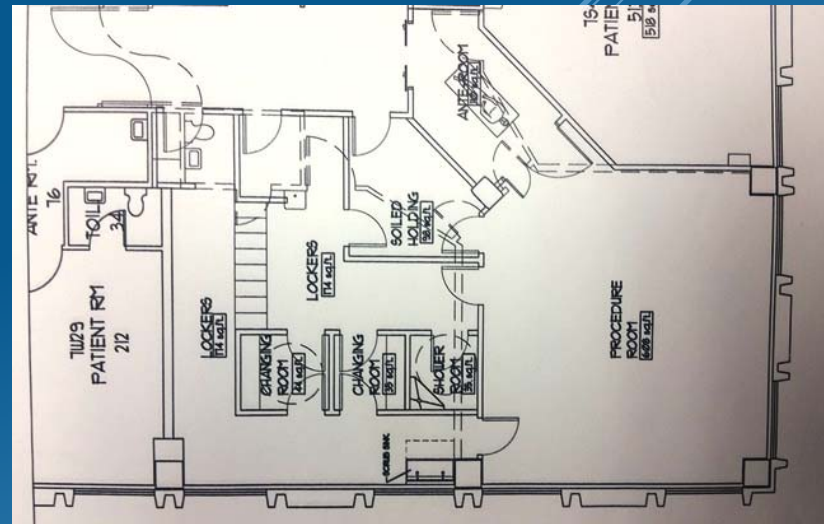
- Partnership with Emory University, University of Nebraska and HHC/Bellevue
- Funded by ASPR
- Site assessments, curriculum development, training courses and technical support for Regional ESPTCs and Treatment Hospitals

SPECIAL PATHOGENS PROGRAM FUTURE DEVELOPMENT

Waste Management



Special Pathogens Operatory



SPECIAL PATHOGENS PROGRAM FUTURE DEVELOPMENT

Iso-Pod for Respiratory Isolation



Delivery Suite Considerations



SPECIAL PATHOGENS PROGRAM FUTURE DEVELOPMENT

Pathogen Specific Transfer Protocols



Staying Ready, Keeping Safe



COSTS AND CHALLENGES OF READINESS

- ▶ Ramp up costs
- ▶ Response costs
- ▶ Continued readiness costs
- ▶ Personnel training and monitoring

COSTS AND CHALLENGES OF READINESS

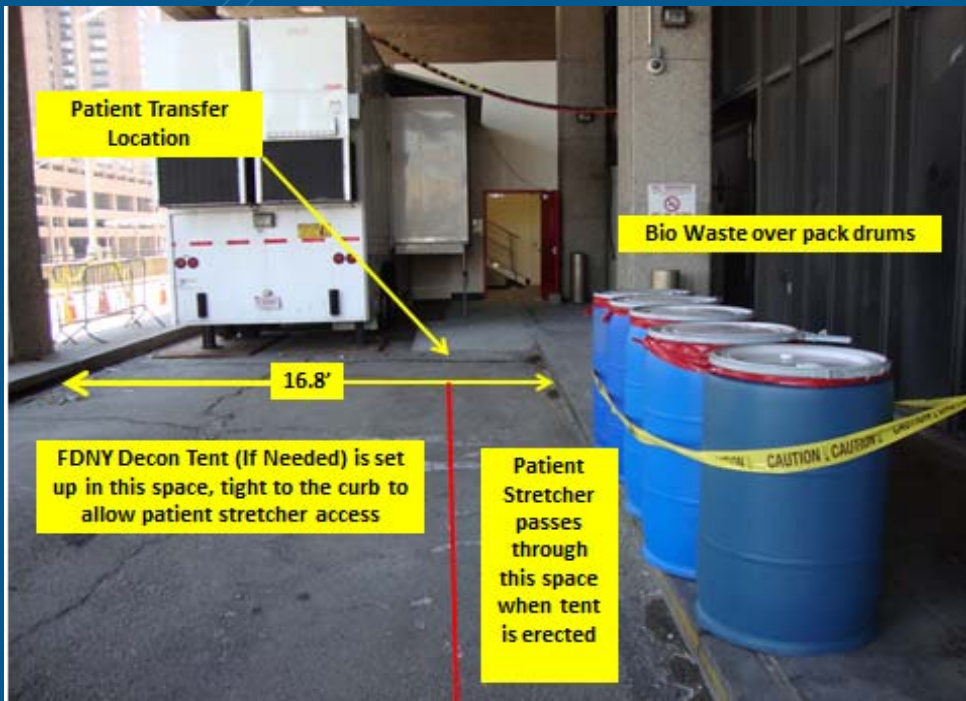
Waste Handling



Keeping Caregivers Safe



COOPERATION & COLLABORATION



THANK YOU

