NYC HEALTH CARE COALITION (NYCHCC) LEADERSHIP COUNCIL MEETING

NYC DOHMH EMERGENCY PREPAREDNESS AND RESPONSE
BUREAU OF HEALTHCARE SYSTEM READINESS

Wednesday, December 13, 2017

NYC Health

WELCOME!

Morning Agenda

8:30 – 9:00 AM	***Registration and Networking***
9:00 – 9:15 AM	***Welcome and National Health Care Coalition Conference Update*** William Lang, Director, Hospitals and Coalitions, Bureau of Healthcare System Readiness, NYC Department of Health and Mental Hygiene
9:15 – 9:25 AM	***Opening Remarks*** Celia Quinn, Executive Director, Bureau of Healthcare System Readiness, NYC Department of Health and Mental Hygiene
9:25 – 9:40 AM	***NYCHCC Charter Workshop Report Out / Next Steps*** William Lang, Director, Hospitals and Coalitions, Bureau of Healthcare System Readiness, NYC Department of Health and Mental Hygiene Aaron Belisle, Acting Director, Emergency Planning Unit, NYC Department of Health and Mental Hygiene Darrin Pruitt, Deputy Director, Bureau of Healthcare System Readiness, NYC Department of Health and Mental Hygiene
9:40 – 10:00 AM	***Citywide Surge Exercise - Update*** Marie Irvine, Emergency Response Coordinator, Bureau of Healthcare System Readiness, NYC Department of Health and Mental Hygiene
10:00 – 11:00 AM	***Regional Resiliency Assessment Program (RRAP)*** Department of Homeland Security
11:00 – 11:15 PM	***Networking Break***
11:15 – 11:45 AM	***NYC DOHMH's EmPower Project*** Tamer Hadi, Director of Strategic Technology, NYC Department of Health and Mental Hygiene

Afternoon Agenda

11:45 – 12:15 PM	***Clinical - Emerging Diseases, What's on the Radar*** Mary Foote, Senior Medical Coordinator for Communicable Disease Preparedness, Bureau of Healthcare System Readiness, NYC Department of Health and Mental Hygiene
12:15 – 12:45 PM	***Lunch***
12:45 – 1:00 PM	***Planning Considerations for Budgetary Period 2 (BP2)*** Darrin Pruitt, Deputy Director, Bureau of Healthcare System Readiness, NYC Department of Health and Mental Hygiene
1:00 – 1:45 PM	***Brainstorming: BP2 Deliverables for Borough Coalitions***
1:45 – 2:00 PM	***Brainstorming: Report Out***
2:00 – 2:30 PM	***HVA Updates and Jurisdictional Risk Assessment*** Shadrzad Kardooni, Preventive Medicine Resident, NYC Department of Health and Mental Hygiene Francoise Pickart, Senior Risk Analyst, Agency Preparedness & Response, NYC Department of Health and Mental Hygiene
2:30 – 2:40 PM	***Networking Break***
2:40 – 3:40 PM	***Puerto Rico Updates w/ Q&A*** Nancy Pagan, RPAC, MPA-S, New York Presbyterian – Weill Cornell Emergency Department Timothy Styles, Medical Director, Bureau of Healthcare System Readiness, NYC Department of Health and Mental Hygiene
3:40 – 3:50 PM	***Member Announcements & Invitations to Upcoming Events***
3:50 – 4:00 PM	***Concluding Remarks***

NYC Health

OPENING REMARKS

Celia Quinn, Executive Director, Bureau of Healthcare System Readiness, NYC Department of Health and Mental Hygiene

NYCHCC CHARTER: UPDATE / NEXT STEPS

William Lang, Director, Hospitals and Coalitions, Bureau of Healthcare System Readiness, NYC Department of Health and Mental Hygiene

Aaron Belisle, Acting Director, Emergency Planning Unit, NYC Department of Health and Mental Hygiene

Darrin Pruitt, Deputy Director, Bureau of Healthcare System Readiness, NYC Department of Health and Mental Hygiene

HEALTHCARE COALITION PREPAREDNESS PLAN

BP1 HPP Requirement

Darrin Pruitt, Deputy Director, Bureau of Healthcare System Readiness,
NYC Department of Health and Mental Hygiene

HPP requires…

- Content
  - HCC structure, member guidelines for participation and engagement, policies & procedures, integration within existing state, local, and member-specific incident management, specific roles for members
  - Member priorities based on HVA, complement facility planning, strategic & operational objectives
  - Information sharing, coordination and resources during emergencies, recovery plan
  - Much is contained already in the Charter
- Input
  - representation rate of HCC core (acute care, EMS, EM, Public Health)
  - % of HCCs completing and approving the plan

We plan to meet the requirements by…

- ❑Leveraging information gathered for the Healthcare System Playbook
- ❑Leveraging the content of the HCC charter
- ❑Developing mechanism (checklist) for proposed activities, methods for reporting progress, processes for accountability and completion
- ❑Completing template provided by HPP

We need your involvement specifically…

- ❑ Review and approval of the plan before June, 2018

- ❑ Annual review and/or after coalition exercises or real events

- ❑ Next Steps
  - DOHMH drafts plan, provides for your review
  - All HCC members get a copy of the plan
  - Begin preparing to submit the coalition response plan due at the end of BP2

THANK YOU!

CITYWIDE SURGE EXERCISE - UPDATE

Marie Irvine, Emergency Response Coordinator, Bureau of Healthcare System Readiness, NYC Department of Health and Mental Hygiene

What is SurgeEx?

- The Department of Health and Human Services Office of the Assistant Secretary for Preparedness and Response (HHS APSR) designed the exercise to help Health Care Coalitions **identify gaps in surge and response readiness through a low- to no-notice exercise**.

- The exercise is a required **annual deliverable** for all HHS ASPR Hospital Preparedness Program Awardees 2017-2020 – 8 associated ASPR HPP Performance Metrics. Current Budget Period 1 sets a baseline metric

- The exercise was piloted in South Dakota, Texas, Michigan, and Wyoming.

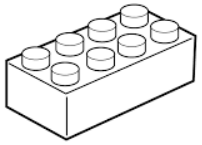
SurgeEx (cont.)

- The exercise scenario (TBD) is expected to simulated evacuation of at least **20% of the acute care beds in a healthcare coalition**.
  - HHS ASPR and DOHMH consider NYC one single coalition comprised of a number of networks and independent facilities
- **Low- to no-notice functional exercise.**
- **Designed to be challenging.**
- **Intended to improve health care system response readiness.**
- **Intended to test the overall health care system response.**
- **<u>Work in progress</u>**

SurgeEx

- ❑ SurgeEx 2018
  - Baseline
  - Major Gaps
  - Focus on Acute Care Sector
- ❑ SurgeEx 2019
  - Adding other sectors (Nursing Homes, Primary Care…)
  - Address Gaps Specifically
  - Added SurgeEx deliverables to support development of surge capacity

SurgeEx Elements



	Element	Participants	Time/Date	Outcome
1	Functional Exercise (FE)	• 55 hospitals (sending and receiving) • 7 Networks • City/State Agencies	• **First Two Weeks of April 2018** • 150 min. (2.5 h) • At facilities/network locations	• Sending, receiving and bed matching data (quantitative)
2	Facilitated Discussion + Hotwash	• 55 hospitals (incl. independents) • 7 Networks • City/State Agencies	• **May 8th, 2018** • 180-min. (1.5h) + 30-minute Hotwash • At combined EPS/LCM	• Identify gaps/issues in surge capacity (qualitative)

Proposed Exercise Objectives

Functional Exercise (FE) Objectives: (April 2018)

- By the end of the exercise, participating evacuating hospitals will have assessed their ability to **identify patients for rapid discharge** within 60 minutes of exercise notification.
- By the end of the exercise, participating networks and facilities will have assessed their ability **to conduct bed-matching of evacuating patients** within 90 and 180 minutes of STARTEX.
- By the end of the exercise, participating evacuating hospitals will have assessed their ability to **identify transportation assets** within 90 and 180 minutes of STARTEX.

Facilitated Discussion Objective(s): (May 8th, 2018)

- By the end of the exercise, the NYC HCC, including city agencies, partner organizations and participating networks and facilities will have discussed strengths and weaknesses in NYC's healthcare system's ability to surge 20%+ in response to an incident requiring mass-evacuation of acute care facilities, incl. capabilities such as **rapid discharge, bed matching, transportation assets and coordination/communications**.

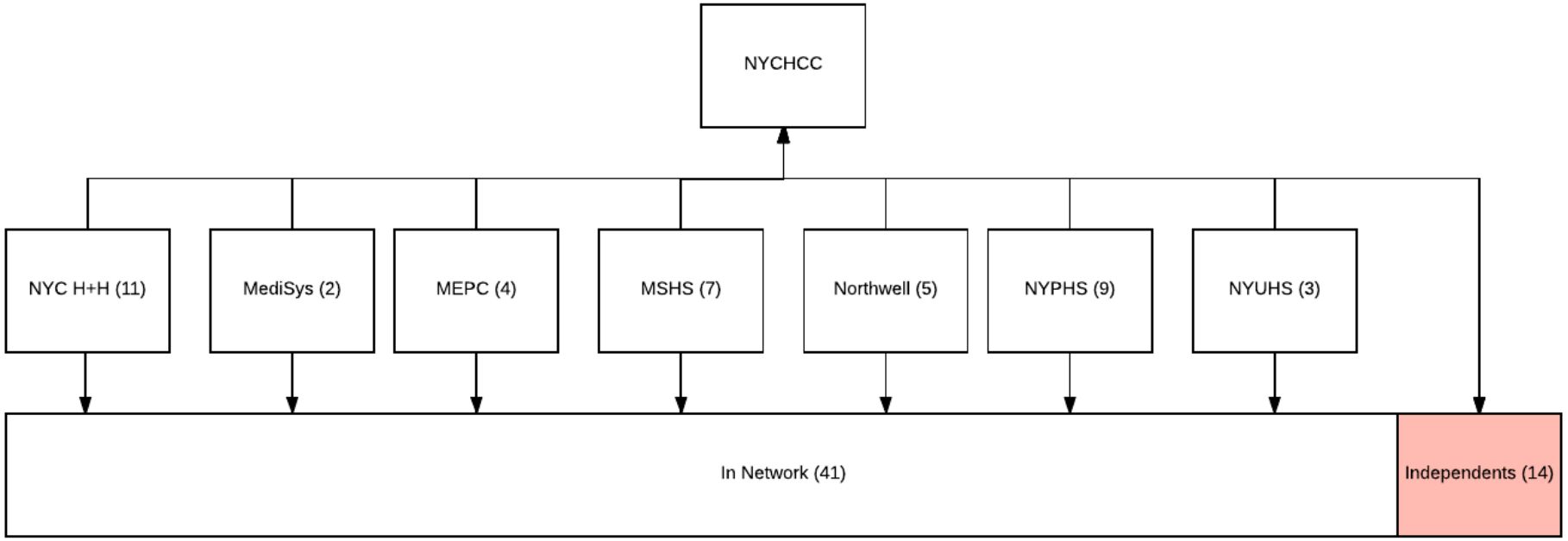
SurgeEx Deliverables

1. Identify Trusted Agent (controller) (Network + Facility)

2. Quantitative Data (FE)
   - Collected through SitStat at 90 + 180 minutes

3. Quantitative Data
   - Collected through SitStat at 90 + 180 minutes (FE)
   - Collected at Facilitated Discussion (May 8th)
   - Collected through “Key Strenghts and Weaknesses” template, to be provided by DOHMH

SurgeEx FE C/E Staffing



Network-Level:
- 1 Trusted Agent
- 1 Evaluator
- Players

Facility-Level:
- 1 Trusted Agent
- 1 Evaluator*
- Players

*evacuating facilities, receiving TBD

All Networks + Facilities are required to provide one (1) trusted agent who will function as a controller on the day of the functional exercise (FE)

Scenario 2018: Coastal Storm

Hurricane William

THANK YOU!

Marie Irvine

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REGIONAL RESILIENCY ASSESSMENT PROGRAM (RRAP)

U. S. DEPARTMENT OF HOMELAND SECURITY

The Office of Infrastructure Protection

National Protection and Programs Directorate
Department of Homeland Security

Regional Resiliency Assessment Program
NYC Regional Supply Chain Project

NYC Health Care Coalition Leadership Council Meeting
December 13, 2017

Homeland Security

Background

- Role of DHS Office of Infrastructure Protection (“IP”)
- IP’s Region 2 office and staff
- IP’s Regional Resiliency Assessment Program

Project Overview

- Originated with NY County Healthcare Resilience Coalition, in close collaboration with other key partners
- Goal = improve understanding of healthcare supply chains and potential disruptions, and support sector-wide planning
- Project Scope
  - NYC and surrounding areas
  - Five product types
  - All-hazards
- Project Approach

Project Participants

Interviews conducted during 2017 primarily in NYC, NYS, NJ, DC

- Hospital systems
- Non-acute care providers
- Med-Surg distributors
- Pharma distributors
- Manufacturers
- Medical gas vendors
- Linen service providers
- Blood suppliers
- Industry groups
- Healthcare data companies
- GPOs
- Independent SMEs
- City Gov
- State Gov
- Federal Gov

Key Project Themes

- Topics and challenges that dominated discussions and deserve the greatest attention moving forward:
  - Improved knowledge and grounding in the prevailing structure and operations of healthcare supply chains
  - The supply chain risk landscape and how timely awareness is key to risk mitigation
  - Increased collaboration among the full range of private and public-sector stakeholders, especially in the face of large-scale supply chain disruptions

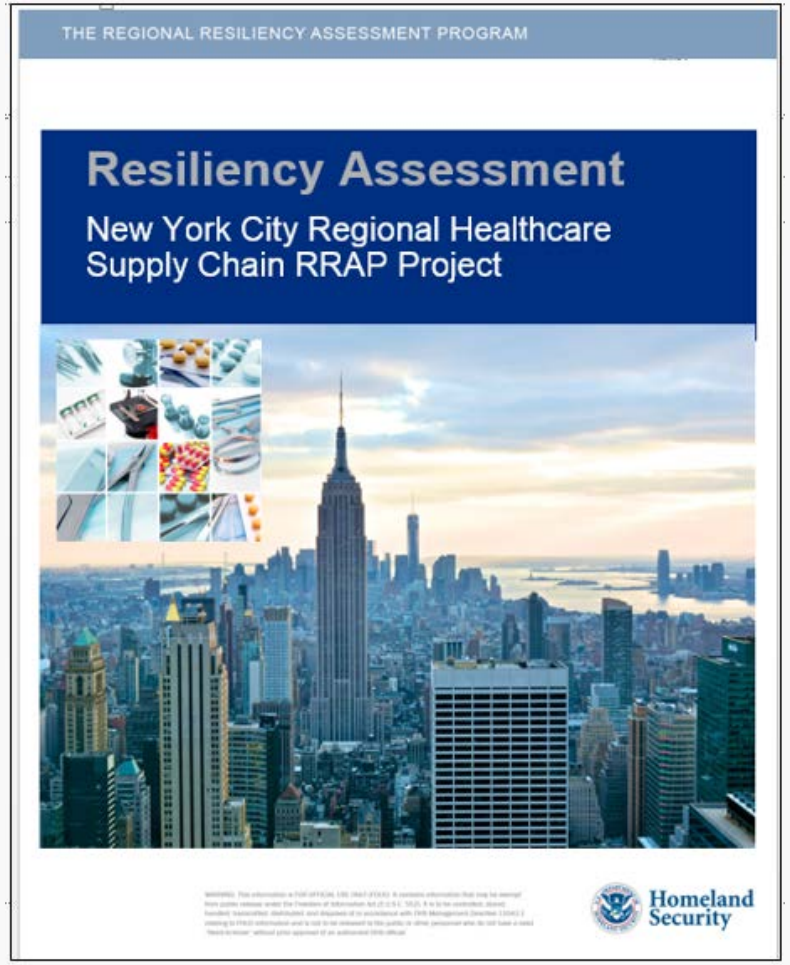
Proposed Future Actions

(See handout for specifics)

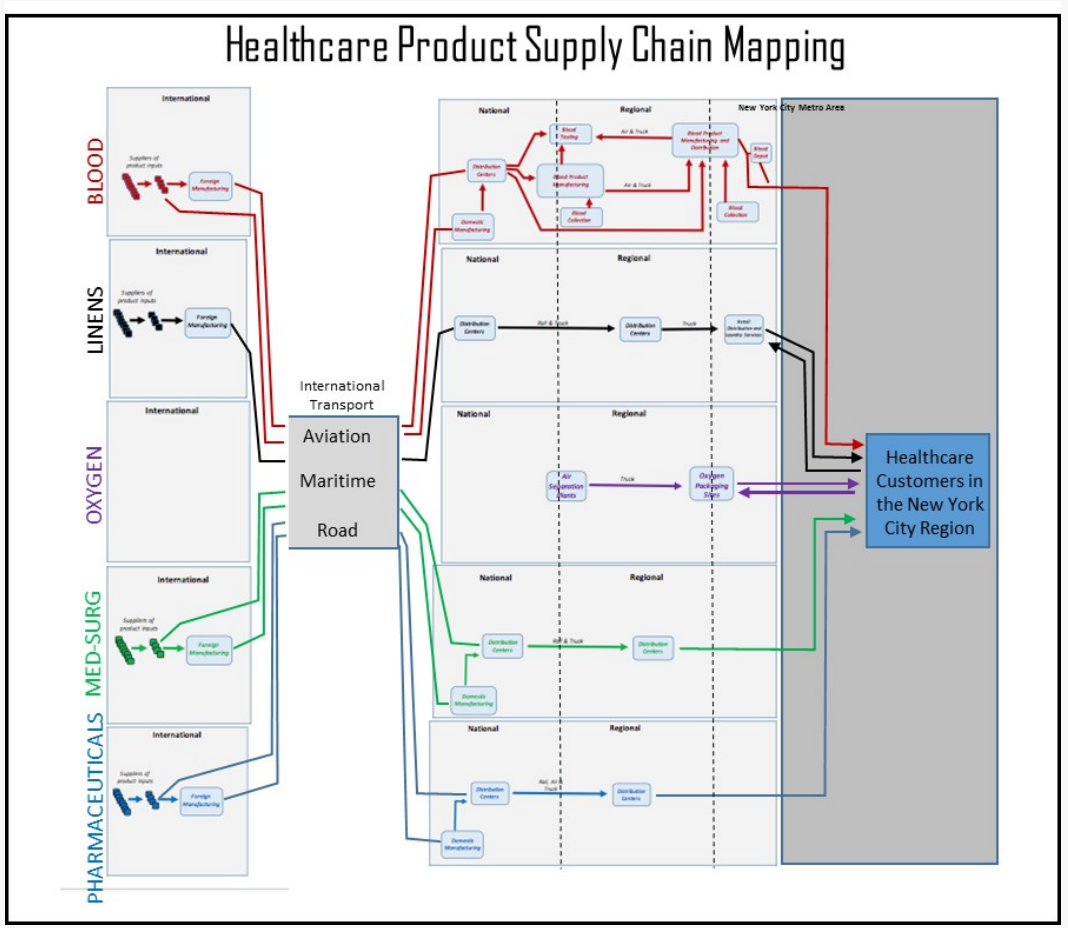
- Products, events, initiatives that could help address highlighted issues and challenges
- Vary in execution horizon, required resources, participants, potential pay-off, complexity, etc.
- Work towards a collective roadmap for concrete actions to improve healthcare supply chain resilience in the NYC region

Project Deliverables

Project Report



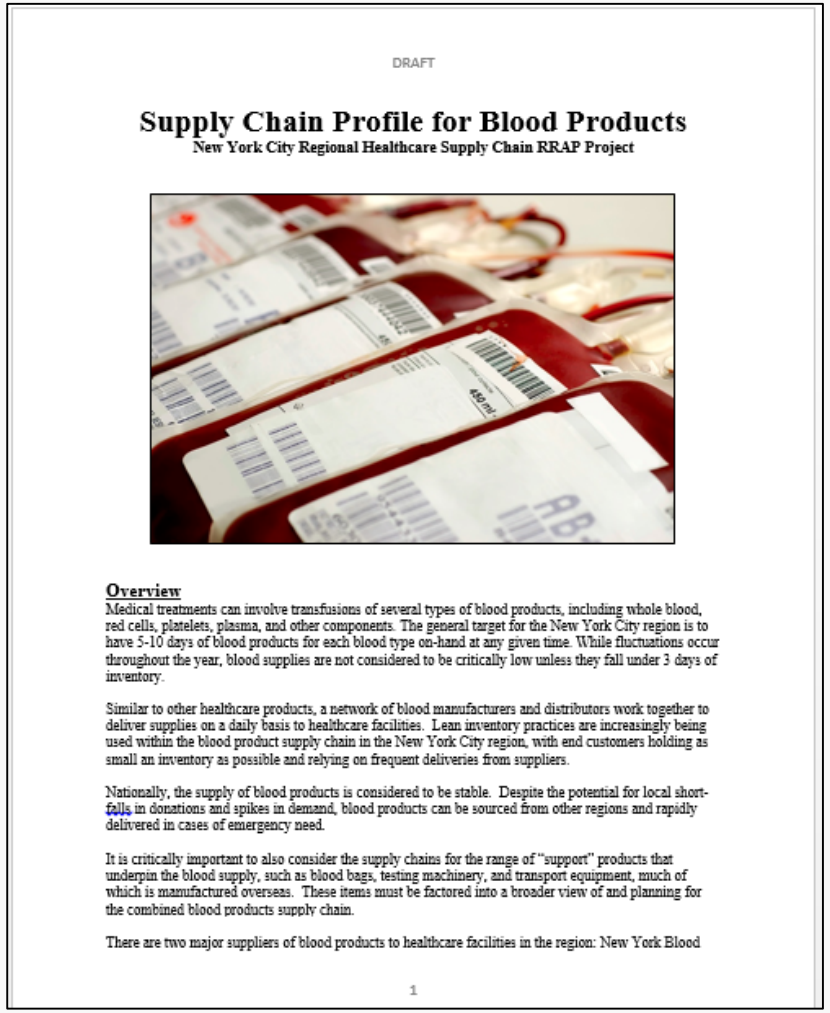
Interactive Supply Chain Navigator



Homeland Security

Project Deliverables

Supply Chain Profiles



DRAFT

Supply Chain Profile for Blood Products

New York City Regional Healthcare Supply Chain RRAP Project

Overview

Medical treatments can involve transfusions of several types of blood products, including whole blood, red cells, platelets, plasma, and other components. The general target for the New York City region is to have 5-10 days of blood products for each blood type on-hand at any given time. While fluctuations occur throughout the year, blood supplies are not considered to be critically low unless they fall under 3 days of inventory.

Similar to other healthcare products, a network of blood manufacturers and distributors work together to deliver supplies on a daily basis to healthcare facilities. Lean inventory practices are increasingly being used within the blood product supply chain in the New York City region, with end customers holding as small an inventory as possible and relying on frequent deliveries from suppliers.

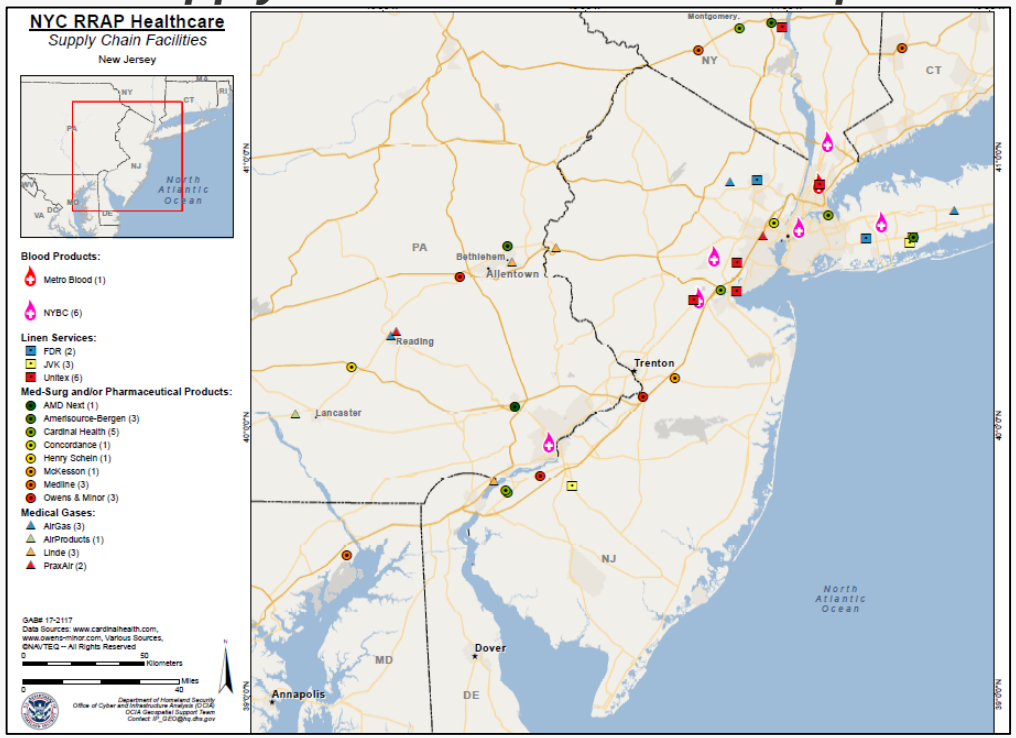
Nationally, the supply of blood products is considered to be stable. Despite the potential for local short-falls in donations and spikes in demand, blood products can be sourced from other regions and rapidly delivered in cases of emergency need.

It is critically important to also consider the supply chains for the range of "support" products that underpin the blood supply, such as blood bags, testing machinery, and transport equipment, much of which is manufactured overseas. These items must be factored into a broader view of and planning for the combined blood products supply chain.

There are two major suppliers of blood products to healthcare facilities in the region: New York Blood

1

Supply Chain Infrastructure Maps



Project Deliverables

Supply Chain Disruption Scenarios

New York City Regional Healthcare Supply Chain Project
Supply Chain Disruption Scenarios

EVENTS			LIKELIHOOD	IMPACTS					RESOLUTION			
Root Cause of Disruption	Scenarios	Historical Events	Common vs. Rare vs. Unseen	Onset Long Notice Short Notice No Notice	Geographic Reach Local, Regional, National, Global	Healthcare Sector Reach Single vs. multiple products affected Single vs. multiple facility types affected	Duration Days, Weeks, Months	Severity Manageable, Disruptive, Debilitating	Event Detection Immediate/Obvious vs. Delayed/Hidden	Recovery Duration Immediate vs. Prolonged	Who needs to act in what way Providers, Distributors, Manufacturers, Government, Others	Key Considerations / Complicating Factors
MANUFACTURING: Product on allocation												
MANUFACTURING: Product recall												
MANUFACTURING: Disruption at a manufacturing site												
MANUFACTURING: Disruption to a manufacturer's supplier												
TRANSPORT: Disruption to a specific transport node												
TRANSPORT: Disruption due to a broader event												
DEMAND: Increased demand for product locally												

Next Steps

- Refinement, review, issuance of deliverables in 1st qtr 2018
- Transition to follow-on actions in the NYC region
  - Supply chain TTX/workshop
  - Topic-specific training/webinars
  - Expanded information resources
  - Coalition work

NETWORKING BREAK

NYC DOHMH'S EMPOWER PROJECT

Tamer Hadi, Director of Strategic Technology, NYC Department of Health and Mental Hygiene

HHS emPOWER Initiative

CMS CENTERS for MEDICARE & MEDICAID SERVICES

ASPR ASSISTANT SECRETARY FOR PREPAREDNESS AND RESPONSE

Using Medicare Data to Communicate with Electricity-Dependent Durable Medical Equipment Users and Dialysis Patients in NYC

Tamer Hadi

Director of Strategic Technology

Office of Emergency Preparedness and Response

NYC Department of Health and Mental Hygiene

NYC Health

What is the emPOWER Initiative?

- ❑ Partnership between CMS and ASPR
- ❑ Medicare billing data to provide public health jurisdictions better understanding of their at-risk populations who rely on electricity-dependent medical devices and dialysis
- ❑ Data contains information on:
  - *Durable Medical Equipment* (ventilator, O_2 concentrator, cardiac devices, wheel chair, etc.)
  - *Dialysis Patients*
  - *Home Health Services*

2 DATA SETS

De-Identified Data Set

Emergency Planning
De-Identified Database

Identified Data Set

Emergency Response
Outreach Dataset

Publicly available vs Emergency Planning De-Identified data sets

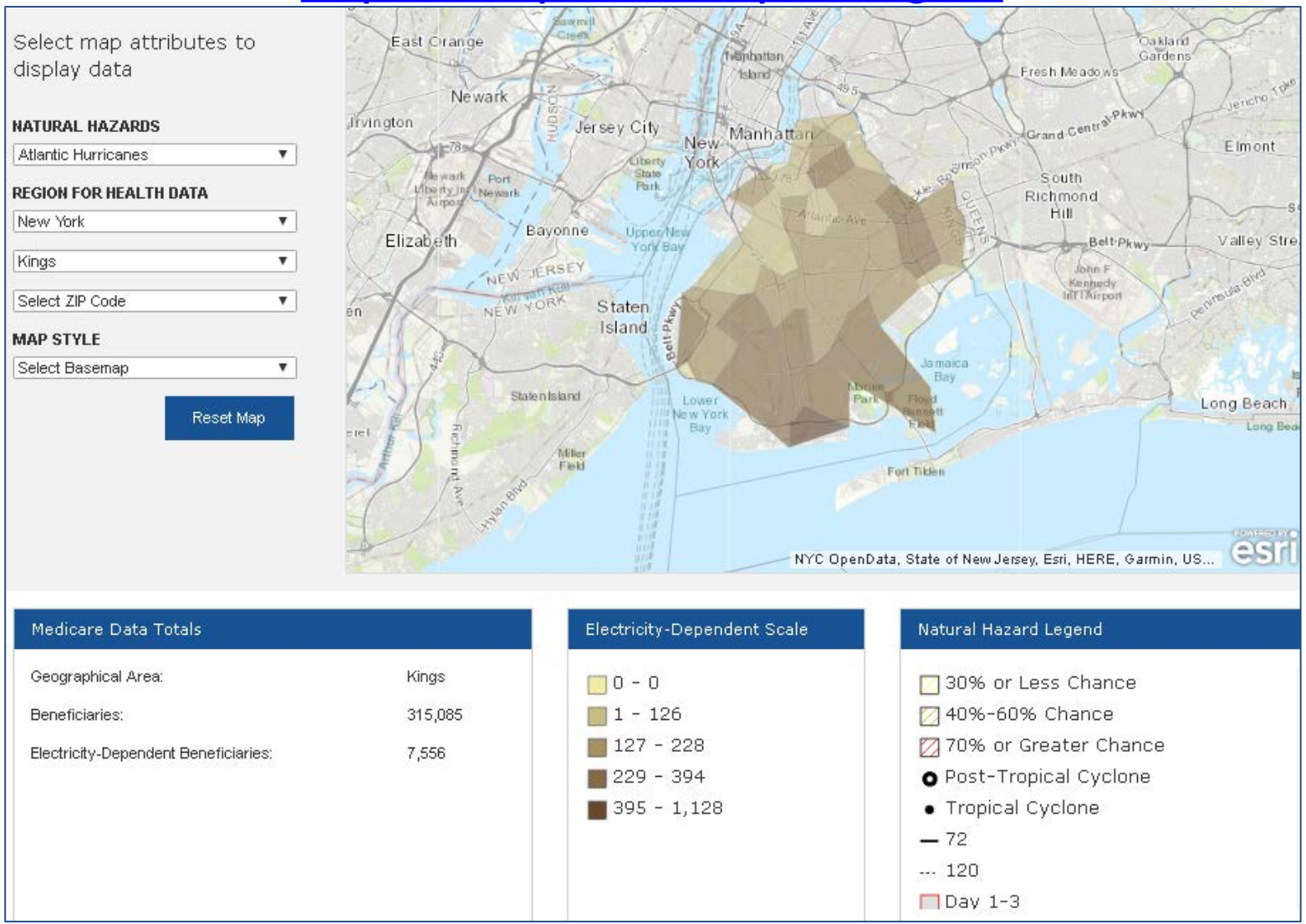
- Publicly available: total electricity-dependent
  - Found on ASPR's website

- Available to local health and partners for emergency planning: aggregate data by medical equipment type
  - Shared with local health for approved data uses
  - Updated 1-2 times per year

Publicly Available Data Set

Emergency Planning De-Identified Database

https://empowermap.hhs.gov/



Emergency Planning Data Set Fine Print

Purpose: enhance situational awareness of and support emergency planning for at-risk individuals that rely on select durable medical equipment (DME)

Emergency Planning Data Set Fine Print

- Data Source:
- Medicare Fee For Service (FFS) Part A and B beneficiary administrative claims data (~32M 65+, blind, ESRD (dialysis), dual-eligible, disabled-can include adults and children)
- Medicare Advantage claims data (~17M 65+, blind , ESRD (dialysis), dual-eligible, disabled-can include adults and children)
- Data does **NOT** include individuals that are only enrolled in a State Medicaid Program
- Medicare DME are subject to insurance claim reimbursement caps (e.g. rental caps) that differ by type and therefore may have a different “look-back” periods (e.g. ventilators are 13 months and oxygen concentrators are 36 months)
- Information provided in Menu and Data Overview tabs of the workbook

Emergency Planning Data Set Fine Print

Approved Data Uses:

The de-identified dataset is approved for use by the state/territory and local health department, either directly or in collaboration with their ESF-8, 6,14 or other partners as appropriate, for public health emergency response, preparedness/mitigation, recovery and resilience activities. All other potential uses of this data require prior approval from ASPR and CMS.

Emergency Planning Data Set Fine Print

Privacy Protections:

As Medicare beneficiary privacy protection is our priority, all personal identifiable information has been removed from this dataset and numerous de-identified methods have been applied to significantly minimize, if not completely mitigate, any potential for deduction of small cells or re-identification risk. For example, any cell size found between the range of 1 and 10 is masked and shown as 11.

Using the De-Identified Data Set for Planning

- New ASPR requirement for Healthcare Coalitions to:
  - *"obtain de-identified data from emPOWER map every six months to identify populations with unique health care needs"*
  - *coordinate with ESF-8 for medical planning and transportation of these populations*
- DOHMH, FDNY EMS, and NYCEM are working together to plan how to use the emPOWER data during an evacuation

De-Identified / Aggregate Data

Medicare Beneficiaries & Electricity-Dependence

United States

Geographical Area:	U.S.
Beneficiaries:	52,338,023
Electricity-Dependent Beneficiaries:	2,469,694

New York State

Geographical Area:	New York
Beneficiaries:	3,096,141
Electricity-Dependent Beneficiaries:	104,971

NYC

Bronx

Geographical Area:	Bronx
Beneficiaries:	175,260
Electricity-Dependent Beneficiaries:	3,526

Manhattan

Geographical Area:	New York
Beneficiaries:	239,418
Electricity-Dependent Beneficiaries:	5,141

Queens

Geographical Area:	Queens
Beneficiaries:	298,798
Electricity-Dependent Beneficiaries:	6,097

Brooklyn

Geographical Area:	Kings
Beneficiaries:	315,085
Electricity-Dependent Beneficiaries:	7,556

Staten Island

Geographical Area:	Richmond
Beneficiaries:	75,697
Electricity-Dependent Beneficiaries:	1,712

Total NYC Medicare Beneficiaries = 1.2 M

Total Electricity-Dependent Beneficiaries = 24,032

Types of Durable Medical Equipment (DME)

NYC Breakdown

# In-Facility ESRD Dialysis	# O2 Services [Tanks]	# Home Health
10,008	7,512	22,425

# Cardiac Devices	# Ventilators	# BiPAPs	# O2 Concentrators	# Enteral Feeding
1,454	1,922	781	13,259	2,313

# IV Infusion Pumps	# Suction Pumps	# At-Home ESRD Dialysis	# Motorized Wheelchairs or Scooters	# Electric Beds
1,880	1,551	1,364	2,014	8,020

*** Note: Stats slightly inflated due to zip code masking ***

NYC Health

Identified Outreach Data

How is DOHMH Going to Use the Data?

1) Request Individualized Data from ASPR
   - *Name, DOB, Address, Devices Used*
2) Add NYC Hurricane Evacuation Zones
   - *Determine which zones we want to message*
3) Reverse Phone Look-Up (Vendor)
   - *Obtain landlines and cell phones (***cost involved***)*
4) Provide Ventilator Patient Data to FDNY EMS
5) Disseminate voice and text messages using DOHMH Emergency Notification System
   - *72-96 hours out*
   - *24-48 hours out*
   - *Within 24 hours after storm passes*

What Are We Going to Say?

Short, Effective Messages

- **72-96 hours out – Preparedness Focus**
  - Make arrangements now to relocate, prepare go-bag, batteries/backups, get dialysis treatment
  - Refer to website with detailed preparedness tips
- **24-48 hours out – Evacuation/Sheltering Focus**
  - Advise on mandatory evacuation, relocate now or call 311 for assistance, items to bring, 311 for nearest evac center
  - Refer to website with detailed preparedness tips
- **After storm passes – Safety Check**
  - Call 311 for evacuation assistance
  - Call 911 for life-threatening emergencies

NYC Health

FDNY EMS Role

- FDNY EMS is going to message and offer evacuation assistance to all **Ventilator patients** in potentially affected coastal storm zones

Challenges

- ❑ *Turnaround time for requesting data / phone number lookup*
- ❑ *Data Security*
- ❑ *How to use for no-notice events*

Next Steps

- ❑ Data Drill to test entire process
- ❑ Larger exercise w/ FDNY EMS drilling vent patient evacuations
- ❑ National Work Group – ASPR advised that a work group will be formed for jurisdictions to share best practices.

Questions & Discussion

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CLINICAL - EMERGING DISEASES, *WHAT'S ON THE RADAR*

Mary Foote, Senior Medical Coordinator for Communicable Disease Preparedness, Bureau of Healthcare System Readiness, NYC Department of Health and Mental Hygiene

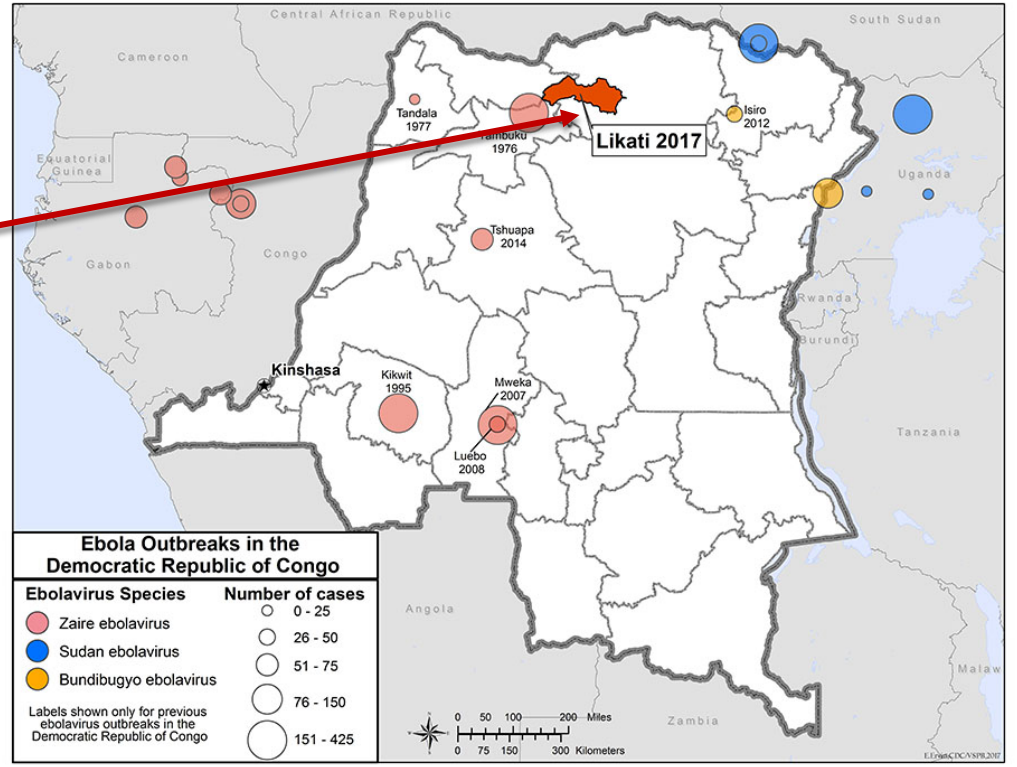
What's on our radar?

INFECTIOUS DISEASE OUTLOOK 2017-2018

2017 Review: Ebola

Democratic Republic of the Congo (May—July)

- May 11, 2017, DRC reported a cluster of suspected EVD cases in remote Likati zone
- Within days, international teams had arrived to support response and testing
- Mobile lab established for diagnoses
- Cases = 8 likely, 5 confirmed
  - Deaths = 4



The map shows the country of Democratic Republic of Congo, located in Central Africa, and indicates outbreaks of Ebola that have happened there.

Source: WHO

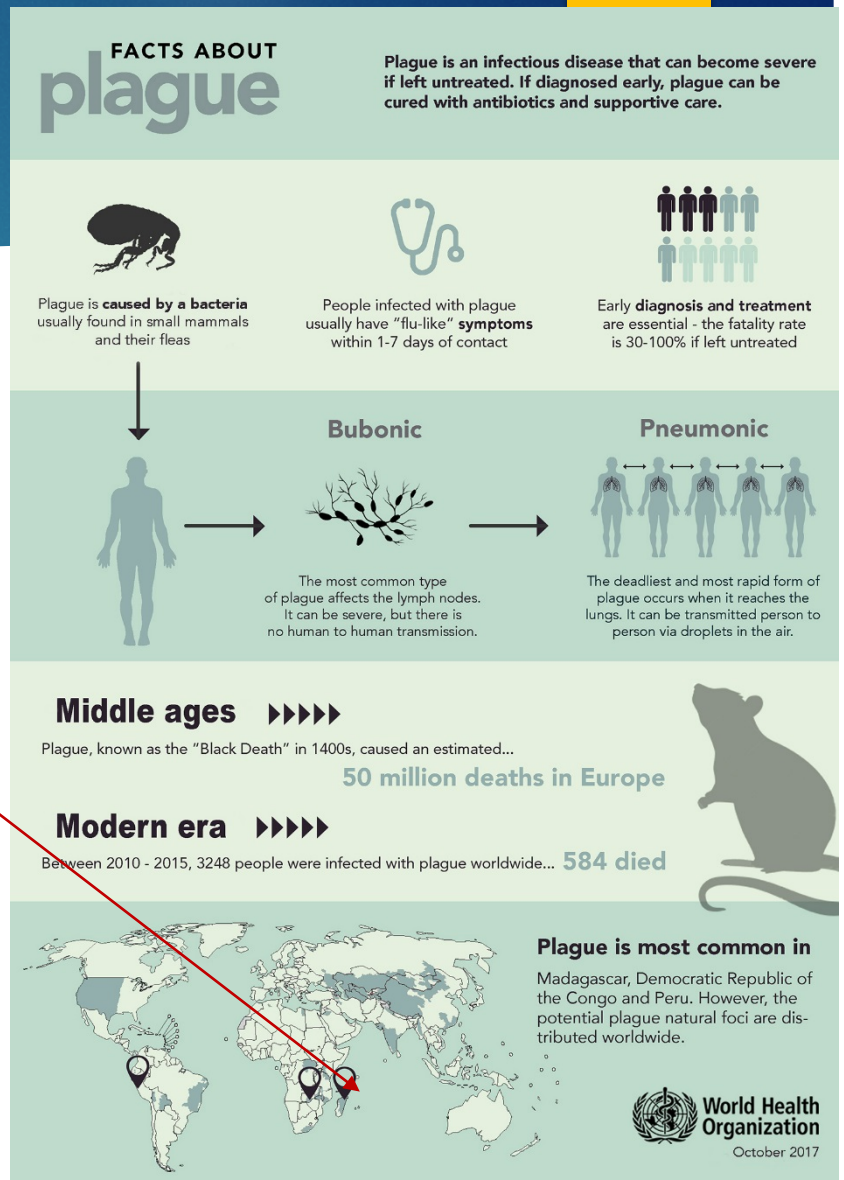
2017 Review: Pneumonic Plague

Madagascar (August—November)

- Spread by exposure to infected rats/fleas (bubonic) or through respiratory droplets (pneumonic)
- Outbreak unusual due to scale, urban spread, predominance pneumonic form
- >700 contacts identified and prophylaxed

Cases	Deaths	CFR
2 417	209	9%

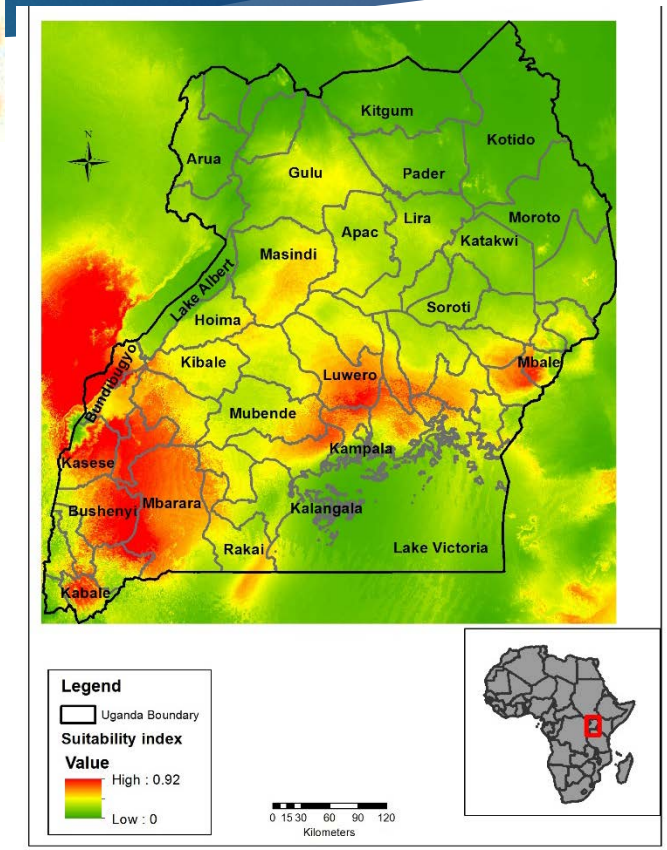
Source: WHO



2017 Review: Marburg

Uganda and Kenya (October—December)

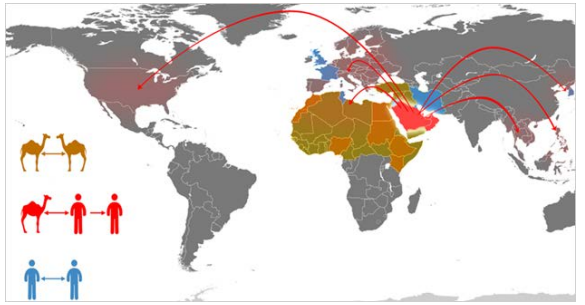
- October 17th, 2017 Ugandan notified WHO of an outbreak of Marburg Virus Disease in remote mountainous area
  - Marburg is a close cousin to Ebola
- 1st case was hunter with likely exposure to bat caves
  - 2 additional cases in same family, one traveled to Kenya when ill
- Rapid national and international response
  - Intense contact tracing
  - Mobile lab services (CDC/EU)
  - Healthcare worker safety support through **IC messaging** and **PPE kit distribution**
  - coordination between Uganda and Kenya to improve surveillance



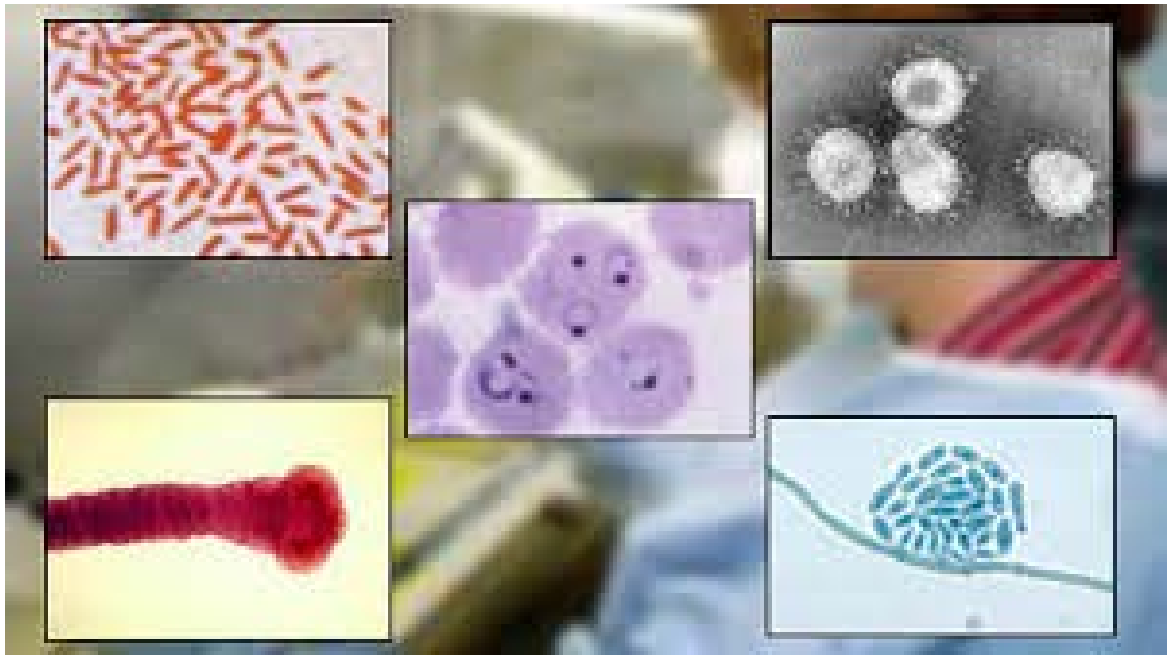
Map showing areas of the relative probability of the presence of filovirus (Ebola and Marburg virus) outbreak in Uganda. (Nyakarahuka, PLOS Currents Outbreaks, 2017)

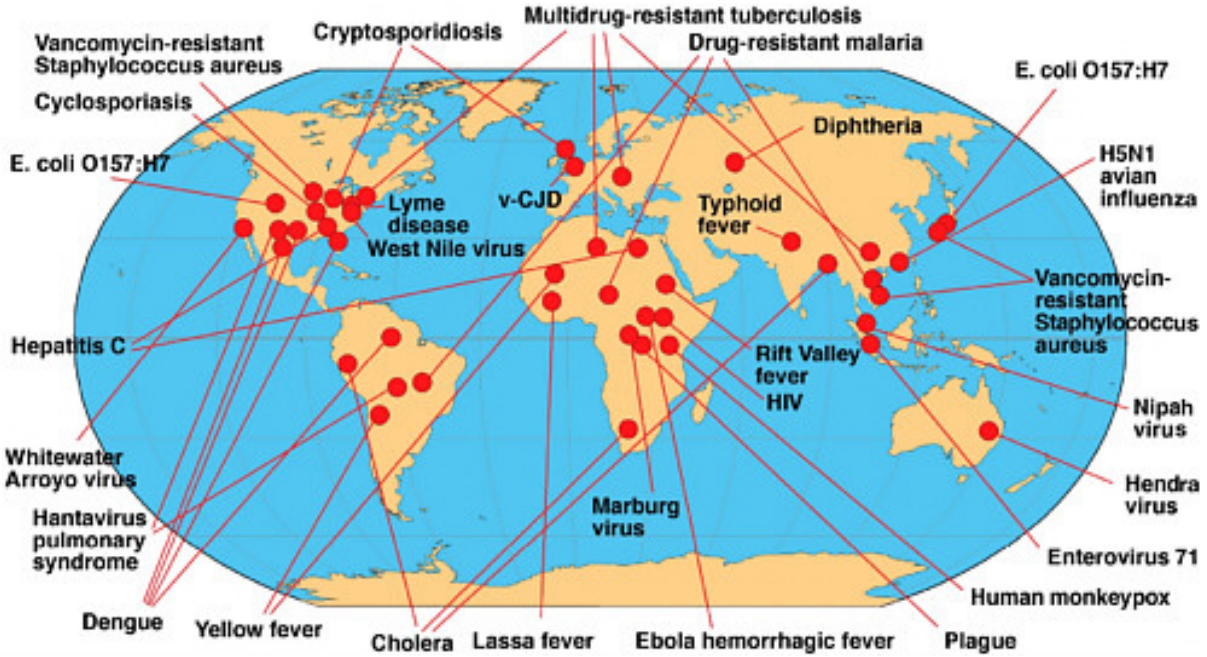
Updates: MERS-CoV

- As of May 2017
  - 1980 laboratory-confirmed cases
  - 720 deaths (case–fatality rate: 36.4%) were reported globally
- April—May→ KSA had 3 hospital outbreaks in/around Riyadh
  - 13 cases, 3 deaths
- Improved infection control practices have greatly reduced healthcare associated cases



What's on Our Radar for 2018 and beyond?





Avian Influenza Viruses ("Bird-flus")

- Four types of influenza viruses identified to date (A, B, C, D)
  - A and B types cause "seasonal influenza", **only type A causes pandemics**
- Most 'flu As' are from **birds (waterfowl)** but can also infect pigs
- Avian influenza A viruses are classified based on molecular and pathogenicity criteria
  - **Low pathogenic avian influenza A viruses (LPAI)**
  - **Highly pathogenic avian influenza (HPAI)**
- Either type can cause severe disease in humans
- Novel influenza A virus infection
  - Human infection with an influenza A virus that is antigenically and genetically distinct from current seasonal influenza A viruses→ Usually from direct or close contact with an infected bird or pig

Source: Dr. Timothy Uyeki

Highly Pathogenic Avian Influenza A (H5N1) Virus

- **First human infections identified in 1997**
  - 18 human cases, 6 deaths
- **Re-emergence in 2003**
  - Family cluster visited southern China (2 deaths)
- **Wide-spread poultry outbreaks and wild bird die-offs in >60 countries 2005-2006**
- **6 countries considered endemic by FAO 2011**
  - Bangladesh, China, Egypt, Indonesia, India, Vietnam
  - Other countries with poultry outbreaks (Cambodia)

- **Sporadic human infections continue to occur**
  - 2017: Human cases reported in Egypt
  - 859 sporadic cases reported since 2003 from 16 countries
  - **Cumulative case fatality proportion = 53%**
  - Admission findings:

    High fever, cough, dyspnea, shortness of breath, leukopenia, lymphopenia, thrombocytopenia, bilateral pneumonia, hypoxia

Kira, et al. *Health Security*. October, 2017.

Low-Pathogenic Avian Influenza A (H7N9) Virus

- **March 31, 2013: China reported 3 human cases to WHO**
  - All 3 adults in eastern China died
  - 2 of 3 had poultry exposure
  - **Novel avian influenza A(H7N9) virus identified**
    - **Low pathogenic avian influenza (LPAI) A virus**
    - **Causes no disease in infected poultry**
- **Risk factors:**
  - Recent poultry exposure
  - Visiting a live poultry market
  - Raising backyard poultry
  - Older age, chronic co-morbidities
- **Clinical characteristics**
  - Most patients admitted 5-7 days after onset
  - Most had viral pneumonia
  - Multi-organ failure (respiratory, renal)
  - Resistance to neuraminidase inhibitor antivirals
    - Emergence reported during treatment with oseltamivir
  - Some mild cases identified

Source: CDC

Novel Influenza Type A: Infection Control

- Standard Precautions
  - Hand hygiene
- Contact Precautions
  - Gloves and gown
  - Eye protection
  - Dedicated equipment
  - Disinfect surfaces frequently
- Airborne Precautions
  - Single airborne infection isolation room (AIIR)
  - Fit tested respirator

Antimicrobial Resistance

The slow moving tsunami

- Bacteria
  - Gram negatives
  - Gram positives
- Yeast
  - *Candida auris*
- Drug resistant *gonorrhea*

Cholera

- Acute gastrointestinal infection caused by ingestion of food or water containing the *Vibrio cholerae (*serogroup O1 or O139)
- Global resurgence→ Countries with severe poverty and civil unrest
  - E.g. Yemen and Somalia
- Establishment in the Americas
  - Starting in Haiti, 2010
- Vaccines now commercially available

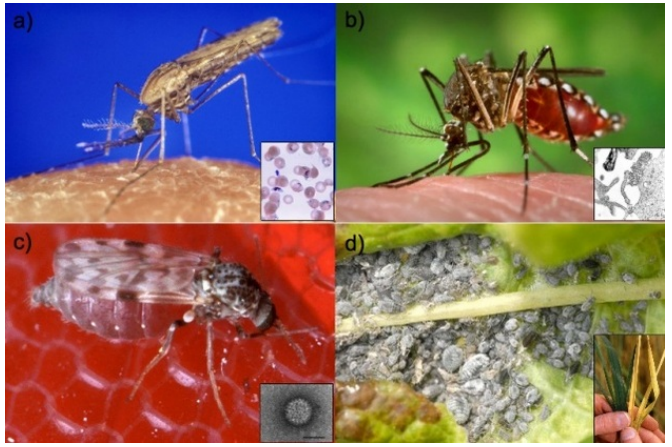
Viral Hemorrhagic Fevers

Global health community closely monitoring for potential outbreaks

- Ebola Virus Disease
- Marburg
- Lassa Fever

Vector-Borne Diseases (Mosquitos)

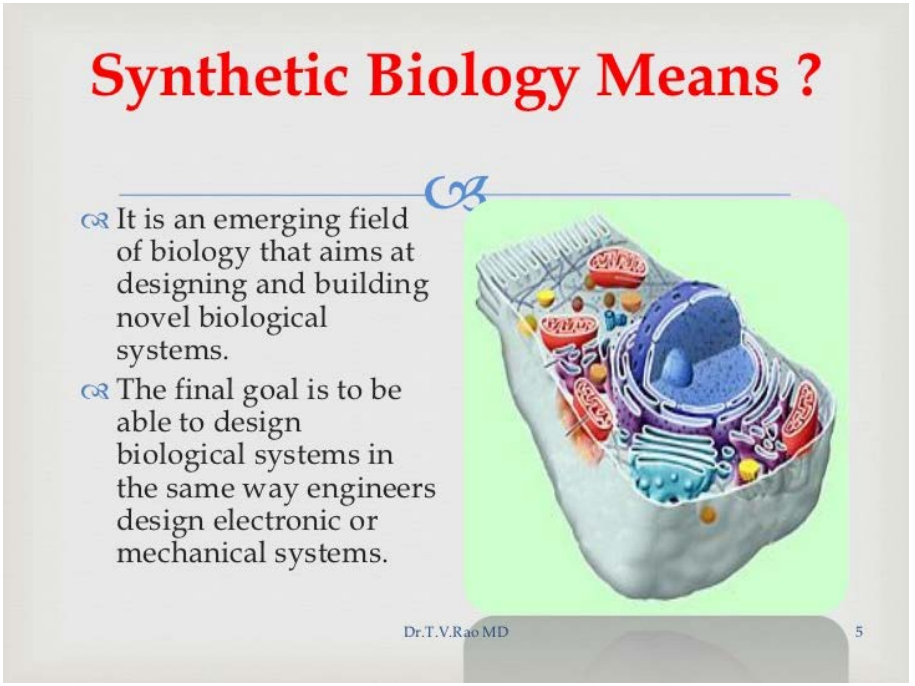
- Yellow Fever (*Flavivirus*)→ acute viral hemorrhagic disease, fatal in 20% to 50% of severe cases
  - Angola/DRC 2015—2016
  - Brazil 2017
- Zika Virus
- Dengue
- Chikungunya
- Other (India)



Synthetic Biology

"A future…bioterrorism attack with a highly lethal agent, such as drug-resistant *Bacillus anthracis*, variola virus, or some other genetically altered pathogen, is not only possible but also highly likely. "
– Michael Osterholm

- Rapidly advancing technologies
  - CRISPR gene editing
  - "Gain of function" research
- "Dual Use" dilemma
  - Same technologies can be used for *good* or *evil*
- Creates threat of new "designer' pathogens
  - Intentional or unintentional release
- Many potential sources of risk



Biological Threats in the 21st Century , World Scientific, 2016

The "Unknown Unknowns"

"NO PANDEMIC HAS EVER BEEN PREDICTED BEFORE IT INFECTED HUMANS"

- Patterns have appeared that bring into clearer focus the types of pathogens and environments where new diseases are most likely to emerge, as well as the roles that humans and animals play.
- Lessons learned from recent outbreaks are strengthening global health capacity to "prevent, detect and respond."

*Morse et al., 2012: The Lancet.

Action Roadmap

- Focus on infection control and surveillance
- Maintain frontline staff capabilities to “identify, isolate and inform”
  - Screening all patients presenting with acute illness for infectious diseases of public health concern
- “All infectious hazards” planning
- Multidisciplinary approach

Thank You

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LUNCH

PLANNING CONSIDERATIONS FOR BUDGETARY PERIOD 2 (BP2)

Darrin Pruitt, Deputy Director, Bureau of Healthcare System Readiness,
NYC Department of Health and Mental Hygiene

HPP Requirements, BP2 and over 5 years

- ❑Coalition Response Plan – informed by member EOPs; must show operations that support strategic planning, information sharing, and resource management
- ❑Coalition HVA – annual review
- ❑Surge Exercise – HPP requirements + broaden to prepare for evac/surge across all sectors
- ❑Supply Chain Integrity – build on what we learn in BP1 about acute care sector.
- ❑2 communications drills
- ❑Crisis Standards of Care - By June 2022, must document processes to oversee jurisdictional crisis standards of care (CSC) planning and to coordinate all local or regional planning efforts.

BRAINSTORMING: BP2 DELIVERABLES FOR BOROUGH COALITIONS

LOOKING AHEAD TO BP2, THE ROLE OF BOROUGH COALITIONS

Darrin Pruitt, Deputy Director, Bureau of Healthcare System Readiness, NYC Department of Health and Mental Hygiene

Review of your strategic plans

- ❑Assess (20) – feasibility of alternate care sites, assessment of regional resources, cataloging facility types
- ❑Plan (94) – resource management, surge response, coordination
- ❑Train (11) – resource requests; local, state, federal systems and assets; EM basics to all staff
- ❑Exercise (18) – coalition level exercises (Surge Ex 2.0)
- ❑Communications/Situational Awareness (49) – mass notification systems, situational awareness tools/applications

Think about…

- borough coalitions in preparedness, response and recovery
- capabilities to be developed to help Borough Coalitions build resilience at the community level
- catastrophic scenarios (e.g., nuclear detonation, severe pandemic, aerosolized anthrax release) to plan activities to encourage building resilience at the community level

Healthcare System Playbook, Healthcare System Objectives

- Coordinate Healthcare System Response
- Establish Alternate Care Sites
- Evacuate Healthcare Facilities
- Leverage Citywide Infrastructure
- Provide Adequate Staffing
- Provide Clear, Timely Communications
- Provide Mental Health Response
- Provide Mutual Aid
- Provide Patient Care
- Respond to Medical Surge
- Support Family Reunification

Alignment of strategic plan objectives with Healthcare System Playbook

- ❑Assess – feasibility of alternate care sites
- ❑Plan surge response
- ❑Train – cited in support of almost all resource elements
- ❑Exercise – evacuation of healthcare facilities
- ❑Communications/Situational Awareness – single situational awareness tool

Your input

- Break into 3 groups, 2 facilitators each
- Complete worksheets, conferring with colleagues
- Ask for help from facilitators
- Report out

BRAINSTORMING: REPORT OUT

HVA UPDATES
&
JURISDICTIONAL RISK ASSESSMENT

HVA UPDATES

Shadrzad Kardooni, Preventive Medicine Resident, NYC Department of Health and Mental Hygiene

JURISDICTIONAL RISK ASSESSMENT

Francoise Pickart, Senior Risk Analyst, Agency Preparedness & Response, NYC Department of Health and Mental Hygiene

The Jurisdictional Risk Assessment

How do you allocate preparedness and mitigation resources where they are most needed?

In January 2018, DOHMH will begin work on a Public Health Risk Assessment to answer:

- How do we define the risk of public health hazards to NYC?
- What are the highest priority public health hazards for NYC?

This will be an inclusive process and *your participation will be requested*.

Final results will be published and included in NYC Emergency Management's Hazard Mitigation Plan (HMP).

Previous Work

2013

- DOHMH Public Health Hazard Risk Assessment
- DOHMH Metropolitan Statistical Area-wide Public Health Risk Assessment Report.

Top Hazards Region Wide

1. Storm/Weather
2. Pandemic
3. Flooding
4. Terrorism
5. Nuclear Facility Offsite Release
6. Power Outages
7. Hazardous Materials
8. Utility Disruption
9. Transportation Accidents
10. Explosions

DISASTER SCENARIO *NYC HMP Section*	SEVERITY	PROBABILITY	IMPACT OF PLANNING	PRIORITY RANK
Coastal Storm* *Coastal Storms*	2	6	2	1
Pandemic Influenza* *Disease Outbreaks*	5	9	1	2
Extreme Heat* *Extreme Temperatures*	8	1	6	2
Flooding *Flooding*	6	4	7	4
Aerosolized Anthrax *Chem, Bio, Rad, Nuke (CBRN)*	4	10	3	5
Radiological Dispersal Device* *Chem, Bio, Rad, Nuke (CBRN)*	3	11	3	5
Improvised Explosive Device* *Not included in HMP†*	7	7	5	7
Improved Nuclear Device *Chem, Bio, Rad, Nuke (CBRN)*	1	12	8	8
Winter Weather *Winter Storms*	9	3	10	9
Chlorine Release *Chem, Bio, Rad, Nuke (CBRN)*	10	5	9	10
Food Contamination *Disease Outbreaks*	12	2	11	11
Tornado *Severe Weather*	11	8	12	12

Different Stakeholder Groups

DOHMH will be creating 4 citywide workgroups:

- The Severity workgroup: Identify and rank the top contributors to assessing the potential harm to the public's health.
- Probability workgroup: Identify and rank the top contributors to estimating the likelihood that an event will occur.
- The Coping Capacity workgroup: Identify and rank the top contributors to assessing the City's ability to cope with the event (includes preparedness and mitigation efforts).
- The Hazard Ranking workgroup: Identify and rank the top public health hazards to the city based on the work of the other workgroups.

More details will be available in January, we aim to complete the assessment by August 2018 and publish results online by November.

NETWORKING BREAK

PUERTO RICO UPDATES WITH Q & A

POST HURRICANE MARIA RESPONSE EXPERIENCE

Nancy Pagan, RPAC, MPA-S

New York Presbyterian - Weill Cornell Emergency Department

Hurricane Maria

- Devastated Puerto Rico on September 20, 2017
- Category 5 Hurricane
- Over 1000 deaths thus far (12/09/17 NY Times)


INICAN
PUBLIC
PUERTO
RICO
CNN

Pre-Deployment to Puerto Rico

- ❑ Medical clearance by Employee Health
  - Updated vaccinations
  - Mental Health clearance
- ❑ Picked up supplies and equipment
  - Included food, clothes, bags, flashlight and other necessities
- ❑ Clear work schedule
  - Colleagues very supportive
- ❑ Awaited the call for departure details

NewYork-Presbyterian

Deployment to Puerto Rico

- Departure October 24, 2017
  - Second response team sent by NYP met at the hospital and transported by bus to JFK
- Commercial flight to San Juan, Puerto Rico
  - Team of 14, only three familiar to me
  - Flight consisted of response personnel and everyday travelers

Arrival at San Juan, Puerto Rico

- After arrival, traveled by bus to San Juan Convention Center
- Awaited details of our assignment

NewYork-Presbyterian

NewYork-Presbyterian

First Assignment

- Manati, Puerto Rico

- Coliseum Bencito
  - Met with the Disaster Medical Assistance Team (DMAT) to discuss the operation in place
  - NYP Team One passed pertinent information to Team Two who then departed back to JFK

Coliseum Bencito

- Chain of Command
  - Health and Human Services (HHS)
  - Disaster Medical Assistance Team (DMAT)
    - Team Commander
    - Chief Medical Officer (CMO) and Chief Nursing Officer (CNO)
  - Non Governmental Organization (NGO)
    - NYP, Stony Brook, JMAC, and FHMC
    - Each has its own team leader and charge nurse
  - Emergency Medical Assistance Compact (EMAC)
    - Veterans Association (VA)

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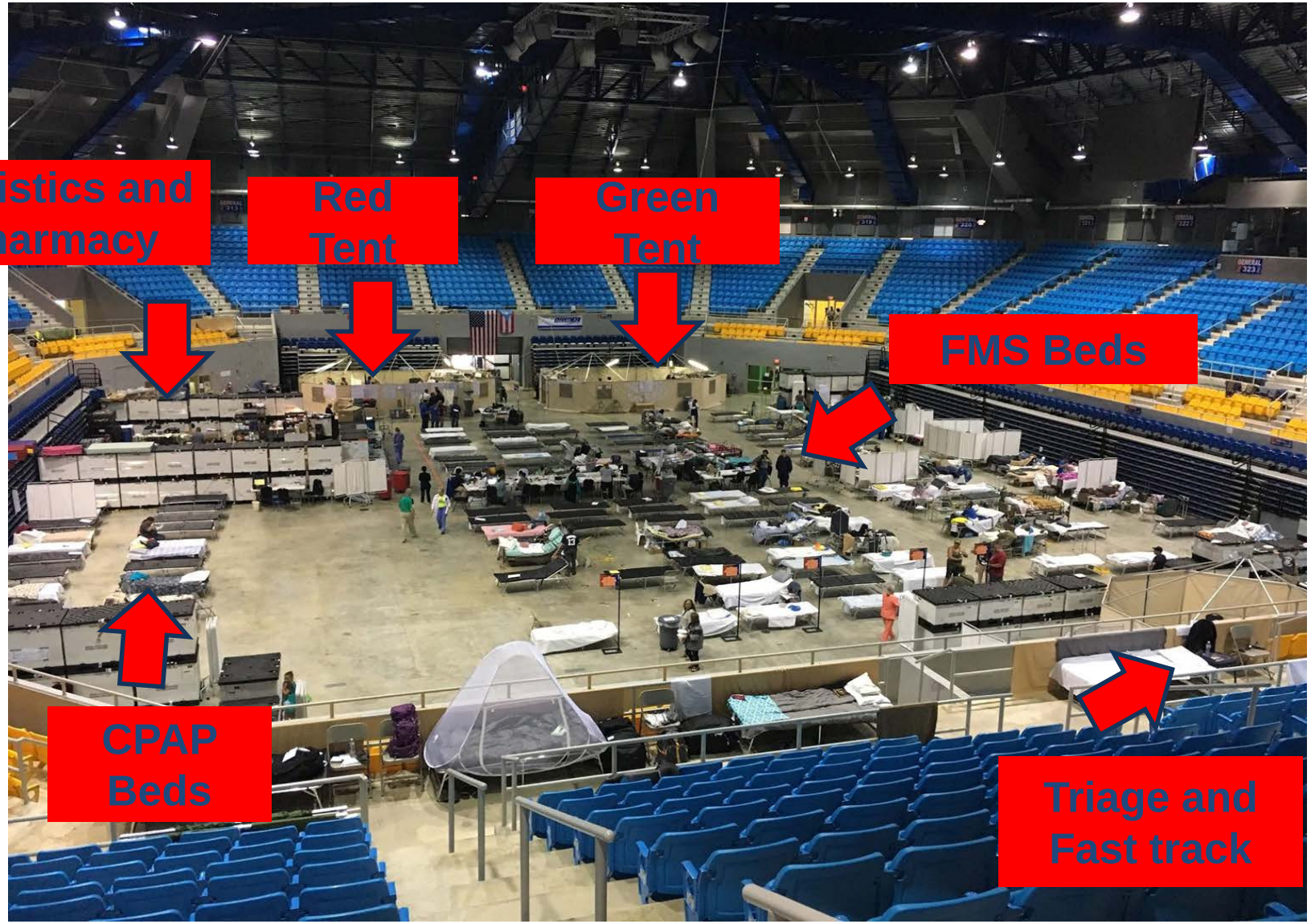
Coliseum Bencito

- Patient care flow
  - Sign in
  - Triage
  - Assign to respective tent
    - Green, Yellow, Red
  - Treat
  - Discharge or transport to hospital by military escort

Coliseum Bencito



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Coliseum Bencito

- Chronic medical needs
  - Ventilated patients
  - Continuous positive airway pressure (CPAP)

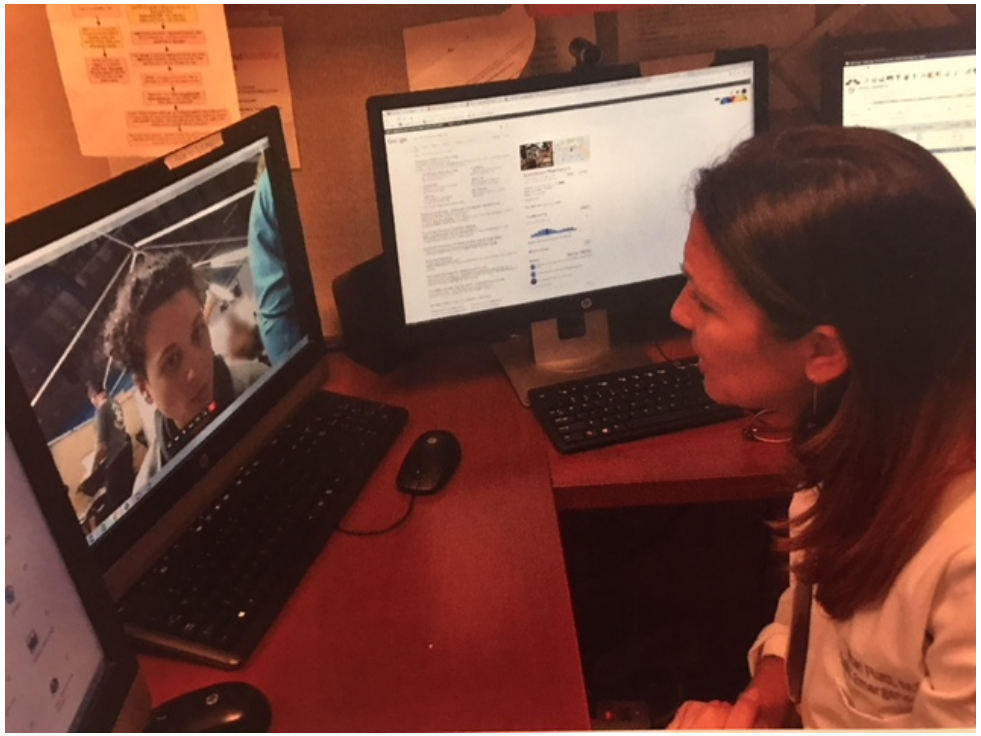
- Acute care cases
  - Chest pain
  - Asthma
  - Abdominal pain
  - Dehydration
  - Leptospirosis

Coliseum Bencito

- Urgent care cases
  - Conjunctivitis
  - Wound care
  - Abscesses
  - Dog bites
  - Burns
  - Machete injuries
  - Viral Illnesses

Coliseum Bencito

- Telemedicine
  - Provides long distance medical care between patient and clinician via electronic and telecommunication technology
  - Utilized for three cases which required a pediatric and adult endocrinologists & an ear, nose and throat specialist (ENT)



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Coliseum Bencito

- Opened October 4, 2017
  - 150 bed Federal Medical Station (FMS)
  - Open 24 hours/7 days a week
  - 210-220 patients a day

- Currently closed
  - Unable to sustain power
  - Patients transferred to the Continental United States

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Second Assignment

- Meeting to split the team
  - Help was needed elsewhere due to the volume of patients

- Five members volunteered to go
  - Old San Juan, Puerto Rico

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Old San Juan Dock

- Chain of Command
  - Health and Human Services (HHS)
  - Disaster Medical Assistance Team (DMAT)
    - Team Commander
    - Chief Medical Officer (CMO) and Chief Nursing Officer (CNO)
  - Non Governmental Organization (NGO)
    - NYP, Stony Brook, JMAC, and FHMC
    - Each has its own team leader and charge nurse
  - Emergency Medical Assistance Compact (EMAC)
    - Veterans Association (VA)
- USNS COMFORT (T-AH-20)

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Old San Juan Dock

- Met with DMAT Team Leader and CMO to discuss patient flow
  - High volume of patients at this location
    - 300-320 patients per day
  - Implemented a new triage system and opened up a new tent specifically for fast track/urgent care
    - New flow tested for 10 hours and permanently implemented

Old San Juan Docks

- Patient care flow
  - Sign in
  - Triage
  - Assign to respective tent
    - Green, Yellow, Red
  - Treat
  - Discharge or transport to USNS Comfort

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Old San Juan Docks

- Large percentage of patients needed basic medical care
  - Medication refills
  - Dental care
  - Ophthalmology care
  - Gynecological care

- USNS Comfort staff provided dental and ophthalmologic care inside the DMAT tent

USNS Comfort

- Approximately 1000 in patient beds including casualty reception (ER), ICU, Med Surg, Radiology (X-Ray/CT capabilities), OR, Dental, Ophthalmology and Gynecology
- NYP members worked in CasRec: Casualty Receiving - is equivalent to the ER with trauma capabilities
- Worked with Naval staff
- Lived on the USNS Comfort

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Sleeping quarters USNS Comfort

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Old San Juan Docks

- USNS Comfort arrived in Old San Juan on October 3, 2017
  - Treated 1899 patients and completed 191 surgeries (11/21/17, America's Navy)
  - Two births on the ship
- Ship departed on November 21, 2017 for the Continental United States

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Return to New York City

- Departed San Juan, Puerto Rico via charter flight on November 8, 2017
- After two weeks, strangers became friends
- Arrived home to a welcoming committee from NYP
- Thank you luncheon from NYP for the two disaster response teams

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Personal Thoughts

- Reasons for volunteering
- Impact
- Return to Puerto Rico
- Care and gratitude

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GRACIAS!

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PUERTO RICO RESPONSE EXPERIENCE

Timothy Styles, Medical Director, Bureau of Healthcare System Readiness,
NYC Department of Health and Mental Hygiene

MEMBER ANNOUNCEMENTS
&
INVITATIONS TO UPCOMING EVENTS

CONCLUDING REMARKS

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