

@syramadad

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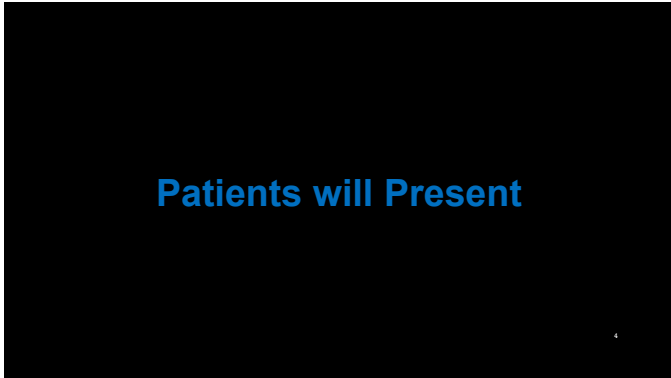
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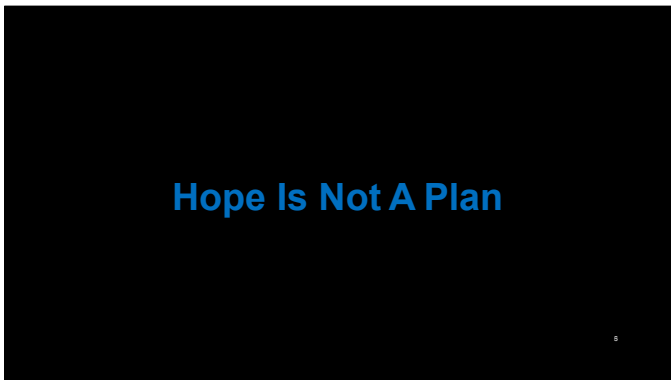
**TWO CERTAINTIES:
READY OR NOT...**

2

Incidents will Occur

3







HOW EBOLA CHANGED THE LANDSCAPE

- 2014 EVD patient at a Dallas community hospital in Dallas
 - Transmission to 2 HCWs
- Entirely novel situation in which **virtually no U.S. hospital had ever trained for**.
 - No healthcare workers had PPE competencies in 2014
- Hospital across the country enhanced HCID preparedness
- Required increased coordination between organizational elements
 - ED, Infection Control, Lab, Transport, public affairs, etc.



RESPTC NETWORK

- Frontline Hospitals (4,845)
- Assessment Hospitals (217)
- Ebola Treatment Centers (63)
- Regional Ebola & Other Special Pathogens Treatment Center (10)



MAINTAINING READINESS FOR INFECTIOUS DISEASE THREATS

Bi-Annual PPE Refresher Training



- Training conducted twice a year
- All frontline healthcare workers

Frontline Facility Simulation Training



- Hands-on simulation training for frontline personnel
- Over 30 courses offered since 2018
- 250+ course participants

Drills & Exercises

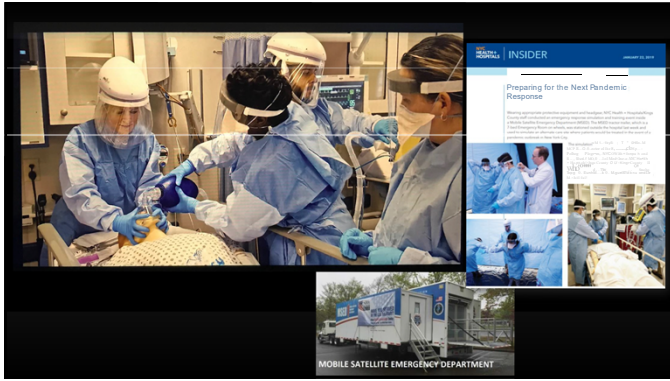


- Discussion and operations based exercises on special pathogens
- In 2018: +30 exercises

Tools & Resources



- Numerous tools and resources developed



THE REALITY

On December 27th 2019, Ron Klain, former US Ebola Czar & Syra Madad published an op-ed in the Washington Post.

The piece warned lawmakers that this vital program is set to expire in May of 2020, urging Congress to renew funding for the system that helps keep Americans safe from a sudden epidemic. "Failure to act would be penny-wise but pound-foolish," it read. "The day will come when a dangerous pathogen will arrive in the United States once again."

On December 31st, four days after the article was published, the government in Wuhan, China, reported to the World Health Organization that it was treating dozens of patients for a novel virus of unknown origin.



HOW COVID-19 CHANGED THE LANDSCAPE

- All 6,000+ U.S. hospitals became frontline, assessment and treatment centers

- Significant impacts to:

- Supplies
- Space
- Staffing
- System

- And Lessons Learned



SUPPLIES



Photographs by Philip Montgomery

SPACE



Photographs by Philip Montgomery

STAFFING



Photographs by Philip Montgomery

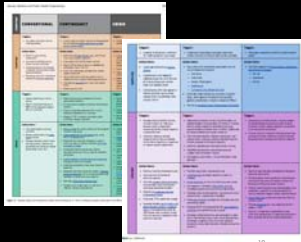
SYSTEM



Photographs by Philip Montgomery

HOSPITAL SURGE PREPAREDNESS AND RESPONSE INDEX

Abstract
The Hospital Surge Preparedness and Response Index is an all-hazards template developed by a group of emergency management and disaster medicine experts from the United States. The objective of the Hospital Surge Preparedness and Response Index is to improve planning by linking action items to institutional triggers across the surge capacity continuum. This responder tool is a non-exhaustive, high-level template; administrators should tailor these elements to their individual institutional protocols and constraints for optimal efficiency. The Hospital Surge Preparedness and Response Index can be used to provide administrators with a snapshot of their facility's current service capacity in order to promote efficiency and situational awareness both internally and among regional partners.



- Response Index includes:
 - Triggers for regional/coalition partners with action items

<https://pubmed.ncbi.nlm.nih.gov/34311795/>

CONDITION	CONVENTIONAL	CONTINGENCY	CRISIS
	<p>Triggers:</p> <ul style="list-style-type: none"> No operational utilities failures, hazard incident, or infectious disease case(s) negatively impacting facility and/or regional standard of care. Infectious disease-related hospitalizations do not exceed institutional capacity or negatively impact hospital operations. 	<p>Triggers:</p> <ul style="list-style-type: none"> Operational/Utilities failures, hazard incident, or epidemiological disease does not directly threaten facility and/or regional standard of care (e.g. confirmed cases from ICD/COVID addressed by hospital decontamination capability). Can maintain hospital infection prevention and control when infectious disease-related hospitalizations exceed institutional capacity. Coalition coordination and information sharing. Neighboring hospitals requesting resource support due to incident impact. Contingency activation in any of the other three domains. 	<p>Triggers:</p> <ul style="list-style-type: none"> Operational/Utilities failures, hazard incident, or epidemiological disease burden directly threatens facility and/or regional standard of care and patient outcomes. Cannot maintain hospital infection prevention and control when infectious disease-related hospitalizations exceed institutional capacity.
SYSTEM	<p>Action Items:</p> <ul style="list-style-type: none"> Maintain routine standard of care. Use maximal utilization of existing capacity. Activate public command team and consider command center activation based on incident. Determine rapid surge for this anticipated impact. Evaluate ICD needs for surge. Develop flexible social media and digital health systems / applications at the population level for notification and symptom checks that can be easily activated in the event of a disaster. 	<p>Action Items:</p> <ul style="list-style-type: none"> Maintain equivalent standard of care. Use public to nearby hospital systems as standby resources at the intra facility/systems level. Use regional / coalition standby resources including capacity/staffing information. Develop and circulate policies / guidance on care / conservation / adaptation strategies. Make critical open available for care decisions not covered by policy. Develop ICD training guides for contingency, staffing and workforce and space. Develop a deferral plan for non-emergent surgeries or interventions (e.g. limit care requirement, oncologic surgeries) that minimize adverse impacts across both situation related and routine patients. 	<p>Action Items:</p> <ul style="list-style-type: none"> Maintain best possible standard of care given resource constraints. Per local government guidance, band balance to internal and external hospital systems to reduce staffing and space impacts. Publicly communicate and acknowledge crisis conditions specific to resource difficulty. Share capacity of the site and other facilities/systems level. Provide guidance on care relating facility / region / state. Conduct / arrange team prepared to make care limiting decisions as required and inform best practices for other relating decisions.

CHANGE THE WAY WE PREPARE: JUST-IN-TIME VERSUS JUST-IN-CASE PANDEMIC PREPAREDNESS

- This just-in-time approach goes beyond PPE manufacturing; it is the *de facto* pandemic preparedness strategy employed by hospitals and health care systems as well as states and the federal government.
- The just-in-case strategy is familiar to the US government, which invests billions of dollars per year in military defense and weapons stockpiles and updates to counter-intelligence technologies—just in case.

[Link: https://www.healthaffairs.org/doi/10.1137/hlthaff.2019089584](https://www.healthaffairs.org/doi/10.1137/hlthaff.2019089584)

Building a Biopreparedness Program for Healthcare Sites

**FRONTLINE HOSPITAL PLANNING GUIDE
SPECIAL PATHOGENS**

EMERGENCY MANAGEMENT | SPECIAL PATHOGENS PROGRAM

<https://hhinternet.bjcb.com/windows.net/uploads/2019/07/NYCHH-Frontline-Hospital-Planning-Guide.pdf>

OVERALL PLANNING CONSIDERATIONS

Overall Planning Considerations

- **Risk/role**
 - Role of hospital in community/region and available assessment/treatment/transfer resources
 - Patient demographics
 - At-risk populations
 - Proximity to transportation hubs (e.g., international airports)
- **Resources – type and amount based on risk**
 - Staff
 - Supplies (e.g., PPE and patient care)
 - Space (e.g., negative airflow rooms, ducting/donning space)
 - Systems (e.g., notification, electronic health record [EHR] integration, laboratory, policies, training systems)
 - Type and scope of infectious disease incidents (e.g., suspect special pathogen case, pandemic, severe influenza year)
- **Response partners – who should be involved in the planning?**
 - Facility partners (e.g., labor unions, emergency department, emergency management, infection control and prevention, infectious disease, relevant inpatient units, public relations, chief medical officer [CMO]/chief nursing officer [CNO], environmental services, plant operations/maintenance, clinical laboratory, admissions, hospital security)
 - Local agencies and healthcare coalition (e.g., local health department, emergency management, emergency medical services [EMS], medical examiner)
 - State agencies (e.g., state health department – state agencies will involve federal partners as required)

EMERGENCY MANAGEMENT CONSIDERATIONS

Emergency Management Considerations

- **Hospital Incident Command System (HICS)**
 - Authorities – legal (including isolation and quarantine regulations) and administrative
 - Organizational response structure for infectious disease incident
 - Triggers for activation of incident command
 - Activation/notification – process and persons notified and communication plan (consider contact list with check-offs for who was notified and when)
 - Situation monitoring and communication process
 - Technical experts (e.g., infectious disease and infection control and prevention, legal)
 - Incident action planning process – consider facility-specific incident response guide
- **Public relations**
- **Internal communication**
 - Facility personnel (e.g., clinical leadership, infection control and prevention, administration) – list and contact information
 - Staff
 - Patients, families, and visitors
- **External communication**
 - Communication and information sharing – what information is shared, with whom, and when – how is information release coordinated with public health partners?
 - Communication with local, state, and federal partners – list and contact information
 - Communication with media/others – Health Insurance Portability and Accountability Act (HIPAA) and other issues
- **Demobilization/disposal/after action review/recovery**

OPERATIONAL CONSIDERATIONS

Operational Considerations

- **Points of entry into healthcare delivery system – screening for potential special pathogen cases at each entry and process for transfer to emergency department (or direct via EMS to a different facility for assessment)**
 - Nurse line/triage line phone call
 - Web-based encounter/telemedicine
 - Emergency department
 - Walk-in clinic/urgent care/free-standing emergency department
 - Ambulatory care center
 - Private physician/primary care provider office
 - Arrival via EMS
- **Care team/staffing model**
 - Skill mix and selection of personnel – special pathogens “team” or all personnel trained equally
 - Roles and responsibilities – lab, environmental services, use of trainees, etc.
 - Staffing model – hours, rotations, process – must be able to initiate care 24/7
 - Special populations (e.g., pediatric, labor and delivery, geriatric)
- **Visitor/family management**
- **Language, religious, and cultural issues that may complicate patient care**

INFECTION CONTROL CONSIDERATIONS

- Infection Control Considerations**
- **Screening and identifying high-risk patients**
 - Who patients
 - Where and when (travel history)
 - What is the concern/risk (according to CDC case definitions/epidemiology and how sick the patient is)
 - How contact with a person confirmed to have a highly contagious disease
 - **Isolating high-risk patient**
 - Suspected diagnosis and procedures to be taken
 - Administrative controls (e.g., policies, procedures, algorithms, checklists, training)
 - Engineering controls (e.g., negative pressure room, single occupancy room with restroom, cohort space, isolation hoods)
 - Physical controls (e.g., PPE)
 - Designated room
 - Airborne infection isolation room (AIIR) – negative pressure isolation room or, if no AIIR room available, room removed from immediate patient care areas with closable door and no recirculation of air to facility unless high-efficiency particulate air (HEPA) filtered
 - Bathrooms included, adjacent, or nearby commode (with a plan on how to dispose of the waste)
 - Storage area for patient belongings
 - **Follow IPC practices and guidelines**
 - **Waste practices**
 - Plans to store waste – large volumes of PPE, linen, and other waste may be generated
 - Disposal plan (e.g., disinfect, use sharps)
 - Area for decontaminating – opportunity to adjust/redecontaminate but must ensure sufficient protected space
 - Dedicated equipment, hand hygiene, and restricted patient movement
 - Extent of care at front-line facility (i.e., what are the goals of the facility and where and when will the patient be transferred to a regional facility for further care?)
 - Patient movement (i.e., transport and transfer) – who can provide, what are the resources
 - Training needs and resources (e.g., National Infection Training and Education Center [NETEC] courses, existing in-house programs and systems, etc.)

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PATIENT CARE CONSIDERATIONS

- Patient Care Considerations**
- **Patient condition**
 - Ambulatory
 - Non-ambulatory
 - Critically ill
 - **Special considerations**
 - At-risk and patients with functional needs
 - Pregnant
 - Pediatric
 - Geriatric
 - Deaf/hard-of-hearing (multiple issues including cooperation with caregivers)
 - Clearly delineated on target
 - **Laboratory services**
 - Specimen acquisition – who acquires and how are samples managed?
 - Diagnostic testing – what will be performed and where? – list of general and specific tests and the specimens and tubes required?
 - Compliance with protocols and procedures for sending specimens for confirmatory testing, internal and external specimen packaging, transport, storage prior to transport, tracking from collection to transport/destruction
 - **Disinfection and medical waste management – label, segregate, hold until test results completed**
 - Category A waste management – “Viral and other infectious substances capable of causing permanent disability or life-threatening or fatal illness in exposed humans or animals”
 - Category B waste management – other infectious substances that do not meet the Category A criteria (note that specimens for METEC-Cell are handled as Category B infectious substances but patient waste may be handled in the usual manner?)
 - **High risk procedures (e.g., central line placement, intubation, surgery, dialysis, delivery/section for VB)**
 - **Linen service**
 - **Food service**
 - **Discharge**
 - **Decedent management**
 - **Decontamination of rooms/equipment**

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HEALTHCARE WORKER CONSIDERATIONS

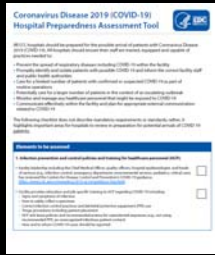
- Healthcare Worker Safety Considerations**
- **Countermeasures (e.g., vaccination, prophylaxis)**
 - **PPE**
 - **Training (e.g., agent information, patient screening and care processes, drills, exercises, just-in-time resources)**
 - **Healthcare worker monitoring**

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GUIDANCE'S, PROCESSES, PROTOCOLS

It may look good on paper... but did it work?

- Once policies, procedures, staff and patient resources are developed and instituted, **test** your plan, **observe** the outcomes, **analyze** the results, provide **feedback**, and **adapt** as needed
 - Secret shopper drill
 - Table top exercise
 - Full scale interagency exercise
- Gather your planning team, establish a scenario, determine the data to be collected
- Include regional and coalition partners



Mystery Patient Drills

1. Actor Briefing



2. Assessment

0 minutes

60 minutes

3. Transport



4. Hotwash

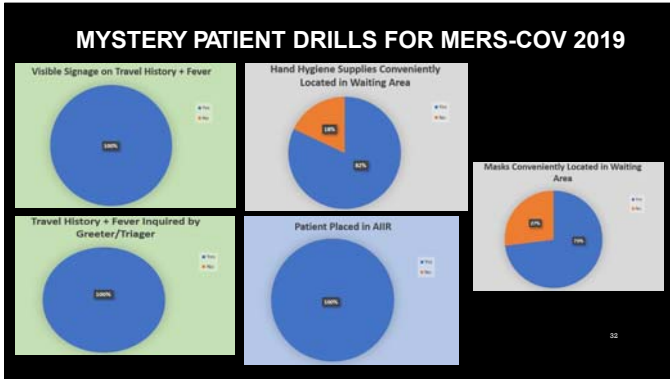
DATA COLLECTION TOOL

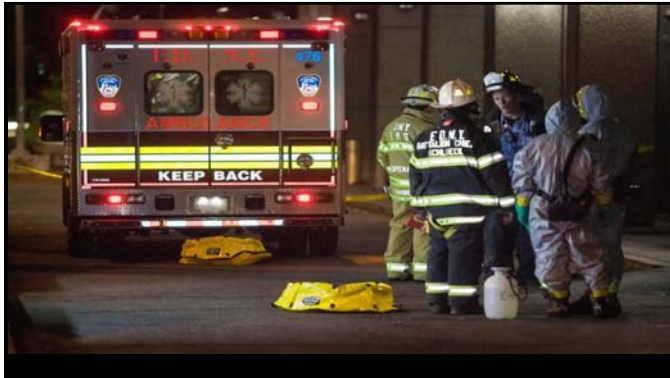
- Drill Time Stamps
- Patient Experience
- Disease-specific Checklist
- Staff Proficiency on "X" Disease

The image shows several overlapping data collection forms. The top form is 'Appendix B: Data Collection Tool' with sections for 'Drill Time Stamps', 'Patient Experience', 'Staff Proficiency on "X" Disease', and 'Checklist'. The forms include tables with columns for 'Type', 'Yes', 'No', and 'Comments'. The 'Checklist' form lists various tasks such as 'Check if patient is in the room', 'Check if patient is wearing PPE', and 'Check if patient is receiving appropriate care'. There are checkboxes for 'Yes' and 'No' and a space for 'Comments'.

Link to ToolKit










A CONTAGION OF MISINFORMATION



It's not just an outbreak of the contagion, but also an epidemic of misinformation

QUESTIONS?

  @syramadad
