Lessons Learned from an Ob/newborn/neonatal Intensive Care Full-scale Exercise

Michael Frogel, MD, FAPP

Arthur Cooper, MD, FAAP

Children are Different

They are not merely "small adults"

Children Today (United States)

- Estimated 78 million people less than 18 years of age
- Roughly 25% of the population
- Largest vulnerable population
- Disabled children
- Tech dependent children
- 30% living at or near the poverty level
- Environment and Response provided by adults

Children are different!

Anatomical

Dehydration, shock, types of injury, >chemical weapons risk, decon- hypothermia

Terror Related Injuries are Different

Blast Lung, intra-abdominal, CNS, Shrapnel, Vascular

Psychological Response

Mirror parents illness
Increased ASD, PTSD

Developmental

Difference in response by age group

Psychosocial Response

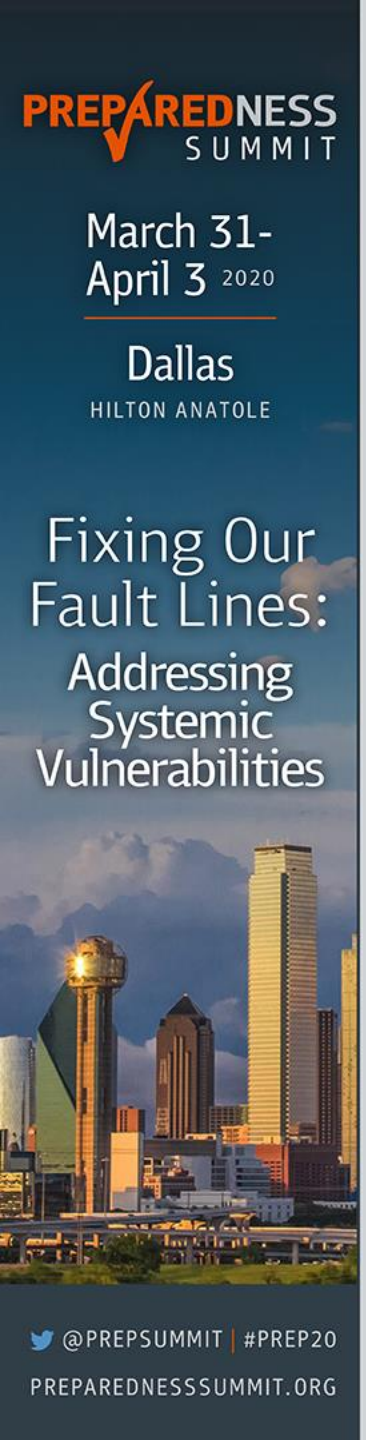
Parent Dependent

Depend on others

Immunological

Influenza, smallpox, Zika

Therefore, the pediatric plan and response to disasters must be tailored to the special needs of children.



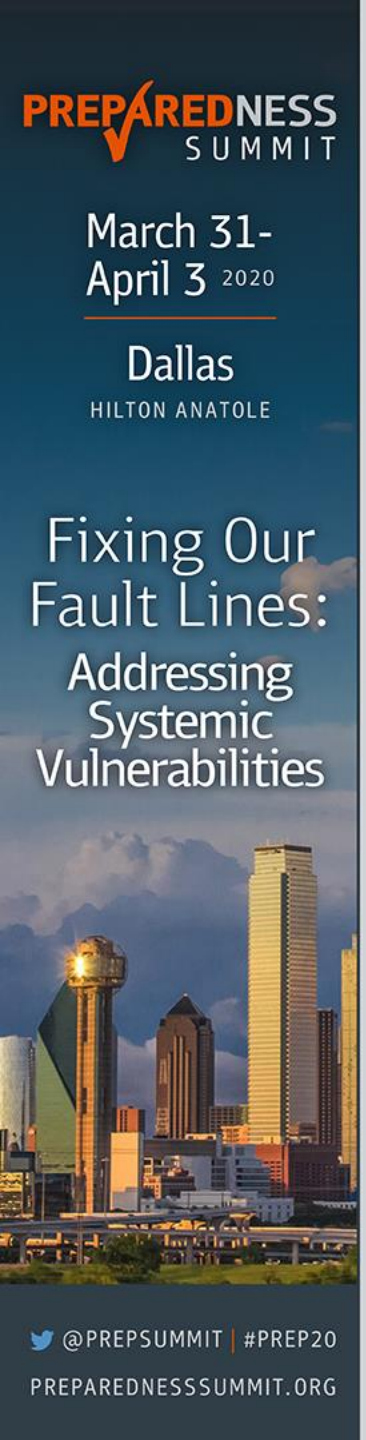
Anatomical Differences

- Thin skin, increased severity of exposure to chemicals, burns, etc.
- Large surface to volume ratio (Hypothermia)
- Poor immune response
- Small airways, limited respiratory reserve capacity
- Closer to the ground, more rapid respiration

Chemical MCI Children more likely to be victims (closer to ground, higher respiratory rate

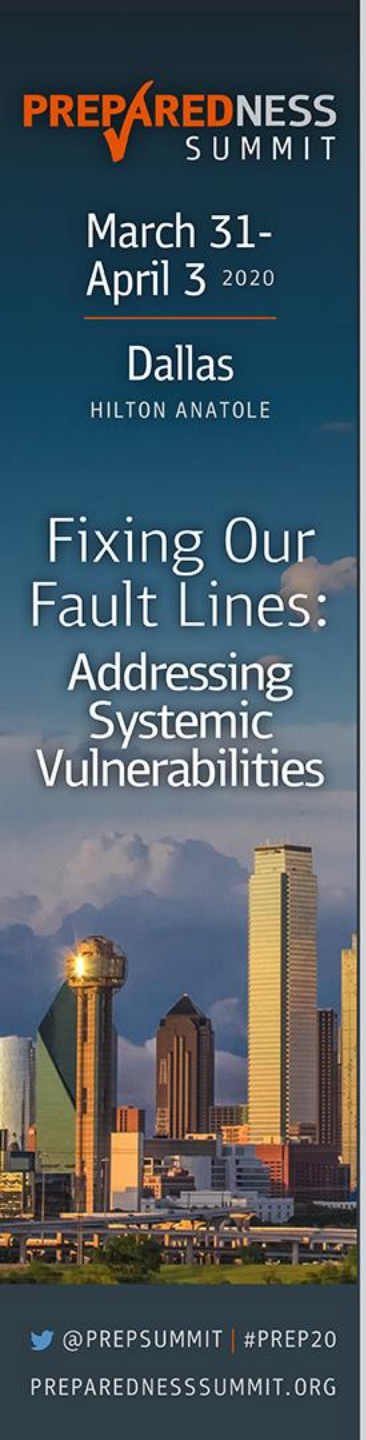
Example children have special needs
Pediatric Generic Decon Issues

- Avoid Separation of Families
- Cannot assume parents can decon child plus self
- Older children may resist due to fear, peer pressure, modesty issues
- Risk of Hypothermia if temp <98˚
- Large volume low pressure hand held hoses
- Beware airway management throughout
- Soap and water only



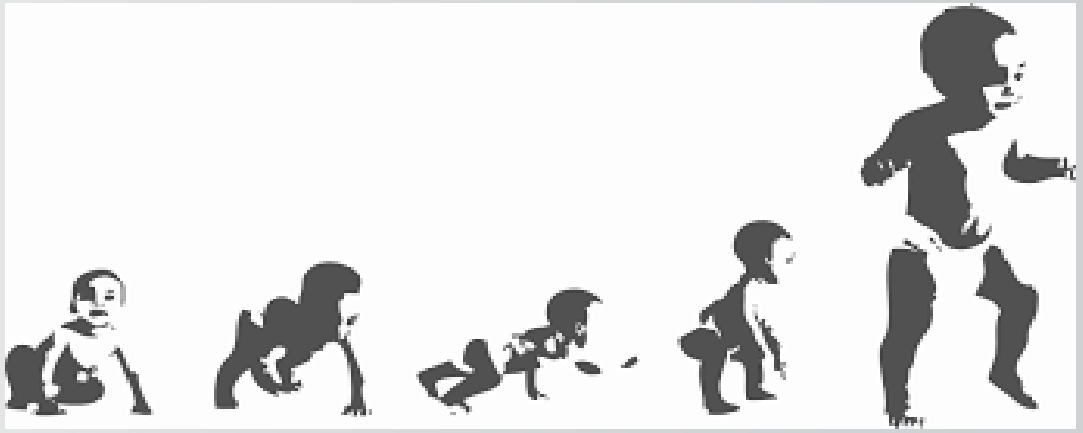
Psychological Response

- Parental dependence
- Reflect parents mental health
- Require developmental level diagnosis/treatment
- Greater risk of acute stress, anxiety, PTSDReflected in play
- Regression
- Somatisation



Developmental Differences

- Unable to recognize danger
- Can not physically escape from the site
- Can not provide reliable information
- Stress reaction age dependent and difficult to diagnose and treat



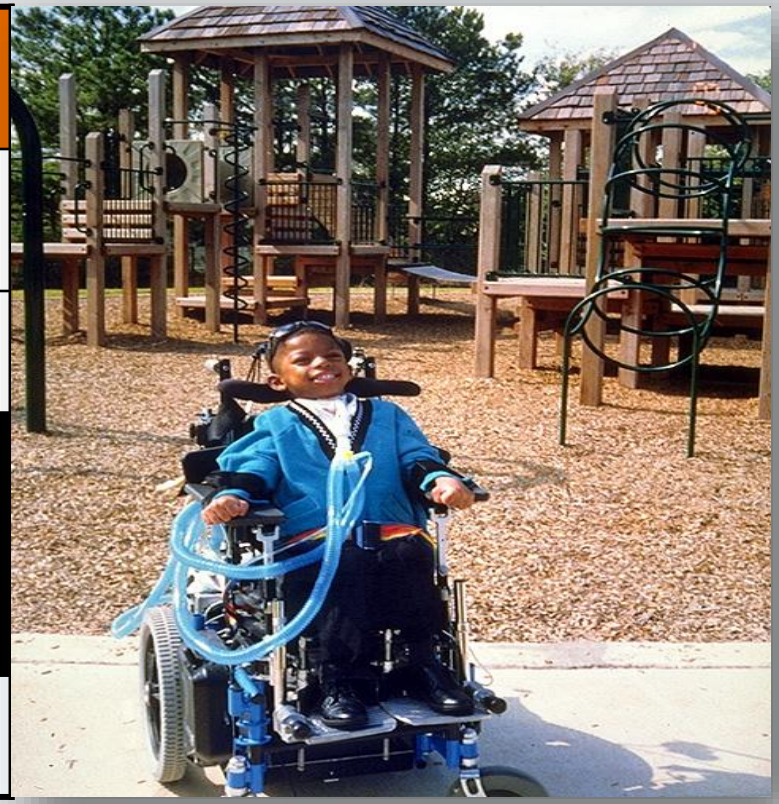
Immunologic Differences

Immature Immune System

- Prone to some infections (RSV, Equine Encephalitis, Zika)
- >infectivity, 30% influenza
- Vaccine reactions (smallpox)
- >Incidence thyroid cancer (use KI), leukemia, breast cancer with radiation
- Decreased incidence of SARS

Disasters can be….

Human Conflict Event	Technological Event	Public Health Event Natural Disasters
Explosive device (open vs. closed)	School bus crash, train derailment	Hurricane, tornado, tsunami, earthquake
Anthrax, plague, smallpox cluster	Chicken tainted by Salmonella typhi	Pandemic influenza, SARS, monkeypox
Nerve gas release	Chemical plant leak	Volcanic eruption
Nuclear plant attack	Nuclear plant leak (Three Mile Island)	Radon exposure
Incendiary device	Boiler explosion	Heat wave



Children with special health care needs may also be MCI victims!

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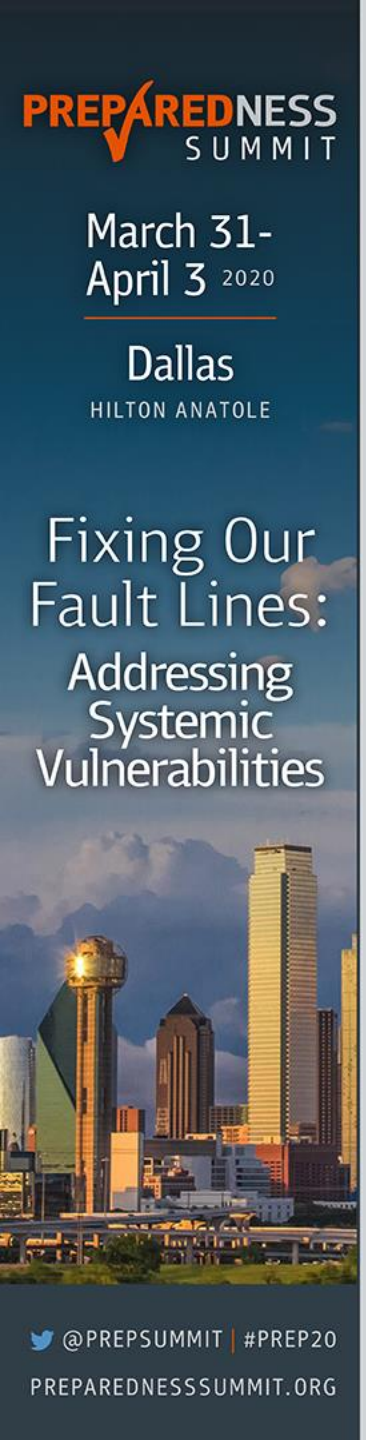
Tsunami, Indonesia

Superstorm Sandy

Tornado, Oklahoma City

Bus crash, Michigan



Or Intentional Targets?

- Al-Qaeda has publicly asserted the "right" to kill 2,000,000 American children
- “Operations are in stages of preparation"
  - Videotapes confiscated in Afghanistan:
    - Showing al-Qaeda terrorists practicing the takeover of a school
    - The trainees issue commands in English
    - Rehearse separating youngsters into manageable groups
    - Meeting any resistance with violence
    - Some "hostages" are taken to the rooftop, dangled over the edge, then shot

Lt. Col. Dave Grossman and Todd Rassa, a trainer with the SigArms Academy
Mass Slaughter In Our Schools: The Terrorists' Chilling Plan?

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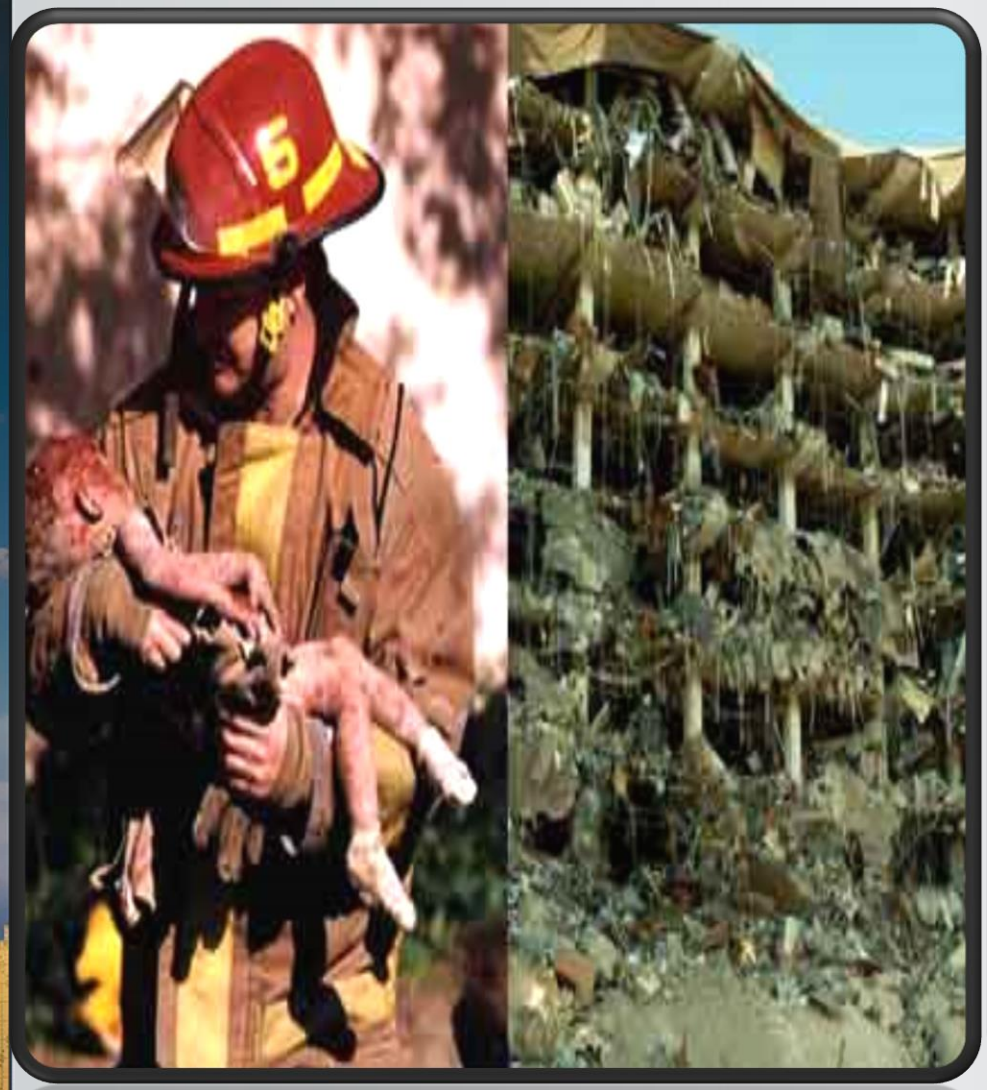

Murrah Building, Oklahoma City Bombing

World Trade Center, 9/11

Children As Primary Targets
(Partial Listing)

- **1838 Blaukaans River, South Africa - Zulus kill 185 children**
- **1974 Maalot School occupation after bus attack - 26 dead, 70 injured**
- **1995 Murrah Building, Oklahoma City - 19 dead, 66 injured, nursery**
- **1998 Elementary school, Jonesboro, Arkansas**
- **1999 Columbine High School, Colorado**
- **2000- Intifada, Israel**
- **2003 Jerusalem Children's Bus (9 killed, 40 wounded)**
- **2004 Baghdad US troops giving out candy 35 dead**
- **2004 Beslan, Russia (186 dead, school)**
- **2006 Platte Canyon High School, Colorado**
- **2011 Norway (69/77 dead, summer camp)**
- **2012 France Ozar Hatorah Toulose (3 dead, day school)**
- **2012 - Sandy Hook Elementary School Shootings, Newtown 28 dead (20 children), 2 injured**
- **2014 Syria: Chemical Weapons**
- **2015 Nigeria, Pakistan Schools (100s)**
- **2015 IRAQ/Syria: Killings, Slavery (10,000s)**
- **2015 Paris Theatre (89)**
- **2016 Truck Attack France**
- **2017 Concert attack England**

And the list goes on…and on…

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Moscow theater siege

OKC Bombing

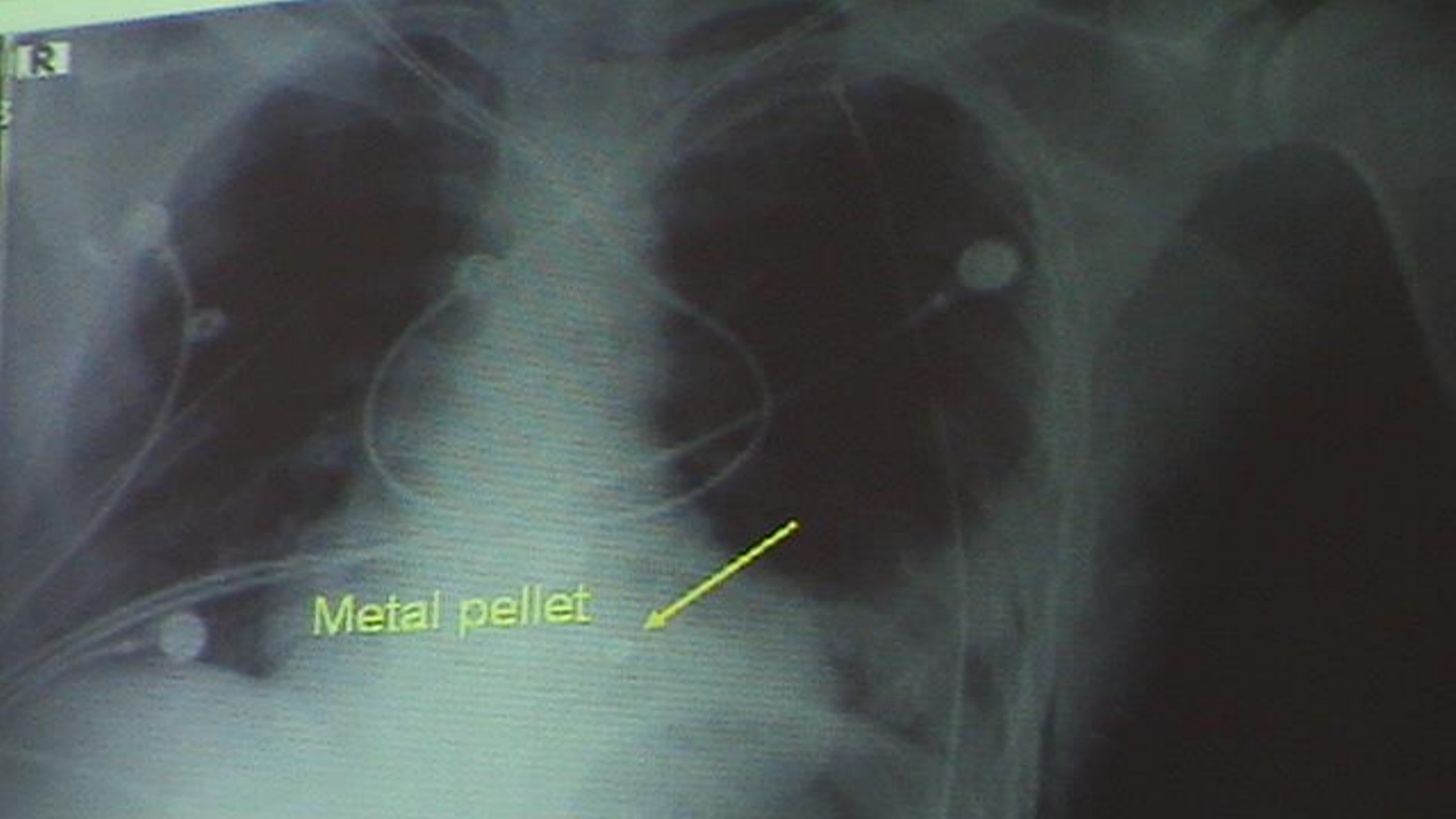
Beslan school siege


No More hurting people.
Peace

www.gaurdian.co.uk

Injuries are Different

Jerusalem, Israel
9 killed 40 injured
Women and Children
Bus Attack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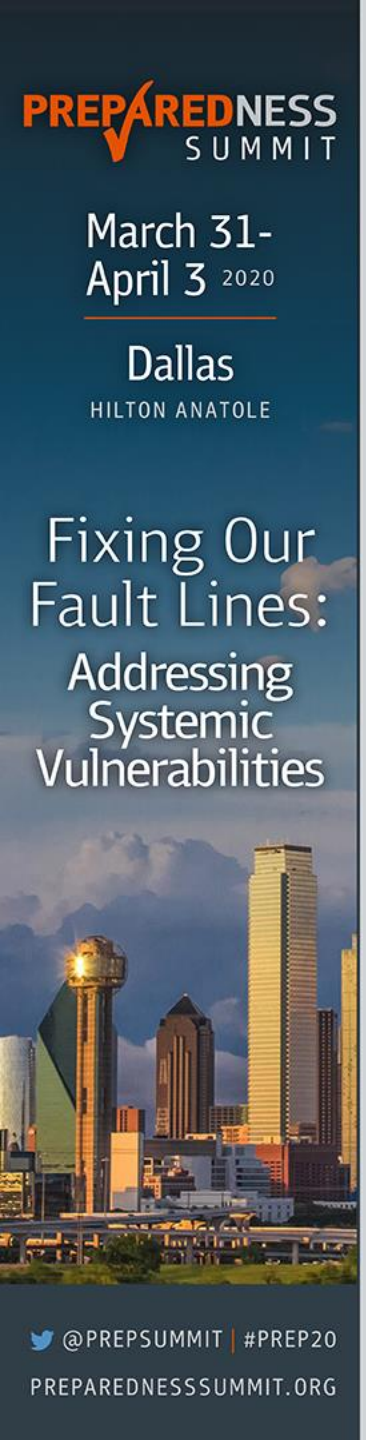
Metal pellet

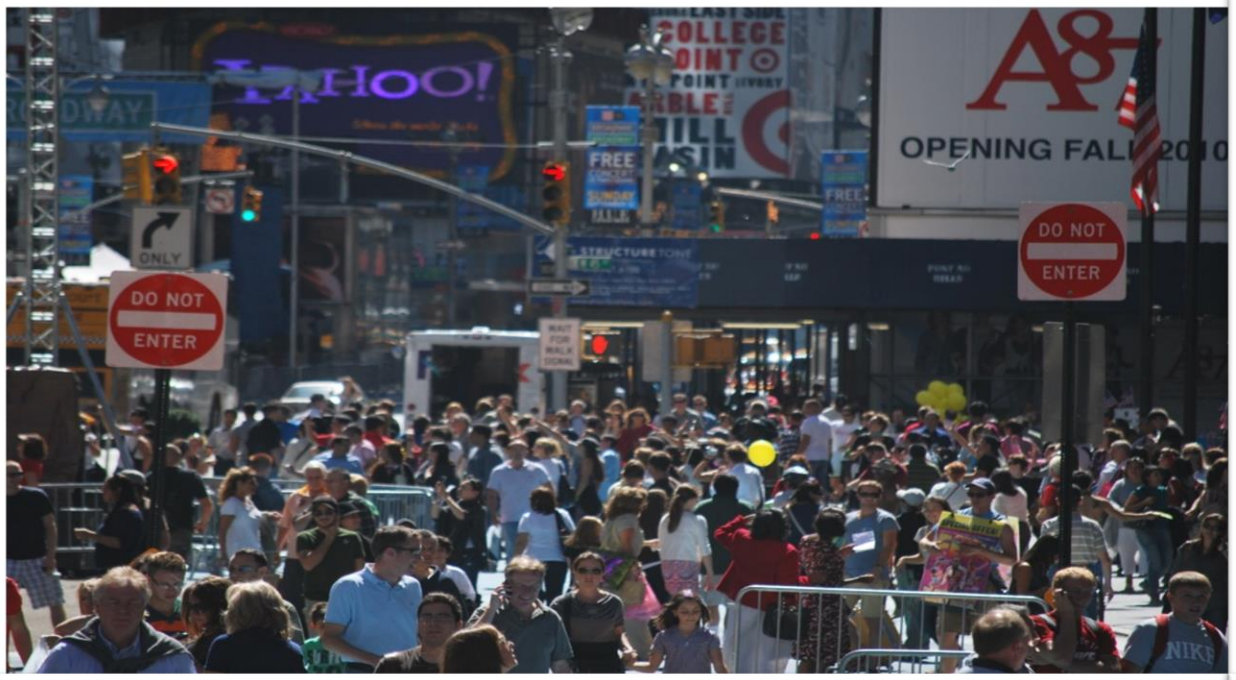
Specific injury due to a suicide bomber



WHAT COULD HAVE HAPPENED IF THAT BOMB HAD GONE OFF IN TIMES SQUARE?

MAY 1, 2010
SATURDAY EVENING IN MANHATTAN

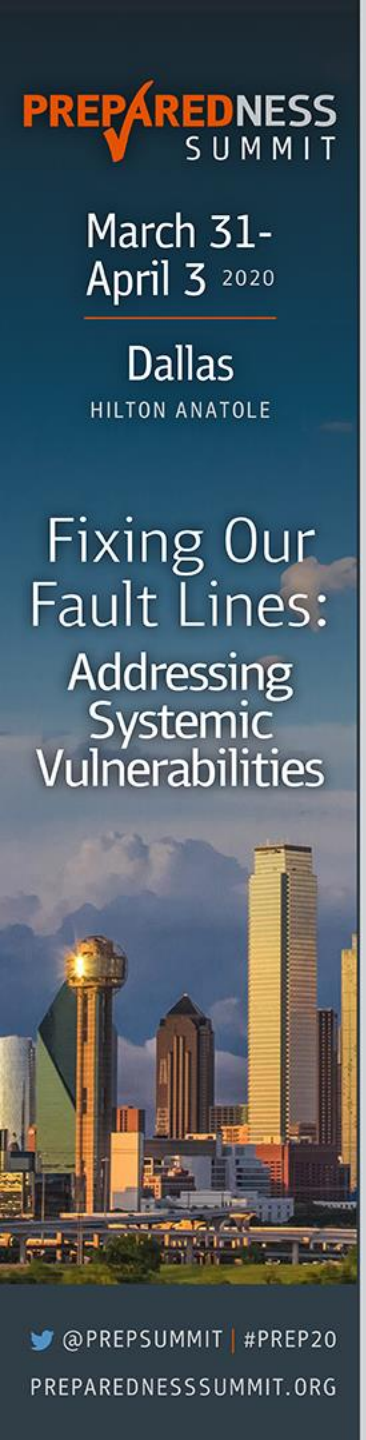

Satellite
Traffic
Live traffic change
Slow
Fast
Paramount
New York Times Towing
The Richard Rodgers Theatre
Milford Plaza
W 46th St
Broadway
W 47th St
7th Ave
Doubletree
New York Marriott Marquis Times Square
St Mary the Virgin Church
W 44th St
8th Ave
St James Theatre
Times Square
The World of Disney Store
St Andrews Restaurant and Bar
W 45th St
Toys R Us & Babies R Us Express
One Times Square
The Duke On 42nd Street
W 43rd St
Sephora
A
F
H
J


YAHOO!
OPENING FALL 2010
DO NOT ENTER
DO NOT ENTER
ONLY


AEROPOSTALE
OPENING FALL 2010
DO NOT ENTER
DO NOT ENTER

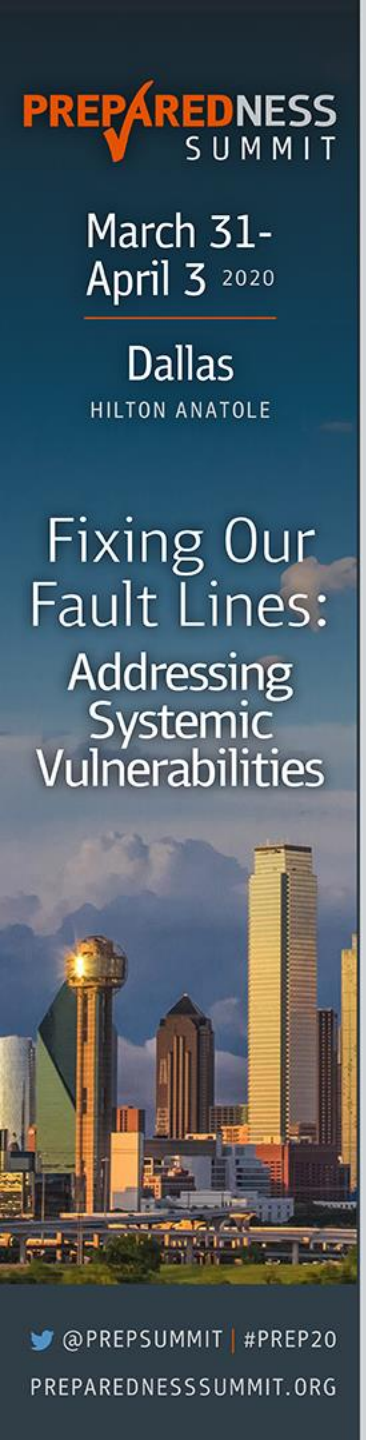

THEATRE
THE LION KING
MINSKOFF THEATRE


HYUNDAI
33857197
HYUNDAI OWNERS CAN'T BE WRONG.
BROADWAY
tkts

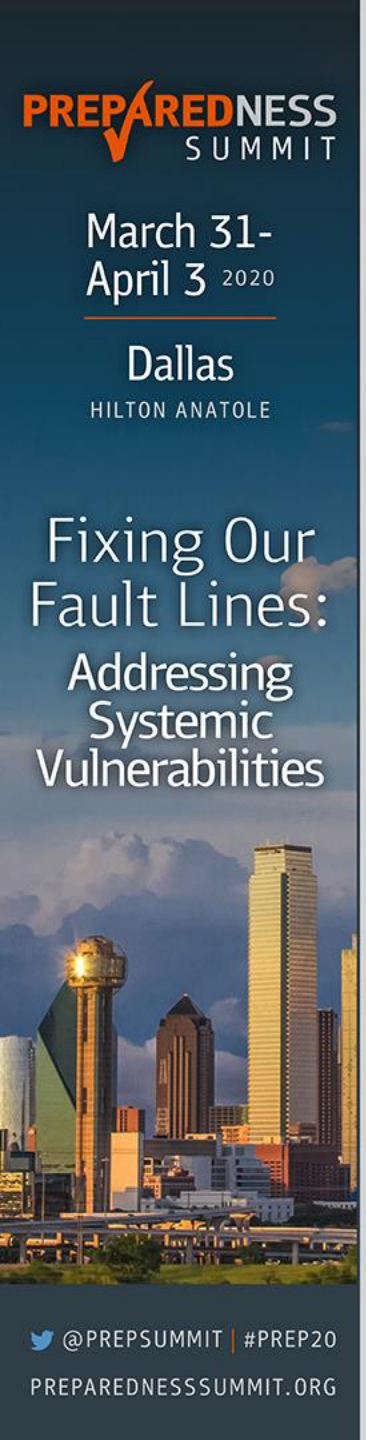


Times Square Bomb

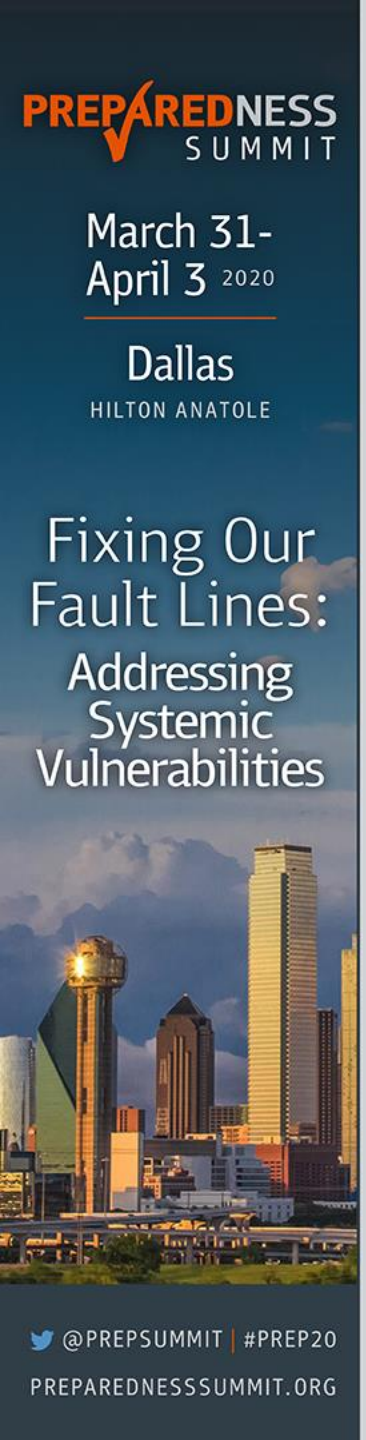
- Across the street from the Lion King Show at the Minskoff Theatre (Seats 1,600)
- Close Proximity to Toys”R”Us
- Close Proximity The Disney Store
- Hundreds of Critically Injured children and adults
- Primary and secondary transport
- Immediate Pediatric Surge
- Are we ready ?



Therefore:
The pediatric plan and response to disasters should be tailored to the special needs of children



The NYC Pediatric Disaster Coalition (PDC)



NYC Pediatric Disaster Coalition

- Established in 2008 to prepare NYC for a catastrophic pediatric mass casualty event
- Funded by the Department of Health and Human Services, Assistant Secretary for Preparedness and Response via the NYC Department of Health
- Our Membership Includes:
  - NYC pediatric general and specialty hospitals
  - Community Healthcare providers
  - NYC Fire Department EMS
  - NYC Emergency Management
  - NYC Department of Health and Mental Hygiene
  - and more…

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Bellevue

Beth Israel
Continuum Health Partners, Inc.

The Brooklyn Hospital Center
Keeping Brooklyn healthy.

Elmhurst
HOSPITAL CENTER

HARLEM HOSPITAL
CENTER

KINGS COUNTY
HOSPITAL CENTER

LICH
Continuum
Health Partners, Inc.

LINCOLN MEDICAL AND
MENTAL HEALTH CENTER

maimonides
Infants & Children's Hospital
of Brooklyn

Montefiore
Inspired Medicine

Mount Sinai
Hospital

St. Luke's
Roosevelt
Continuum Health Partners Inc.

New
York
Hospital
Queens

NewYork-Presbyterian
The University Hospital of Columbia and Cornell

NYU Langone
MEDICAL CENTER

Richmond
University
Medical Center

SUNY
DOWNSTATE
Medical Center

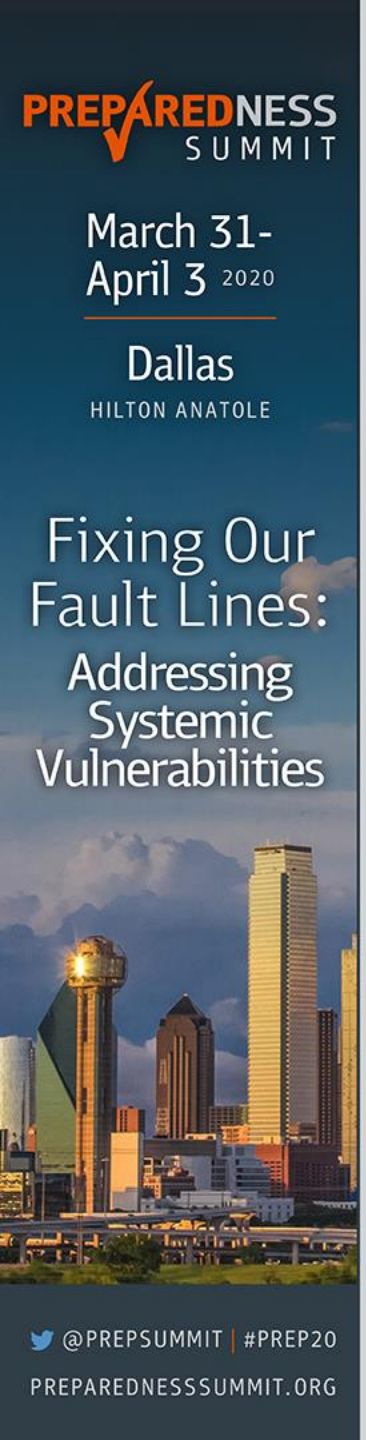
North Shore LIJ
Steven & Alexandra Cohen
Children's Medical
Center of NY

FIRE DEPARTMENT
CITY OF
NEW YORK

OEM
New York City
Office of Emergency Management

NYC
Health

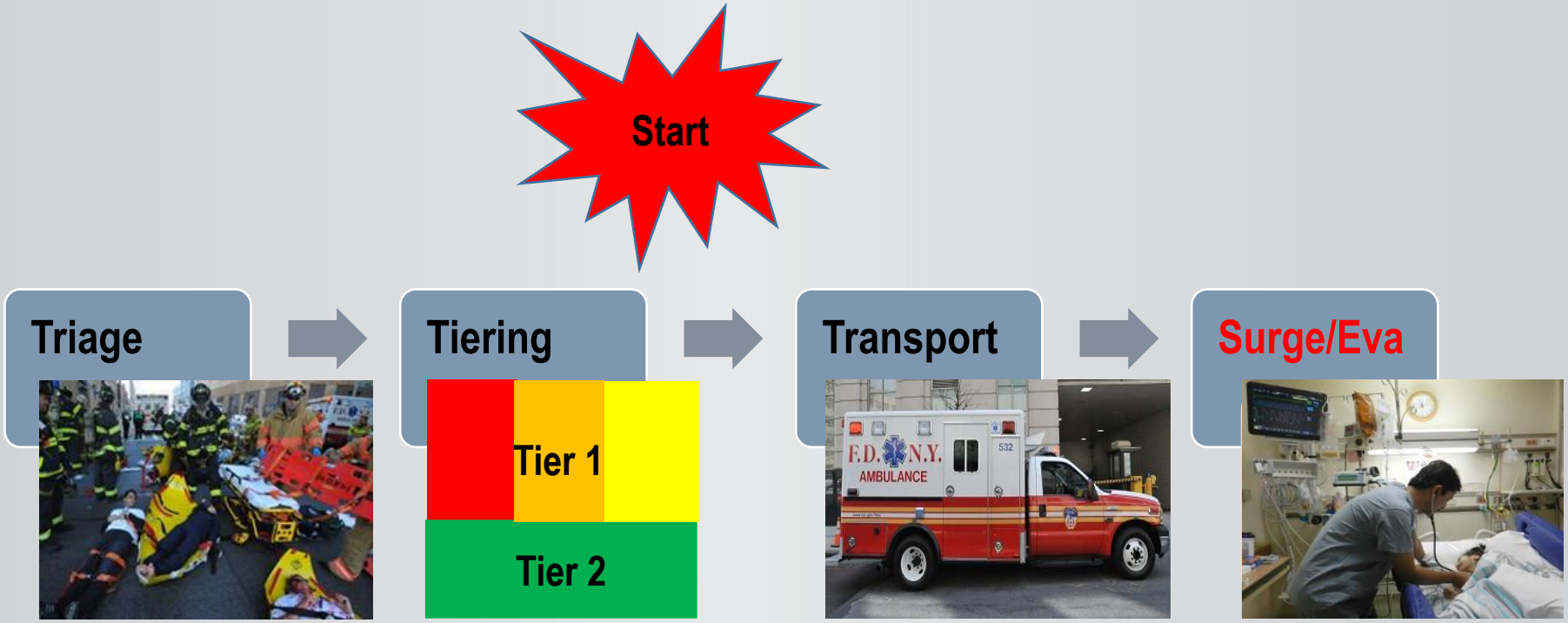
cpem
the center for pediatric emergency medicine



NYC PDC Objectives and Work

- Creating Guidelines and Template Plans for Surge and Evacuation of Pediatric PICUs NICUs Obstetric and Newborn Services and Pediatric Long Term Care facilities in New York City
- Assist facilities in adapting and operationalizing these plans, thereby, increasing surge/evacuation capabilities
- Creating tools and conducting Tabletop and Full Scale Exercises to operationalize plans.
- Creating, implementing, and operationalizing a citywide Pediatric Disaster Response Plan
- Increasing pediatric critical care staffing resources through hosting Pediatric Fundamentals of Critical Care Support Courses
- Educating community groups and partner coalitions on pediatric disaster preparedness
- Creating lessons learned and guidance documents from real disasters and emergencies.

NYC Pediatric Disaster Plan



The PDC and their collaborative planning team created a comprehensive Pediatric Disaster Plan for NYC from the onset of the event and first response through pediatric surge.

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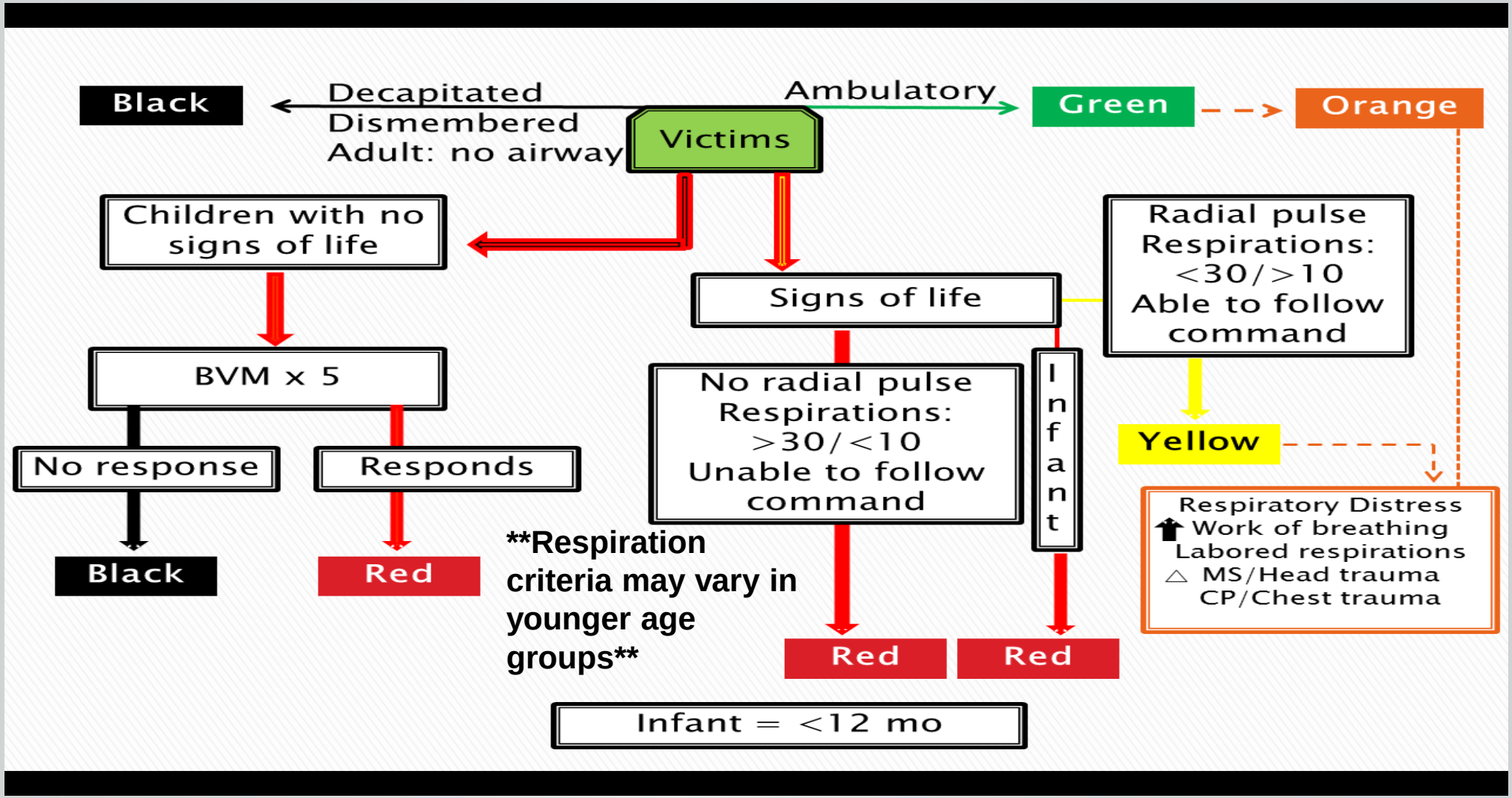
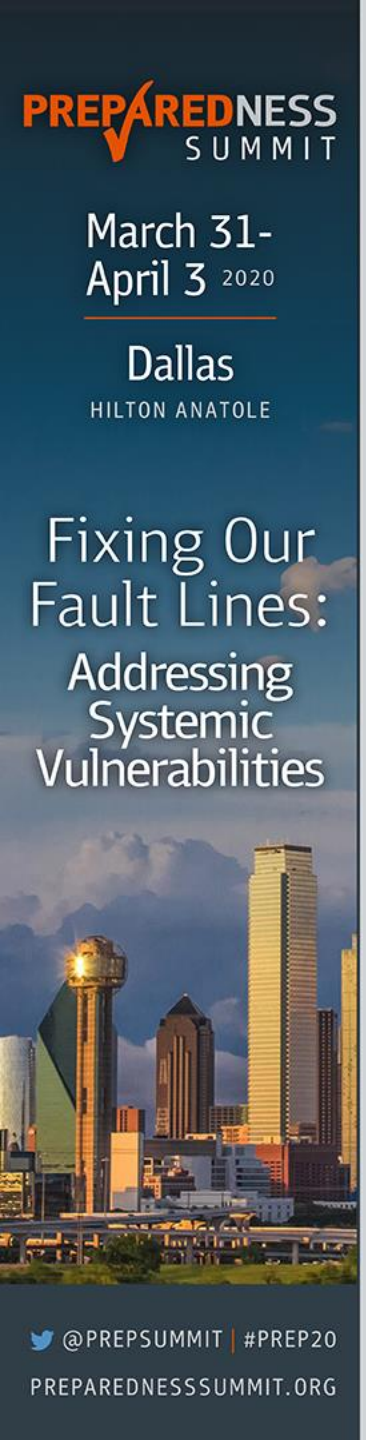
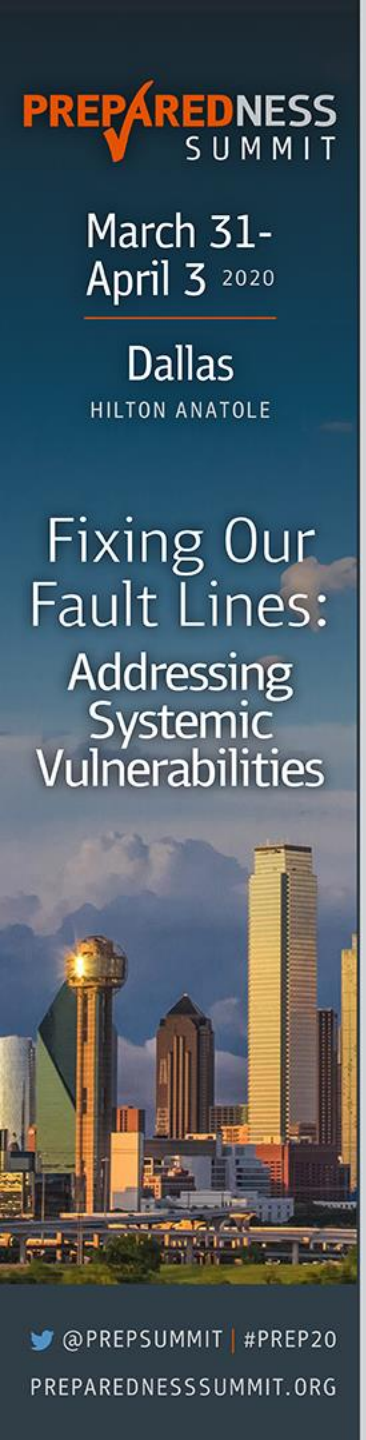
Updated Triage Algorithm





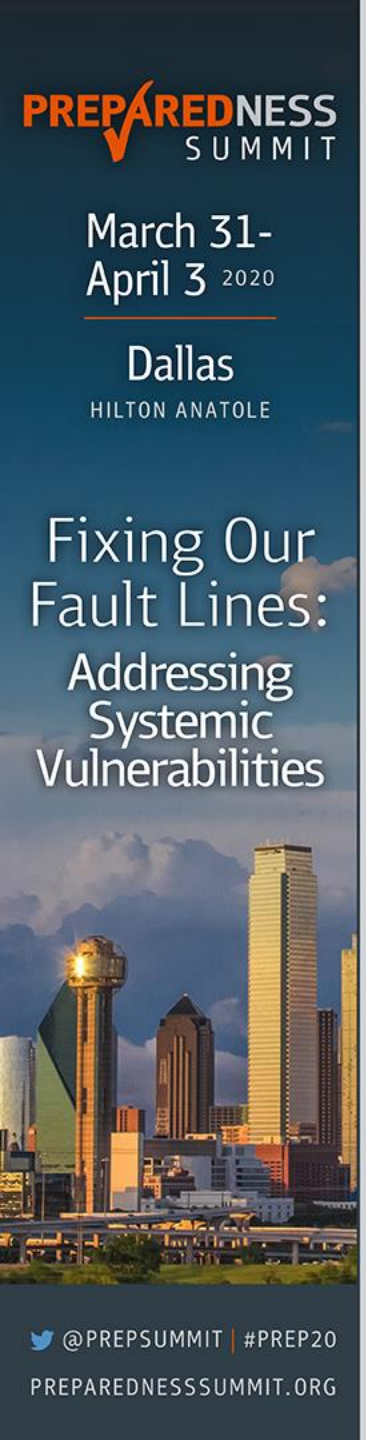
Pediatric and NICU Surge and Evacuation Planning & Exercise Series Toolkit

- **The PDC created a Pediatric and NICU Surge and Evacuation Planning & Exercise Series Toolkit**
- What is the "Toolkit"?
  - A comprehensive document that will be made available to hospitals to:
    - Develop their own PICU Surge Capacity Plans and NICU Evacuation Plans
    - Design, conduct and evaluate workshops, tabletops, drills and full-scale exercises
- What's within the "Toolkit"
  - A detailed description of how to develop plans, design, conduct and evaluate exercises in compliance with the Homeland Security Exercise and Evaluation Program (HSEEP) ***based on PDC best practices***
  - Appendices with PDC PICU Surge Capacity and NICU Evacuation Template Plans and exercise document templates



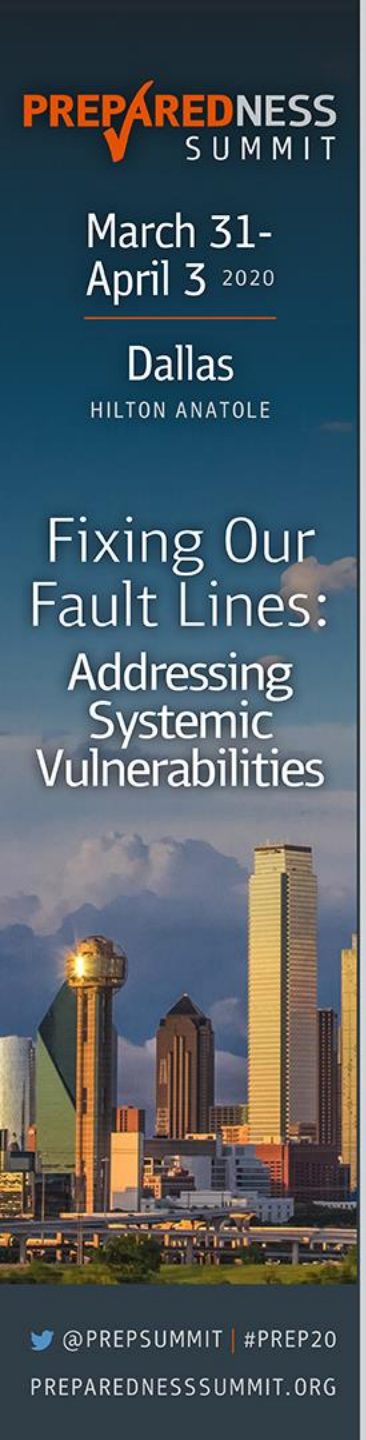
NYC Pediatric Disaster Coalition 2019-2020 Planning Efforts

	Total Completed by June 2020	Total Units in NYC	Percent Covered by 2017
Pediatric PICU	20	20	100%
Pediatric Non-PICU	8	8	
NICU Evacuation and Surge	23	38	60%
Obstetric Services Evacuation and Surge	18	38	47%
Total	69		



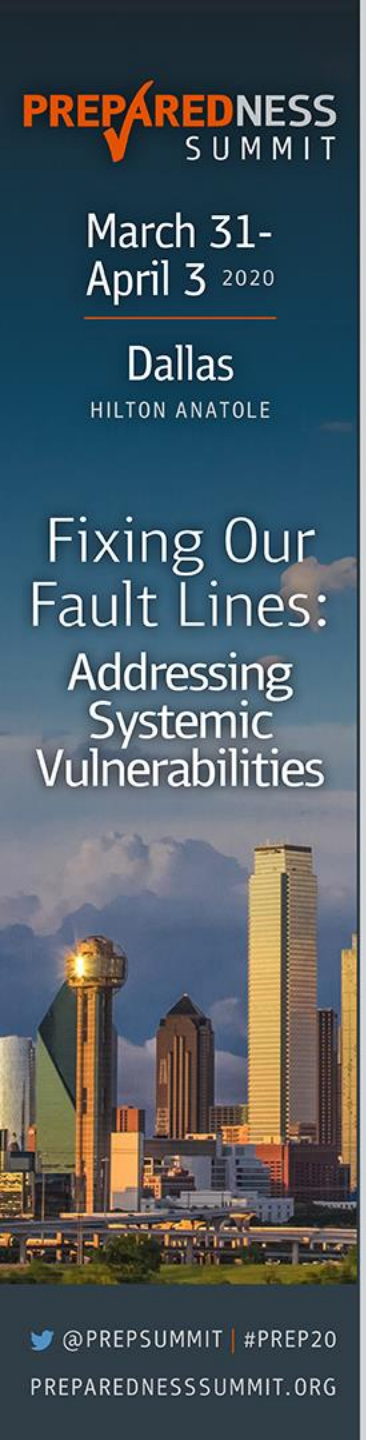
Lessons Learned from an OB/Newborn/Neonatal Intensive Care Full-Scale Exercise

New York City Pediatric Disaster Coalition



Roles and Expectations

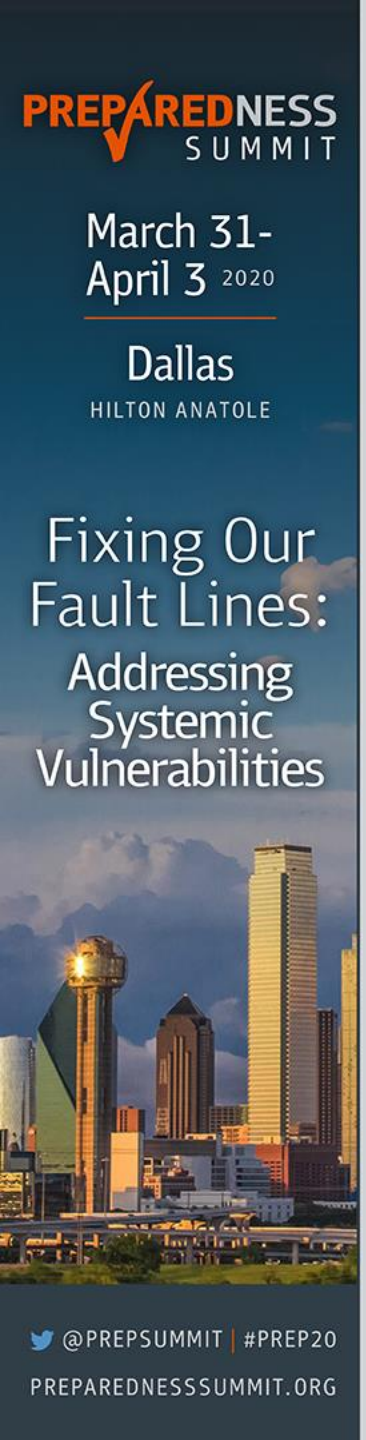
- ✓ Convene a hospital planning team
- ✓ Review and Revise Your Plan
- ✓ Attend at least 3 planning meetings plus controller/evaluator training session
  - ✓ **Identify four representatives from your hospital to attend the controller/evaluators training.** These controllers and evaluators should be individuals who will <u>not</u> be players in the exercise.
- ✓ Host external evaluators at your facility
- ✓ Participate in the exercise at your facility
- ✓ Conduct hot wash
- ✓ Attend after action meeting
- ✓ Complete individual hospital after action report and improvement plan



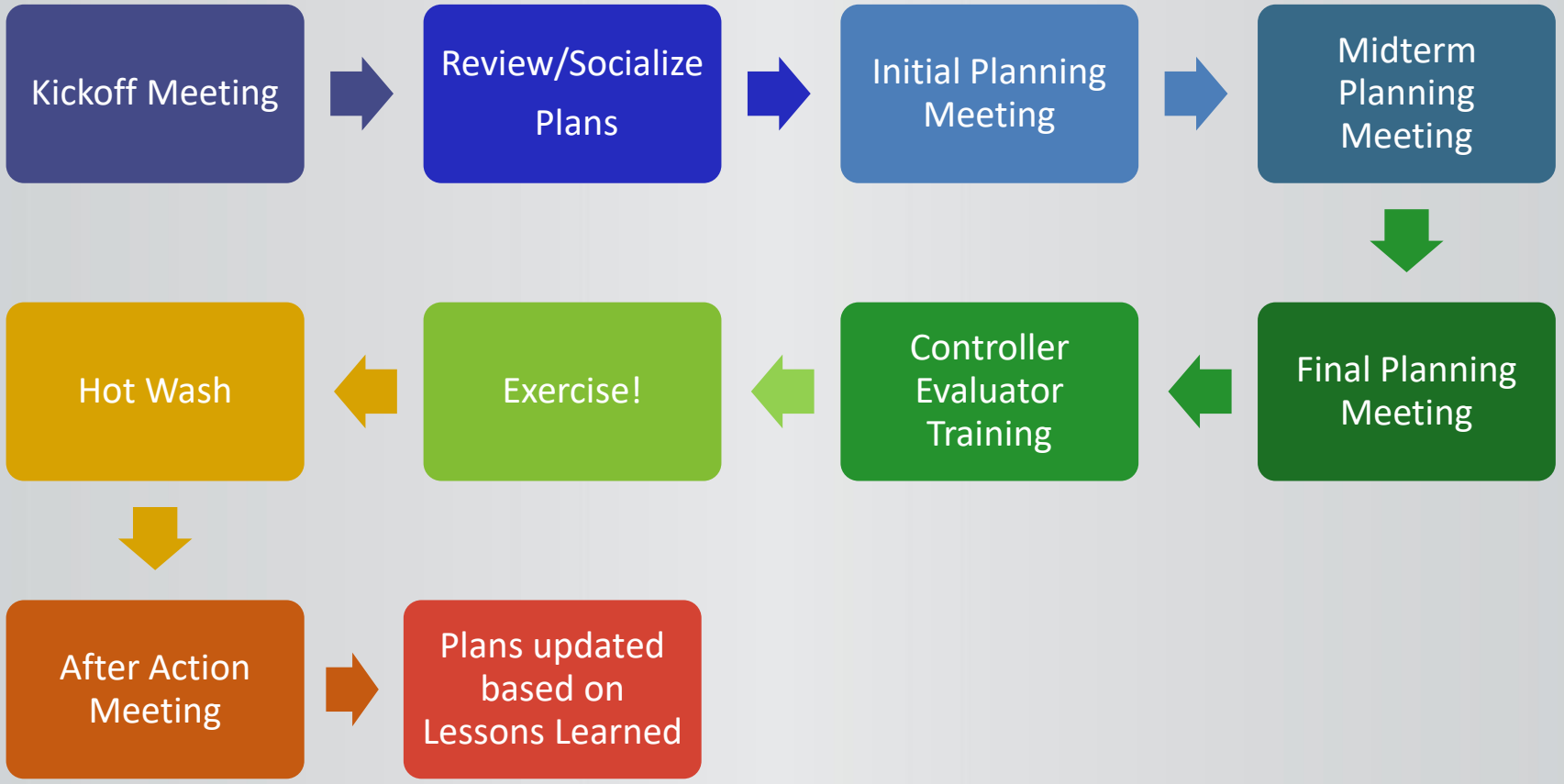
Project Description

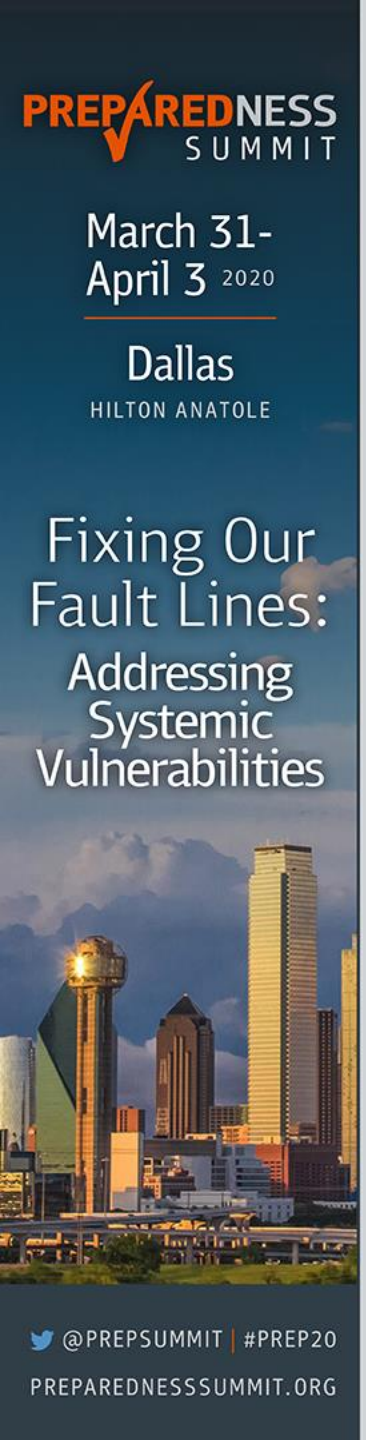
- In preparation for the OB/Newborn/Neonatal Services Unit Evacuation FSE we conducted a series of planning meetings. The series consisted of:

1. Kickoff Meeting – October, 2017
2. Initial Planning Meeting – December, 2017
3. Midterm Planning Meeting – January, 2018
4. Final Planning Meeting – March, 2018
5. Controller/Evaluator Meeting – April, 2018
6. OB/Newborn/Neonatal Services Unit Evacuation FSE – April, 2018
7. After Action Meeting - May, 2018



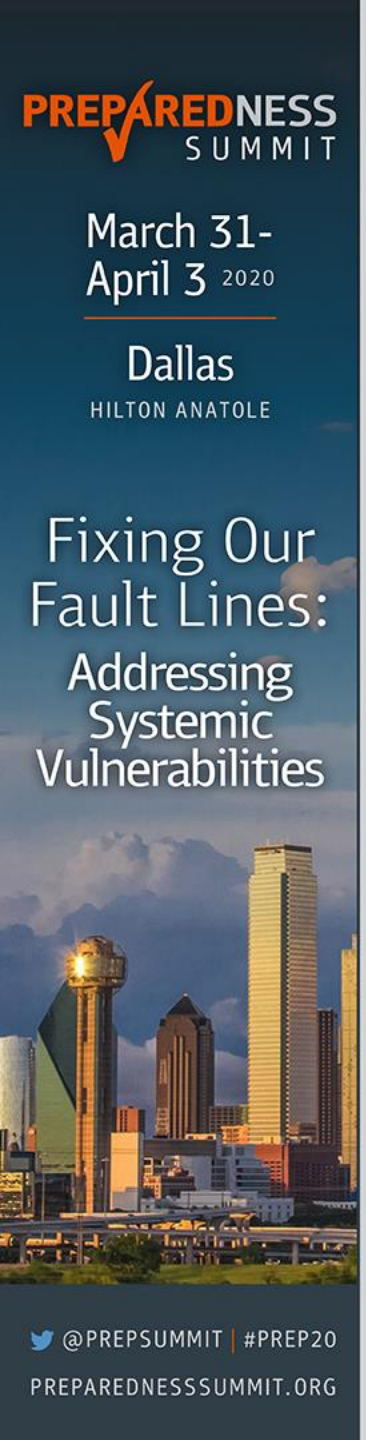
Key Milestones





Exercise Goals

- The overall goal of the *Staten Island University Hospital North (SIUHN) Ob/Newborn/Neonatal Evacuation FSE is to* assess the capability of SIUHN in the context of an evacuation event, to:
- Evacuate Ob/Newborn/Neonatal patients
- Establish and operate an alternate care site
- Provide effective internal and external communications
- Identify gaps and revise plan(s) based on lessons learned

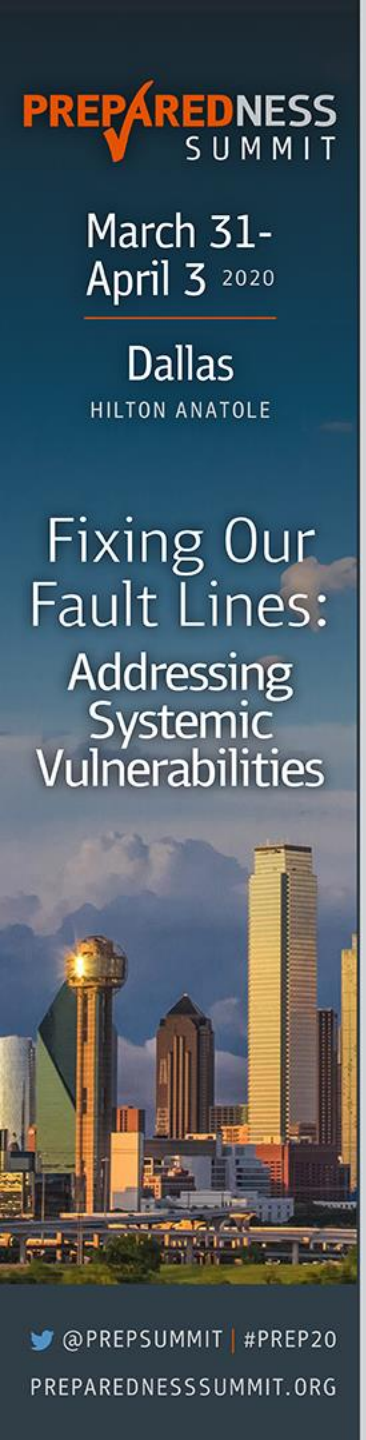


Exercise Objectives

- Assess ability of Ob/Newborn/Neonatal leadership to identify there is a problem that could cause a relocation/evacuation
- Assess ability of staff to identify patients who require evacuation within the institution.
- Evaluate the internal and external communications of the hospital.
- Evaluate ability to communicate and respond to requests from FDNY
- Assess availability and management of resources as it pertains to staffing, supplies and equipment in an urgent evacuation event.
- Assess the ability of staff to notify parents of the units' evacuation, their child's disposition and where they will be evacuated to.
- Assess ability of staff to move patients from Ob/Newborn/Neonatal to staging area and/or alternate care sites
- Assess ability of staff to track patients from Ob/Newborn/Neonatal to staging area and/or alternate care sites.
- Test and improve hospital Ob/Newborn/Neonatal Services Evacuation plan and response

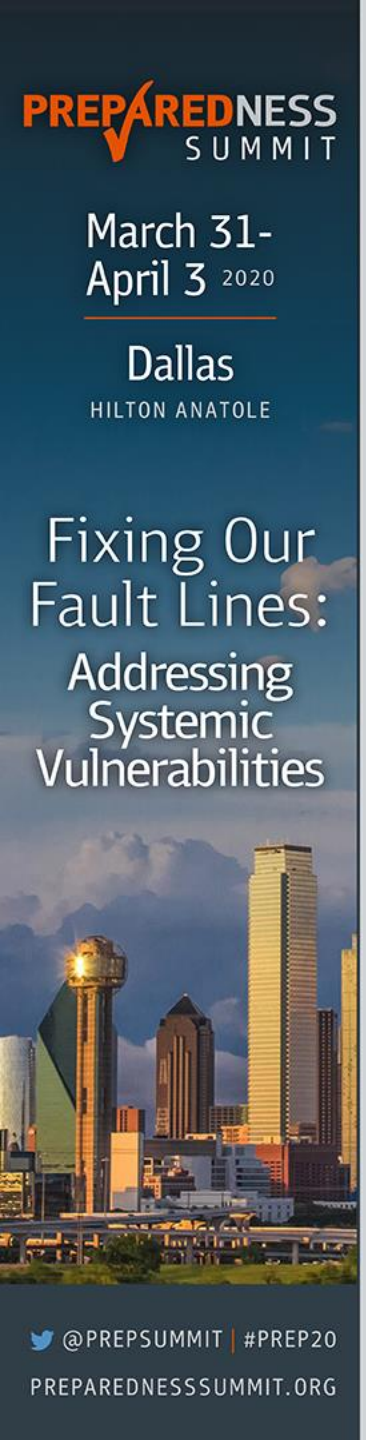
Core Capabilities

- Planning
- Operational Coordination
- Operational Communications
- Situational Assessment
- Risk and Disaster Resilience Assessment
- Threats and Hazards Identification
- Mass Search and Rescue Operations
- Fire Management and Suppression
- Health and Social Services



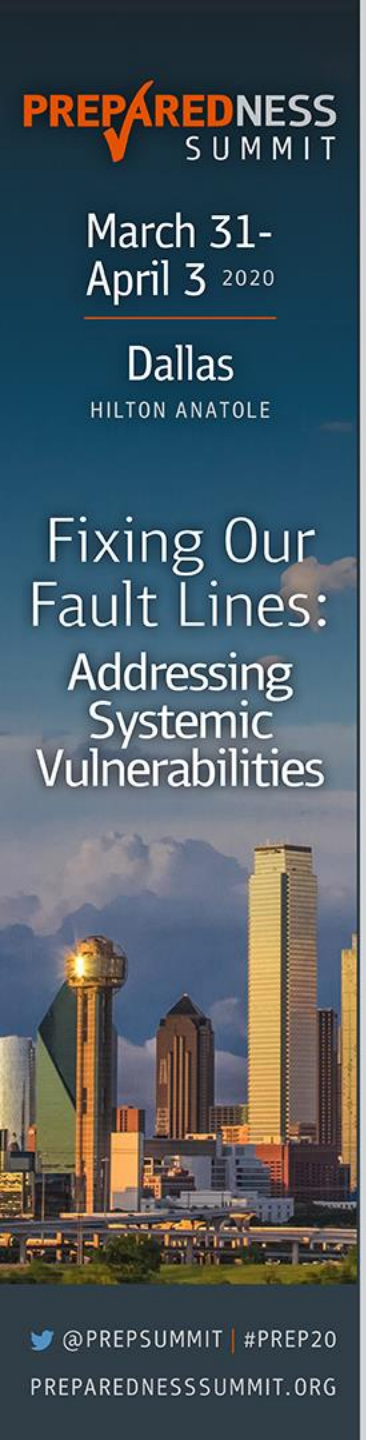
Scenario

- Alarm bells are heard indicating a potential emergency in the antepartum waiting room. Staff onsite report a smoke condition in the area. Over the next few minutes smoke intensifies and starts to enter the labor & delivery area. The unit is notified by security that there is a fire in the electrical closet in close proximity to the L&D area. Over a short period of time the smoke continues to intensify and begins to become apparent in the Maternity/Newborn Nursey. The smoke condition spreads to the neonatal unit. FDNY is called to the scene. Patients begin to be evacuated to other areas within the hospital.



Exercise Assumptions

- The exercise is conducted in a no-fault learning environment wherein capabilities, plans, systems, and processes will be evaluated.
- The exercise scenario is plausible, and events occur as they are presented.
- Exercise simulation contains sufficient detail to allow players to react to information and situations as they are presented as if the simulated incident were real.
- Exercise Players have had the opportunity prior to the exercise to review their hospital's respective Emergency Operations Plans (EOPs) and Players understand their specific roles and responsibilities.
- Equipment, supplies, and staff will be limited to that of SIUH North.
- Exercise Players will react to the information and situations as they are presented in the same manner as if it was a real emergency incident.
- Participating agencies may need to balance exercise play with real-world emergencies. **Real-world emergencies take priority.**

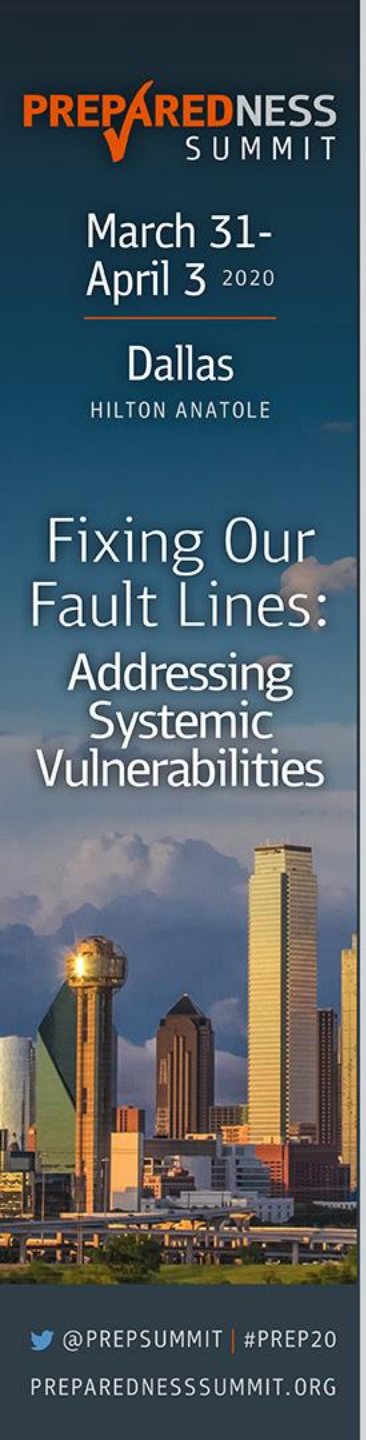


Exercise Artificialities

- Exercise communication and coordination is limited to participating exercise sites and participants (This my include FDNY). Time jumps in the scenario may occur and will be conveyed to players by the Controller based on the MSEL scenario.
- Injects, as part of a larger scripted Master Scenario Events List (MSEL), will be used to prompt action as needed.
- An Emergency Operations Center must be opened and staffed appropriately to accomplish the exercise objectives.
- Patients will consist of real-life role players and dolls/mannequins.
- All data questions about the exercise should be answered during and or after the exercise as dictated by the MSEL and conduct of the exercise
- Patient profiles (three patients provided for management by neonatal) will include clinical information and disposition. All real patients based on the census in the units on the day of the exercise should be tracked throughout the exercise as if they were being evacuated. Patients should be tracked carefully; however, it is not required to place patient profiles or orders etc. in the official medical records system. Nursing and clinical staff should conduct rapid evacuation rounds and ensure that all patients have been accounted for in virtual reality.

Participants

- NYC Pediatric Disaster Coalition (PDC)
- Staten Island University Hospital North – Northwell Health
- NYC Dept. of Health and Mental Hygiene (DOHMH)
- NYC Medical Reserve Corps (Role Players)
- Fire Dept. of New York (FDNY)



Suggested Players

- EPC
- Administration
- OB/Newborn/Neonatal Medical and Nursing Staff
- Operating Room Staff
- Security
- Facilities Management
- Central Supply
- Communications Dept
- Admitting/Clerical Staff
- IT
- Respiratory Therapy
- Pharmacy
- Mental Health Team
- FDNY
- Public Affairs
- Other

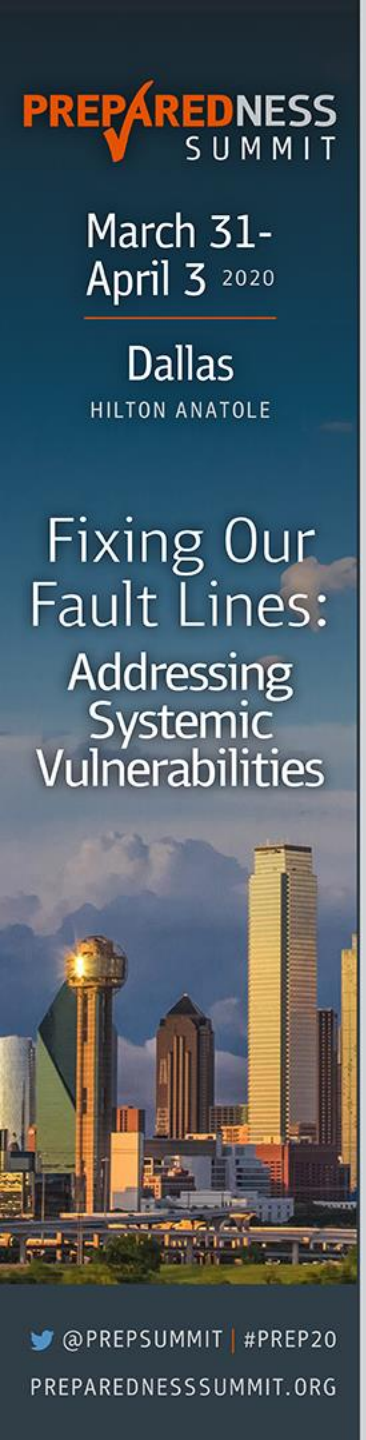
Evaluators, Observers, Controllers

Three hospital representatives (one Controller and two Evaluators) to serve in these roles during the exercise. The Controller and Evaluators should be individuals who will not be players in the exercise. MRC, DOHMH and PDC staff will serve as observers and/or evaluators.

Effective exercise evaluation involves:

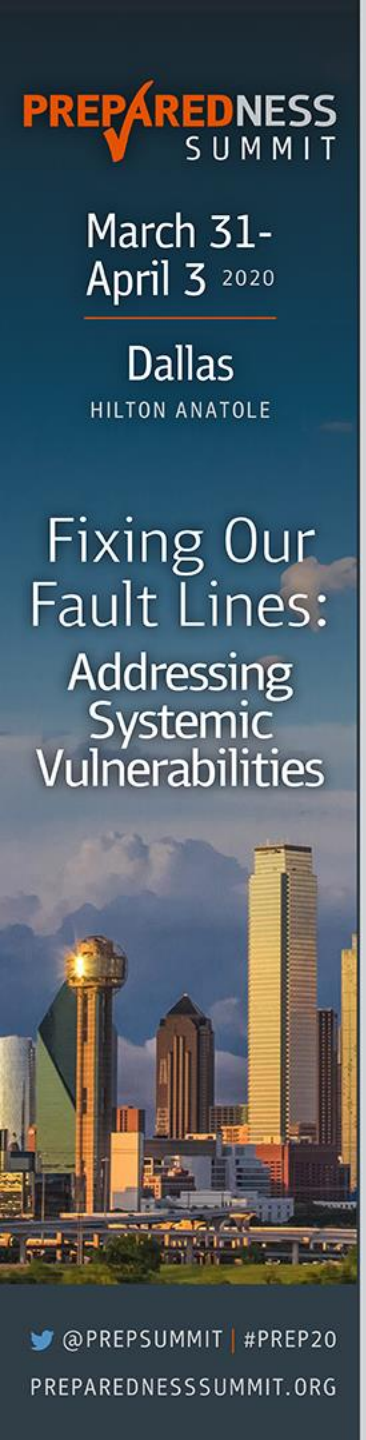
- Planning for exercise evaluation
- Observing the exercise and collecting exercise data during exercise conduct
- Analyzing collected data to identify strengths and areas for improvement
- Reporting exercise outcomes in a draft AAR

Representatives from ASPR and an evacuation equipment vendor were present observing the exercise



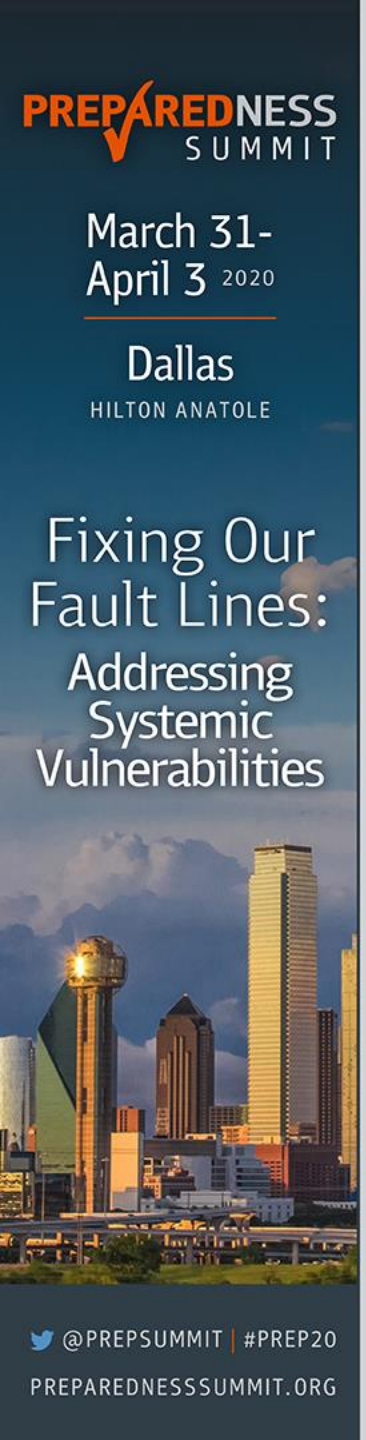
Role of the Controller

- Controllers will direct the pace of exercise play, providing key data to players and may prompt or initiate certain player actions to ensure exercise continuity
- Controllers will assist with setting up and operating the exercise locations; managing exercise play, and may act in the roles of response individuals and agencies
- Controllers will provide supplementary exercise control support to the Evaluators however, they will not perform formal evaluations of the exercise
- **The Controller should be an individual who will <u>not</u> be a player in the exercise**
- **Controllers may appoint other individuals to assist in their tasks during the exercise**
- **Controllers and or designees are responsible for answering questions related to the MSEL and the conduct of the exercise**



Role of the Evaluator

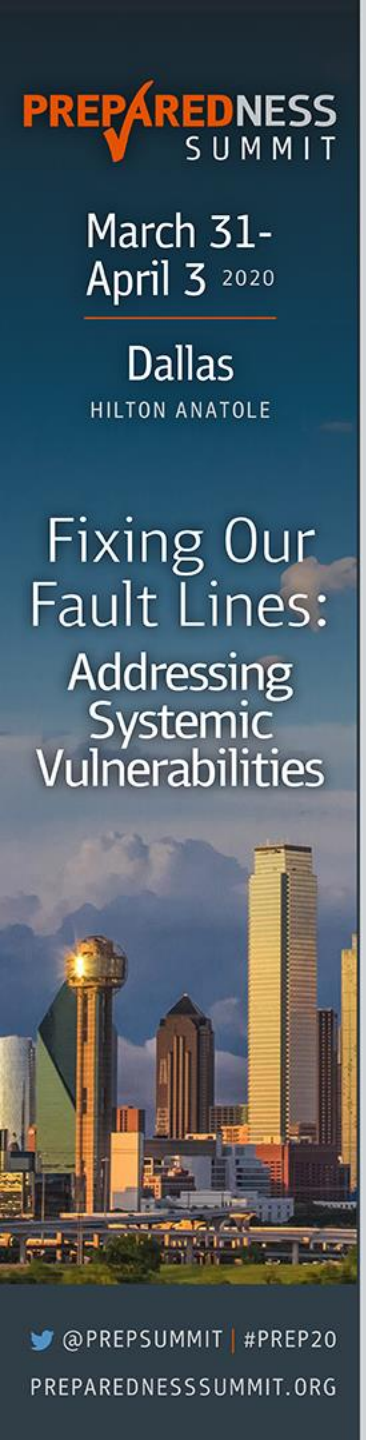
- Evaluate and provide feedback on a designated functional area of the exercise
- Evaluators will assess and document participants' performance against established emergency plans and exercise evaluation criteria, in accordance with HSEEP standards
- **The Evaluators should be individuals who will <u>not</u> be a player in the exercise.**



Exercise Process

- ExPlan
- MSEL Scenario
- MSEL Patients
- MSEL Questions
- Exercise Evaluation Guide
- Participant Feedback Forms

- Hot wash
- After action meeting
- After action report & improvement plan
- Lessons learned and plan revisions



MSEL Questions Examples

- Has facilities management/security arrived to investigate the smoke condition?
- Has hospital administration been notified of the event and the need to evacuate patients from the Ante Partum/ Labor Delivery Area? Yes__ No___ time
- What is the patient census in the Ante-Partum Labor and Delivery area at the time of the evacuation? _____
- Are all patients and visitors and staff accounted for? Yes___ No____
- Have additional staff been enlisted to assist in evacuation? Yes___ No___
- Has patient equipment been evacuated as per individual patient needs? Yes___ No____
- Do staging areas have electrical backup capabilities for equipment?

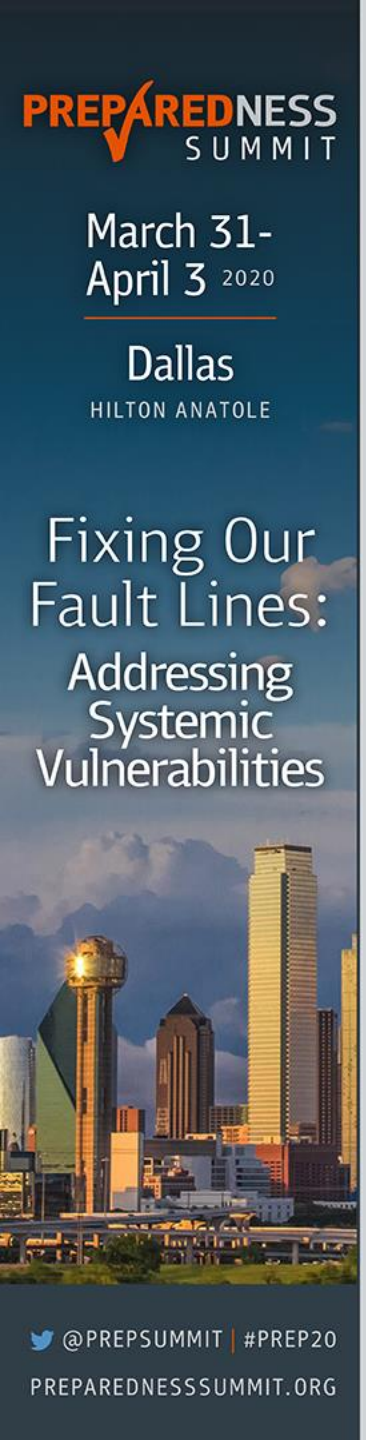
MSEL Patient Profile Examples

Actor Patient OB
29 year old diabetic female, 41 weeks gestation in active labor, 7cm dilated, fetal monitor shows recurrent decelerations, breech presentation
Obstetrical Staff have just decided that she requires a stat C-section.
VS: BP 160/110, Respirations 25, Heart Rate 100, Afebrile.

Actor Patient Maternity
22 year old mother S/P delivery 2 days ago with history of anxiety separated from newborn during evacuation on way to staging area develops rapid heart rate, hyperventilation and begins screaming “where is my baby. OMG did he make it”

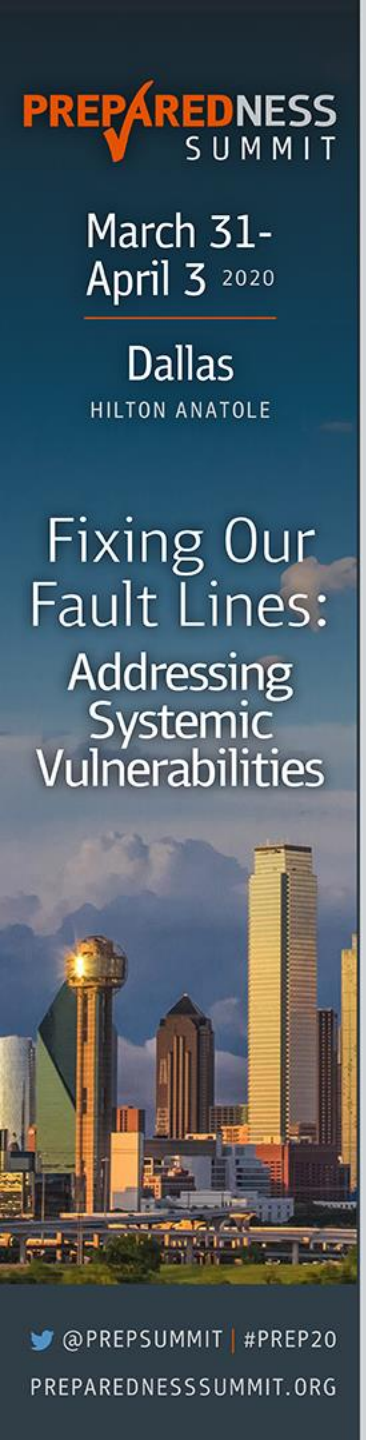
Actor Patient Newborn Visitor
60 year old grandmother visiting newborn becomes dizzy, sweaty with complaint of acute severe chest pain and falls to the floor

Simulated Patient Neonatal
24 week male, Day of Life #33, on mechanical ventilator (SIMV). Patient is receiving 2.5 ml q3hrs of feeds and receiving TPN via a PICC line.



Feedback and Evaluation

- **Hot Wash:**
  - At the conclusion of exercise play, controllers facilitate a Hot Wash to allow players to discuss strengths and areas for improvement, and evaluators to seek clarification regarding player actions and decision-making processes. All participants may attend; however, observer attendance is optional. The Hot Wash should not exceed 60 minutes.
- **Participant Feedback Forms:**
  - Participant Feedback Forms provide players with the opportunity to comment candidly on exercise activities and exercise design. Participant Feedback Forms should be collected at the conclusion of the Hot Wash.
- **Exercise Evaluation Guides:**
  - EEGs assist evaluators in collecting relevant exercise observations. EEGs document exercise objectives and aligned core capabilities, capability targets, and critical tasks. Each EEG provides evaluators with information on what they should expect to see demonstrated in their functional area.
- **AAR:**
  - The EEGs, coupled with Participant Feedback Forms and Hot Wash notes, are used to evaluate the exercise and compile the After-Action Report (AAR).



Evaluation Process

Six Evaluators total

- Three Internal Evaluators
- Three External Evaluators (PDC)

Evaluators were stationed:

- In the EOC
- Floating
  - (Labor & Delivery, Maternity/Newborn, Neonatal Unit, Evacuation staging areas, etc.)

Evaluation Categories

Communications

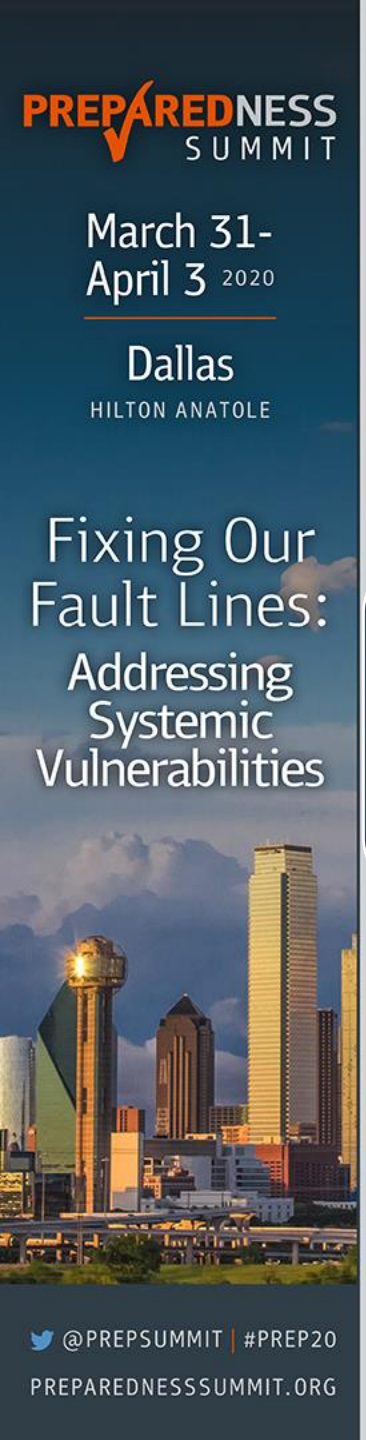
EOP

Evacuation

Patient Tracking

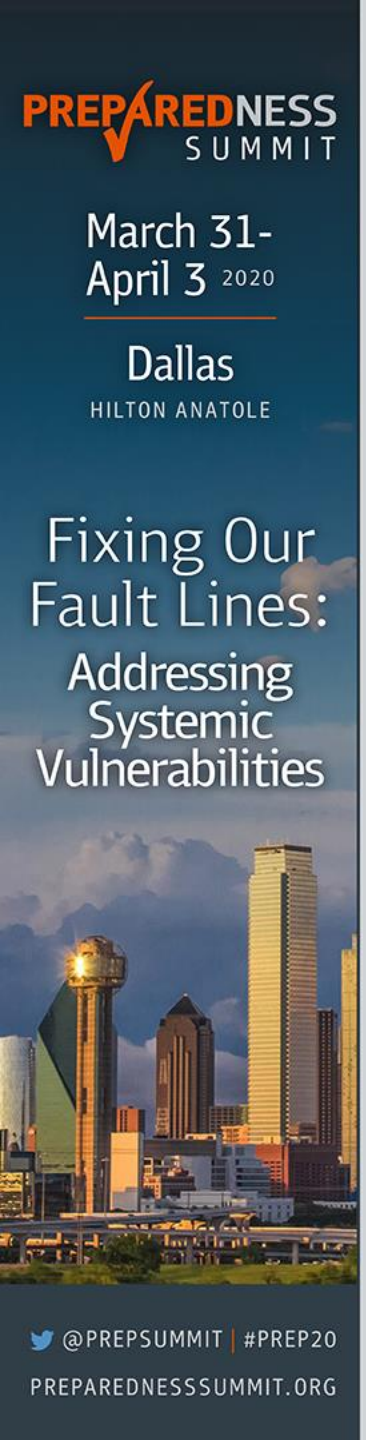
Supplies

Staffing



Evaluation Tool Scoring Process- 1-4

4	3	2	1
Performed without Challenges	**Performed with Some Challenges**	**Performed with Major Challenges**	**Unable to be Performed**



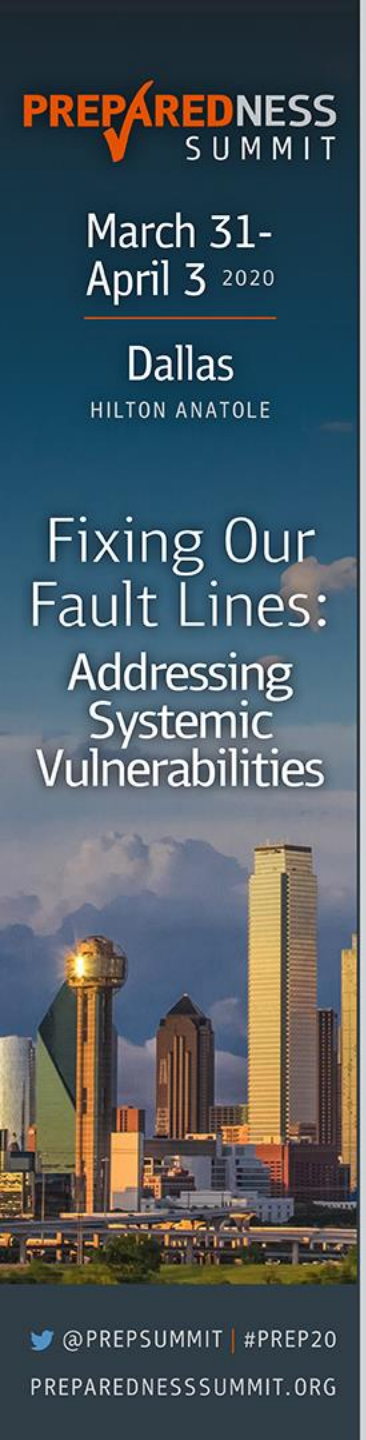
Objective 1: Evaluate the internal and external communications of the hospital

- ***Points of Review:***

COMMUNICATIONS

Objective Average: 3.45/4.0

- Notify hospital administration of the event
- Notify the FDNY of the event
- Communicate updates and ongoing situational awareness
- Establish communications with clinical/nursing leadership
- Communicate patient census in various units to EOC
- Notify patient family members of the evacuation
- Establish updated recorded message for call takers



Objective 2: Assess availability and management of resources as it pertains to staffing, supplies and equipment in an urgent evacuation event

- ***Points of Review:***

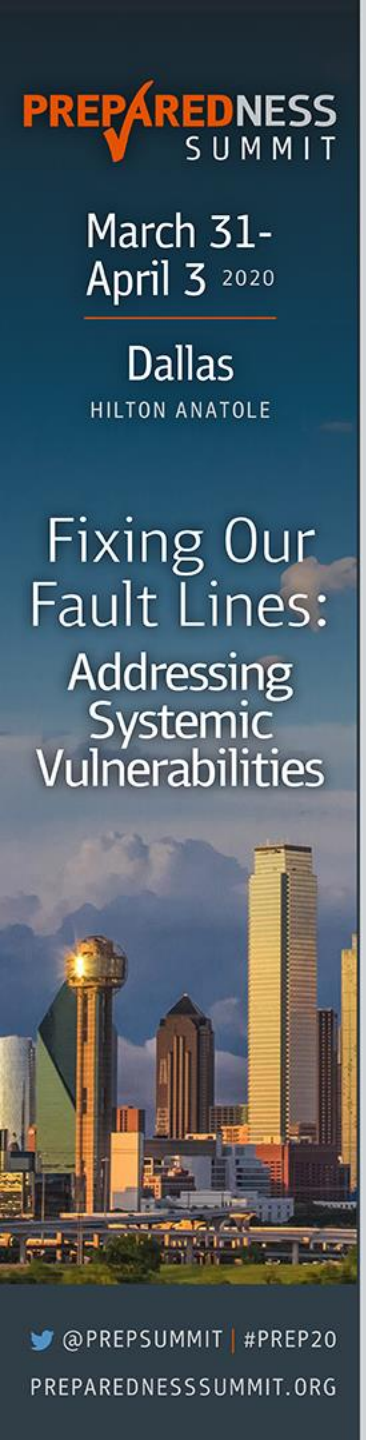
SUPPLIES

Objective Average: 3.76/4.0

- Evacuate patient equipment to meet patients' needs
- Deploy burn cart

STAFFING

- Enlist staff to assist in evacuation of various units
- Designate space for the labor pool
- Assign respiratory therapy to report in and assist in evac
- Staff a family reunification area
- Staff a public information officer and area

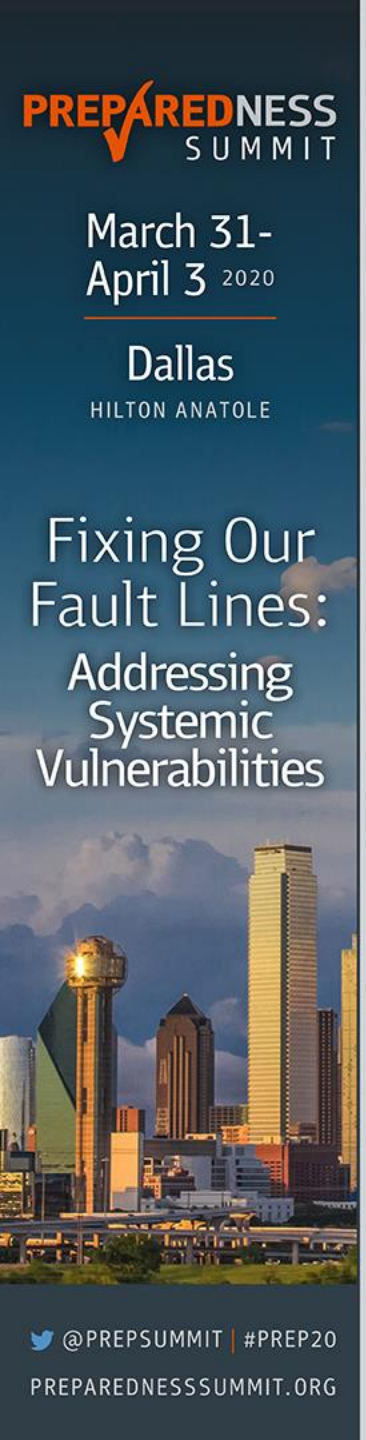


Objective 3: Assess ability of staff to track patients from Ob/Newborn/Neonatal to staging area and/or alternate care sites

PATIENT TRACKING

Objective Average: 3.85/4.0

- Account for all patients and visitors in impacted units
- Establish internal method of patient tracking

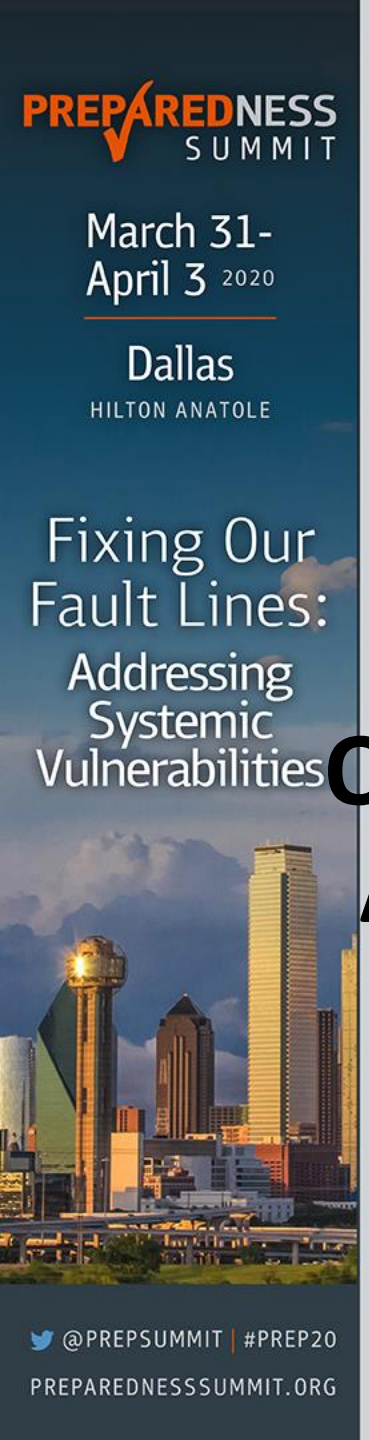


Objective 4: Assess ability of staff to identify patients who require evacuation within the institution and assess ability of staff to move patients from Ob/Newborn/Neonatal to staging area and/or alternate care sites

EVACUATION

Objective Average: 3.60/4.0

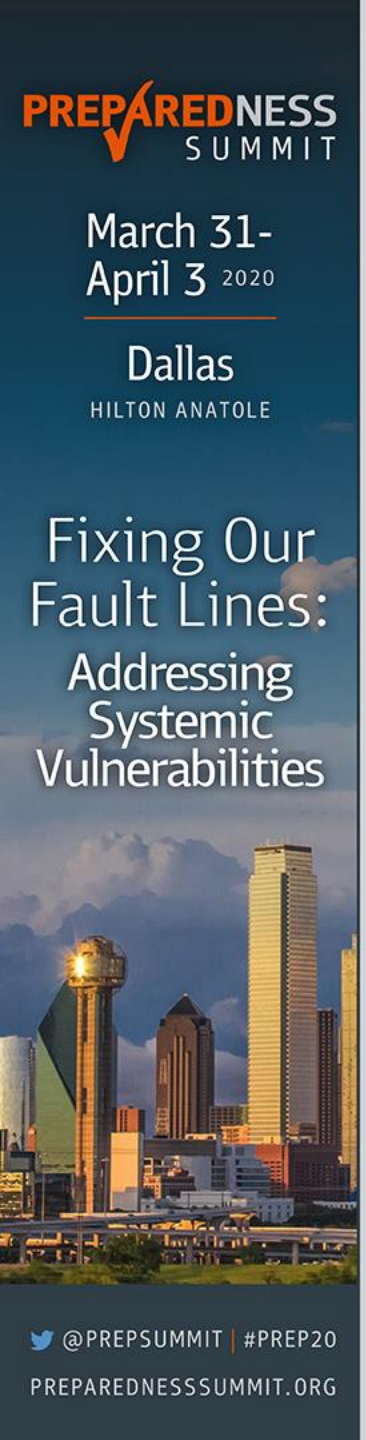
- Evacuate impacted units to staging area(s)
- Identify area to move patients to receive continued care



Objective 5: Test and improve hospital evacuation and emergency plans and response

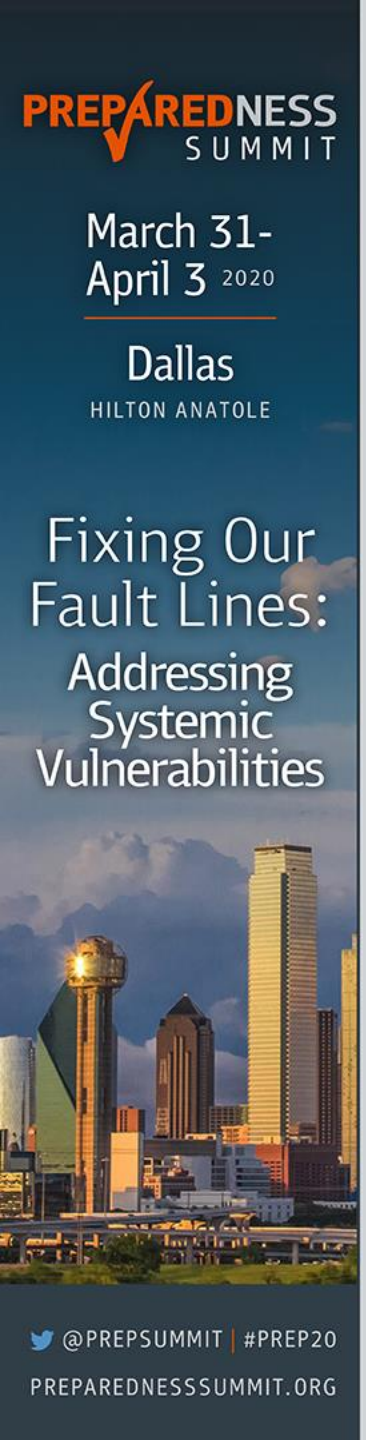
EOP Objective Average: 3.61/4.0

- Investigate smoke condition
- Stand up Emergency Operations Center (EOC)
- Activate internal fire evacuation plan
- Activate pediatric annex evacuation plan
- Activate security plan



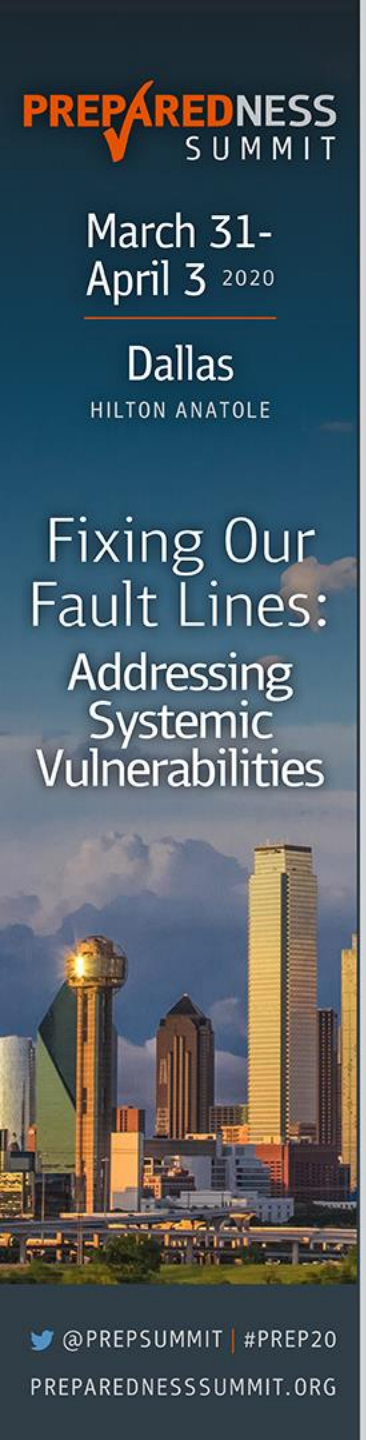
Scoring Results Summary

- **Total Average Score: 3.65/4.0**
- **Highest Score: 3.85/4.0**
  - Objective 3 (Patient Tracking)
- **Lowest Score: 3.45/4.0**
  - Objective 1 (Communications)



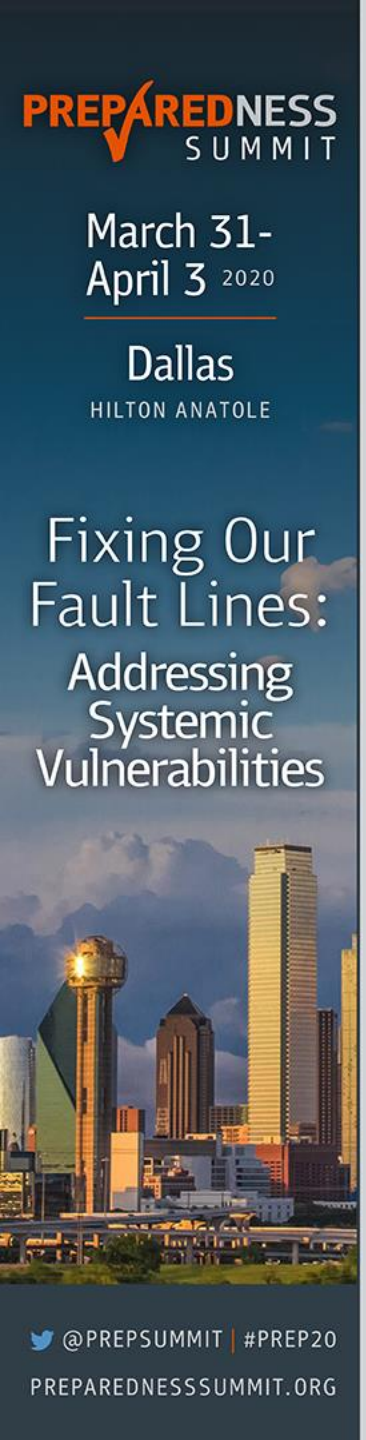
Positive Feedback

- Excellent patient care was delivered
- Strong engagement and enthusiasm from staff
- There were multiple forms of communication between Maternity/Newborn and the EOC, very efficiently controlled by nursing leadership
- In the staging area from Maternity/Newborn, nurses verbally and physically "checked in" each patient along with visitors that were on unit at time of evacuation
- Overall the objectives of the exercise were met
- Representatives from each department/unit were well versed in their area of expertise
- Multiple lessons learned were identified during hot wash to improve and revise evac plans



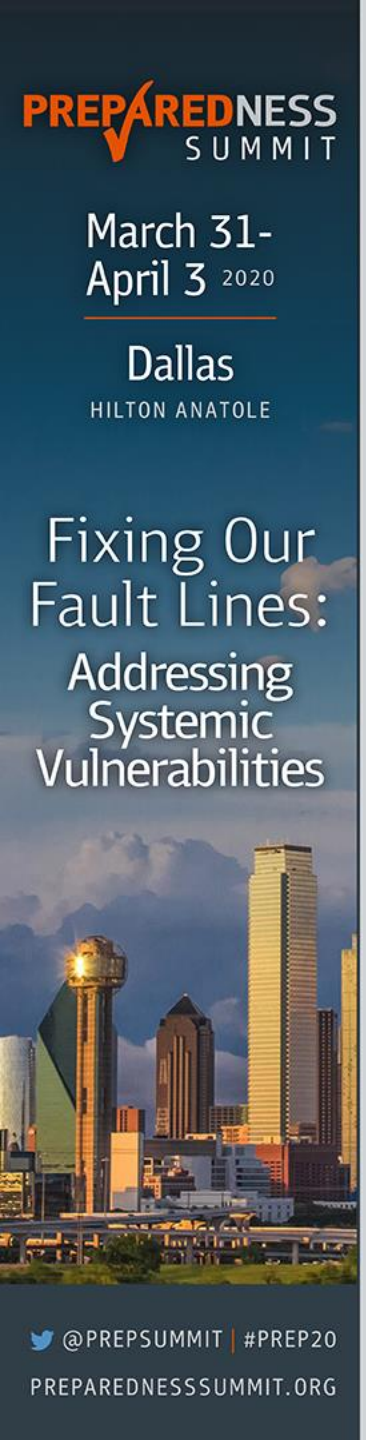
Room for Improvement

- First 30 minutes of exercise play - there was not enough communication in/from the EOC
- EOC was too crowded, some pertinent personnel should have been designated in remote areas
- Floor plan binders were not available to FDNY at staging site
- Radio issues,(channels used, dead zones)
- Overhead exercise announcements should begin with “This is a drill” (it was not announced until the 3rd sentence which alarmed some visitors in the waiting area)
- At least one staff member was not fully aware of the exercise and their role/expectations
- For vertical evacuation via stairwell it was discovered that additional blankets, tubing, IVs for neonate should have been brought down with evacuation as they were not readily available on 2nd floor staging area
- For lateral evacuation to dayroom, babies were not wrapped before being wheeled out of unit



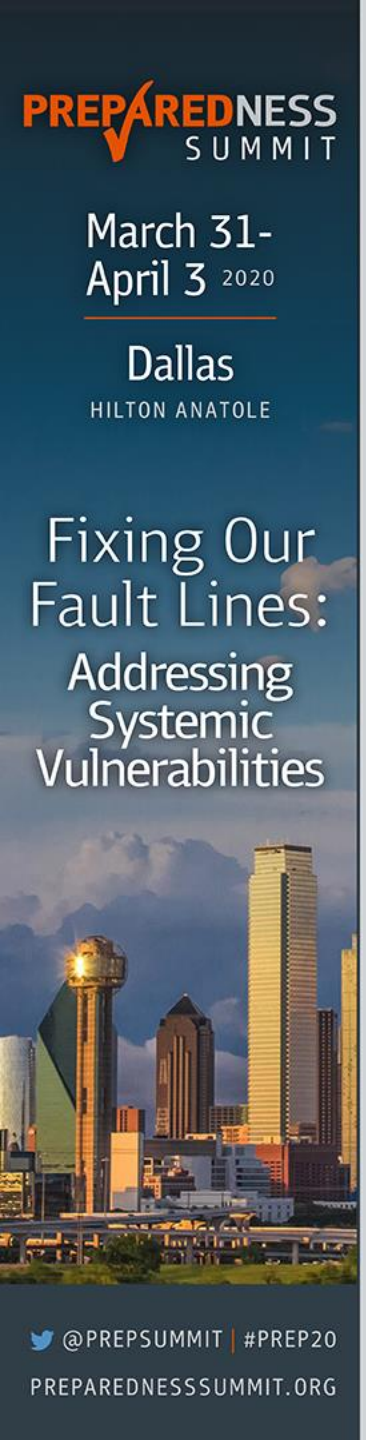
Room for Improvement Cont.

- Staff rarely called the EOC for information/updates or to provide information, a list of active command center numbers should have been sent out
- The phone number for the command center listed on the unit DEOP was not hooked up
- The command center was not set up according to the algorithm
- The labor pool was set up in an area other than what is listed in the unit DEOP



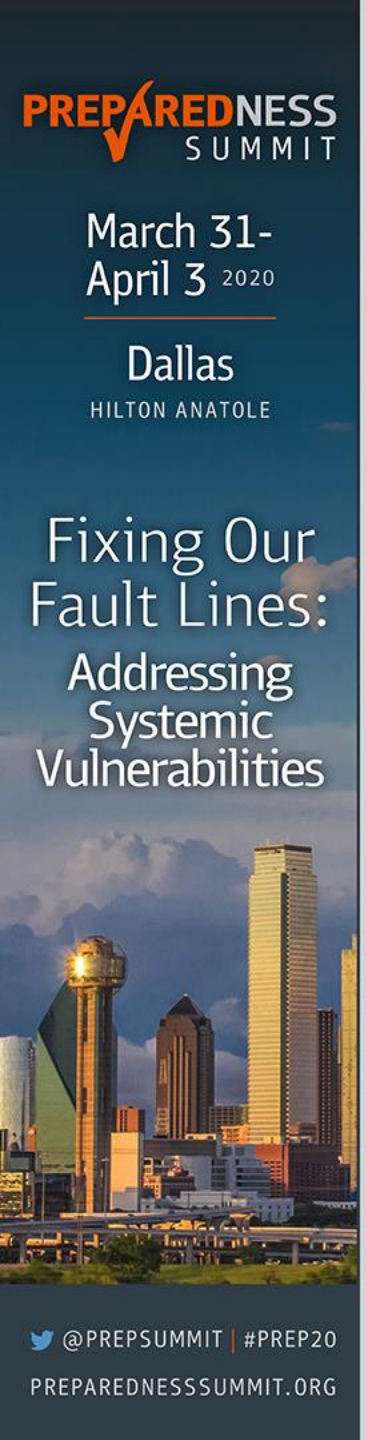
Other Feedback

- EOC set up was too quick (unrealistic)
- Difficulty was expressed following the scenario and some felt it was unrealistic
- Additional vertical NICU evacuation patients would have presented great challenges
- Utilizing jobs actions sheets for the future is encouraged
- More frequent DEOP plan drilling is needed
- SIUH North should coordinate with the FDNY to reveal which stairways & hallways are used for evacuation
- FDNY can provide a labor pool to move stable patients
- Medical staff are needed to support the FISC and PSA



Lessons Learned

- Having a book at the main entrances of all hospitals with floor plans and the DEOPS would improve the effectiveness of the FDNY response
- Phone numbers in the command center were different than the numbers in the DEOPS. That required corrected
- Communications dead zones require resolution
- More supplies are needed on the 2nd floor for a Vertical evacuation
- If the areas requiring evacuation are not functional for a prolonged period of time alternate care sites should be predetermined based on patient space/staff/stuff needs
- Staging areas require sufficient electrical power and appropriate equipment/supplies



Lessons Learned Continued

- Pre exercise planning greatly improved the:
  - ability to rapidly evacuate patients
  - cooperation and communication with FDNY
  - overall evacuation response
- Radio communications can be challenging and require pre-discussion re: utilizing proper channels, and ensuring redundant back up system

Planning is a Continuous Process

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Thank You for your Time!

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