National Healthcare Coalition Preparedness Conference (NHCPC) 2024

Compendium of Presentations and Associated Materials Categorized as

Emerging Threats

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NATIONAL HEALTHCARE COALITION PREPAREDNESS CONFERENCE

Visions of Progress: Sustainable Strategies for Emergency Preparedness & Resilience

DECEMBER 10-12, 2024 | ROSEN SHINGLE CREEK | ORLANDO, FLORIDA

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Definitive Care: Navigating Challenges and Advancements in Federal Patient Movement Coordination

U.S. Department of Health and Human Services

Administration for Strategic Preparedness and Response

Center for Response

Office of the National Disaster Medical System

December 2024

Session Objectives

- Identify the role of the National Disaster Medical System (NDMS) and its relationship with healthcare coalitions and healthcare facilities to provide care to federalized patients

- Recognize elements and order of operations of the NDMS bed reporting process as collaborating with Federal Coordinating Centers

- Learn about the direct benefits and features for participating in the NDMS Definitive Care Partner Health Facility program

National Disaster Medical System

est. 1984

A FEDERAL SECTOR PARTNERSHIP

Mission is two-fold:

Supplement state and local medical resources during disasters or major emergencies

Provide backup medical support to the military/VA medical care systems during an overseas conventional conflict

PATIENT CARE
- NDMS Medical Teams
- Facilitated Support through Industry (Contract)
- Specialty Care Capabilities

PATIENT MOVEMENT
- NDMS Partnership
  - DoD
  - VA
  - DHS/FEMA-National EMS Contract
  - HHS JPATS and Case Management

FATALITY MANAGEMENT
- Disaster Mortuary Operational Response Teams
- Subject Matter Expertise – Fatality Management Assessment

DEFINITIVE CARE
- Partnering with 1800+ civilian health care facilities through a Memorandum of Agreement
- Coordinated across 65 DoD (14) and VA (51) Federal Coordinating Centers (FCC)
- Reimbursed up to 125% of Medicare rate for facilities (payer of last resort)

When Does Federal Patient Movement Occur

- **Stafford Act Event**
  - Led by HHS, supports a state request and consists of moving both inpatients and outpatients from healthcare facilities and evacuation locations.

- **Emergency Repatriation/Noncombatant Evacuation Operations**
  - Led by the U.S. Department of State and supported by HHS' Administration for Children and Families, includes moving inpatients returning from overseas medica facilities.

- **Active-Duty Patient Redistribution – CONUS Patient Distribution Plan / Integrated CONUS Medical Operations Plan**
  - In collaboration with the U.S. Departments of Defense (DoD) and Veterans Affairs (VA), distributes service members from the theater of operations to (1) DoD Medical Treatment Facility, (2) VA Healthcare Facility, and (3) NDMS Definitive Care Partners.

Federal Patient Movement Partners

- **Department of Health and Human Services**
  - Division, Federal Patient Movement
  - Hospital Preparedness Program (HPP)- Field Project Officers
  - Medical Reserve Corps
  - Federal Health Coordinating Official
  - Regional Administrator
  - Regional Emergency Coordinator
  - Incident Management Team

- **Department of Veterans Affairs**

- **Department of Homeland Security/Federal Emergency Management Agency**

- **Voluntary Organizations Active in Disasters (VOADs)**

- **Department of Defense**
  - Health Affairs
  - DoD Policy/DSCA
  - Northern Command (NORTHCOM)
    - Joint Regional Medical Planning Officers
    - Defense Coordinating Official / Defense Coordinating Element
  - Transportation Command (TRANSCOM)
  - Air Mobility Command (AMC)
  - National Guard Bureau (NGB)

- **State and local partners**

Federal Coordinating Center (FCC)

- An organization managed by VA or DOD located in one or more assigned geographic NDMS Patient Reception Areas (PRA) responsible for receiving, triaging, staging, tracking, and transporting patients affected by a manmade or natural disaster, national emergency, military contingency to a participating NDMS partner healthcare facility capable of providing the required level of definitive care.

- 65 FCCs

  - VA – 51

  - DoD – 14
    - AF - 3
    - Army - 6
    - DHA - 1
    - Navy - 4

FCC Facility Locations

FCC Alert and Activation

- FCCs are alerted and activated with STTL partners through HHS REC Community for Mission Generation of Federal Patient Movement.

- Selection process is a coordinated effort between HHS, VA, and DoD

- Some considerations for FCC selection include:

  - FCC readiness

  - FCC throughput

  - FCC targeted bed report

  - FCC proximity to point of embarkation

Definitive Care

A coordinated partnership between HHS, VA, and DoD designed to provide care for patients who are American citizens and/or military casualties who require additional or complex care unavailable within the affected area due to disasters, public health emergencies, repatriation events, or military contingencies.

- Comprised of a nationwide network of civilian partner facilities that entered into an agreement with the federal government to accept NDMS federal patients during a national level disaster and/or public health emergency.

- The scope of beneficiaries may include military, civilians, and disaster relief personnel responding to the public health emergency.

- Approximately 1,800+ civilian healthcare facilities in the NDMS network

  - Appx. 305,000 beds

- Seven (7) bed categories: burn, critical care, med-surge, psychiatric, negative pressure isolation, pediatric, and pediatric ICU

NDMS Definitive Care Bed Report

- VA and DoD FCC coordinators complete monthly and ad hoc bed reporting based on real-world events in the following categories:

  - 7 Bed Categories – Critical Care (CC), Med-Surge (MM-SS), Pediatrics (MC), Psychiatry (MP), Burn (SBN), Negative Pressure Isolation (NPI), Pediatric ICU (PICU)

- Available Beds – NDMS partner healthcare facilities will report the number of staffed and equipped beds that they will **voluntarily commit** to the reception of NDMS federal patients at the time of the FCC request.

NDMS Definitive Care Memorandum of Agreement

- Memorandum of Agreement (MOA)
  - May 2023 – up to 125% CMS reimbursable rate
  - Agreement between NDMS and healthcare facilities (not limited to just hospitals)
  - VA/DoD FCC coordinators recruit facilities in their surrounding area to become NDMS partners
    - Benefit in working with FCCs: Exercise offerings by VA and DoD to participate in
  - Ideal NDMS partner healthcare facility is any place a patient may receive medical treatment
    - E.g., skilled nursing, dialysis, rehabilitation, mental health

Expansion

- Dialysis
- Behavioral Health
- Long-Term Care Facilities
- Post-Acute Care
  - Rehabilitation
  - Skilled Nursing

Case Management Support

- Primary mission is to check in on NDMS patients at facilities

  ▪ Follow patients to the NDMS facilities (tracked in JPATS)

  ▪ Coordinate wrap-around services (ensure transportation, human services (language translation, food, lodging, etc.)) and arrangements for discharged patients and their respective non-medical attendants (NMAs)

  ▪ Coordinate patient return to home of record

- Assist with service animals

- Coordinate reimbursement prior to discharge through the Definitive Care Claims Reimbursement program

Federal Patient Movement Tracking

- **Joint Patient Assessment & Tracking System (JPATS)**

  - System of record for tracking all NDMS federal patients and NMAs.

  - TRANSCOM Regulating and Command & Control Evacuation System (TRAC2ES)

Federal Patient Movement

- Provide patient movement from the disaster area; air, bus, train

- ESF#8 Patient Movement Coordination Cell manages requests

- USTRANSCOM: Patient regulating, movement requests, staging, tracking
  - Embarkation
  - Debarkation

- Return (*Not a DoD responsibility*)

- Patient movement is coordinated by 65 FCCs across the country managed by DoD and VA

Patients from area hospitals, nursing homes

Disaster Aerial Staging Facility (DASF) At an Aerial Port of Embarkation (APOE)

NDMS/Federal Coordinating Center (FCC) at Aerial Port Of Debarkation (APOD)

NDMS Definitive Care Partners

How Can Coalitions Be Involved?

- Include HHS ASPR HQ in regional stakeholder meetings
  - HPP field project officers
  - Regional emergency coordinators (RECs)
  - NDMS Federal Patient Movement HQ representatives
  - Federal Coordinating Center (FCC) coordinators and directors
- Understand your state, territorial, tribal, and local partner patient movement and federal patient movement plans
- Sign up to be a definitive care facility to participate in NDMS system-wide full scale and functional exercises (VA & DoD sponsored)
  - Receive credit for these exercises for the HPP NOFO
- Communicate with NDMS Federal Patient Movement representatives- challenges and barriers for your coalition in engaging support for facility leadership to participate in the program
  - Supply chain disruption, staffing, etc.? We want to know how we can continuously evaluate the Definitive Care program to allow you to be successful with providing patient care to those in need.

Q&A Panel

Large Health System Perspective

Clinical Stats

Number of Births – – – – – **>79k**
ED Visits – – – – – – – – **>3.1M**
Outpatient Visits – – – – – **>16.5M**
Surgical Visits – Outpatient **>599k**
Equivalent Discharges – – **>716k**
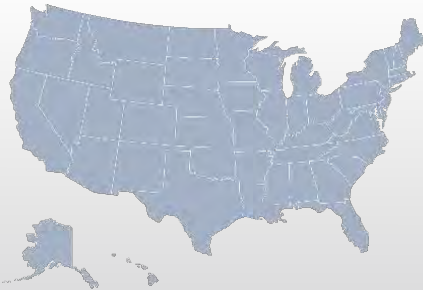
139 Hospitals

2,600 Sites of Care

More than **25k** Available Beds
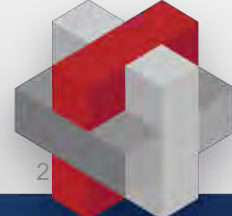
19 States and the District of Columbia

35k Affiliated Physicians

134k Associates

Medxcel is the leading facilities services provider in the U.S. exclusively serving the healthcare industry.

Emergency Management, Environment of Care, and Safety
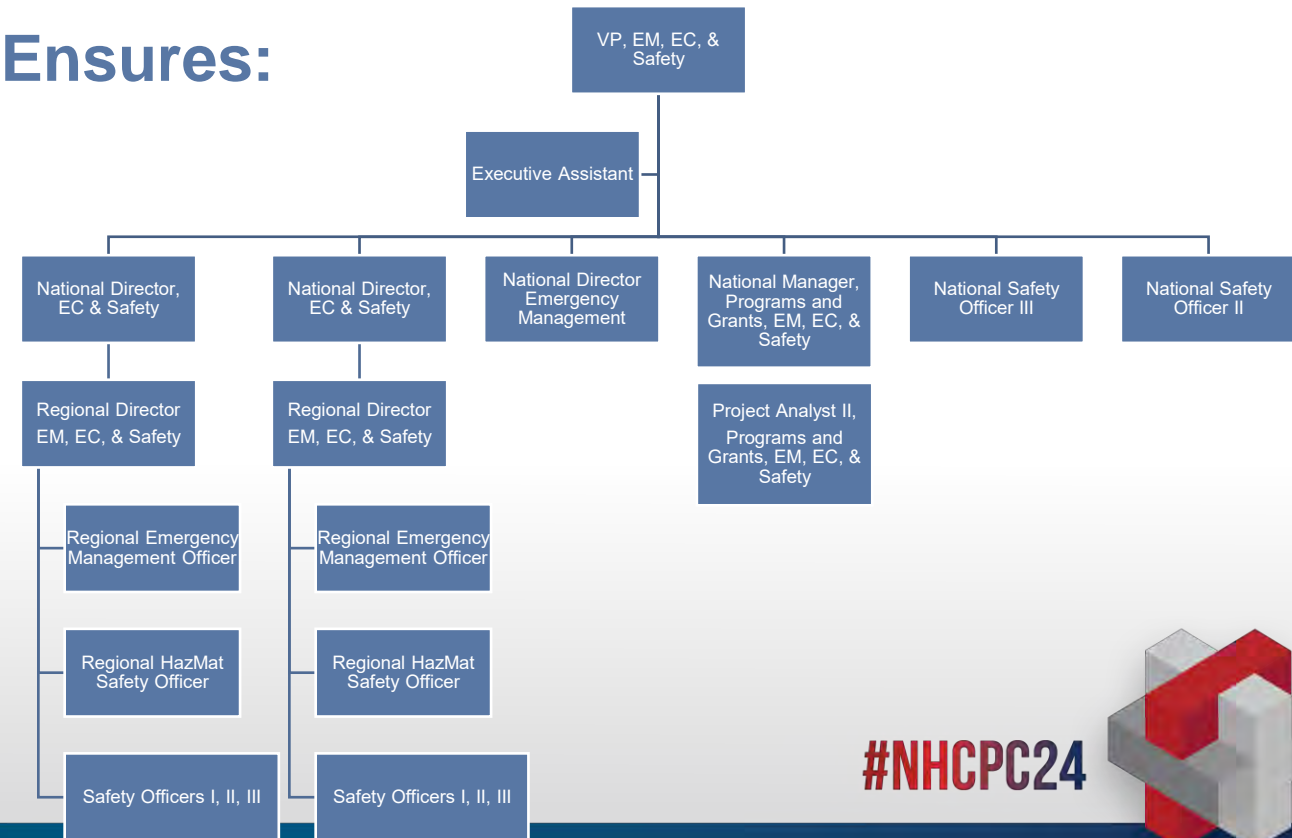
Direct Chain of Command Ensures:

Standardization

Optimization

Communication

VP, EM, EC, & Safety

Executive Assistant

National Director, EC & Safety

National Director, EC & Safety

National Director Emergency Management

National Manager, Programs and Grants, EM, EC, & Safety

National Safety Officer III

National Safety Officer II

Regional Director EM, EC, & Safety

Regional Director EM, EC, & Safety

Project Analyst II, Programs and Grants, EM, EC, & Safety

Regional Emergency Management Officer

Regional Emergency Management Officer

Regional HazMat Safety Officer

Regional HazMat Safety Officer

Safety Officers I, II, III

Safety Officers I, II, III

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Polling Question #1

> How has your organization been impacted by polar vortex events? (select all that apply)

- ❑ Financial Impact (overtime, lost revenue through delayed or cancelled procedures, infrastructure repairs, etc.)
- ❑ Infrastructure Impact (power failures, water system failures, sprinkler system damage, etc.)
- ❑ Business Impact (loss of patient volume, damage to organization's reputation, etc.)
- ❑ No impact

How has your organization been impacted by polar vortex events? (select all that apply)

Financial Impact (overtime, lost revenue through delayed or cancelled procedures, infrastructure repairs, etc.)
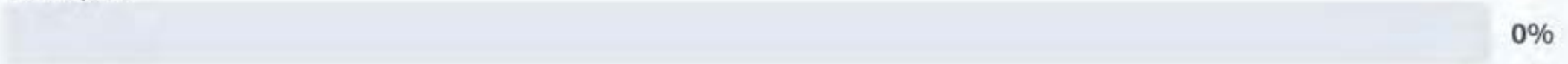
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Infrastructure Impact (power failures, water system failures, sprinkler system damage, etc.)
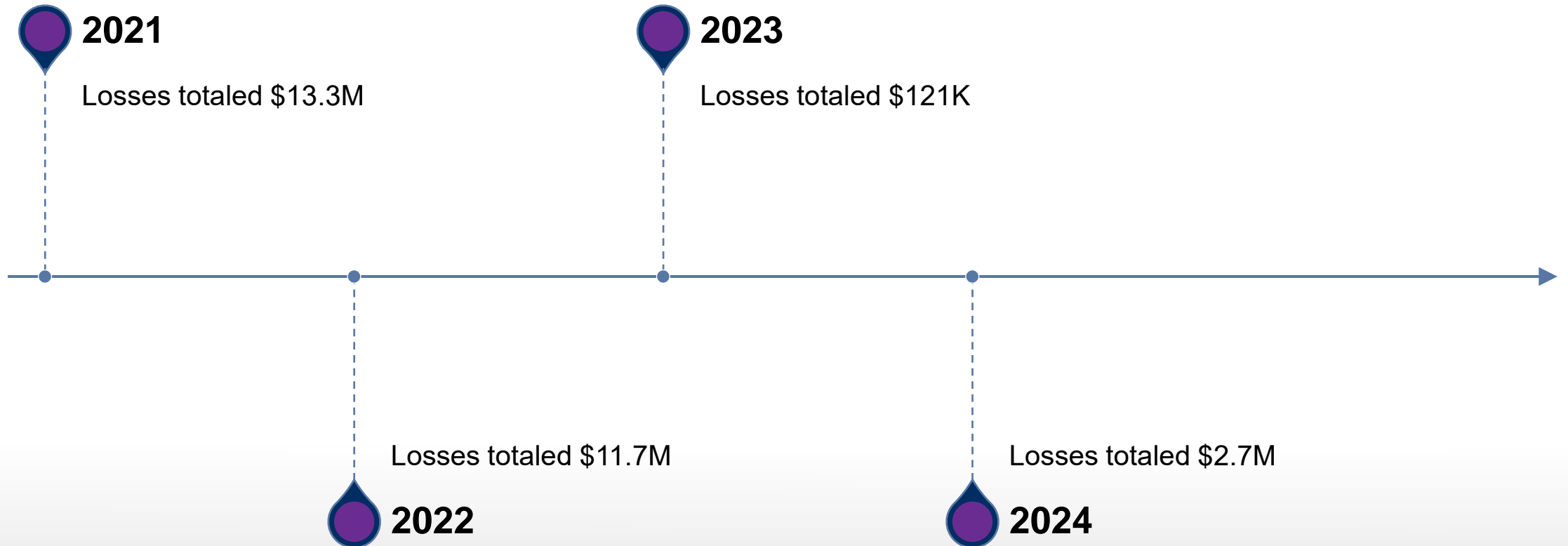
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Business Impact (loss of patient volume, damage to organization's reputation, etc.)

0%

No impact

0%

Why do we worry about polar vortex events?

2021

Losses totaled $13.3M

2023

Losses totaled $121K

Losses totaled $11.7M

2022

Losses totaled $2.7M

2024

Polling Question #2

> Does your organization have standard operating procedures (SOPs) or emergency response plans (ERPs) that are consistent across all levels of the organization (facility, local, statewide, national, etc.)?

❑ Yes
❑ No
❑ I don't know

Does your organization have standard operating procedures (SOPs) or emergency response plans (ERPs) that are consistent across all levels of the organization (facility, local, statewide, national, etc.)?

Yes

0%

No

0%

I don't know

0%

Disrupting the Cycle of Loss

> National workgroup created in 2023 focused on mitigating impacts from polar vortex events
>> Team comprised of emergency management and facilities management subject matter experts
>> All geographic areas of the health system represented
>> Charged with developing standard operating procedures to prepare for, respond to, and recover from polar vortex events

Development of the IPRG

› Extreme Cold Incident Planning and Response Guide (IPRG)
  » Built off the Hospital Incident Command System (HICS) Incident Response Guides (IRG) formatting
  » Planning section outlines activities to be completed prior to an extreme weather event
  » Response section broken into two parts:
    • 48-24 hours prior to event
    • Imminent event and day of event

› Deployed for use in preparation / response to the 2024 polar vortex event

Mitigation and Preparedness

› Ongoing activities to be conducted well in advance of an extreme weather event

» Maintenance of roof drains and landscaping

» Validating process for generator fuel deliveries

» Testing of emergency equipment throughout the facility

» Locations identified to house staff, discharged patients, and community members

MITIGATION/PREPAREDNESS

EXTREME COLD WEATHER MITIGATION AND PREPAREDNESS CHECKLIST

Purpose: Winter storms or hazardous winter weather is likely to occur as indicated in the facility's Hazard Vulnerability Assessment (HVA) and is a threat to life or property.

Risk Areas: Damage to facilities (physical plant), from flooding or wind; potential for roof collapse from weight of heavy snow fall; loss of power or heat (boilers); the hospital/ Healthcare Facility (HCF) is inaccessible in and out due to impassable or closed roads; loss of power and resultant disruptions in the environment of care; disruptions of supply lines; difficulty for staff to report to work, travel, and conduct home visits.

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Response

› Activities to be conducted 48 – 24 hours in advance of an extreme weather event

» Routine monitoring of weather information

» Prepare/activate hospital incident command team

» Validate communication methods with snow/ice removal team

» Review current supply levels for all departments

» Review housing plan for staff remaining on site

» Develop staffing plan for rounding in areas typically unoccupied (i.e. closed units, construction areas, business offices, etc.)

» Review plan for documenting response related costs

» Obtain/deploy supplemental heating devices if available

EXTREME COLD WEATHER RESPONSE CHECKLIST

Purpose: To prepare hospital/ HCF for a significant winter storm or hazardous winter weather that is likely, imminent or occurring. Preparations for the storm can be enacted to mitigate the threat to life or property.

EXTREME COLD WEATHER WATCH (48hrs – 24hrs pre-storm)

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Response

› Activities to be conducted upon storm onset and throughout extreme weather event
  » Routine monitoring of weather information
  » Activate hospital incident command team
  » Evaluate current supply levels for all departments
  » Implement housing plan for staff remaining on site
  » Implement staffing plan for rounding to typically unoccupied areas (i.e. closed units, construction areas, business offices, etc.)
  » Communicate facility status to patients and families
  » Document all event response expenses

EXTREME COLD WEATHER RESPONSE CHECKLIST

Purpose: To prepare hospital/ HCF for a significant winter storm or hazardous winter weather that is likely, imminent or occurring. Preparations for the storm can be enacted to mitigate the threat to life or property.

EXTREME COLD WEATHER WARNING (Imminent storm/storm day)

Polar Vortex Reimbursements 2021-2024

2021

Losses totaled $13.3M

$12.6M recovered from insurance

2023

Losses totaled $121K

$91K recovered

- Applied for Public Assistance for Debris and Emergency Protective Measures

Losses totaled $11.7M

$8.5M recovered

2022

Losses totaled $2.7M

$2.6M recovered

2024

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Success Drivers in 2024 Polar Vortex

› Routine rounding of unoccupied areas and deployment of staff to typically unoccupied buildings

› Identification of vulnerable areas based on experience, implementing protective measures
  » Drained sprinkler systems and initiated fire watches in areas with minimal protection from extreme temperature

› Consistent communication between local, state, and national teams on facility status

› Standard process implemented for documenting damage expenses throughout organization

› Deployment of standard cost center for additional personnel hours

› Early procurement of ice melt supplies able to withstand extreme temperatures

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Polling Question #3

> Does your organization have a standard process or system for tracking expenses related to extreme weather event responses?

❑ Yes
❑ No
❑ In development

Does your organization have a standard process or system for tracking expenses related to extreme weather event responses?

(A) Yes

0%

(B) No

0%

(C) In developement

0%

FEMA Grants, Public Assistance, and Insurance Claims

FEMA Grant Programs

› FEMA has funding programs available for pre-disaster mitigation and post-disaster recovery

› Maximizing funds available requires a structured program and training before the disaster strikes

» Program management coordinates with regional emergency management officers, site safety officers, and local hospital incident command teams

› Program structure can be applied to other government and non-government programs

› Process is useful during the insurance claim process

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FEMA Grant Programs

› FEMA Public Assistance
(after a presidentially declared disaster)

» Provides supplemental grants to nonprofit entities enabling organizations to quickly respond to and recover from major disasters or emergencies
» Cost-share – 75% federal/25% non-federal

› Hazard Mitigation Grant Program (HMGP)

» Funding enabling organizations to rebuild in a way that reduces or mitigates future disaster losses in their communities
» Cost-share – 75% federal/25% non-federal

› Management costs available

» Up to 5% of the total obligated amount
» Costs for indirect and administrative grant management

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Our Process

› Launched enterprise emergency management program in 2015 and identified opportunity for public assistance after the 2016 hurricane season

› Identified opportunities in the areas of grants, proper filing, capturing expenses, and compliance with FEMA requirements

› Hired a program manager to develop a multi-disciplinary team, a disaster response guide, a process for collecting data, debris-specific documentation, and standardized activity logs for emergency protective measures

› Continued work on best practices, including developing a module for all staff to review regarding requirements and documentation collection

› Added a program analyst in 2020 to provide additional support

› Ongoing search for additional grant opportunities (such as security grants)

Documentation

› National approach for education and training for hospital incident command teams

› We document time and expenses related to the disaster
  » The site(s) establish a department code for all time and expenses, capturing all expenses related to the disaster
  » The facilities' related items are documented via our work order system so we can track time, materials, and equipment
  » Incident command forms track attendance, activities, and procurement processes

Disaster Guide and Module

> Disaster Response and Recovery Annex

>> Incident Reimbursement

- Guidance includes:
  - Eligible expenses
  - Procurement
  - HICS forms and use
  - Required documentation

> In 2023, we developed a learning module for leaders to review before disasters to understand documentation needs, resource allocation, assets, safety, emergency management, and responsibilities during an emergency

Incident Reimbursement

Attachment F – Disaster Response and Recovery Annex

Date: 30 April 2021

Federal Emergency Management Agency Reimbursements & FM Global Insurance Claims: The Process

Other Benefits

› We use a similar process for insurance claims

  » You cannot "double dip" insurance and FEMA assistance

› FEMA pays up to 5% of assistance/grant value for the administration of the process

  » Indirect and direct administrative costs associated with requesting, obtaining, and administering a grant

  » Obligated $497K and potential for $8M based on the projects we are currently working on

Public Assistance Grant Dollars

› Applied for public assistance for 13 disasters (data does not include COIVID-19 pandemic)
  » 9 hurricanes, 3 severe storms, and 1 winter storm
  » Since 2017, we have applied for over $18M and received over $10M to date
    • Includes the FEMA cost-share (75% - 100% depending on the disaster)
    • Several projects are ongoing with FEMA, and we anticipate payment in the next few months
  » Types of categories
    • A – Debris
    • B – Emergency protective measures
    • E – Buildings and equipment
    • G - Parks, recreational facilities, and other items

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Hazard Mitigation Grant Dollars

> Applied for two grants for damages from Hurricane Irma

>> Applied for and were awarded over $88M

- Currently working on the projects
- Cost-share 75% - 25%

Resources

- https://www.fema.gov/assistance/public

- https://www.fema.gov/grants/preparedness/nonprofit-security

- https://www.fema.gov/grants/mitigation/hazard-mitigation

- http://cdphready.org/fema-reimbursement-for-acute-care-hospitals-guide-2/

Questions?

Jeff Butler

Regional Emergency Management Officer

Jeff.Butler@medxcel.com

(847) 736-7256

Katie Brymer

National Manager Program and Grants

Katie.Brymer@medxcel.com

(512) 924-8548

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NATIONAL HEALTHCARE COALITION
PREPAREDNESS CONFERENCE

*Visions of Progress: Sustainable Strategies for
Emergency Preparedness & Resilience*

Presented By:

MESH

**KC Strong: The Events and
Aftermath of the Superbowl
Celebration Mass Shooting**

Steven Hoeger
Director, Corporate Emergency Management & Compliance;
University Health
Chair, MARC Health Care Coalition

Jennifer Sutherlin, MPH, BSN
Emergency Services Health & Medical Program Manager,
Missouri Region A Readiness & Response Coordinator;
Mid-America Regional Council

Neither presenter has any financial disclosures.

This presentation contains videos and audio that may be disturbing to some. Audio contained in this presentation is not to be shared with the general public.

- Counties: 13 (16 with KS)
- Population: 1.45M
  - *2.3M with Kansas Metro*
- Member Organizations: 267
- Active & engaged membership
- Work closely across state lines-
   (Kansas City Metro)
- Urban and rural
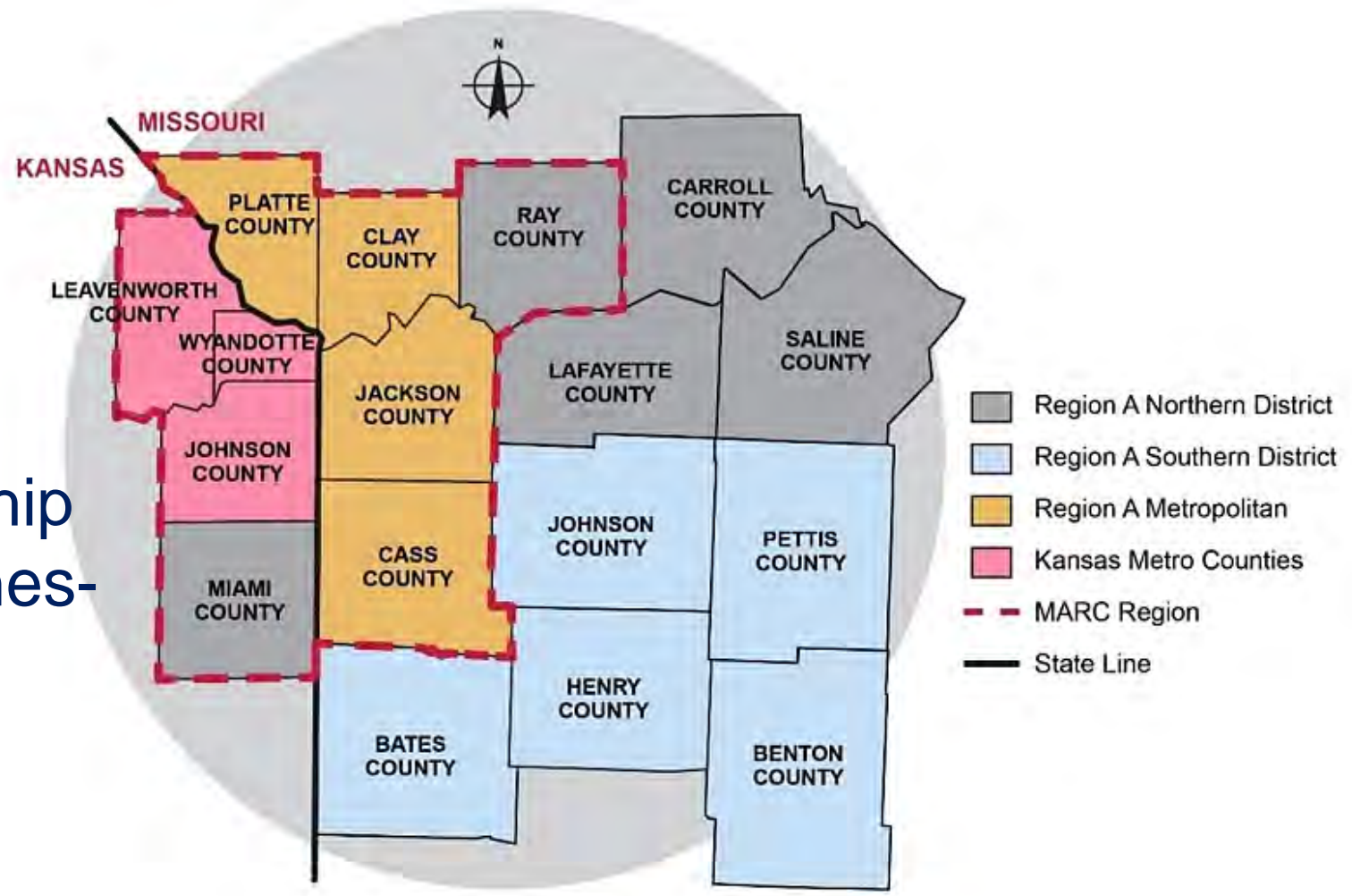
MARC HCC Mission

The mission of the MARC HCC is to *prepare and coordinate health and medical response and recovery to the threats and hazards the region faces to help communities during emergencies receive the care they need*; decrease deaths, injuries, and illnesses resulting from emergencies; and *promote health care delivery system resilience.*

This will be done through a cooperative strategic and operational annual assessment and planning process, identifying regional health care threats, gaps, and vulnerabilities that could impede delivery of healthcare; establishing collaborative and integrated mitigation strategies and implementing those strategies through *coordinated integrated planning and training, information and resource sharing, and exercising plans, systems and processes.*

MARC RHSCC Circle of Friends

The MARC Health Care Coalition exists as the health and medical arm of the Regional Homeland Security Coordinating Committee. This structure allows collaboration and coordination across disciplines and agencies to ensure inclusive planning and response.
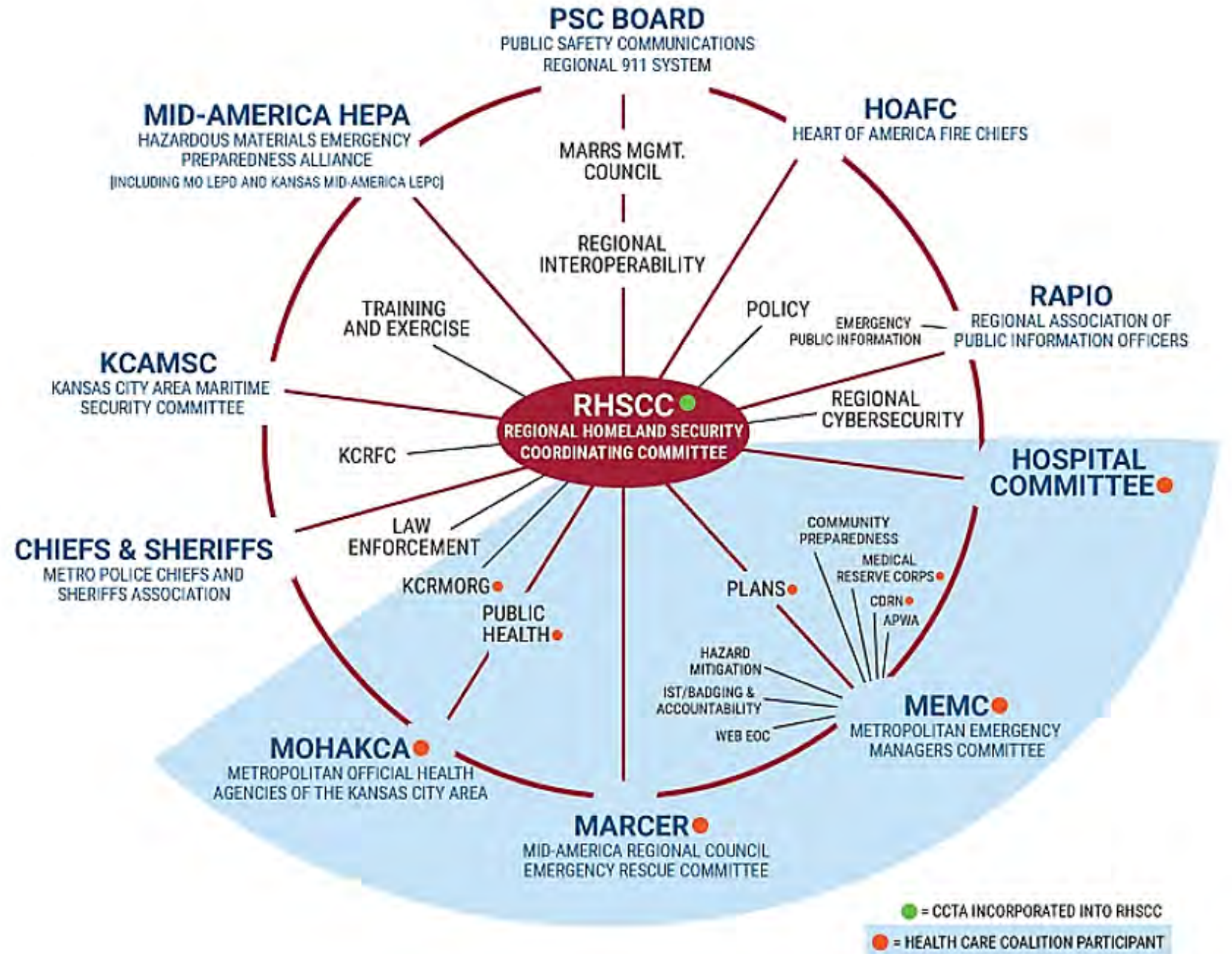
What *is* the role of the coalition?

'HCCs collaborate to ensure each member has what it needs to respond to emergencies and other events, including medical equipment and supplies, real-time information, communication systems, and educated and trained health care personnel in the event of an emergency,' (ASPR).

Core Functions

Assessment & risk mitigation	→	Information sharing	→	Specialty care & coordination
Respond	→	Health care workforce support	→	Resource management
Training, Exercise & Evaluation	→	Continuity & Recovery	→	Organizational Development
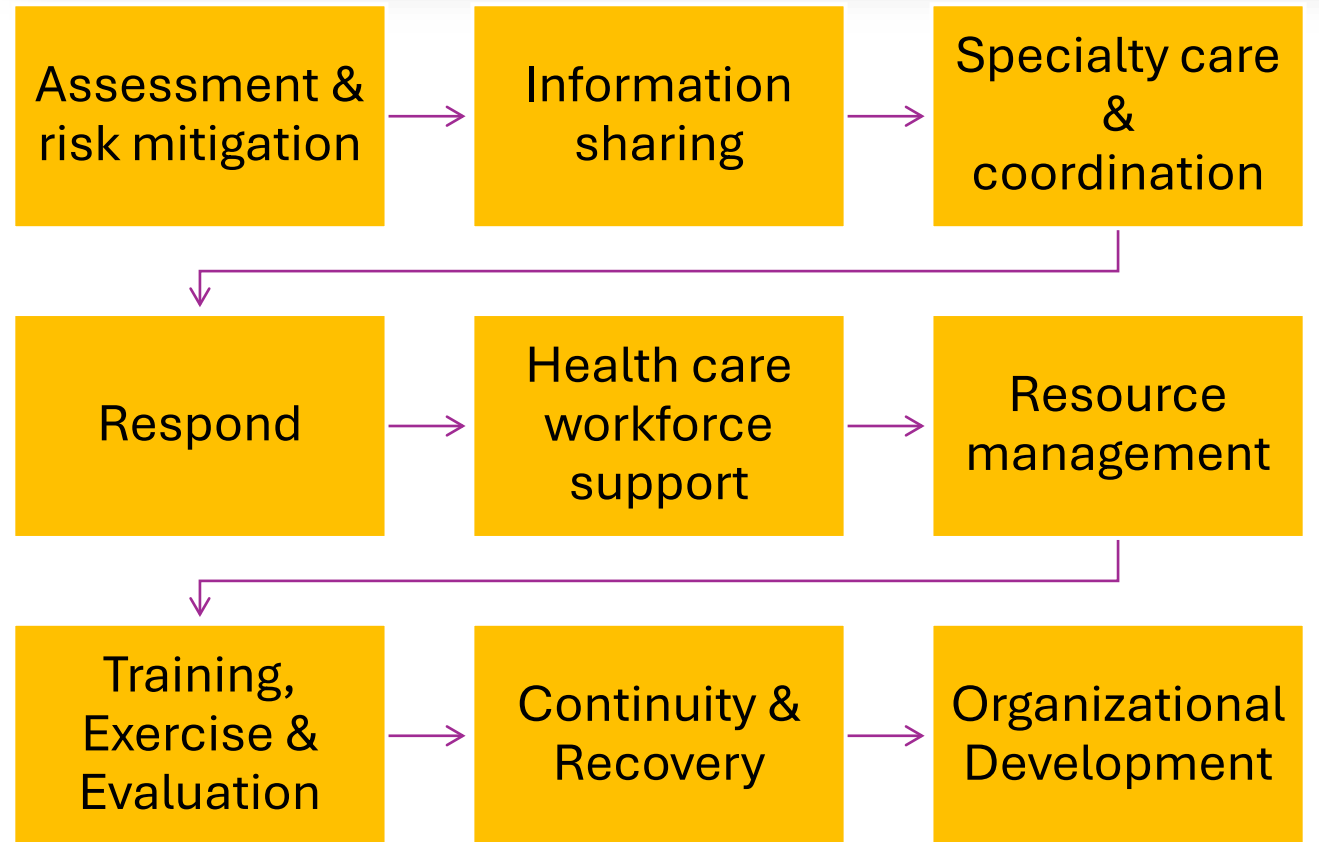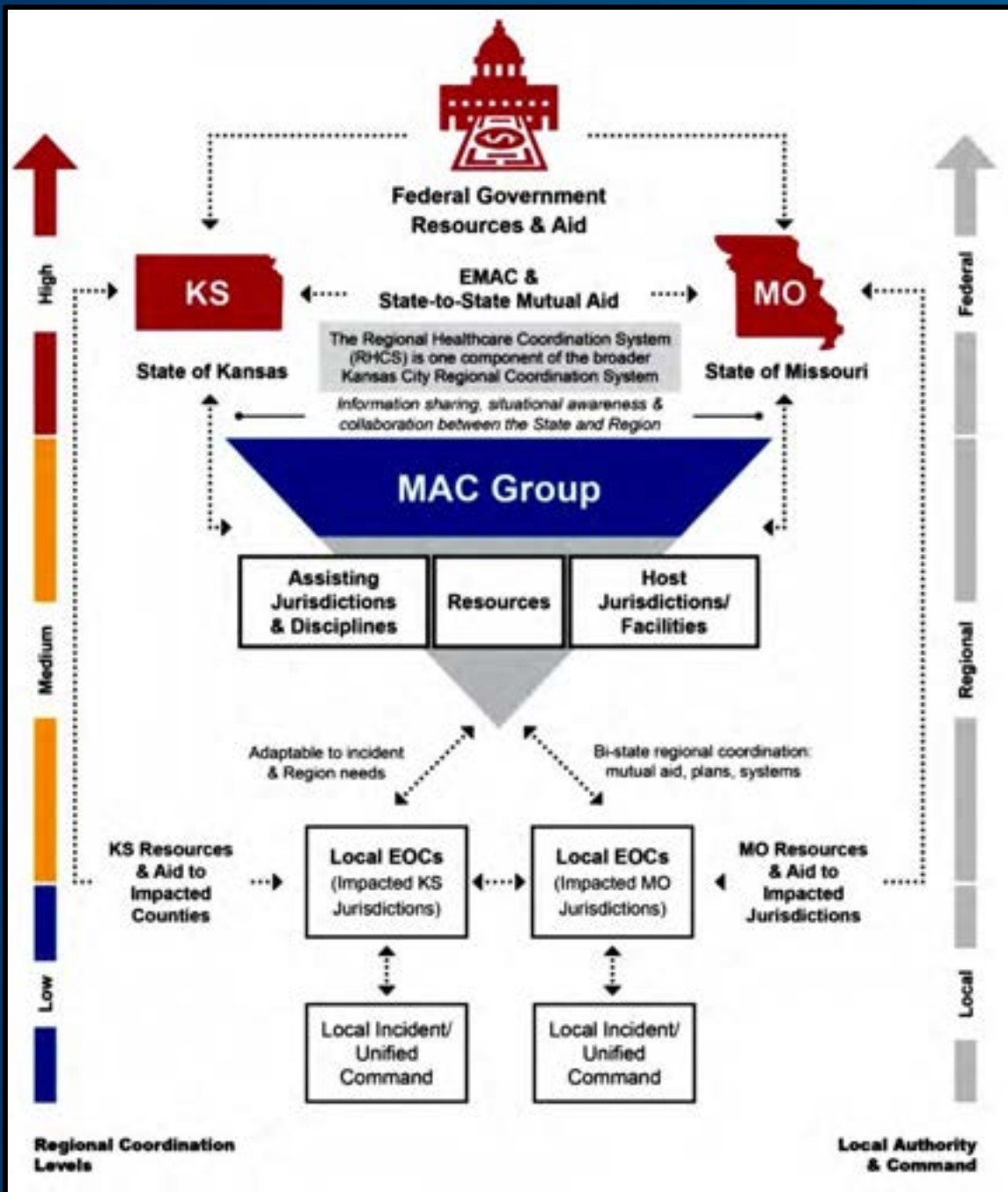
Regional Healthcare Coordination System (RHCS)

The information sharing and coordination mechanism for the MARC HCC Response Plan is the Regional Healthcare Coordination System (RHCS), which specifically addresses public health and medical needs within the Region. The nature of the incident/event and corresponding and evolving prevention, preparedness, mitigation, response and recovery needs will largely determine which participants (i.e. coalition members) will make up the RHCS at any given time during a public health and/or medical incident/event.

Key Components of the RHCS

Coordinate/ Support Impacted Local ESF 8

Continue Assessing the Situation

Activate Regional Healthcare Coordination Center (RHCC), as needed

Gather and Share Information with MARC HCC members

Determine if there is a recognized need for regional support/ coordination

MARC HCC (via the RHCS and RHCC) Assists in Identifying/Prioritizing/ Coordinating Resources

Triggers that initiate the MARC HCC Response Plan

Significant Public Health and/or Medical Incident Occurs or is Anticipated

MARC HCC Duty Officer receives a telephone call (913-608-9425) from a HCC member requesting monitoring or activation of the HCC Response Plan

MARC HCC Duty Officer notifies the MARC HCC Threat Assessment Team via eICS

MARC HCC Threat Assessment conducts a threat assessment via Conference Call or In-Person Meeting Call

Note: Additional attendees may include the impacted HCC member(s) and/or Local ESF8

MARC HCC Threat Assessment determines the appropriate response level and appropriate next steps.

Potential Next Steps:

- No Further Action Necessary
- Continue Monitoring
- Activation of Regional Healthcare Coordination

MARC HCC Threat Assessment notifies the MARC HCC members via eICS and/or WebEOC and/or email of the:

- 1. Situation
- 2. Response Level
- 3. Next Steps

(as appropriate)

Activation of RHCS Needed

Threat Assessment Team (TAT)

- MARC HCC Chair

- Co-Chairs of the MARC RHSCC Hospital Committee (KS & MO)

- Co-Chairs of the MARC Emergency Rescue Committee (MARCER-EMS/Ambulance; KS & MO)

- Co-Chairs of the MARC RHSCC Public Health Subcommittee (KS & MO)

- Chair and Vice Chair of the Metropolitan Emergency Managers Committee (MEMC, KS & MO)

- Chair of the Kansas City Mortuary Operational Response Group (KCRMORG)

- HCC Readiness and Response Coordinators (KS & MO)

- MARC HCC Duty Officer(s)

- Clinical Advisor(s)

- Pediatric Medical Advisor

- MO Region A EMS Mutual Aid Coordinator

- others may be added to these calls as needed, dependent on the nature of the incident (e.g., impacted organization, agency, or jurisdiction)

Team members evaluate and discuss next steps based on population, agency, and regional impacts.

Each discipline represented evaluates based on their scope, expertise and any possible resources they may have to assist if needed.
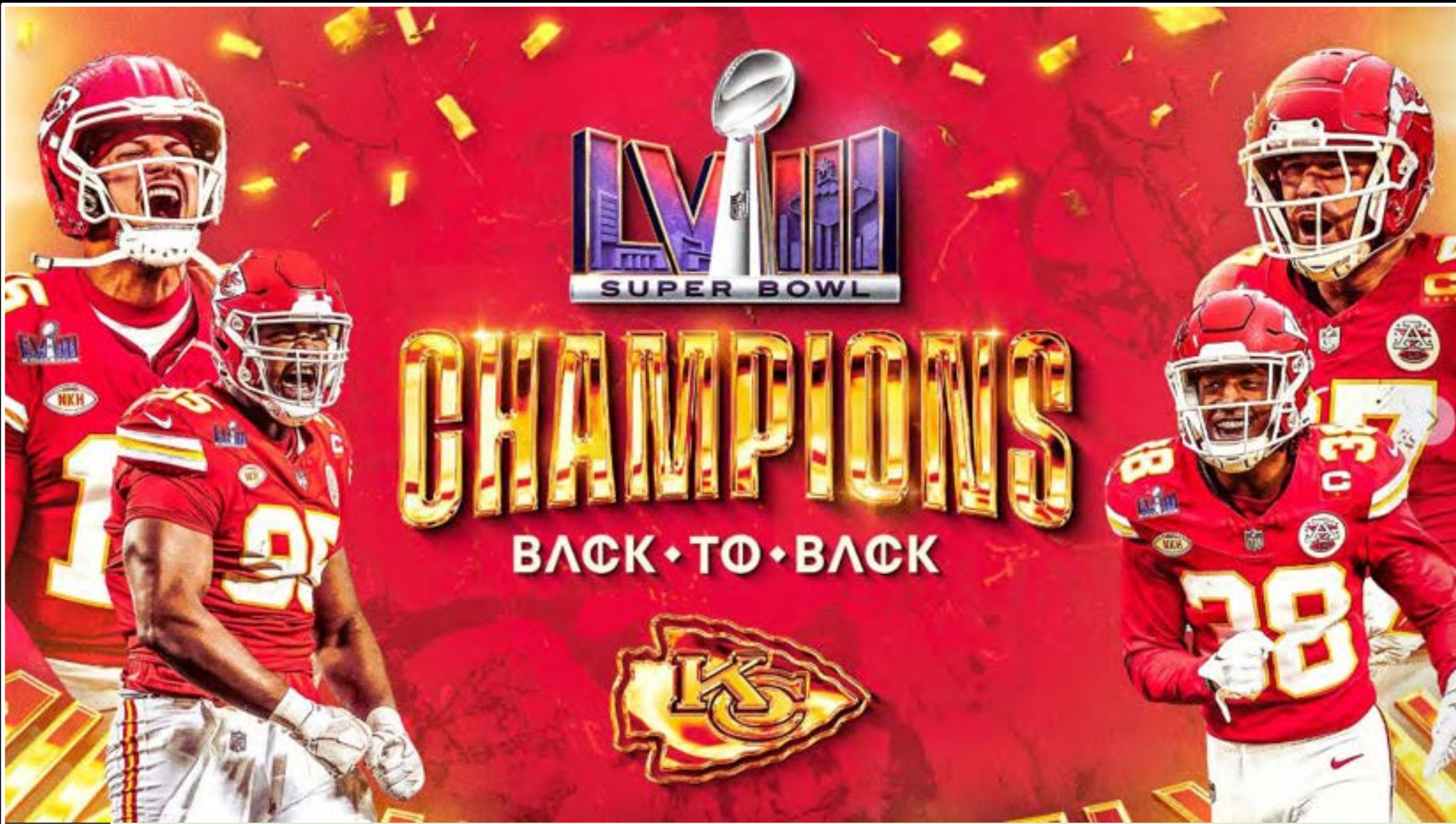
KC Championship Parade & Victory Rally: February 14, 2024

David Eulitt/Getty Images, 02/14/2024

SUPERBOWL PARADE TIMELINE

● ● ● ● ●

Parade

Post-Event

Pre-Planning

Event

Lessons
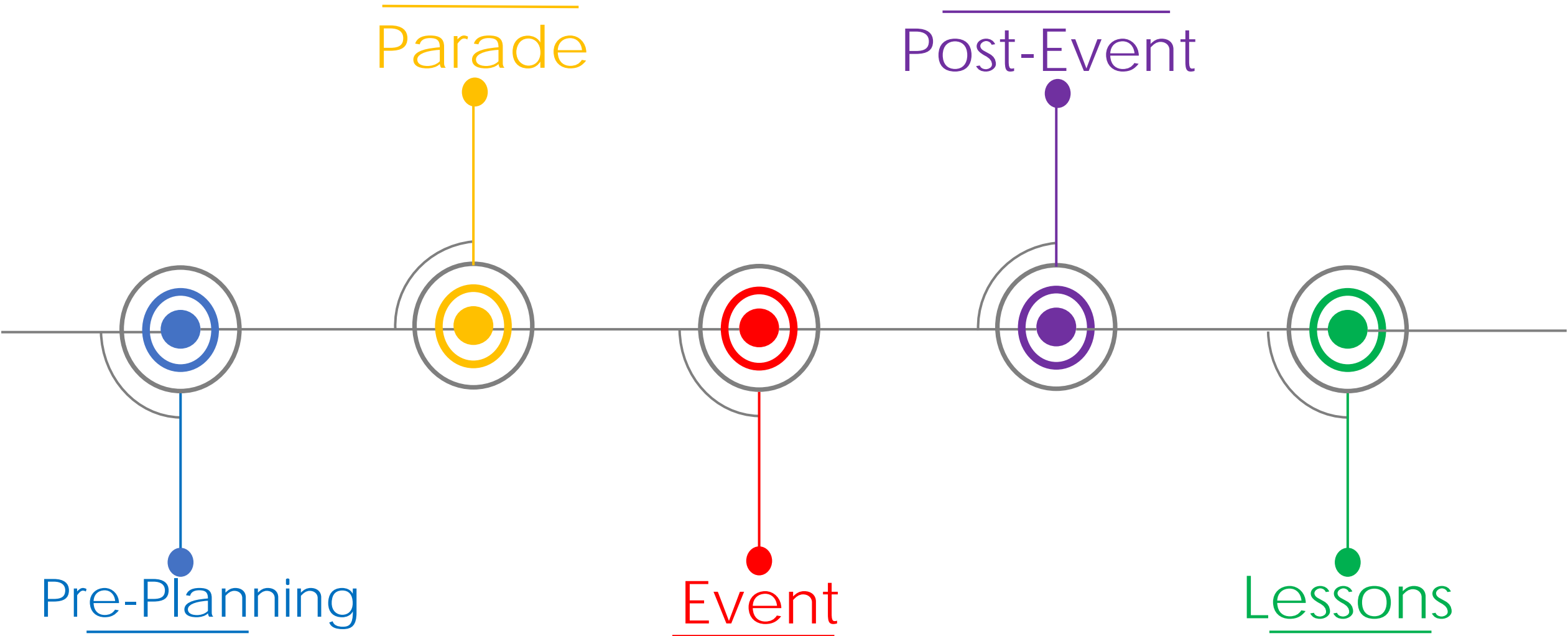
SUPERBOWL PARADE TIMELINE

Pre-Planning

HCC Pre-event planning

- eICS
  - Reminders re: access
  - Event activation
- Street closure information
- Parade Map/Route
- RHCC Staffing
- Hospital Bed polling

SUPERBOWL PARADE TIMELINE

Parade

Pre-Planning

Sports Business Journal, Feb 14, 2024
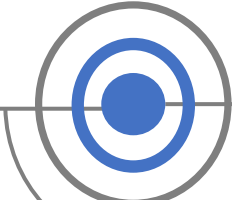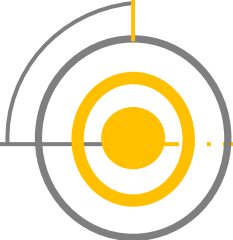
Parade

- Situational Awareness Updates (eICS)
- Connected to boots on the ground
- Continuous monitoring
  - City Cameras
  - Live broadcasts
  - Radio Traffic
  - Web EOC

SUPERBOWL PARADE TIMELINE

Parade

Pre-Planning

Event

Jamie Squire-Getty Images, Feb.15, 2024

© AFP via Getty Images
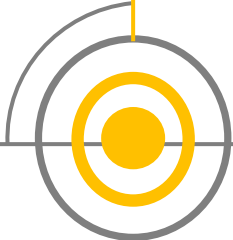
1:51 PM
"1190...

WE HAVE SHOTS FIRED JUST WEST OF THE STAGE"

Transition to response.

HCC Response Actions: Information Sharing

Feb 14 2024 12:27	Duty Officer MARC HCC	Situational Update: Continuing to monitor WebEOC, radio traffic, EOC feeds, etc. No significant health/medical events.
Feb 14 2024 13:16	Duty Officer MARC HCC	Situational Update: Increase in activity at east medical tent. EMS crews load balancing. RHCC in contact with EMS Mutual Aid Coordinator and DHSS contact at DMAT. No immediate needs.
Feb 14 2024 13:59	Duty Officer MARC HCC	Major Event: Confirmed multiple shooting. 9 victims at this time.
Feb 14 2024 14:04	Duty Officer MARC HCC	Notification: MCI Alert Issued via EMResource for shooting at area in and around Union Station.
Feb 14 2024 14:09	Duty Officer MARC HCC	Notification: Eight victims in medical tent awaiting transport to hospitals.
Feb 14 2024 14:09	Jennifer Sutherlin	Message Posted: "MCI ALERT-": "hospitals please complete MCI query STAT. Multiple patients. Situation ongoing." was sent with High priority.
Feb 14 2024 14:19	Jennifer Sutherlin	Situational Update: Current estimate 10 total victims. Situation ongoing.

Credit: Jamie Squire

The first 10 minutes

The First 10 Minutes

Additional Reports

LIVE

1:58
60°

41
KSHB

41
KSHB

HCC Response Actions: Information Sharing

Patient transport locations (when known)

Scene information

Safety

Situational awareness

HICS 254r- Patient Tracking for Reunification Form

MARC-HCC
MID-AMERICA REGIONAL COUNCIL
HEALTH CARE COALITION
Collaborating to Advance
Health Care System Resilience

Facility Name:		Operational Period:		Incident Location(s)	
		Date / Time Prepared:			- Site 1
Incident Name:		Submitted By:			- Site 2
		Date / Time Submitted:			- Site 3
		Contact Phone #:			

Identifier	Triage Category	Last Name	First Name	DOB/Age	Sex	Only Complete Below Fields if Patient Identity is Unknown				Incident Location	Disposition	Transfer Location
						Race	Eye Color	Hair Color	Additional Identifier(s)			

HCC Response Actions: Patient Tracking

HICS 254r- Patient Tracking for Reunification RHCC Incident Summary

Incident Name:	Chiefs Parade/Rally MCI	Date/Time Prepared:	2/14/2024
Incident Date:	2/14/2024	Distribution:	
RHCC Location:	KCMO EOC	Prepared By:	Jennifer Sutherlin
Notes:			

Sheet Name	Hospital/Facility Name	Patients Received	Triage Category					Disposition				
			Unknown	Green	Yellow	Red	Black	In Process	Discharged	Admitted	Transferred	Morgue
	Incident Totals =	40	14	10	7	9	0	12	8	2	1	0

HCC Response Actions: Patient Tracking

Patients were seen at 10 different facilities
- Gun shot wounds
- Fleeing/trampling injuries
- Behavioral health
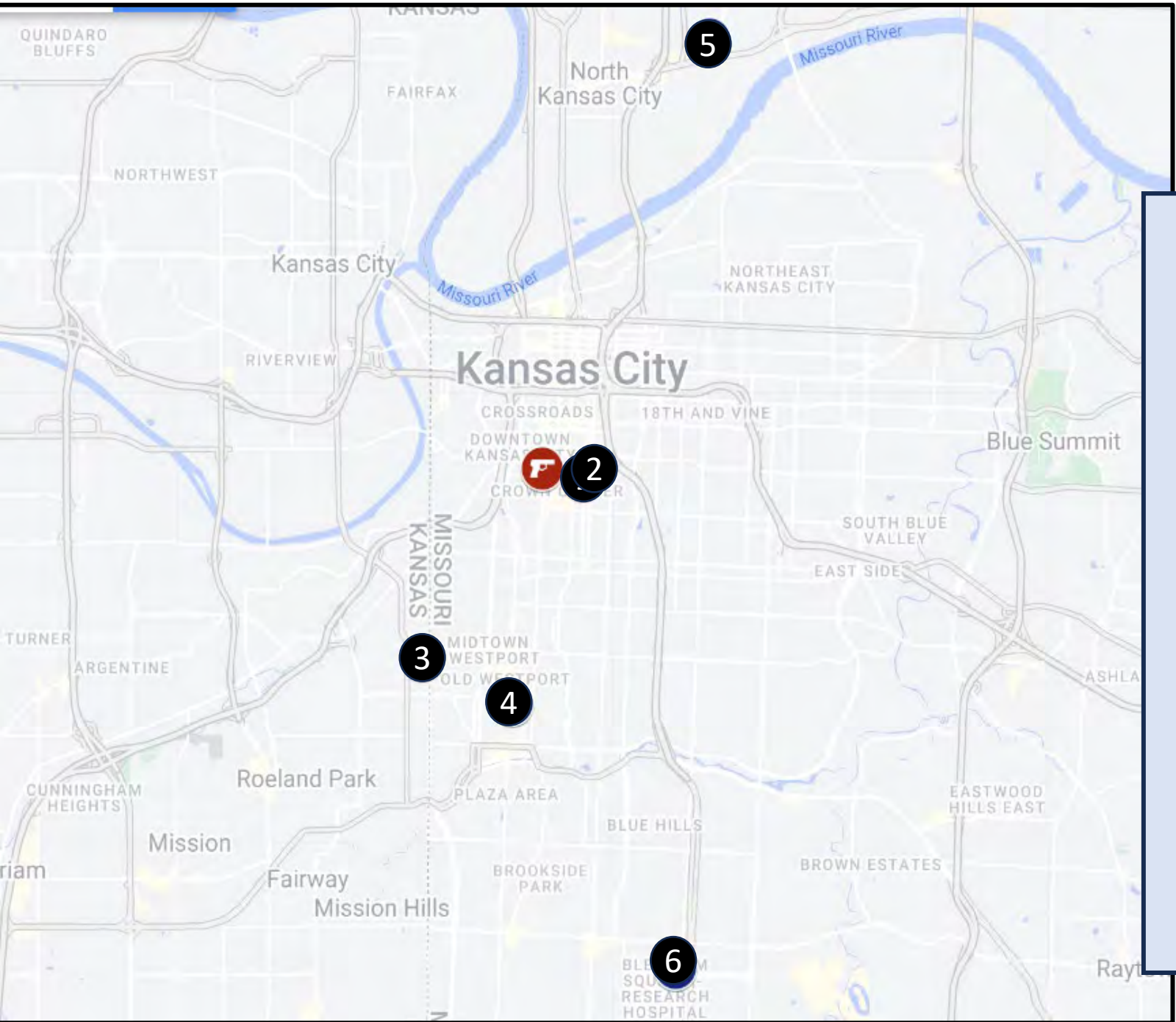
1 — **Children's Mercy Hospital**
Level 1 Trauma; 0.8 Miles

2 — **University Health-TMC**
Level 1 Trauma; 0.8 Miles

3 — **The University of Kansas**
Level 1 Trauma; 2.8 Miles

4 — **Saint Luke's Hospital-Plaza**
Level 1 Trauma; 3.4 Miles

5 — **North Kansas City Hospital**
Level 2 Trauma; 6.6 Miles

6 — **Research Medical Center**
Level 1 Trauma; 6.8 Miles
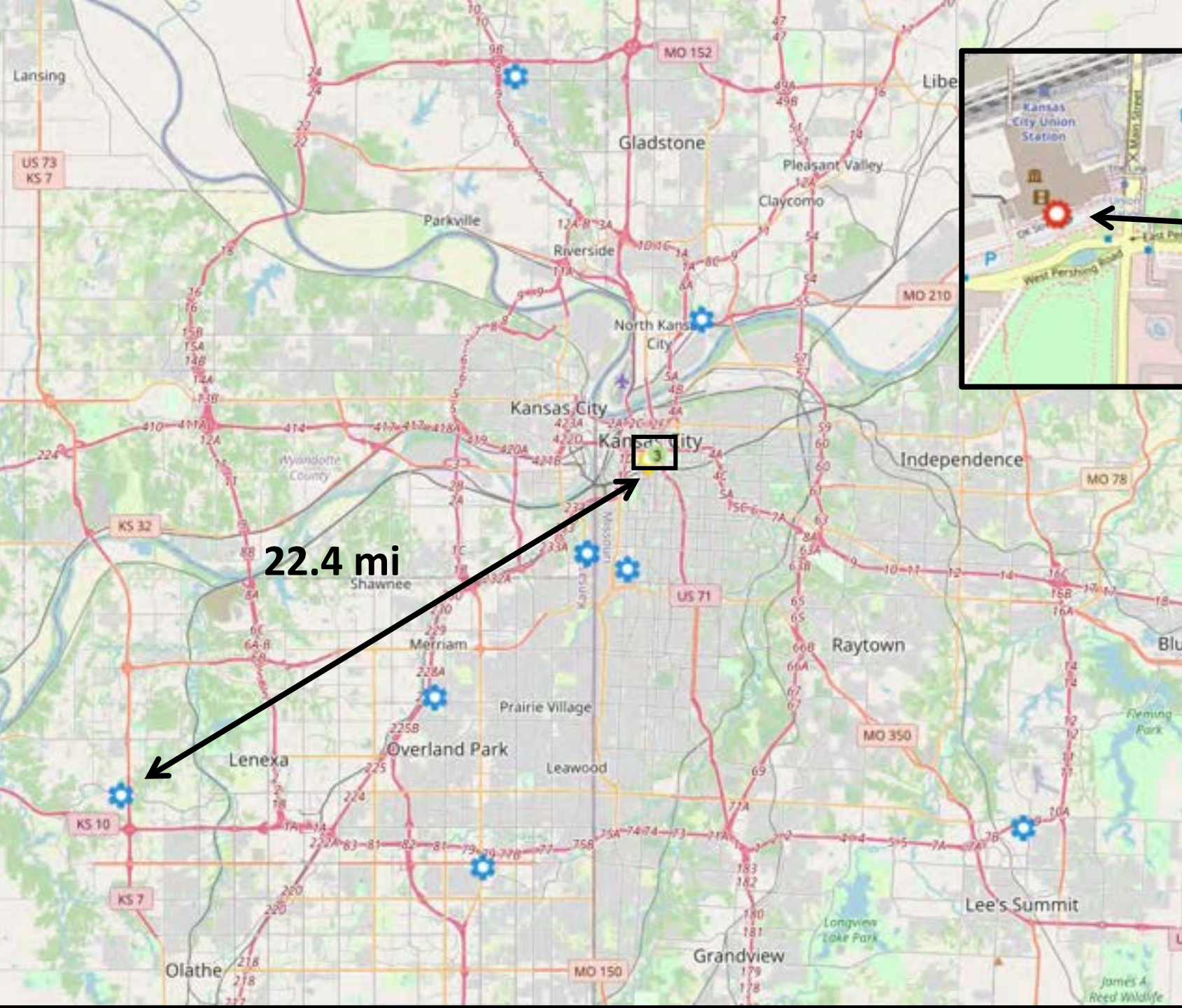
0.8 mi

22.4 mi

Casualty distribution
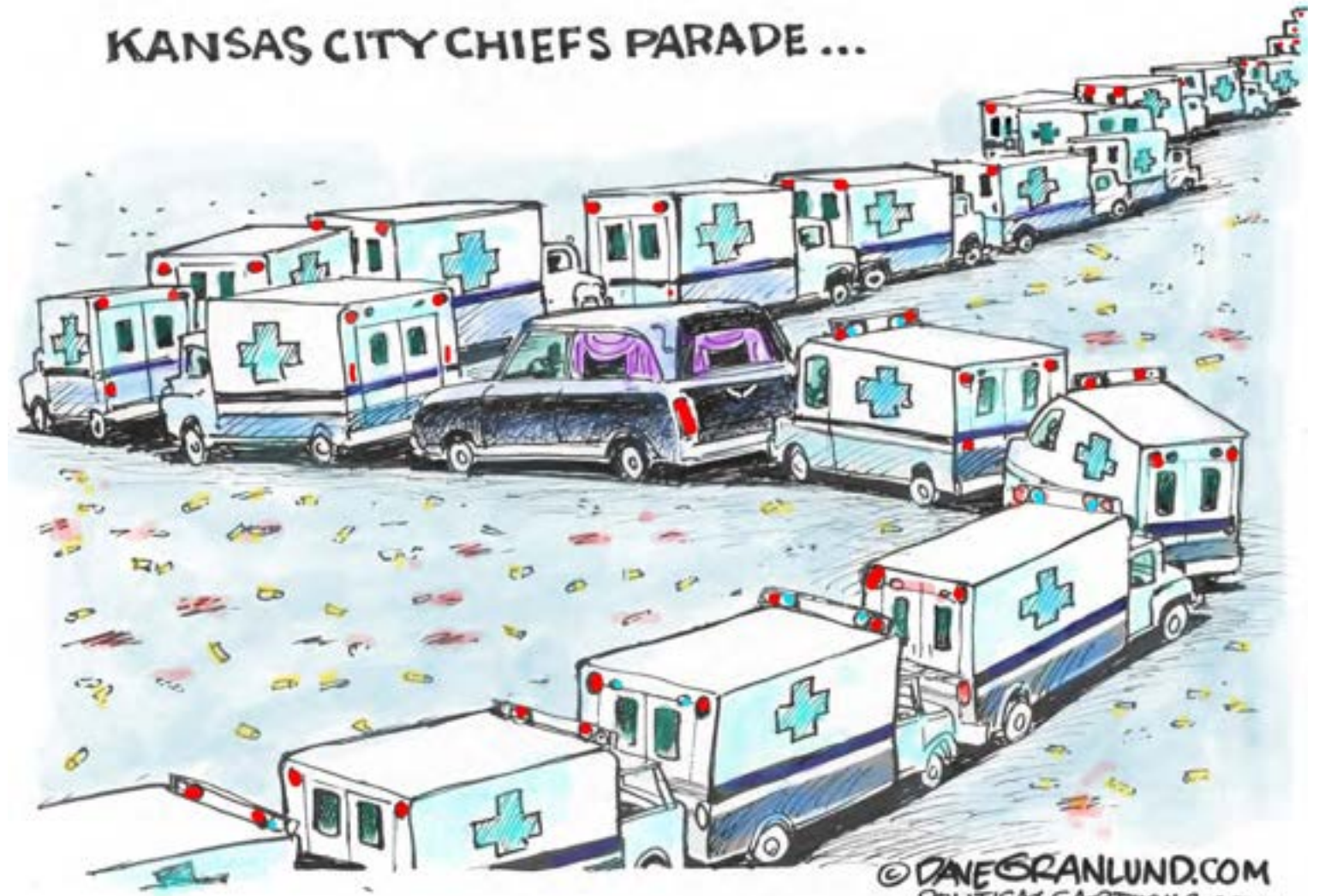
SUPERBOWL PARADE TIMELINE

Post-Event
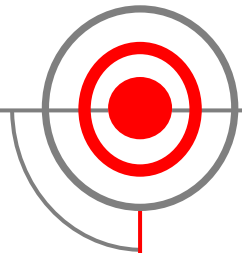
Event
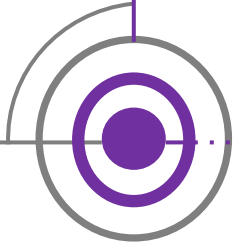
A. Spoerre, Missouri Independent.

Regional Debrief & Hotwash February 15th, 2024

- 76 participants
  - Hospitals
  - Public Health
  - EMS
  - Emergency Management
  - Missouri Department of Mental Health (DMH)
  - Missouri Dept. of Health & Senior Services (DHSS)
  - Sheriff's office
  - Community Disaster Resiliency Network (CDRN)
  - Home care/hospice representative (KCRHCA)
  - Kansas Metro HCC
  - Missouri DMAT
  - Fusion Center

SUPERBOWL PARADE TIMELINE

Post-Event

Lessons

Strengths

Relationships, relationships, RELATIONSHIPS!

Exercises are critical.

Real time information sharing is invaluable.

Proximity is key.

Improvement Planning

Duty Officer radios

Transport officers/information

Behavioral Health
1) Understanding coverage short term
2) Ensuring coverage long term

Pre-planned events vs. random/unexpected

Crucial Considerations

Are OUR people safe?

Media

Milestones

Thank you

December 19, 2023

- IT discovered an outside disruption to computer operations
- IT pulled the plug and shut down ALL operations
- This included not just the hospital, but all the clinics and Urgent Care
- Incident Command was initiated, downtime procedures announced
- All Leadership notified to meet for briefing
- Leadership briefed
- Liberty Hospital went Out of Service via EMResource

Immediate Objectives

- Ensure Safe Patient Care
- Establish Department Communications
- Triage all patients for possible transfer
- Go "Out of Service" for all ambulances

Local and Regional Assistance

- HCC Duty Officer reached out and a Threat Assessment Team (TAT) Call initiated

- Steve Hoeger (HCC Chair) from University Health came to Liberty Hospital to provide Incident Management support in IC

- Hospital Bed Poll done

- EMS notified of the need to transfer patients

- Liberty Fire dispatched 2 assistant chiefs (Chris Young, Pete VanNess)

- Chief Dan Manley activated the Region A Mutual Aid system, 2 strike teams sent

State and Federal Help

Missouri Hospital Association (MHA)

Missouri Department of Health and Senior Services (DHSS)

Missouri Behavioral Health Strike Team

Federal Bureau of Investigation (FBI)

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Transfer of Patients

Physicians made rounds in house and decided who needed transfer

Patients were triaged as emergent, urgent, or non-urgent

A total of 48 patients were transferred

There were 8 different EMS agencies and 8 different hospitals involved in transfers

Incident Command (IC)

- Core group of leaders staffed IC 24/7 for the first 2 weeks
- IT staffed a representative in IC to triage IT issues
- Daily briefings were held for leadership (sometimes twice a day)
- Primary IC was for operational issues – remained a physical location for 1 month
- Secondary IC was in IT, prioritizing systems restoration
- Incident Command formally demobilized 5 weeks after event

Incident Command Core Group
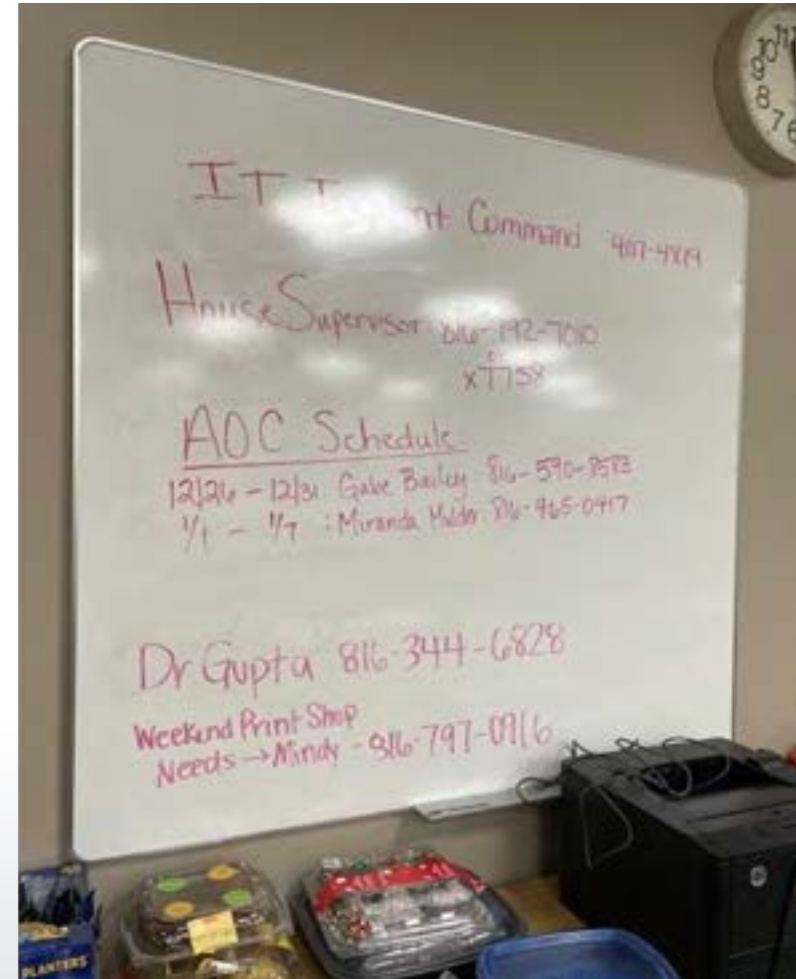
Piles and Piles of Paper!
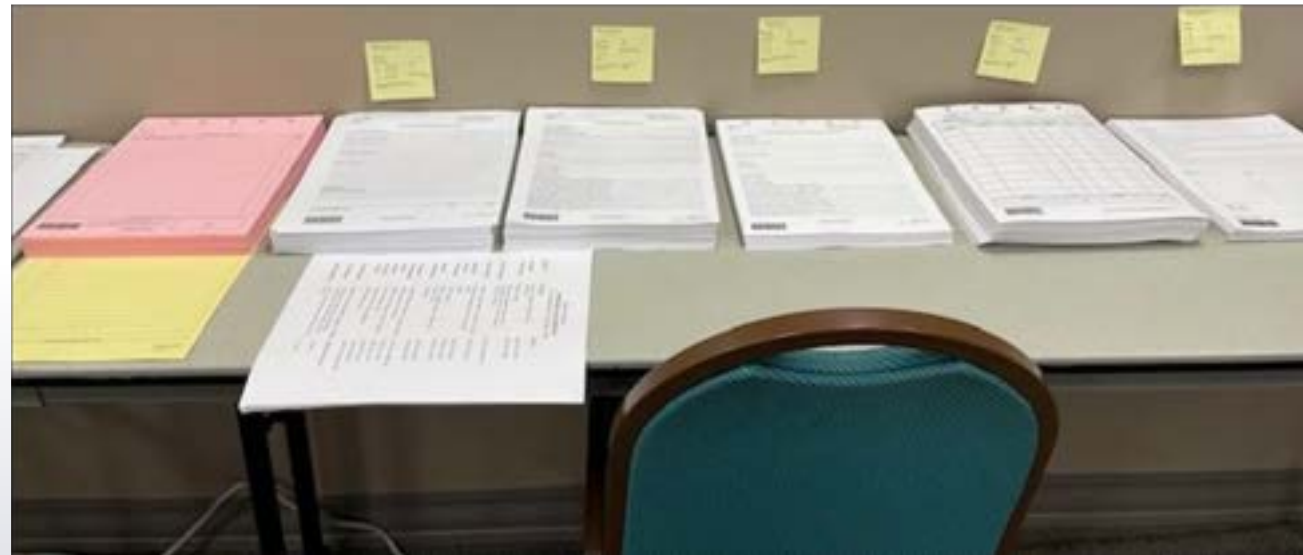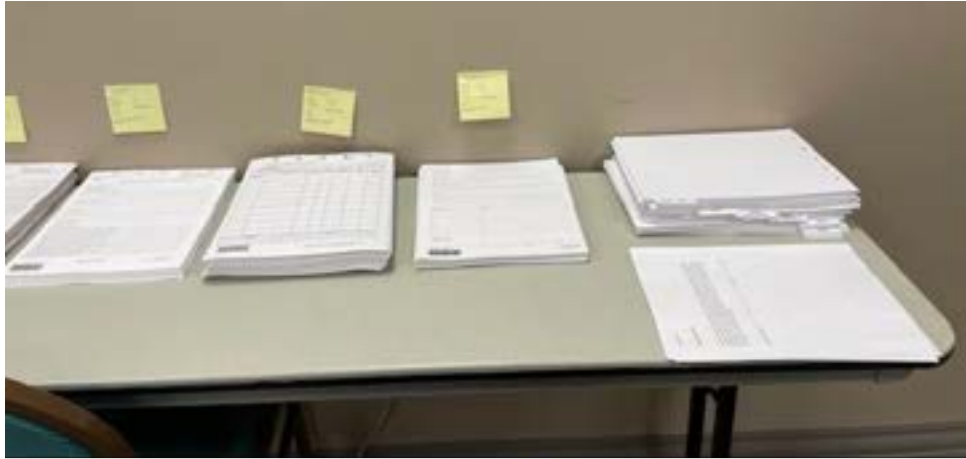
Life Without Electronics

- Every laptop, desktop, iPad, etc. needed to be screened and reimaged
- Unable to read radiology images as they are all digital
- Phones were cleared in 24 hours, so only used radios a short time
- The only way to mass communicate was via RAVE
- No EHR (Electronic Health Record), no Email

Systems Slowly Restored

- The Emergency Department opened to ambulances 3 days later but remained on TCD diversion

- The EHR was restored 3 weeks after event

- The Emergency Department went off TCD diversion when EHR was restored

- Email was restored one month after event

- Systems have been restored

Lessons Learned

Accept help when offered	Be transparent with leadership and staff	The Kansas City Healthcare Coalition is an invaluable asset	Onsite print shop was a tremendous help
Keep a back-up for policies/ procedures/ order sets	Make frequent rounds to bolster morale and reassure patients	Have a printed list of leadership & physician cell phone numbers	Communicate, Communicate, Communicate!

Lessons Learned

JIT Training for Physicians

Assign super-users for downtime documentation

Consistent leadership in Incident Command

IT Liaison in Incident Command

Have multiple ways to update staff and public

Arrange for Critical Incident Stress Management

Demobilize in Phases

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Questions?

Carolyn Wells

Carolyn.wells@libertyhospital.org

816-792-7248

Steve Hoeger

Steve.Hoeger@uhkc.org

816-404-2661

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Objective

Upon completion, attendees will gain strategies to more effectively organize their LSS by utilizing local data and addressing specific needs, enabling them to better prepare for and respond to emergencies.

Topics of Consideration

Stockpile
- What is in your stockpile?
- What is your inclusion/exclusion criteria?
- What are your local facilities storing?

Maintain
- How frequently do you rotate expired stock?
- How do you perform maintenance on products which require routine maintenance?

Updates
- How frequently do you obtain new supplies for your warehouse?
- How do you coordinate with local healthcare facilities to identify gaps?

Requests
- What is the process for requesting resources?
- How long will it take to deploy from the time of request?

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Local Strategic Stockpile Overview

Local Strategic Stockpile (LSS)

- Created and maintained by Local Health Jurisdictions.

- Collaboration and coordination with Healthcare Coalitions.

- LSS strengthens medical response capabilities.

- Designed to enhance, not replace, facility stockpiles.

- Focused on local community needs.

Warehousing During and After COVID-19

Warehousing During COVID

Resource Allocation

- Requests for PPE, personnel, vaccines, therapeutics, etc.
- Nearly 5,000,000 PPE items deployed

ReddiNet

- Bed census and availability polling
- Mass casualty incident management
- Resource requesting

Warehouse Coordination

- Contacted warehouse has custom inventory management system and resource requesting portal

Challenges from COVID

Warehouse Location

- Lease ended, not renewed due to sale of warehouse (Mid-Late 2021).
- Finding new space mid-COVID a major challenge.

Resource Requesting

- Training coalition (170+ facilities) on ReddiNet to request resources.
- ReddiNet for Resource Requesting began March 6th, 2020.

Warehouse Response

- Pickup/Delivery Logistics.
- Office Stockpile.

Post-COVID LSS Review

Successes

- ReddiNet
- Equipment tracking and inventory management
- Coalition facility site visits
- Coalition buy-in / build-out

Challenges

- Warehouse relocation
- Physical audit accuracy and timelines
- Warehouse space prohibitively expensive
- Learning a new warehouse inventory management system
  - Systems and processes all needed updating

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Post-COVID Review

Review current MOUs and revise to be more specific, to include policies for prioritization against competitors, after-hours requests, audits, and stockpile rotation as well as driver and equipment availability.

Inventory Management Systems (IMS)

Stockpile Notable Practices Report

Engage private sector and hospitals/healthcare to provide input on the local stockpile contents.

Update emergency plans to follow day-to-day warehouse operations for stock rotations, after-hours access, security etc. and conduct exercises with local warehousing vendors.

Pharmaceutical Stockpile Rotation

Consider investing in additional technology to streamline rapid documentation of new inventory, such as scanners.

Warehouse Operations

Strategic National Stockpile 12-hour Push Package Product Catalog

SAN MATEO COUNTY HEALTH EMERGENCY MEDICAL SERVICES

LOCAL STRATEGIC STOCKPILE POLICIES

Training and Exercises

Plans and Processes

Supply Chain Threats

Consider investing in additional technology to streamline rapid documentation of new inventory, such as scanners.

Identify additional warehouse and transportation options throughout the jurisdiction as backups.

Pharmaceuticals

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Updated Procedures & Policies

Current Warehouse and Cache

Contracted Warehouse

- 10,000sqft contracted warehouse space.
- Mobile Medical Shelters, generators, HVACs, PPE, medical equipment, pharmaceuticals, etc.
- We have priority over all others in times of emergency

Mass Casualty Incident Trailers

- Three trailers stationed centrally within the bayside of the county.
- Deployable across the county and contains key response medical equipment and pharmaceuticals.

Medical Reserve Corps Response Trailer

- Stationed on the Coastside of SMC.
- MRC volunteers, when deployed, can use this cache to support response operations.

Office Storage Rooms

- PPE closet in main EMS office – stores a small stock of all PPE

# Demographic Analysis for Warehousing and Caching

San Mateo County

At a Glance:

- **Geography:** 448 mi^2 land, 293 mi^2 water, Santa Cruz Mountains run north/south through entire county
- **Population** (2020): 764,442
- Over 400,000 people pass through San Mateo daily for work
- San Francisco International Airport (SFO)
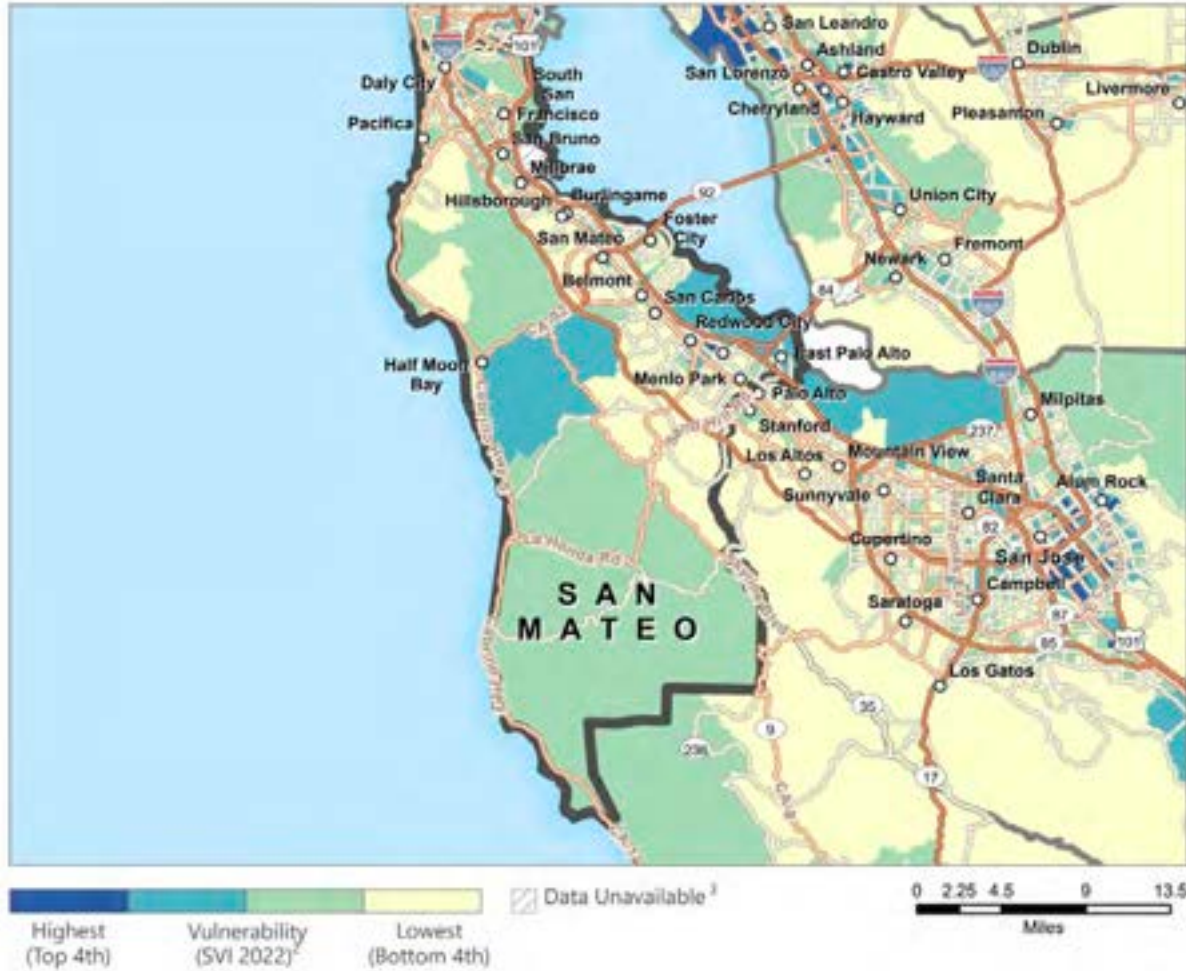- **Healthcare System:** 6 Hospitals, 0 trauma centers

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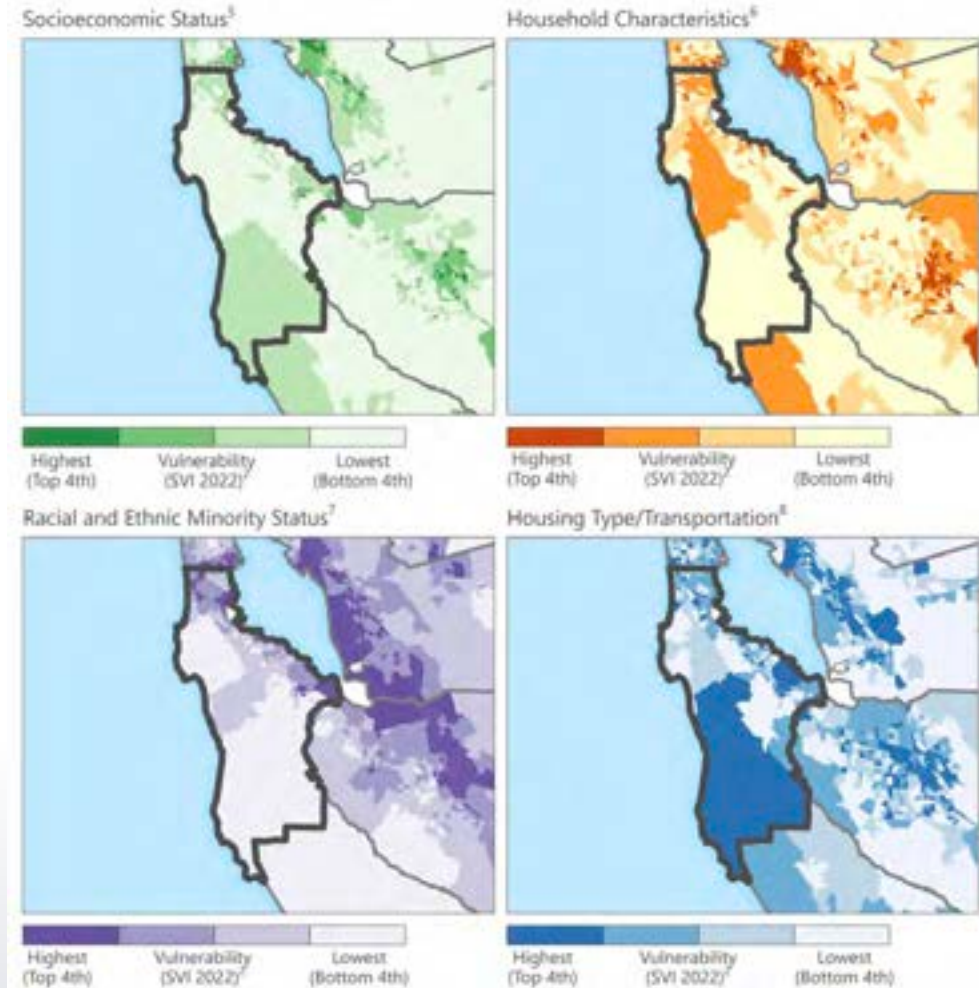EmPOWER Demographics Analysis by Population
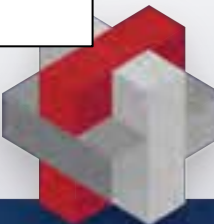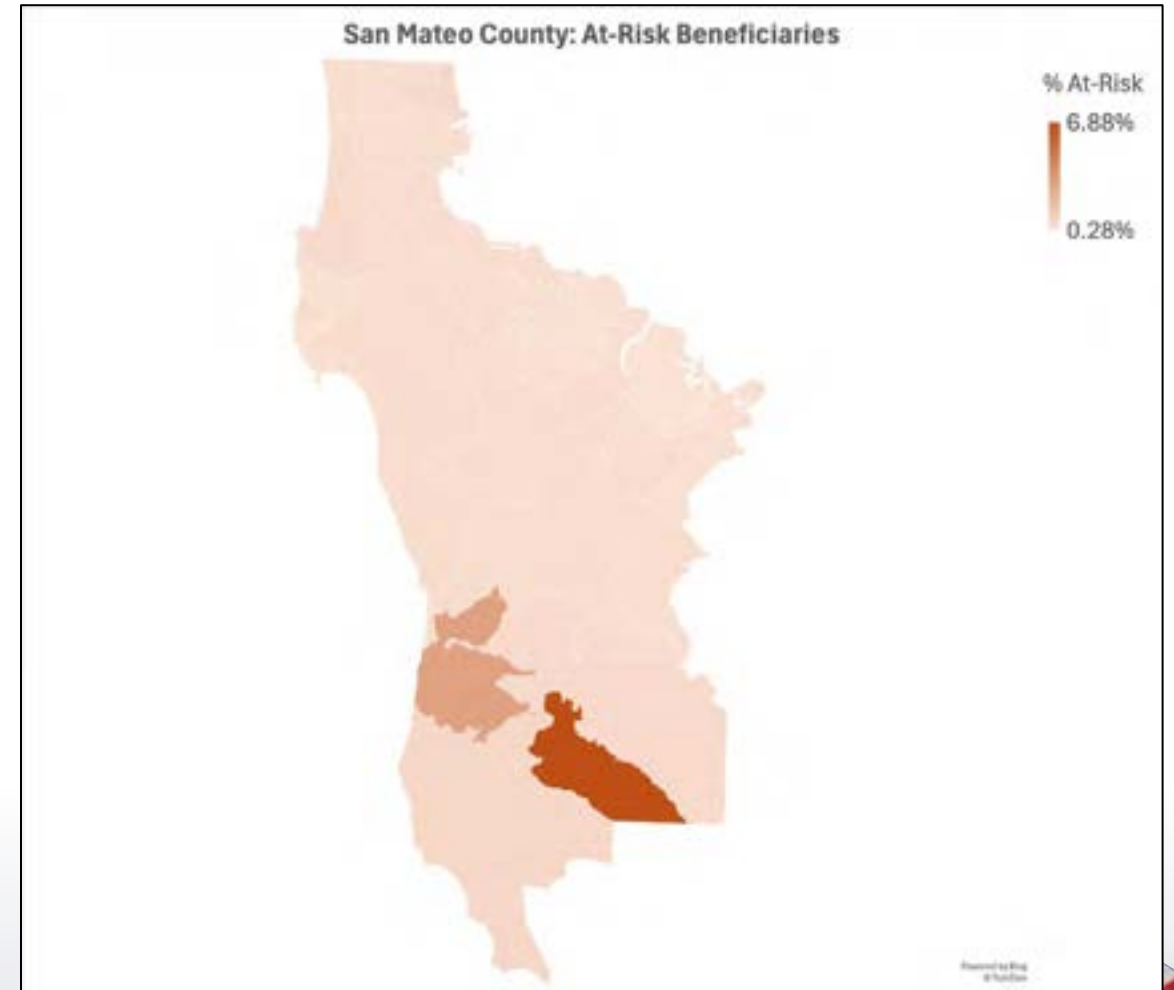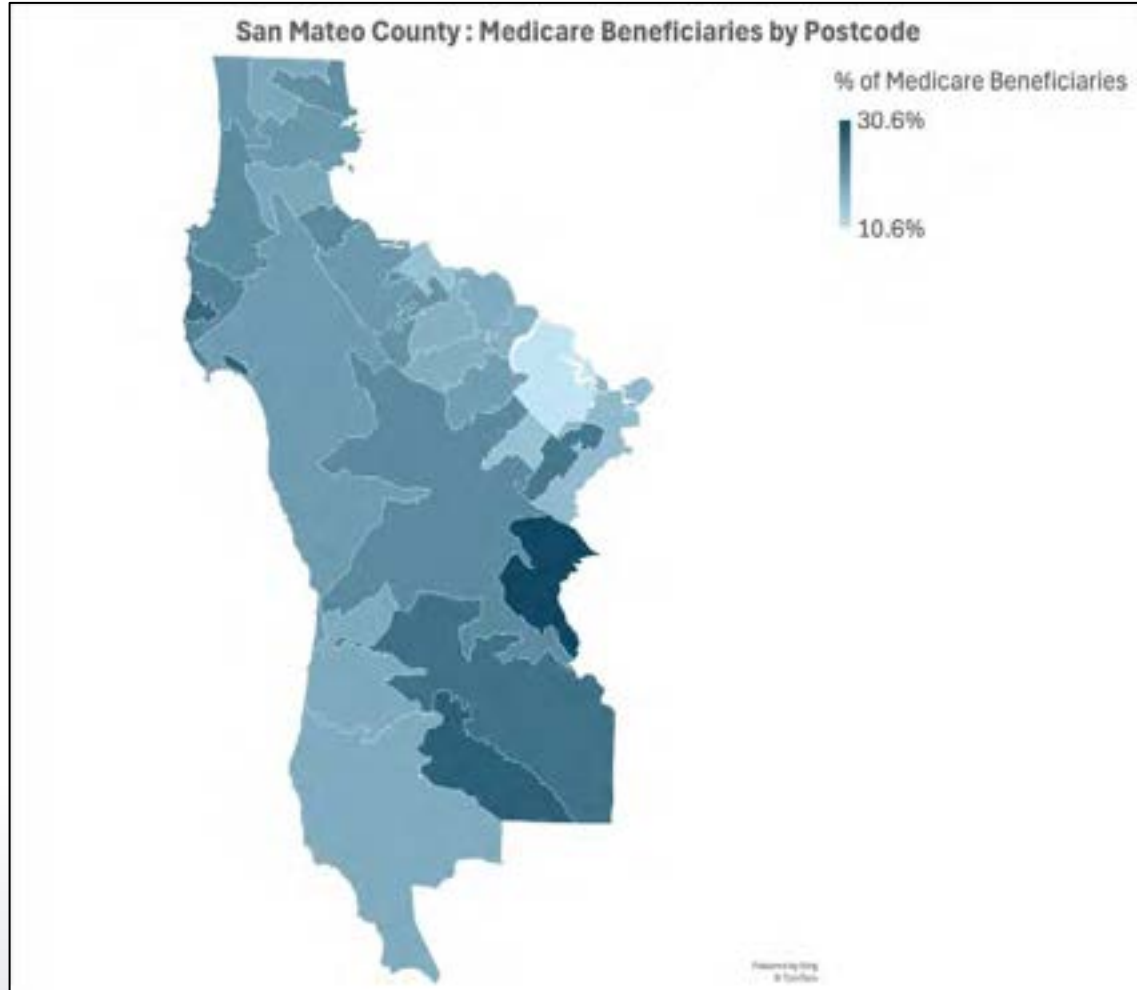
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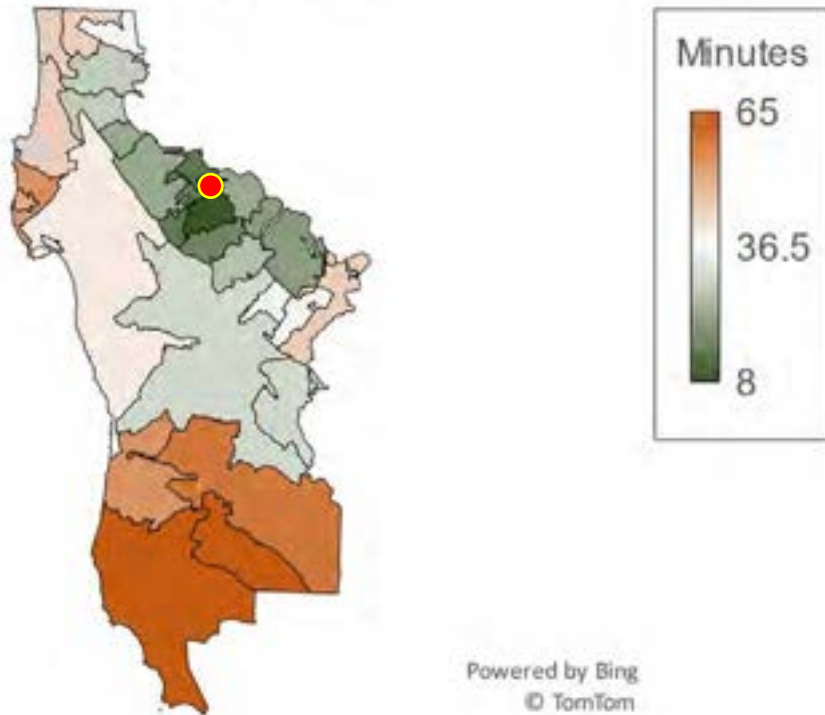
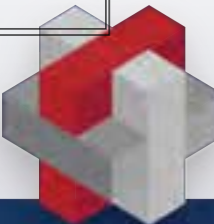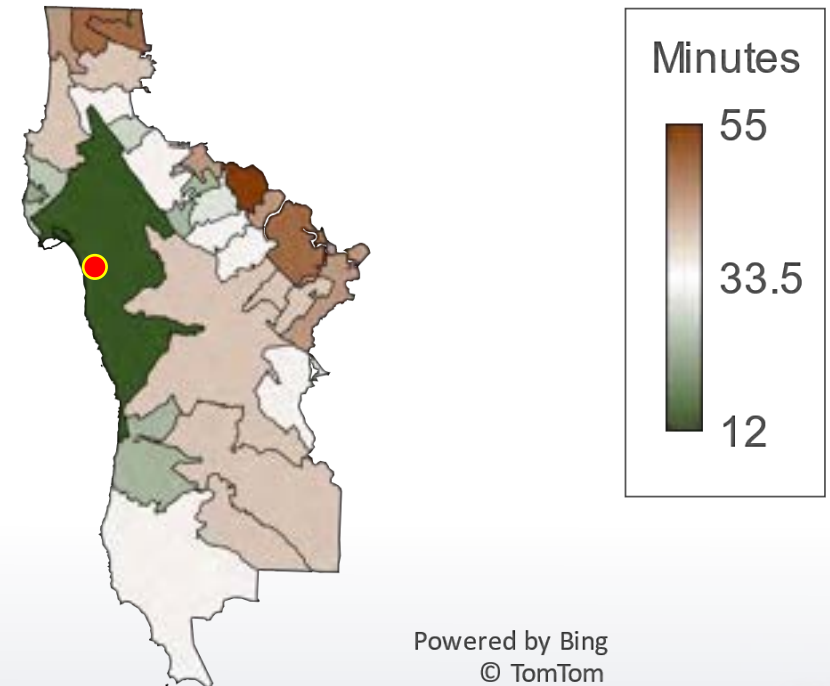# CDC/ASTDR Social Vulnerability Indicators

Travel Time Estimations

Peak Travel Time from SMC Event Center

Peak Travel Time from Half Moon Bay

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Cache Considerations

Local Caches
- Strategically located based on population density, vulnerability, and unique needs.

Facilities of Interest
- Hospitals
- SNFs
- Gathering/Public Spaces (Event centers, Fire Departments, schools, churches, etc.)

Push Packages
- Rapid Response
- Versatile

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SKU Lists

What's Included

- Anything deemed necessary or which may be rapidly needed in an urgent response situation.
- "Must, Should, Could" items from pharmaceutical and medical equipment desk review.

Rapid-Deployment

- Created based on 50-person incidents, easily scalable.
- By having pre-selected lists, it creates less strain on EMS and frees up resources.
- Warehouse can work efficiently to pull what is needed in an organized and logical manner.

Incident-Specific

- General sheltering needs
- Fire
- CBRNE etc.

Pharmaceutical and Medical Supply List

Pharmaceutical Cache Kitting for Small <50 Person Event

MUSTS		SHOULDS		COULDS	
Product Name	**Product Details**	**Product Name**	**Product Details**	**Product Name**	**Product Details**
Acetaminophen	various formulations - infant, pediatric, adult	Acyclovir	30 each: 200mg "2 tablets TID" // 50 each: 800mg 1 tablet 5 times a day	Acetaminophen (Tylenol, Caffeine & Diphen-PH)	3 each: various types
Albuterol sulfate / Ipratropium	0.83 (for neb) DuoNeb	Adenosine, SDV	3 each: SDV 3MG/ML 2ML 10/CT	Acetaminophen Chewable - Children's	1 bottle
Amlodipine	10 mg 1 tab daily	Advil Chewables	1 bottle	Acetaminophen - Infant's	1 box
Amoxicillin	500mg Capsule "1 capsule TID" 30	Albuterol	3 each	Acetaminophen Supposit - Children's	1 bottle
Aspirin	325 & 81 mgs	Albuterol Sulfate	6 each: VL NEB 0.083 2.5MG/3ML UD 25/BX	Amlodipine	30 each: 5mg 1 tab daily
Azithromycin	250mg-z-pack, 500mg, 1 gm packet/powder.	Aleve	1 bottle	Aripiprazole (abilify)	60 each: 10mg (no sig)
Bacitracin // Bacitracin Zinc	Bacitracin Ointment	Alka-Seltzer	1 bag	Beverage, Glu Tol Org	1 each: 50GM PLAS 24/CS
Ceftriaxone	500mg & 1g Inj.	Ambu-Adult	1 each	Bismuth Subsalicylate (Pepto Bismol) tabs	24 each
Cephalexin	500mg Capsules "1 capsule TID"	Amitriptyline Hydrochloride	1BT: 25mg 100TAB	Calcium Chloride, SYR 10	1 each: 100MG/ML 10ML 10/CT 9IMDSY
Cetrizine	10mg tabs. 1 tab PO daily for itching	Atenolol	30 each: 50mg Tablets 1 tab daily	Ivermectin	10 each: 3mg tabs (2 doses)

Medical Equipment and Supplies Cache Kitting for Small <50 Person Event

MUSTS		SHOULDS		COULDS	
Product Name	**Product Details**	**Product Name**	**Product Details**	**Product Name**	**Product Details**
Adhesive Skin Liquiband	1 Pack: 10ct; 0.8g Dome 10ct	AED with extra pads	2 Each (adult & pediatric)	AFN Cots	3 Each
Adhesive Tape (Cloth, Waterproof, Transparent, Surgical types)	1 Case: 12/case	Adult Medication Card	1 Each	Ammonia Inhalants	1 Pack
Airway Kit - Surgical	5 Each	Airway, Guedel (Multiple Sizes)	1 Each	Apron Polyethylene White	1 Pack: 100ct
Alcohol Prep Pads	2 Boxes: HAZMAT	Airway, Nasal Pharyn ID Naso Clear	1 Each	Automizer MAD 300	1 Each
Ambubags (adult & youth)	3 Boxes Each	Airway, Nasopharyn	1 Each	Cutter/Splitter Pill Hand-Operated Blue	2 Each
Applicator Cotton Tip 6" Sterile	2 Packs: 100ct	Airway Nasopharyngeal Clear	1 Each	Electrodes, EKG Monitor	1 Each
Bags - trash & ziplock	20 Each	Airway, Robertazzi Nasopharyl	1 Each	Flu Kit	5 Kits
Bandages	1 Box (100/box) Various sizes and types	Arrow EZ-IO	1 Each	Noro Collection Kit	5 Kits
Biohazard Bags	1 Box	Arrow EZ-IO Vascular Access Power Driver	1 Each	Stapler Wound Sterile SingleUse McKesson	1 Each
Blankets, Emergency	5 Each	Backboard and Straps	30 Each	System Purification WaterBag 2.5gal DEV	1 Each

SKU Lists

Cache Kitting for Small <50 Person Event

Based on 1:10 medical worker-patient ratio

Product Name	Product Details	Quantity		Product Information
Airway Kit	See AIR - Airway Kit	1		
Bandage-Burn Kit	See BURN - Bandage-Burn Kit	1		
PPE - Medical Staff Kit	See PPE - Medical Staff PPE Kit	1		
Pharma General Kit	See PHARM - Pharma General Kit	1		
Bags - Plastic		1 bag	Y	58-97 | POLY BAG W/ZIP LOCK CLOSURE, 100 PER BAG, NA
Caution Tape		1 roll	Y	71-1001 | CAUTION TAPE, NA, NA ; CT3YE1/300N | CAUTION TAPE, 3 IN, NA, NA ;
Decontamination System		1 each	Y	SYS-IND-10-13-1/WSB250G | GRAINGER, INDIVIDUAL DECON SYSTEM, 1 EACH PALLET, NA
Goggles		100 each	Y	1902153 | SAFETY GOGGLE, 100 PER CARTON, NA ; IDCF/GAF-100 | CLEAR PLASTIC GOGGLES W/ELASTIC STRAP 4630002/4630000, 100 GOGGLES PER CARTON, NA ; LABGOGGLE | GOGGLE, NA, NA ; Y30GOOGLE-G | SAPPHIRE SAFETY SPECTICLE, NA, NA
Gloves	See PPE - Medical Staff Kit			
Hazmat Spill Cleanup Kit		2 each	Y	17121 | SAFETEC, EZ-CLEANS PLUS SPILL CLEAN-UP KIT, 24 KITS PER CARTON, 20 PER CARTON
Safety Glasses		10 each	Y	3130B-400 WEXFORD

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Future Warehouse and Cache Goals

Robust warehousing options

- Alignment with CDC City Readiness Initiative (CRI) recommendation of multiple warehouse options to encourage greater mitigation.
- Enhance emergency response capabilities of warehouse staff and management.

More abundant and better caches

- Using demographics and travel time information to determine best locations for additional medical caches.
- Internal study used to ensure the most critical items to store in cache are included.

Regional and local pharmaceutical rotation

- Prepositioned critical pharmaceuticals in warehouses and caches.
- Agreement with pharmacies/pharmaceutical companies to rotate expiring stock.

Questions?

Contact US:
ems@smcgov.org

SMCHC
SAN MATEO COUNTY HEALTHCARE COALITION

Preparing for a Behavioral Health Hospital Evacuation

Considerations, Challenges, and Best Practice

Mark Sevilla, DNP, RN, Vice President
Behavioral Health & Emergency Services
Yale New Haven Hospital

Roger Glick, Market Director
Healthcare + Emergency Management
Jensen Hughes

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NATIONAL HEALTHCARE COALITION
PREPAREDNESS CONFERENCE

Visions of Progress: Sustainable Strategies for Emergency Preparedness & Resilience

Presented By:

MESH

Learning Objectives

Describe the distinctive characteristics of behavioral health hospitals and the implications for emergency preparedness and response.

Gain insights into the diverse needs and vulnerabilities of patients receiving mental health treatment and the importance of tailoring evacuation plans to address these specific requirements.

Be introduced to a comprehensive framework for preparing for a behavioral health hospital evacuation.

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Learning Objectives

We want you to <u>think differently</u>,

and to <u>deliberately identify and mitigate risks</u>

associated with Behavioral Health evacuations.

Empirical Findings

We all have thoughts, experiences, and war-stories but what does the literature teach us about Behavioral Health evacuations?

- Frank & Trinidad, 2007 – Support to victims of Hurricane Katrina.

- Griffies, 2009 – Reestablishing program structure for the LSU/Oschner psychiatric residency following Hurricane Katrina.

- McClain et al., 2007 – Evacuation of 6 veterans following Hurricane Rita.

Previous to Hurricane Katrina...not a lot specific to psychiatric facilities, most assess fire related events.

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Empirical Findings

Post Hurricane Katrina...
still not a lot, but...

Thomas & Lackey, 2008 – Evacuation of a psychiatric hospital during Hurricane Katrina.

Waitz et al., 2024 – Disaster Preparation and Effects on Inpatient Psychiatric Care (Chapter 6 in Handbook of Evidence-Based Inpatient Mental Health Programs for Children and Adolescents).

Nouri et al., 2022 – Phoenix on Fire: A Phenomenological Study of a Psychiatric Hospital Fire in Iran.

Terui et al., 2021 – Determinants of the evacuation destination for psychiatric inpatients following the Fukushima nuclear disaster.

Differences: Behavioral Health vs. Acute Care

Acute patients are in the hospital by choice. Behavioral Health patients often aren't, so they will leave if they can.

Acute patients can be cohorted. Behavioral Health patients may need to be separated.

Behavioral Health patients' conditions are often exacerbated by stimulus. Evacuating would be a significant stimulus in various ways.

One major difference is that you must distinguish between *disaster preparation for the system* and *disaster preparedness for treating an individual patient or patients* (Waitz et al., 2024).

What Do We Need to Know?

Patient Condition

Destination

Staffing requirements

Patient documentation

Patient equipment, supplies, and pharmaceuticals

Patient Condition
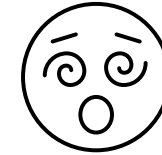
Anxiety	Bipolar
Depressive	Dissociative
Neurocognitive	Personality
Schiziphrenia	Trauma and Stressor Related
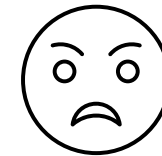
Patient Condition

Typically, patients are cohorted by type of illness and/or age

- Geropsychiatric
- General Adult
- Mood Disorders
- Adolescent
- Transitional Age Youth

Each patient should be assessed prior to movement

Consider pre-medication

Beware makeshift weapons and ligature risks

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A Word About Ligature Risks

Patient Destination

Where is it and how far?

What type of transportation will be required?

Will the trip require food and rest stops?

How long will the patient need to stay?

Staffing Requirements

Staff to Patient ratio?

What about high-risk patients? (1:1)

What if you need to restrain a patient?

Staff needed for movement vs. while in transport?

What mix of staff?

- RN
- Mental Health Worker or Milieu Counselor
- Security

What if you need to use untrained staff?

Patient Documentation

Medical records

Patient identification

Organizational forms (e.g., staffing sheets, flowsheets, etc.)

Patient Equipment, Supplies, & Pharmaceuticals

Personal belongings

Medical supplies & equipment (syringes, CPAP, etc.)

Medications:

Refrigerated vs. non-refrigerated

Sufficient doses

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What do you need to do, now?

RISK ASSESSMENT

EMERGENCY PLAN(S)

TRAINING

EXERCISING AND EVALUATE

What do you need to do, now?

You need to be able to demonstrate that you have asked the appropriate questions, and reasonably mitigated risks.
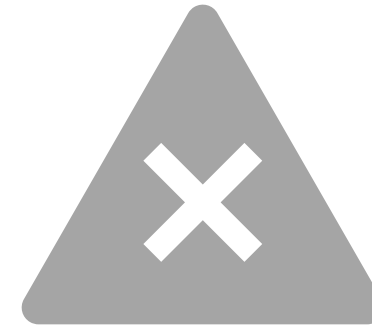
You need to be able to demonstrate that you have thought differently and that you have acted deliberately to identify and mitigate risks.

Evacuation Checklist

Evacuation Element	Primary Considerations
Patient Condition	• Triage (Most Ready to Least Ready) • Ability to cohort • Need to separate
Destination	• How far? • How long will it take? • How will you transport? • Psychiatric vs. non-psychiatric plant?
Staffing Requirements	• Orientation of non-psychiatric staff • Requirements for 1:1 staffing • Sufficient staffing during transportation (e.g., bathroom breaks)
Patient Documentation	• Required notifications • Notification to payors • Medical Records
Patient Equipment, Supplies, and Pharmaceuticals	• Personal belongings (patients and staff) • Medical supplies and equipment

Questions and Discussion

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Mark Sevilla, DNP, RN
Vice President
Behavioral Health & Emergency Services
Yale New Haven Hospital
mark.sevilla@ynhh.org
203.688.2185

Roger Glick
Market Director
Healthcare + Emergency Management
Jensen Hughes
roger.glick@jensenhughes.com
540.521.7996

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"Every incident has narratives with victims, villains, and heroes."

Eric J. McNulty
Associate Director
National Preparedness Leadership Initiative
Harvard University

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Discussion Points

How likely is it that your organization will experience a cyber attack in the next five (5) years?
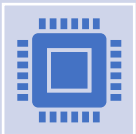
How disruptive would a cyber attack be to your normal operations?

Discussion Points

How likely will your organization experience a cyber attack in the next five (5) years?
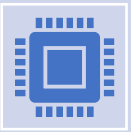
How disruptive would a cyber attack be to your normal operations?

What has your organization done to prepare for a cyber attack?

Discussion Points

How likely will your organization experience a cyber attack in the next five (5) years?

How disruptive would a cyber attack be to your normal operations?

What has your organization done to prepare for a cyber attack?

Has the risk of your organization being hit by a cyber attack changed?

Discussion Point

How likely will your organization experience a cyber attack in the next five (5) years?

How disruptive would a cyber attack be to your normal operations?

What has your organization done to prepare for a cyber attack?

Has the risk of your organization being hit by a cyber attack changed?

How has your organization's preparedness changed to reflect that increased risk?

We underestimate risk: we believe negative events are less likely to happen to us (Optimism Bias).

We overestimate preparedness: we believe we are prepared for crises and that the risks are fully manageable when, in reality, their complexity often exceeds our abilities (Illusion of Control).

Nassim Nicholas Taleb

The Black Swan

So, what is an effective preparedness strategy?

A Preparedness Strategy

Risk Reduction is primarily an IT function. Although EM/BC should be an active participant, it is NOT the "lead" – for obvious reasons. IT identifies and coordinates strategies to decrease the risk of cyberattacks (e.g., implementing Multi-Factor Authentication, keeping IT systems updated and patched, Employee Awareness, and Training Programs).

A Preparedness Strategy

<u>Consequence Management is primarily an EM/BC function.</u> Developing strategies and plans, training key stakeholders on those plans, and exercising the plans to evaluate them are all responsibilities of EM/BC.

A Preparedness Strategy

Develop Consequence Management Strategies and Plans:

- Map out the organization as a system.

- Identify potential disruptors to the system.

- Ask "what ifs". Boldly explore worst-case, not best, scenarios.

Use this information to inform Scenario-based Planning.

A Preparedness Strategy

Consequence Management Strategies and Plans

Develop a Cyber Attack Playbook for Incident/Organization Leaders

- Immediate Actions Checklist
- Description of Crisis Response Phases and Roles/Responsibilities/Authority
- Legal Workflows and Timing (e.g., Hiring a Negotiator, Engaging the Threat Actor, Engaging Law Enforcement, Reporting and Notification Obligations)
- Ransom Payment Guidelines

A Preparedness Strategy

<u>Consequence Management Strategies and Plans</u>

- Strategies
  - Ensure patient safety
  - Minimize disruption to normal operations
  - Protect patient, employee, and organization information
  - Protect the organization's reputation
  - Recovery priorities (e.g., software/function, organizational geography)
- Plans
  - Clinical management plans (e.g., EMR, imaging, pharmacy, case management)
  - Staffing management plans (e.g., scheduling, payroll, employee assignments)
  - Facility management plans (e.g., security/access, HVAC systems, alarm monitoring systems)
  - Financial management plans (e.g., accounts receivable, accounts payable, pre-authorizations)

A Preparedness Strategy

Training and Exercising

- Training is essential
  - Different people will need to be trained on different plans.
  - Different people will need different levels of sophistication and competence.
  - Training programs must be developed to combat knowledge decay and staff turnover.
- Exercising is also essential
  - The purpose of an exercise is to evaluate the plan (and, to a lesser extent, the responders).
  - The exercise program should have increasing complexity (e.g., severity, duration, and co-morbidities).
  - The exercise program should stress-test the system (e.g., stress till failure and then build back stronger).
  - The exercise program should always identify opportunities that are then leveraged improvements.

Case Study: Hartford HealthCare

Hartford HealthCare is one of Connecticut's most comprehensive health care networks.

Fast Facts:

- President & CEO: Jeffrey Flaks
- Licensed Beds: 2,488
- Colleagues (incl. employees and contingent staff): 27,701
- Physicians on Staff: 5,847
- Operating Revenue: $5,403,735,000

"While an initial crisis may not have been preventable, the secondary crisis of a bungled response is avoidable."

Eric J. McNulty
Associate Director
National Preparedness Leadership Initiative
Harvard University

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Questions

Speakers

Patrick Turek, Senior System Director
Public Safety and Emergency Management
Hartford HealthCare
patrick.turek@hhchealth.org

Roger Glick, Market Director
Healthcare + Emergency Management
Jensen Hughes
roger.glick@jensenhughes.com
540.521.7996

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NATIONAL HEALTHCARE COALITION
PREPAREDNESS CONFERENCE

*Visions of Progress: Sustainable Strategies for
Emergency Preparedness & Resilience*

Presented By:

MESH
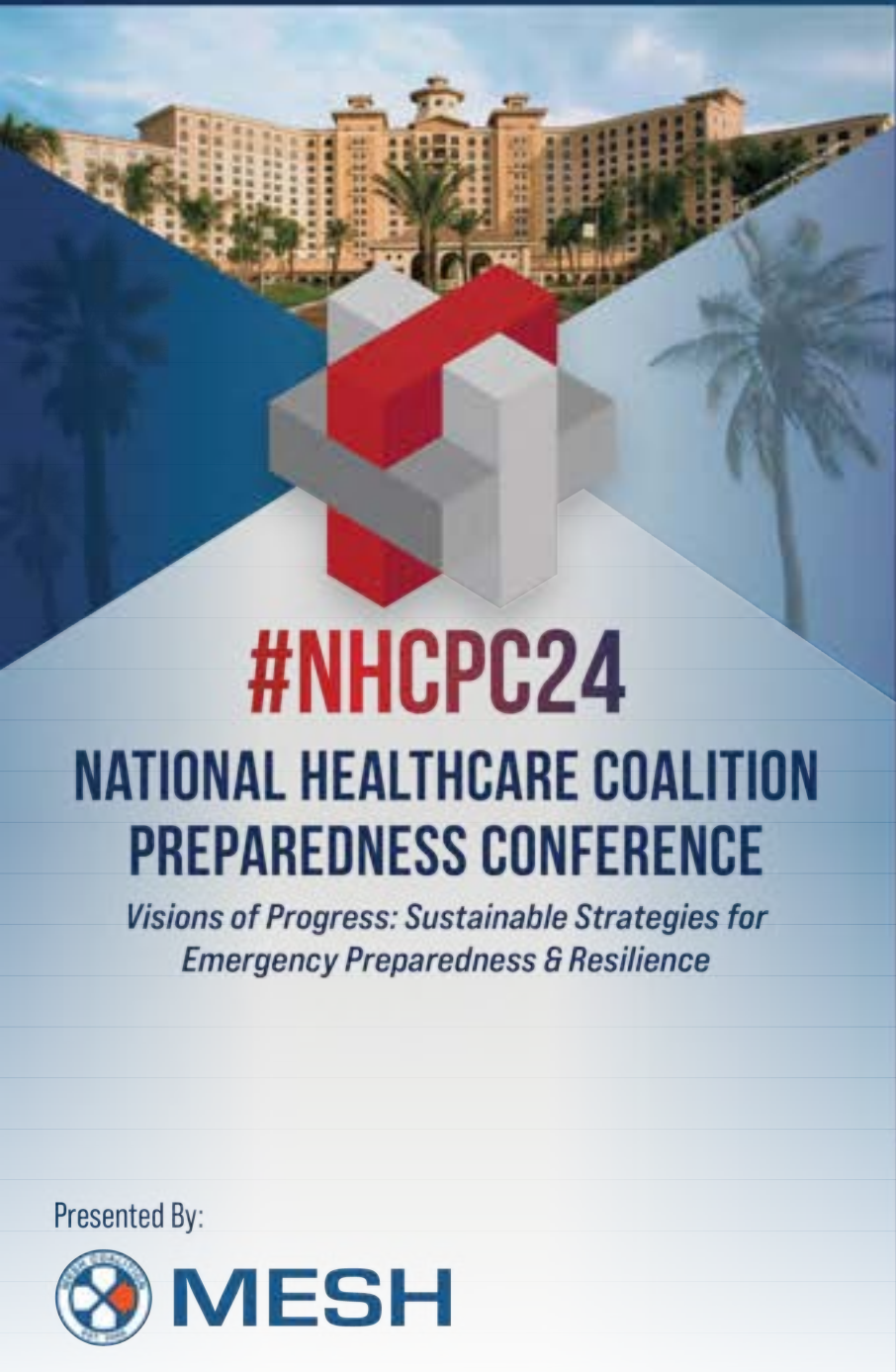
Ready and Resilient

Best Practices in Healthcare Business Continuity
Program Development

Ralph Nazzaro, CEM, MEP, CBCP
Kristopher Mattson, CEM, MEP

Agenda

- Introduction and Overview
- Establishing Governance
- Identifying and Validating Essential Functions
  - Business Process Analysis (BPA)
  - Business Impact Analysis (BIA)
- Developing the Continuity Plan
- Sustaining the Continuity Program

INSTRUCTIONS FOR REVIEW
OF THE BPA WORKSHEET

Children's
Healthcare of Atlanta

References and Tools

- FEMA References
  - FEMA Continuity Guidance Circular (CGC), February 2018 (Updated 2024)
  - FEMA BPA/BIA User Guide, July 2019
  - FEMA Comprehensive Planning Guidance (CPG) 101, September 2021
- California Hospital Association Hospital Continuity Resources
  - https://www.calhospitalprepare.org/continuity
- ASPR TRACIE Technical Resources: Continuity of Operations Business Continuity Planning
  - https://asprtracie.hhs.gov/technical-resources/17/continuity-of-operations-coop-business-continuity-planning/110

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Continuity of Operations vs. Business Continuity

- **Continuity of Operations (COOP)**: An effort within individual organizations to ensure that essential functions continue to be performed during disruption of normal operations

- **Business Continuity (BC) Plan**: Outlines the processes that enable an organization to continue its essential functions following a disruption to normal operations. [They] focus on key variables that recover the delivery of products and services…to minimize lost revenues and maximize profits

Source: Continuity Guidance Circular (CGC), Feb 2018 (2024)

Continuity Guidance Circular
February 2018 (2024 update)
FEMA Office of National Continuity Programs

FEMA
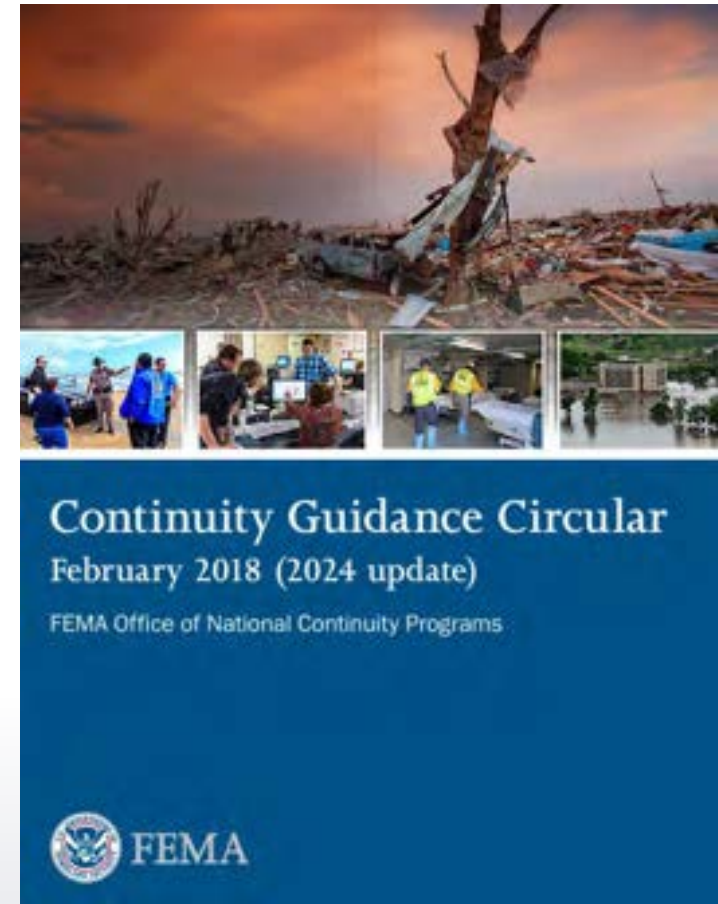
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Continuity Requirements

The Joint Commission (EP 13.01.01) says:

- The hospital has a Continuity of Operations Plan
- The [plan] identifies how and where to continue to provide essential business functions
- The hospital has a written order of succession plan
- The hospital has a written delegation of authority

The CMS Emergency Preparedness Final Rule says:

- "Continuity of business" incorporates all continuity of operations and business continuity
- Continuity is the facility's ability to continue operations or services related to patient care <u>and</u> to ensure patient safety and quality of care is continued in an emergency event
- Emergency plans will address continuity of operations, including delegations of authority and succession plans
- Considers elements such as essential personnel, essential functions, critical resources, vital records and IT data protection, alternate facility identification and location, and financial resources

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Continuity Capability Elements

Program Management, Plans, and Procedures

Communications and Information Systems

Devolution

Essential Functions

Essential Records Management

Reconstitution

Orders of Succession

Alternate Locations

Test, Training, and Exercise (TT&E)

Delegations of Authority

Human Resources

All elements based on **Risk Management**

Source: IS-1300.a, Introduction to Continuity, June 2024

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Overview- Children's Healthcare of Atlanta

- Three acute care hospitals
(789 licensed beds)
  - 446-bed Arthur M. Blank Hospital (AMBH) opened September 2024
- Marcus Autism Center
- Two (2) Surgery Centers
- Outpatient Services
  - Eight (8) Urgent Care Locations
- Over 12,000 Staff

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Project Scope

- Designed to better prepare the healthcare system and meet TJC requirements
  - 3-year approach, building to an internal capability
  - Year 1 – Plan Development
  - Year 2 – AMBH incorporation and staff training
  - Year 3 – Test, Training & Exercise (TT&E) implementation and transition continuity program to Children's staff

Year One: Project Overview and Deliverables

Governance Structure and Essential Function Identification

Identify:
- Essential Functions/ Departments
- Critical Processes

Business Process Analysis (BPA)/ Business Impact Analysis (BIA)

Identify and Analyze:
- Required Resources
- Department-Specific Impacts and Mitigation Strategies

Continuity of Operations (COOP) Plan

Drafts of:
- Base Plan
- Essential Dept Annexes
- Appendices
  - References
  - Activation Flowchart
  - Forms

| July – August 2023 | Sept- Dec 2023 | January – March 2024 |

Immediate Challenges

- **Virtual Approach**
  - Intent to minimize impact on already stressed staff
  - Primarily by email and videoconferencing at start of project
  - Data security: initially used file sharing site; moved to MS Teams for BIA and plan/annex submissions (first external partner with internal Teams access)

- **Timing**
  - Post-pandemic recovery / Tripledemic height (Surge Emergency Oct 2023- March 2024)
  - New hospital build – 24 months until open (strategic priority)

- **Staff issues in understanding of COOP and BC**
  - Preconceived notion that BC is IT-based only
  - Understanding of "Essential Functions" versus "Important"

Establishing Governance- Start of Planning
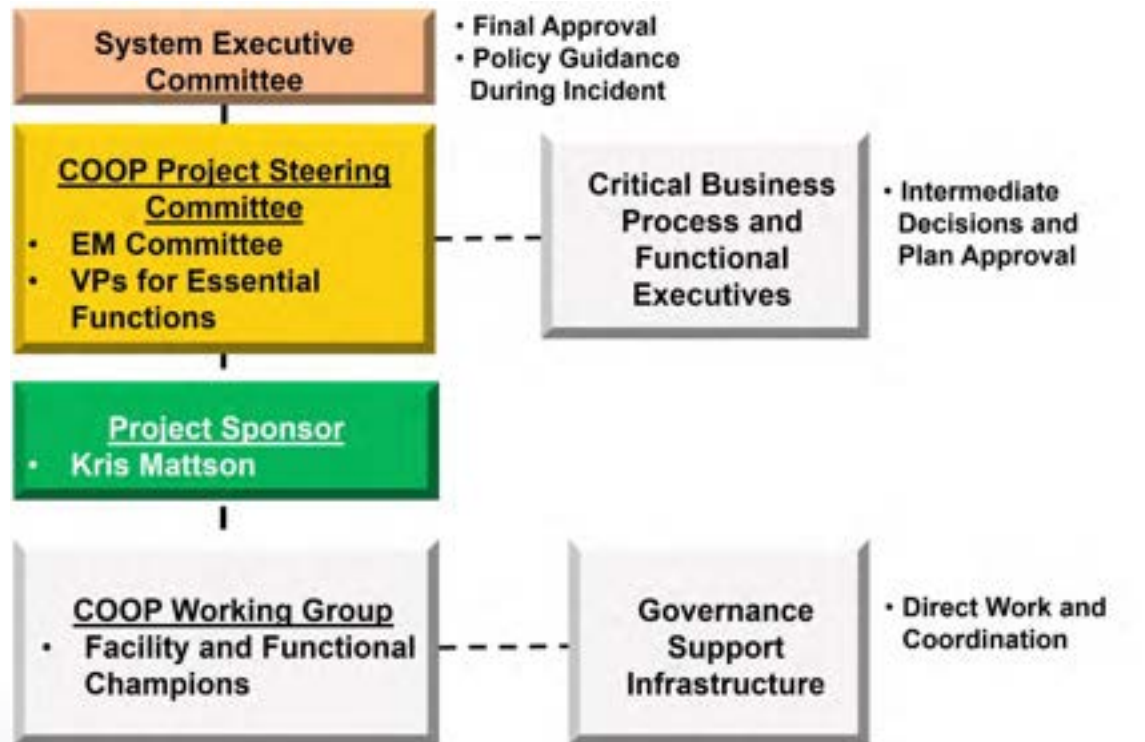
- Concept:
  - Department Continuity Champions provide direct input
  - Steering Committee (Systemwide EM Committee) reviews products and approves key decisions
  - Executive Committee provides final approval of plan
- Issues:
  - Continuity Champion availability and delegation below appropriate level
  - EM Committee meeting frequency and EM Department capacity created review bottleneck
  - February 2024 healthcare cyberattacks

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Establishing Governance- End of Year One
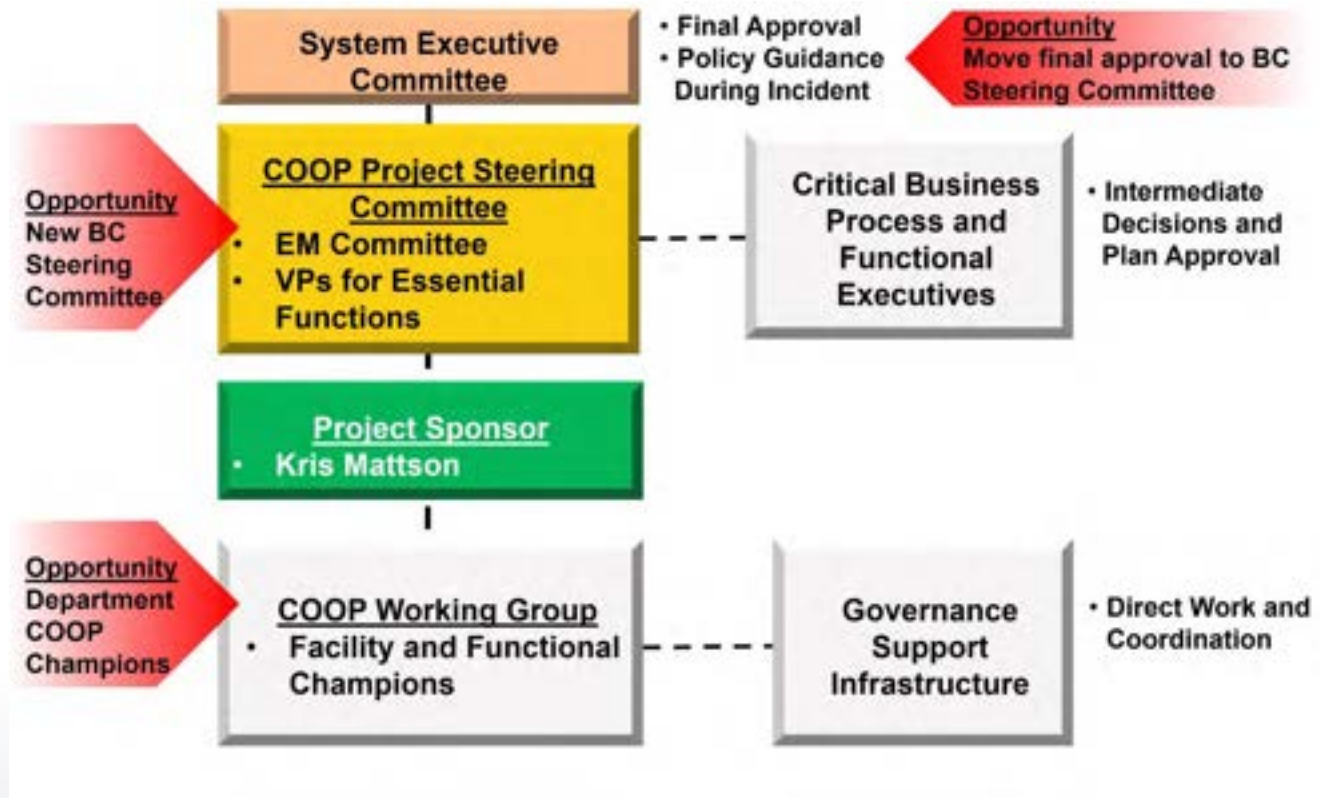
- Increased emphasis on Department Continuity Champion participation

- Creation of Business Continuity Steering Committee

- Delegation of final approval authority for the plan to the BC Steering Committee

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Best Practice: System BC Steering Committee

Children's BC Steering Committee Members

- Chief Information Officer

- Chief Information Security Officer

- Senior VP, Facilities

- Senior VP, Clinical Operations

- VP, Healthcare Campus

- Director of Finance

- Director of Information Technology

- Director of Internal Communications

- Director, Safety & Emergency Management

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Identifying Essential Functions (EF)

- **CGC (2024) Definition**: "A subset of organizational functions that are determined to be critical activities."
  - "[Identifies] supporting tasks and resources that must be included in the organization's continuity planning process."
- Healthcare Practice: define EFs as Departments
- System EFs versus Department EFs
  - Need to identify critical processes within Departments

- Approach:
  - Created Essential Functions worksheet for departments to self-assess
  - Identified 38 Departments as Essential Functions
    - 22 Clinical
    - 16 Non-Clinical/Support Services
  - Reviewed and approved by Steering Committee (EM Committee)

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Department Essential Functions Worksheet

Worksheet Elements

- Department (EF) Title
- EF Description (Output Statement)
- Location in Health System
- Point of Contact
- Clinical Capacity (# beds, OR tables, etc.)
- Department Critical Processes and Minimum Staff Requirements

Essential Function: NEONATAL INTENSIVE CARE UNIT

EF Description: Scottish Rite NICU provides the highest level comprehensive, advanced care for critcally ill newborns and premature infants requiring medical, surgical, or other complex care needs.

Locaton: Scottish Rite

Name:

Email:

Clinical Capacity: 39   **Comments:**

Click here for instructions on completing this form.

Critical Process and Minimum Staffing Identification

		RN	Charge Nurse		Asst. Manager		Manager		Director		Neonatologist		APP		Respiratory Therapist		Unit Secretary		Support Tech/PCT		Discharge Coordinator		Case Manager	
		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Registration	☑			1	1													1	1					1	
Treatment	☑	22	22	1	1							2	1	2	1	5	5								
Discharge	☑	22	22	1	1							2		2	1			1	1			1		1	
Transfer	☑	22	22	1	1	1		1		1		2	1	2	1			1	1			1		1	
Diagnostic Testing	☑	22	22									2	1	2	1	5	5								
Bedside procedures & surgeries	☑	22	22	1	1							2	1	2	1	5	5								
Stocking supplies	☑																			1	1				
Cleaning Beds/Equipment	☑																			1	1				
	☐																								
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Business Process Analysis (BPA)

- Identifies for each EF*:
  - The workflow and steps necessary for critical processes
  - Critical staff, equipment, and other resources
  - Dependencies with other departments and organizations
- Department BPAs accomplished through:
  - BPA Worksheets sent to Department Continuity Champions at each hospital
  - Step-by-step written instructions and training video
  - Virtual interviews and email follow-up as required

Source: FEMA BPA/BIA User's Guide (July 2019)

Department BPA Worksheet

- Based on California Hospital Association Hospital Continuity Toolkit
  https://www.calhospitalprepare.org/continuity
  - *Output Statement* and Critical Processes
  - Critical Equipment and Staff
  - Required IT Applications
  - Essential Records
  - *Department and External Organization or Vendor Dependencies*
  - *Critical Process Workflow*
- Resources described by Recovery Time Objective (RTO), or how quickly access to the resource or system must resume to support EF performance

Business Impact Analysis (BIA)

- A method of identifying and evaluating the effects of various threats and hazards and the impact they may have on the ability of an organization to perform its EFs

- Steps:
  - Identify likely hazards
  - Determine vulnerability of EFs (Departments) to disruption
    - Consider operational *and financial* impacts
  - Identify mitigation measures

Source: FEMA BPA/BIA User's Guide (July 2019)

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Department BIA Worksheet

- Hazards (13) based on current Children's Hazard Vulnerability Analysis (HVA)

- Impacts described by BPA categories (Staff, Equipment/Supplies, IT and Critical Records, Facilities, Dependencies)

- Mitigation Strategies based on current policies/procedures or recommended practices

Threat or Hazard Facility/Location	Threat or Hazard Operational Impacts		Mitigation Strategy
Tornado • Egleston • AMBH • Scottish Rite	**Staff:**	• Injury to on-shift staff and patients, particularly near windows • Inability for next shift staff or surge employees to reach hospital	• Hospital activates EOP and Labor Pool (See 4.13: Code Green) • Evaluate dept capabilities, needs, and report to Hosp Command Center • Hold current shift as surge staff or runners • If power or IT outage occurs, follow manual timekeeping procedures/forms
	Equipment/ Supplies:	• Equipment inoperable due to power outages or direct damage • Consumable supplies damaged by direct facility strike • Insufficient red outlets for all NICU Services equipment • Omnicell access impacted (power outage or damage)	• Evaluate equipment capabilities and needs and report to Hosp Command Ctr • Plug critical equipment into red (generator) power outlets; prioritize equipment for red outlets based on patient care needs • Use bedside monitors; follow downtime patient monitoring procedures • Ensure Omnicell is in default mode and accessible • Transfer patients to different units or campuses through Patient Transfer Center if unit unable to support patient census
	IT and Crit Record Impacts	• Loss of access to Epic, API, and other applications due to power outage or server loss • Loss of comms and comms between care sites and with Pt. Transfer Center	• Access through EPIC SRO, or use BCA computers to print census, patient facer sheets and reports • Coordinate with physicians to recreate medical records for patients • Coordinate with House Supervisor for downtime bed placement • Submit manual requests to EVS, Supply Chain, Lab, Rad, Patient Transport

Developing the Continuity Plan

Organizing the Base Plan

- Base Plan
- Situation
- Concept of Operations
  - Continuity Phases
- Department Responsibilities
- Direction, Control, and Coordination
- Supporting Continuity Elements
- Continuity Communications
- Test, Training, and Exercises
- Plan Maintenance

Phase I — Readiness & Preparedness

Disruption

Phase II — Activation

Phase III — Continuity Operations

Phase IV — Establishing a New Normal

Developing and Maintaining Emergency Operations Plans

Comprehensive Preparedness Guide (CPG) 101

September 2021, Version 3.0

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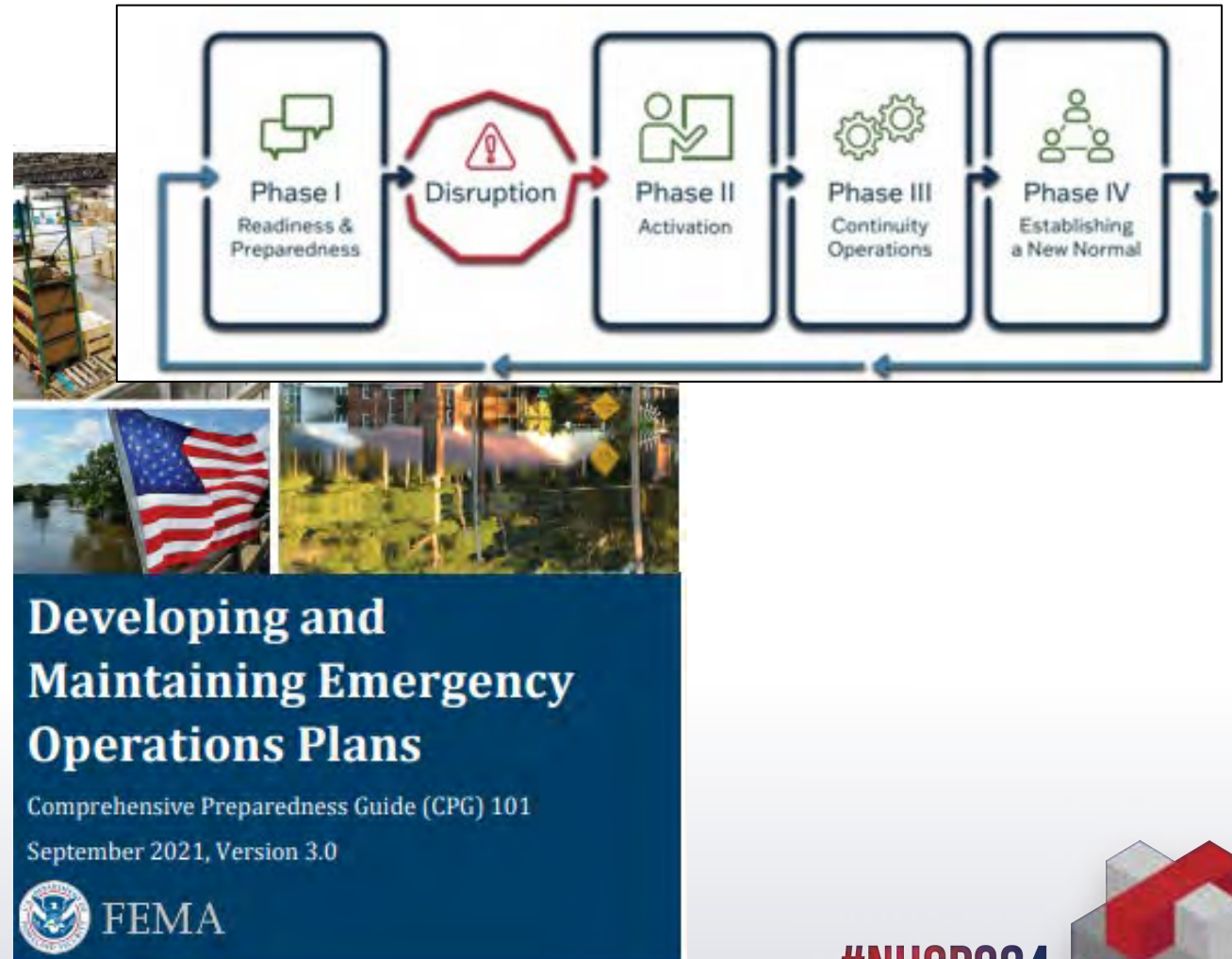
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Department Annexes

- Checklist and Reference Based
  - Output Statement
  - Critical Business Processes (with RTOs)
  - Recovery Team
  - Key Impacts and Capability Gaps
  - By-Phase Actions
    - Checklist Format
    - Includes Existing Procedures and BIA Mitigation Measures
  - Required Resources (from BPA)

Direction, Control, and Coordination

- Assessment and Plan Activation

- Notification

- Department Recovery Team

- Orders of Succession and Delegation of Authority

- Alternate Facilities

- Devolution of Control and Direction
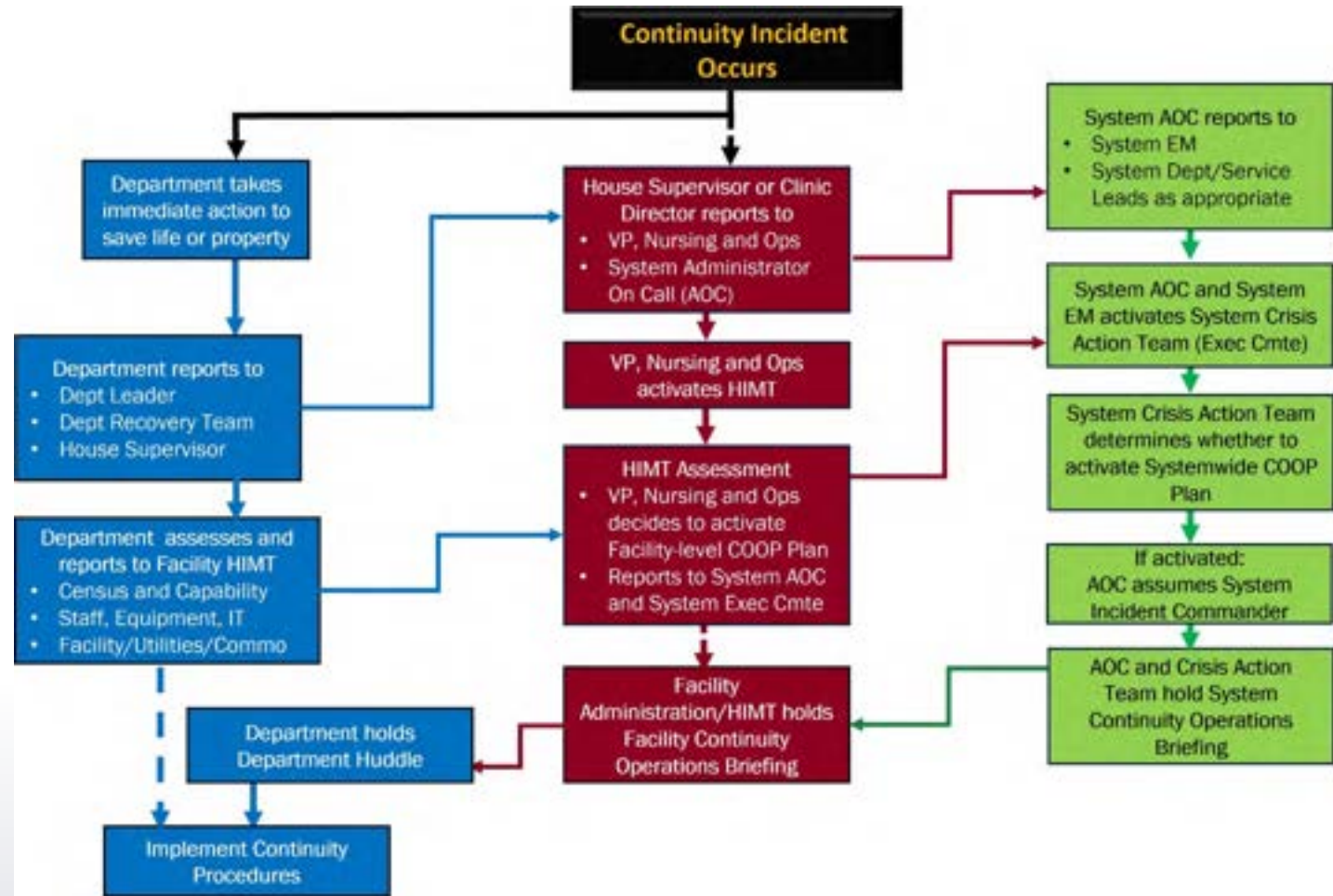
Human Resources

- Labor Pool for Surge Staffing and Courier Runner Requirements

- Attendance Policy
  - PTO Policy

- Manual Timekeeping and Payroll Procedures

- Employee Assistance Program

Essential Records and Processes

- Department-Specific (per BPA)
  - Downtime Form Standardization
- Timekeeping/Payroll
- Medical Record Reconstruction Process
  - Census Printouts Each Shift
  - Care Team Involvement
  - Integration After Downtime
- Supply Chain/Ordering
- Charge Capture Process

Continuity Communications

- PACE Methodology
  - **P**rimary: Desk Phones, Wi-Fi Phones, Virtual Conference Tools
  - **A**lternate: Downtime-Capable Phones
  - **C**ontingency: Personal Cell Phones/Texting, Satellite Phones
  - **E**mergency: Couriers, Handheld Radios, High-Frequency Radios

- Internal Communications Planning
  - Department and Facility Critical Communications Directory
  - Systemwide Emergency Alerts
  - Employee Information Line
- External Communications
  - Information to Patients and Family Members
  - Patient/Family Call Center
  - Appointment Rescheduling or Cancellation

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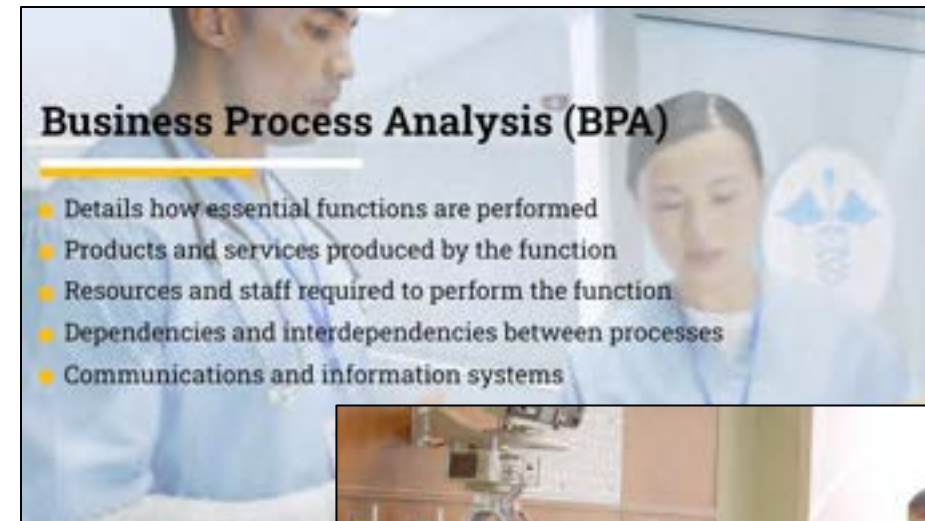
Where Are We Now?

- **Phase 1 (April 2024 – December 2024): Complete Draft Plan**
  - Initial draft plan completed for BC Committee review
  - Internal focus on downtime procedure standardization and hospital move

- **Phase 2 (January 2025 – July 2025): Plan Validation and Revision**
  - Post-hospital move, the systemwide strategic priority shifts to continuity
  - Conduct department-level workshops to validate BPA/BIA data and annex procedures with Continuity Champions and incorporate new facility into plans
  - Computer-Based Training and TT&E program development

- **Phase 3 (Summer 2025 – 2027)**
  - Launch Computer-Based Training and begin TT&E delivery

TT&E Program: Continuity Training

- Initial and Cyclic COOP Orientation and Awareness
  - Computer-Based Training Model
  - Plans, Roles, and Responsibilities
  - Front-Line and Leader-specific

- Department-Level Training
  - Department Annex Checklist Orientation
  - Department Procedures Review (link to existing EM Training)
  - Hands-On Downtime Procedures

Business Process Analysis (BPA)
- Details how essential functions are performed
- Products and services produced by the function
- Resources and staff required to perform the function
- Dependencies and interdependencies between processes
- Communications and information systems

COOP Plan
- Extension of hospital Emergency Operations Plan
- Describes essential organization functions and services
- Assessed using Hazard Vulnerability Analysis (HVA)

TT&E and Continuity Program Sustainment

- Tests
  - Alert and Notification Systems
  - Continuity Communications
  - IT Application Downtime Procedures
  - Facility Backup Systems

- Exercises
  - Leadership Discussion-Based Exercises (Tabletops and Games)
  - Facility and Department Operations-Based Exercises (link to EM Exercises)

- Plan Sustainment
  - Cyclic Review Schedule
  - Transition to Children's Business Continuity Department

Overall Lessons Learned

- **Vendor Use:** Allowed for the project to continue moving forward, BUT you will need a dedicated staff person from the hospital/health system
  - Planning skillsets brought to the facility far exceeded our internal capability, but department leader involvement needed for valid BPA/BIA analysis
- **Emphasis**: Senior Leaders must make BC a systemwide priority for department leaders
- **Education**: Orientation and training for department leaders and Continuity Champions at each step (videos, facility presentations, etc.)
- **Virtual vs. In-Person**: Advantages to initial virtual/reduced footprint approach, but still need dedicated time with department leaders to design procedures
- **Timing**: There is never a good time to undertake a BC project, but also never a good time to not have a validated plan
- **Dedicated Business Continuity Staff**: Needed for project handoff from vendor

Questions?

- **Ralph Nazzaro, CEM, MEP, CBCP**
  Senior Homeland Security Analyst, Ascenttra
  ralph.nazzaro@ascenttra.com

- **Kristopher Mattson, CEM, MEP**
  Director, System Safety and Emergency Management, Children's Healthcare of Atlanta
  kristopher.mattson@choa.org

TALON CWG OPERATIONAL STRATEGY

CONSEQUENCE MANAGEMENT

Consequence management occurs through the consideration of the wider ramifications of an extended downtime event on regional healthcare delivery. This approach moves the focus from the specific hospital victim, to broader consequences that may affect patient care delivery in the region if there is a catastrophic degradation of patient care regionally or nationally.

🔒 **Large healthcare systems affected by a cyber-attack that have a significant market footprint in your area**

🔒 **3rd Party providers to the health sector affected by a cyber-attack cause cascading disruptive effects to many competing hospitals**

🔒 **Cyber-attack on power grid and/or water distribution systems that affect healthcare critical infrastructure in your region, triggering hospitals to initiate continuity plans for backup power and water**

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MEDICAL ESSENTIAL ELEMENTS OF INFORMATION

mEEI

Any critical medical intelligence information required by reporting agencies that collect, analyze, and disseminate EEIs to create situational awareness for the emerging event

🔒 **mEEIs are specific to a health sector cyber event that may trigger a regional or national disruption of patient care**

🔒 **The Cyber EEIs are written out in advance as questions by consumers of the EEI information**

🔒 **Expressing complex medical intelligence requirements as a collection of essential elements of information provides the ability of healthcare response stakeholders to create situational reports to support health sector response activities**

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REGIONAL EXTENDED DOWNTIME EEIs

🔒 **Is the affected hospital(s) diverting/evacuating patients to other healthcare facilities within the regional healthcare delivery system? Is the affected hospital(s) considering extended diversion and/or evacuation?** *(To include forecasted disruption in healthcare delivery in the next 24-48hrs)*

🔒 **Are sufficient local, regional medical transportation systems in service to accommodate patient diversion and placement to other healthcare facilities in the region?** *(To include forecasted availability of medical transportation in the next 24-48hrs)*

🔒 **Can the regional healthcare delivery system absorb patient care in critical medical service areas such as Emergency Care, Surgery, Cardiac Care, Stroke Care, Burn Care, Trauma Care, Cancer Care, Dialysis Care, Pediatric Care, Labor & Delivery, and Imaging Diagnostics?** *(To include forecasted disruption of healthcare delivery in the next 24-48hrs)*

🔒 **Are there any other concurrent operational issues that could affect the regional healthcare delivery systems ability to care for diverted patients from affected hospital(s)?** *(Severe weather, nursing strike, higher than normal census, pandemic medical surge, mass casualty event, staffing shortage etc. To include forecasted disruption of healthcare delivery in the next 24-48hrs)*

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EEIs WE ARE NOT TRACKING

🔒 Exposure of personally identifiable information that may result in HIPAA violations on the victim hospital(s)

🔒 CMS regulatory issues that may require enforcement actions on the victim hospital(s)

🔒 FDA regulatory issues that may require enforcement actions on the victim hospital(s)

🔒 Details of the cyber criminal's tactics, techniques and procedures

🔒 Details of mitigation strategies that the victim hospital is deploying. Disabling VPNs, remote access, and single sign-in services

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RESONABLE WORST CASE SCENERIO

So, let's talk about what could happen. The scenario that we will discuss in the following slides are what we consider a possible and reasonably worst-case scenario of a major incident that affects approximately 25% of your region's bed capacity.

WHILE LISTENING
CONSIDER THE FOLLOWING QUESTIONS

How would your HCC respond?

What resources does your region have for movement of many patients?

What if this incident occurs during a severe weather event, flu season, nursing strike, large special event, or a mass casualty incident?

SCENARIO

In today's digital age, where technology is integral to healthcare operations, the importance of robust cybersecurity cannot be overstated. Cyber threats are evolving, and our healthcare infrastructure is a prime target. A breach can not only disrupt services but also compromise patient safety and public trust.

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RIO GRANDE VALLEY

Metropolitan Statistical Area

1,300,000 People United States

1,400,000 People Mexico

2,700,000 Total Population

12 Hospitals

2 Level I Trauma Hospitals

~ 2,700 Licensed Beds

102°F / 84°F Average Summer Temperature

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SETTING THE STAGE

105°F

Heat Index

95%

2,500 of 2,700 Beds

Bed Capacity

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REGIONAL HEALTHCARE DELIVERY

What types of patient care are disrupted?

(mEEI) Can the regional healthcare delivery system (other hospitals) absorb patient care diverted from the targeted hospital(s)?

Emergency Care	Emergency Surgery	Stroke Care
Cardiac Care	Burn Care	Trauma Care
Cancer Care	Dialysis Care	Lab & Imaging
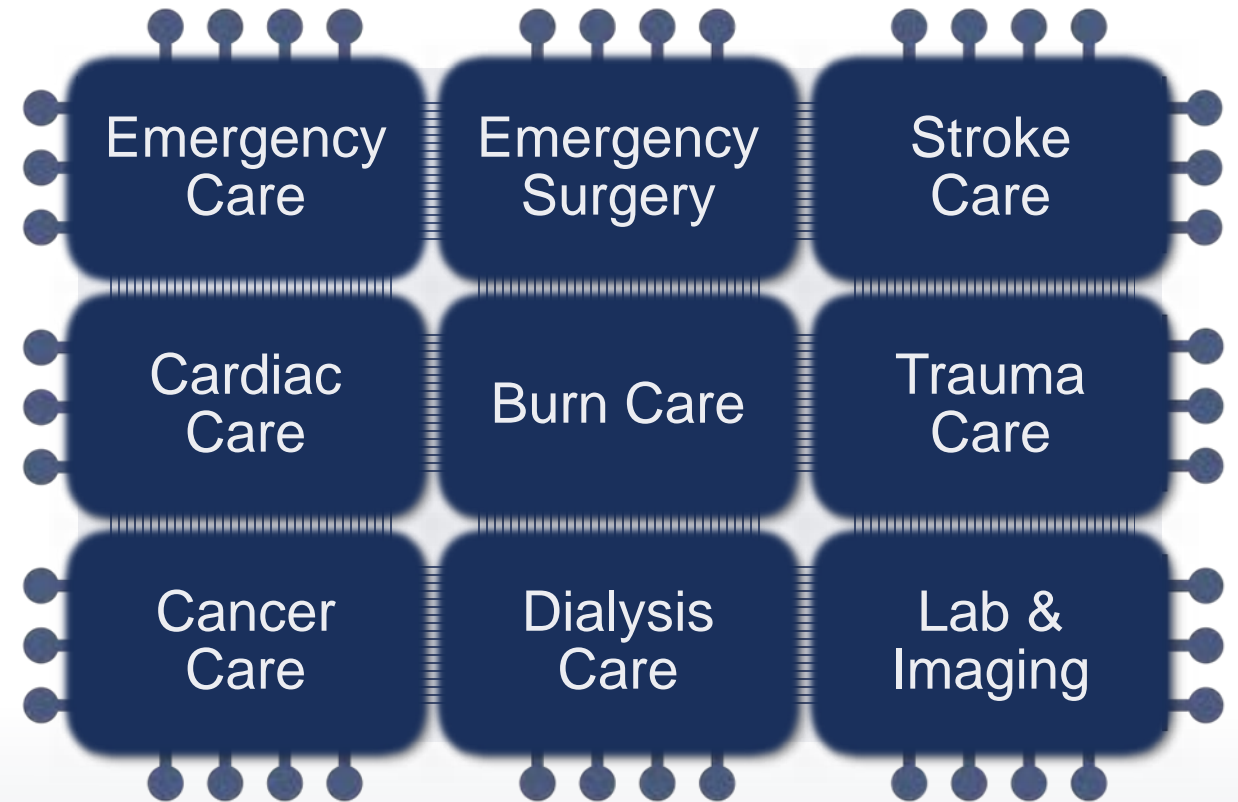
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CONCURRENT ISSUES

🔒 **Successful cyber-attacks on healthcare were up 25% during pandemic**

🔒 **Cyber-attacks and severe weather are the most concerning combination events to hospital emergency managers**

🔒 **(mEEI) Are there concurrent operational issues that could affect the regional healthcare delivery systems ability to care for diverted patients from affected hospital(s)?**

Severe Weather

Nursing Strike

Mass Casualty Event
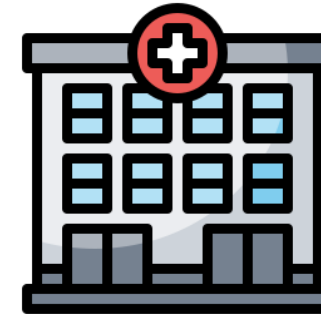
Higher Than Normal Census

Pandemic Surge

Staffing Shortage

SETTING THE STAGE

HVAC	Hospital abruptly lost access to function of HVAC / Chiller systems throughout the hospital. All other systems are functioning normally.	Upon assessment, the SCADA systems that control all HVAC / Chillers have been encrypted and are not functional. The vendor notified the facility that full replacement with new equipment would take approximately 3 days.	**SCADA**
UTILITIES	Upon review of systems all utilities, generators, and electrical functions are normal, but HVAC / Chillers are not functioning.	No manual controls for the complex HVAC / Chiller systems. Temperatures inside the hospital is rising at a rate of 15 degrees / hour from a starting average internal temperature of 71 degrees.	**TEMP**
		Threat actor is asking for 15 million in crypto for decryption keys. The decision was made to pay... but even with keys technical issues prevented restoration of system and the complex environmental system were permanently damaged from the improper shutdown and loss of cooling. Timeline for HVAC / Chiller repair is approximately 15 – 20 days.	**RANSOM**

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MEDICAL TRANSPORTATION

🔒 **Are there enough medical transportation assets available to transport diverted patients to other facilities?**

🔒 **Is diverted patient flow distributed evenly to available receiving facilities?**

🔒 **Does EMS know that the hospital may be experiencing an extended downtime event and may be on divert longer than usually expected?**

🔒 **(mEEI) Is the affected hospital(s) diverting/evacuating patients to other healthcare facilities within the regional healthcare delivery system? Is the affected hospital(s) considering extended diversion and/or evacuation?**

🔒 **(mEEI) Are sufficient local, regional medical transportation systems in service to accommodate patient diversion and placement to other healthcare facilities in the region?**

HOSPITAL DIVERSION / EVACUATION

🔒 **May be difficult to assess how long the hospital will be on diversion at the beginning of the event**

🔒 **Monitoring the affected hospital status, in the beginning, is crucial even if they activate their continuity plan, decompress patient load, and implement downtime procedures**

🔒 **Is this cyber event impacting hospital critical infrastructure, power, and/or water distribution?**

🔒 **(mEEI) Can the regional healthcare delivery system absorb patient care in critical medical service areas such as Emergency Care, Surgery, Cardiac Care, Stroke Care, Burn Care, Trauma Care, Cancer Care, Dialysis Care, Pediatric Care, Labor & Delivery, and Imaging Diagnostics?**

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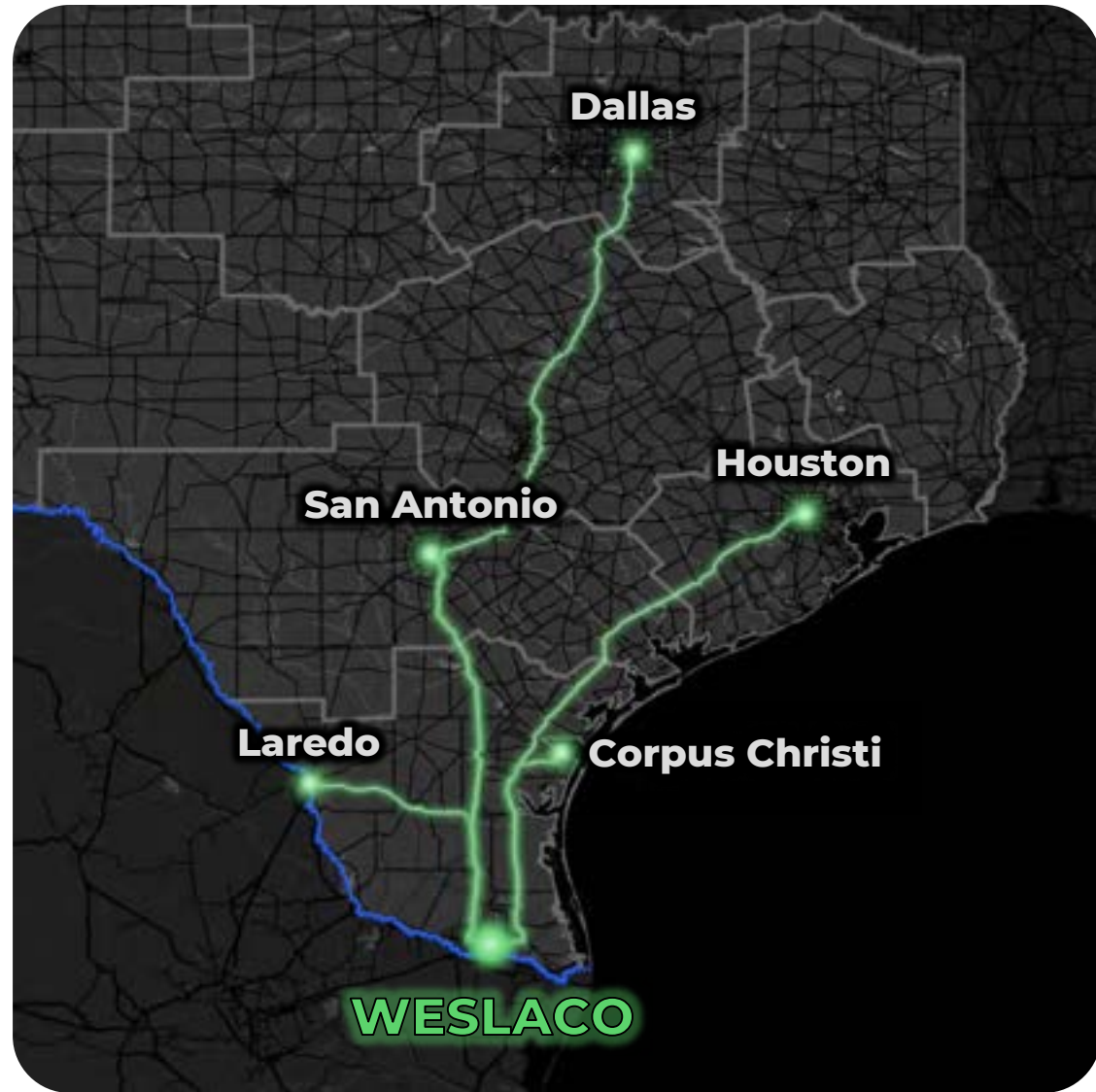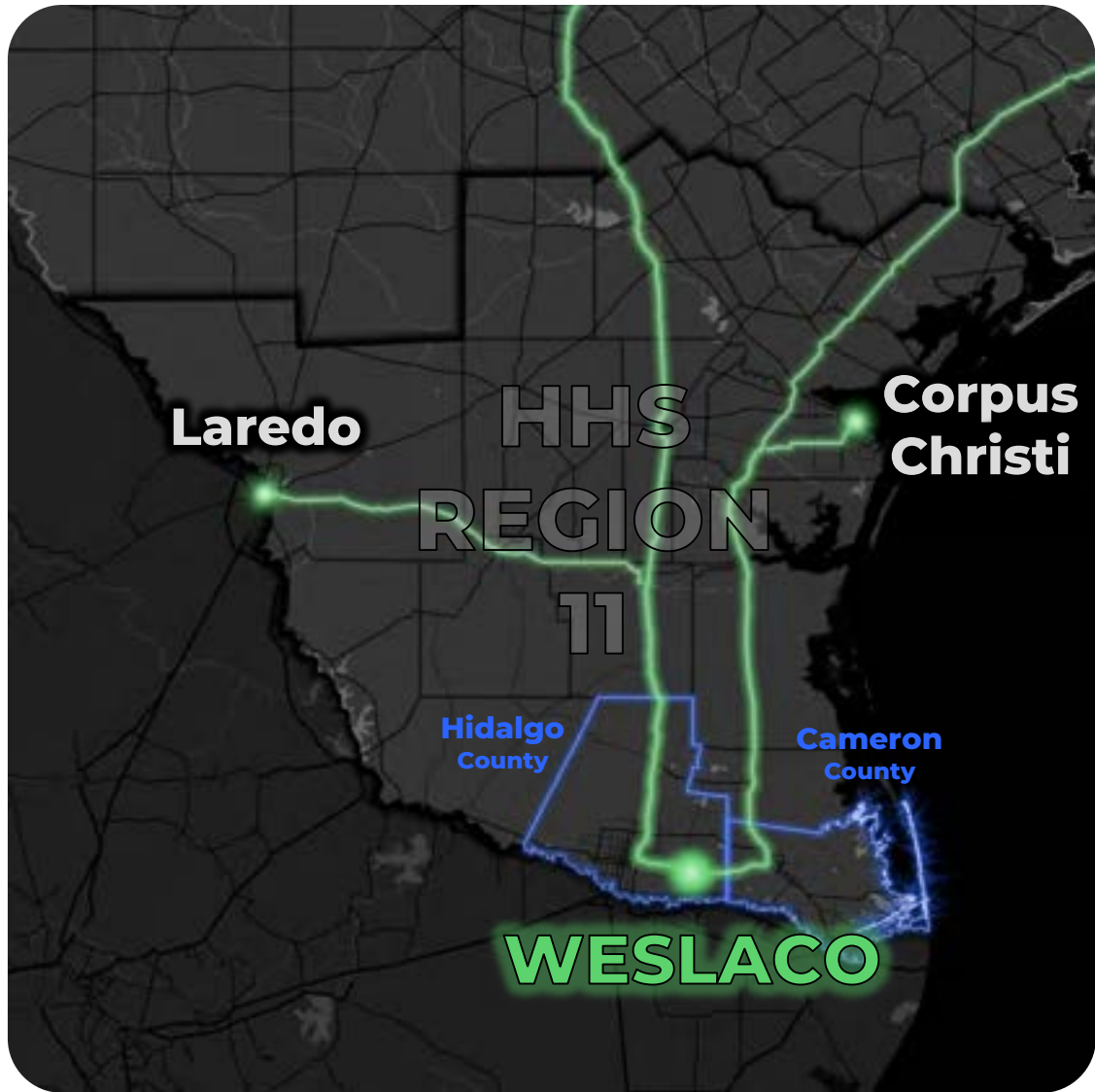
EVACUATION TIMES FROM WESLACO

Discharge

<10% of Patients

Ambulance
TRIP TIME
CC: 2 hr
LAR: 3 hrs
SA: 4 hrs
HOU: 6 hrs
DAL: 9 hrs
CAPACITY 2

Rotor Wing
TRIP TIME
CC: 1 hr
LAR: 1 hr
SA: 2 hrs
HOU: 2 hrs 30 mins
CAPACITY 1

Fixed Wing
TRIP TIME
CC: 1 hr
LAR: 1 hr
SA: 2 hrs
HOU: 2 hrs 30 mins
DAL: 4 hrs
CAPACITY 1-2

AMBUS
TRIP TIME
CC: 4 hrs
LAR: 3 hrs
SA: 5 hrs
HOU: 8 hrs
DAL: 11 hrs
CAPACITY ~20

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The medical one-way transport times displayed are estimates based on typical travel conditions and may vary due to weather, traffic, airspace restrictions, or patient acuity. Capacity limits and trip durations are subject to change depending on resource availability and real-time operational circumstances.

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EVACUATING 25% OF THE REGIONS BED CAPACITY

Worst Case Scenario

🔒 Loss of facility function

🔒 Compromise to patient and staff safety

🔒 The dreaded cyber/physical sentinel event

Minimize Patient Risk

🔒 Early identification and communication of the incident

🔒 Quick implementation of extended downtime procedures and other relevant critical response plans

🔒 Up-to-date and trained / exercised response plans

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WHAT CAN WE DO?

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CYBERSECURITY PERFORMANCE GOALS

ESSENTIAL GOALS

help healthcare organizations address common vulnerabilities by setting a floor of safeguards that will better protect them from cyberattacks, improve response when events occur, and minimize residual risk.

ENHANCED GOALS

help healthcare organizations mature their cybersecurity capabilities and reach the next level of defense needed to protect against additional attack vectors.

HEALTHCARE AND PUBLIC HEALTH SECTOR-SPECIFIC

CYBERSECURITY PERFORMANCE GOALS

STRENGTHENING THE CYBERSECURITY OF THE HEALTHCARE SECTOR AND KEEPING PATIENTS SAFE AND SECURE
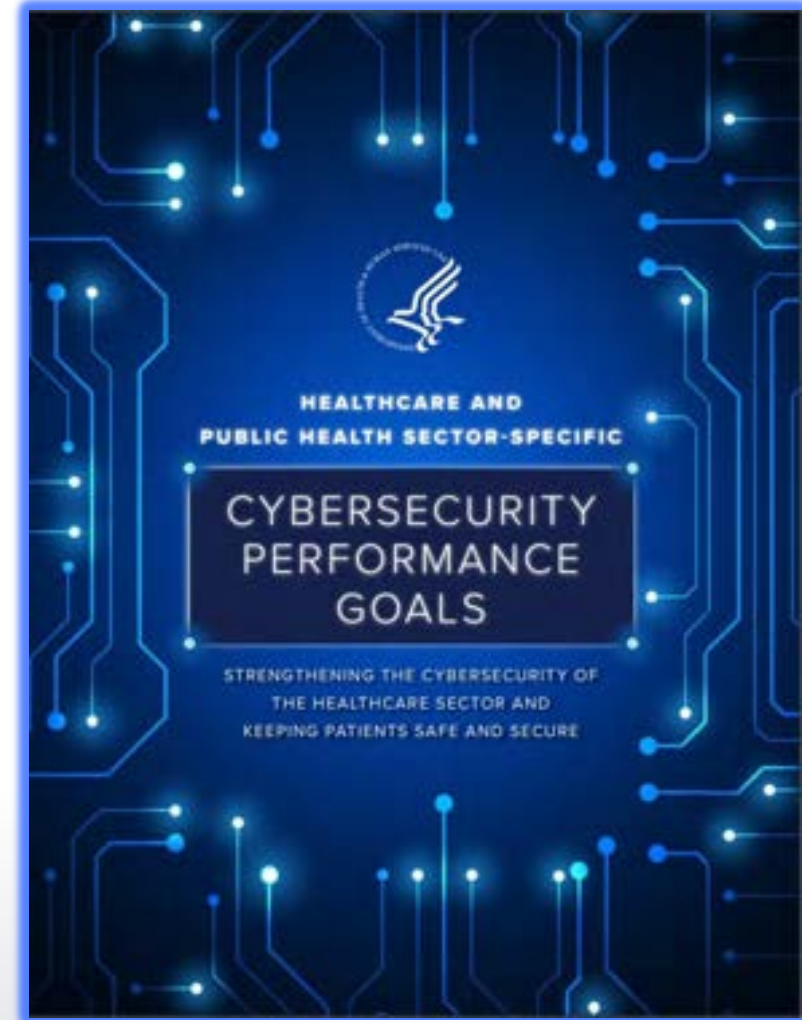
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CYBERSECURITY PERFORMANCE GOALS

ESSENTIAL GOALS

Mitigate Known Vulnerabilities	Revoke Credential for Departing Workforce Members
Email Security	Basic Incident Planning & Preparedness
Multifactor Authentication	Unique Credentials
Basic Cybersecurity Training	Separate User & Privileged Accounts
Strong Encryption	Vendow / Supplier Cybersecurity Requirements

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INFORMATION SHARING

The best way to understand the threat, is to get involved!

MS-ISAC `FREE`
- 🔒 SLTT Government
- 🔒 https://learn.cisecurity.org/msisac-registration

Public Safety Threat Alliance `FREE`
- 🔒 EMS, Law Enforcement, Fire, Emergency Management, PSAP's, FSLTT Government
- 🔒 https://namrinfo.motorolasolutions.com/join-the-psta

Health-ISAC
- 🔒 Nominal Fee
- 🔒 https://health-isac.org/join-h-isac/

CISA Cyber Intelligence Center HSIN COI `FREE`
- 🔒 Critical Infrastructure CISO / CSO / CIOs and SLTT Government
- 🔒 https://www.dhs.gov/how-join-hsin

InfraGard `FREE`
- 🔒 All 16 Critical Infrastructure Sectors
- 🔒 https://www.infragard.org

HHS CIP Email Distribution List `FREE`
- 🔒 https://stg-aspr.hhs.gov/cip/Pages/CIPInquary%20Form.html

Fusion Center Liaison Programs `FREE`
- 🔒 https://www.dhs.gov/fusion-center-locations-and-contact-information

EMR-ISAC HSIN COI `FREE`
- 🔒 Law Enforcement, EMS, Fire, Emergency Management
- 🔒 https://www.dhs.gov/emergency-services

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TRAINING OPPURTUNITIES

Personal Training

🔒 ISC2 CC – Certified in Cybersecurity

🔒 TALON CWG Webinars (Coming Soon!)

🔒 Health Sector Coordinating Council

🔒 Emergency Services Sector Coordinating Council

Coalition Training

TEEX – CDP

🔒 Information Security for Everyone

🔒 Understanding Targeted Cyber Attacks

🔒 Cybersecurity Risk Awareness for Officials and Senior Management

🔒 Demystifying Cyber Attacks

🔒 Cybersecurity Incident Response and Management

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HOW TO GET DHS/FBI INVOLVED

HOW TO BRING HEALTHCARE IT/IS TO THE TABLE AND GET CISA/FBI INVOLVED IN YOUR COALITION

🔒 Coordinate with DHS Cybersecurity Advisors and Protective Security advisors to conduct a webinar for your coalition. If you don't know your CSA/PSA https://www.cisa.gov/audiences/find-help-locally

🔒 Work with your CSA/PSAs to determine if an in-person meeting would be beneficial to your region and invite your regional IT/IS personnel.

🔒 Contact your regional FBI Field Office and ask for the Private Sector Coordinator (every FBI field office has one) and ask for a virtual introduction meeting to discuss the purpose and function of your HCC.

🔒 Depending on your regional hazards and threats (large chemical plants or petrochemical some coalitions may want to consider engaging with CISA's Chemical Security Inspectors and FBI's Weapons of Mass Destruction Coordinators to discuss healthcare specific capabilities and responses to major incidents. (I know this is not related to Cyber, but it is a way to build a relationship with DHS/FBI)

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HEALTH SECTOR COORDINATING COUNCIL
INCIDENT RESPONSE & BUSINESS CONTINUITY WORKING GROUP

🔒 **Tactical Crisis Response Guide (HIC-TCR)**

🔒 **Matrix of Information Sharing Organizations (HIC-MISO)**

🔒 **Coordinated Healthcare Incident Response Plan (CHIRP)**

🔒 **Operational Continuity – Cyber Incident (OCCI)**

🔒 **Healthcare Executive Checklist for Cyber Incidents**

🔒 **Cyber Incident Response – Executive Checklist**

https://www.healthsectorcouncil.org

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OCCI ELEMENTS

Editable Collection of Incident Response Guides

Priority actions for the first 8 hours of a large-scale Cyber Security Event

Actionable items that allows HICS respond quickly

Version 2.0 released soon through a partnership between HSCC and 405(d) Program and HHS

Version 3.0 will also be released soon and is a printable operational document that can be filled out and provide areas for written notes

Response Guideline
Cybersecurity/Technology System Prolonged Massive Disruption or Outage
This checklist outlines recommended initial (first 12 hours) actions and considerations during cybersecurity incidents

Command positions should be activated as they are needed. If a command position is not activated, actions fall to the Incident Commander and can be delegated as appropriate. Position activation may depend on staff availability or the size and scope of the incident.

Based on assessment by CIO, CISO, and senior leadership, incident command may be activated Threshold for activation:

A prolonged massive disruption meets or has the potential to meet any of the following:
a. Patient safety and/or member service impacts
b. Large-scale clinical workflow, patient care, and/or member service impacts
c. Implementation of preventative defenses that could impact clinical workflow

Incident Commander
Role: Provides overall strategic direction on all site-specific response actions and activities.

1.1	Identify Incident scope and obtain situational awareness • Identify Scope – One site/multiple sites/isolated outage/full network outage ○ Assume it is a malicious (cybersecurity) incident until proven otherwise • Situational awareness – operational, business, and clinical impacts
1.2	Establish a cadence and process for coordination with IS/IT and Cyber Security • Consider command center coordination or unified command based on organizational structure *(Hospital, IS/IT, and Cybersecurity Command)*
1.3	Activate applicable continuity and downtime plan(s) • If plans do not exist or are not functional, rapidly identify critical services and create a plan to continue/sustain services
1.4	Communicate activation of downtime plans to inform operational changes • Consider use of overhead paging, mass notification system, etc.
1.5	Approve recommendations from Operations relative to: • Scaling services • Pausing services • Initiating diversionary status
1.6	Address incident need by activating additional resources
1.7	Understand upstream and downstream impact(s) to partner organizations. Communicate as appropriate. • Community Connect • Other health systems • Community partners (e.g., SNF, LTAC, EMS)
1.8	Establish cadence for ongoing impact assessment and briefing (e.g., operational periods)

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COORDINATED HEALTHCARE INCIDENT RESPONSE PLAN
CHIRP

- Plan template to guide the response to a large-scale cybersecurity incident

- Platform to unite Cyber Security / Information Technology response plans and Hospital EOPs

- Leveraged as a stand-alone document or a supporting document to other supplemental plans

CYBER INCIDENT RESPONSE

HOSPITAL LEADERSHIP

CYBER SECURITY

IT

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QUESTIONS?

To be added to our email distribution list, email the TALON Cyber Admin Team at

intake@r6hppcyber.us

If you are a FSLTT government employee or a HPP Contractor and would like to join our TLP:AMBER TALON CWG Signal chat please email your name, org, and contact info to intake@r6hppcyber.us to be added.
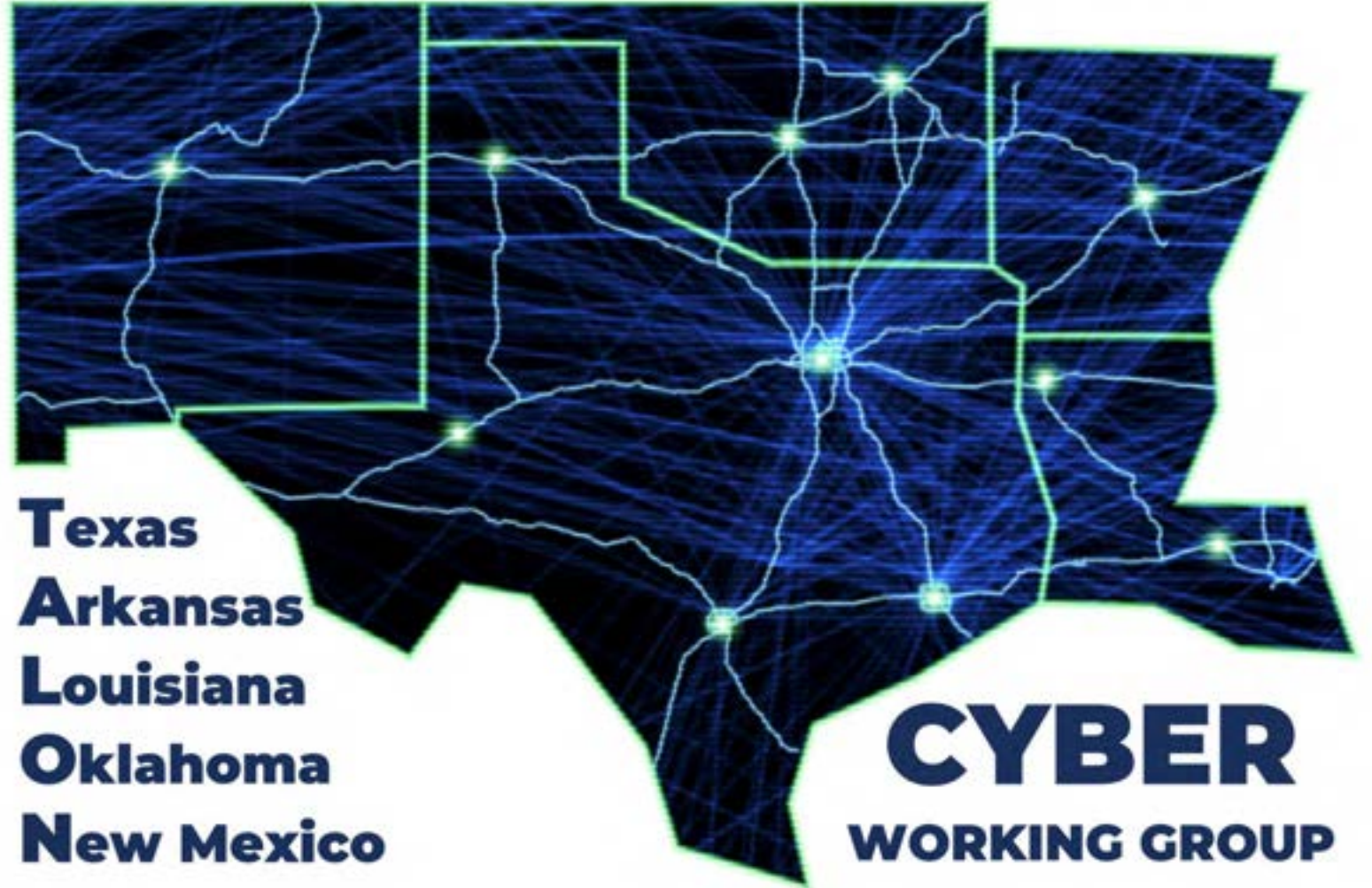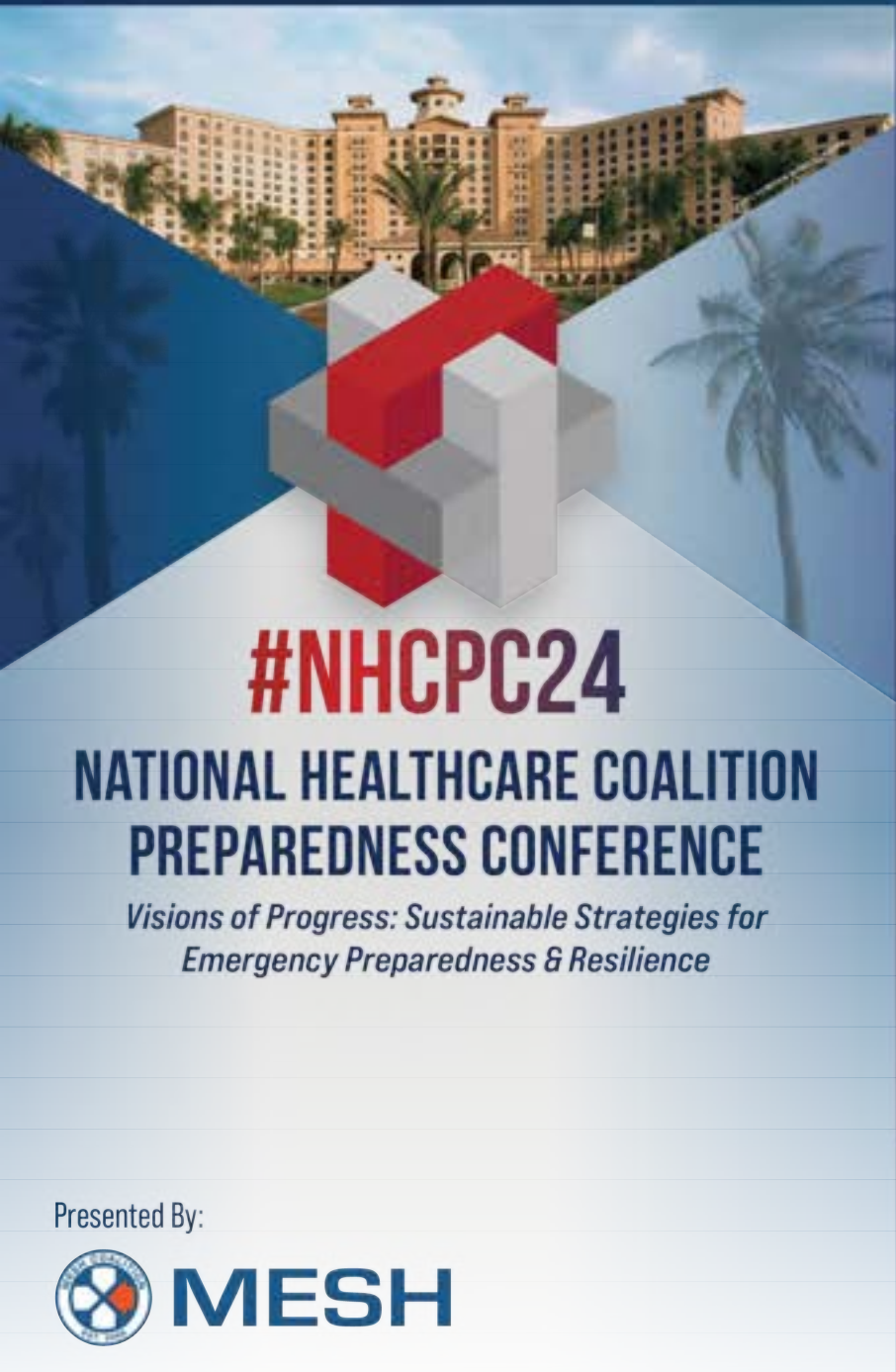
Introduce the Pan Flu Scramble

- CDC activity to flood the community healthcare sector with patients represented by 5X7 cards

#1   **Emergency Department**   **Round 1**

- 8 month old female
- Temperature of 104°F (40°C)
- Increased work of breathing with retractions
- Poor muscle tone
- Cyanosis
- No previous medical history

Vital signs upon evaluation:

Temp–104°F, Pulse–130, Respiration–32, Blood Pressure–80/48

Round 1

- ☐ Keep this patient for treatment
- ☐ Release this patient to go home
- ☐ Seek to transfer this patient to _____ who:
  - ☐ Accepts transfer request
  - ☐ Rejects transfer and returns patient to ED

Round 2

- ☐ Keep this patient for treatment
- ☐ Release this patient to go home
- ☐ Seek to transfer this patient to _____ who:
  - ☐ Accepts transfer request
  - ☐ Rejects transfer and returns patient to ED

Other Call Centers

9-1-1 Call Centers

Emergency Medical Services

ED/ICU

VA Medical Center/Clinic

Public Health Department

Pharmacies

Facilitator

Home Care Site

Fatality Management Services

Local Gov/ EMA/ EOC

Long -Term Care

Home Health/ Hospice Care

Urgent Care Centers

Outpatient Walk-in Clinics

Primary Care Providers

Tasked with 2023/4 MRSE functional exercise

- Chemical Event (new annex)

- ASPR's evaluation tool
  - We needed to collect all that data

- Agencies present/invited

- Conducted a day after Symposium (focus on Chemical events)
  - Overview of Annex and Chempack program
  - Hazmat on-scene procedures
  - Treatment protocols for organophosphates

PowerPoint with instructions

1. All your instructions will come from us. We'll project the scenario up on this PP

2. We are going to direct you to Victim Cards when it's time

3. Then we are going to give you time to process the incoming victims. But not too much time.

4. Then we'll stop the activity and check in with you as a large group and ask you to update your numbers. More to come

5. Then we'll ask lots of questions, some specifically aimed at hospitals and EMS, but others may be to the entire room

6. If you have an answer….raise your flag, pick up your microphone and wait to be called on

Scenario

At approximately 9:00 AM, a chemical tanker truck carrying organophosphates overturned near a major intersection(90th and Dodge), leading to a catastrophic release of toxic chemicals. The incident has affected a hundreds of people in the vicinity, including pedestrians, motorists, and residents/occupants in nearby buildings as the plume drifts southeast. The following facilities are in the path

Emergency Medical Services

Hospital 1

Hospital 2

Public Health Department

Facilitator

Local Gov/ EMA/ EOC

Long -Term Care

Home Health/ Hospice Care

Outpatient Walk-in Clinics

Items on each table

Revised Patient Cards

20% of staffed beds and 85/15/rule

Data collection forms for MRSE evaluation

Healthcare Coalition Medical Response and Surge Exercise
(MRSE)

Please answer all of the following questions. This data must be collected and reported to the Administration for Strategic Preparedness and Response (ASPR) in accordance with the Coalition's funding guidelines.

EMS agencies should complete the following questions based on your response to the scenario:

1. Which EMS agency are you representing? _____
2. Please complete the following table at the beginning and end of the exercise to indicate the availability of EMS resources.

Resource Type	Number available at beginning of functional exercise	Did your facility have enough to respond to the incident?
Ground Ambulance (Basic Life Support)		
Ground Ambulance (Advanced Life Support)		
Hazmat Team		
Decontamination Team		
Specialized Protective Equipment		

Data collection forms for MRSE evaluation

Healthcare Coalition Medical Response and Surge Exercise (MRSE)

Please answer all of the following questions. This data must be collected and reported to the Administration for Strategic Preparedness and Response (ASPR) in accordance with the Coalition funding guidelines.

Hospitals should complete the following questions based on your facility's response to the scenario:

1. **What is your hospital's name?** _____
2. **Please use the following tables to record the availability of resources throughout the exercise:**

Personnel Type	**Total number available before exercise** (call your facility for this info at the beginning of the exercise).	(end of exercise) **Did you have enough to care for existing and surge patients?**
Respiratory therapists		Yes No
Pharmacists		Yes No
Trauma, Emergency Department, and Perioperative Services Staff		Yes No
Pediatrics, Neonatal, and Obstetric Services Staff		Yes No
Laboratory and Diagnostic Imaging Services Staff		Yes No
Environmental Services Staff		Yes No
Clinical Supply Staff		Yes No
Facilities and Information Technology Staff		Yes No
Security Staff		Yes No
Resource Type	**Total number available before exercise** (call your facility for this info at the beginning of the exercise).	(end of exercise) **Did you have enough to care for existing and surge patients?**
Pressor Medications		Yes No
Respiratory Medications		Yes No
Anticonvulsant Drugs		Yes No
Antidotes (e.g. Atropine, Hydroxocobalamin)		Yes No
Intravenous Fluids		Yes No
Oxygen		Yes No
2-pam Chloride		Yes No
Infusion Pumps		Yes No
Ventilators		Yes No
Bedside Monitors		Yes No
Airway Suction (Adult & Pediatric)		Yes No
Supplies Needed to Administer Pharmaceuticals, Blood Products		Yes No

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Data collection forms for MRSE evaluation

Bed Type	Number of open beds at the beginning of the exercise (call your facility for this information).	Did your facility have enough to respond to the incident?
Emergency Department Beds		Yes No
General Medical Unit Beds		Yes No
ICU Beds (SICU, MISU, CCU)		Yes No
Post Critical Care (Monitored/Stepdown) Beds		Yes No
Surgical Unit Beds (Pre-op., Post-op., and Procedural)		Yes No
General Pediatric Unit Beds		Yes No
Pediatric ICU Beds		Yes No

Please complete the following questions related to patient movement at the end of each round.

Hospital Census at the beginning of the exercise	

Patient Movement	Number at end of exercise
Surge patients received and admitted	
Transfer patients received and admitted	
Number of existing patients discharged to accommodate surge	
Number of patient transferred to another facility to accommodate surge	
Number of existing and surge patients that did not receive an appropriate staffed bed at your facility and/or transport to another facility (i.e. patients awaiting admission)	

Data collection forms for MRSE evaluation

Hospital Name:
Existing patients transferred out
Surge patients transferred out
Existing patients discharged

Email sent before exercise

- Hospitals given a list of current day info needed based on HCC test objectives
  - Bed counts by type
  - Supplies on hand
  - Personnel on hand
- Instructed to bring phone numbers of colleagues at facility
- This becomes a functional exercise!

Played 2 Rounds at 10% for each

- Experts in the room

- Updated tally/data collection sheets at the end of each round

- Reported out
  - First hospitals
  - Then all partners in room

Evaluation Overview

- Participant feedback

- Healthcare Coalition Coordinator feedback

- Future considerations
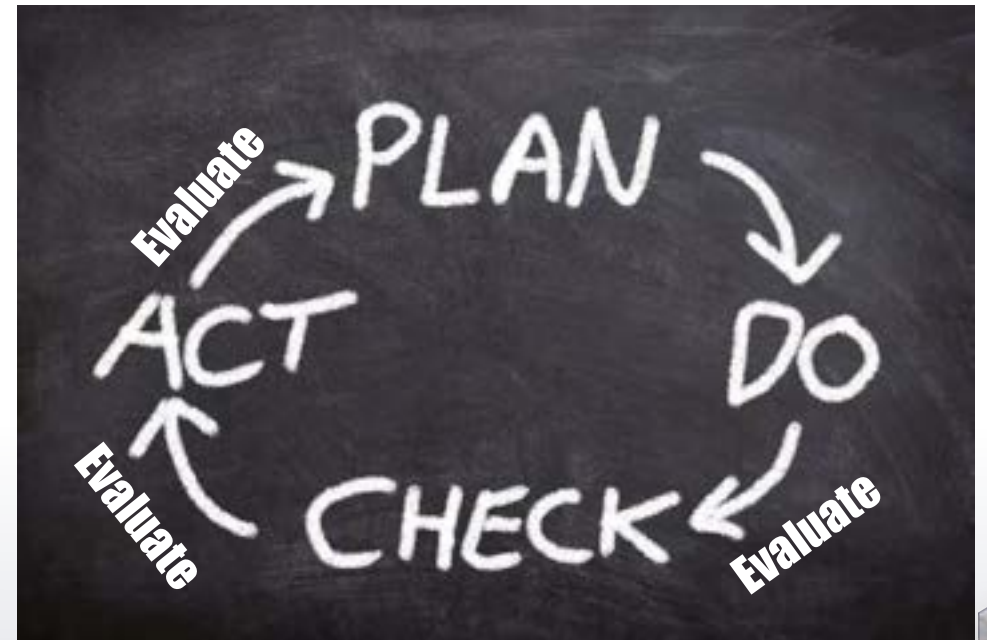
Photo credit: Pixabay royalty free clipart

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Participant Feedback Collection Methods

Healthcare Coalition Medical Response and Surge Exercise (MRSE)

Please complete the following questions as part of the Healthcare Coalition MRSE evaluation.

1. What is your organization? _____
2. Are you an executive for your organization?   Yes   No

Please fill in the bubbles below to indicate your level of agreement with each statement about the exercise objectives.

3. The Coalition engaged coalition members and their executives to participate in the MRSE and the After Action Review (AAR).

○	○	○	○	○
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

4. The Coalition effectively notified members of the exercise and modeled how information sharing would be facilitated during a community-wide emergency or disaster.

○	○	○	○	○
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

5. The Coalition demonstrated its ability to assess and meet the critical personnel and resources needs (supplies, personnel, etc.) to manage a patient surge during a community wide emergency or disaster.

○	○	○	○	○
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

6. The Coalition exhibited its ability to assess and meet the critical EMS personnel and resource needs to manage patient surge during a community-wide emergency or disaster.

○	○	○	○	○
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

7. The Coalition displayed its ability to reduce patient morbidity and mortality through appropriate patient placement during a large-scale patient surge by assisting with the identification and coordination of available patient care resources.

○	○	○	○	○
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

8. The Coalition showcased its ability to successfully coordinate and execute all relevant response plans during a community-wide emergency or disaster.

○	○	○	○	○
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

9. The MRSE evaluated the readiness and response capabilities of hospitals in handling a mass casualty event caused by chemical contamination.

○	○	○	○	○
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

Participant Feedback Collection Methods

10. The MRSE assessed the coordination and communication among the HCC, healthcare facilities, first responders, and public health agencies.

○	○	○	○	○
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

11. The MRSE determined the ability of hospitals to surge by at least 20% of their staffed beds and initiate Crisis Standards of Care.

○	○	○	○	○
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

12. The MRSE identified areas for improvement in the emergency response plan and resource allocation during a chemical incident.

○	○	○	○	○
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

Please fill in the bubbles below to indicate your agreement with each question in relation to the format of this exercise.

13. The Scramble (in-person functional exercise with an opportunity to discuss between rounds of events) is an effective format for the MRSE.

○	○	○	○	○
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

14. The 20% staffed bed surge was an effective number of patients to test the exercise objectives.

○	○	○	○	○
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

Please answer the following questions and consider the exercise format and design, the scenario, the events that played out during the exercise, and the actions of exercise participants.

15. What is one area for improvement from your participation in the MRSE?

_____
_____

16. How do you think the area for improvement from question #15 could be addressed?

_____
_____

17. What is one strength you identified playing in the MRSE?

_____
_____

Participant Feedback Collection Methods

- Hot wash
  - What went well with exercise operations?
  - What could be improved with exercise operations?
  - What went well with exercise design?
  - What could be improved with exercise design?

Participant Feedback Average Ratings

Agency	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	# of Respondents
Emergency management	4.50	4.00	4.50	4.00	4.00	4.00	4.00	4.50	4.00	4.50	4.50	4.50	2
EMS	4.83	4.72	4.83	4.56	4.22	4.22	4.67	4.50	4.11	4.22	4.39	3.94	7
Hospital	4.62	4.56	4.48	4.34	4.31	4.47	4.52	4.49	4.37	4.54	4.56	4.15	121
Long term care	4.36	4.42	4.31	4.32	3.96	4.26	4.24	4.10	4.42	4.20	4.65	4.10	19
Public health	4.39	4.48	4.25	4.00	4.24	4.19	4.19	4.07	4.08	4.38	4.30	3.74	23
Other	4.41	4.47	4.37	4.32	4.28	4.34	4.36	4.36	4.14	4.30	4.28	4.11	47
Composite	4.52	4.44	4.46	4.26	4.17	4.25	4.33	4.34	4.19	4.36	4.45	4.09	219

Highest Average by Organization Type

Lowest Average by Organization Type

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Participant Feedback Average Ratings - Highest

Agency	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	# of Respondents
Emergency management	4.50	4.00	4.50	4.00	4.00	4.00	4.00	4.50	4.00	4.50	4.50	4.50	2
EMS	4.83	4.72	4.83	4.56	4.22	4.22	4.67	4.50	4.11	4.22	4.39	3.94	7
Hospital	4.62	4.56	4.48	4.34	4.31	4.47	4.52	4.49	4.37	4.54	4.56	4.15	121
Long term care	4.36	4.42	4.31	4.32	3.96	4.26	4.24	4.10	4.42	4.20	4.65	4.10	19
Public health	4.39	4.48	4.25	4.00	4.24	4.19	4.19	4.07	4.08	4.38	4.30	3.74	23
Other	4.41	4.47	4.37	4.32	4.28	4.34	4.36	4.36	4.14	4.30	4.28	4.11	47
Composite	4.52	4.44	4.46	4.26	4.17	4.25	4.33	4.34	4.19	4.36	4.45	4.09	219

Question 1:The coalition engaged coalition members and their executives to participate in the MRSE and After Action Report.

Question 2: The coalition effectively notified members of the exercise and modeled how information sharing would be facilitated during a community-wide emergency or disaster.

Question 3: The coalition demonstrated its ability to assess and meet the critical personnel and resource needs (supplies, personnel, etc.) to manage a patient surge during a community-wide emergency or disaster.

Question 11: The Scramble (in-person functional exercise with an opportunity to discuss between rounds of events) is an effective format for the MRSE.

#NHCPC24

Participant Feedback Average Ratings - Lowest

Agency	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	# of Respondents
Emergency management	4.50	4.00	4.50	4.00	4.00	4.00	4.00	4.50	4.00	4.50	4.50	4.50	2
EMS	4.83	4.72	4.83	4.56	4.22	4.22	4.67	4.50	4.11	4.22	4.39	3.94	7
Hospital	4.62	4.56	4.48	4.34	4.31	4.47	4.52	4.49	4.37	4.54	4.56	4.15	121
Long term care	4.36	4.42	4.31	4.32	3.96	4.26	4.24	4.10	4.42	4.20	4.65	4.10	19
Public health	4.39	4.48	4.25	4.00	4.24	4.19	4.19	4.07	4.08	4.38	4.30	3.74	23
Other	4.41	4.47	4.37	4.32	4.28	4.34	4.36	4.36	4.14	4.30	4.28	4.11	47
Composite	4.52	4.44	4.46	4.26	4.17	4.25	4.33	4.34	4.19	4.36	4.45	4.09	219

Question 5: The coalition displayed its ability to reduce patient morbidity and mortality through appropriate patient placement during a large-scale patient surge by assisting with the identification and coordination of available patient care resources.

Question 12: The 20% staffed bed surge was an effective number of patients to test the exercise objectives.

#NHCPC24

Coalition Coordinator Feedback

- Level of agreement with each statement:

1. The 20% surge of hospital staffed beds effectively tested the HCC's response plans.

2. The 85/15 rule (85% of patients are treat and release, 15% are critical and require admission) was an effective format for the severity of the patients.

3. The patient cards were an effective way to simulate patients for the in-person functional MRSE.

4. The hospital data collection forms were an effective tool to collect the required data for ASPR.

5. The EMS data collection forms were an effective tool to collect the required data for ASPR.

6. Partnering the Symposia and MRSE was an effective way to engage members and provide education on emergency preparedness topics.

7. I felt engaged during the MRSE planning process.

8. The MRSE helped meet the coalition and partner's emergency preparedness needs.

9. The topic (chemical) of the MRSE was a good topic for a surge exercise.

10. The facilitation of the MRSE was engaging and effective.

11. The in-person functional, as opposed to a functional with a Simulation Cell, was a good format for the MRSE.

Coalition Coordinator Feedback

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Number of Respondents
3.6	4	4.4	5	4.2	5	4.8	4.8	4.2	4.8	4	5

1. The 20% surge of hospital staffed beds effectively tested the HCC's response plans.

4. The hospital data collection forms were an effective tool to collect the required data for ASPR.

6. Partnering the Symposia and MRSE was an effective way to engage members and provide education on emergency preparedness topics.

#NHCPC24

Participant Exercise Design Themes

Good:

- Diversity of Attendees
  - Networking
  - Brainstorming
  - Engagement
  - Collaboration
- Room setup
  - Microphones
  - Homogenous tables
- Patient cards
  - Cards themselves
  - Envelopes – "the unknown"
- Real-time information

Participant Exercise Design Themes

Areas for Improvement:

- Hospital-centric
  - Disengaged: LHD, LTC, non-hospital healthcare
- Attendees
  - **Needed:**
    - **EMS**
    - **Emergency management**
    - Hospital
      - Clinical
      - Administration
  - Desired:
    - Law enforcement
    - Dispatch
    - Weather service

Participant Exercise Design Themes

Areas for Improvement:

- Introductions

- Room setup
  - Homogenous tables

- Surge not stressful

- Scenario
  - Chemical
  - On-scene details

- Exercise run time

Future Considerations

Photo credit: Pixabay royalty free clipart

- EMA and EMS participation
  - Survey, discussion if unable to attend
- More surge
  - >20% (if using 85/15)
  - Time of year
  - Patient acuity
- Scenario:
  - Not chemical
  - More details for first responders
  - Recovery
    - Public health activities
    - Prolonged stress
      - Length of patient stay on card
- Inject: Non-hospital healthcare needs patients
- Test the information-sharing system
- Fewer objectives

#NHCPC24

Thank you!

Healthcare Coalition Medical Response and Surge Exercise (MRSE)

Please answer all of the following questions. This data must be collected and reported to the Administration for Strategic Preparedness and Response (ASPR) in accordance with the Coalition's funding guidelines.

EMS agencies should complete the following questions based on your response to the scenario:

1. Which EMS agency are you representing? _____
2. Please complete the following table at the beginning and end of the exercise to indicate the availability of EMS resources.

Resource Type	Number available at beginning of functional exercise	Did your facility have enough to respond to the incident?
Ground Ambulance (Basic Life Support)		
Ground Ambulance (Advanced Life Support)		
Hazmat Team		
Decontamination Team		
Specialized Protective Equipment		

Healthcare Coalition Medical Response and Surge Exercise (MRSE)

Please answer all of the following questions. This data must be collected and reported to the Administration for Strategic Preparedness and Response (ASPR) in accordance with the Coalition funding guidelines.

Hospitals should complete the following questions based on your facility's response to the scenario:

1. **What is your hospital's name?** _____
2. **Please use the following tables to record the availability of resources throughout the exercise:**

Personnel Type	Total number available before exercise (call your facility for this info at the beginning of the exercise).	(end of exercise) Did you have enough to care for existing and surge patients?	
Respiratory therapists		Yes	No
Pharmacists		Yes	No
Trauma, Emergency Department, and Perioperative Services Staff		Yes	No
Pediatrics, Neonatal, and Obstetric Services Staff		Yes	No
Laboratory and Diagnostic Imaging Services Staff		Yes	No
Environmental Services Staff		Yes	No
Clinical Supply Staff		Yes	No
Facilities and Information Technology Staff		Yes	No
Security Staff		Yes	No
Resource Type	**Total number available before exercise** (call your facility for this info at the beginning of the exercise).	**(end of exercise) Did you have enough to care for existing and surge patients?**	
Pressor Medications		Yes	No
Respiratory Medications		Yes	No
Anticonvulsant Drugs		Yes	No
Antidotes (e.g. Atropine, Hydroxocobalamin)		Yes	No
Intravenous Fluids		Yes	No
Oxygen		Yes	No
2-pam Chloride		Yes	No
Infusion Pumps		Yes	No
Ventilators		Yes	No
Bedside Monitors		Yes	No
Airway Suction (Adult & Pediatric)		Yes	No
Supplies Needed to Administer Pharmaceuticals, Blood Products		Yes	No

Bed Type	Number of open beds at the beginning of the exercise (call your facility for this information).	Did your facility have enough to respond to the incident?	
Emergency Department Beds		Yes	No
General Medical Unit Beds		Yes	No
ICU Beds (SICU, MISU, CCU)		Yes	No
Post Critical Care (Monitored/Stepdown) Beds		Yes	No
Surgical Unit Beds (Pre-op., Post-op., and Procedural)		Yes	No
General Pediatric Unit Beds		Yes	No
Pediatric ICU Beds		Yes	No

Please complete the following questions related to patient movement at the end of each round.

Hospital Census at the beginning of the exercise	

Patient Movement	Number at end of exercise
Surge patients received and admitted	
Transfer patients received and admitted	
Number of existing patients discharged to accommodate surge	
Number of patient transferred to another facility to accommodate surge	
Number of existing and surge patients that did not receive an appropriate staffed bed at your facility and/or transport to another facility (i.e. patients awaiting admission)	

Hospital Name:
Existing patients transferred out
Surge patients transferred out
Existing patients discharged

Healthcare Coalition Medical Response and Surge Exercise (MRSE)

Please complete the following questions as part of the Healthcare Coalition MRSE evaluation.

1. What is your organization? _____
2. Are you an executive for your organization?   Yes   No

Please fill in the bubbles below to indicate your level of agreement with each statement about the exercise objectives.

3. The Coalition engaged coalition members and their executives to participate in the MRSE and the After Action Review (AAR).

O	O	O	O	O
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

4. The Coalition effectively notified members of the exercise and modeled how information sharing would be facilitated during a community-wide emergency or disaster.

O	O	O	O	O
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

5. The Coalition demonstrated its ability to assess and meet the critical personnel and resources needs (supplies, personnel, etc.) to manage a patient surge during a community wide emergency or disaster.

O	O	O	O	O
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

6. The Coalition exhibited its ability to assess and meet the critical EMS personnel and resource needs to manage patient surge during a community-wide emergency or disaster.

O	O	O	O	O
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

7. The Coalition displayed its ability to reduce patient morbidity and mortality through appropriate patient placement during a large-scale patient surge by assisting with the identification and coordination of available patient care resources.

O	O	O	O	O
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

8. The Coalition showcased its ability to successfully coordinate and execute all relevant response plans during a community-wide emergency or disaster.

O	O	O	O	O
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

9. The MRSE evaluated the readiness and response capabilities of hospitals in handling a mass casualty event caused by chemical contamination.

O	O	O	O	O
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

10. The MRSE assessed the coordination and communication among the HCC, healthcare facilities, first responders, and public health agencies.

O	O	O	O	O
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

11. The MRSE determined the ability of hospitals to surge by at least 20% of their staffed beds and initiate Crisis Standards of Care.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
O	O	O	O	O

12. The MRSE identified areas for improvement in the emergency response plan and resource allocation during a chemical incident.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
O	O	O	O	O

Please fill in the bubbles below to indicate your agreement with each question in relation to the format of this exercise.

13. The Scramble (in-person functional exercise with an opportunity to discuss between rounds of events) is an effective format for the MRSE.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
O	O	O	O	O

14. The 20% staffed bed surge was an effective number of patients to test the exercise objectives.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
O	O	O	O	O

Please answer the following questions and consider the exercise format and design, the scenario, the events that played out during the exercise, and the actions of exercise participants.

15. What is one area for improvement from your participation in the MRSE?

_____

_____

16. How do you think the area for improvement from question #15 could be addressed?

_____

_____

17. What is one strength you identified playing in the MRSE?

_____

_____

U.S. Department of Health and Human Services

ASPR — Administration for Strategic Preparedness & Response

Sustainable Medical Operations Coordination Centers (MOCCs): Making them Work for You

December 12, 2024

Disclaimer

The opinions expressed in this presentation and on the following slides by non-federal government employees are solely those of the presenter and not necessarily those of the U.S. government. The accuracy or reliability of the information provided is the opinion of the individual organization or presenter represented.

Rachel Lehman
Acting ASPR TRACIE Program Director

ASPR Key Priorities

1 **Prepare** for future public health emergencies and disasters

2 Manage the federal **response** to and recovery from public health emergencies and other disasters

4 Ensure **workforce readiness** through development of innovative workplace practices

3 Improve and leverage **partnerships** with health care and public health stakeholders

To meet its mission, ASPR is focused on four key priorities

ASPR TRACIE: Three Domains

TECHNICAL RESOURCES

- Self-service collection of audience-tailored materials
- Subject-specific, SME-reviewed "Topic Collections"
- Unpublished and SME peer-reviewed materials highlighting real-life tools and experiences

asprtracie.hhs.gov

ASSISTANCE CENTER

- Personalized support and responses to requests for information and technical assistance
- Accessible by toll-free number (1844-5-TRACIE), email (askasprtracie@hhs.gov), or web form (ASPRtracie.hhs.gov)

1-844-5-TRACIE

INFORMATION EXCHANGE

- Area for password-protected discussion among vetted users in near real-time
- Ability to support chats and the peer-to-peer exchange of user-developed templates, plans, and other materials

askasprtracie@hhs.gov

John Hick, MD
Moderator
Hennepin Healthcare & ASPR TRACIE

Session Objectives

1. Describe how jurisdictions can incorporate Medical Operations Coordination Centers (MOCCs) for daily, specialty, and mass casualty surge incidents.

2. Learn how MOCCs can incorporate pediatric and burn considerations for specialty care.

3. Describe ASPR TRACIE resources that can help support MOCC operations.

What is a Medical Operations Coordination Center (MOCC)?

- Regional hub for healthcare capacity management

- Backstops, does not replace usual referral mechanisms

- Monitors regional healthcare capacity

- Key functions
  - Transfer management
  - Load-balancing
  - Single point of contact for all hospitals when usual referral mechanisms overloaded

Why Use a MOCC?

- Gets patients to the right resources as quickly as possible
    - o Reduces time to transfer during periods of surge
    - o Can reduce mortality caused by delays and overcrowding
- Maintains equity of access to care
- Supports consistent regional standard of care
- Ensure patients in community hospitals have access to emergent specialty care
- Facilitates "care-in-place" consultation when transfers are not possible
- Prioritizes transfers during high volume periods when not all requests can be met
- Can interface with EMS to arrange transfers

ASPR TRACIE MOCC Toolkit, Version 3

- Original version created during pandemic by NRCC Healthcare Resilience Task Force

- Updated twice

- Incorporates wide variety of SME input / lessons learned

https://files.asprtracie.hhs.gov/documents/fema-mocc-toolkit.pdf

MEDICAL OPERATIONS COORDINATION CENTERS TOOLKIT
THIRD EDITION

Contents

- MOCC Background
- Attributes
- Organization
- Initial Considerations
- MOCC Funding Options
- RMOCC, SMOCC, IMOCC Considerations
- MOCC Operations

Appendix

- Acronyms
- Patient Transfer Checklist
- Pediatric Considerations for MOCCs
- Burn Considerations for MOCCs
- MOCC Pre-Scripted Mission Assignment (PSMA) Template
- MOCC Patient Transfer Workflow

Key Points

- MOCC will have varied constructs depending on the area
- Basing MOCC on daily operational constructs likely much more effective than "disaster-only" function
- Many jurisdictions face daily capacity / transfer management issues that a MOCC can help mitigate (strain rather than surge)
- Legal protections and regulatory environment may differ substantially during non-disaster operations
- Funding issues
- Access to SMEs
- Integrate with "next level" of distribution (IMOCC, sub-specialty care)

Annette Newman, MS, RN, CCRN
Community Outreach/Burn Disaster Coordinator, Western
Region Burn Disaster Consortium Coordinator

ABA Disaster Region Review

- Five U.S. ABA Disaster Regions

- One Canadian Region

- Don't match FEMA or RDHRS regions

- Regional Example: Western Region Burn Disaster Consortium (WRBDC)
  - 28 Burn Centers & multiple partners
    - 13 states/11 with Burn Centers
    - WRAP-EM/PPN
  - 469 + Regional burn beds
    - 185 (avg.) immediately available beds
    - 259 (avg.) surge capacity
  - Coordinator on call /BMCI MedPic app

- **Burn Bed Counts - Nevada Watchboard**

American Burn Association
U.S. Burn Centers (127 Total)

Northeast Region
Eastern Great Lakes Region
Southern Region
Midwest Region
Western Region

Response to Burn Surge – Within the State & Beyond

Activate and respond to a no-notice burn mass casualty incident (BMCI)

Provide just in time **situational awareness** to local and state agencies to inform BMCI response

Support and assist with the **coordination of care** at non-burn centers prior to transfer to a burn center

Partnership Benefits: MOCC augmentation / not limited by typical geographic boundaries

Nevada Hospital Association (NHA) Burn Watchboard: Nowcasting Situational Awareness
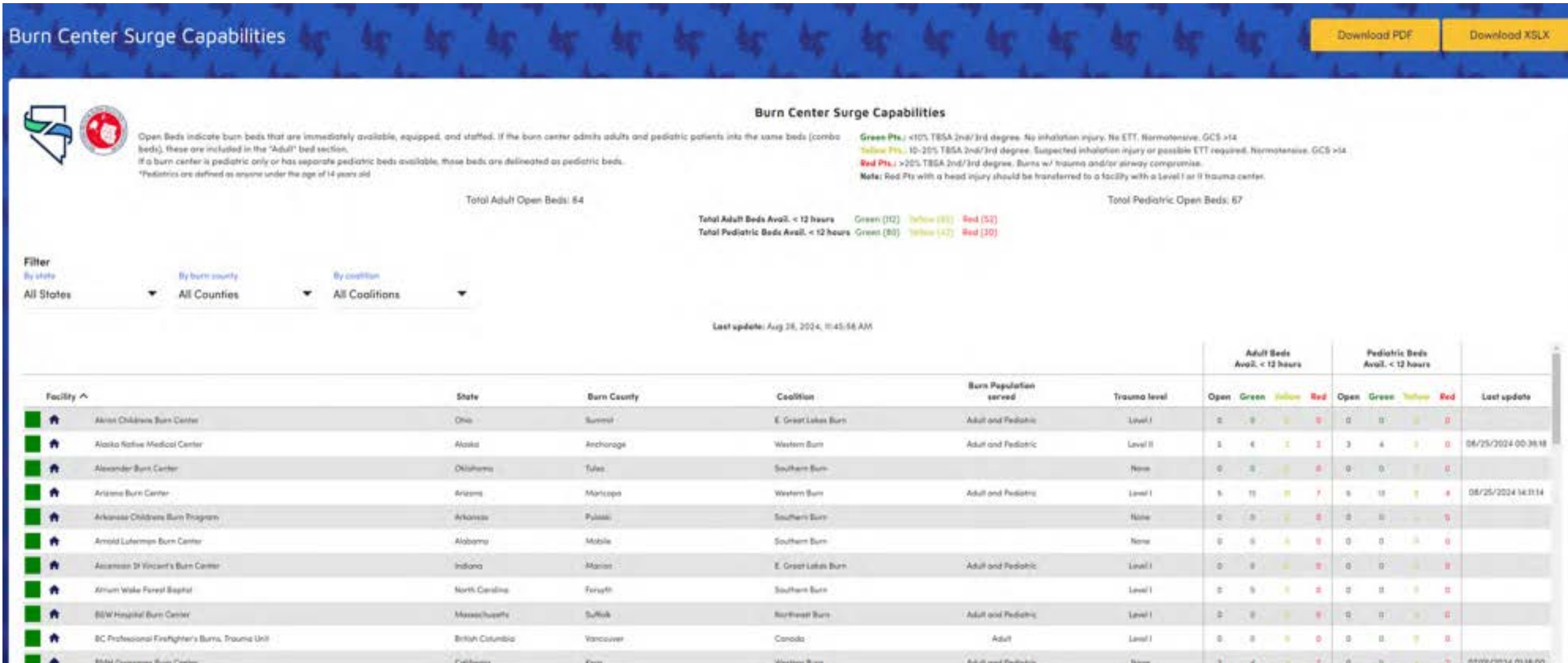
Partnership Benefits: Regional view of open beds (pediatric & adult) and surge capabilities

Sub-specialty Considerations: Standardization

Partnership Benefits

- Standardized language
  - Optimal communication
  - Infers specific resources
  - Staff/stuff/space/systems
  - Blue sky education
- Mirrors existing traffic light protocol
  - Pre-hospital
    - START, JumpSTART
  - In hospital
    - Crisis, contingency, conventional

Maui Wildfire: Case Study

- Climate change
  - Wildfires larger, more frequent & more widespread
  - Wildland-urban interface (WUI)
- <1900 Burn beds in the US
  - Scarce resource
  - Doesn't take many burn patients to overwhelm hospital systems
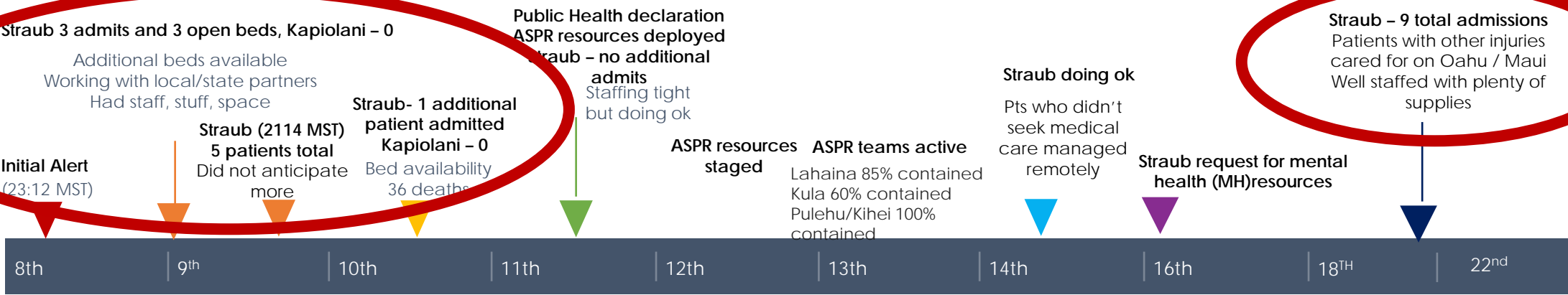 - Situational awareness of available beds & surge capability is imperative

* Partnership Benefits: Sometimes just knowing that there is enough resources brings the intensity of the situation down a little

Photo credit: David Bulow for Time. Published: September 4th, 2023

August 2023

8th	9th	10th	11th	12th	13th	14th	16th	18TH	22nd

Straub 3 admits and 3 open beds, Kapiolani – 0
Additional beds available
Working with local/state partners
Had staff, stuff, space

Initial Alert
8/08 (23:12 MST)

Straub (2114 MST)
5 patients total
Did not anticipate more

Straub- 1 additional patient admitted Kapiolani – 0
Bed availability
36 deaths

Public Health declaration
ASPR resources deployed
Straub – no additional admits
Staffing tight but doing ok

ASPR resources staged

ASPR teams active
Lahaina 85% contained
Kula 60% contained
Pulehu/Kihei 100% contained

Straub doing ok
Pts who didn't seek medical care managed remotely

Straub request for mental health (MH)resources

Straub – 9 total admissions
Patients with other injuries cared for on Oahu / Maui
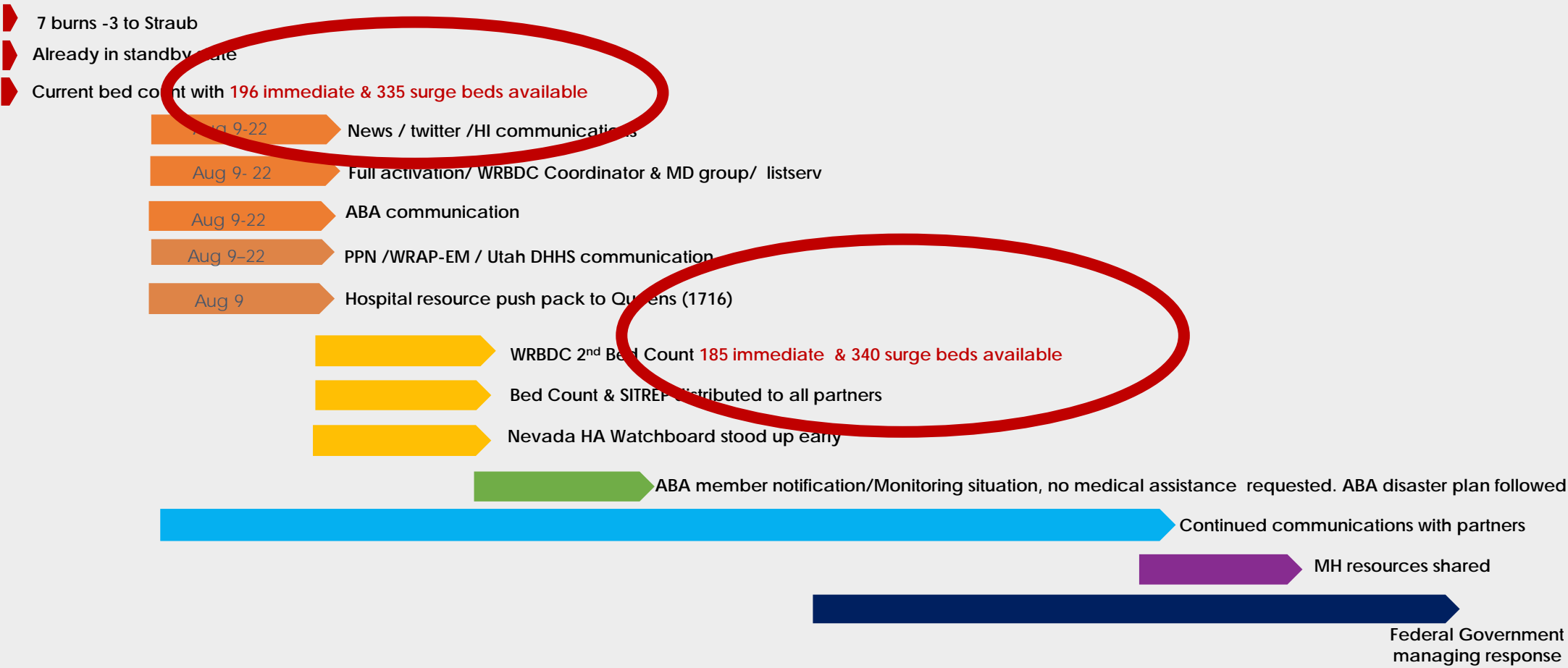Well staffed with plenty of supplies

---

WRBDC: Activation & Response (CONOPS)

Provision of Situational Awareness

Support Coordination of care at non burn centers

- 7 burns -3 to Straub
- Already in standby state
- Current bed count with **196 immediate & 335 surge beds available**

Aug 9-22	News / twitter /HI communications
Aug 9- 22	Full activation/ WRBDC Coordinator & MD group/ listserv
Aug 9-22	ABA communication
Aug 9–22	PPN /WRAP-EM / Utah DHHS communication
Aug 9	Hospital resource push pack to Queens (1716)

WRBDC 2nd Bed Count **185 immediate & 340 surge beds available**

Bed Count & SITREP distributed to all partners

Nevada HA Watchboard stood up early

ABA member notification/Monitoring situation, no medical assistance requested. ABA disaster plan followed

Continued communications with partners

MH resources shared

Federal Government managing response

Sub-specialty Considerations: Data Entry and Incorporation of Real World Lessons

- Data easily entered from within the portal
- Appears on either the Surge or Status Boards for situational awareness
- Based on AAR and lessons learned during real events and exercises
  - Time variance between time zones – challenging for sit rep
  - Patient aggregated data reporting (TBSA, intubated, ages)
- Can be queried to gain insights into burn center operations or research purposes

* Partnership Benefits: Situational report updates inclusive of aggregated patient information

Sub-specialty Considerations: Accessibility & Research
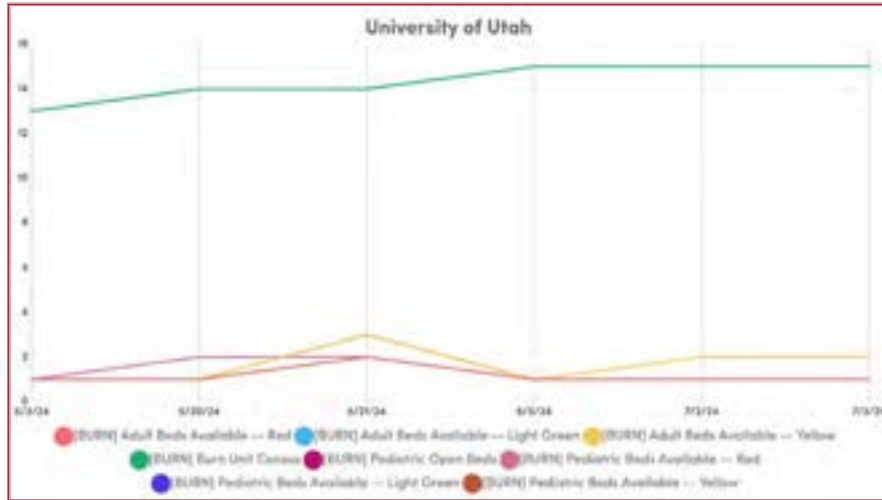
- All data accessible from within the portal.

- Reports can be generated based on facility, ABA region(s), or county.

- Data can be entered as frequently as desired
  - Some Regional Coordinators have a minimum cadence

- Data can be displayed in the portal as a graph, exported as a .png picture or Excel file
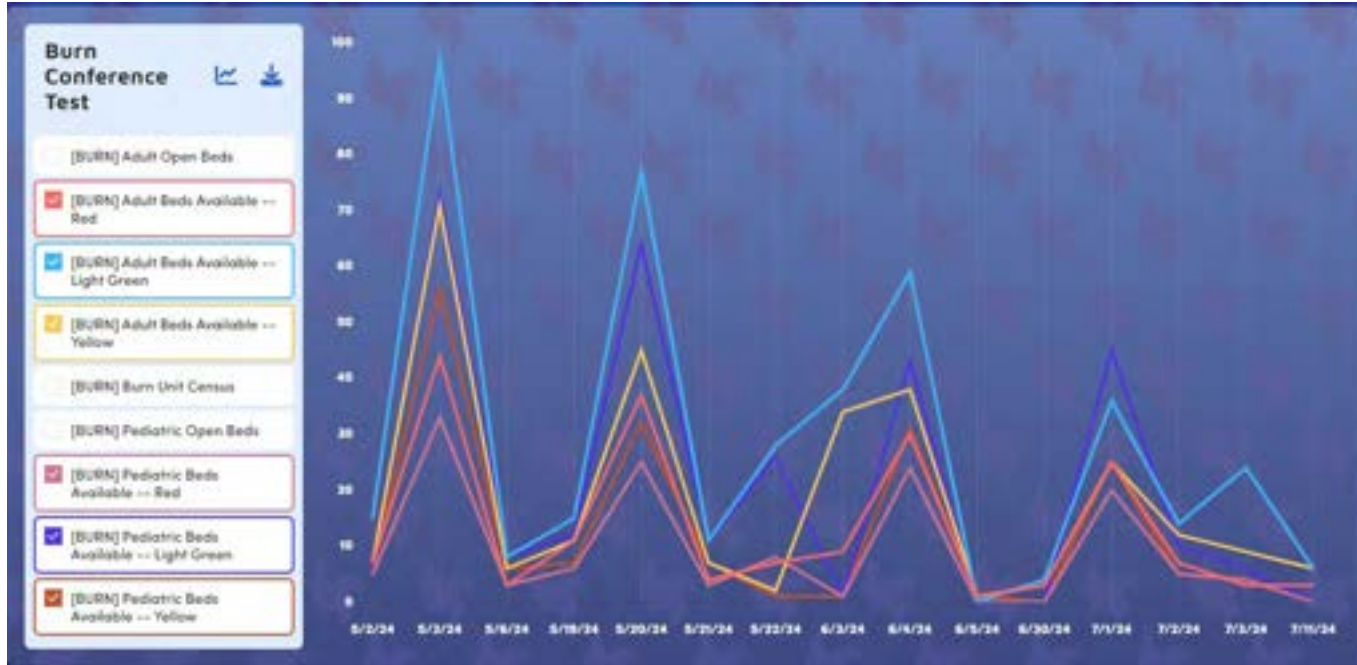
* **Partnership Benefits: sharable reports & aggregated trend monitoring**

- 146 Burn Centers across the United States & Canada
- Represents 100% of the nation's burn beds
  - Verified & non-verified
- 43 States & 5 Canadian provinces
- Official watchboard of the American Burn Association
- Used by HHS, DHS, FEMA, and ASPR governmental agencies

* Partnership Benefits: Specialty surge is a team sport!! Working with each other enhances response and saves lives

Summary

What we can assist with:

- Effective communication and coordination among healthcare facilities.
- Optimization of resource utilization and patient care.
- Streamlined patient transfer processes.
- Supporting local and regional emergency response efforts.
- Planning, training and exercises - Whole community
- Evaluation and improvement
  - o Rapid cycle
  - o Incorporation of evolving best practices

*Not a patient movement entity

* Partnership Benefits: Leveraging relationships & technology for human centered care

ABA Coordinators and Burn Watchboard

ABA contact & Regional Disaster Coordinators:

ABA: Maureen Kiley kiley@ameriburn.org

Southern: Carl Flores Carl.Flores@lcmchealth.org

Northeast: Kathe Conlon Kathe.Conlon@rwjbh.org

Great Lakes: Lisa Vitale LVitale2@dmc.org

Mid West: Mark.J.Johnston@HealthPartners.Com

Western: Annette Newman annettenewman2020@gmail.com

Canada: Danielle Fuchko danielle.fuchko@ucalgary.ca

"Knowing is not enough; we must apply.
Willing is not enough; we must do."
- Goethe

To gain access to the Burn Watchboard:

Send an email requesting access that includes:

Name

Title

Hospital / Burn Center

Email Address

Cell Phone Number

To: **watchboard@nvha.net**

MOCC Adaptations During a Pediatric Surge
Statewide Pediatric Patient Load Balancing During the Tripledemic

Mary King, MD, MPH
Medical Director
Pediatric Critical Care
Harborview Medical Center
maryking@uw.edu

December 12, 2024

NORTHWEST HEALTHCARE Response Network.

WASHINGTON
Medical Coordination Center
at Harborview Medical Center

Northwest Healthcare Response Network (NWHRN)

We lead regional healthcare collaboration and coordination to effectively prepare, respond and recover from emergencies and disasters so that our communities get the care they need.

- Established 2005 within local public health
- Independent non-profit corporation (501c3) since 2013
- 15 counties and 25 Tribal Nations
- Largest concentration of critical medical specialty services in Pacific Northwest

NWHRN: About Us

Washington State PICUs

- *115 beds per 1.64 million children <18 yrs = 7 beds per 100,000 kids*

- **Central WA**   96
    - Seattle Children's   64
    - Mary Bridge   16
    - Swedish   6
    - Madigan   4
    - Harborview   6 (trauma only)
- **Eastern WA**   19
    - Sacred Heart   19
- **Northern WA**   0

NORTHWEST HEALTHCARE Response Network.

Western Washington Coalition

E. WA Coalition

- North District
- Northwest District
- West District
- Central District
- Region 4 Healthcare Preparedness Alliance
- Eastern Washington Coalition

WASHINGTON
Medical Coordination Center
at Harborview Medical Center

WA Medical Coordination Center

Disaster Medical Coordination Center

Regional COVID Coordination Center (RC3)
Harborview Medical Center/King County
Northwest Health Response Network
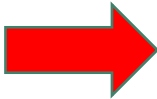
Washington Medical Coordination Center (WMCC)

WMCC Coordination Strategies

- **Coordination across all aspects of Washington hospital leadership**

  - **Governmental/regulatory**
    - Governor, DOH, Sec of Health, WA State Health Officer
  - **Hospitals**
    - WA Hospital Association (WSHA), Health System Executive Leadership
  - **Healthcare coalitions**
    - Northwest Healthcare Response Network, REDI Network

Washington Medical Coordination Center
Operational Framework

WASHINGTON
Medical Coordination Center
at Harborview Medical Center

Guaranteed Acceptance Policy

WMCC - Washington State Hospital Association

- *WMCC will determine when a guaranteed acceptance rotation system is necessary. WMCC will notify WSHA when this goes into effect and WSHA will notify the major hospital CEOs.*

- *"IF the WMCC says they need to come to us – they come"*
  - *Worked only with trusted PICU level triage SME's*

WASHINGTON
Medical Coordination Center
at Harborview Medical Center

3 Major Challenges – Viral Respiratory Surge "Tripledemic"

1. Rapidly Expand Pediatric Health System

2. Pediatric triage support for our RNs (Adult Critical Care RNs)
   - Stay in place with support
   - Acute care bed at hospital with no PICU
   - Send to tertiary hospital with a PICU

3. Provide expert "support" for hospitals requesting assistance

Solutions: Pediatric Bed Expansion

1. Rapidly expanded use of acute care peds beds in community hospitals

1. "OK to take transfers"
2. Expanded acute care areas and stretched staff ratios

2. PICU in the MICU

1. Primarily teens with overdose

3. Neonatal ICU Expansion

1. Some limited success
2. Resistance from community groups (academic med centers more malleable)

4. Support in Place

1. Assistance from PICU consultant at tertiary referral center

Solutions: Subject Matter Experts

1. Utilized "On-call" PICU Attendings as Subject Matter Experts

1. PICU Faculty from Harborview > during their "off-season"
2. Provided triage support in decision making
   1. Became trusted resource for referral hospital AND receiving hospitals
   2. Clinical support for referring ERs
   3. Supported triage RN in determining fit between child resource need and bedspace

WASHINGTON
Medical Coordination Center
at Harborview Medical Center
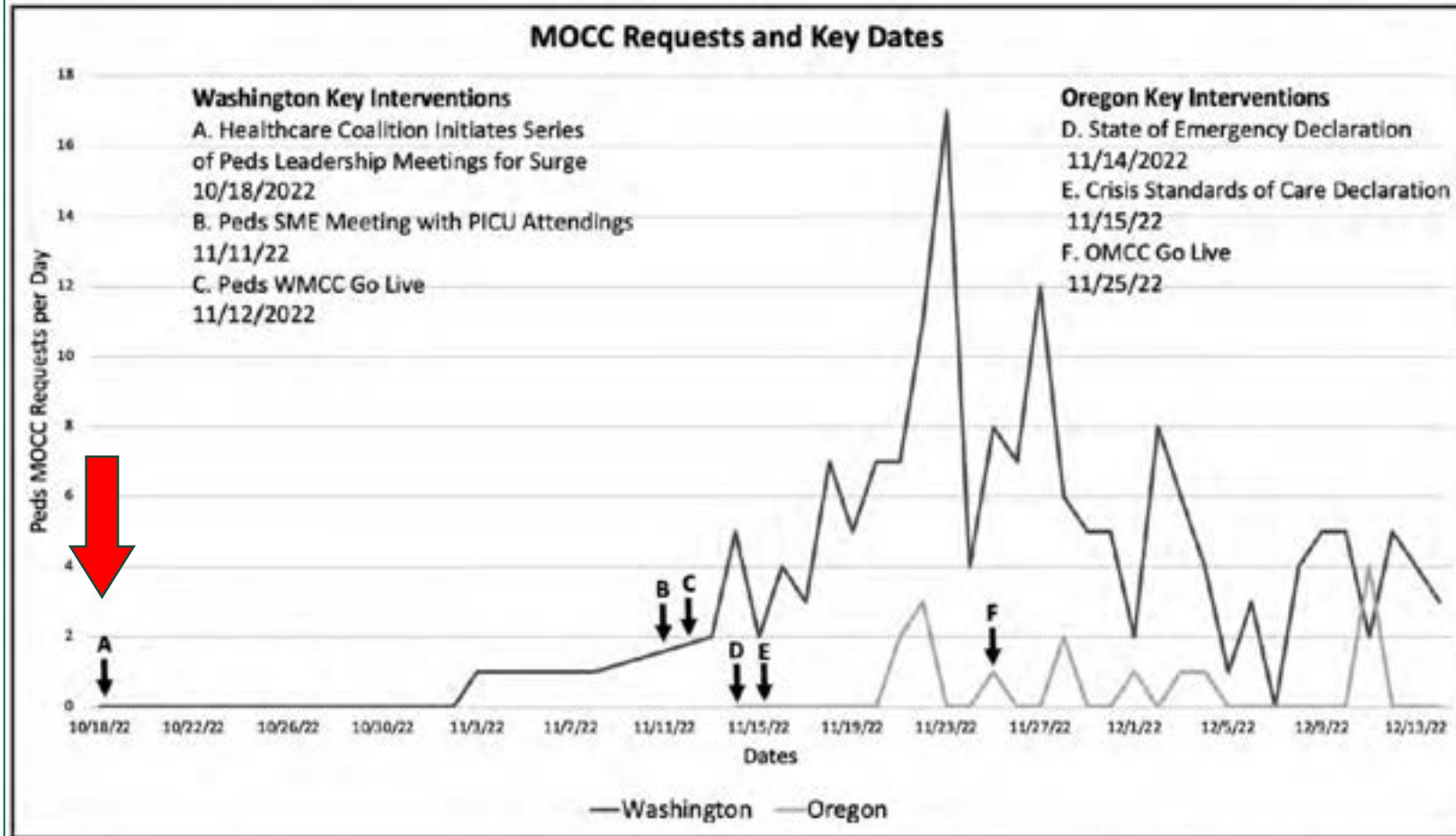
Figure 1. Key dates and summary of Washington and Oregon Medical Operations Coordination Center (MOCC) requests. Key interventions in pediatric MOCC development and pediatric hospital requests for assistance by date in Washington and Oregon. Region 1 = region within the Oregon Health Authority Emergency Response Plan encompassing the Portland, Oregon metropolitan area, SME = subject matter expert, WMCC = Washington Medical Coordination Center.

WASHINGTON
Medical Coordination Center
at Harborview Medical Center

Results Summary

November 1, 2022 - December 14, 2022

- All pediatric acute and critical care beds over capacity (~135-150%)

- WMCC Managed:
  - 171 pediatric requests
    - 16% for ≤ 3 months old
    - 37% <1 one year old
    - 17% from Critical Access Hospital
    - 58% were critically ill children
    - 100% "accepted" with mean time of acceptance 3 hours in WA

WASHINGTON
Medical Coordination Center
at Harborview Medical Center

PMOCC Bed Placement Trends Observed

- Most less sick kids placed in community hospital beds without PICUs (low HFNC)

- Some sick babies placed in NICUs who don't typically take readmits (HFNC, CPAP)

- Some sick teens placed in adult ICUs (ingestions)

- Sicker kids placed at Peds hospitals with PICUs (high HFNC, CPAP/BIPAP, ETT)

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PMOCC Lessons Learned

- RNs need to know **pediatric-specific resource capability limitations** at each hospital (such as flow level of HFNC allowed on a given pediatric ward)

- **Pediatric transport** must be integrated

- **NICUs** should be included in pediatric MOCC planning/response

- **Established relationships** between Pediatric and HCC leaders allowed for teamwork

- **PICU SME was highly utilized** (~25% of cases) and changed dispo in 38% of these

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Resources for Developing PMOCC Capability

WRAP-EM Surge Playbook:

https://wrap-em.org/index.php/jit-resources/pediatric-surge-playbook

Pediatric Critical Care Medicine Article:
Using Two Statewide MOCCs to Load Balance in Pediatric Hospitals During a Severe Respiratory Surge in the United States
https://journals.lww.com/pccmjournal/fulltext/2023/09000/using_two_statewide_medical_operations.8.aspx#

Moderator Roundtable

Questions

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ASPRtracie.hhs.gov

askasprtracie@hhs.gov