NEW JERSEY HEALTHCARE COALITIONS

National Healthcare Coalition Preparedness Conference (NHCPC) 2024

Compendium of Presentations and Associated Materials Categorized as

Executive Coalition Leadership

Please contact our team at RHCC@NJHA.com should you have questions or if you encounter any difficulties accessing these presentations.

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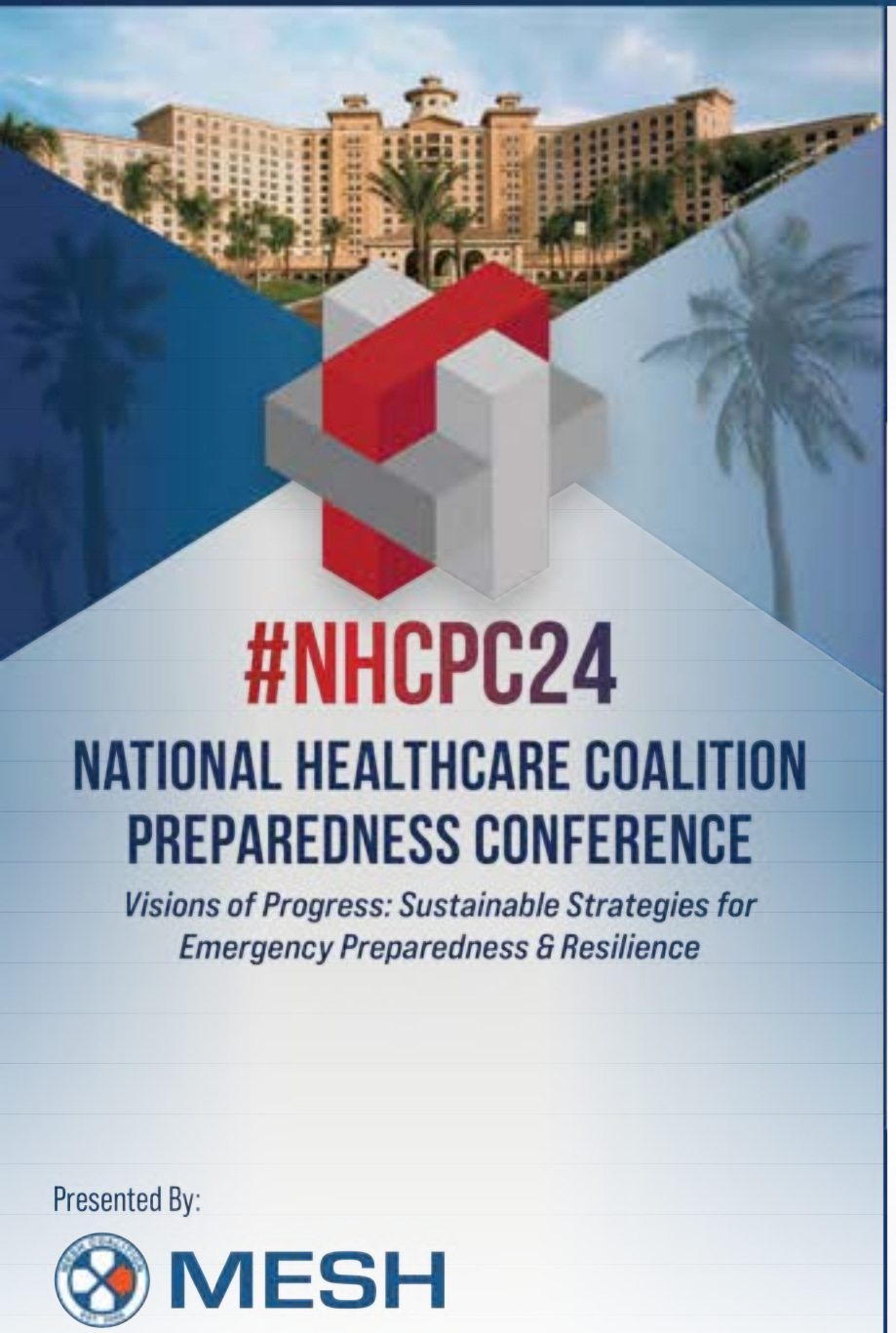

A Novel Approach to Patient Reunification

Steven Ellen
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Disclosure

- The Mountain Plains Regional Disaster Health Response System is funded by Award Number 6 HITEP200043-01-03 from the Administration for Strategic Preparedness and Response (ASPR).
- The content of this presentation is a product of the individual presenters and does not represent the official policy of the United States Government.
- This information is not meant to be a substitute for professional medical advice, diagnosis, or treatment.

Conflict of Interest

- The presenter has no relevant financial interest or relationships to disclose.

Mountain Plains Regional Disaster Health Response System (MPRDHRS)

- HHS/ASPR funded grant
- Awarded to Denver Health and Hospital Authority
- 4 sites across the US
- Improve healthcare coordination within Region VIII
- Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming

Disasters

- Hurricane Rita and Katrina, 2005
- Aurora Theatre Shooting, 2011

Disasters

- Hurricane Rita and Katrina, 2005
  - 5,192 children separated
  - 6 months to reunify
  - 34,000 calls to National Center for Missing and Exploited Children hotline

Disasters

- Hurricane Rita and Katrina, 2005
  - 5,192 children separated
  - 6 months to reunify
  - 34,000 calls to National Center for Missing and Exploited Children hotline
- Aurora Theatre Shooting, 2011
  - 82 injured
  - 60 patients transported to 6 different hospitals
  - 1,200 people in the building
  - 6,000 calls to Aurora Public Safety Communications department
  - 1,000 calls per hour to 6 hospitals

Challenges

- Mechanism for taking inbound calls
- Staffing
- Shared database
- Legal
- Program Adoption

Challenges

- Mechanism for taking inbound calls
  - Rocky Mountain Poison Center
  - Software broker
  - Amazon Web Services
- Staffing
- Shared database
- Legal
- Integration

Challenges

- Mechanism for taking inbound calls
- Staffing
  - Rocky Mountain Poison Center
  - Colorado Department of Public Health and Environment (CDPHE)
- Shared database
- Legal
- Integration

Challenges

- Mechanism for taking inbound calls
- Staffing
- Shared database
  - Elements to collect
  - Elements to share
  - Data entry
- Legal
- Program Adoption

Challenges

- Mechanism for taking inbound calls
- Staffing
- Shared database
- Legal
  - HIPPA
  - CVM
- Program Adoption

Challenges

- Mechanism for taking inbound calls
- Staffing
- Shared database
- Legal
- Program Adoption
  - Regional Patient Tracking and Reunification plan
  - Demonstration Product

Lessons Learned

- January:
  - Call Restrictions
  - Operations Channel
  - Data Collection Items
  - Hold music too cheerful
- June
  - Breaks
  - Behavioral Health
  - Script refinement
- September
  - Hospital based data entry
  - Hospital system reunification teams

Functional Drills

Month	# calls	# agents	Duration (minutes)	# call / agent / minute	Avg Handling Time
January 2024	68	12	30	.189	3:05
June 2024	167	10	60	.278	2:12
September 2024	143	6	66	.361	1:58

Next steps

- Document framework
- HCC, Statewide, Regional adoption and support
- Increase recruiting

Questions?

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Region 8
MOUNTAIN PLAINS
Regional Disaster
Health Response System

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Reach out with questions. Connect with us.

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Presented By:

MESH

Achieving Healthcare Resilience Through Interoperability and Data Driven Insights

Tennessee Department of Health's Healthcare Resource Tracking System (HRTS)

Presenters:
Paul E. Petersen, PharmD, MPH, CEM
Diane Dubinski, MEM, BSN, RN, NHDP-BC

Learning Objectives

1. Describe how HCC and state leaders can utilize insights from HRTS data to make informed decisions regarding resource allocation and prioritize initiatives according to community needs.
2. Identify best practices for assessing coalition sustainability (e.g., resources, funding, partnerships).
3. Develop strategies for long-term sustainability, funding, and community support.
4. Define the collaborative impact on patient care delivery through Health Care Coalition use of HRTS.

Introduction to HRTS

Tennessee's Healthcare Resource Tracking System (HRTS):

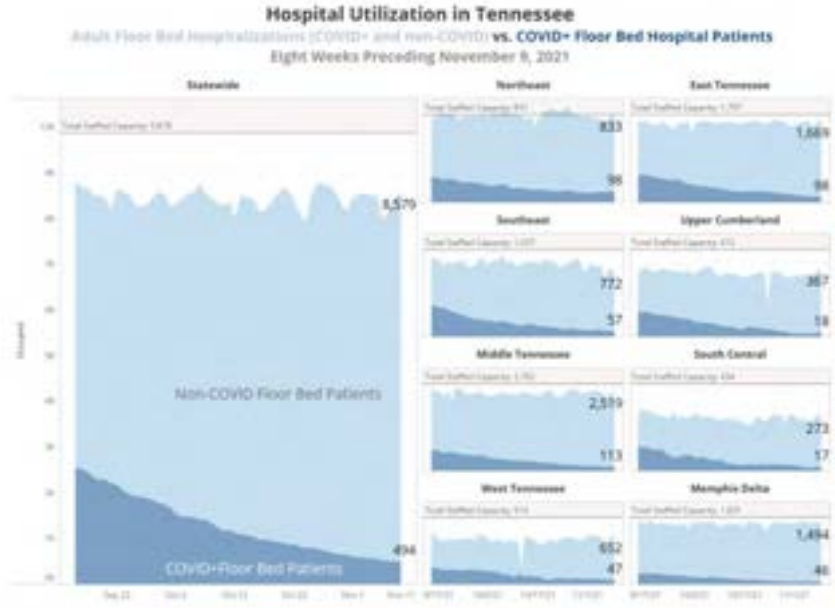
- Enhances real-time healthcare delivery by optimizing resources, managing crises, and supporting coalitions.
- Connects healthcare facilities, Regional Healthcare Coordinators, EMS, and other state and local emergency responders.
- Supports patient routing daily and during emergencies.
- Tracks facility bed, service, and asset availability.
- Enables event activation and management at local, regional, or statewide levels.
- Enhances situational awareness and communication.

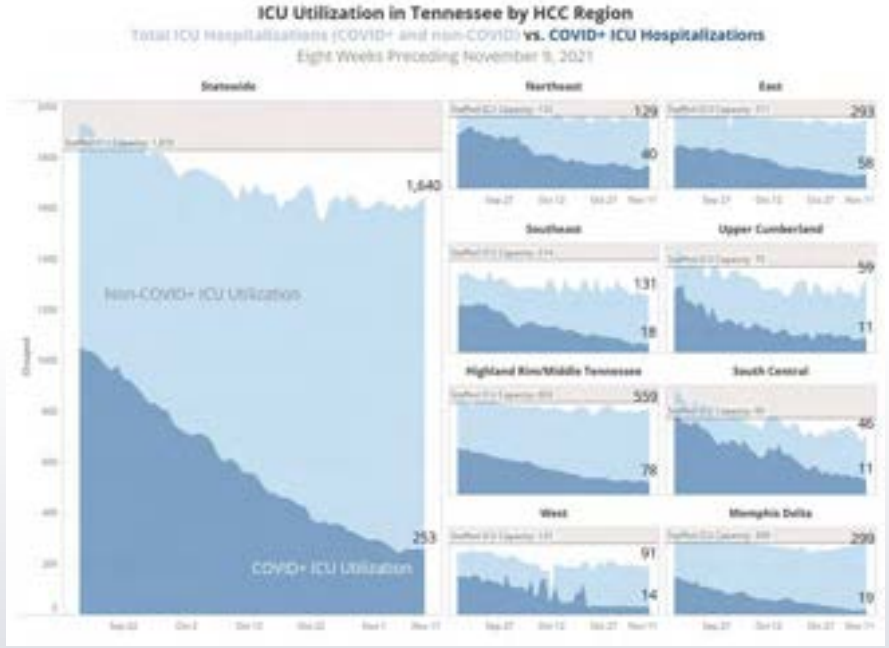
HRTS Background

- Implemented in 2007.
- Developed with in put from all stakeholders including the Tennessee Hospital Association and healthcare facilities etc.
- Maintained in-house by the Tennessee Department of Health.
- Currently in its 3rd version.
- A secure login to the portal is required.
- Data is maintained securely and is encrypted.

- Authorized statewide reporting system for all Federal Data during COVID-19 response.
- Recent additional functionality:
  - Long-Term Care Facilities
  - Patient Bed Matching (PBM)
  - Resource management

Use of HRTS During COVID





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Public View of Data During Covid

Daily Operational View

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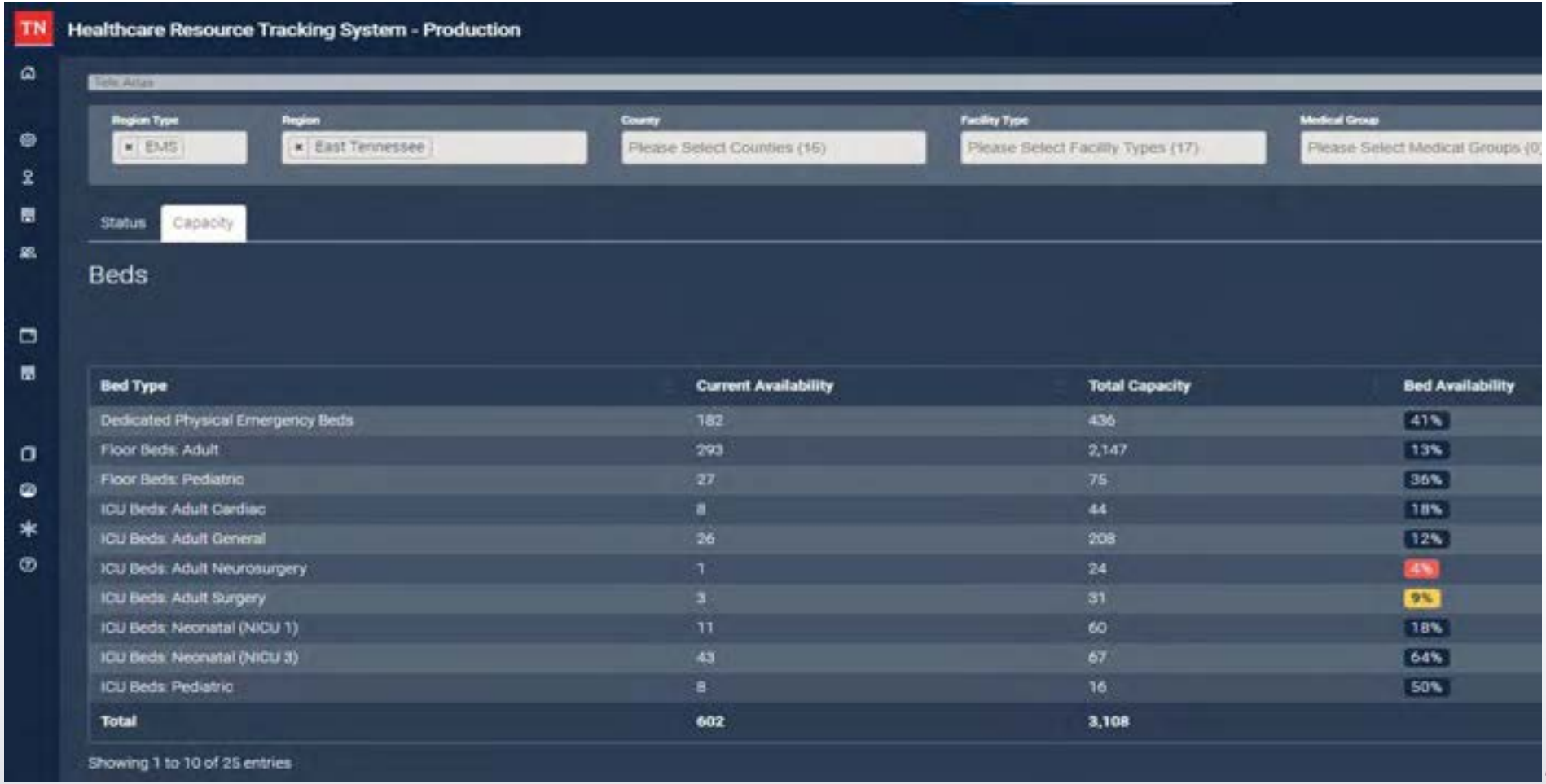
Daily Operational View

Capacity Tab



Color Codes for Status

Emergency Department

Facility Status Type	Status Color	Status Description
Emergency Department	Normal (Green)	All ED Operations are Normal
	Advisory (Yellow)	ED is experiencing a high volume of patients; EMS should anticipate some offload Delays.
	Severe (Orange)	ED is experiencing severe overcrowding in the waiting room area, limited bed availability and EMS offload delays.
	Critical (Red)	ED is experiencing critical overcrowding, holding admissions in ED with a full lobby and extended EMS offload delays **or** a critical failure in service/operations in the ED. Redirect EMS patients as appropriate if possible.
	Divert (Black)	ED has loss services/operations due to an internal disaster. **HICS has been activated.** HRTS updated as dictated on HRTS event board or every 2 hours if HRTS event not active. Unable to accept patients, EMS should divert patients.

Color Codes for Status

Facility

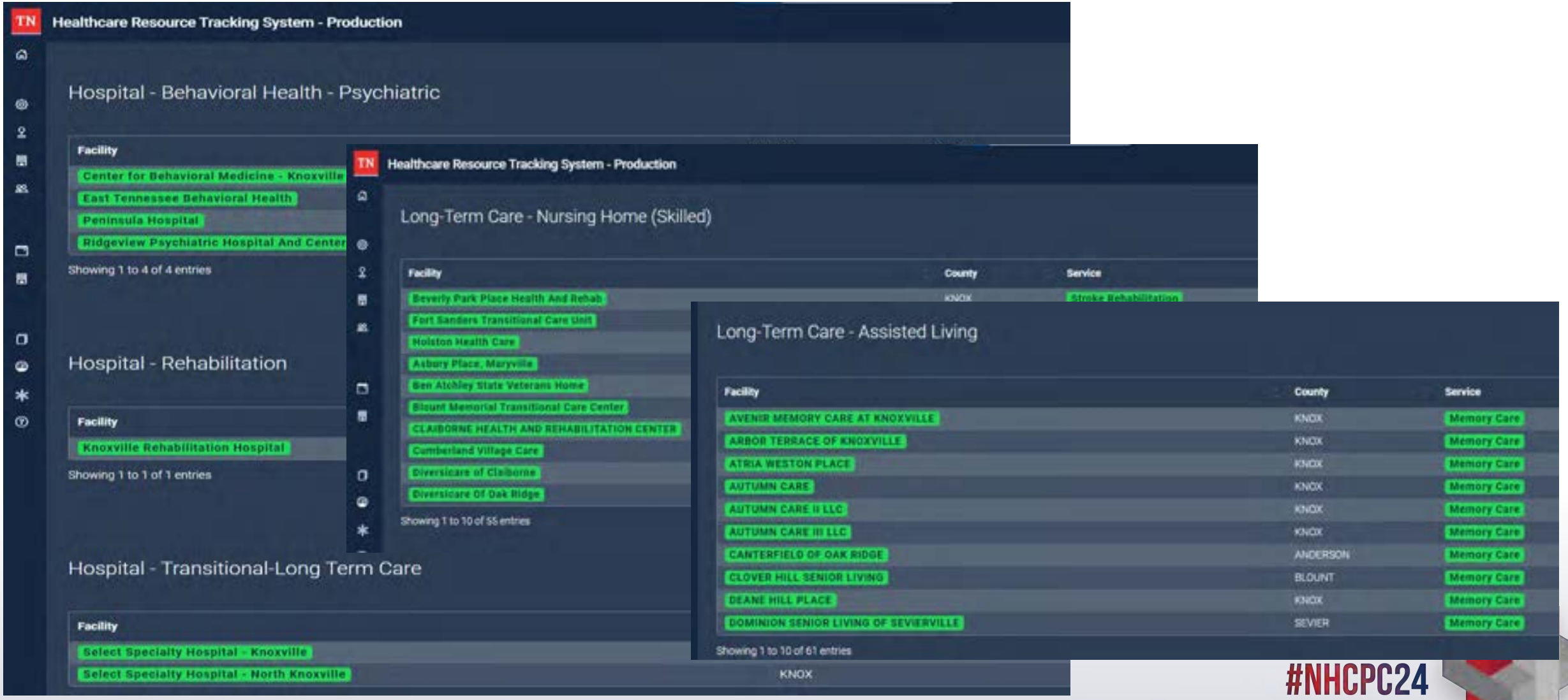
Facility Status Type	Status Color	Status Description
Facility	Normal (Green)	All Operations are Normal
	Advisory (Yellow)	Facility is experiencing a high volume of patients cause delay in services.
	Severe (Orange)	Facility is experiencing overcrowding in patient care areas with limited bed availability resulting in delays of patient movement.
	Critical (Red)	Facility has no beds available; admissions being held in ED **or** a critical failure in service/operations within facility. Redirect EMS patients as appropriate and if possible.
	Divert	Facility has loss services/operations due to an internal disaster. **HICS has been activated**. Unable to accept patients, EMS should divert patients.

Color Codes for Status

Services

Facility Status Type	Status Color	Status Description
Services (i.e. MRI, CT, Cath Lab, L&D, Behavioral Health…)	Normal (Green)	All Operations are Normal
	Advisory (Yellow)	Limited access/use available. Update service status in HRTS. EMS should have early notification to facility to check availability.
	Severe (Orange)	Delay in service availability due to overcrowding or service disruptions
	Critical (Red)	Critical system failure and service is not available. Update service status in HRTS. EMS should redirect patient as appropriate.
	Divert	Facility has loss services/operations due to an internal disaster or system outage. Unable to accept patients, EMS should divert patients.

Beyond Acute Care Hospitals



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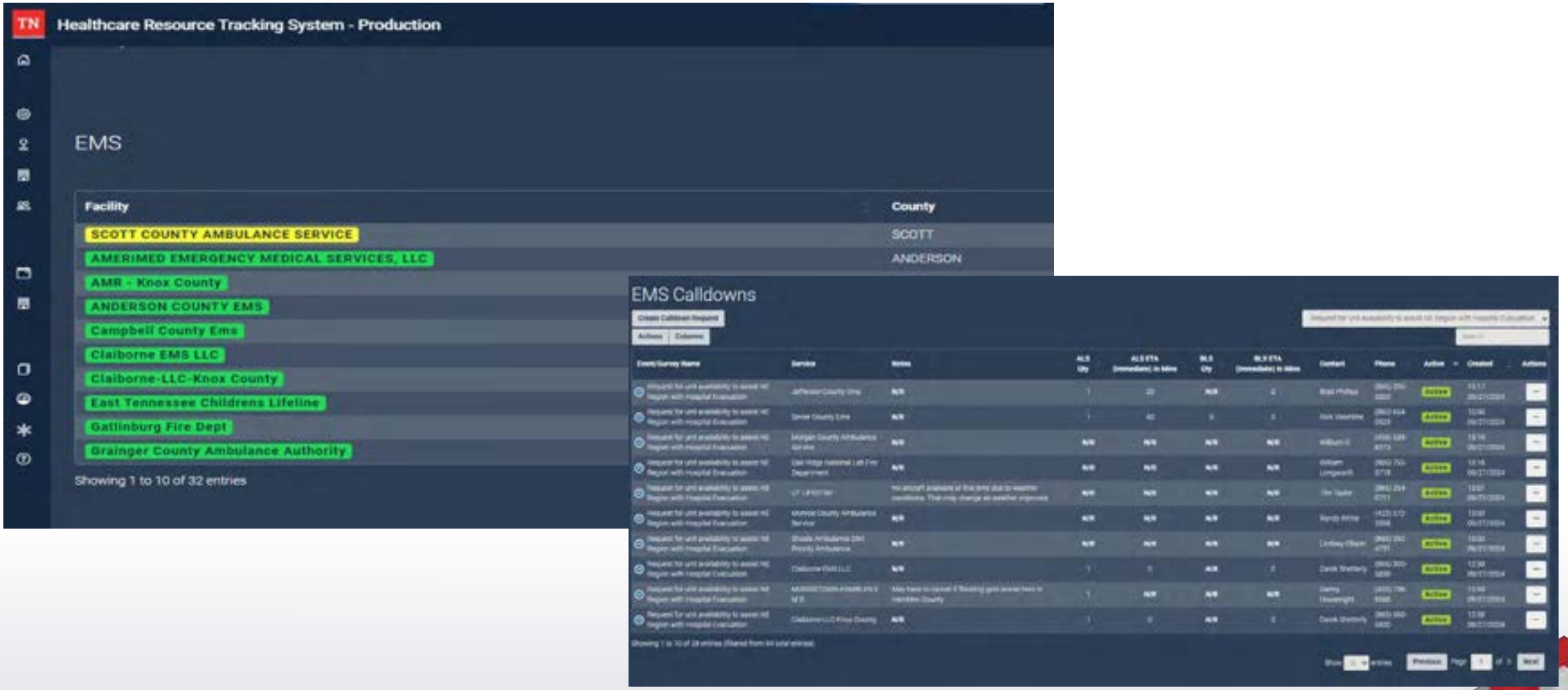
Emergency Medical Services



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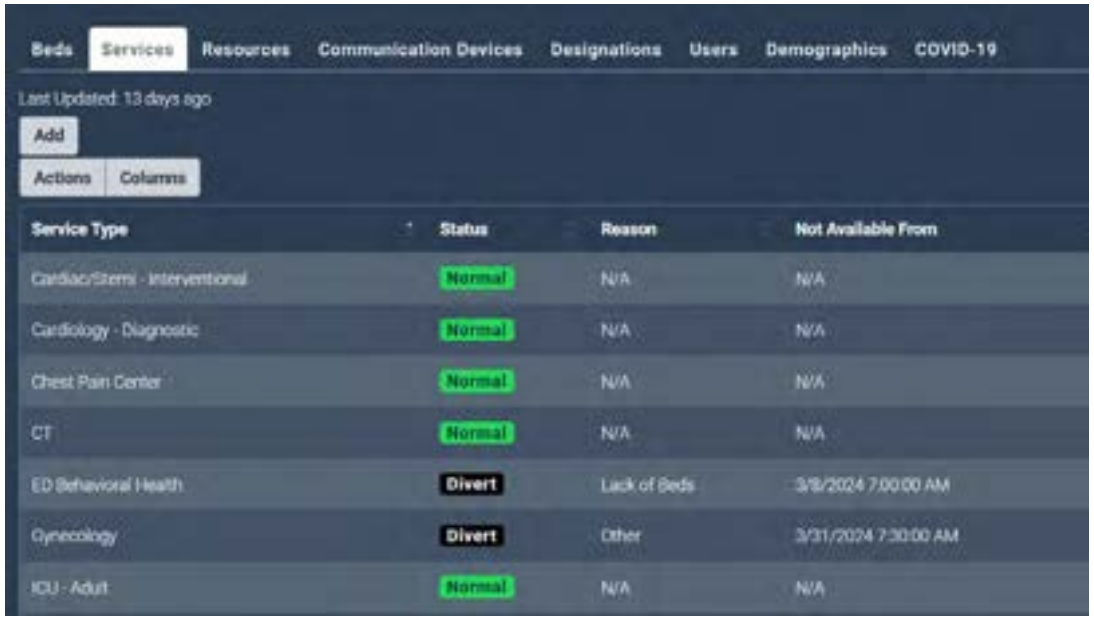
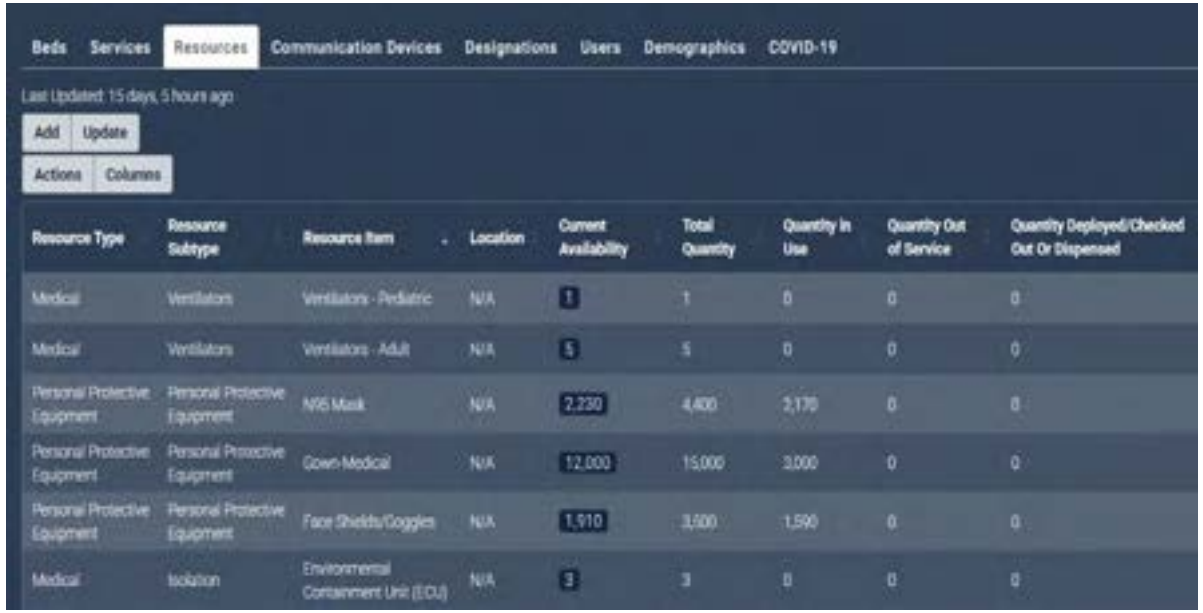
Status of Services and Resources





Reports –PDF or Excel

Parkwest Medical Center - Services

Service Type	Status	Reason	Not Available From	Not Available To
Cardiac/Stemi - Interventional	Normal	N/A	N/A	N/A
Cardiology - Diagnostic	Normal	N/A	N/A	N/A
Chest Pain Center	Normal	N/A	N/A	N/A
ED Behavioral Health	Critical	Patient Overcrowding	2/23/2024 8:32:00 AM	2/26/2024 8:32:00 AM
ICU - Adult	Normal	N/A	N/A	N/A
Interventional Radiology	Normal	N/A	N/A	N/A
Labor and Delivery	Normal	N/A	N/A	N/A
MRI	Normal	N/A	N/A	N/A
Neurology	Normal	N/A	N/A	N/A
Obstetrics	Normal	N/A	N/A	N/A
Ophthalmology	Normal	N/A	N/A	N/A
Orthopedics	Normal	N/A	N/A	N/A
Telemetry/Monitored Beds	Normal	N/A	N/A	N/A

Parkwest Medical Center - Services

Service Type	Status	Reason	Not Available From	Not Available To
Cardiac/Stemi - Interventional	Normal	N/A	N/A	N/A
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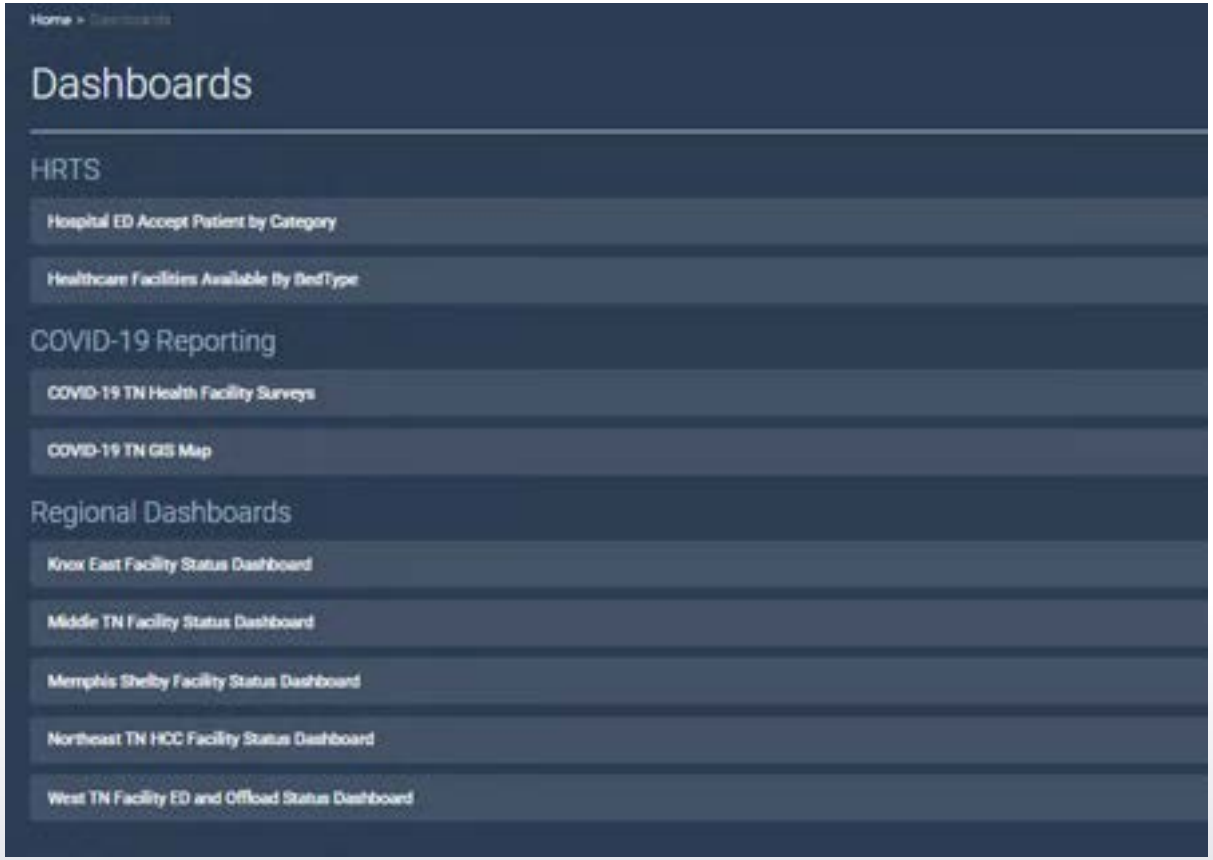
Interventional Radiology	Normal	N/A	N/A	N/A
Labor and Delivery	Normal	N/A	N/A	N/A
MRI	Normal	N/A	N/A	N/A
Neurology	Normal	N/A	N/A	N/A
Obstetrics	Normal	N/A	N/A	N/A
Ophthalmology	Normal	N/A	N/A	N/A
Orthopedics	Normal	N/A	N/A	N/A
Telemetry/Monitored Beds	Normal	N/A	N/A	N/A

Dashboards and Reports



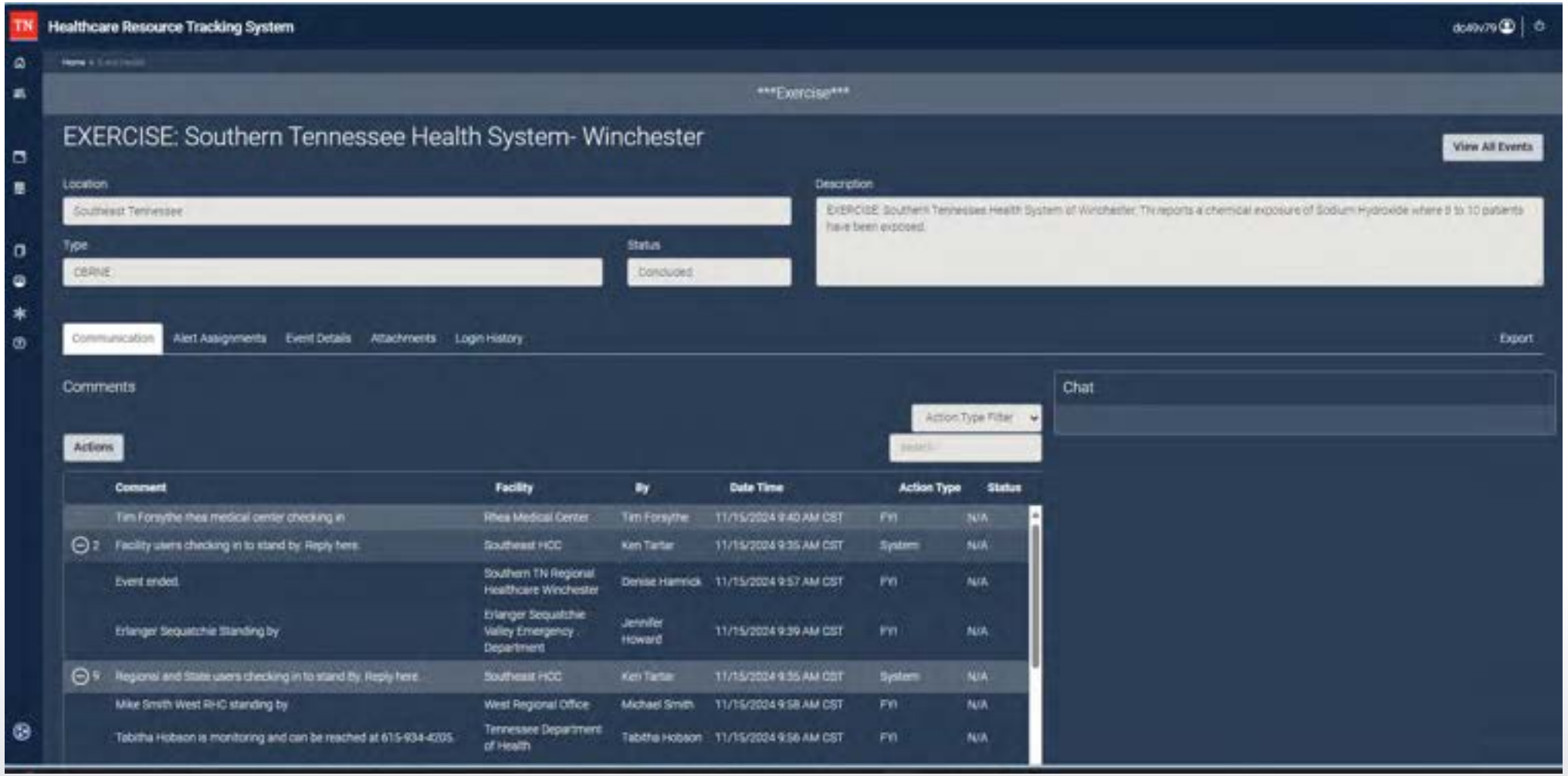
Facility Bed Availability Report

	Region	FacilityTyp	SubType	BedType	BedUpd	CurrentCapac	TotalCapaci	Occupi
dical Center	East Tenness	Hospital	Acute Ca	Dedicated Physical Emergency	3/12/20	0	8	1
dical Center	East Tenness	Hospital	Acute Ca	Floor Beds: Adult	3/12/20	5	12	7
lospital	East Tenness	Hospital	Acute Ca	Dedicated Physical Emergency	3/12/20	0	35	35
lospital	East Tenness	Hospital	Acute Ca	Floor Beds: Adult	3/12/20	18	130	109
lospital	East Tenness	Hospital	Acute Ca	ICU Beds: Adult Cardiac	3/12/20	0	8	8
lospital	East Tenness	Hospital	Acute Ca	ICU Beds: Adult Surgery	3/12/20	2	8	6
lospital	East Tenness	Hospital	Acute Ca	Operating Pre/Post Beds	3/12/20	4	8	4
Center	East Tenness	Hospital	Acute Ca	Dedicated Physical Emergency	3/12/20	4	10	6
Center	East Tenness	Hospital	Acute Ca	Floor Beds: Adult	3/12/20	9	21	12
Center	East Tenness	Hospital	Acute Ca	ICU Beds: Adult General	3/12/20	1	5	4
Center	East Tenness	Hospital	Acute Ca	Operating Pre/Post Beds	3/12/20	3	3	0
ildrens Hospital	East Tenness	Hospital	Acute Ca	Floor Beds: Pediatric	3/12/20	14	75	61
ildrens Hospital	East Tenness	Hospital	Acute Ca	Operating Pre/Post Beds	3/12/20	25	25	0

Use of HRTS Beyond Daily Operations

Planned and Unplanned Events

Events Page - Communication



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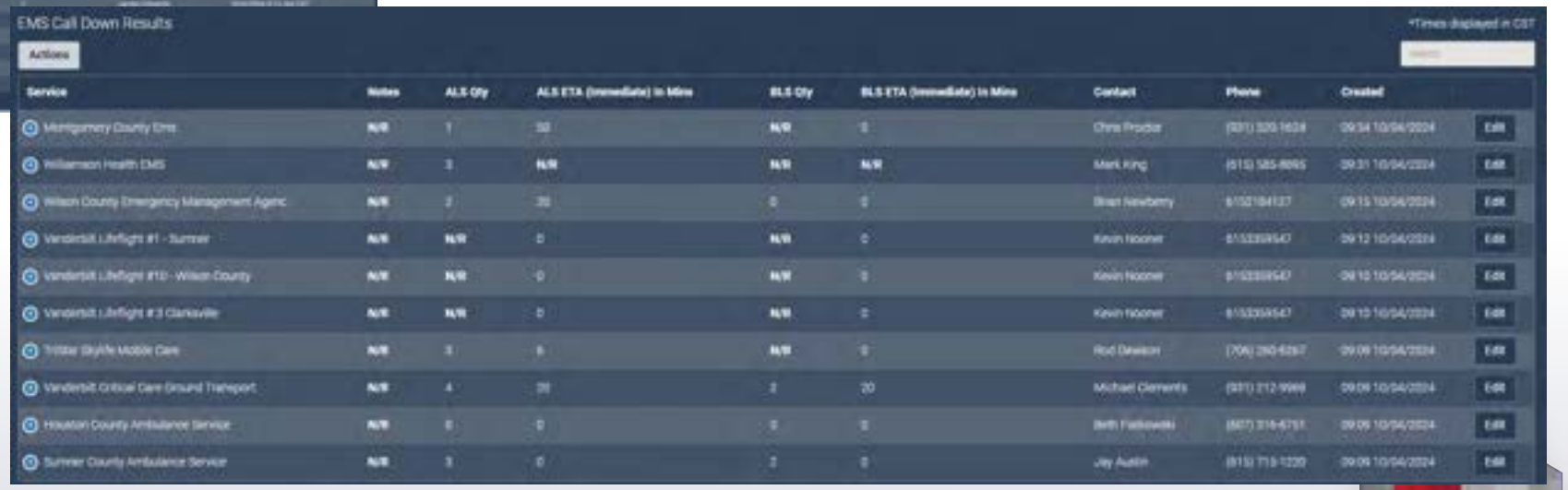
Events Page – Patient Triage and EMS Call Down Analytics



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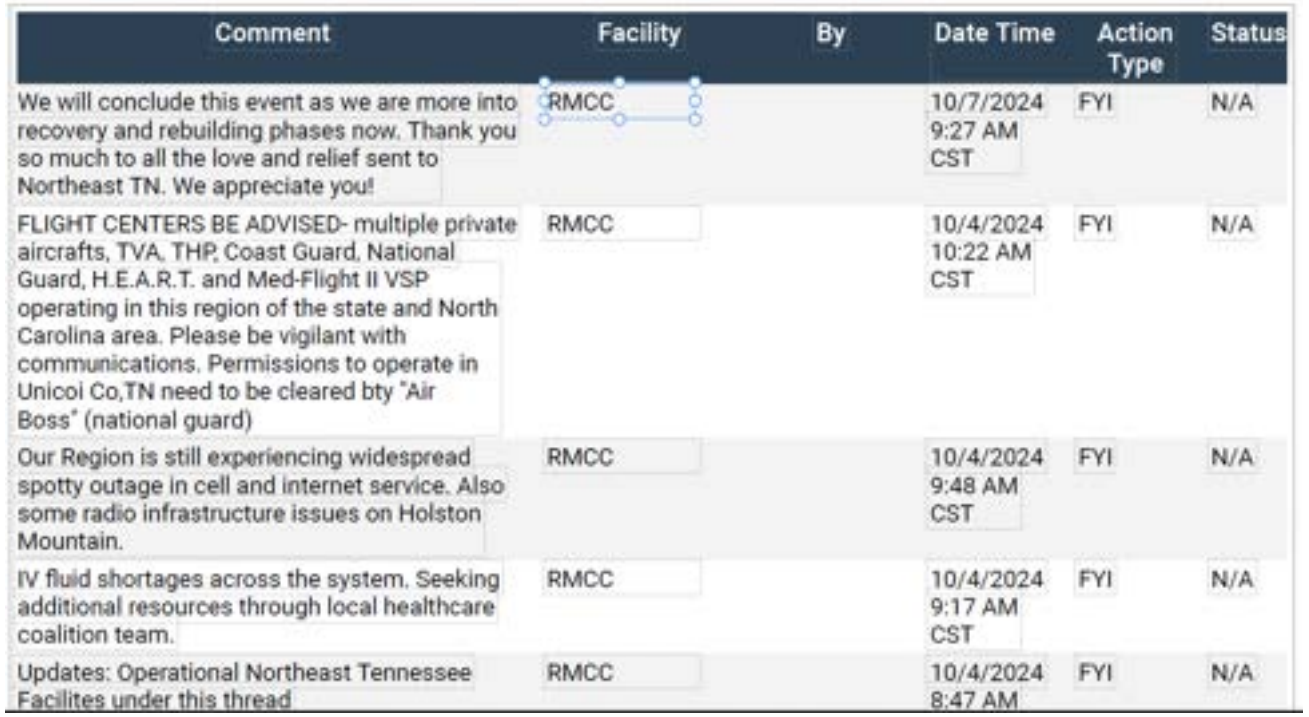
Events Page Record Management

Downloadable Reports

- Communications Log
- EMS Response Report
- Hospital Triage Records
- Any relevant attachments or additional documents.

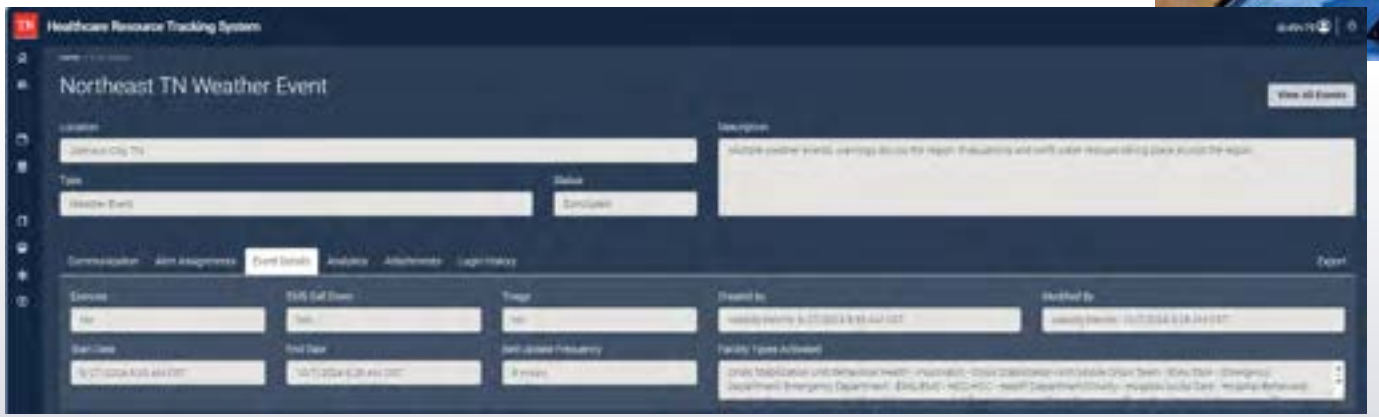


Comment	Facility	By	Date Time	Action Type	Status
We will conclude this event as we are more into recovery and rebuilding phases now. Thank you so much to all the love and relief sent to Northeast TN. We appreciate you!	RMCC		10/7/2024 9:27 AM CST	FYI	N/A
FLIGHT CENTERS BE ADVISED- multiple private aircrafts, TVA, THP, Coast Guard, National Guard, H.E.A.R.T. and Med-Flight II VSP operating in this region of the state and North Carolina area. Please be vigilant with communications. Permissions to operate in Unicoi Co,TN need to be cleared bty "Air Boss" (national guard)	RMCC		10/4/2024 10:22 AM CST	FYI	N/A
Our Region is still experiencing widespread spotty outage in cell and internet service. Also some radio infrastructure issues on Holston Mountain.	RMCC		10/4/2024 9:48 AM CST	FYI	N/A
IV fluid shortages across the system. Seeking additional resources through local healthcare coalition team.	RMCC		10/4/2024 9:17 AM CST	FYI	N/A
Updates: Operational Northeast Tennessee Facilites under this thread	RMCC		10/4/2024 8:47 AM	FYI	N/A

HRTS Event Northeast – Hurricane Helene 9/27/2024 – 10/7/2024

Timeline

- Event activated in HRTS at 8:35 AM on 9/27/2024.
- Unicoi Medical Center (Erwin, TN)
  - Decision to evacuate at 9:48am ET
  - Evacuation complete by 4:45pm ET
- 4 Helicopters (2 TNNG and 2 VA Police)
- 54 Lives Saved
- Activation concluded at 9:27 AM on10/7/2024.



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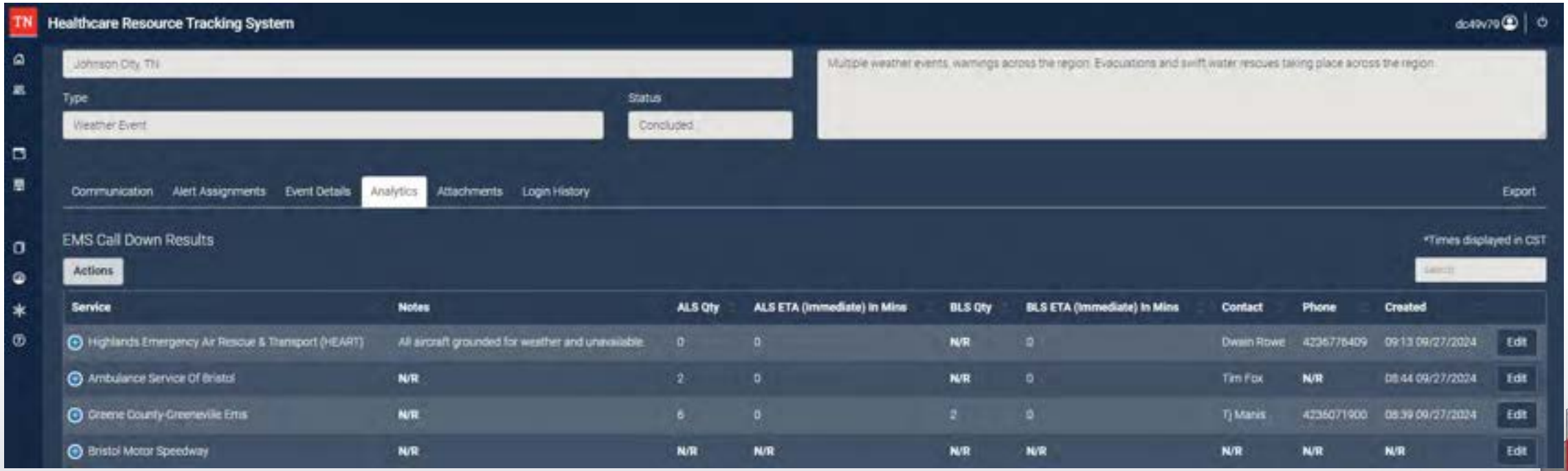
HRTS Event Northeast – Hurricane Helene
9/27/2024

HRTS Event Northeast – Hurricane Helene
9/27/2024 – 10/7/2024

EMS Call Down Results



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HRTS Event Northeast – Hurricane Helene
9/27/2024 – 10/7/2024

Communication

ESF-8 in coordination with EMS is working the situation and will be in contact with the RHC/ ERC/RMCC.	Tennessee Department of Health	9/27/2024 12:42 PM CST	FYI	N/A
Sycamore Shoals Hosptial is now evacuating their hospital as well.	RMCC - Ballad Health	9/27/2024 12:30 PM CST	FYI	N/A
2 Ambu buses have been deployed to SSH	RMCC - Ballad Health	9/27/2024 1:46 PM CST	FYI	N/A
10 ambulances are needed to stage at Elizabethton High School	RMCC - Ballad Health	9/27/2024 12:37 PM CST	FYI	N/A
SSH Hospital is currently evacuating.		9/27/2024 12:19 PM CST	FYI	N/A
HCMH 7 ER beds available. M/S full at this time.	Hawkins County Memorial Hospital	9/27/2024 11:45 AM CST	FYI	N/A
Carter Co, Johnson Co and Unicoi Co have all declared states of emergency.	RMCC - Ballad Health	9/27/2024 11:30 AM CST	FYI	N/A
Niswonger Children's hospital 1 and 2 Conference Rooms will be reunification points for UCH hospital staff.	RMCC - Ballad Health	9/27/2024 11:07 AM CST	FYI	N/A

HRTS Event Northeast – Hurricane Helene
9/27/2024 – 10/7/2024

Facility Status

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HRTS Metrics-Northeast

“Northeast TN Weather” Event Metrics

- 111 facilities alerted -Hospitals, LTC, EMS, Public Health
- 15 Counties reporting in TN and VA
- 1328 system users visited the Event page while it was active (some are duplicates)
- 166 comments were posted by 46 individuals

Best Practices

- Assisted in sustaining a common operating picture and needs assessments through Event Comments.
- Recognizes the ability of the RMCCs to maintain and provide updates of regional data such as essential elements of information, EMS availability, status updates.
- RMCC was able to communicate with other RMCCs to provide additional ambulances if needed.
- RMCC was able to provide updates to ambulance availability within their region.
- Event chat allowed rapid technical changes to be made between RMCC and HRTS System Admins to correct an upload problem.

Lessons Learned

- EMAs were not included in event notification.
- Skilled Nursing and Assisted Living had a low response rate.
- Non-Acute Care Hospitals were non-responsive.
- EMS Call down was successfully completed by 3 of 14 EMS agencies (21%).

HRTS Metrics - East

“City of Newport Evacuation and Inclement Weather” Event Metrics

- 67 facilities alerted -Hospitals, LTC, EMS, Public Health
- 16 Counties reporting in TN
- 407 system users visited the Event page while it was active (some are duplicates)
- 51 comments were posted by 36 individuals

Best Practices

- Assisted in providing resources needed within shelters.
- Recognizes the ability of regional staff to maintain and provide updates of regional data and status updates.
- Hospitals were fantastic in ensuring beds were updated in a timely manner.

Lessons Learned

- Portable O2 should be put in as Resource Needed instead of FYI so the request can be closed upon fulfillment.
- No further updates on City of Newport before event closed.

Conclusion

- HRTS is essential for effective healthcare management and resilience, ensuring patient needs are met through coordinated resources.
- Sustainability insights from HRTS support coalition efforts and strategic planning for future resilience.
- HRTS enables data-driven collaboration, sharing best practices, and avoiding overload in crises.
- Centralized data and real-time visibility optimize healthcare delivery, enhancing coalition effectiveness in crises.

Questions

Artificial Intelligence in Mobile Medicine (EMS & Fire): Implications, Potential and Pitfalls

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BEYOND LUCID

We Connect Mobile Medical Professionals with Their Ecosystems of Care

What IS Artificial Intelligence?

Before we can contemplate the

power of A.I. as a set of capabilities,

we must define what we are referring to.

Perhaps also what we are not talking about.

Goal Today: Set Brain on Fire 🔥

This discussion will be about ideas, not a technical dive (we can have that discussion, too, if you want).

Let's contemplate what we <u>want</u>

A.I. in Mobile Medicine to be and do.

Goal Today: Set Brain on Fire 🔥

Futurism • VISIONCAST

Let's contemplate what we <u>want</u>

A.I. in Mobile Medicine to be and do.

Why? Because My Mother Said:

When it comes to A.I. in healthcare:

“All these things just sound like Epic to me.”

Two Fundamental "Types" of AI

Generative

Other than Generative

Generative A.I.

Access to Data

- But *which data* is central to truth vs. error and bias.

Private Sources

Public Sources

Generative A.I.

Medical charting	Exchange queries	Radiology readings	Teaching materials
Letters and opinions	Research compendia	Molecular interactions	High-speed simulations

(e.g., “Monte Carlos”)

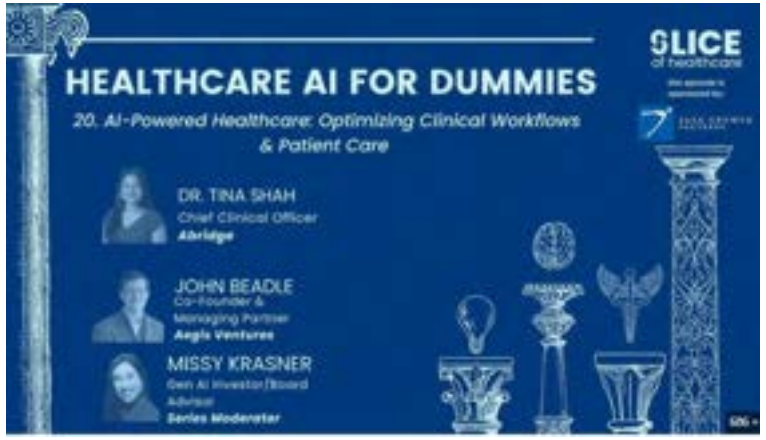
No Wonder Folks are Gaga For It

The New York Times

July 11, 2023

A.I. Could Solve Some of Humanity's Hardest Problems. It Already Has.

Demis Hassabis, the chief executive of DeepMind, discusses how A.I. systems can accelerate scientific research.



Much of A.I. Isn’t New. Speed Is.

+ a b | e a u
from Salesforce

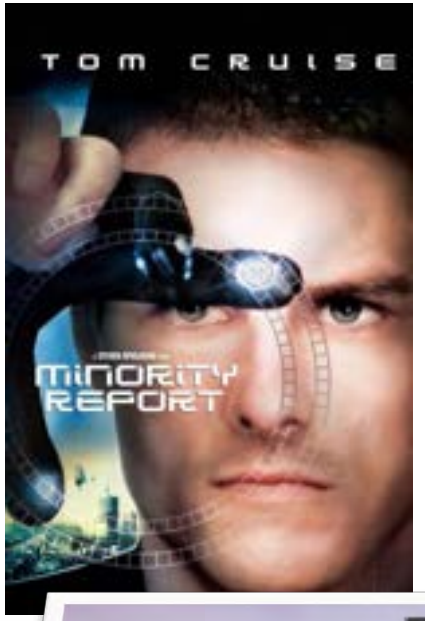
Birth of AI: 1950-1956

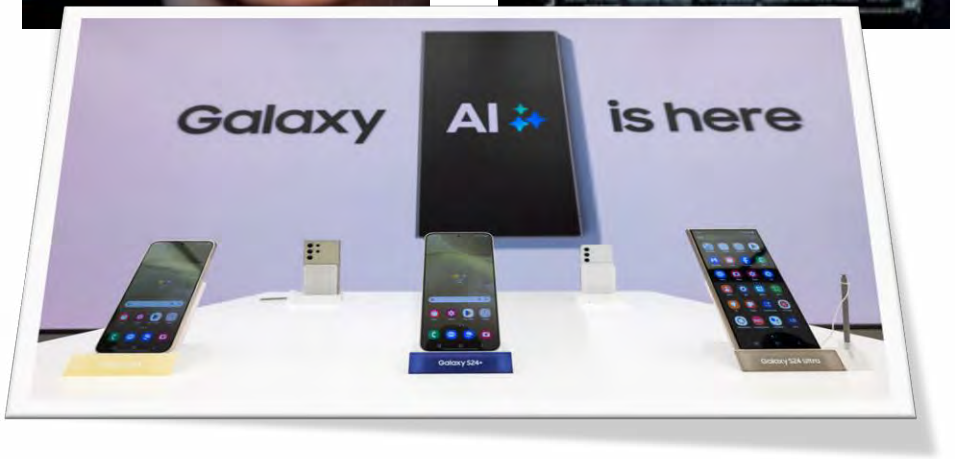
This range of time was when the interest in AI really came to a head. Alan Turing published his work “Computer Machinery and Intelligence” which eventually became The Turing Test, which experts used to measure computer intelligence. The term “artificial intelligence” was coined and came into popular use.

Dates of note:

- **1950**: Alan Turing published “Computer Machinery and Intelligence” which proposed a test of machine intelligence called The Imitation Game.
- **1952**: A computer scientist named Arthur Samuel developed a program to play checkers, which is the first to ever learn the game independently.
- **1955**: John McCarthy held a workshop at Dartmouth on “artificial intelligence” which is the first use of the word, and how it came into popular usage.

SOURCE: https://www.tableau.com/data-insights/ai/history





Mission Critical Generative A.I.

ChatGPT + Sources ➔ Infectious Disease of High Consequence (IDHC) Procedure

- AZ Dept of Health Services: Emergency Response Plan. December 2016
- AZ Dept of Health Services: Infectious Disease of High Consequence Plan. 3/2023
- ASPR-TRACIE (HHS): EMS Infectious Disease Playbook, Version 2.0. June 2023
- EMS.gov: EMS Pandemic Influenza Guidelines for Statewide Adoption, USDOT. 5/3/2007
- Phoenix Sky Harbor Communicable Disease Response Plan (CDRP). 2021
- PFD Mgmt. Procedures Vol. I (Personnel), Vol. 11 (Operations.), and Vol. 12 (EMS Proc.).
- Doctrine from PFD Infection Control Officer, PFD Occupational Health center, PFD Homeland Defense Bureau, PFD Resource Management (Logistics Section).
- Maricopa County DPH Infectious Disease Annex, v1.7 FY 2019-20 Update. National Emerging Special Pathogens Training & Education Center (NETEC): EMS Guidelines for Marburg Virus Disease. 3/9/2023
- Phoenix Fire Dept. Medical Director, Maricopa County Dept. of Public Health Epidemiologist

PFD Capt. David Moffit

Other Than Generative A.I.

Types of AI models

From sources across the web

- Decision trees
- Random Forest
- Unsupervised learning
- Neural network
- Convolutional neural net...
- Linear Discriminant Analy...
- Dimensionality reduction
- Narrow AI
- Linear regression
- Reinforcement learning
- Deep learning
- KNN algorithm
- Large language models
- Reactive machines
- Supervised learning
- AI modeling
- Logistic regression
- Support Vector Machines
- Naive Bayes
- Generative Adversarial N...
- Limited memory
- Theory of mind
- General AI
- Clustering

Source: Google...no irony there! ☺

Other Than Generative A.I.

Access to Data

- But *which data* is central to truth vs. error and bias.

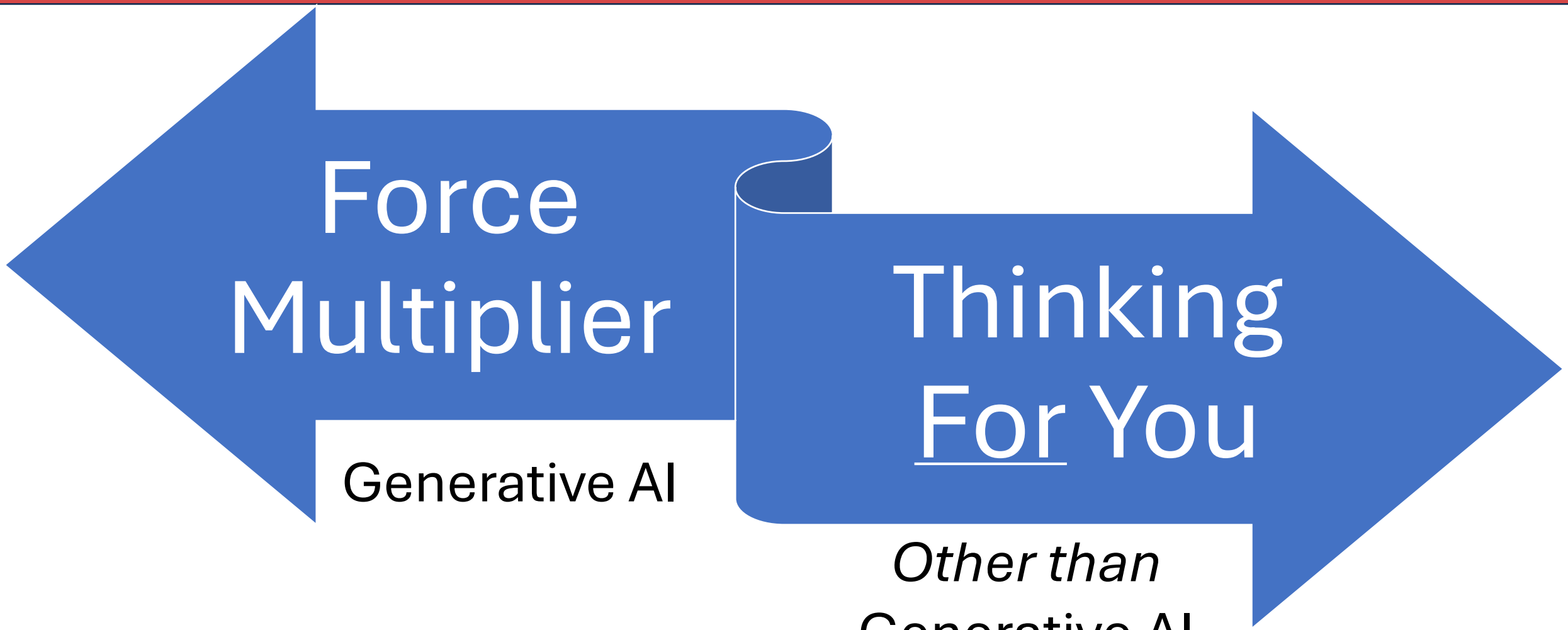
Other Than Generative A.I.

Biometric Identification	Federated Health Data	Dynamic Protocols	Patient Matching
Risk Identification	R-T Triage Activation	SDOH Intervention	MVC-Injury Prediction

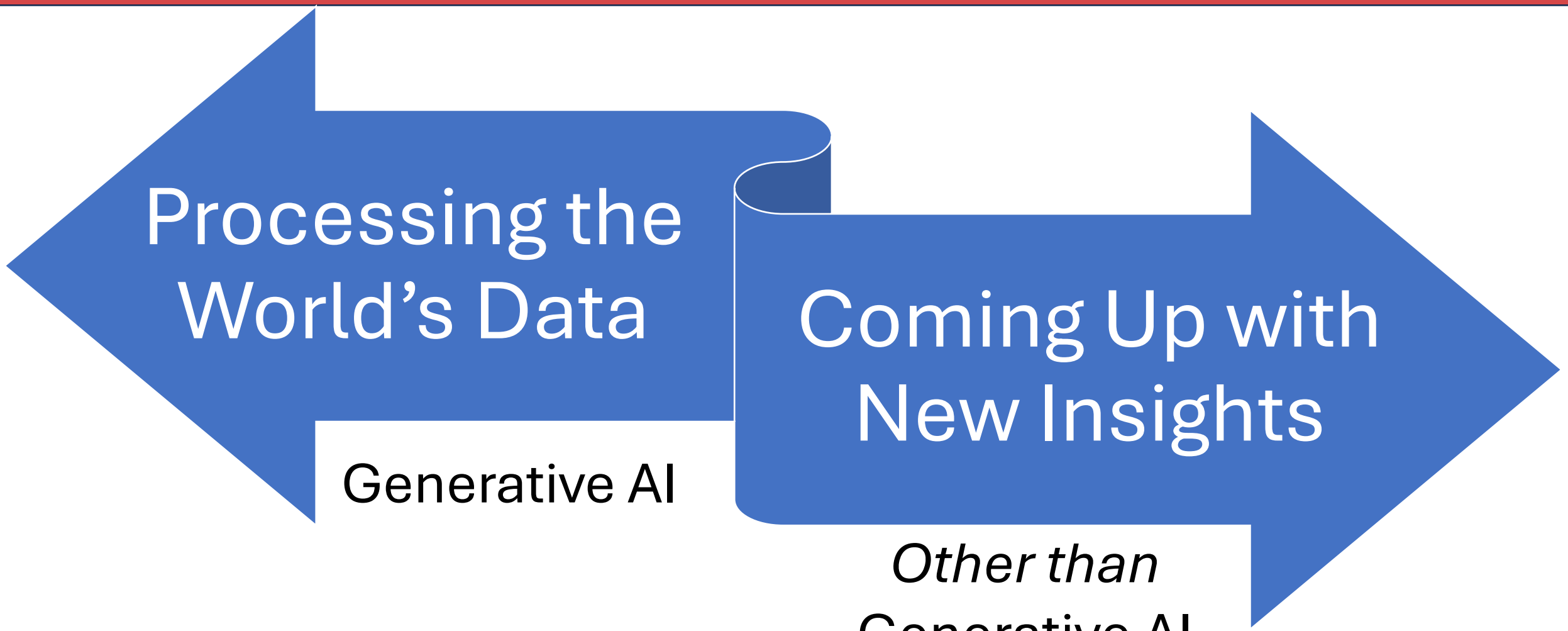
MVC = motor vehicle crash

But Are We Pushing Far Enough?

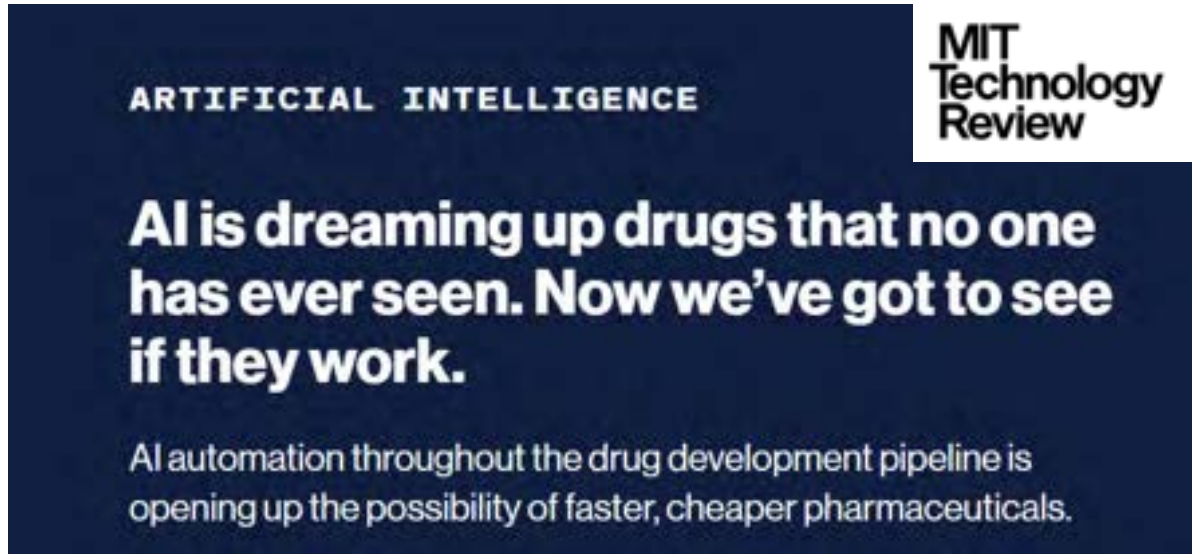
But Are We Pushing Far Enough?

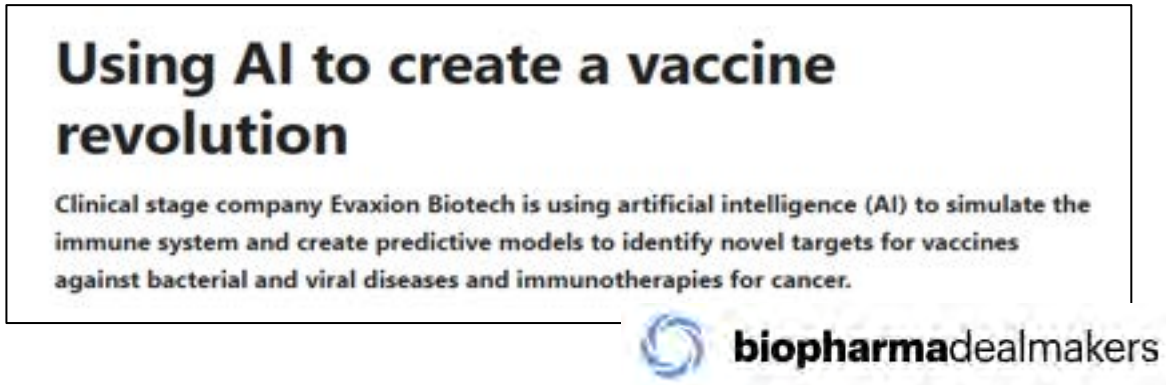


But Are We Pushing Far Enough?



Some are questioning AI's limits





Are There Limits? Tech vs. Ethics

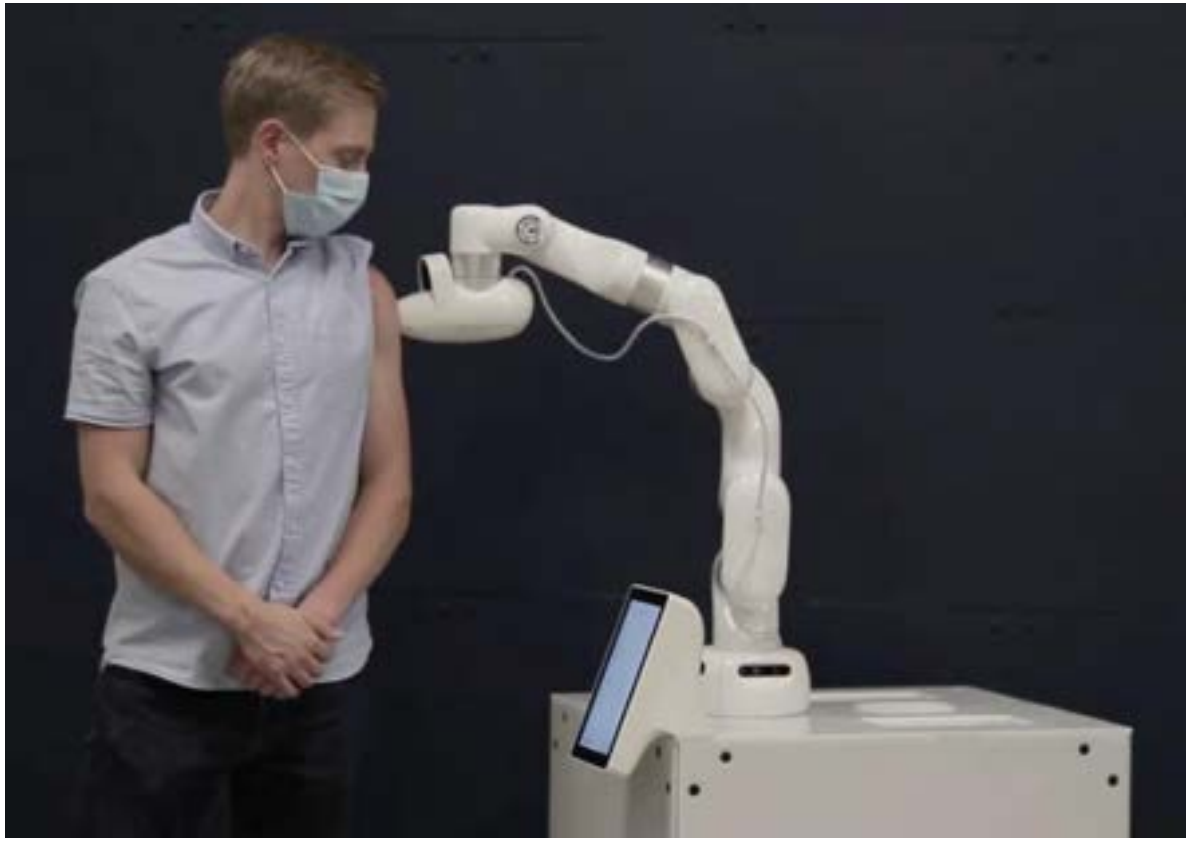
"Band-Aids Over Bullet Holes" – Is removing the human good…or even feasible?

Is the techno-chase sidetracking us from **investing in what still needs human touch?**

Are There Limits? Tech vs. Ethics

"Band-Aids Over Bullet Holes" – Is removing the human good…or even feasible?

https://spinalcord.org/disability-products-services/obi-robotic-feeding-device/



https://newatlas.com/robotics/cobi-robot-needle-less-vaccinations/

Are There Limits? Tech vs. Ethics

"Band-Aids Over Bullet Holes" – Is removing the human good…or even feasible?

https://homelessdeathscount.org/

https://www.stlpr.org/health-science-environment/2016-02-18/st-louis-county-police-add-heroin-overdose-antidote-to-patrol-cars

Are There Limits? Tech vs. Ethics

“Band-Aids Over Bullet Holes” – Is removing the human good…or even feasible?

https://invisiblepeople.tv/wp-content/uploads/2012/08/helping_the_homeless-1-1024x680.jpg

Teaching Children How to Reverse an Overdose

In rural Carter County, Tenn., health officials have embraced a strategy for stemming addiction: Teaching children as young as 6 how to administer Narcan, a nasal spray that can stop an opioid overdose from being fatal.

https://www.nytimes.com/2020/02/23/us/opioids-tennessee-narcan-training.html

The One Thing We Know for Sure

AI is On the Mind of Government

Homeland Security

Topics | News | In Focus | How Do I? | Get Involved | About DHS

Home » News » Press Releases »
Groundbreaking Framework for the Safe and Secure Deployment of AI in Critical Infrastructure Unveiled by Department of Homeland Security

News

- All DHS News
- Apps
- Blog
- Comunicados de Prensa
- Data

Groundbreaking Framework for the Safe and Secure Deployment of AI in Critical Infrastructure Unveiled by Department of Homeland Security

Release Date: November 14, 2024

AI is On the Mind of Government

America's Cyber Defense Agency

NATIONAL COORDINATOR FOR CRITICAL INFRASTRUCTURE SECURITY AND RESILIENCE

Key Highlights of the Framework:

•**Collaborative Guidance:** The Framework includes specific actions for key stakeholders—cloud and compute providers, AI developers, critical infrastructure owners, civil society, and public sector entities—to mitigate risks, safeguard consumer rights, and promote safe and transparent AI practices.

•**Comprehensive Coverage:** It addresses vulnerabilities unique to AI in critical infrastructure, such as attacks using AI, attacks targeting AI systems, and design failures, while also supporting a "Secure by Design" approach for AI developers.

•**Endorsement from Leadership:** DHS Secretary Alejandro N. Mayorkas emphasizes the transformative potential of AI in strengthening U.S. critical infrastructure resilience, urging leaders across sectors to embrace and implement the Framework.

AI is On the Mind of Government

Request for Information: Opportunities and Challenges of Artificial Intelligence in Transportation

Posted by the **Department of Transportation** on May 3, 2024

SUMMARY:

The U.S. Department of Transportation's Advanced Research Projects Agency—Infrastructure (ARPA-I) is seeking input from interested parties on the potential applications of artificial intelligence (AI) in transportation, as well as emerging challenges and opportunities in creating and deploying AI technologies in applications across all modes of transportation. The purpose of this Request for Information (RFI) is to obtain input from a broad array of stakeholders on AI opportunities, challenges and related issues in transportation pursuant to Executive Order (E.O.) 14110 of October 30, 2023 entitled "Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence".

BEYOND LUCID TECHNOLOGIES'S COMMENT #: ***DOT-OST-2024-0049-0037***
Posted by the Department of Transportation on Jul 1, 2024

AI is On the Mind of Government

U.S. DOT is committed to safety and innovation and sees artificial intelligence (AI) as a promising capability to help achieve these aims:

- ***Enabling the safe integration of AI into the transportation system***, including as a foundational technology in many automated driving systems and unmanned aircraft systems. U.S. DOT's work in this area also focuses on safe integration of AI into conventional aircraft systems as well as traffic management operations across modes.

- ***Adopting and deploying AI-based tools into internal operations, research, and citizen-facing services.*** U.S. DOT has focused investments in the application of AI into improving the efficiency and effectiveness of internal processes and research, including natural language processing, computer vision, and machine learning-based predictive analytics.

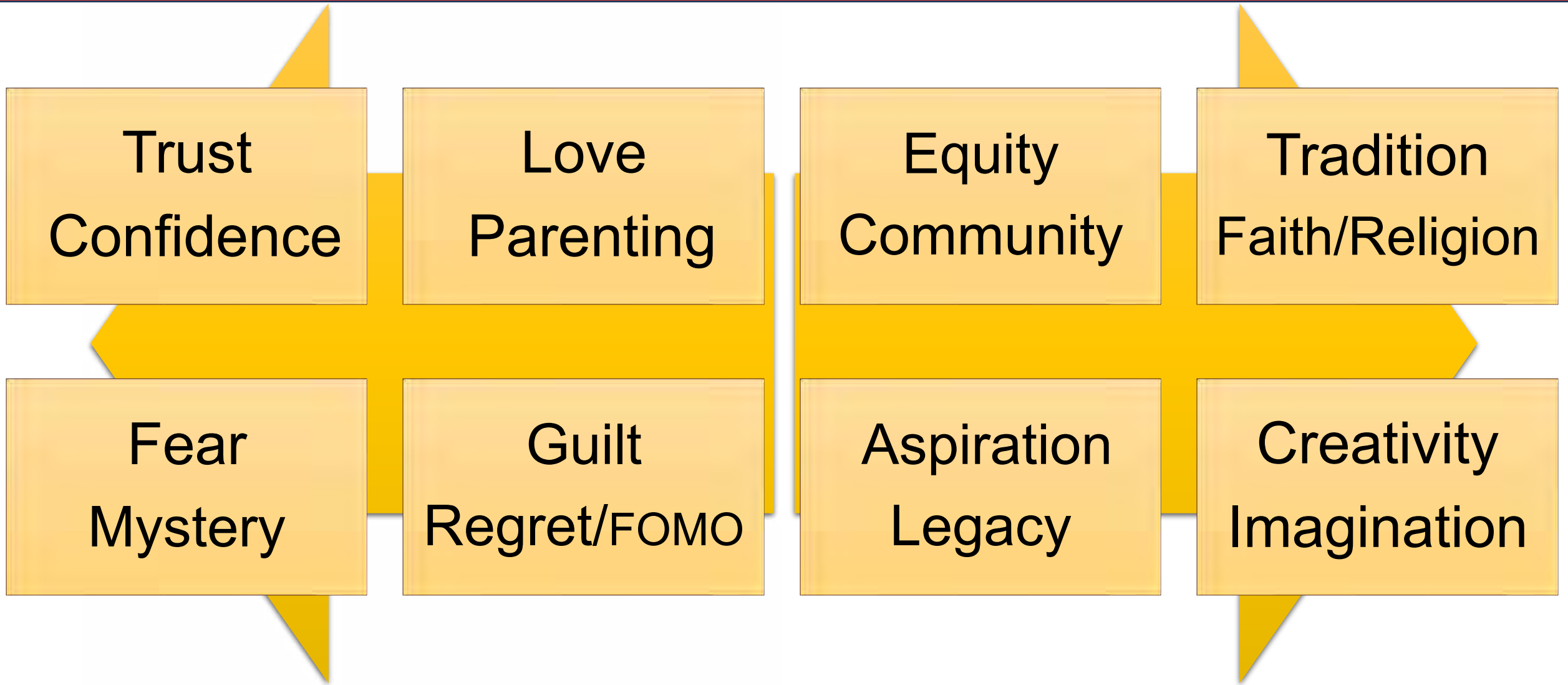
But Why So Much Interest Now?

…And what can the problems that the federal government is seeking to solve tell us about **the power, potential, and pitfalls of A.I.?**

But Why So Much Interest Now?

- The “Silver Tsunami”
- Autism Rights Mvmt
- Rapid Global Mobility
- Climate Disasters
- Availability of Data/HIE
- Whole Blood in the Field
- Man-Made Crises/Terror
- Morbidity on Roadways

How Far Will People Let A.I. Go?



Implications for Emergencies

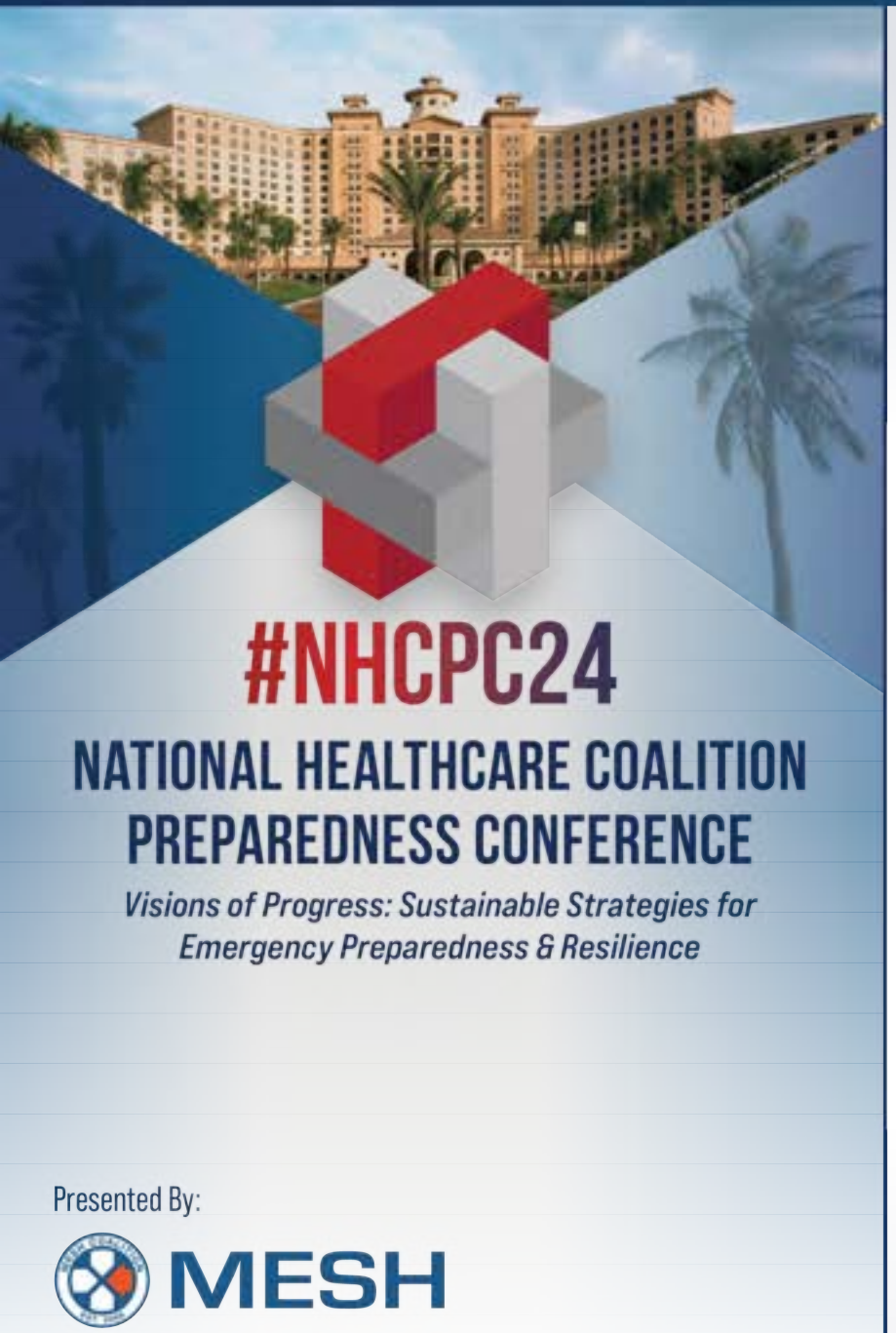
Dynamic Routing → Code Black or Status Zero	Dynamic Routing → Status Bypass (Patient Distrib.)	Clinical Decision Support/Protocol Guidance	Family Reunification After Evacuation
Collective After-Action Review	Reduce Burdens → Improve Hiring	Sentinel Event Tracking • MH/BH	Syn. Surveillance + Contagion Spread Modeling
Threat ID and Localization / Public Safety	Automation of Mutual Aid at Vulnerable Sites	Prevent Adverse Encounters, 2nd ary Emergency	Protect People w/ Special Needs + Critical Wishes

Thank you! Please get in touch if you are working on related grants + projects, and/or want to collaboratively bring them to fruition.

Jonathon S. Feit, MBA MA
Co-Founder & Chief Executive
Jonathon.Feit@beyondlucid.com
(650) 648-3727

BEYOND LUCID

We Connect Mobile Medical Professionals with Their Ecosystems of Care



Building Resilient Healthcare Coalitions

Assessments, Adaptation, and Evidence-Based Growth

Jordyn Marchi, MPH

Public Health Emergency Response Coordinator

Northern Nevada Public Health

Table of Contents

Learning Objectives

1. Identify the importance of assessment implementation in building and sustaining healthcare coalitions.
2. Define strategies for proactive adaptation in healthcare coalitions to emerging challenges utilizing the HPP Capability Framework.
3. Discuss evidence-based decision-making and stakeholder engagement.

Inter-Hospital Coordinating Council (IHCC)

Began as a partnership in 1985
Officially became a coalition in 1994

Partners include EMS/Fire, healthcare facilities, school districts, emergency management, public health, and law enforcement

Purpose: Collaboration, allocation of resources, information sharing, community resilience

#NHCPC24

Poll Question

What are key steps to building resilient coalitions?

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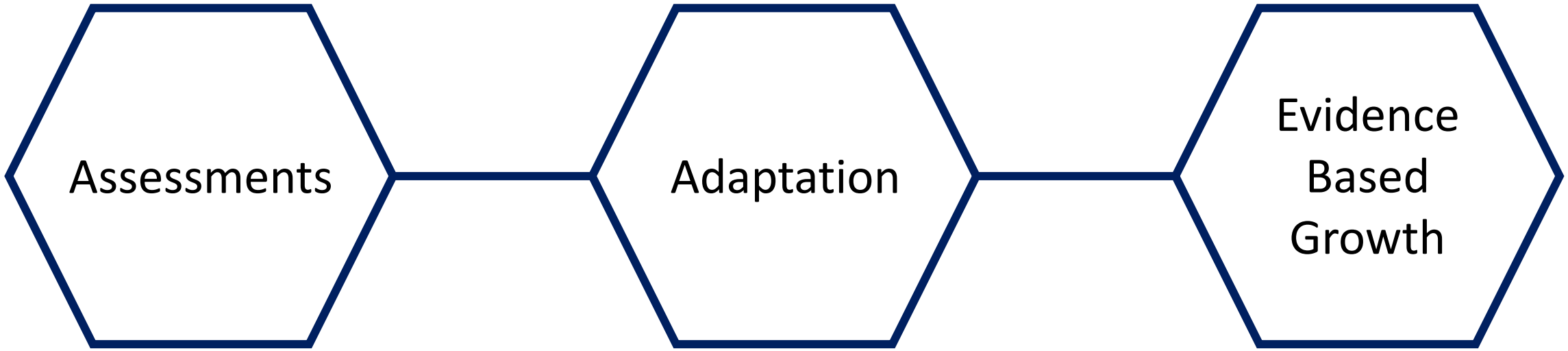
Steps to Building Resilient Coalitions



Hospital Preparedness Program (HPP) Capabilities

The Administration for Strategic Preparedness and Response (ASPR) released new proposed HPP Capabilities in July 2023

Increased focus on workforce, health equity, access, and climate change

Capabilities Overview

Capability 1: Incident Management & Coordination
Capability 2: Information Management
Capability 3: Patient Movement & Distribution *(not assessed)*
Capability 4: Workforce
Capability 5: Resources
Capability 6: Operational Continuity
Capability 7: Specialty Care
Capability 8: Community Integration

HPP Capability Assessments

HPP Capability Assessments – Purpose

Foster stakeholder engagement

Informed decision-making

Sustainable growth

HPP Capability Assessments – Intended Audience

- Acute Care Hospitals/Free-Standing Emergency Departments (FEDs)
- EMS/Fire Services
- Skilled Nursing/Memory Care/Assisted Living Facilities
- Home Health/Hospice/Dialysis Centers
- Clinics/Ambulatory Surgery Centers
- Behavioral Health Facilities

HPP Capability Assessment Email Template

Subject: Ready, Set, Assess! Complete the HPP Capability Assessments by [insert due date]

Good morning,

We are evaluating our community based on the eight proposed Hospital Preparedness Program (HPP) Capabilities. Your input is crucial - please complete the assessments by **[insert due date]**. These capabilities are key to enhancing healthcare readiness and ensuring our ability to maintain healthcare delivery during and after disasters.

Intended audience:
These assessments are intended for healthcare partners, including:

- Acute Care Hospitals/FEDs
- EMS/Fire Services
- Skilled Nursing/Memory Care/Assisted Living Facilities
- Home Health/Hospice/Dialysis Centers
- Clinics/Ambulatory Surgery Centers
- Behavioral Health Facilities

Assessments: The purpose of these assessments is to identify strengths and weaknesses to enhance community resilience. Individual agency results will remain confidential and will be used to inform our planning for the next fiscal year. Please note that the assessments have replaced the Resource and Gap Analysis completed in previous years. There are 7 assessments corresponding to HPP capabilities 1-8 (excluding Capability 3). After analyzing the results, we will present the findings to [insert coalition name] and establish workgroups to discuss priorities.

Only one respondent per organization needs to complete the assessments. Please answer each question to the best of your ability; selecting '*Don't know*' or '*N/A*' as an answer choice is completely acceptable and will help us identify gaps and detect areas where additional resources and training are needed.

HPP Capability Assessments – Email

- Introduction
- Intended Audience
- Purpose
- Assessment Information
- HPP Capability Pre-Decisional Draft

Capability 1 - Incident Management and Coordination (FY25)

***For the purposes of this assessment, the term organization refers to any partner of IHCC. The term EOP refers to emergency operations plan or any other applicable documents for emergency planning or response.**

Capability 1: Incident Management and Coordination

Desired Outcome: A health care delivery system with incident management practices and structures that integrate health care into the jurisdictional response and use clinical expertise to inform the delivery and continuity of patient care and clinical operations at all levels.

Description: This capability focuses on coordinating organizations during a health care response and integrating clinical expertise into incident operations and decision-making. During a response, incident management provides situational awareness, resource management, information management and coordination, and accountability, as well as a framework for developing and prioritizing objectives as an incident evolves.

***For more information, please reference the document attached to the email.**

Capability 1 is comprised of 4 objectives, 11 activities and 39 sub-activities. There will be a maximum of 12 questions depending on your type of organization. These questions are specific to your organization and not the coalition.

Single Select Questions: Read each question carefully and select the best answer based on your understanding of the information provided.
Response Options: Selecting 'Don't Know' or 'N/A' is acceptable. This will help us identify gaps and areas that may require additional training.

HPP Capability Assessments- Preview

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1. Please enter the name of your organization *

Enter your answer

2. Please select the membership status of your organization *

Eligibility of Voting Membership: Voting membership is comprised of any member who has attended three consecutive meetings and has been voted on by IHCC

- ◯ Voting Member
- ◯ Non-voting Member

3. Please select your organization type *

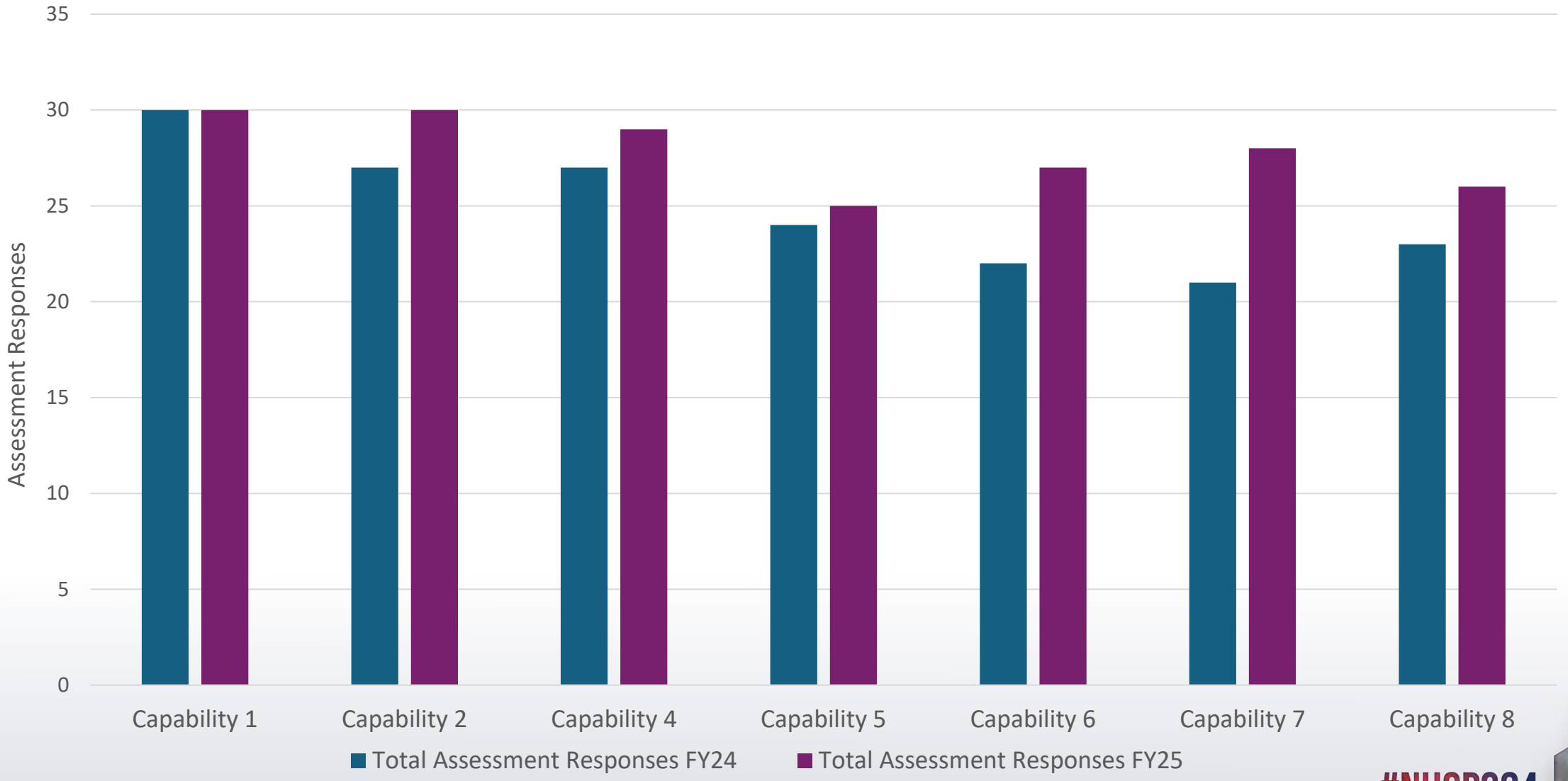
- ◯ Hospital/FED (Acute Care)
- ◯ EMS/Fire
- ◯ Skilled Nursing/Memory Case/Assisted Living
- ◯ Home Health/Hospice/Dialysis
- ◯ Clinics/Ambulatory Surgery Center
- ◯ Other

HPP Capability Assessments - Structure

- Evaluated sub-activities
- Tailored to specific healthcare providers
- Assessed by voting and non-voting members

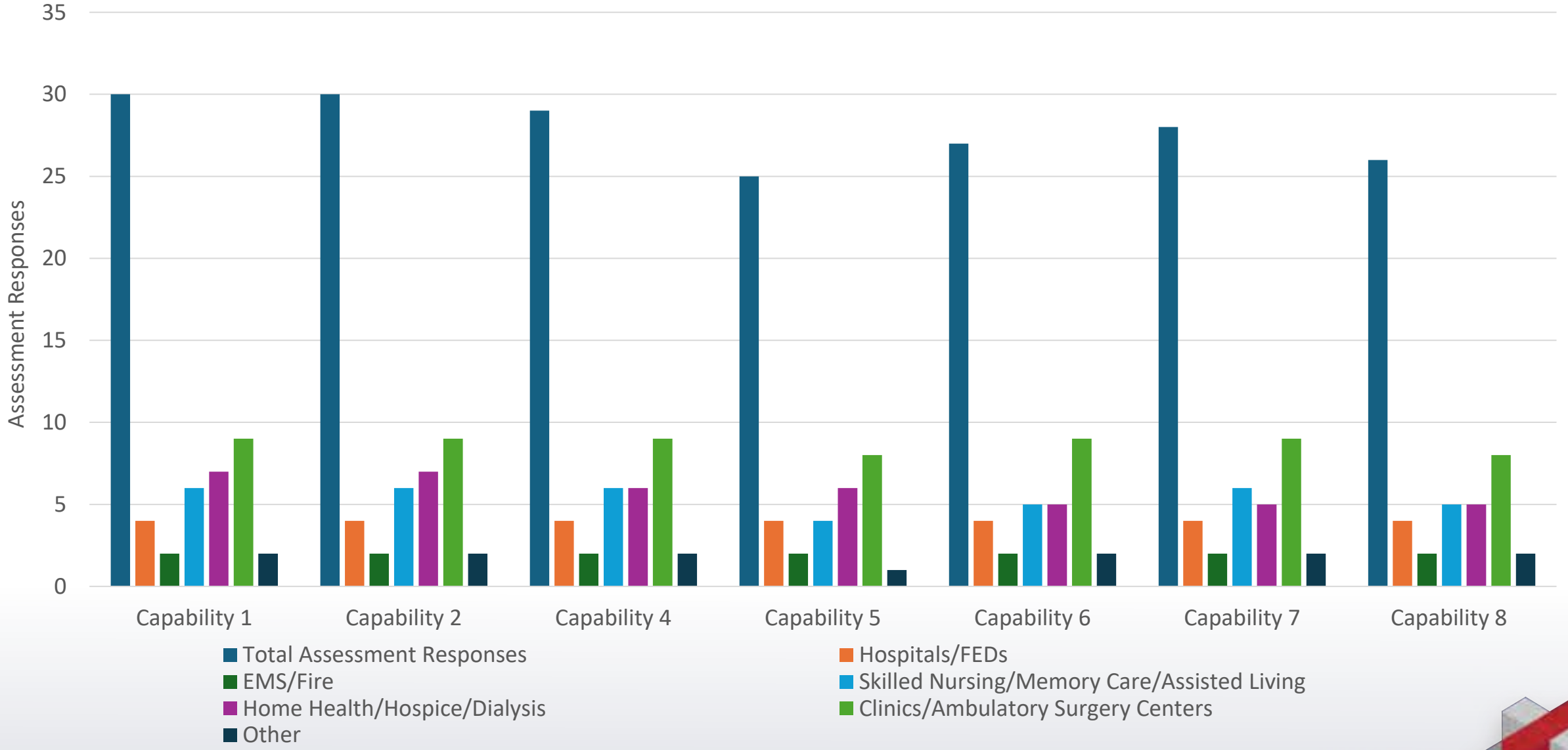
Results

Total Assessment Responses Compared by Fiscal Year



#NHCPC24

FY25 Assessment Responses Based on Provider Type for Each Capability

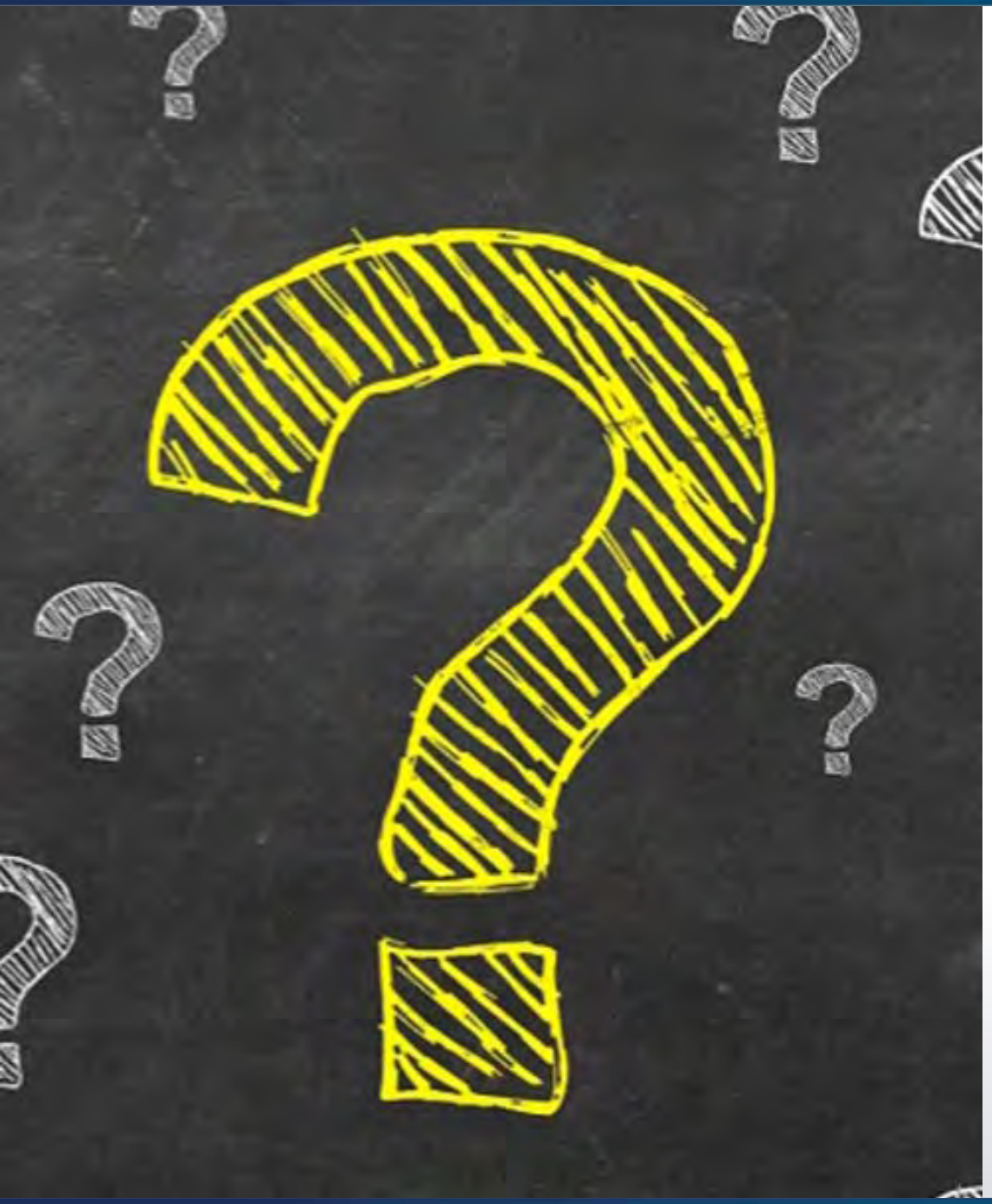


FY24 & FY25 Response Rate Comparison

Adapting for Clarity & Audience Needs

Revisions
- Enhance clarity
- Consideration of membership status
- Intended audience alignment
- Identification of training needs

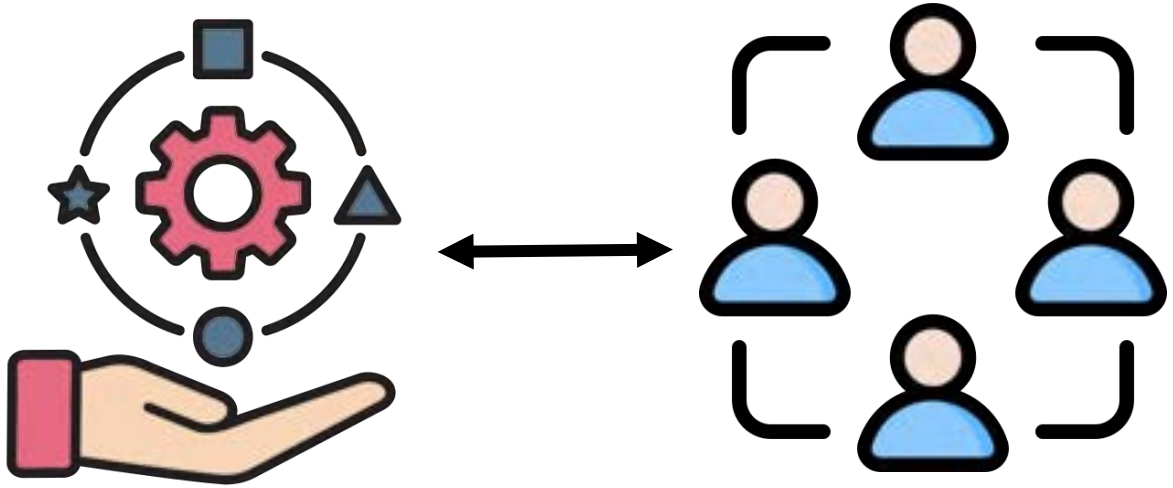
Sources of Feedback
- Input from IHCC members
- Internal review
- Partner review
- Market research



Poll Question

How do you use the results of assessments to inform your next steps?

Evidence-Based Growth



Identify strengths & areas of improvement

Establish workgroups

Incorporate ideas into plan updates & scope of work

Poll Question

How have you overcome those challenges?

Timeline for FY25

July

Review and revision of the FY24 HPP Capability Assessments

August & September

Completion of HPP Capability Assessments by coalition members

October

Analysis of assessment results

November & December

Establish workgroups with provider types & update IHCC Plans

Summary of Key Points

- Role of assessments in coalition growth and capacity building
- Strategic importance of assessments in evolving healthcare landscapes

- **Call to Action:** Embrace assessments as a tool for sustainable coalition growth and resilience

Thank You!

Jordyn Marchi, MPH
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(775)328-2440

IHCC
Inter-Hospital
Coordinating Council
Est. 1994

NORTHERN NEVADA
Public Health
Serving Reno, Sparks & Washoe County

#NHCPC24

HPP Capability Assessment Email Template

Subject: Ready, Set, Assess! Complete the HPP Capability Assessments by [insert due date]

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Intended audience:
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- Skilled Nursing/Memory Care/Assisted Living Facilities
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- Clinics/Ambulatory Surgery Centers
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Only one respondent per organization needs to complete the assessments. Please answer each question to the best of your ability; selecting '*Don't know*' or '*N/A*' as an answer choice is completely acceptable and will help us identify gaps and detect areas where additional resources and training are needed.

- **Capability 1** - 12 questions
- **Capability 2** - 5 questions
- **Capability 4** - maximum of 60 questions
- **Capability 5** - maximum of 42 questions
- **Capability 6** - maximum of 33 questions
- **Capability 7** - maximum of 47 questions
- **Capability 8** - maximum of 21 questions

For additional information on the capabilities, please refer to the attached document. If you have any feedback or questions about the assessments, please do not hesitate to contact me.

Thank you for your continued support and engagement. Your involvement is vital to our community's preparedness and resilience.

#NHCPC24

NATIONAL HEALTHCARE COALITION PREPAREDNESS CONFERENCE

Visions of Progress: Sustainable Strategies for Emergency Preparedness & Resilience

Presented By:

MESH

CARDS AGAINST COALITIONS

Jenaila Hawkins, MSHA, EMHP, CNP

Elisabeth Wilson

This session will be INTERACTIVE

Introduction

- Jenaila Hawkins
- Georgia Region N Healthcare Coalition Facilitator
- Cobb and Douglas Public Health
  - Center of Emergency Preparedness and Response
  - Marietta Georgia/Metro Atlanta
  - Urban and Suburban
  - 4 county region
  - Regional population approx. 1.4 million

- Elisabeth Wilson
- Georgia Region E Healthcare Coalition Facilitator
- Northeast Health District
  - Office of Emergency Preparedness and Response
  - Athens Georgia
  - Suburban and Rural
  - 12 county region
  - Regional population approx. 500,000

Healthcare Coalitions

- The main purpose of the Healthcare Coalition is to provide Regional Integrated Healthcare Emergency Preparedness activities and response coordination
  - Collaboration
  - Partnerships

NO Coalition is alike

If you've seen ONE …

you've seen one

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We do have in common….

Coalition Deliverables

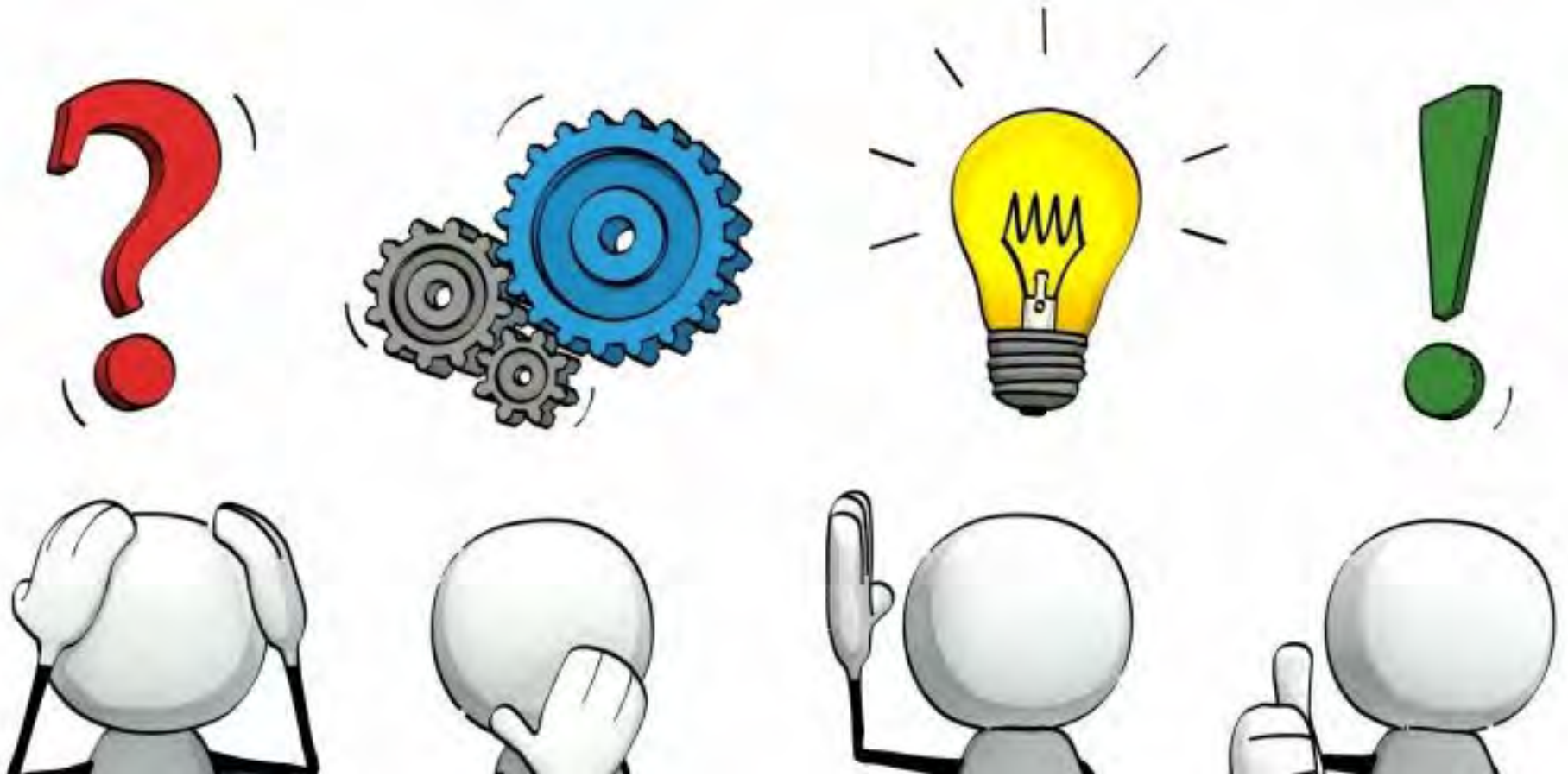
- Preparation of Regional Plans
- Reports
- Regional Hazard Vulnerability Analysis
- Resource Assessment
- Education, training and exercises
- Redundant Communication systems
- MRSE

We do have in common….

Coalition Deliverables

Biggest being

- HPP funding
  - Funds must primarily support strengthening the healthcare system preparedness thru initiatives that prepare the HCC to respond as an entire regional health system rather than individual healthcare organizations



So how can we do this?

Strengthen our regional coalition preparedness

Creatively…

That is both educational and engaging for all coalition members

Who's in the room?

- Public Health
- EMA
- Healthcare
- Fire/EMS
- NGOs
- Other

Reason for the Concept

- For this presentation and game, we will give examples of incidents, questions, or events that may occur in a healthcare coalition and ways we may respond while sometimes being cheeky and relatable

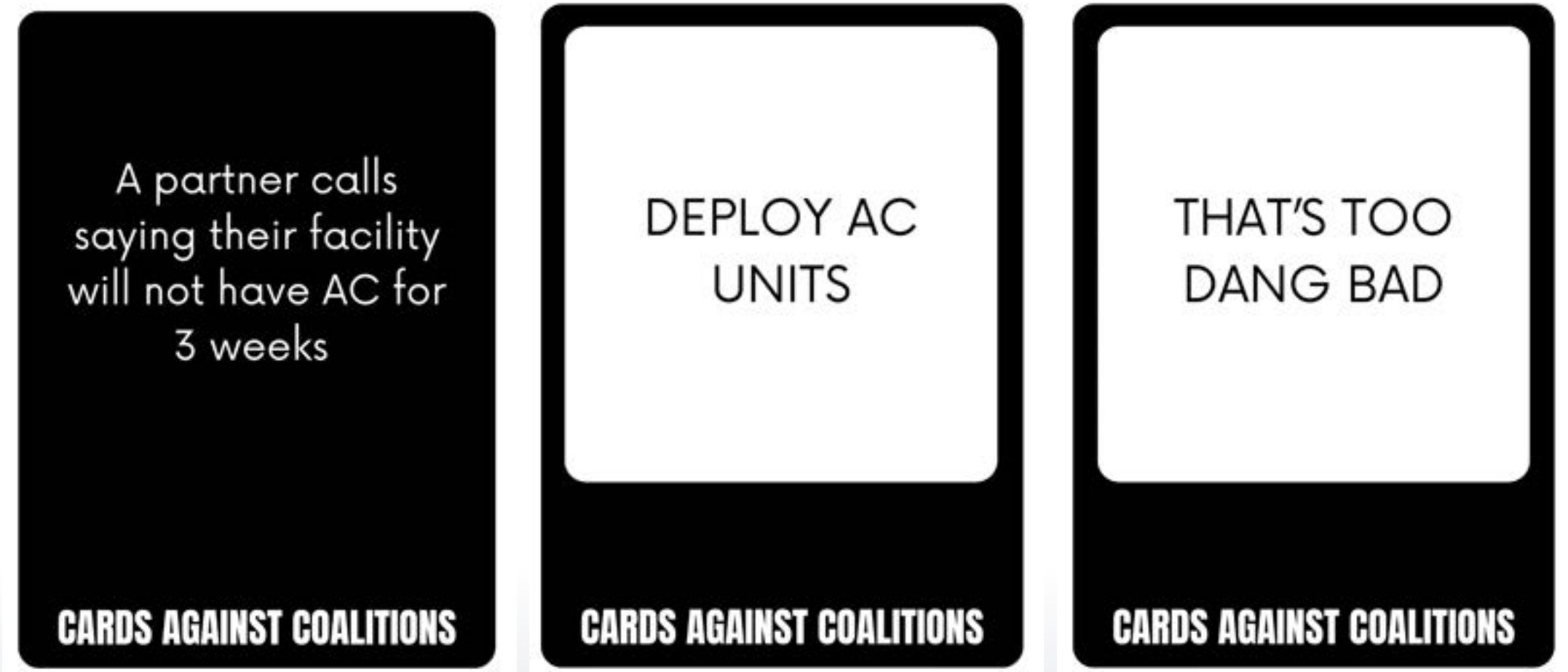
- These are based on real world examples, but every coalition is different, so we all have different priorities

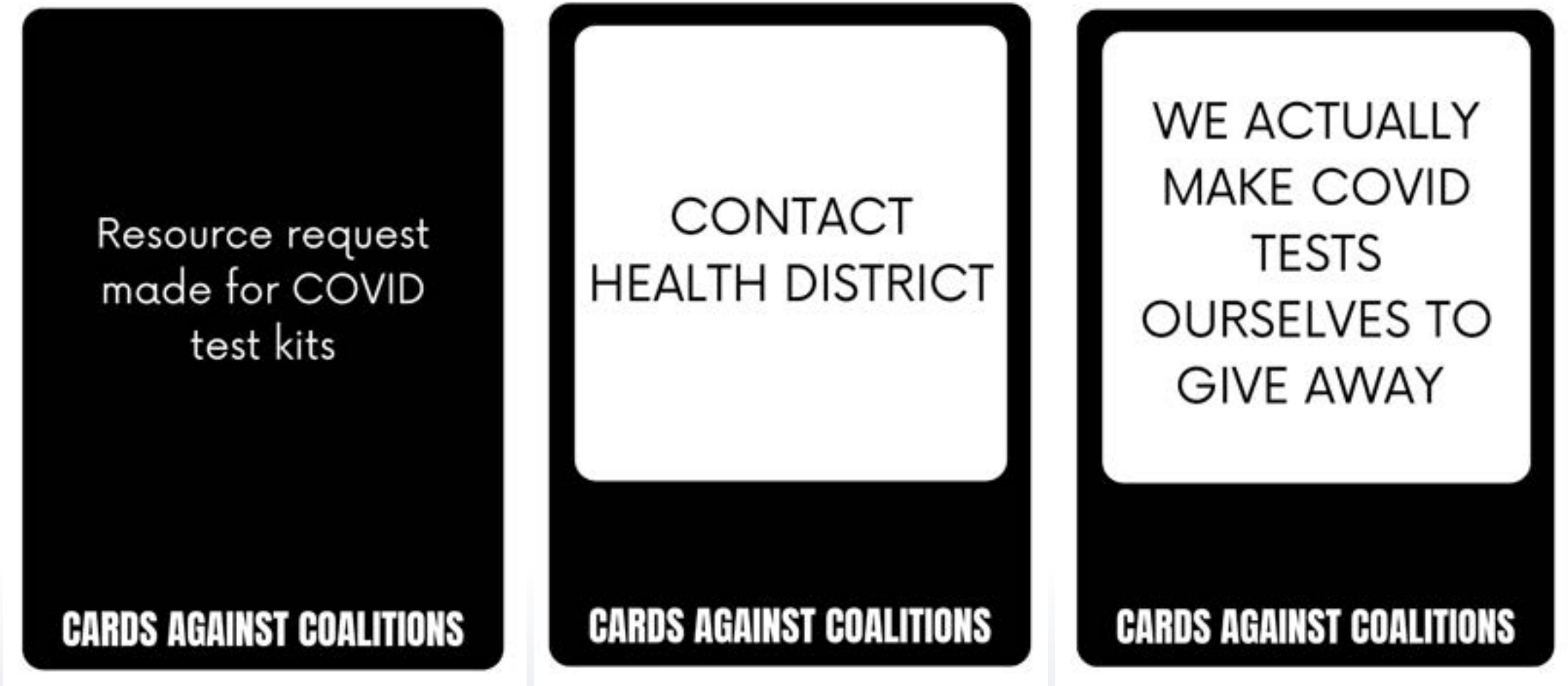
How to play

How To Play

- Players compete to get the most correct responses to a black card, which is a question or fill in the blank, by picking white cards with possible answers.
- For the sake of interaction as a group, we will show a black card with a question or fill in the blank on the screen. If you think the white card that you have could go with the black card on the screen, please raise your hand, to be called on, to read your white card.
- For each white card read we will discuss how we and you would actually respond (and laugh at the not so serious cards)


CARDS
AGAINST
COALITIONS
EXAMPLE


A partner calls saying their facility will not have AC for 3 weeks
CARDS AGAINST COALITIONS
DEPLOY AC UNITS
CARDS AGAINST COALITIONS
THAT'S TOO DANG BAD
CARDS AGAINST COALITIONS


Resource request made for COVID test kits
CARDS AGAINST COALITIONS
CONTACT HEALTH DISTRICT
CARDS AGAINST COALITIONS
WE ACTUALLY MAKE COVID TESTS OURSELVES TO GIVE AWAY
CARDS AGAINST COALITIONS


A resource request has been made for PPE
CARDS AGAINST COALITIONS
DEPLOY PPE
CARDS AGAINST COALITIONS
WE AREN'T EXPERIENCING A MAJOR OUTBREAK BUT WE THOUGHT WE COULD STOCK UP INCASE WE DO
CARDS AGAINST COALITIONS

It is 2am and 30 degrees outside, a corporate skilled nursing contact calls to say a facility does not have power

CARDS AGAINST COALITIONS

A partner is asking for a vaccine event

CARDS AGAINST COALITIONS

There is an uptick in COVID cases in a facility

CARDS AGAINST COALITIONS


A tropical storm/hurricane/ tornado has hit a longterm care facility and they need assistance evacuating
CARDS AGAINST COALITIONS
A neighboring coalition needs help with a resource request
CARDS AGAINST COALITIONS
Employee calls to complain about the facility they work in
CARDS AGAINST COALITIONS


A partner is asking for assistance in writing plans
CARDS AGAINST COALITIONS


A partner is asking you to sign a document stating you will provide backup water and security to their facility in the event of an emergency
CARDS AGAINST COALITIONS


It's 3 months into the new fiscal year and we still have no coalition funding
CARDS AGAINST COALITIONS


A nursing home is requesting a generator to support their entire facility
CARDS AGAINST COALITIONS
A hospital is under the assumption that the national guard will come to every event they may experience
CARDS AGAINST COALITIONS
A partner wants to attend a conference on behalf of the coalition
CARDS AGAINST COALITIONS


I've never attended a coalition meeting, can I attend a conference?
CARDS AGAINST COALITIONS
If I come to a Coalition meeting do I get free stuff?
CARDS AGAINST COALITIONS
Can you come do a full scale exercise for my facility?
CARDS AGAINST COALITIONS


Our hospital can't support a patient evacuation from our facility
CARDS AGAINST COALITIONS


We requested a resource 2 days ago and still have not received it
CARDS AGAINST COALITIONS


A tropical storm/hurricane/ tornado has hit a longterm care's sister facility and needs assistance receiving evacuated patients
CARDS AGAINST COALITIONS

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thanks for joining us!

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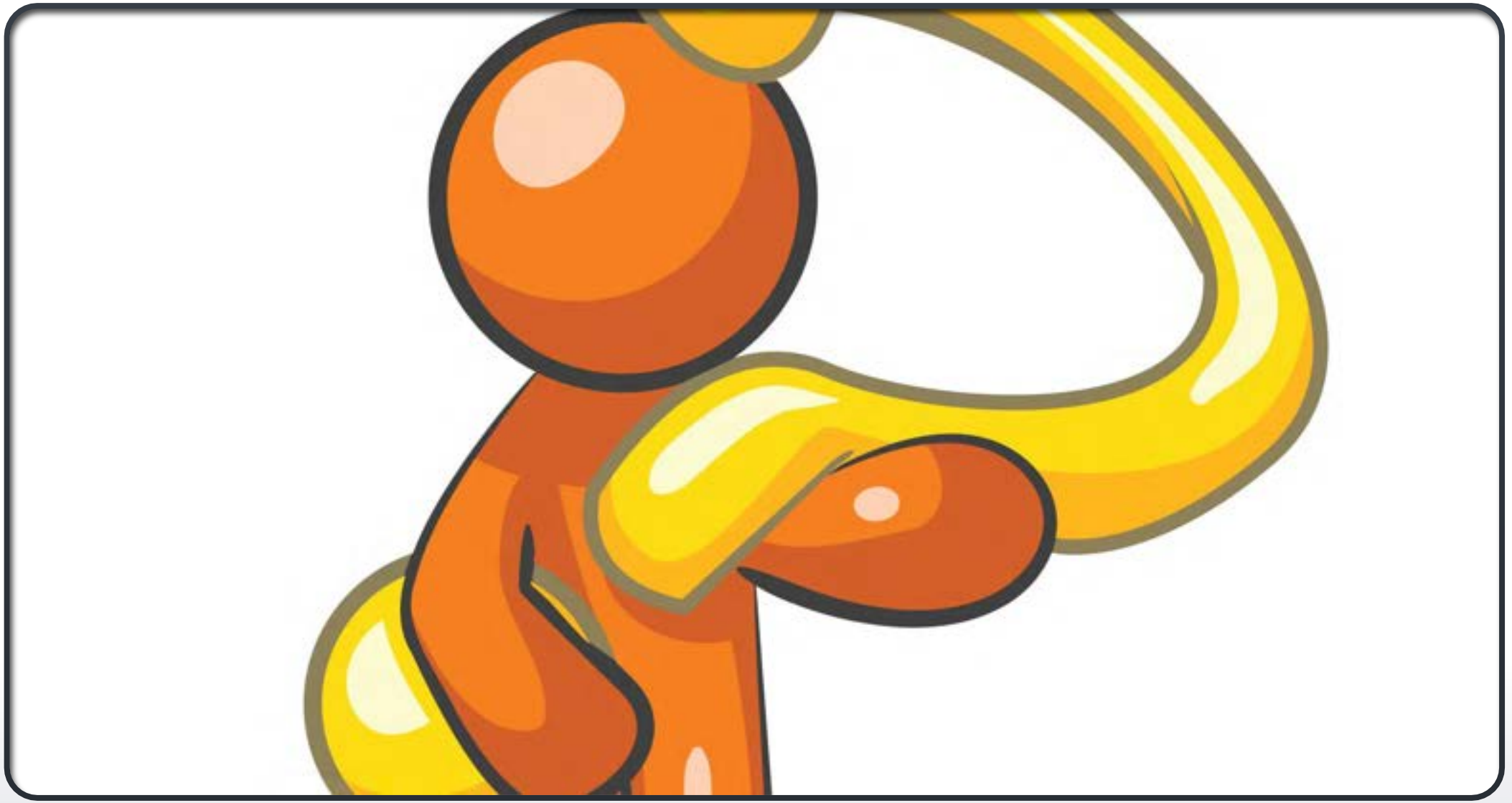
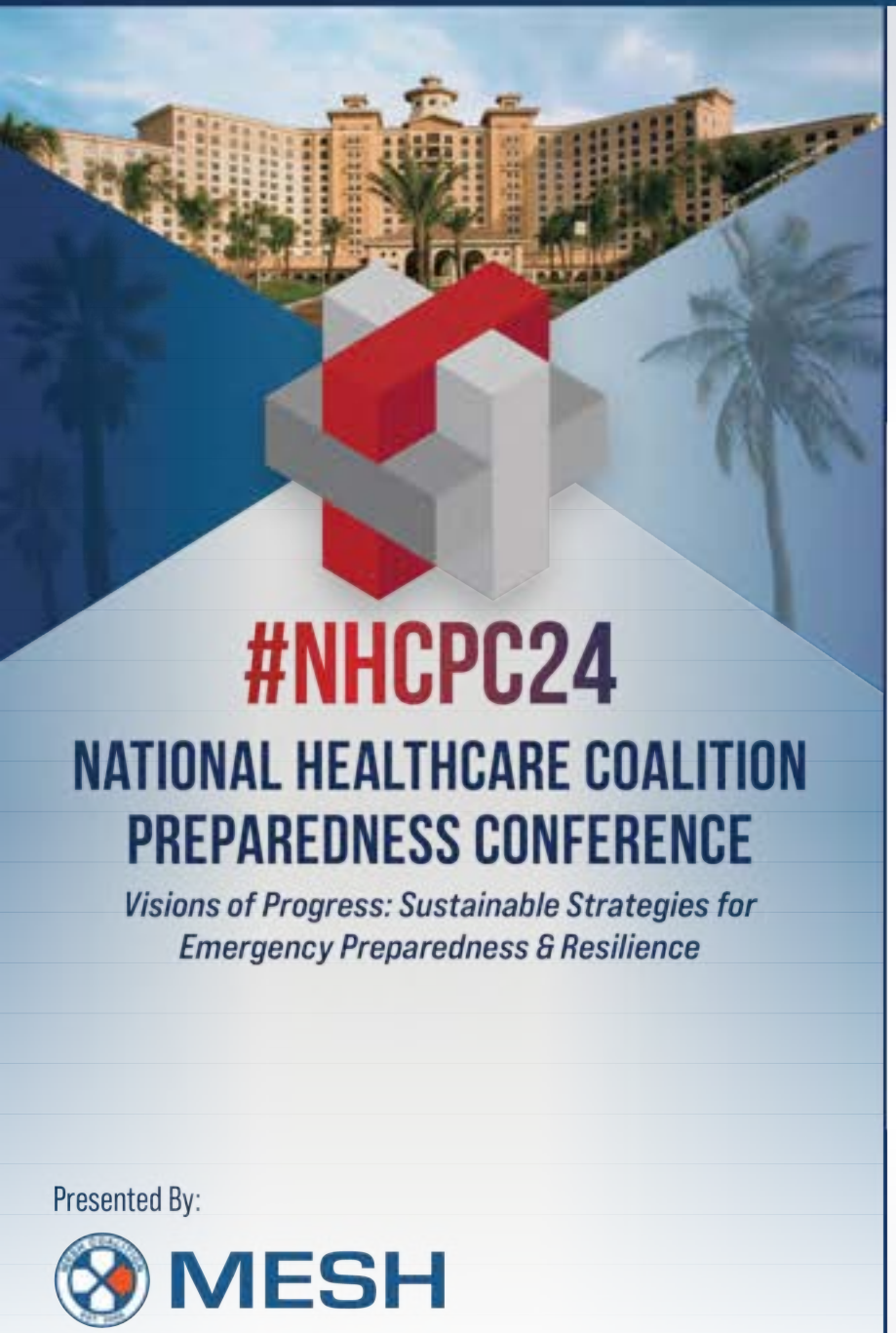


Jenaila Hawkins
Jenaila.Hawkins@dph.ga.gov

Elisabeth Wilson
Elisabeth.Wilson@dph.ga.gov



Strategies for Including Poison Center and Pharmaceutical Expertise into HCC Planning

- Kathy Jacobitz, MHA, BSN, RN, CSPI
  Director, Nebraska Poison Center
- Justin Watson, MPA
  Coordinator, Omaha Metropolitan Healthcare Coalition

We will discuss…

- Overview of the Omaha Metropolitan Healthcare Coalition
- Development of the OMHCC Chemical Annex
- Overview of Poison Centers
- Regional Disaster Health Response Systems
- R7DHRE Chemical Specialty Team
- Role of the OMHCC Pharmacy Workgroup
- Response to real world incidents and exercises through partnerships with OMHCC, Nebraska Poison Center, and the R7DHRE Chemical Team

Mission:

Promote community healthcare coordination and resilience.

Vision:

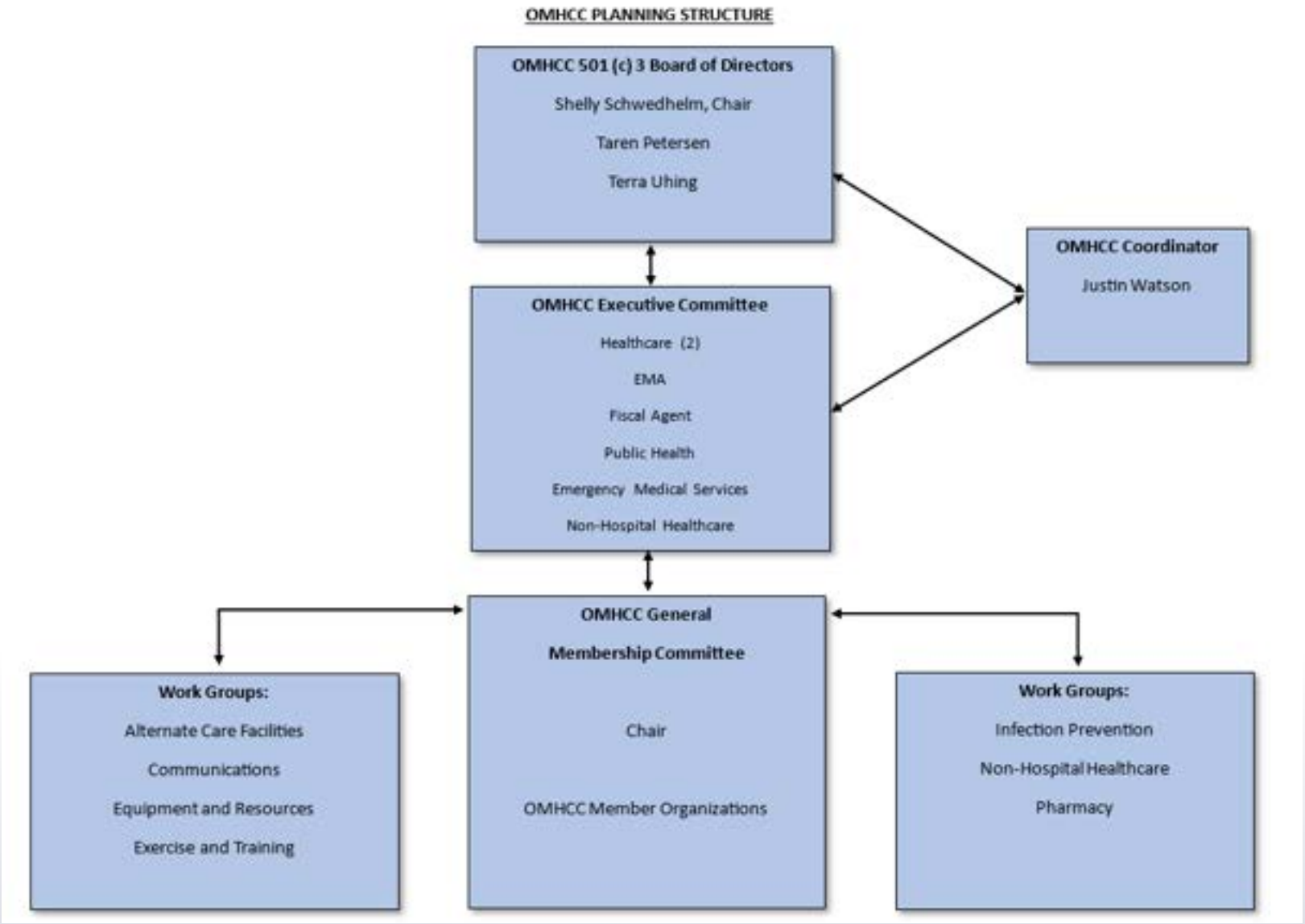
Promote community healthcare coordination and resilience by bringing together the medical community, emergency management agencies, public health departments, emergency medical services, and other community stakeholders to plan for a coordinated medical response to any potential incident.

#NHCPC24

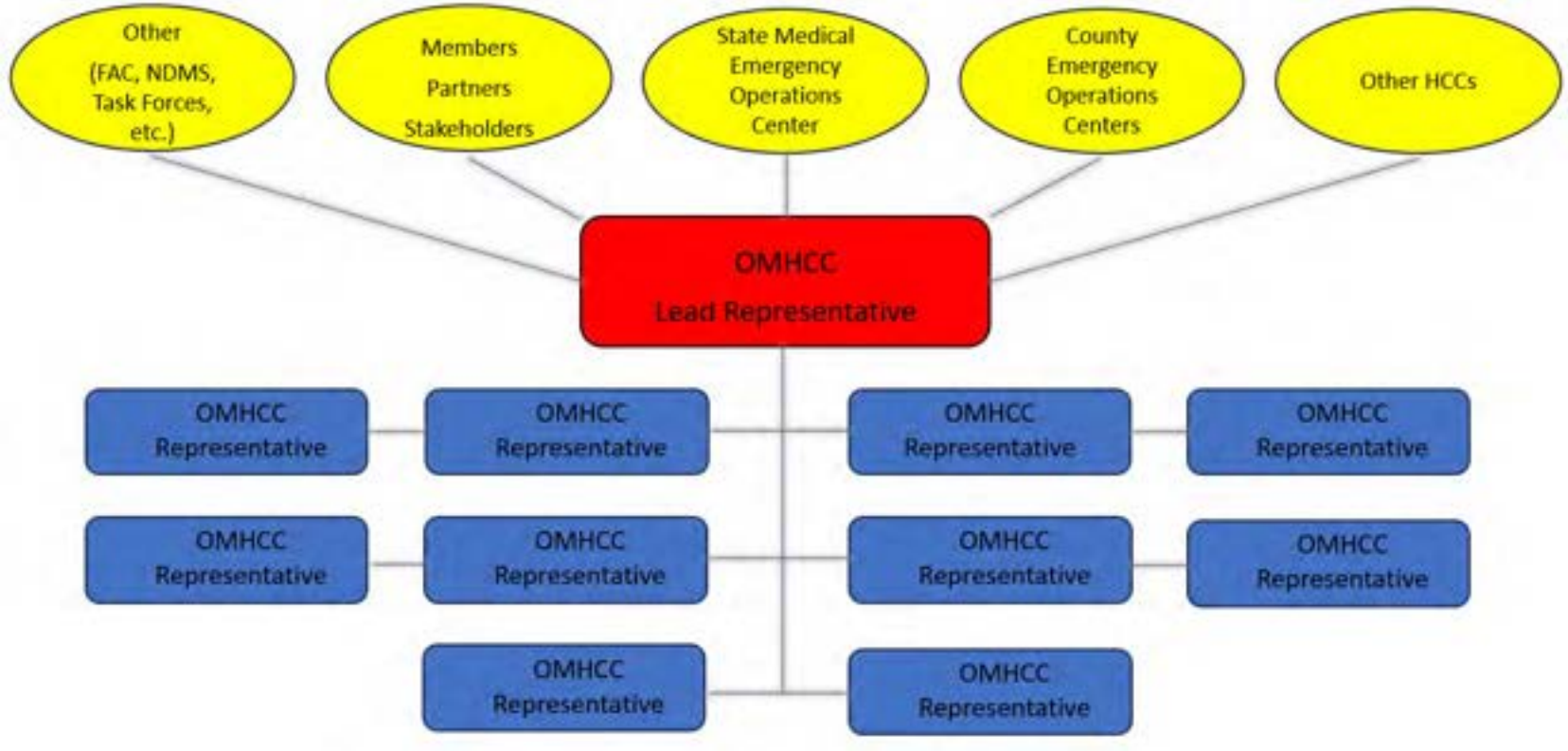
OMHCC Response

- Information sharing
- Facilitate resource sharing
- Act as a liaison between healthcare and jurisdictional authorities
- Facilitate response discussions

Day to Day Structure



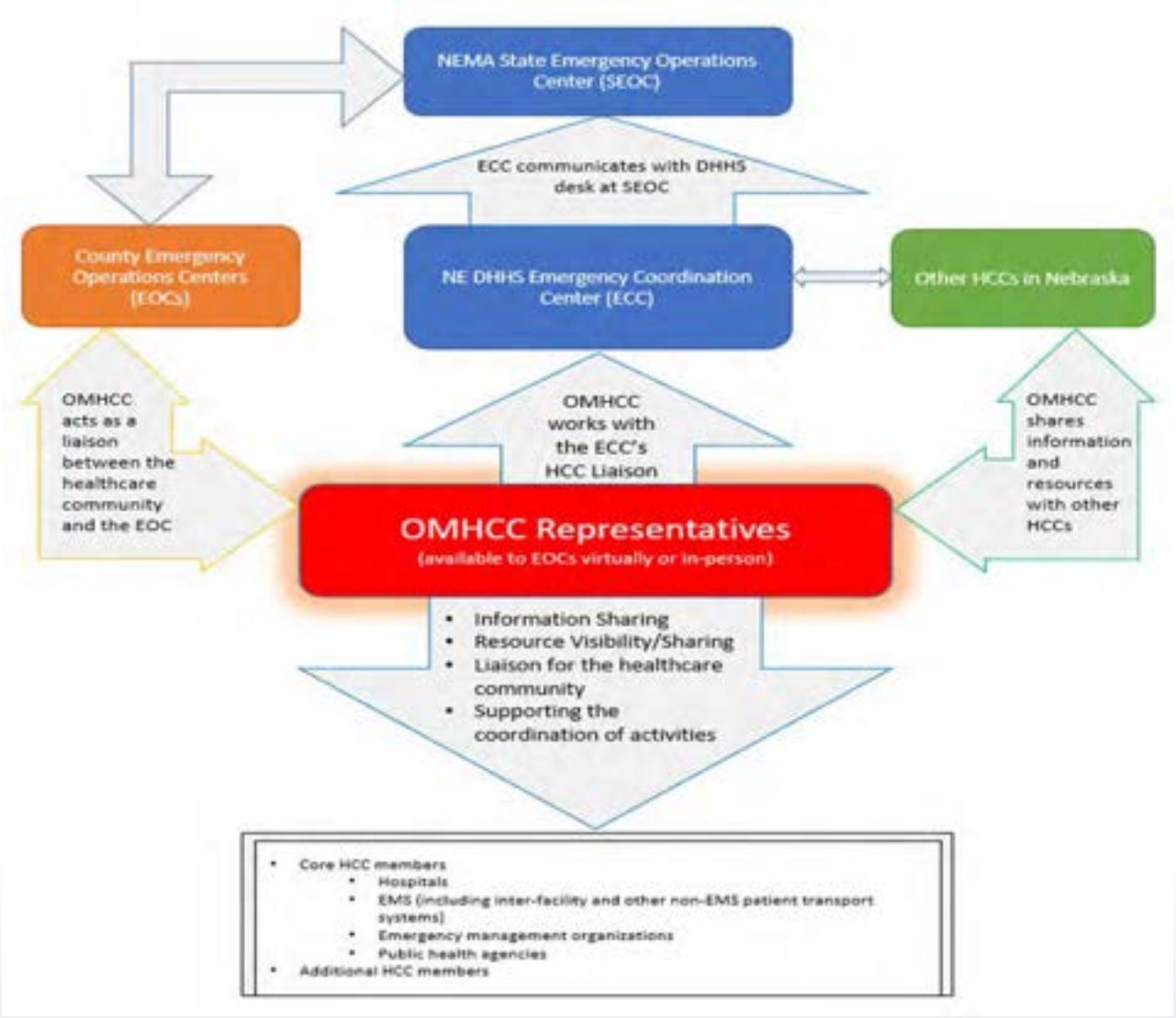
OMHCC Representative Structure



OMHCC Representatives

1. Justin Watson, OMHCC Coordinator
2. Roberta Coffman, Executive Committee Chair, Children's Nebraska
3. Val Goodman, OMHCC Volunteer
4. Brian Smith, Nebraska Methodist Health System
5. Shelly Schwedhelm, Nebraska Medicine
6. Dr. Anna Fisher, Hillcrest Health Services
7. Curtis Friedrich, CHI Health Lakeside/Midlands
8. Patti Motl, Medical Reserve Corps
9. Lori Jensen, OrthoNebraska

Another Viewpoint



OMHCC's New Plans

OMHCC Administrative Plan and Procedures

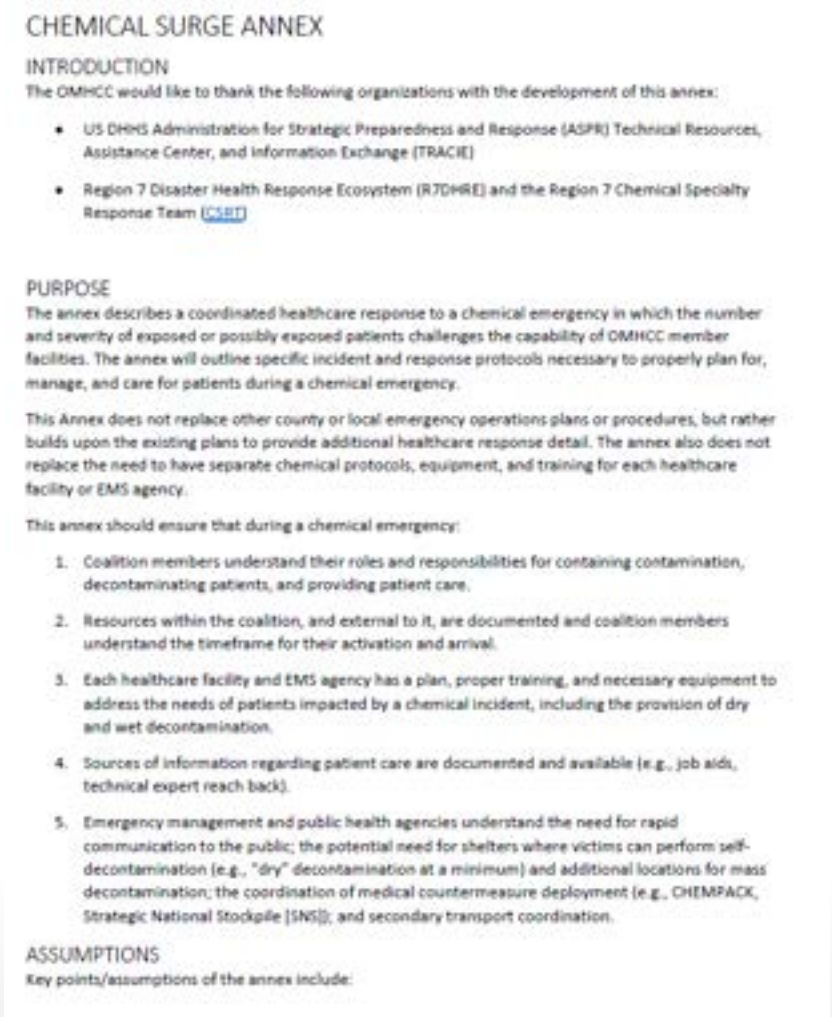
OMHCC Response Plan

Major Changes:

- Adding hyperlinks to help navigate the documents and easily find what you are looking for.
- No activation levels. OMHCC is either activated or not activated for a response.
- Removing many attachments that will be referenced as "on file" with the OMHCC Coordinator.
- A lot of formatting changes – more condensed.
- Removed some repetitive information and information we are unsure of (i.e., amateur radio).

OMHCC Chemical Annex

- R7DHRE Template (based on ASPR TRACIE Template) given to HCCs.
- HCCs modified for their own region.
- OMHCC developed several drafts before the final.
- Several SMEs involved in development.
- Follows structure of other annexes and ASPR TRACIE templates.
- Several links to outside resources and other parts of the OMHCC Response Plan.



CHEMICAL SURGE ANNEX

INTRODUCTION

The OMHCC would like to thank the following organizations with the development of this annex:

- US DHHS Administration for Strategic Preparedness and Response (ASPR) Technical Resources, Assistance Center, and Information Exchange (TRACIE)
- Region 7 Disaster Health Response Ecosystem (R7DHRE) and the Region 7 Chemical Specialty Response Team (CSRT)

PURPOSE

The annex describes a coordinated healthcare response to a chemical emergency in which the number and severity of exposed or possibly exposed patients challenges the capability of OMHCC member facilities. The annex will outline specific incident and response protocols necessary to properly plan for, manage, and care for patients during a chemical emergency.

This Annex does not replace other county or local emergency operations plans or procedures, but rather builds upon the existing plans to provide additional healthcare response detail. The annex also does not replace the need to have separate chemical protocols, equipment, and training for each healthcare facility or EMS agency.

This annex should ensure that during a chemical emergency:

1. Coalition members understand their roles and responsibilities for containing contamination, decontaminating patients, and providing patient care.
2. Resources within the coalition, and external to it, are documented and coalition members understand the timeframe for their activation and arrival.
3. Each healthcare facility and EMS agency has a plan, proper training, and necessary equipment to address the needs of patients impacted by a chemical incident, including the provision of dry and wet decontamination.
4. Sources of information regarding patient care are documented and available (e.g., job aids, technical expert reach back).
5. Emergency management and public health agencies understand the need for rapid communication to the public; the potential need for shelters where victims can perform self-decontamination (e.g., "dry" decontamination at a minimum) and additional locations for mass decontamination; the coordination of medical countermeasure deployment (e.g., CHEMPACK, Strategic National Stockpile [SNS]); and secondary transport coordination.

ASSUMPTIONS

Key points/assumptions of the annex include:

Poison Center Overview

- Mission: Provide timely, quality care for patients exposed to chemicals and other toxic substances
  - 24/7 emergency telephone service
  - Assess poisoning risk and triage patients to most appropriate level of care
  - Provide treatment recommendations to healthcare professionals and public
- Public & professional education
- Toxicosurveillance (National Poison Data System)
- Support public health planning & disaster response
  - OMHCC Pharmacy Workgroup
  - Region VII Disaster Health Response Ecosystem Chemical Specialty Team

Poison Center Staffing

Toxicology Experts

- Board Certified Medical & Clinical Toxicologists
- Nationally Certified Specialists in Poison Information
  - Pharmacists
  - Registered Nurses
  - Physician Assistants
  - Physicians

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Poison Center Access

- National toll-free number
- Poison centers serve:
  - 50 states and District of Columbia
  - U.S. Territories: American Samoa, Guam, Puerto Rico, U.S. Virgin Islands
  - Federated States of Micronesia

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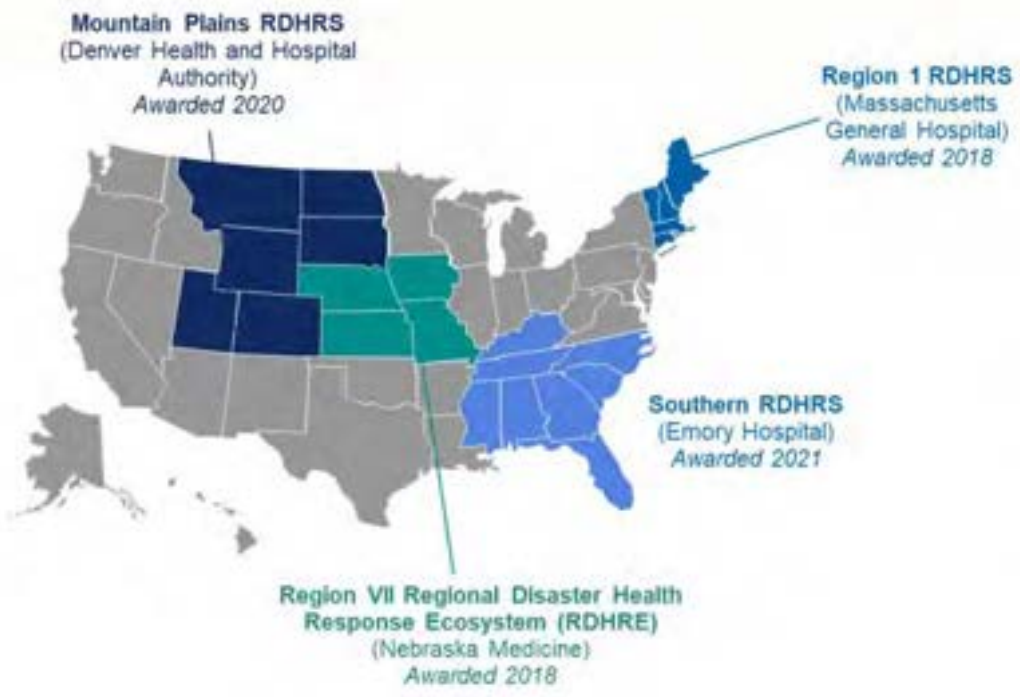
Regional Disaster Health Response Systems

ASPR awarded four disaster response sites to address health care preparedness challenges, establish promising practices for improving disaster readiness across the health care delivery system, demonstrate the potential effectiveness of an RDHRS, and make progress toward building a national system for readiness built on regional collaboration.

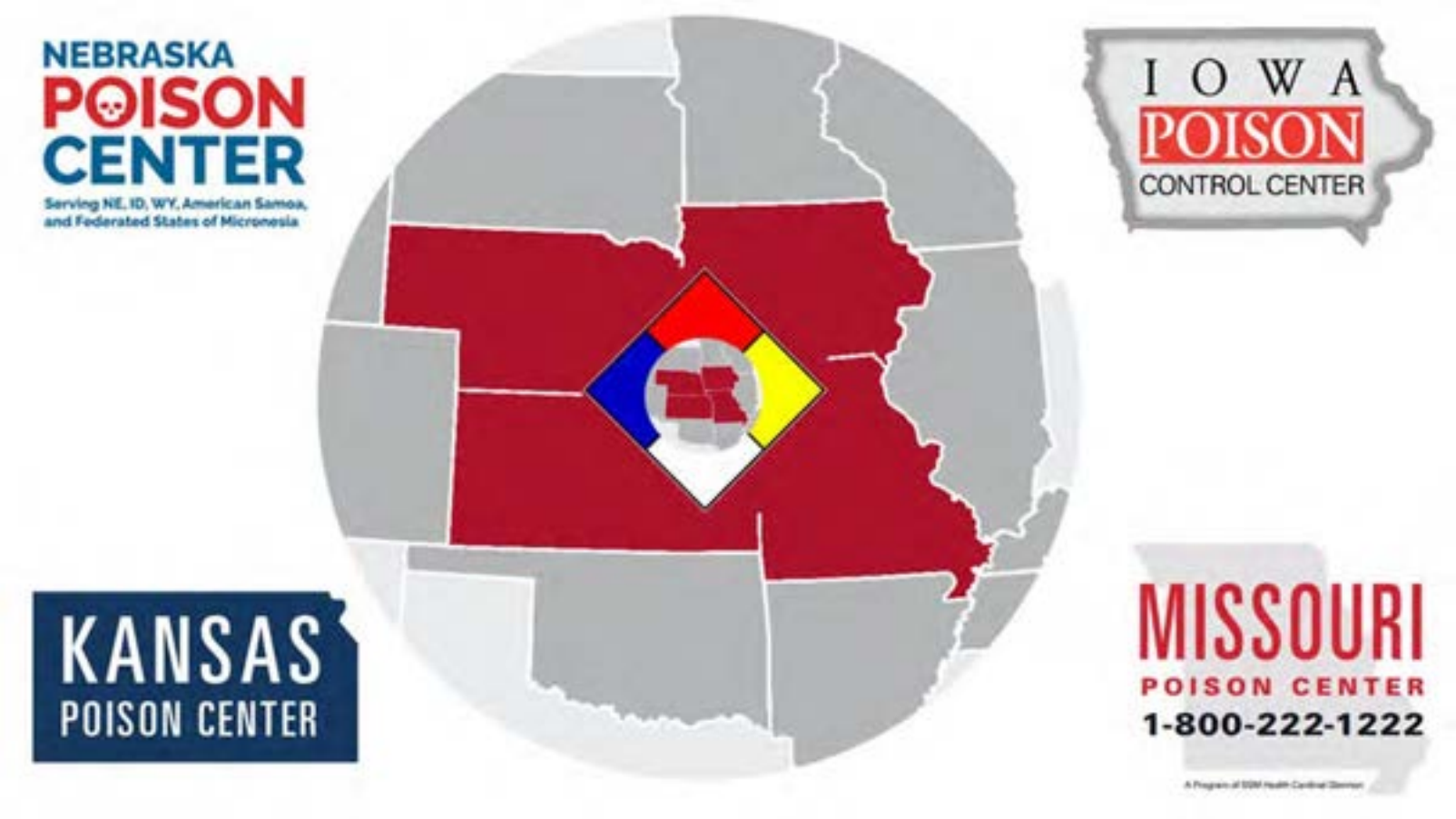


- **Build** a partnership for disaster health response
- **Align** plans, policies, and procedures related to clinical excellence in disasters
- **Increase** statewide and regional medical surge capacity, coordinate regional medical response, expand specialty care
- **Improve** statewide and regional situational awareness
- **Develop** readiness metrics to integrate measures of preparedness
- **Test** capabilities through exercises

Region VII Specialty Teams

Primary Goal: Bridge the gap between local resources and federal asset arrival. Specialty Teams may deploy or use telehealth or other communication platforms to provide quick subject matter expertise and assistance when an event happens requiring their expertise.

Region VII Chemical Specialty Team



REGION VII
DISASTER HEALTH
RESPONSE ECOSYSTEM

POISON
HELP
1-800-222-1222

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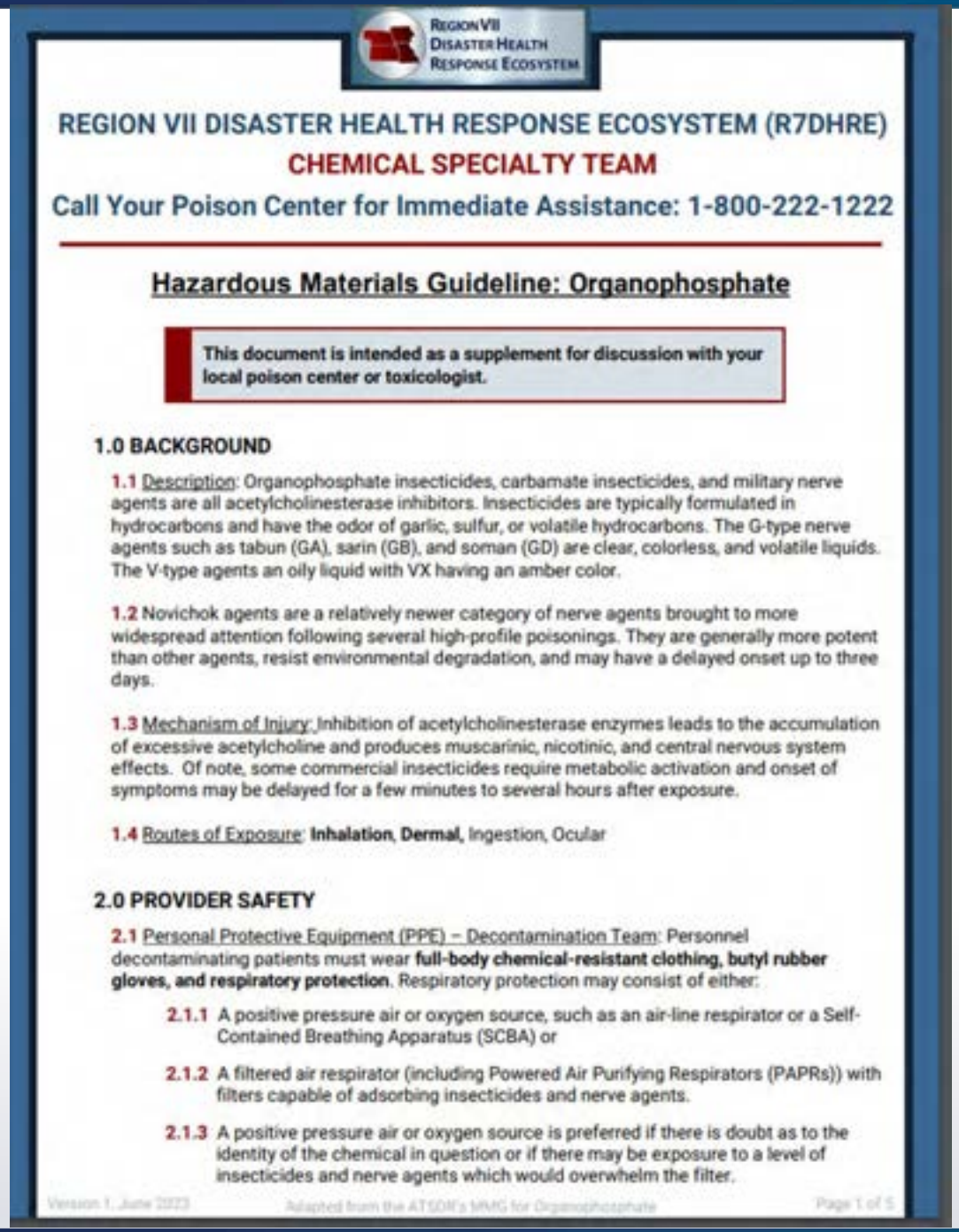
Poison Centers/RDHRS

- All RDHRS Teams partner with Poison Centers
- Toxicology expertise assists with planning, education, and immediate response to chemical and other hazardous materials incidents
- Presentations on Management of Chemical Exposures
  - Conferences, Webinars
  - Advanced Hazmat Life Support courses
- Regional Chemical Specialty Teams (staffed by Poison Centers)
  - Provide immediate telephone advice
  - Provide advice and training via tele-technology
  - Travel to scene of disaster to assist with patient/event management and training

How Can Poison Centers/Chemical Specialty Teams Help HCCs?

Identify	Identify the hazardous materials involved, based on symptoms and history
Assess	Assess potential toxicity and identify immediate dangers
Triage	Provide triage, decontamination, toxicity information, and treatment recommendations
Treatment	Notify hospitals that are receiving victims and provide patient-specific treatment recommendations
Notify	Notify all area hospitals, local and state public health of the incident; provide clinical guidelines
Antidotes	Provide antidote dosing and administration information
Assist	Assist with locating and transferring antidotes
Provide	Provide on-scene or bedside treatment assistance (depending on location)



REGION VII DISASTER HEALTH RESPONSE ECOSYSTEM (R7DHRE)

CHEMICAL SPECIALTY TEAM

Call Your Poison Center for Immediate Assistance: 1-800-222-1222

Hazardous Materials Guideline: Organophosphate

This document is intended as a supplement for discussion with your local poison center or toxicologist.

1.0 BACKGROUND

1.1 Description: Organophosphate insecticides, carbamate insecticides, and military nerve agents are all acetylcholinesterase inhibitors. Insecticides are typically formulated in hydrocarbons and have the odor of garlic, sulfur, or volatile hydrocarbons. The G-type nerve agents such as tabun (GA), sarin (GB), and soman (GD) are clear, colorless, and volatile liquids. The V-type agents an oily liquid with VX having an amber color.

1.2 Novichok agents are a relatively newer category of nerve agents brought to more widespread attention following several high-profile poisonings. They are generally more potent than other agents, resist environmental degradation, and may have a delayed onset up to three days.

1.3 Mechanism of Injury: Inhibition of acetylcholinesterase enzymes leads to the accumulation of excessive acetylcholine and produces muscarinic, nicotinic, and central nervous system effects. Of note, some commercial insecticides require metabolic activation and onset of symptoms may be delayed for a few minutes to several hours after exposure.

1.4 Routes of Exposure: **Inhalation**, **Dermal**, Ingestion, Ocular

2.0 PROVIDER SAFETY

2.1 Personal Protective Equipment (PPE) – Decontamination Team: Personnel decontaminating patients must wear **full-body chemical-resistant clothing, butyl rubber gloves, and respiratory protection**. Respiratory protection may consist of either:

2.1.1 A positive pressure air or oxygen source, such as an air-line respirator or a Self-Contained Breathing Apparatus (SCBA) or

2.1.2 A filtered air respirator (including Powered Air Purifying Respirators (PAPRs)) with filters capable of adsorbing insecticides and nerve agents.

2.1.3 A positive pressure air or oxygen source is preferred if there is doubt as to the identity of the chemical in question or if there may be exposure to a level of insecticides and nerve agents which would overwhelm the filter.

Version 1, June 2023 Adapted from the ATSDR's MMG for Organophosphate Page 1 of 5

Hazmat Guidelines

Ammonia	Aniline
Arsine	Chlorine
Corrosives Acids	Corrosive Bases
Cyanide	Hydrazine
Hydrofluoric Acid	Hydrogen Sulfide
Methyl Bromide	Methyl Isocyanate
Nitrogen Oxides	Organophosphates/Nerve agents
Phosgene	Phosphine
Riot Control Agents	Strychnine
Sulfur Dioxide	Unidentified Chemical

Hazmat Guidelines

REGION VII DISASTER HEALTH RESPONSE ECOSYSTEM

2.2 Personal Protective Equipment (PPE) – Treatment Team: Personnel treating patients who have been adequately decontaminated need no additional PPE other than **universal precautions** since there is no serious risk of secondary contamination. The **vomit from persons who have ingested insecticides or nerve agents is hazardous because it can off-gas toxic vapors**. Prepare treatment areas for rapid clean up in case the patient vomits.

2.3 Patient Decontamination:

2.3.1 **Decontaminate ALL PATIENTS**. The patients' hair and clothes can trap off-gas vapors. Those patients contaminated with insecticide or nerve agent solutions pose a risk of secondary contamination from off-gassing of vapors and direct contact with the chemical.

2.3.2 **Remove ALL clothing and jewelry.** Double bag clothing and jewelry to prevent off-gassing.

2.3.3 **Rapid decontamination is critical** because insecticides and nerve agents are rapidly absorbed from the skin. **Decontamination is best accomplished by irrigation with copious amounts of water**. Wash skin and hair with plain water for a minimum of 5 minutes and then wash twice with soap & water after washing with plain water. Washing with water alone (for a longer time) is acceptable if soap is not available. Absorbent powders such as flour, talcum powder, or Fuller's earth, can be used to absorb liquid insecticides and nerve agents if water is not available.

2.3.4 Remove contact lenses if it can be done without additional trauma to the eye. **Irrigate eyes for a minimum of 15 minutes.** Continue irrigation until eye pH is neutral (7 to 8).

2.3.5 Watch for hypothermia (1) in children and the elderly, (2) when decontamination is done with un-heated water, or (3) during cold weather.

2.3.6 **Reactive Skin Decontamination Lotion**, in the form of a lotion impregnated sponge, may be available to facilitate the rapid removal and/or neutralization of chemical warfare agents. If used, traditional decontamination with water or soap and water should follow when feasible.

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3.0 SIGNS & SYMPTOMS

3.1 Severity of symptoms will depend upon the dose patients are exposed to and the route of exposure. Severe toxicity presents with **diffuse secretions, bradycardia, constricted pupils, altered mental status, seizures, and death**. Symptoms are further delineated in the table below. Delayed toxicities in the form of resurgent muscle weakness (Intermediate Syndrome) and a peripheral polyneuropathy are possible.

3.2 Insecticide and nerve agent vapors and liquids are readily absorbed through the lungs and eyes, producing local and systemic effects within seconds to minutes. The liquid is readily absorbed through the skin though effects may be delayed from minutes to up to 18 hours.

3.3 Ocular effects may result from either direct contact of the insecticide or nerve agent with the eye or from systemic absorption of the insecticide or nerve agent. Abdominal pain, nausea and vomiting are common manifestations of exposure by any route and may be the first systemic effects from dermal absorption. If these symptoms occur within an hour of dermal exposure, severe intoxication is likely.

3.4 **Exposure Grading:**

3.4.1 **Mild:** Miosis, rhinorrhea, mild chest tightness, mild shortness of breath, sweating, lacrimation

3.4.2 **Moderate:** Vomiting, diarrhea, severe chest tightness, wheezing, profuse airway secretions, respiratory distress, muscle weakness, bradycardia

3.4.3 **Severe:** Unconsciousness, seizures, paralysis, cyanosis, respiratory failure, apnea

Effects	Muscarinic Effects	Nicotinic Effects	CNS Effects
Memory Aid	DUMBELS	MTWHFS (Days of the week)	CLAS
Symptoms	Diaphoresis Defecation Urination Miosis Bradycardia Bronchorrhea Bronchoconstriction Blurry & dim vision Emesis Eye pain Lacrimation Salivation Rhinorrhea	Mydriasis Tachycardia Weakness Leading to paralysis Hypertension Fasciculations Flaccid paralysis Seizures	Confusion Coma Lethargy Agitation Apnea Seizures

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4.0 DIAGNOSTICS

4.1 Organophosphate and carbamate poisoning are a clinical diagnosis. Diagnostic testing may be indicated based on clinical judgement and the patient's presentation and level of illness.

4.2 Blood collected in two lavender EDTA tubes can be sent for red blood cell cholinesterase and plasma cholinesterase activity measurement to confirm the diagnosis and monitor recovery.

5.0 TREATMENT

5.1 General: **Treatment emphasizes aggressive supportive care and prompt administration of antidotal therapy if indicated.** Patients may need airway management, respiratory support, cardiovascular support with IV fluids and vasopressors, treatment for severe acidemia, and treatment of seizures with benzodiazepines or other GABA agonists.

5.2 Avoid: Other anticholinesterase agents, succinylcholine, and drugs that may decrease respiratory drive.

5.3 Ocular: **Irrigate eyes.** Perform a thorough eye exam: test visual acuity, and perform fluorescein and slit lamp examinations. Ophthalmology consultation may be necessary. Immediately consult an ophthalmologist for patients who have corneal injuries.

5.4 Ingestion: **Do NOT induce emesis or give activated charcoal.**

5.5 ANTIDOTE: **Atropine.** Atropine is an antimuscarinic medication which reverses the DUMBELS symptoms of cholinergic toxicity. Atropine **should be titrated to resolution of bradycardia, bronchorrhea, and bronchospasm**.

5.5.1 Adults: Begin with 2-5 mg, IV push, every 5-10 minutes as needed while titrating dose as needed

5.5.2 Children: Begin with 0.05 to 0.1 mg / kg, IV push, every 5-10 minutes as needed while titrating dose as needed

5.5.3 In massive exposures, over 1 gram of atropine has been given in the first 24 hours.

5.6 ANTIDOTE: **Benzodiazepines.** Benzodiazepines such as diazepam or midazolam should be given in sufficient quantities to control any seizures, agitation, or restlessness that results from cholinesterase inhibitor exposures. Benzodiazepines should be given intravenously or intramuscularly. Doses up to 30-40 mg of diazepam have been required.

5.7 ANTIDOTE: **Pralidoxime.** Pralidoxime prevents the bond between organophosphates and the acetylcholinesterase enzyme from becoming permanent.

5.7.1 Adults: Bolus 1-2 grams, IV, over 15-30 minutes, then a continuous IV infusion of 250-500 mg / hour.

5.7.2 Children: Bolus 25-50 mg / kg, IV, over 15-30 minutes, then a continuous IV infusion of 10-20 mg / kg / hr.

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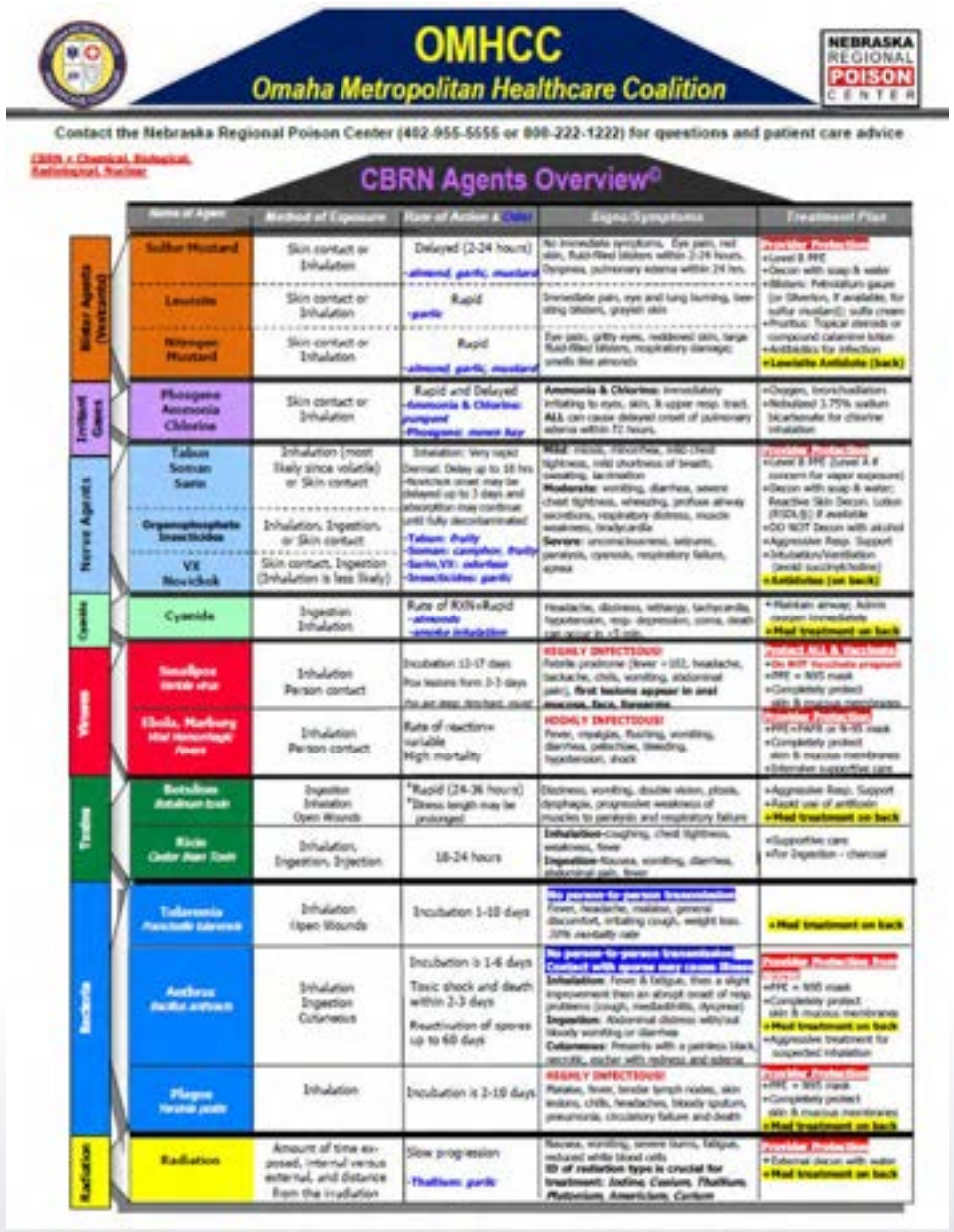
OMHCC Pharmacy Workgroup

- Team of pharmacists, paramedics, public health, poison center
- Assesses pharmaceutical availability and needs during disasters
- Purchases/maintains medication caches (placed in rescue squads and hospitals)
- OMHCC's stockpiled meds are shared throughout the region
- Knows location of other regional & statewide caches (e.g., VA Medical Center, Offutt Air Force Base, CHEMPACKs)
- Assists providers & PH with obtaining meds during disasters & other PH events
  - **24/7 contact for requests: Nebraska Poison Center**
    - **800-222-1222 (if calling from NE) or 402-955-5555**

CBRN Agents Overview

Developed, reviewed, updated by the OMHCC Pharmacy Workgroup and Nebraska Poison Center

R7DHRE Chemical Team Site: https://static1.squarespace.com/static/625f47c7c516853b6bf783fe/t/62eaf20ca1cb507a934603e9/1659564557747/CBRN-Version14-revised-4.13.22.pdf



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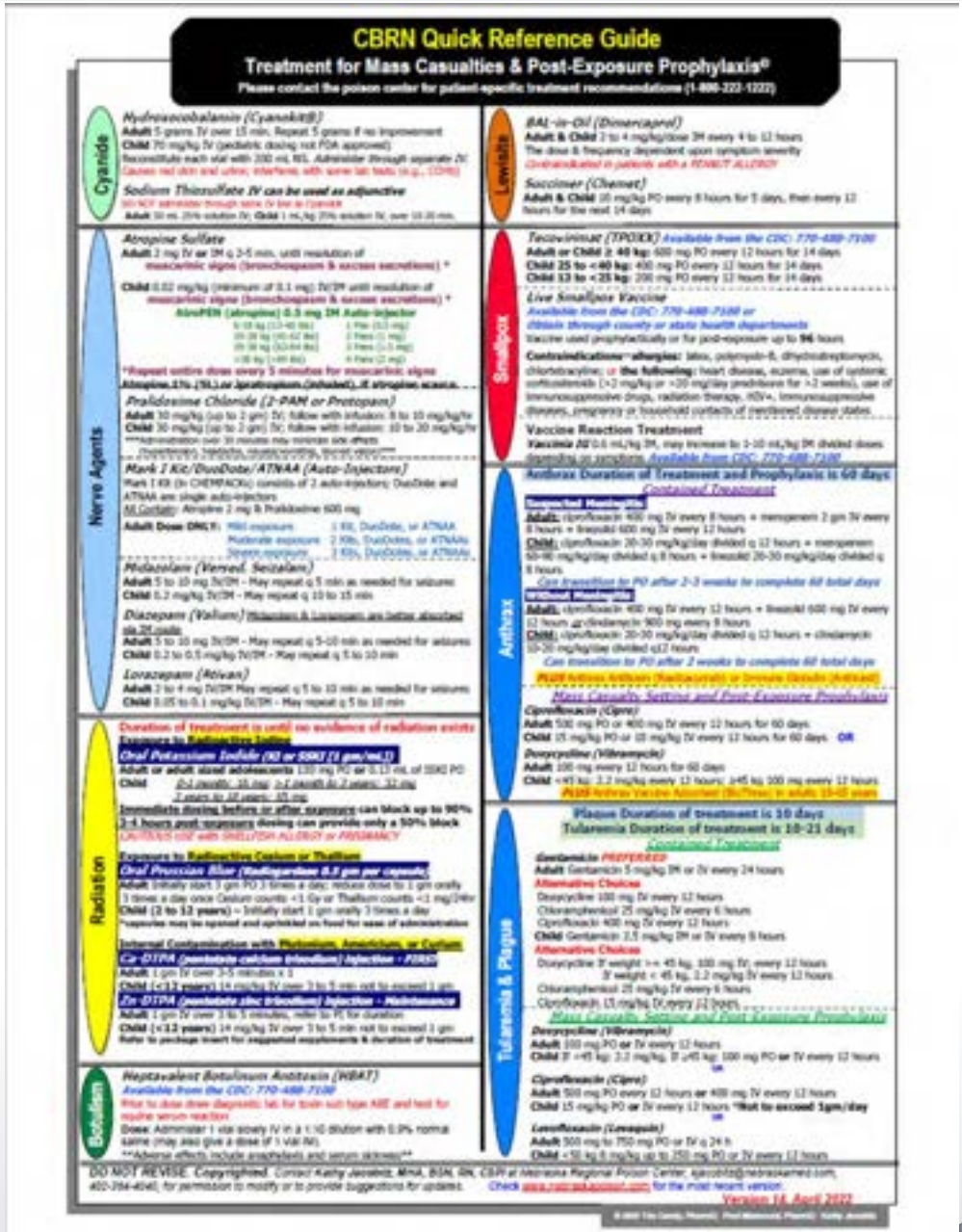
CBRN Agents Overview

- Pharmaceutical treatment and dosing information
- Call your Poison Center for patient-specific treatment recommendations



POISON HELP 1-800-222-1222

REGION VII DISASTER HEALTH RESPONSE ECOSYSTEM

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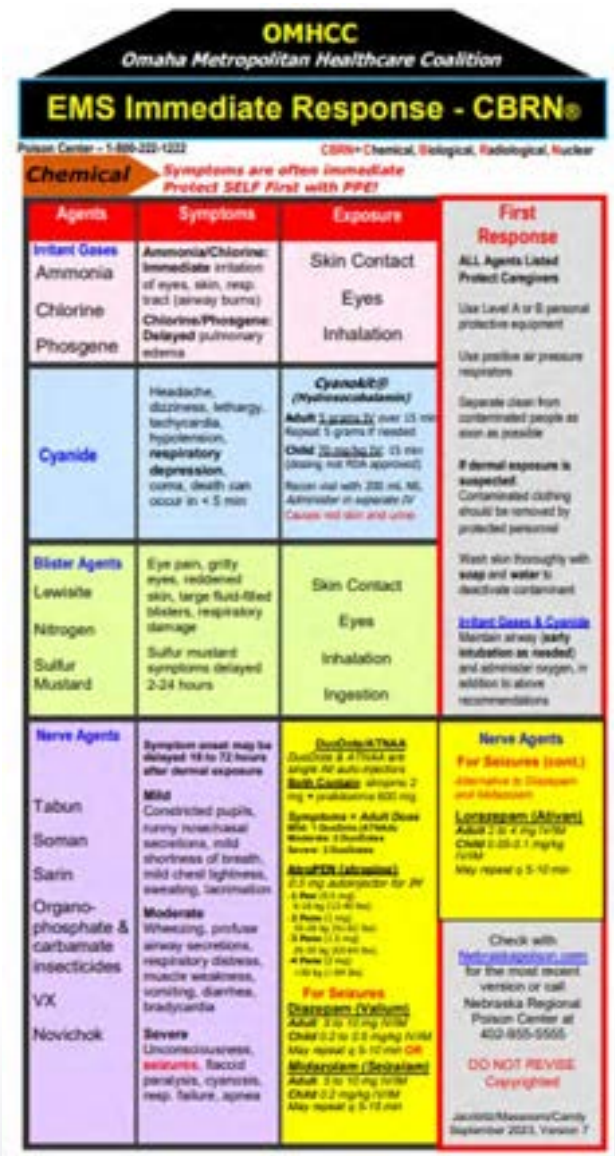
OMHCC Pharmacy Workgroup

- Developed, reviewed, updated by the OMHCC Pharmacy Workgroup and Nebraska Poison Center
- Can be printed as 2-sided card for EMS
- https://static1.squarespace.com/static/625f47c7c516853b6bf783fe/t/65131b1831bf074c1a9b45aa/1695750937206/OMMRS+EMS+Card+-+Both+Sides+-revised+9.23.pdf


OMHCC
Omaha Metropolitan Healthcare Coalition
EMS Immediate Response - CBRN
Chemical
Symptoms are often immediate
Protect SELF First with PPE!
Agents
Symptoms
Exposure
First Response
Irritant Gases
Ammonia
Chlorine
Phosgene
Skin Contact
Eyes
Inhalation
Cyanide
Blister Agents
Lewisite
Nitrogen
Sulfur Mustard
Skin Contact
Eyes
Inhalation
Ingestion
Nerve Agents
Tabun
Soman
Sarin
Organo-phosphate & carbamate insecticides
VX
Novichok
Nerve Agents
For Seizures (cont.)
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OMHCC
Omaha Metropolitan Healthcare Coalition
EMS Immediate Response - CBRN
Nuclear
DECON with Water First!
Symptoms
Exposure
First Response
Radiological Nuclear
Nausea, vomiting, burns, fatigue, reduced WBCs
Amount of time exposed, internal vs. external exposure, and distance from the radiation is important
Protect Caregivers
Remove clothing
Decontamination using water
Biological
Don Mask and Gloves at a Minimum
Agents
Symptoms
Exposure
First Response
Smallpox
Fever, hard pox lesions, body aches, malaise, vomiting, and headache
HIGHLY INFECTIOUS!
Inhalation
Person contact
Botulism
Weakness, dizziness, dry mouth, blurred vision, progressive weakness, of muscles leading to paralysis and abrupt respiratory failure
Ingestion
Inhalation
Open wounds
No person-to-person transmission
Tularemia
No person-to-person transmission
Fever, headache, malaise, cough, weight loss
Anthrax
No person-to-person transmission
Contact with spores may cause illness
Fever & fatigue, then abrupt onset of resp. problems (cough, dyspnea). Toxic shock and death
Ingestion
Inhalation
Cutaneous
Plague
Malaise, fever, tender lymph nodes, skin lesions, chills, headache, bloody sputum, pneumonia, circulatory failure and death
HIGHLY INFECTIOUS!
Inhalation
Protect caregivers
Use impermeable surgical gown/gloves
Use oral/nasal masks
Preferable to use HEPA-filter masks, especially for Plague, Smallpox, and Viral Hemorrhagic Fevers (i.e., Ebola)
If necessary, use face shields or goggles
Isolate potentially infectious people as soon as possible
If dermal exposure:
Clothing should be removed by protected personnel
Wash skin with soap and water
Give supportive care
ALL AGENTS
Refer to OMHCC CBRN Quick Reference Guide for Treatment Recommendations

NEBRASKA POISON CENTER
Serving NE, ID, WY, American Samoa, and Federated States of Micronesia

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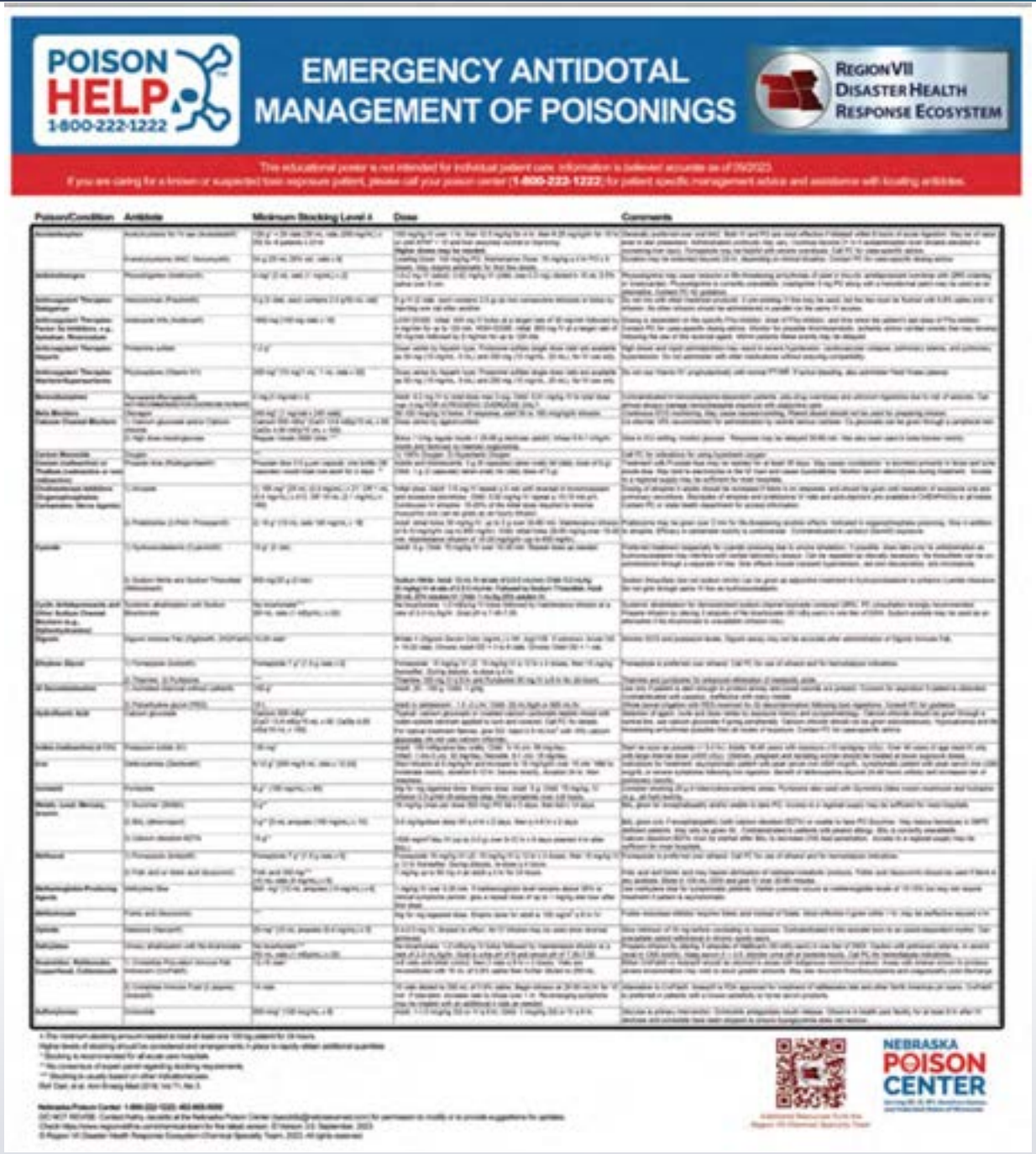

POISON HELP 1-800-222-1222

EMERGENCY ANTIDOTAL MANAGEMENT OF POISONINGS

Region VII Disaster Health Response Ecosystem

This educational poster is not intended for individual patient care. Information is believed accurate as of (9/2022).
If you are caring for a known or suspected toxic exposure patient, please call your poison center (1-800-222-1222) for patient specific management advice and assistance with locating antidotes.

Poison/Condition	Antidote	Minimum Stocking Level #	Dose	Comments
Acetaminophen	Acetylcysteine IV (N-acetylcysteine)	120 g/ = 24 vials (20 mL vials, 200 mg/mL) = 192 IU = 4 patients x 2.5 IU	150 mg/kg IV over 1 hr, then 12.5 mg/kg IV q 4 hr, then 6.25 mg/kg/hr for 10 hr (or until ATNP* < 10 and liver abnormal normal or improving). Higher doses may be needed.	Maximal, purified non-over and NAC. Both IV and PO are most effective if initiated within 8 hours of acute ingestion. May be of value in later presentation, hepatotoxication continues may vary. Overdose become (* in 2 acetaminophen level should decrease in recovering liver injury. Therapeutic may be helpful with severe overdoses. Call PC for case-specific advice.
	Acetylcysteine (NAC, Mucomyst®)	24 g (20 mL 20% or vials x 6)	Loading Dose: 140 mg/kg PO. Maintenance Dose: 70 mg/kg q 4 hr PO x 5 doses. Oday dosing alternate for first 3 doses.	Duration may be extended beyond 20 hr, depending on clinical situation. Contact PC for case-specific dosing advice.
Anticholinergics	Physostigmine (Antilirium®)	2 mg/ (2 mL vials x 1 mg/mL) = 2	1 to 2 mg IV initially. If no response, 0.02 mg/kg IV (ONE dose 0.5 mg), doses in 10 to 15 min (what ever 5 min	Physostigmine may cause seizures in life-threatening arrhythmias. If used in this role, antidysrhythmic combine with QRS widening or bradycardia. Physostigmine is currently unavailable. Inadequate 2 mg PO along with a transdermal patch may be used as an alternative. Contact PC for guidance.
Anticoagulant Therapies - Coagulant	Vitamin K1 (Phytonadol)	5 g (5 vials - each contains 2.5 g) (5 mL vials)	5 g IV (2 vials - each contains 2.5 g) as one concentrate delivered, or bolus by injecting over last after another	Do not mix with other intravenous products. If not working 5 hrs may be used, but the last dose must be flushed with 5.0% saline and 0.9 infusion. No other infusion should be administered in parallel via the same IV access.
Anticoagulant Therapies - Factor Xa Inhibitors, e.g., Apixaban, Rivaroxaban	Andexanet Alfa (Andexxa®)	1600 mg (160 mg vials x 10)	Low dosage: Initial: 400 mg IV bolus at a target rate of 30 mg/min followed by a regular for up to 120 min. High dosage: Initial: 800 mg IV at a target rate of 30 mg/min, followed by a regular for up to 120 min.	Dosing is dependent on the specific Xa inhibitor, time of Xa inhibitor, and time since last patient's last dose of Xa inhibitor. Contact PC for case-specific dosing advice. Monitor for possible thromboembolic, ischemic stroke cerebral events that may develop following the use of this reversal agent. Monitor patients these events may be delayed.
Anticoagulant Therapies - Heparin	Protamine sulfate	7.2 g/	Dose varies by heparin type. Protamine sulfate single dose vials are available as 50 mg (10 mg/mL, 5 mL) and 250 mg (10 mg/mL, 25 mL), for IV use only.	High dose and rapid administration may result in severe hypotension, cardiovascular collapse, pulmonary edema, and pulmonary hypertension. Do not administer with other medications without ensuring compatibility.
Anticoagulant Therapies - Warfarin/Supratherapeutic	Phytonadione (Vitamin K1)	200 mg/ (10 mg/1 mL, 1 mL vials = 50)	Dose varies by heparin type. Protamine sulfate single dose vials are available as 50 mg (10 mg/mL, 5 mL) and 250 mg (10 mg/mL, 25 mL), for IV use only.	Do not use Vitamin K1 prophylactically with normal PT/INR. If active bleeding, also administer fresh frozen plasma.
Benzodiazepines	Flumazenil (Romazicon®)	2 mg (2 mg/vial x 1)	Adult: 0.2 mg IV to total dose may 1 mg. Total: 0.5 mg/kg IV to total dose over a mg FOR ID PROCEDURAL SEDATION ONLY.	Contraindicated in benzodiazepine-dependent patients, pts on any substance and seizure/ hypoxia but to risk of seizures. Can precipitate seizures, cardiac arrhythmias and myocardial ischemia/infarction.
Beta Blockers	Glucagon	240 mg/ (1 mg/vial x 240 vials)	50-150 mg/kg IV bolus. If response, start 50 to 100 mg/kg/hr infusion.	Continuous ECG monitoring, daily serum electrolyte testing. Patient should not be used for preparing infusion.
Calcium Channel Blockers	1. Calcium gluconate (and/or Calcium chloride)	Calcium 500 mL/hr (Calcium 10 mL vials) (10 mL x 10 vials = 100 mL/hr = 500)	Dose varies by agent/condition.	Use a 10 mL vial. Monitor glucose. Response may be delayed 30-60 min. Has also been used in beta blocker toxicity.
	2. High dose insulin/glucose	Regular insulin 500 U/hr **	Bolus 1 U/kg regular insulin + 25-50 g dextrose (pediat: bolus 0.5-1 U/kg/hr, titrate and dextrose by clinical response).	Use a D10 setting. Monitor glucose. Response may be delayed 30-60 min. Has also been used in beta blocker toxicity.
Carbon Monoxide	Oxygen	**	1. 100% Oxygen 2. Hyperbaric Oxygen	Call PC for indications for using hyperbaric oxygen.
Cholinesterase Inhibitors (Organophosphates, Carbamates, Nerve Agents)	Pralidoxime chloride (Protopam®)	Pralidoxime dose 2 g (use capsule: one bottle (30 capsules) would treat one adult for 2 days *	Adult: 1-2 g (usually 1 g) IV over 30 min, may repeat 1 g every 1 to 2 hr (max 12 g). Pediat: 20-40 mg/kg IV over 30 min, may repeat 20 mg/kg every 1 to 2 hr (max 12 g).	Contraindicated in benzodiazepine-dependent patients, pts on any substance and seizure/ hypoxia but to risk of seizures. Can precipitate seizures, cardiac arrhythmias and myocardial ischemia/infarction.
	1. Atropine	1) 100 mg/ (20 mL (5 mg/mL) x 2 = 200 mL (4 mg/mL) x 5 = 1000 mL = 1 L) 2) 2 mg/mL x 1 mL = 2 mg/mL x 1000 mL	Initial dose: Adult: 1-5 mg IV bolus q 3-5 min until reversal of muscarinic and excessive secretions. Pediat: 0.02 mg/kg IV bolus q 3-5 min until. Continuous IV atropine: 10-20% of the initial dose required to reverse muscarinic sign can be given as an hourly infusion.	Titrating of atropine to 1 atropine should be increased 2-4 bolus is no response, and should be given until reversal of excessive oral and pulmonary secretions. Boluses of atropine and pralidoxime IV side and auto-injectors are available in CHEMPACKs at all states. Contact PC or state health department for access information.
	2. Pralidoxime (Child- Protopam®)	1) 10 g (10 mL vials 500 mg/mL) = 10	Adult: initial dose 30 mg/kg IV, up to 2 g over 30-60 min. Maintenance infusion at 8 mg/kg/hr (up to 500 mg/hr). Initial: initial dose 25-50 mg/kg over 15-60 min. Maintenance infusion at 10-20 mg/kg/hr (up to 500 mg/hr). Usual: 1 g. Child: 15 mg/kg IV over 10-30 min. Repeat dose as needed.	Pralidoxime may be given over 2 min for life-threatening arrhythmic effects. Indicated in organophosphate poisoning, this in addition to atropine. Efficacy in carbamate toxicity is controversial. Contraindicated in carbaryl (Sevin®) exposure.
Cyanide	1) Hydroxocobalamin (Cyanokit®)	10 g/ (5 vial)	Adult: 5 g. Child: 70 mg/kg IV over 15-30 min. Repeat dose as needed.	Kinetic not treatment (especially for cyanide poisoning due to smoke inhalation). If possible, draw labs prior to administration as hydroxocobalamin may interfere with certain laboratory assays. Can be repeated as clinically necessary. The hydroxide can be co-administered through a separate IV line. Side effects include transient hypertension, red skin discoloration, skin incompatible.
	2. Sodium Nitrite and Sodium Thiosulfate (Nithiodote®)	300 mg/ (10 g (3 vials)	Sodium Nitrite: Adult: 10 mL IV at rate of 2.5-5 mL/min (300-12.5 mg/kg (0.33 mg/kg IV at rate of 2.5-5 mL/min. Followed by Sodium Thiosulfate: Adult: 50 mL (12.5% solution) IV. Child: 1.65 mg (0% solution) IV.	Sodium thiosulfate does not sodium nitrite can be given as adjunctive treatment to hydroxocobalamin to enhance cyanide clearance. Do not give through same IV line as hydroxocobalamin.
Cyclic Antidepressants and Other Sodium Channel Blockers (e.g., Carbamazepine, Diphenhydramine)	Systemic alkalization with Sodium Bicarbonate	No recommended ** (50 mL vials (1 mEq/mL) x 20)	Bolus 1-2 mEq/kg IV (repeat boluses by maintenance infusion at a rate of 2-3 x IV fluids. Goal pH is 7.45-7.55.	Systemic alkalization for dysrhythmias/sodium channel blockade (wide QRS). IV consultation strongly recommended. Prepare infusion by diluting 3 ampules of the bicarbonate (50 mEq each) in one liter of D5W. Sodium acetate may be used as an alternative if the bicarbonate is unavailable (infusion only).
Digoxin	Digoxin immune Fab (Digibind®, DIGIFab®)	10-20 vials*	Initial: 1 (Digoxin Serum Conc (ng/mL) x 1.6) mg/100. If unknown: Acute OD = 10-20 vials. Chronic toxicity = 2 to 4 vials. Chronic Dose OD = 1 vial.	Monitor ECG and potassium levels. Digoxin assay may not be accurate after administration of Digoxin Immune Fab.
Ethylene Glycol	1) Fomepizole (Antizol®)	Fomepizole 1 g/ (1.5 g (vial x 1))	Fomepizole: 15 mg/kg IV (1 15 mg/kg IV q 12 hr x 3 doses, then 15 mg/kg thereafter. During dialysis, re-dose q 4 hr.	Fomepizole is preferred over ethanol. Call PC for use of ethanol and for hemodialysis indications.
	2. Thiamine, 3) Pyridoxine	**	Thiamine: 100 mg IV q 12 hr, and Pyridoxine: 50 mg IV q 6 hr for 48 doses.	Thiamine and pyridoxine for enhanced elimination of metabolic acids.
Iron Accumulations	1) Deferoxamine (Desferal®)	140 g/	Usual: 15 - 100 g. Child: 1 g/kg.	Deferoxamine is used only for patients with severe iron toxicity and is present. Consult for approval if patient is stable/not hemodynamically unstable, ineffective with many metals.
	2. Deferiprone (Ferriprox®)	**		Whole bowel irrigation with PEG reserved for IV decontamination following bare ingestions. Consult PC for guidance.
Hydrofluoric Acid	1) Calcium gluconate	10 L Calcium 500 mg/ (Calcium 10 mL vials (5 mL x 20 = 100 mg/mL) = 1000 mg/mL = 1000)	Topical: calcium gluconate in inverted calcium carbonate topical, mixed with water-soluble lubricant applied to burn and covered. Call PC for details. For topical treatment flames, give 500 mg/cm2 (1 mL/cm2 with 25% calcium gluconate gel and care calcium chloride).	Determine if agent. Burns and flame refers to chemical's name, and to ground through a normal line, and calcium gluconate if going peripherally. Calcium chloride should not be given subcutaneously. Hydrocarbons and the remaining anhydrous (possible that all routes of exposure. Contact PC for case-specific advice.
Iodide (radioactive) or CTA	Potassium iodide (KI)	130 mg/	Adult: 130 milligrams/day, orally. Child: 1 to 3 yrs: 65 mg/day. Neonate: 8 mo - 1 yrs: 32 mg/day. Dose reduces at 5 mg/day and increases to 10 mg/5 g/dl. Usual: 15 mL vials. Vials for incidental events, available in 10 mL (above levels), duration 24 hr, then reactivate.	Treat as soon as possible (< 3 hr). Adults: 16 all years with exposure (10 mg/day, OTC). Over 40 years of age treat for only with large thyroid dose (>500 mGy). Children, pregnant and lactating women should be treated at lower exposure levels. Instructions for treatment: asymptomatic patient with upper person over 1000 mg/dL, symptomatic patient with upper serum iron (>90 mcg/dL, or severe symptoms following iron ingestion. Benefit of deferoxamine beyond 24-48 hours unlikely and not helpful risk of systemic toxicity.
Isoniazid	Pyridoxine	8 g/ (100 mg/mL) = 80	4 g IV (100 mg/mL) = 40 mL vials x 10 = 400 mL. Usual: 5 g. Child: 70 mg/kg. IV infusion (1 g/vial) 25 patients (dose: dose) maximum over 120 hours.	Consider starting 25 g in intensive-ordered areas. Pyridoxine also used with Glycerol's Detox (room mushroom and hydrazine (e.g., gel food toxicity).
Metals: Lead, Mercury, Arsenic	1) Succimer (DMSA)	3 g/	Oral: 10 mg/kg/dose every 8 hr for 5 days, then 10 mg/kg/dose every 12 hr for 14 days.	Mild - given oral. If encephalopathic and/or unable to take PO: Succimer is a topical supply may be sufficient for most hospitals.
	2) BAL (dimercaprol)	3 g/ (3 mL ampules (100 mg/mL, x 10)	3-5 mg/kg/dose deep IM q 4 hr x 2 days, then q 6-8 hr x 3 days	Acts - given oral. If encephalopathic (with calcium disodium EDTA) or unable to take PO: Succimer is a topical supply may be sufficient for most hospitals.
	3) Calcium disodium EDTA	3 g/	Adult dose/ Day: IV up to 3 g given in 3-5 g over 8-12 hr x 5 days (repeat 5 hr after 48hr.)	Calcium disodium EDTA must be started after BAL to decrease CNS lead penetration. Unable to a regional supply may be sufficient for most hospitals.
Methanol	1) Fomepizole (Antizol®)	Fomepizole 1 g/ (1.5 g (vial x 1))	Fomepizole: 15 mg/kg IV (1 15 mg/kg IV q 12 hr x 3 doses, then 15 mg/kg thereafter. During dialysis, re-dose q 4 hr.	Fomepizole is preferred over ethanol. Call PC for use of ethanol and for hemodialysis indications.
	2) Folic acid or folinic acid (leucovorin)	Folic acid 500 mg/** (50 mg vials (5 mg/mL)) (50 mg/ (10 mL ampules (5 mg/mL) x 6)	1 mg/kg IV over 5-30 min. If methanol/ethanol level remains above 20% or clinical symptoms persist, give a repeat dose of up to 1 mg/kg and now after first dose.	Folic acid and folinic acid may hasten derivation of methane-metabolic products. Folinic acid (leucovorin) should be used if there is any question. Dose is 100 mg IV/IO and give IV over 30-60 minutes.
Methamidophos-Producing Agents	Ethylene Bile	**	1 mg/kg IV over 5-30 min. If methanol/ethanol level remains above 20% or clinical symptoms persist, give a repeat dose of up to 1 mg/kg and now after first dose.	Ethylene bile is a competitive inhibitor of alcohol dehydrogenase. Same potential volume a contraindicated levels of 10-15% but may not require treatment if patient is asymptomatic.
Methotrexate	Folinic acid (leucovorin)	**	Mg for mg-equivalent dose. Empiric dose for adult is 100 mg/m2 q 6 hr IV.	Folinic leucovorin inhibitor requires bolus and instead of bolus. Most effective if given within 1 hr, may be ineffective beyond 4 hr.
Opioids	Naloxone (Narcan®)	20 mg/ (10 mL ampules (0.4 mg/mL)) = 8	0.4-2.0 mg IV. Repeat to effect. IM IO titration may be used when desired.	Dose: minimum of 0.4 mg before concluding to response. Contraindicated in the accepted form to an opioid-dependent mother. Can precipitate opioid withdrawal in chronic opioid users.
Salicylates	Urinary alkalization with Na bicarbonate	No recommended ** (50 mL vials (1 mEq/mL) x 20)	Bolus 1-2 mEq/kg IV bolus followed by maintenance infusion at a rate of 2-3 x IV fluids. Goal is a pH of 7.45 and serum pH of 7.35-7.55.	Titrating of bicarbonate 1-2 mEq/kg IV bolus followed by maintenance infusion at a rate of 2-3 x IV fluids. Goal is a pH of 7.45 and serum pH of 7.35-7.55. Titrate with potassium volume. In severe cases (>90 mg/dL), treat serum 2 - 3 L alkaline urine pH at periodic levels. Call PC for hemodialysis indications.
Sulfonylureas	1. Octreotide (For select Glucose Fail (Octreotide))	1.5 mg/	Bolus: 50 mcg IV. Infusion: 50 mcg/hr.	Octreotide is a PO/IV approved for treatment of sulfonylurea fail and other North American pt cases. "DIFAB" is preferred in patients with a known sensitivity, or by-to serum products.
	2. Octreotide Acetate Fluid (2 (Apidra) (Insulin))	1.5 mg/	50 mcg/hr. Bolus: 50 mcg IV. Infusion: 50 mcg/hr.	Octreotide is DIFAB®. Octreotide is PO/IV approved for treatment of sulfonylurea fail and other North American pt cases. "DIFAB" is preferred in patients with a known sensitivity, or by-to serum products.
Sulfonylureas	Octreotide	300 mg/ (100 mg/mL, x 3)	Adult: 1-1.5 mg/kg SQ or IV q 6-8 hr. Child: 1 mg/kg SQ or IV q 6-8 hr.	Effective a primary intervention. Octreotide antagonizes insulin release. Observe 6 hr health care facility for at least 6 hr after IV dextrose and octreotide have been stopped to ensure hypoglycemia does not recur.

1. The minimum stocking amounts needed to treat at least one 100 kg patient for 24 hours.
Higher levels of stocking should be considered and arrangements in place to rapidly obtain additional quantities.
* Stocking is recommended for all acute care hospitals.
** No consensus of known parent regarding stocking requirements.
*** Stocking is usually based on other indications.
Ref: Clark, et al. Ann Emerg Med 2016; Vol 71, No 3.

Nebraska Poison Center 1-800-222-1222 402-955-5555
(DO NOT RECITE) Contact Kathy Jacobs at the Nebraska Poison Center (kjacobs@unmc.edu) to permission to modify or to provide suggestions for updates.
Check https://www.regionviihrse.com/education/ for the latest version. © Version 3.0, September 2023
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NEBRASKA POISON CENTER

NEBRASKA POISON CENTER
Serving NE, ID, WY, American Samoa, and Federated States of Micronesia

Call your Poison Center for patient-specific treatment recommendations

https://static1.squarespace.com/static/625f47c7c516853b6bf783fe/t/65661e5e0bbe25746534e33e/1701191264066/Emergency+Antidotal+Management.pdf

#NHCPC24

OMHCC Pharmacy Workgroup

Real World Response
OMHCC Medications Have Helped…

Potassium Ferricyanide

- House fire smoke inhalation victims
- First responders and others exposed to homemade cyanide in college dorm
- Exterminator and others exposed to organophosphate insecticides
- Offutt AFB medical team responding to 2011 Fukushima nuclear disaster incident in Japan
- Located vaccines/immune globulin for tetanus, rabies, hepatitis A & B during public health incidents

OMHCC Pharmacy Workgroup

2019 Flood Response

Filled Prescriptions

- OMHCC received request to fill prescriptions for residents stranded in Riverside Lakes (Waterloo, NE)
  - Set up phone line in Poison Center; PC staff and rotators received requests and completed a spreadsheet
  - Nebraska Medicine Outpatient Pharmacy contacted residents' pharmacies to transfer and fill prescriptions; 24 were verified and filled within a few hours
  - Omaha Fire Dept picked up prescriptions and delivered them to residents by boat

OMHCC Pharmacy Workgroup

2019 Flood Response

Shelter Assistance

- Pharmacy Workgroup received several requests to assist people in shelters with medications and medical supplies.
  - Helped find solutions for people who needed multiple medications but were unable to reach their own physician or pharmacy.
  - Colostomy supplies and a knee brace were requested. OMHCC contacted a local pharmacy, which donated and delivered the supplies directly to the shelter.
  - Received requests for OTC medications for shelters, were donated by local pharmacies.

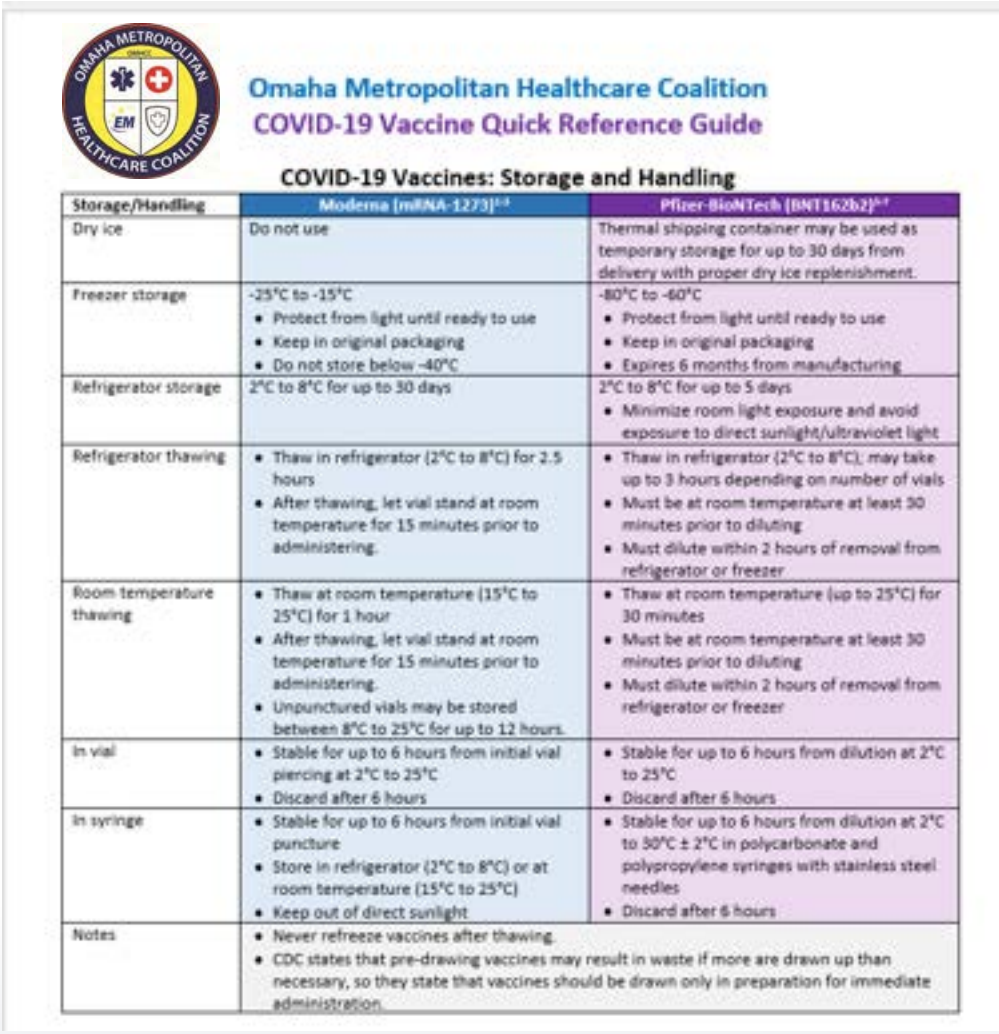
Provided Vaccines & Pharmacy Supplies

- Nebraska Medicine anticipated the need for additional tetanus vaccines and LifeNet flew them up from KC after I-29 closed.
- CHI Health also provided vaccines and was prepared to order additional doses.
- Provided 535 tetanus vaccines (plus needles/syringes) and 600 NS IV bags & saline flush syringes to support six health departments and fire departments.

OMHCC Pharmacy Workgroup

COVID-19 Response

- Recruited additional members to support vaccine administration: local nursing & pharmacy school faculty, additional retail pharmacists, Nebraska Pharmacists Association
- Developed and frequently updated a Vaccine Quick Reference Guide
  - Storage and Handling
  - Vaccine Differences & Practical Considerations



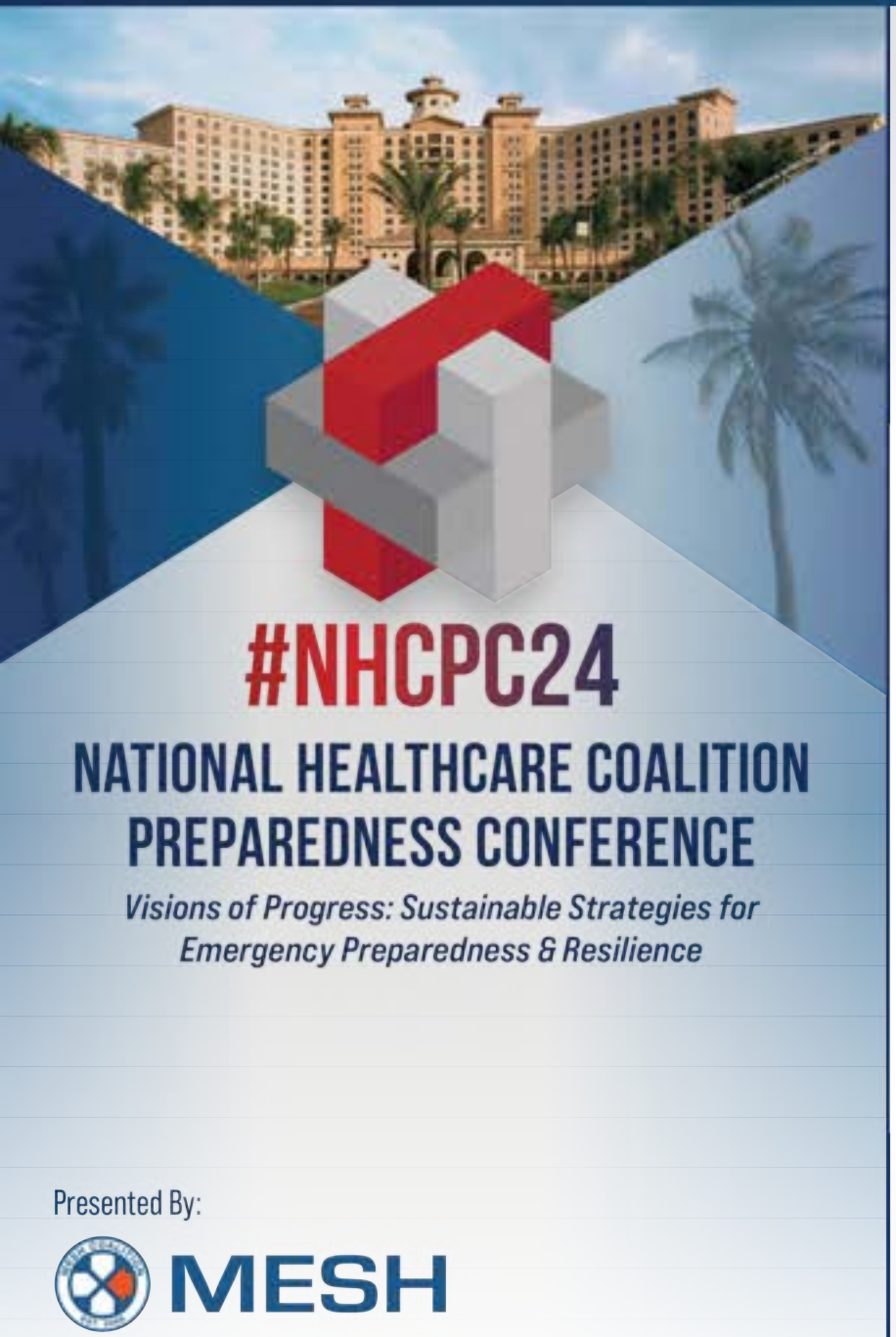
Omaha Metropolitan Healthcare Coalition
COVID-19 Vaccine Quick Reference Guide

COVID-19 Vaccines: Storage and Handling

Storage/Handling	Moderna (mRNA-1273)[1-3]	Pfizer-BioNTech (BNT162b2)[3-7]
Dry ice	Do not use	Thermal shipping container may be used as temporary storage for up to 30 days from delivery with proper dry ice replenishment.
Freezer storage	-25°C to -15°C • Protect from light until ready to use • Keep in original packaging • Do not store below -40°C	-80°C to -60°C • Protect from light until ready to use • Keep in original packaging • Expires 6 months from manufacturing
Refrigerator storage	2°C to 8°C for up to 30 days	2°C to 8°C for up to 5 days • Minimize room light exposure and avoid exposure to direct sunlight/ultraviolet light
Refrigerator thawing	• Thaw in refrigerator (2°C to 8°C) for 2.5 hours • After thawing, let vial stand at room temperature for 15 minutes prior to administering.	• Thaw in refrigerator (2°C to 8°C); may take up to 3 hours depending on number of vials • Must be at room temperature at least 30 minutes prior to diluting • Must dilute within 2 hours of removal from refrigerator or freezer
Room temperature thawing	• Thaw at room temperature (15°C to 25°C) for 1 hour • After thawing, let vial stand at room temperature for 15 minutes prior to administering. • Unpunctured vials may be stored between 8°C to 25°C for up to 12 hours.	• Thaw at room temperature (up to 25°C) for 30 minutes • Must be at room temperature at least 30 minutes prior to diluting • Must dilute within 2 hours of removal from refrigerator or freezer
In vial	• Stable for up to 6 hours from initial vial piercing at 2°C to 25°C • Discard after 6 hours	• Stable for up to 6 hours from dilution at 2°C to 25°C • Discard after 6 hours
In syringe	• Stable for up to 6 hours from initial vial puncture • Store in refrigerator (2°C to 8°C) or at room temperature (15°C to 25°C) • Keep out of direct sunlight	• Stable for up to 6 hours from dilution at 2°C to 30°C ± 2°C in polycarbonate and polypropylene syringes with stainless steel needles • Discard after 6 hours
Notes	• Never refreeze vaccines after thawing. • CDC states that pre-drawing vaccines may result in waste if more are drawn up than necessary, so they state that vaccines should be drawn only in preparation for immediate administration.	

MRSE and Full-Scale Exercise

- Lessons Learned
  - Organizations knew their roles in a chemical emergency incident.
  - Opportunity to educate on the role of the NE Poison Center for pharmaceutical needs and the CHEMPACK process.
  - The Pharmacy Workgroup and NE Poison Center were able to assess unmet pharmaceutical needs.



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U.S. Department of Health and Human Services

ASPR Administration for Strategic Preparedness & Response

Striking a Balance: Cultivating an Agile and Resilient Workforce in Turbulent Times

Perry Vaughn

Office of National Readiness and Response

Center for the Strategic National Stockpile

National Healthcare Coalition Preparedness Conference

December 9, 2024

Today's Speaker

Perry Vaughn
Incident Management Program Director
Office of National Readiness and Response
Strategic National Stockpile
Administration for Strategic Preparedness and Response

ASPR's mission:
Assist the country in **preparing for**, **responding to**, and **recovering from** public health emergencies and disasters.

ASPR 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

3

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

4

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

Agenda

- Strategic National Stockpile (SNS) Overview
- The Agility and Resilience Arena
- Transforming Organizational Culture: Striking a Balance
- A Coaching Approach: The three R’s
- The Way Forward

SNS Overview

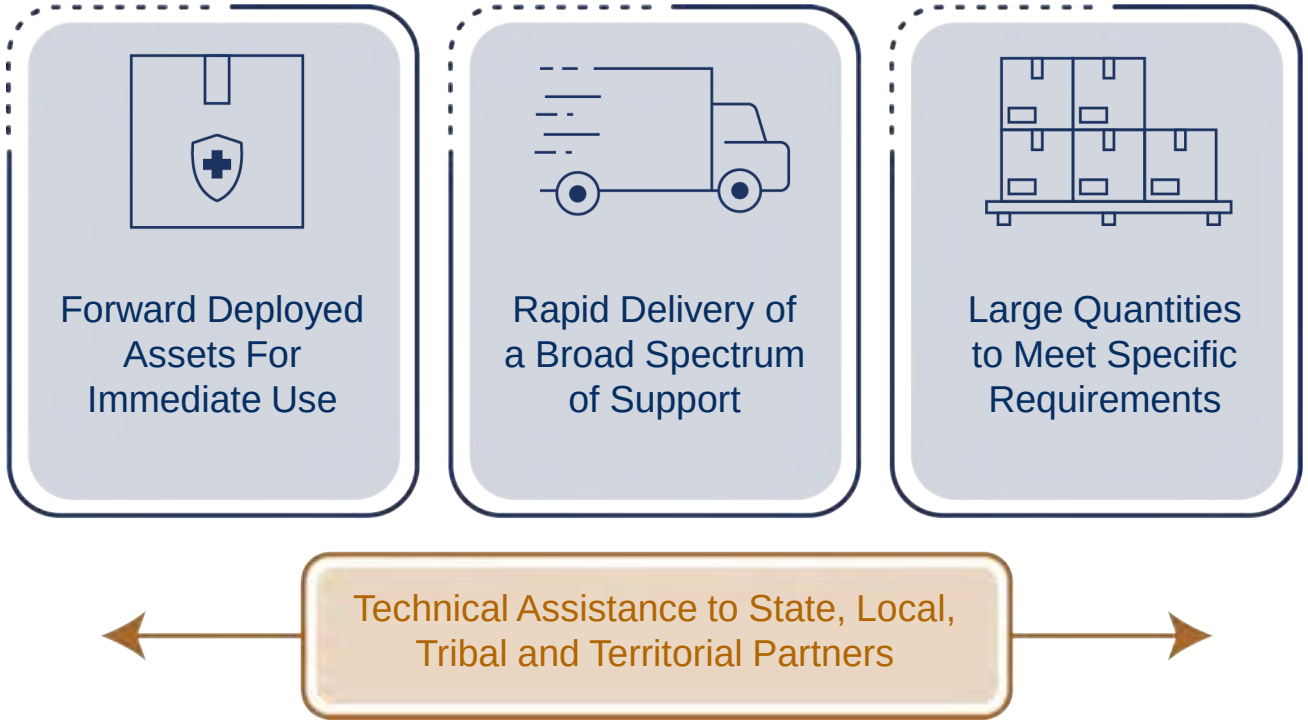
SNS Purpose and Mission

- **Purpose**: Supplement and resupply state and local public health agencies in the event of an emergency

- **Mission**: Prepare and support partners and provide the right resources at the right time to secure the nation's health

SNS Quick Facts

- The U.S. federal government's largest repository of emergency medical countermeasures (MCMs)
- Established in 1999 as the National Pharmaceutical Stockpile
- ***~$11.6 billion*** inventory of MCMs to respond to
  - ***Chemical, biological, radiological and nuclear threats***
  - Burn/blast events
  - Emerging infectious diseases and pandemics
  - Natural disasters
- Commercial logistics providers operate SNS warehouses and transportation

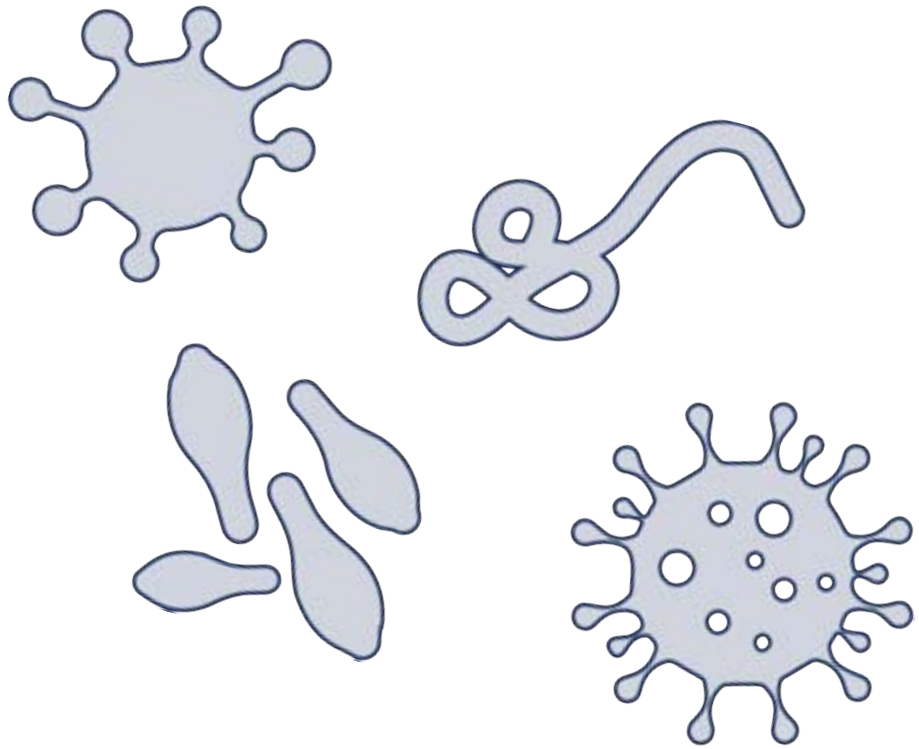


Rationale for Stockpiling

- MCMs are normally held for one or more of these reasons:
  - No commercial market exists to ensure production
  - A product is available but not in sufficient quantities
  - Commercial supply chain not optimized to dispense a product in the right time or amount
- The U.S. pharmaceutical and medical material supply chain is broad but shallow
  - Less than 30-day supply for most pharmaceuticals and personal protective equipment (PPE)
- Stockpiling may be addressed through multiple means to ensure access in times of need

Priority Threat Categories

- Category A threat agents
  - Smallpox
  - Anthrax
  - Botulism
  - Viral hemorrhagic fevers
  - Plague
  - Tularemia
- Chemical nerve agent
- Radiation/nuclear/blast & burn
- Pandemics, including influenza
- Emerging infectious disease
- Natural disasters



SNS Formulary

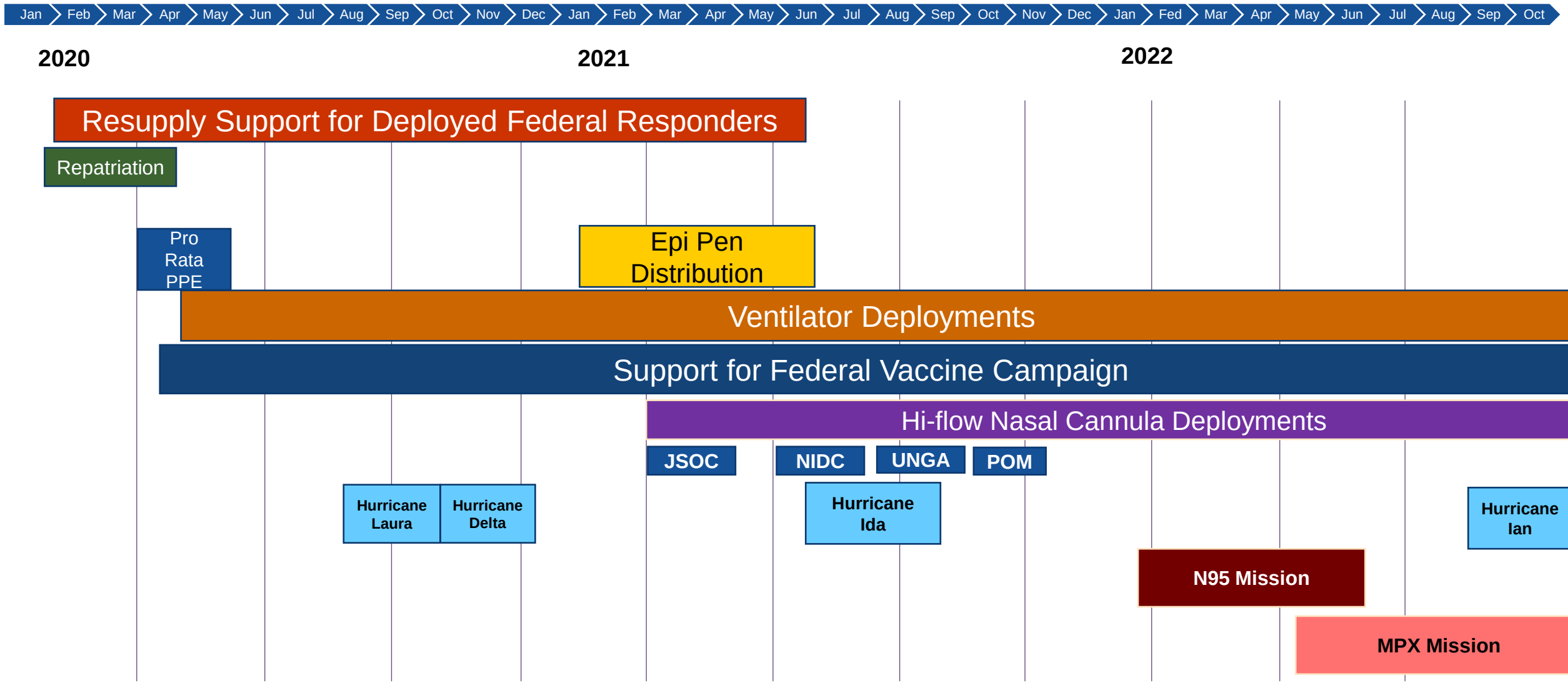
- Antibiotics
- Chemical Antidotes
- Antitoxins
- Vaccines
- Antiviral Drugs
- Other Life-saving Medical Materiel

The Agility and Resilience Arena

SNS Workforce Challenges: COVID-19 Pandemic

- Repatriation mission and long-term support of federal, state, local, tribal and territorial responders across 62 jurisdictions.
- 1,200 National Disaster Medical System caches added to SNS inventory; resupply and acquisition support when deployed. (now part of another ASPR center)
- Novel adjudication processes created for requesting scarce resources and MCMs.
- Significant increase in SNS ventilators required adjudication and extended support across all 10 ASPR regions.
- Real-time reporting of SNS deployments to 50 states, four major metropolitan areas, and eight geographically dispersed territories.
- Long-term SNS subject matter support to the White House, the U.S. Department of Health and Human Services, and the Department of Defense working groups
- 100% virtual SNS workforce for 1,000+ days of national and global responses.

SNS Response Layers
January 2020 – January 2023



Accomplishments: 99.9% Reliability!

- Resupplied 40 federal teams and more than 1,800 personnel deployed across 15 states.
- Supported repatriation of more than 750 Americans with quarantine, screening, and housing services.
- Deployed 71.7 million PPE items to U.S. health care workers: 90% SNS inventory of masks, gowns, goggles, gloves
- Deployed 6,000 tri-wall containers to comprise 30 Federal Medical Stations used nationwide for acute care sites. Supported set up through virtual consultation.
- Increased ventilators from three models (16,600 total) to 12 models (150,000 total); adjudicated, deployed, maintained, and recovered 28,000+ ventilators across the United States.
- Procured and distributed ancillary and mixing kits to administer 1.32 billion COVID-19 vaccinations.
- Procured 30,000 high-flow nasal cannulas and 200,000 epinephrine auto-injectors
- Supported four major hurricanes and four National Special Security Events.
- Distributed ~300 million free N95 masks through 541 retail pharmacy distribution centers and 1,600 Federally Qualified Healthcare Centers. Marked the largest deployment of PPE in U.S. history.
- Mpox global outbreak: Deployed more than one million temperature-controlled vaccine and therapeutics.

Transforming Organizational Culture: Striking A Balance

A Practitioner/Academic "Pracademic" Approach

High Reliability Organization (HRO) Principles

1. **Preoccupation with failure.** Encourage the reporting of errors and pay attention to any failures.
2. **Reluctance to simplify interpretations.** Analyze each occurrence through fresh eyes and take nothing for granted.
3. **Sensitivity to operations.** Pay serious attention to minute-to-minute operations and be aware of imperfections in these activities.
4. **Commitment to resilience.** Cultivate the processes of resilience, intelligent reaction and improvisation. Build excess capability by rotating positions, creating additional sources of knowledge and adding new skills.
5. **Deference to expertise.** During troubled times, shift the leadership role to the person or team possessing the greatest expertise and experience to deal with the problem at hand. Provide staff with the empowerment they need to take timely, effective action. Avoid using rank and status as the sole basis for determining who makes decisions when unexpected events occur.

Weick, K. E., & Sutcliffe, K. M. (2015). *Managing the unexpected* (3rd ed.). John Wiley & Sons.

Learning Agility Factors

1. **People Agility**. The degree to which people know themselves, learn from experience, treat others well, and are calm and resilient under pressure.
2. **Change Agility**. The extent to which people are curious, like to experiment, are passionate about new ideas, and engage in skill-building activities.
3. **Results Agility**. The level to which people achieve results, inspire others, and exhibit a personal presence that builds confidence in others.
4. **Mental Agility**. The degree to which people are comfortable with complexity and ambiguity, think through problems from a unique point of view, and can explain their thinking to others.

Harvey, V. S., & De Meuse, K. P. (Eds.). (2021). *The age of agility: Building learning agile leaders and organizations.* Oxford University Press; Society for Industrial and Organizational Psychology.

A Coaching Approach: The Three R's – Recruit, Rewire, Reflect

How is Change Embraced?

Agility is the ability to adapt and respond to change. . . agile organizations view change as an opportunity, not a threat.

Jim Highsmith (1945–),
American software engineer and author

Look for Learning Agile Behaviors In Past Performance

Learning Agility

The willingness and ability to learn new competencies to perform under first-time, tough, or different conditions.

High-Potential Learning Agility Behaviors

People Agility

- Understands personal limits.
- Eager to learn about self, others, and ideas.
- Can empathize; walk in other's shoes.
- Gives and shares credit verse takes.
- Can change position or mind when presented with counter-evidence.
- Presents ideas and concepts in the language of the target audience.

Results Agility

- Performs well under first-time conditions.
- Isn't thrown by changing situations.
- Manges innovation change efforts well.
- Builds or contributes to high-performing teams.
- Demonstrates personal drive and adaptability.
- History of successes with limited resources.
- Has a significant, noticeable presence.

Mental Agility

- Curious, mentally quick.
- Picks up new skills and ideas quickly.
- Looks for the why and how of experiences.
- Good at simplifying complex subjects.
- Analyzes problems and presents contrasts and multiple viewpoints.
- Explains thinking when searching for meaning.
- Comfortable working on ambiguous and complex issues.

Change Agility

- Continuously tinkering, seeking improvements.
- Understands change is unsettling.
- Can take the heat even if personal.
- Initiates skill-building activities.
- Helps others think and experiment.
- Seeks out and learns from feedback.
- Actively incorporates new skills into their repertoires.

Anticipate Anomalies; Act on Outliers!

An organization's ability to learn, and translate that learning into action rapidly, is the ultimate competitive advantage.

Jack Welch (1935– 2020),
former CEO and chair of General Electric

Most Crises Foretold By Subtle Cues or “Near Misses”

High Reliability Organization (HRO) Mindfulness: Most events that escalate into crises or catastrophes are forecasted by small problems, mistakes, subtle cues, and failures that are unnoticed, misunderstood, discounted, or ignored.

Sutcliffe, K. M., & Christianson, M. K. (2011). Managing the unexpected.

Attune to Nuances, Outliers, Subtle Cues

- What are the critical differences between what was planned to happen versus what happened?
- What are some of the activities or factors that contributed to the difference or variance of what was planned or expected and what occurred?
- Were any “near misses” or potential mishaps observed (e.g., close call, nail biter, workaround, dodged bullet)?

Analyze Expectations, Assumptions Against Positive and Negative Outcomes

- How would you objectively describe the approach taken to achieve what occurred (e.g., flow chart)?
- What are some of the activities or factors that contributed to the difference or modification of what was planned or anticipated and what occurred?
- What can be done next time a similar situation occurs to repeat a successful result or improve an outcome?

Rebound with Action and Awareness

- What did you take away from the situation?
- If your teammates could encounter a similar situation, what advice would you share?
- How can we apply what was learned here to future situations?

Build “Cue” Expertise: Ask More; Tell Less

Barner, R. (2011). *Accelerating your development as a leader: A guide for leaders and their managers*. John Wiley & Sons.

Step Back, Take Stock, Explore Alternatives

Experience is not what happens to a person; it is what a person does with what happens to them.

Aldous Huxley (1894– 1963),
English writer and philosopher


Action
Action Learning
"The After Party"
Social Engagement
Reflection

Realtime After Action Reflection: Look Back *and* Forward for Resilience

- Past:
  - Where were we most and least effective?
  - What worked, what didn't, what have we learned?
  - What new thing did we try today?
  - What's the most useful thing we learned today/week/month?
  - What opportunity did we miss?
  - What are we grateful for?

- Future:
  - What are my most important priorities tomorrow?
  - Do I need to do anything differently to continue making progress?
  - What actions do I want to take?
  - What will prompt me to do that?
  - What feedback do I want, who do I want it from, and how will I make sure I get it?

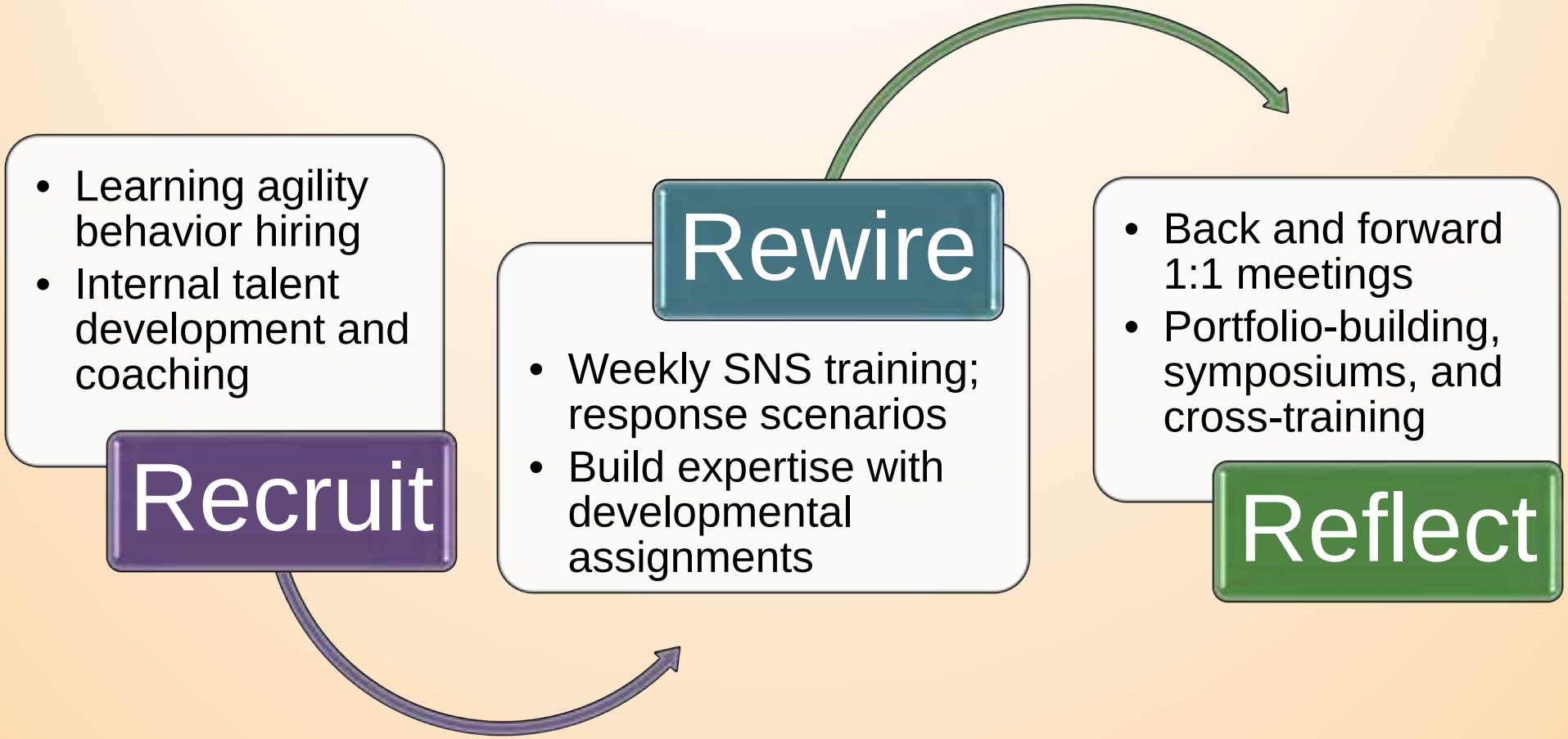
Build a Social Engagement Portfolio

Cultivate a broad set of relationships or "portfolio" of people who can provide access to a tapestry of expertise, assumptions, experiences, and questions which will expand what a leader is reflecting on and help the group make sense of what they are going through.

Peterson, D. B. (2021). The DNA of VUCA. The Age of Agility: Building Learning Agile Leaders and Organizations, 327

The Way Forward

Building a Resilient and Agile SNS Workforce



Questions

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twitter.com/HHS_ASPR

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aspr.hhs.gov

Contact:
sns.ops@hhs.gov

Presented By:

MESH

Texas Tornadoes: Activating Your Regional Healthcare Coalition

Fidel J. Calvillo

Emergency Management Operations Coordinator

Special Populations

SETRAC – SouthEast Texas Regional Advisory Council

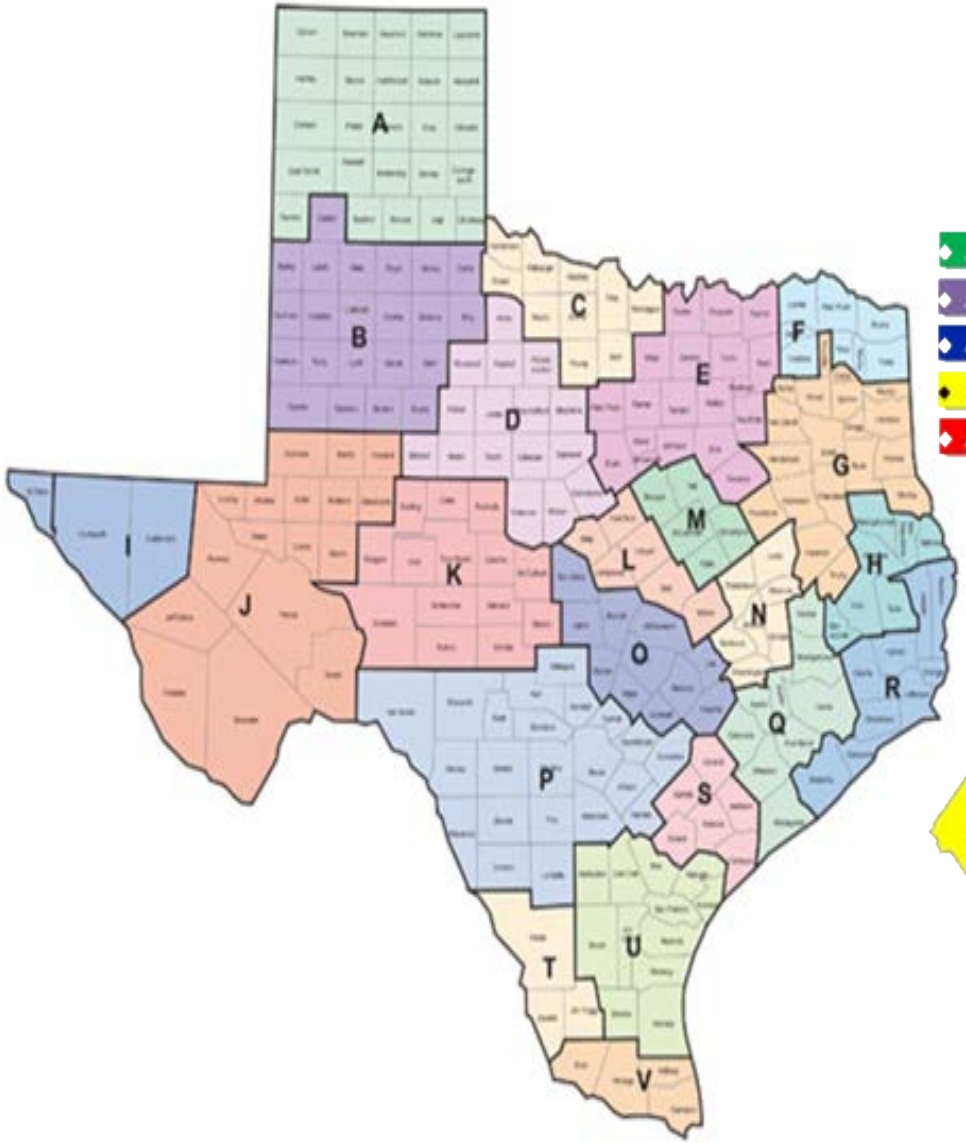
Overview

- Introduction to SETRAC and Special Populations
- Initiatives in place to increase and sustain stakeholder participation
- Activating and responding to events

What is SETRAC

Regional Healthcare Preparedness Coalition

- A non-profit 501(c3), grant funded organization heading a regional network of healthcare agencies, EMS and response partners, public health officials and jurisdictional authorities within the twenty-five counties of Texas that make up TSA (Trauma Service Areas) Q, R, and H.
- Trauma Service Area (TSA): Designated geographic area with purpose of developing a trauma system consistent with patient care and transportation needs of local hospitals.
- Texas Department of State Health Services sub recipient of the Healthcare Preparedness Program - HPP.



Our Coalition Region:

- 25 Counties
- 277 cities
- 9.8 Million* (36%)
- 897,000/disabilities* (24%)
- 180+ Hospitals
- 1100+ Nursing Homes, Assisted Living and ICF
- 2000+ Home Health and Hospice
- 2200+ Outpatient Services and Clinics

Emergency Medical Task Force

- The Emergency Medical Task Force (EMTF) is a State and Federally (TXDSHS, ASPR) funded program with the mission of creating State-deployable medical teams, regionalized for rapid mobilization and readiness.
- The goal of the EMTF program is to provide a well coordinated response, offering rapid professional medical assistance to emergency operation systems during large scale incidents. Immediately available resources include AMBUSes (Four in EMTF6), Mobile Medical Units, Ambulance Strike Teams (hundreds of units across Texas), RN Strike Teams, Medical Incident Support Teams and Staging Managers.
- Eight (8) full-time Regional Coordinators and one (1) State Program Manager assure emergency resources are immediately available across Texas. The Texas EMTF is part of the Texas Disaster Medical System.
- The EMTF-6 Region is managed by SETRAC.

What are Special Populations?

- Long-Term Care (LTC)
- Assisted Living Facilities – Non-CMS
- End-Stage Renal Disease (ESRD) Facilities
- Home Health Agencies (HHAs) & Hospices
- Intermediate Care Facilities for Individuals with Intellectual Disabilities (ICF/IID)
- Clinics
- Surgery Centers

HMMMMMM…..Where are they?

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Implementing Strategies

- Emergency Preparedness Workshops
- Conduct exercises – relevant to them
- Meet with your State Agency Regulatory
- State or Local Associations
- End Stage Renal Disease Network (ESRD Network)

EMERGENCY PREPAREDNESS BOOT CAMPS

- Review of the Senate Bill rules and strategies to meet them and adapt to future changes.
- Define role of the local Emergency partners, regional and state governments & Coalition involvement.
- Hands-on workshops for emergency notifications & bed reporting.
- How to develop and conduct an exercise.
- One on one with your local Office of Emergency Management response overview.

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Our target audience:

- Long Term Care facilities, Nursing Homes, Assisted Living Centers, Inpatient Mental Health facilities
- Home Health Agencies, Home Health, Hospice
- Dialysis Centers
- Facilities with the need for increased Emergency Preparedness and those that fall under the CMS rules.

Pink Evacuation Vest

- Used at times of evacuation for easy identification of residents
- Includes Face PVC Pocket for face sheet and information
- Available for free by healthcare coalitions (excluding shipping)


Dickinson, Texas
BREAKING NEWS
NURSING HOME RESIDENTS UP TO THEIR WAISTS IN FLOOD WATERS
LIVE
CNN
WITH A BOAT OR HIGH-WATER VEHICLE
HARVEY SLAMMED INTO TEXAS
NEWSROOM

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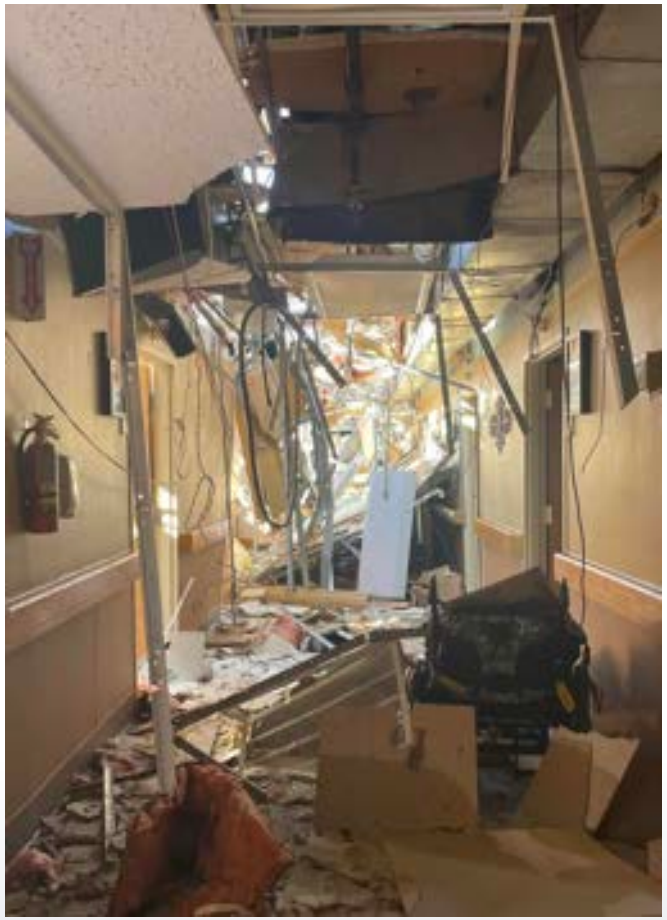
What's Your Benefit?

Real world examples

- January 24th, 2023, a tornado strike on nursing home. 64 residents
- August 2023 in Beaumont, TX. due to drought conditions, affected dialysis clinics to provide dialysis.
- January 2024, thunderstorm winds caused power outages that affected several nursing homes and dialysis clinics.
- May 2024, Derecho Windstorm causing infrastructure damage and power outages for 2 weeks.
- July 2024, Hurricane Beryl causing regional power outages over two weeks.


DEER PARK ISD
AMBULANCE



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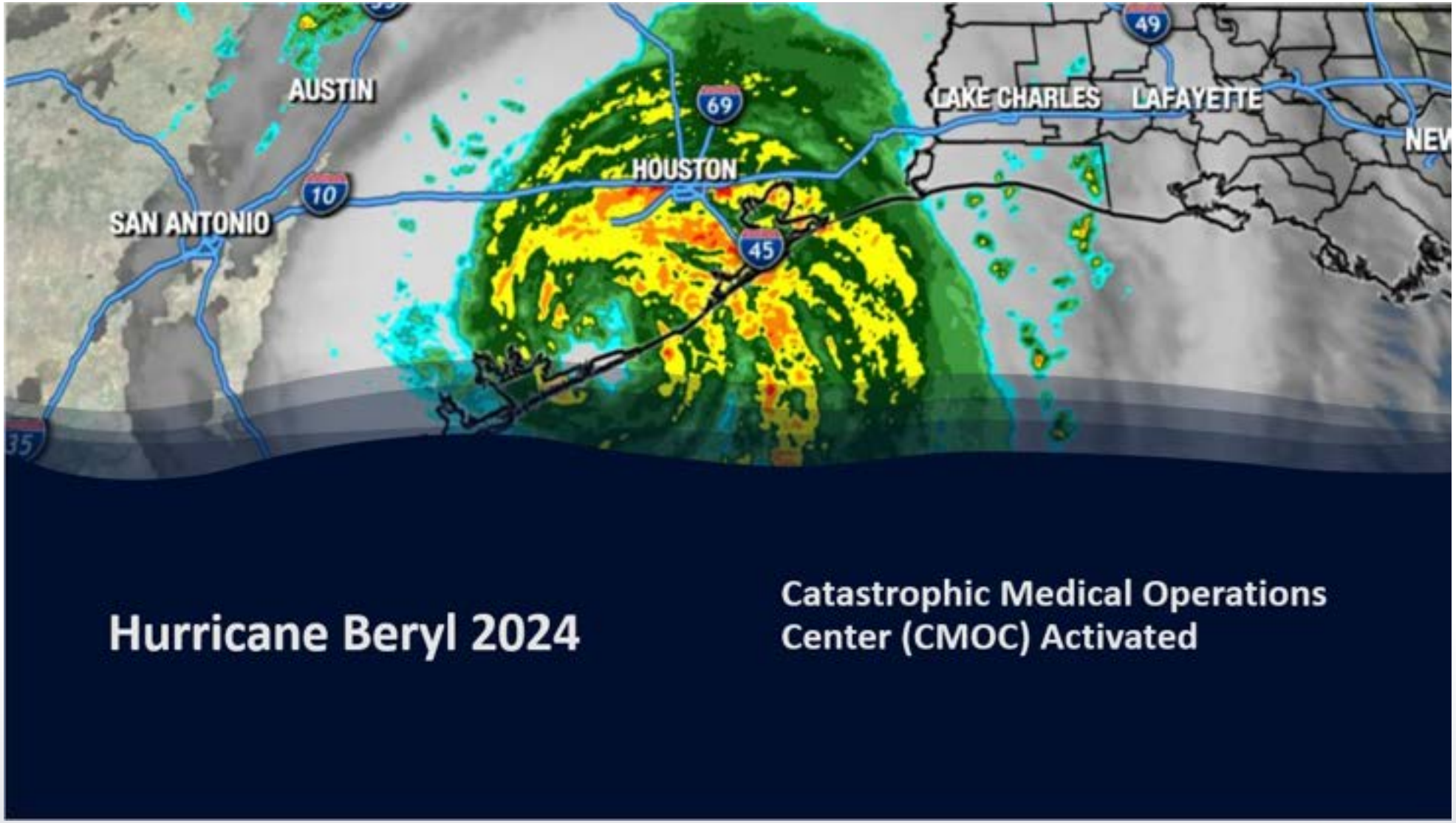
AUSTIN
SAN ANTONIO
HOUSTON
LAKE CHARLES
LAFAYETTE
10
69
45
49
Hurricane Beryl 2024
Catastrophic Medical Operations Center (CMOC) Activated

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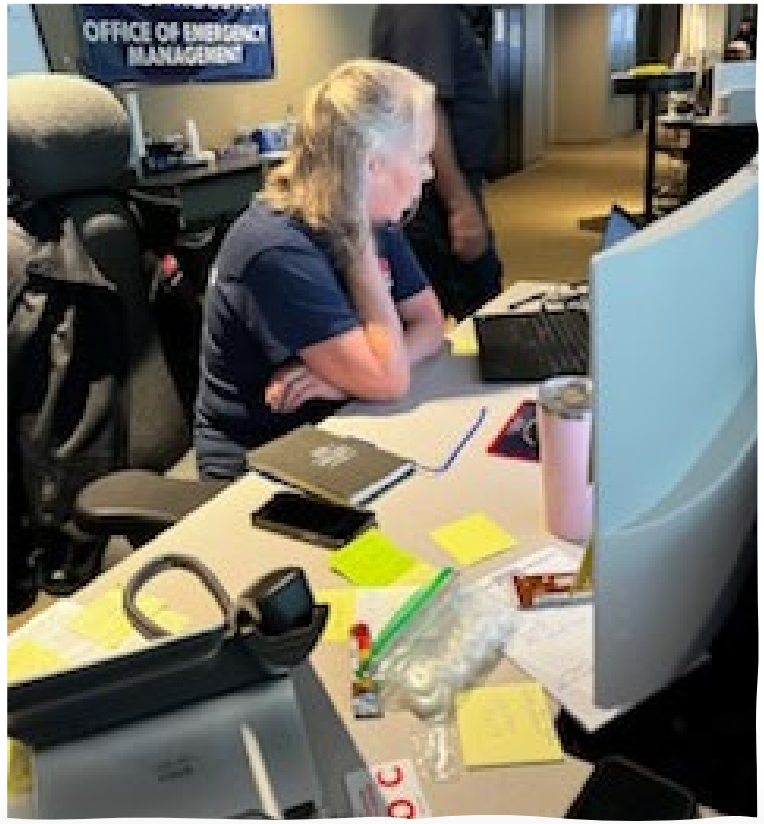
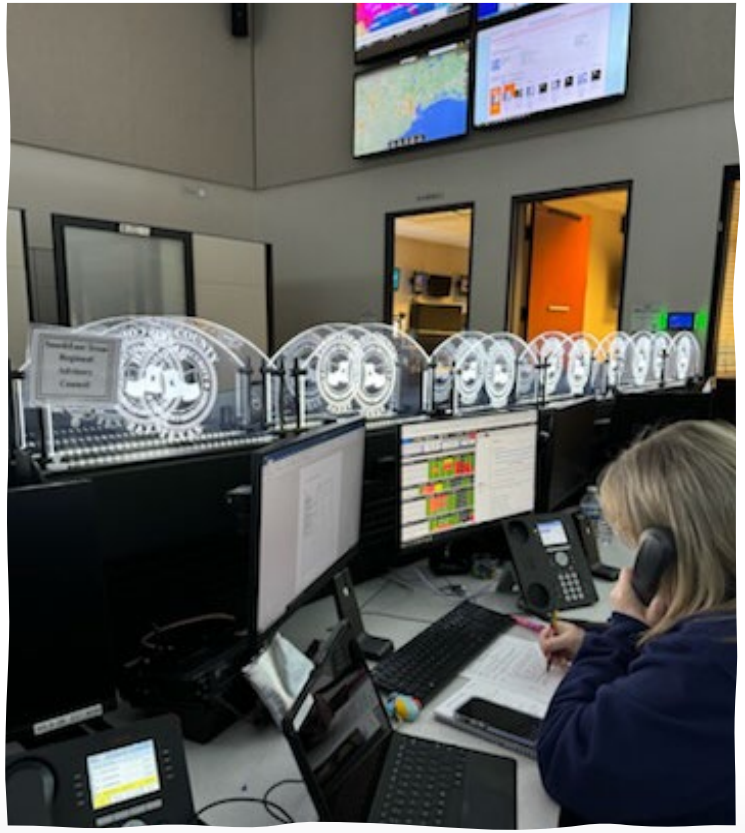
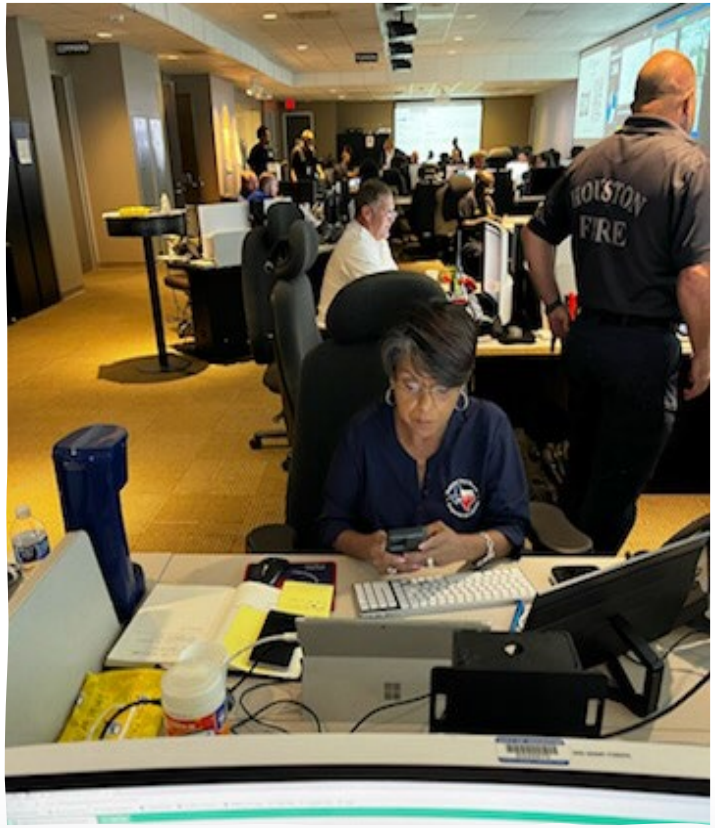
Coordination







- Medical Coordination
- Dailly Conference Calls
- Oxygen Delivery to Home bound
- Mission Tasks for LTC welfare Checks
- Coordinated Medical Shelter


CMOC
What did we do??
• Dialysis assistance
• Nursing Home evacuation
• Aided with generators for Assisted Living Centers & Hospitals

CMOC/ EMTF

- 9-1-1 Support
- Hospital surge support missions to assist in wall times
- 92 agencies from across Texas

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Questions?

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Thank You

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Emergency Management Operations Coordinator

Special Populations

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NATIONAL HEALTHCARE COALITION PREPAREDNESS CONFERENCE

Visions of Progress: Sustainable Strategies for Emergency Preparedness & Resilience

Presented By:

MESH

Together Takes Time

One Example of Emergency Response & Management Living Under the Same Roof

Kylaas Flanagan
Medical Surge & Utah/Wasatch County Healthcare Coalition Coordinator

The Internal Team

Janeen, **Q**, *Jester*, *[Redacted], Talisha*

Ryan, *Emily*, **Kylaas**, *Katrina, Rob*

Ian, **Becca**, **Tad**, **Derrick**, Gayla

Kristen, Jodi, *Lindsey*, *Garrison*

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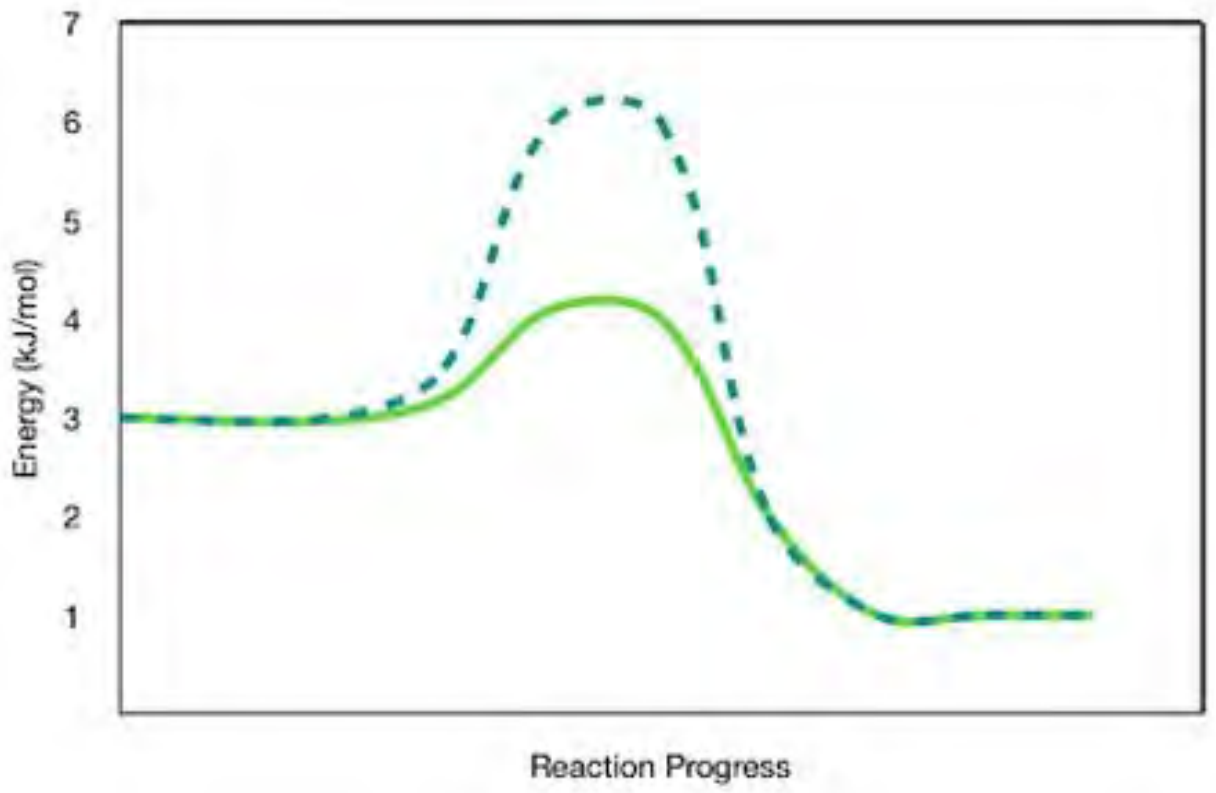
Group activity

What is this diagram a representation of?

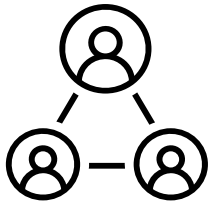


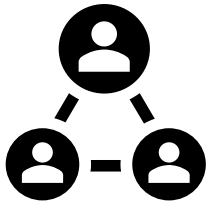
- Activation energy – what happened to start the process?

- What was the first major change?

The External Team

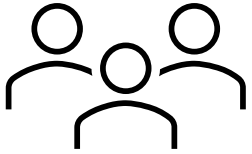
Emergency Management





Public Health

National Guard



Utah Department of Health & Human Services

What needed to be considered?

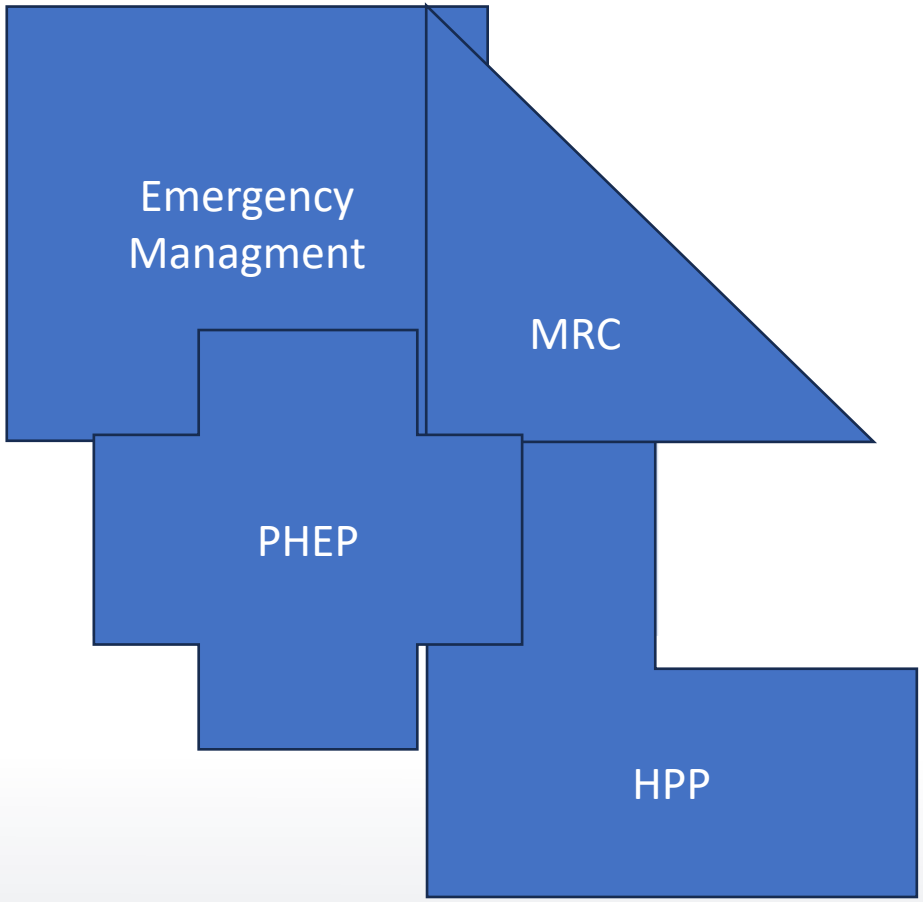
- Interoperability of supplies
- Interoperability of personnel

What were some of the small things that helped?

- Starting small (4 employees) and moving to a larger model
- Overarching organization
- Scenarios were not always steady

How it's set up now:

- Interoperability of supplies
- Interoperability of personnel



What we are moving towards:

- Shared workspace
- Shared warehouse space
- Shared knowledge base
- Unique advantages

Questions? Thoughts?

Kylaas Flanagan
Medical Surge & Utah/Wasatch County
Healthcare Coalition Coordinator

KylaasF@UtahCounty.Gov
801.960.2705

Presented By:

MESH

What Does A Response Coalition Look Like?

Kelsey Blackburn, CHEP SE/SEC Ohio Regional Coordinator

Jodi Keller, RN Central Ohio Regional Coordinator

Agenda

- Review the 2 HCC Regions of COTS
- Discuss the COTS HIL
- The Why? *What brought us to this discussion?*
- *Response vs. Preparedness*
- *Workshops*
- *Final Product*

About Our Coalitions

Mission

- To create and promote a state of readiness and response to protect central and SE/SEC Ohio's healthcare system during an emergency; through effective planning, exercises, education and collaboration between healthcare organizations, 1st responders, emergency management directors, public health, and other emergency response planners.
- To create a state of readiness and response by promoting better outcomes through collaboration thus achieving quality healthcare delivery during a crisis.

Eight Homeland Security Planning Regions – receive ASPR funding for HCC Coordination
Seven Healthcare Coalitions

Northwest Region
Hospital Council of NW Ohio
RHC: Susan Murphy
President: Pamela Jensen

West Central Region
Greater Dayton Area Hospital Association
RHC: Mary Porter
President/CEO:
Sarah Hackenbracht

Southwest Region
The Health Collaborative
RHC: Jessica Skelton
VP Clinical Strategies: Tiffany Mattingly

Northeast Region
The Center for Health Affairs
RHC: Christina Fozio
VP of Business Ops and Administration: Tracy Wise

Northeast Central Region
Healthcare Alliance of Greater Ohio
RHC and CEO: Sarah Metzger

Central Region
COTS
RHC: Jodi Keller
President: Sherri Kovach

Southeast/Southeast Central Region
COTS
RHC: Kelsey Blackburn
President: Sherri Kovach

RHEP Coalition- Central Ohio

- 15 counties in central Ohio with Columbus being the Urban center
- 29 Hospitals
- 7 Trauma Centers
- 1 Pediatric Trauma Center
- 13 Acute Care hospitals
- 7 Critical Access Hospitals
- 12 FSEDs
- >600 HCC Members

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SE/SEC Ohio Coalition

- 21 counties
- 17 hospitals
  - 2 - Level 3 Trauma Centers
  - 6 – critical access hospitals
  - **NO** pediatric or burn hospitals
- 5 free-standing EDs
- 170+ Coalition Members

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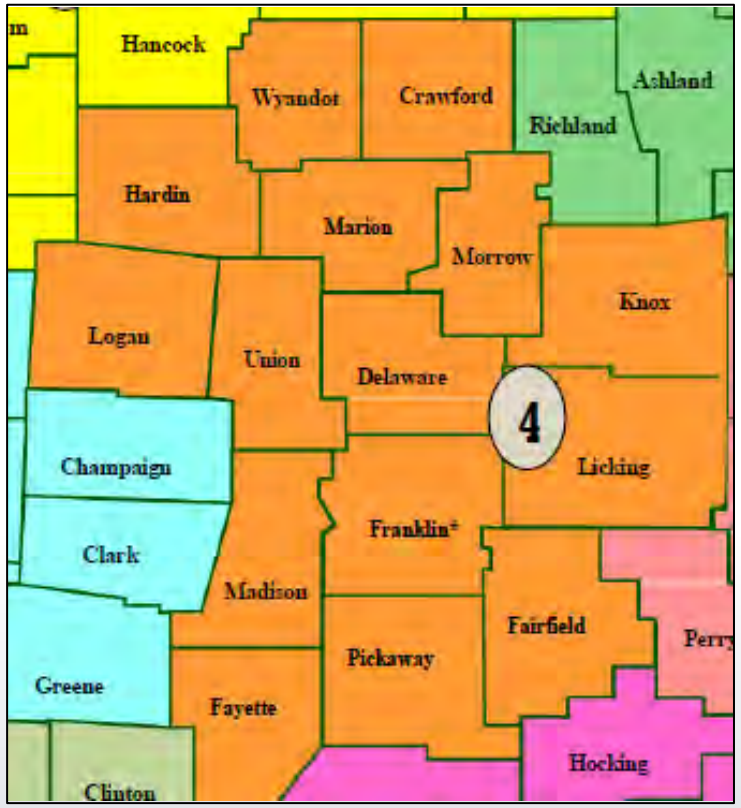
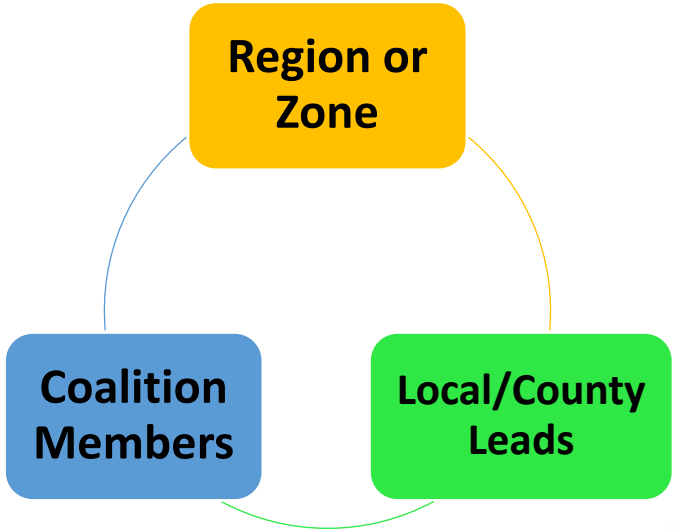
Local/County Healthcare Coalitions

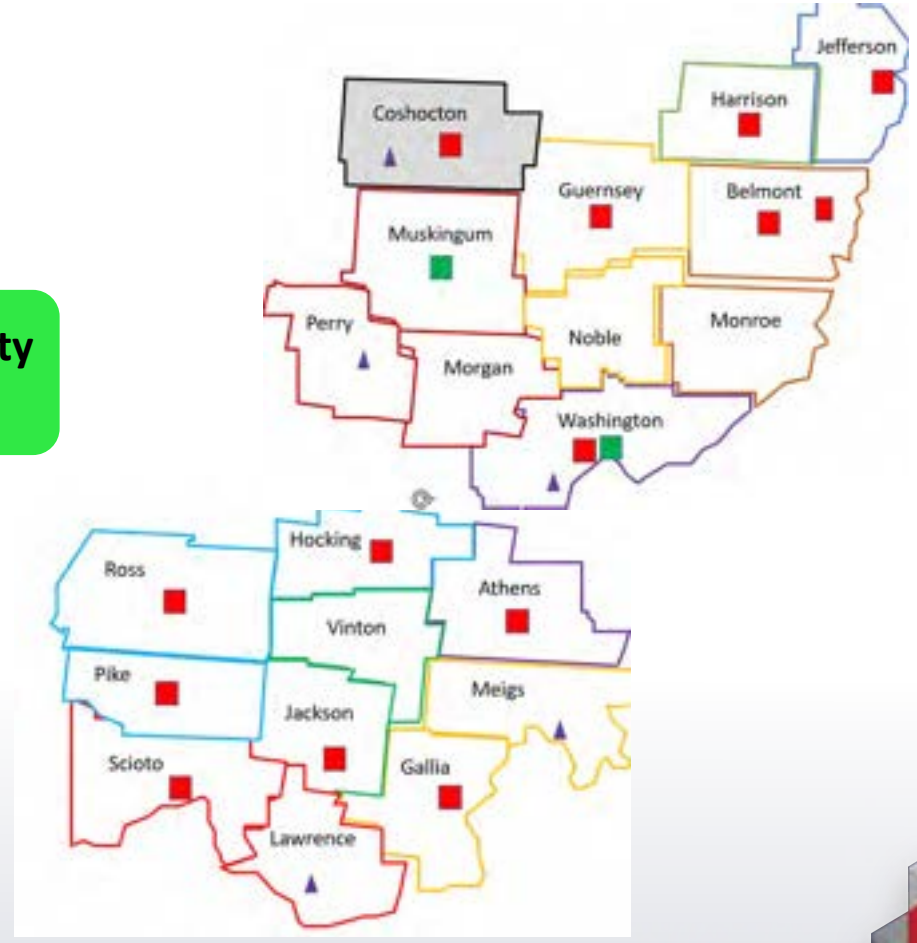
Central
- 15 county coalitions
- Each has a lead agency





Disaster response occurs first at the **Local** level. Local governments and voluntary agencies represent the front line when disasters occur.

SE/SEC
- 12 Local Coalitions
- Each has a lead agency



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Healthcare ZONES

coronavirus.ohio.gov

ZONE 2

MIKE DEWINE
GOVERNOR OF OHIO

Ohio | Department of Health

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Healthcare Incident Liaison (HIL)

- Direct Response to 911
- Hospitals willing to share resources and act collectively in disaster
- Recognition of the value of collaboration in a disaster
- COTS HIL role is written into city, county, regional, and state emergency response plans.

HIL Role

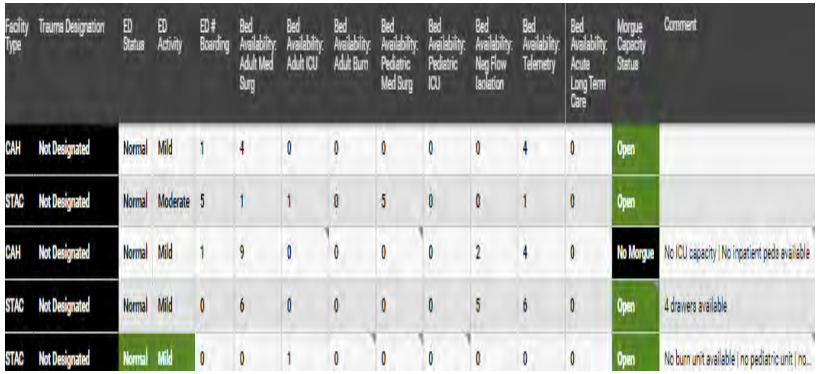
- On call 24/7
- Coordinates Healthcare Response to Disasters/Emergencies:
  - Collection and collation of regional health information
  - Resource Allocation
  - Situational Awareness
  - Monitoring of health care system performance and capacity
  - Liaison between the region and state agencies

When to Call the HIL

Examples of events in which the HIL should be activated include but are not limited to:

- System-wide communication outages
- No Notice mass casualty incidents
- Facility evacuation
- Hazardous materials exposures (decon)
- Internal hospital emergencies that require absolute diversion of EMS patients, reallocation of patients and/or additional resources
  - With or without an impact to patient care
- An injured suspect fleeing from law enforcement who may present at a Central Ohio emergency department
- Resource request
- An event with anticipated media coverage

This is a communication drill alert from COTS. Coalition members please log into COHDIMS and open the Monthly Communication Drill tile to complete your agency Situation Report by 10:00 a.m. This is for the non hospital members to complete.



Facility Type	Trauma Designation	ED Status	ED Activity	ED # Boarding	Bed Availability: Adult Med Surg	Bed Availability: Adult ICU	Bed Availability: Adult Burn	Bed Availability: Pediatric Med Surg	Bed Availability: Pediatric ICU	Bed Availability: Neg Flow Isolation	Bed Availability: Telemetry	Bed Availability: Acute Long Term Care	Morgue Capacity Status	Comment
CAH	Not Designated	Normal	Mild	1	4	0	0	0	0	0	4	0	Open	
STAC	Not Designated	Normal	Moderate	5	1	1	0	5	0	0	1	0	Open	
CAH	Not Designated	Normal	Mild	1	9	0	0	0	0	2	4	0	No Morgue	No ICU capacity | No inpatient peds available
STAC	Not Designated	Normal	Mild	0	6	0	0	0	0	5	6	0	Open	4 drawers available
STAC	Not Designated	Normal	Mild	0	0	1	0	0	0	0	0	0	Open	No burn unit available | no pediatric unit | no...

Information Sharing and Communication Systems

Status	Updated
High	08/16/2024 08:37
Moderate	08/15/2024 15:19
Moderate	08/16/2024 06:52
Mild	08/16/2024 09:00
High	08/16/2024 01:17
Moderate	08/16/2024 09:09
High	08/16/2024 09:04
Mild	08/16/2024 05:07
Low	08/16/2024 07:09
High	08/16/2024 07:28
Moderate	08/16/2024 09:32
High	08/16/2024 07:30

The Why?

- >6 years ago- ASPR talked about creating response ready coalitions for HCCs to strive to be and evaluate themselves.
- During COVID updates to SurgeNet/EMResource, RTAS, COHDIMS, and OHA dashboard started daily
  - Post COVID the updates to EMResource continue 2x daily, and during real-world incidents the HIL can be activated, and mass notification can be sent to share information and gather situational awareness
- Healthcare coalitions shift from WHAT *things* we *need* to respond to HOW do we respond.
- **Validate what we are already doing and evaluate if there is more that we could be doing…**

The WHY?

- The THREATS are REAL!

Preparedness vs. Response Organizations

Exhibit 1-5. Preparedness versus Response Organization

Preparedness Organization:

- Provides a structure and function to manage the coordination of emergency management activities, which take place in a non-emergency context.
- Conducts emergency management program activities, including committee meetings, EOP development, preparedness planning, training, exercises, resource management, and program evaluation and improvement.

Response Organization:

- Provides a structure and function to manage the coordination of actions to achieve objectives under emergency conditions.
- Conducts information management, emergency decision-making, incident planning, actions to implement decisions, and coordination of resources.

Workshop

- Two in-person sessions – one in SE/SEC region and one in Central region
- Different disciplines (EMA, Hospitals, EMS, Public Health)
- Five break out sessions with a COTS facilitator
  - Coordination Agency
  - Communication Tools/Platforms
  - Core Members and Other Members Engaged
  - Medical Surge and Response
- 20-minute discussion and rotate one time

Task at Hand

- Work in your table workgroup to discuss your topic
- Take credit for what the RHEP and SEOHC Coalition already has in place
- Think big picture: Are there more things to put in place to be response ready?
- Also, think about this as a checklist for coalitions around the country

Topics

- Coordinating Agency
- Communication Tools/Platforms
- Valued Services
- Core Members and Other Members Engaged
- Plans and Procedures
- Surge/Response

Results and Similarities

- **Coordination Agency –**
  - Both regions have access to the COTS HIL 24/7 365
- **Communication Tools/Platforms –**
  - Many situational awareness platforms to gather incident information
  - Need additional training on EMTrack
- **Core Members and Other Members Engaged –**
  - Utilized local healthcare coalitions
  - Need additional EMS participation
  - Show value to members for participation
- **Medical Surge and Response –**
  - Load Balancing
  - Communication between coordination agency and scene to provide real-time information

Differences

Central Region

- Load balancing with pre-hospital partners during an MCI
- Surge Operations Call Center (coordinated load balancing)

SE/SEC Region

- Intrastate coordination
- Load balancing between regional hospitals
- Standardize triggers/indicators for response
- Enhance Telemedicine

Coordinating Agency

- COTS HIL
- Local Coalition Leads
- Coordination calls during a response – include additional partners based on the event
- Include Key agencies in drills, training, and exercises
- Develop strike teams
- Review activation triggers in response plan
- Standardize template for coordination between PSAPs and coordination agency
- Funding

Communication Tools/Platforms

- EMResource and EMTrack – additional training needed
- COTS HIL
- EMTrack and role of ARC in family reunification
- Using tools to obtain real time information from the scene to coalition
- Text messages are helpful vs phone calls
- Resource requests – additional education needed for request process (i.e. EMA vs Coalition)
- Consider monthly drills
- COHDIMS needs revised – difficulty to navigate, remote options
- HSIN
- SOPs for notifications – EEIs for specific incidents
- Opt in or Opt out receiving TENS alert – local coalitions do a review of TENS recipients
- Alert members, sharing information, obtain information, report facility status and patient tracking
- Is there a better way to get the information to coalition members? So many emails from COTS - who is receiving the information when emails are sent from COTS or local coalition leads. Include in TENS who the message is going to or tine stamp. Maybe a situational awareness sharing platform (i.e. announcement section).

Valued Services

Exercises and training

24/7 HIL response

SMEs

Exercises need to tie back to HVA

Use TTX in box for hospitals to test at their own facility

Use partners to serve as evaluators in the region

How to write an AAR training

Relationship building – networking events for collaboration

Internship for EMs

- Host a COTS open house
- Better education about what is happening in the field
- Best practices and sharing of plans/information - platform/site
- Strike teams – consider developing
- LE and Physician engagement (retired)
- Regional Planning
- Resource Sharing
- Full Scale Exercises – Large Scale with longer play time
- Off shift drills/exercises
- Best practice in the state for coalitions
- Conference Calls

Core Members and Other Members Engaged

- Missing Law Enforcement in local and regional level
- Tiered notifications (who gets what alerts)
- Task forces by disciplines (i.e. LTCFs)
- What are each other resources?
- LEPC connections with the local coalitions
- Local Lead- time commitment
- Local TTXs participation was better than a normal meeting
- Define member groups better – commitment levels (need a dedicated representative from PSAP, mental health agencies)
- Community Engagement – looking at upcoming events and communicate with the public
- Partner more with MRC as back up to coalition members

Plans and Procedures

- ✓Regional Response Plan
- ✓Regional Preparedness Plan
- ✓Pediatric Surge Annex
- ✓Burn Surge Annex
- ✓Infectious Disease Annex
- ✓Regional Surge Annex
- ✓Continuity of Operations Plan
- ✓Radiation Surge Annex
- ✓Chemical Surge Annex

Surge/Response

- HCC is able to provide bed status in 1 hour
- 20% surge across the coalition
- Off loading of patients with LTCFs
- Process for load balancing
- Engagement of trauma centers and leadership
- Blood bank engagement
- Pre event response
- Volunteer management
- HCC Hospitals have a surge plan
- HIL
- Ohio Fire Chiefs Response Plan
- Patient Tracking
- Resource Requests
- Public Messaging and PIOs
- Decon team that is decon ready
- Strike Teams
- Live CAD PERFECT WORLD

WHAT DOES A RESPONSE COALITION LOOK LIKE

What Does a Response Ready Coalition Look Like?
• Coordinating Agency
• Communication Tools/Platforms (blood) (beds/facility)
• Valued Services
• Core Members and Other Members Engaged
• Plans and Procedures
• Surge/Response (time frames/sense of urgency)

What Does a Response Ready Coalition Look Like?	
Surge/Response	
Planning	
	The HCC proactively plans for a surge PRIOR to a large mass gathering event. • Bed reporting. • Blood inventory reporting • Touchpoint conference calls • Sit/reps (Response Ready Reports [R3 Reports])
	The HCC hospitals update bed availability at least once a day to give a baseline number of available beds for the day. Some HCCs may choose to update more frequently.
	All HCC hospitals have written surge plans.
	Regional Surge Annexes are in place (peds, infectious disease et. al)
	HCC facilities have a volunteer management plan. (MRC)
	Engagement of trauma centers and leadership.
	Engagement of hospital blood banks and blood bank vendors in the region.
	MOUs are in place to assist with the response.
	HCC relationships are established prior to the event. Look for ways to build emergency management relationships.
	Agencies have caches of supplies in house for at least 96 hours of a response. (PPE, Stop the Bleed, Burn, Pediatrics, oxygen)
	Regional Caches exist as defined by the Coalition.
	The HCC provides frequent training sessions on the regional response plan and surge.

	The HCC conducts at least annual mass casualty exercises with a surge into the hospital emergency departments.
	The HCCs located on regional or State boarders, plan and respond together.
Response	
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	to make room for incoming acute care patients to the hospital.
	Ability to load balance among hospitals with an established operations call center.
	The HCC blood banks are able to report blood inventory on a platform that is visible to all blood banks/hospitals and coordinating agency.
	A Coordinating Agency is in place to coordinate the HCC response during an incident.
	EMS has mutual aid agreements in place. (local, regional, statewide)
	A platform exists for patient tracking.
	A process exists for regional resource requests from HCC members.
	A process exists for load balancing patients pre-hospital during a large-scale event.
	All HCC hospitals maintain an active decon team that is mission ready.
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	The coordinating agency, hospitals and coalition members are able to pivot response actions based on the need during a response.
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	The HCC provides an optional Emergency Management Strike Team, upon request only, to assist hospital/facility EM Point of Contact (POC) during an incident impacting their facility.
Recovery	
	If funding is available, re-establish used cache items.
	Return borrowed equipment.
	Return to Steady State.
	Always evaluate the response, write an after-action report and close any identified gaps.

2023-2024 Responses

Central

- The Arnold Sports Festival
- Red, White and Boom
- Home OSU Football Games
- Columbus Marathon
- Pride Festival
- Rickenbacker Air Show
- Licking County Bus Crash- MCI
- Logan County EF3 Tornado- MCI
- Bat Exposure to 250 campers/Vaccine
- CrowdStrike Outage
- Fentanyl Exposure at Corrections Facility
- Vehicle into a Restaurant MCI
- Solar Eclipse- path of totality- 2+ years of planning

SE/SEC

- County Water Main Break
- Blood Shortage
- Meningitis Outbreak
- Blood Cultural Shortage
- Solar Eclipse Response
- Severe Weather – Tornados
- Super loads
- Rabies Exposure
- CrowdStrike IT System Outage
- Flooding
- Correctional Institution Botulism Outbreak
- Temperature Extremes – Heat Advisory
- Nursing Home Water Disruption

Questions?

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WHAT DOES A RESPONSE COALITION LOOK LIKE

What Does a Response Ready Coalition Look Like?
• Coordinating Agency
• Communication Tools/Platforms (blood) (beds/facility)
• Valued Services
• Core Members and Other Members Engaged
• Plans and Procedures
• Surge/Response (time frames/sense of urgency)

What Does a Response Ready Coalition Look Like?	
Coordinating Agency	
Planning	
√	Educated and experienced healthcare emergency preparedness and response staff that are trained in healthcare coalition response.
	Establish appropriate MOUs with organizations to provide support (i.e., OP3 organizations).
	Facilitate increased collaboration and communication of partners in the region.
	Help coalition member organizations obtain incident-related information that is not otherwise readily available.
	The Coalition response organization can serve as the official representative of member organizations to see incident details that are important to the healthcare response.
	Ability to convene (often virtually) specific personnel from coalition member organizations to discuss strategic issues or make policy recommendations related to the healthcare response.
	The Healthcare Coalition (HCC) has an engaged medical professional in the Clinical Advisor Role.
	Standardize triggers and indicators to activate a coordination agency.
	Need stable funding to support a coordination agency.
	Identify a main representative from each CMS type as an SME. They get special recognition (ex: coalition representative of LTC.) They are listed on the website and have a responsibility to represent the coalition. They can help to identify planning, trainings/exercise needs, and resources, etc. in addition be an SME to other agencies.
	Research among high-performing HCCs has found that their greatest value is the community and regional partnership that

	enables interoperability among organizations, open sharing of resources and information, and improved communication among agencies and the public.[1]
Response	
	Coordinating agency has staff available 24/7 for healthcare emergencies and disasters.
	The coordinating agency is able to activate the coalition response within 30 minutes of notification.
	Facilitate the coordination of response actions among member organizations.
	Facilitates information sharing among participating healthcare organizations and with jurisdictional authorities to promote common situational awareness.
	Promote a common operating picture (situational awareness) between coalition member organizations and the community response.
	Provide an outlet for recommendations from the jurisdictional agency to coalition members (i.e., treatment protocols.)
	Coordinate information sharing with other regional healthcare coalitions to enhance situational awareness about an incident and promote a common operating picture regarding the regional healthcare response.
	Promote consistent and effective healthcare response actions between HCC across the affected regions.
	Serves as the liaison to state and federal agencies.
	A process exists to communicate with on scene Incident Command.
	A process exists to communicate with local county EMA/EOC.
	Ability to better coordinate and communicate across regions and at the state and federal levels.
Recovery	

	A process improvement program for people to identify any concerns, issues, best practices, etc. that is available with an anonymous option

What Does a Response Ready Coalition Look Like?	
Communication Tools and Platforms	
Planning	
√	Ability to provide notification to member organizations that an actual or potential incident is developing. This allows for very rapid response on a 24/7 basis. *Bonus if alerting system provides for text messages.
	Hospitals provide bed availability twice a day for situational awareness during non-event times.

	The HCC conducts focused drills with targeted groups on communication platforms to maintain competencies and assure key staff have access to the systems. (valid log in) • Consider monthly drills
	The HCC conducts regular system maintenance and upgrades on their communication platform and tools. This ensures systems are up to date and provide the latest needs/requests by HCC and partners.
	Local county HCCs should consider adopting communication system processes/best practices/Communication SOPs from the larger HCC.
Response	
	Platform provides a way to report ED business at specific times of the day and as changes occur.
	Ability to report available beds at a hospital per bed type.
	Ability to report available beds at non-hospitals with in-patient capacity.
	Ability to report facility situational status upon request.
	HCC has a platform for documenting hospital POD location logistics.
	Platform available to report blood inventory at each hospital.
	Platform provides a mechanism to rapidly disseminate information to coalition member organizations so that they can effectively and safely participate in emergency response.
	Platform to provide incident updates to HCC partners.
	Ability to track incident patients treated by coalition organizations to maintain accountability for patients and facilitate family reunification efforts.
	Platform provides a way to request and track resources. *HCC to provide frequent training on the process of requesting resources.

	HCC possesses a central location [with link] to share real-time information for leadership to engage in conversation. [suggestions included a platform like HSIN]
	HCC has video conferencing capability.
Recovery	

What Does a Response Ready Coalition Look Like?	
Valued Services	
Planning	
√	The HCC has a Training and Exercise Program that provides ongoing training and regular exercises necessary to ensure that personnel/volunteers are well-prepared to respond to emergencies. This includes drills for various scenarios, VR, simulation exercises and continuous learning opportunities.
	The HCC provides exercises for hospitals and coalition members to test regional plans. Consider conducting exercises during off hours such as at shift change, during evenings, or weekends. TTX in a box may be an option to provide.
	The HCC provides Peer Exercise Evaluator Teams for a “fresh set of eyes” and subject matter experts. (SME)
	HCCs should consider conducting longer Full-Scale Exercises (FSE’s) of at least four (4) hours or multiple days. Two (2) hour full-scale exercises do not often properly test patient tracking throughout the incident, inpatient surge, allocation of scarce resources. (supplies, personnel, CT/MRI/OR/critical labs…).

	Provide free training opportunities with emergency preparedness topics. (e.g., Regional Bootcamp, Situation awareness tools [EMResource, EMTrack] SALT Triage, HICS, NIMS, FEMA, TEEX, etc.)
	The HCC educates HCC members on the EMS role in the field during an incident.
	The HCC provides an online Lessons Learned and Information Sharing (LLIS) website for members to share AARs, plans and best practices.
	Access to the Coordinating Agency.
	Access to regional resources and resource requests shared to all partners.
	The HCC has deliverables that assist in meeting survey requirements (TJC, DNV, ACS, CMS, CARF, ABA)
	The HCC provides a document detailing the Coalition Benefits annually.
	The HCC provides a document detailing the Coalition Accomplishments annually.
	The HCC provides an opportunity to participate in region wide planning together and relationship building efforts.
	The HCC builds resilience and ensures continuity of essential services as key aspects of a response-ready coalition's capabilities. This involves contingency planning, backup systems, and adaptive strategies to cope with evolving challenges.
	The HCC conducts focused drills with targeted groups on communication platforms to maintain competencies and assure key staff have access to the systems. (log ins are valid and new staff have access)
	The HCC provides the ability to purchase supplies and equipment together.

	The HCC conducts goal planning that looks at deliverables and identifies additional goals that value all types of members. Goals can be discussed during the IPPW.
	The HCC provides the opportunity to share best practices on how facility Emergency Managers can integrate into their organization to ensure stakeholders see the value of the EM program. (not just when needed for an incident) Leadership buy-in.
	The HCC provides SMEs to assess agency/organization's program. (e.g., chemical decon, radiological response, MCI, Hospital Command Center, etc.)
	The HCC provides training on how to write an AAR.
	FSEs conducted by the HCC should focus on HVA's, especially severe weather events that may require a Long-Term Care (LTC) or hospital evacuation.
	Members are invited to an annual Summit/Conference provided by the coordinating agency that provides valuable education and networking opportunities.
Response	
	Collect, compile and report situation updates and other data from coalition members to the relevant jurisdiction agency to enhance situational awareness. Reported data can include how the hazard has impacted coalition members.
	Opportunity to participate in region wide planning and relationship building efforts.
	No agency is on an island unto themselves. We respond as a coalition.
	Access to the Coordinating Agency 24/7/365
	Access to regional resources and coordination of resource requests shared to all partners.
	The HCC collects, compiles, and reports situational updates and other data from coalition members to the relevant jurisdiction

	agency to enhance situational awareness. Reported data can include how the hazard has impacted HCC members.
	The HCC has a process for how coordination occurs once an event happens that is consistent.
	The HCC provides an optional Emergency Management Strike Team, upon request only, to assist hospital/facility EM Point of Contact (POC) during an incident impacting their facility.
Recovery/Blue Sky Days	
	The HCC works with colleges and universities that have Emergency Management (EM) Programs to provide their students with mentorship opportunities, assistance with capstone projects, and/or internships. This will also benefit the HCC with a pool of qualified candidates in this limited job applicant field.
	Provide an EM Open House with tables set up to share the mission, vision and capabilities of the HCC and the coordinating agency. This Open House could be offered to agency/organization leadership to be better acquainted with what the HCC does, and increase buy in for internal preparedness efforts.
	Engage physicians and retired physicians in planning, training, exercises, and real-world responses. (e.g., dentists assisted with vaccines during COVID)
	The Improvement Plan (IPP) closes the loop on Areas of Improvement identified during previous exercises, drills, and actual events.

What Does a Response Ready Coalition Look Like?	
Core Members and other Healthcare Members Engaged	
Planning	
√	Active members have signed a regional MOU to participate in the Coalition.
	Healthcare partners will work together for a common good despite day-to-day competition, especially if a fair platform with transparent decision-making is provided for this functional relationship.

	Healthcare leadership is engaged.
	Healthcare clinicians are engaged.
	Comprehensive healthcare membership with the four core entities: hospitals, EMS, EMA, public health, *and Law Enforcement*.
	The HCC engages multi-disciplinary members to build partnerships, reduce gaps, mitigate impact, increase capabilities to be response ready. (non-participating members become a weak link for the coalition)
	Members engage in all hazards personal preparedness activities to strengthen the coalition as a whole.
	HCC members are engaged and prepared to make the HCC stronger.
	Non-healthcare agencies participate in the healthcare coalition to support non-healthcare needs (financial, space, things) (Huntington Bank, Convention Center)
	The HCC is Mission Ready.
	HCCs with trauma centers have trauma leadership engaged in the planning and exercises for mass casualty events.
	HCCs meet in person to build relationships during the planning stage- before the response.
	HCC members engage in community/social events (maybe organized by discipline) to build relationships with essential partners.
	Core Members plan and prepare for large mass gathering events.
	The HCC establishes levels of participation. 1. Active Coalition Members are organizations that participate in at least two of the following coalition activities: a. Strategic planning b. Attend coalition meetings.

	c. Exercise planning and participation in exercises. d. Preparedness and Response Plan creation and review e. Resource coordination f. Information sharing g. Engagement in Memorandum of Understanding or other contracting process with HPP subrecipient 2. Participants: receive information from the local HCC lead/Coordinating agency but are not active members
Response	
	The coalition has a structured trigger algorithm for notifications and engagement of members. • Primary Core Members: PH, EMA, EMA. Hospitals • Secondary Members: LTC, HH, Hospice, etc. Only activated if needed by discipline (reduce the noise)
	Information sharing is a two-way street. The coordinating agency provides information related to the incident and HCC members provide situational awareness in their facilities.
Recovery	

What Does a Response Ready Coalition Look Like?	
Regional Coalition Plans and Procedures	
√	Regional Response Plan
√	Regional Preparedness Plan
√	Pediatric Surge Annex
√	Burn Surge Annex
√	Infectious Disease Annex
√	Regional Surge Annex
√	Continuity of Operations Plan
√	Radiation Surge Annex
√	Chemical Surge Annex

What Does a Response Ready Coalition Look Like?	
Surge/Response	
Planning	
	The HCC proactively plans for a surge PRIOR to a large mass gathering event. • Bed reporting. • Blood inventory reporting • Touchpoint conference calls • Sit/reps (Response Ready Reports [R3 Reports])
	The HCC hospitals update bed availability at least once a day to give a baseline number of available beds for the day. Some HCCs may choose to update more frequently.
	All HCC hospitals have written surge plans.
	Regional Surge Annexes are in place (peds, infectious disease et. al)
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	Return borrowed equipment.
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	Always evaluate the response, write an after-action report and close any identified gaps.

What Does a Response Ready Coalition Look Like?	
Resources	
√	The HCC has an established process to request resources.
	Access to regional stockpiles and assets.

	HCC members maintain and share an asset list so other members know what they may be able to request/share.

What Does a Response Ready Coalition Look Like?	
√	Recognizing that a sustainable funding model cannot rely solely on waning federal sources, ASPR also investigated potential incentives for meaningful and sustainable health-care sector investment in readiness,[16] for example, by linking coalition participation to hospital accreditation and/or reimbursement requirements. However, to date, these potential incentives have yet to be implemented.
	While some HCCs have developed significant operational response capabilities,[18] many others see themselves as a resource support network[19] or planning entity[20] rather than an active partner in response.

Exhibit 1-5. Preparedness versus Response Organization

Preparedness Organization:

- Provides a structure and function to manage the coordination of emergency management activities, which take place in a non-emergency context.
- Conducts emergency management program activities, including committee meetings, EOP development, preparedness planning, training, exercises, resource management, and program evaluation and improvement.

Response Organization:

- Provides a structure and function to manage the coordination of actions to achieve objectives under emergency conditions.
- Conducts information management, emergency decision-making, incident planning, actions to implement decisions, and coordination of resources.