

Nebraska Regional Disaster Health Response Ecosystem (NRDHRE)

Connecting the Dots.....

Shelly Schwedhelm, MSN, RN, NEA-BC

Learning Objectives

- ☐ Participants will become familiar with the overall demonstration grant objectives.
- ☐ Participants will learn about the benefits and challenges of implementation using the healthcare coalition framework.
- ☐ Participants will identify several strategies that could be considered for implementation in their region.



Purpose & Vision

Regional Disaster Health Response System

In a disaster (e.g., earthquake, radiological event), thousands of Americans may require immediate medical specialty care, surpassing the care available in the community.

In response, the U.S. Department of Health and Human Services' Office of the Assistant Secretary for Preparedness and Response (ASPR) awarded demonstration grants to demonstrate how a new Regional Disaster Health Response System (RDHRS) could meet these needs in a disaster.



RDHRS Goals



- ▶ **Integrating Medical Response Capabilities**
to include community-based and non-traditional response



- ▶ **Expanding Specialty Care Expertise**
telepresence and mobile teams for trauma, chemical, biological, radiological, nuclear, and pediatric injuries



- ▶ **Coordinating Medical Response**
through increased situational awareness and information sharing



- ▶ **Integrating Measures of Preparedness**
into daily priorities through healthcare and community system incentives



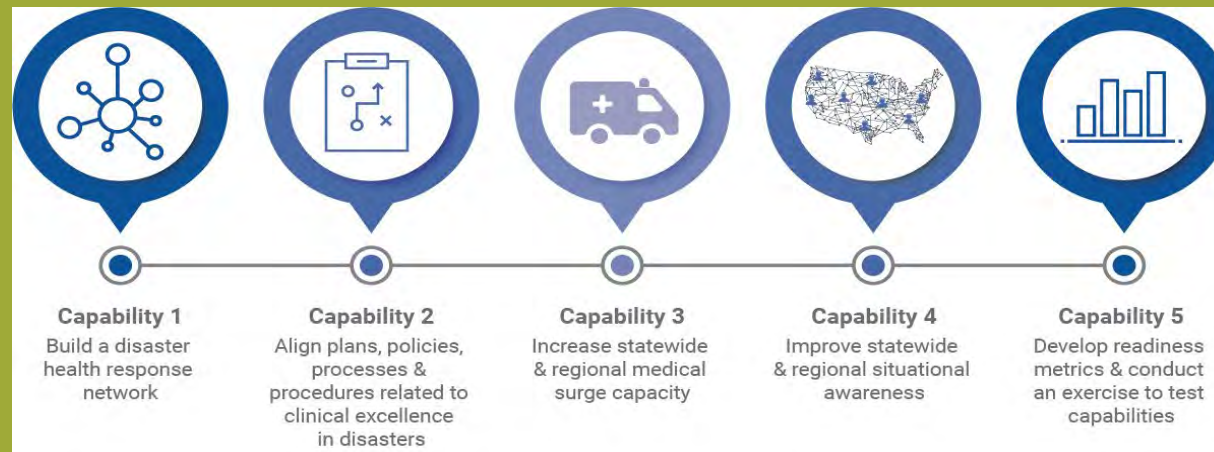
- ▶ **Building on Regional Healthcare Coalitions**
and better integrating public and private sector partners to improve preparedness and response



Purpose & Vision

Key Response Capabilities

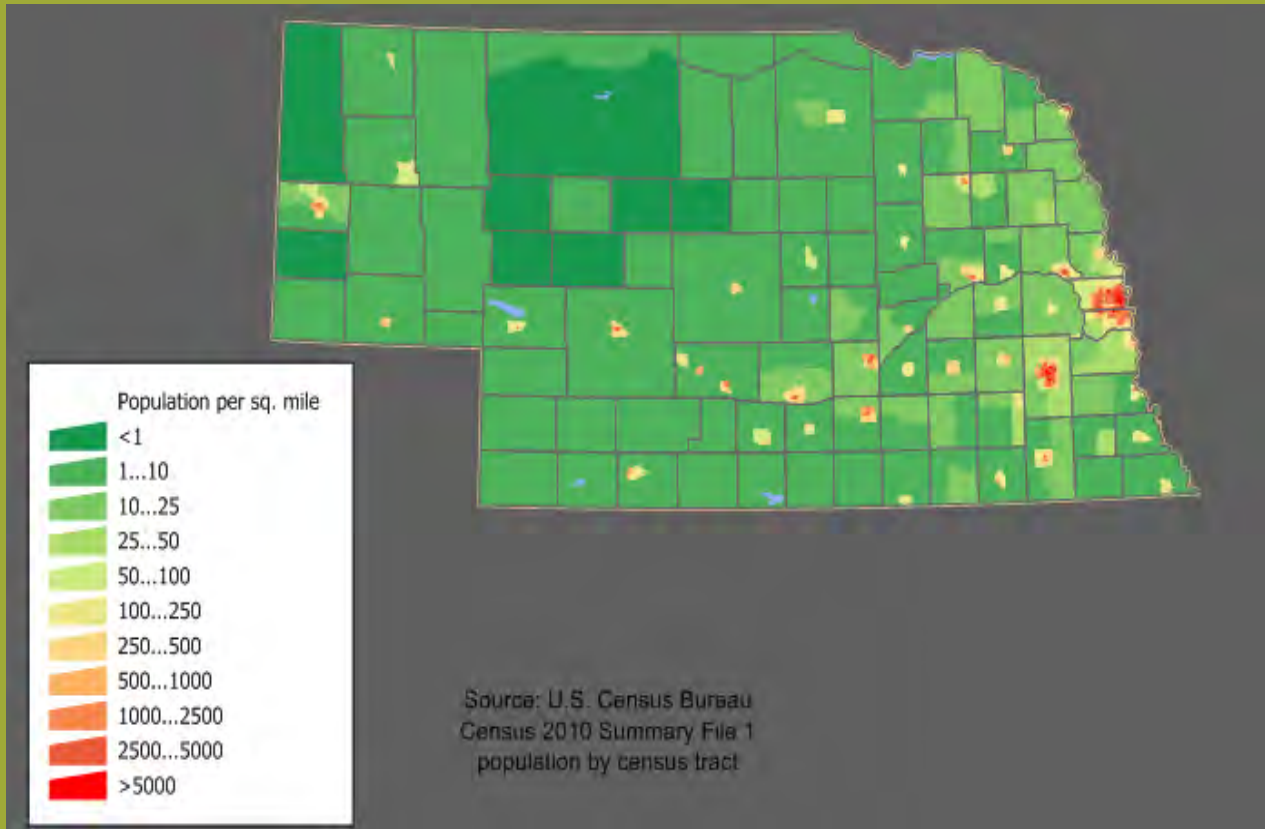
Applicants must demonstrate the following capabilities in support of a coordinated, statewide and regional emergency response:



Each **Capability** consists of one or more **Objectives**.
Each **Objective** contains one or more **Activities**.
Each **Activity** has a set of specific items that must be addressed.



Why Nebraska?



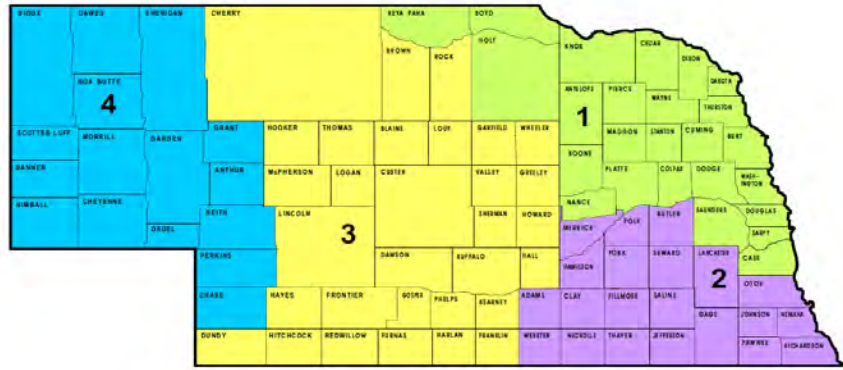
One of the top 3 states with most disaster declarations since 1960

Urban, Rural and Frontier locations

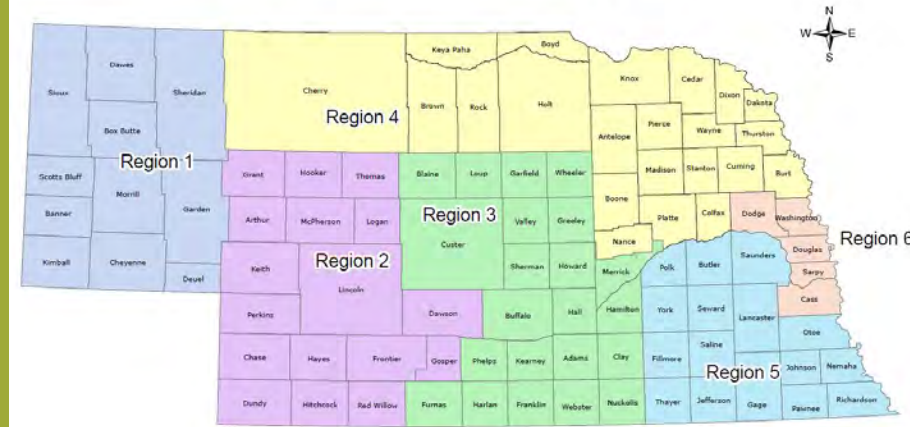


Demographics & Regions

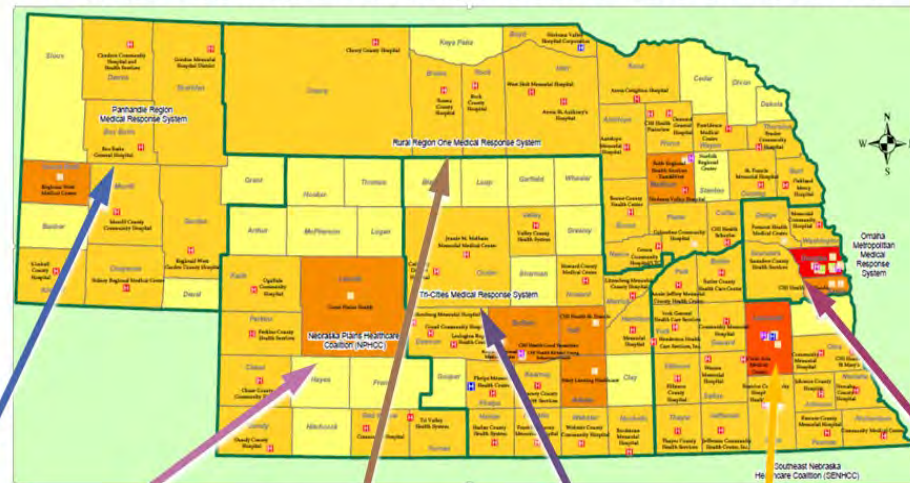
Nebraska Department of Health & Human Services
EMS/Trauma Program
Trauma System Regions



Behavioral Health Regions



Nebraska Healthcare Coalitions



PRMRS

NPHCC

RROMRS

TRIMRS

SENHCC

OMHCC



Purpose & Vision

NRDHRE Philosophy: Building an ecosystem for regional disaster health system response

Ecosystem – *self-sustaining community comprised of inter-dependent organisms...and their natural environment*

Ecosystems are:

- Diverse*** Expand outside of healthcare facilities to include first responders, emergency management, community organizations, private sector, private citizens
- Interconnected*** Create knowledge-sharing platforms and expand lines of communication
- Redundant*** Develop tiered systems for disaster healthcare surge that expand capacity and increase specialty care access
- Dynamic*** Evolve and align response to be self-actuating and situationally adaptive
- Self sustaining*** Explore economic incentives in health system, government, and business community to develop public-private partnerships for preparedness investment



Diverse

Expand outside of healthcare facilities to include first responders, emergency management, community organizations, private sector, private citizens

Diverse

Regional Engagement and Relationship Building

Southeast HCC
 Omaha HCC
 Nebraska Department of Health and Human Services
 Dept. of Corrections
 Nebraska National Guard
 Nebraska Public Health Laboratory
 Fusion Center
 Governor's Policy Group
 RROMRS
 NEMA
 County EM (NAEM)
 TRIMRS
 Physicians Mutual
 Children's Physicians and Children's Specialty Physicians
 Omaha VA Hospital
 ORAU
 Southeast District Health Department
 NSRI
 Team Rubicon
 Region 6 Behavioral Healthcare
 Nebraska State Trauma Advisory Board
 Nebraska State Emergency Health Systems Office
 VA Nebraska-Western Iowa Health Care System
 Offutt 55th Medical Group
 NeDHHS: DMAT/DMORT/ESAR-VHP/MRC Teams
 Nebraska Task Force 1
 Nemaha County Hospital
 Faith Regional Health
 Great Plains Health
 Bryan Health & Bryan Medical Center
 Nebraska Medicine - Bellevue Hospital
 CHI Health & CHI Bergan Mercy Hospital
 Methodist Health System & Methodist Hospital
 CHI Health



Omaha Metro Healthcare Coalition (OMHCC)

Nebraska Medical Reserve Corps
 Douglas County Public Health Department
 Sarpy/Cass County Public Health Department
 Three Rivers Public Health Department
 Lincoln-Lancaster County Public Health Department
 Mills County Public Health Department
 The Governor of the State of Nebraska
 Nebraska State Trauma System
 Douglas Co Emergency Management
 Omaha Fire Department/EMS
 Nebraska Medicine
 University of Nebraska Medical Center
 National Ebola Training & Education Center
 Region VII EMS & Exercise Committees
 National Strategic Research Institute
 Global Center for Health Security
 Center for Preparedness Education
 HEROES Program
 Nebraska Infection Control Network
 Nebraska Public Health Laboratory
 Nebraska Regional Poison Control Center
 American Association of Poison Control Centers
 American Red Cross – Kansas/Nebraska/SW Iowa Region
 Omaha Chamber of Commerce
 Nebraska State Chamber of Commerce and Industry
 Nebraska Hospital Association
 Nebraska Healthcare Association
 Nebraska Nursing Facility Association
 Nebraska Assisted Living Association
 Nebraska Hospice and Palliative Care Association
 Licensed Practical Nurse Association of Nebraska
 Nebraska Association of Local Public Health Directors
 Public Health Association of Nebraska

Executive Council

- Children's Hospital
- Omaha VA
- Region 6 Behavioral Health
- NEMA
- Nebraska DHHS
- Omaha Chamber of Commerce
- UNMC Chancellor
- Nebraska Medicine CMO
- Community Representative
- United States Air Force-STRATCOM

Coordinating Council

- Healthcare coalition coordinators
- Emergency Services Representative
- Trauma Coordinators
- Trauma surgeon
- Emergency Management
- National Strategic Research Institute
- Nebraska DHHS
- Air National Guard

Grant Faculty

- Medical Director
- Executive Director
- Capability Leaders



Back to the Basics



Meet them where they are...



Grant Faculty:

- Participated in monthly coalition calls with state health department
- Attended coalition meetings in person
- Facilitated workshops
- Facilitated exercises

Challenges & Solutions

Challenges:

- Gaining the participation of numerous agencies/individuals that were already full-time-plus (Healthcare Coalition Coordinators)
- 80% EMS in Nebraska are volunteer based
- Perception in state that “Omaha is telling us what to do (again)”

Solutions:

- Showing time savings by HCC’s in terms of their HPP/PHEP requirements
- Being present across the state-site visits, workshops and exercises held outside of Omaha to explain the project and demonstrate that “we are listening”
- Seeking review of key concepts, products and models from all coalitions, integrating as able and closing the loop with final results

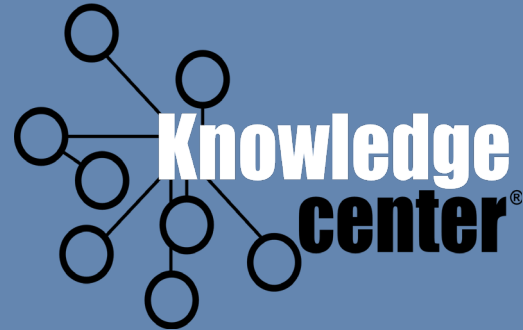


Interconnected

**Create knowledge-sharing platforms and
expand lines of communication**

Interconnected

Healthcare



Emergency Management



Panhandle Public Health District



Omaha Metro Healthcare Coalition (OMHCC)



Highlights: Knowledge Center Go-Live & Immediate Use

Knowledge Center officially went live on July 8th and was put into immediate use with flooding that impacted the state on July 9th

Log ID	Event ID	Description	Priority	Status	Type	Activity Date	Entered Date	Entered By
14101	1473 - FLOODING/Statewide/Beginning 5.22.2019	Document added- Lexington Disaster Declaration 7.9.2019 (Sent from: ICKC)	L	Remote	CMD	07/11/19 12:00	07/11/19 12:02	Burmester, Jill Program Specialist-Watch Center
14092	1473 - FLOODING/Statewide/Beginning 5.22.2019	As of 9:30 a.m. July 11, 2019, Nebraska Public Power District (NPPD) has 24 meters out of service from the original 470 from July 9, 2019 morning. NPPD cannot energize customers until they have had an electrical inspection of the residence/business and approval by the City of Kearney. NPPD is working with those inspectors as they go from location to location. Any structure that had flooding must be inspected first before being energized. Wednesday morning (July 10), there were approximately 370 meters out of service and once inspections began, those numbers lowered	L	Remote	DU	07/11/19 09:45	07/11/19 09:49	Burmester, Jill Program Specialist-Watch Center
14091	1473 - FLOODING/Statewide/Beginning 5.22.2019	Document added-Dawson County Declaration 7.11.2019 (Sent from: ICKC)	L	Remote	CMD	07/11/19 09:11	07/11/19 09:12	Burmester, Jill Program Specialist-Watch Center
14088	1473 - FLOODING/Statewide/Beginning 5.22.2019	Document added- Hall County ISR for Wood River (Sent from: ICKC)	L	Remote	CMD	07/11/19 08:58	07/11/19 08:58	Burmester, Jill Program Specialist-Watch Center
14086	1473 - FLOODING/Statewide/Beginning 5.22.2019	Document added- Hall County ISR 7.11.2019 (Sent from: ICKC)	L	Remote	CMD	07/11/19 08:48	07/11/19 08:49	Burmester, Jill Program Specialist-Watch Center
14064	1473 - FLOODING/Statewide/Beginning 5.22.2019	No Phone Service in parts of Harlan & Franklin Counties Acted on earlier phone call from Sheriff Chris Becker, Harlan County (308) 920-1190. He reported that there is not and has not been any landline phone service since 0600 yesterday (July 9th). He gave me the number of the company that they use (Eagle Communications). I call that number (855) 613-2453 and spoke with a Bryan. Bryan refused to give me his last name. he stated that they were well aware of the problem and that they were working on it - he also said that he had no idea how long it would take to get it fixed. I gave him my cell phone number and asked that he call me as soon as he had an idea	L	Remote	ESF02	07/10/19 11:24	07/10/19 11:25	Pizzi, Pamela NRD/HRE Consultant-Information Technology
14063	1473 - FLOODING/Statewide/Beginning 5.22.2019	Flood Warning/South Central Nebraska/7.10.2019 At 11:07 AM CDT the NWS in Hastings issued a flood warning for Nuckolls County, southeastern Webster County and Thayer County in south central Nebraska until 11 AM CDT Thursday. ESS by NEMA prooney #NuckollsCo #WebsterCo #ThayerCo	L	Remote	WX	07/10/19 11:08	07/10/19 11:21	Pizzi, Pamela NRD/HRE Consultant-Information Technology

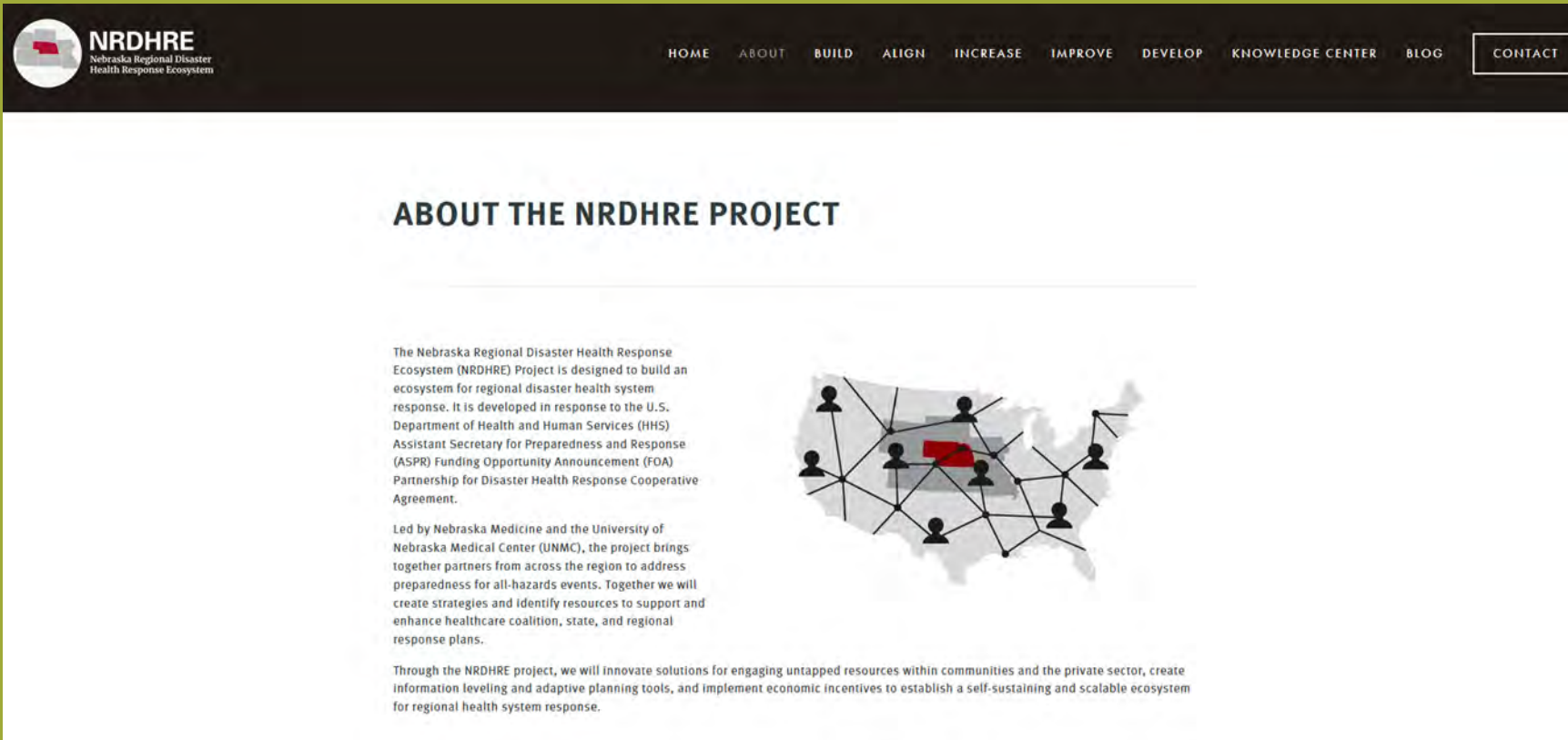


Knowledge Center

- Knowledge Center training has recently scheduled with the Santee Sioux Nation and Winnebago Tribes.
- Training numbers - Over 50 classes conducted so far
 - 363 have attended or are scheduled for training on HIMS
 - 321 have attended or are scheduled for training on ICKC
- These numbers include representatives from the following:
 - Nebraska National Guard
 - Every University of Nebraska campus
 - 14 Unique State Agencies (including the Governor's office)
 - County emergency managers (including local/county fire & sheriff)
 - Nebraska Poison Center
 - Nebraska Public Health Laboratory
 - State & Local Public Health
 - Private & Public EMS
 - 44 Unique Hospitals (including the 3 largest systems- Methodist, CHI & Nebraska Med)

*****ROI in progress***





www.nrdhre.com



Legal Reference Guide



NRDHRE
Nebraska Regional Disaster
Health Response Ecosystem

LEGAL REFERENCE GUIDE

JULY 2019

Contents include the following topics:

- Emergency Declarations (Federal, State, and Local)
- Liability Protections for Volunteers and Healthcare Workers
- Alternate Care Sites
- Crisis Standards of Care
- Isolation & Quarantine
- 1135 Waivers
- HIPAA
- EMTALA
- Vulnerable Populations
- Emergency Management Assistance Compact (EMAC)
- Nurse Licensure Compact



Challenges & Solutions

Challenges:

- Geographical spread of the state
- Legacy (stovepiped) IT and communications systems
- Limited resources for IT investment
- Resistance to “break-the-glass” solutions

Solutions:

- Identify system (KC) that can connect across diverse sectors and systems
- Demonstrate the cost/time saving benefits of KC (e.g., HVA, plan storage, family reunification)
- Aggressive training and demonstration of KC in daily work flows

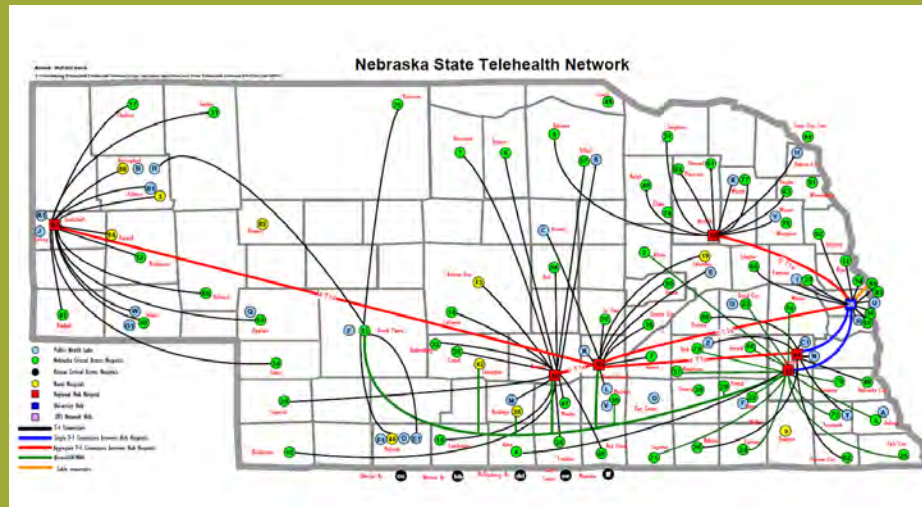


Redundant

Develop tiered systems for disaster healthcare surge that expand capacity and increase specialty care access

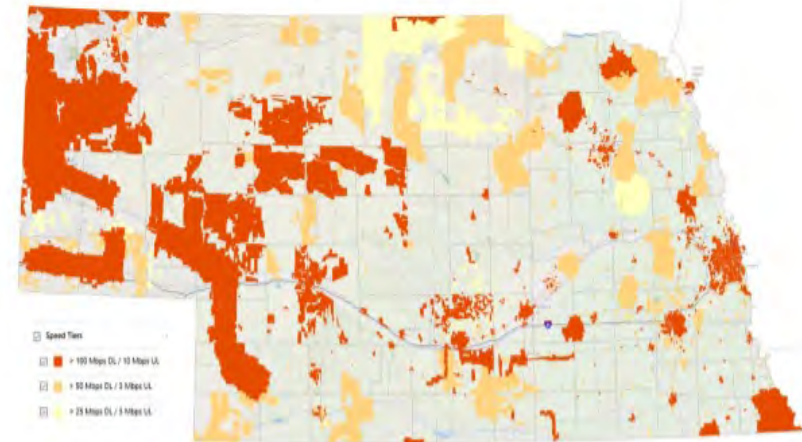
Redundant

Telehealth



Broadband Availability in Nebraska

December 2017

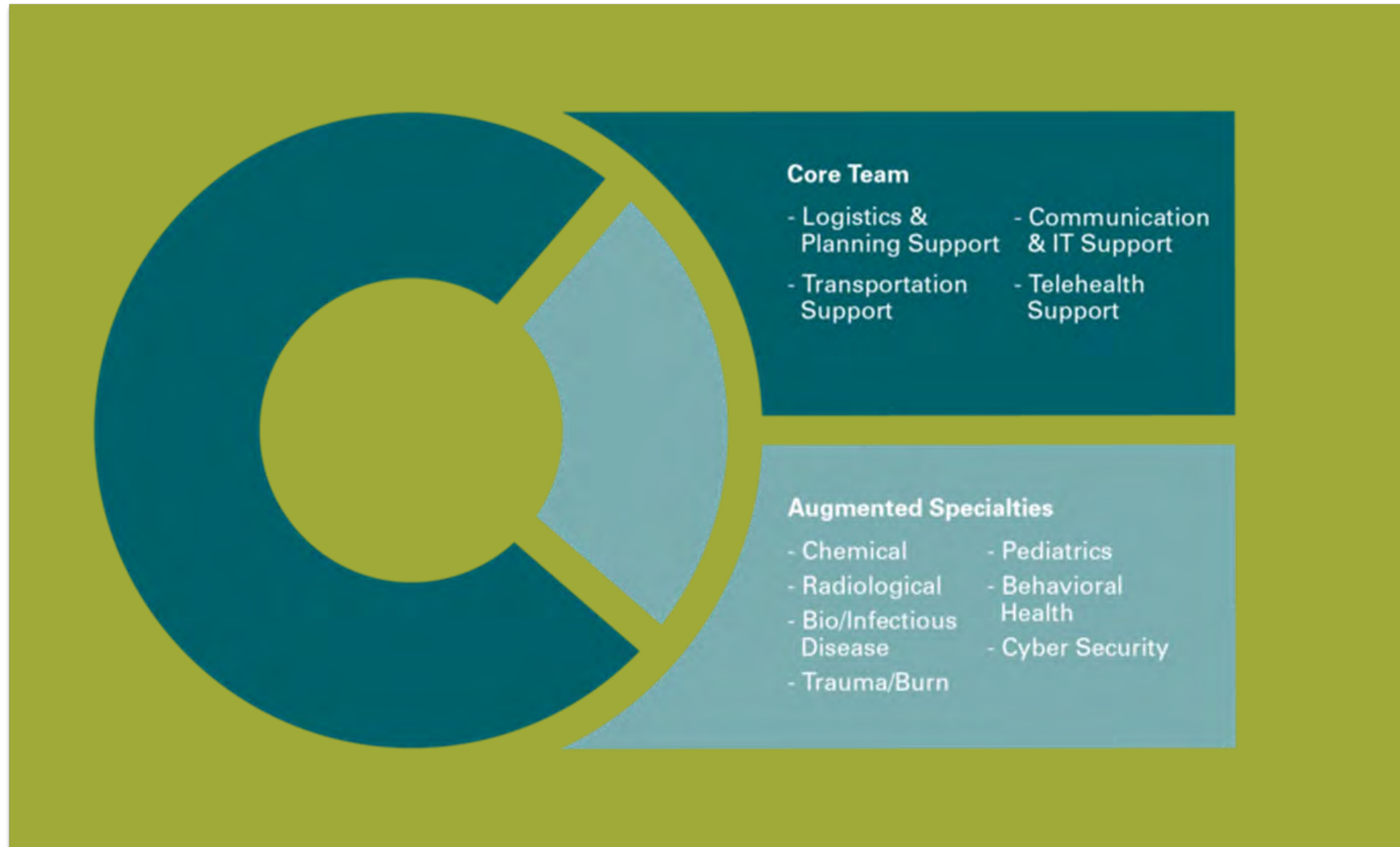


Nebraska Broadband Map using Dec. 2017 FCC Form 477 data, broadbandmap.nebraska.gov



Redundant

Specialty Teams



Cyber Security Team

The *DRAFT* team charter for the Cyber Security team has been created. The Cyber Security team will provide subject-matter-expertise in an area with very limited resources in the region.

Operations

The CyberSRT consist of a small number of Healthcare Information Technology/Information Security specialists.

The team follows the NIST Standards for Incident Response Management and is activated at the second or third step

- Preparation
- Detection and Analysis
- Containment, Eradication, and Recovery
- Post-Incident Activity

The team can assist local incident response personnel by:

- Traveling to the scene of an incident or event in order to assist in cyber security incident management.
- Traveling to the scene of an incident or event in order to provide advice and just-in-time training.
- Providing advice and training from afar via tele-technology.

Assistance & Resources

The core capabilities of the CyberSRT lie with a small group of subject matter experts (SMEs) and augmented as the situation warrants, by other subject matter experts.

The members of the team have the following qualifications:

- DoDD 8570.1 certifications covering the 4 domains (Technical, Management, Architecture & Engineering, Network Defense)

The SMEs can, among other things:

- Analyze network traffic for malfeasance
- Identify attacker artifacts and activities on a variety of different enterprise systems
- Collect and analyzing intel associated with the attack
- Analyze the malware used by attackers
- Handle an incident in an enterprise network
- Eradicate the attackers' presence from the environment



Behavioral Health Team

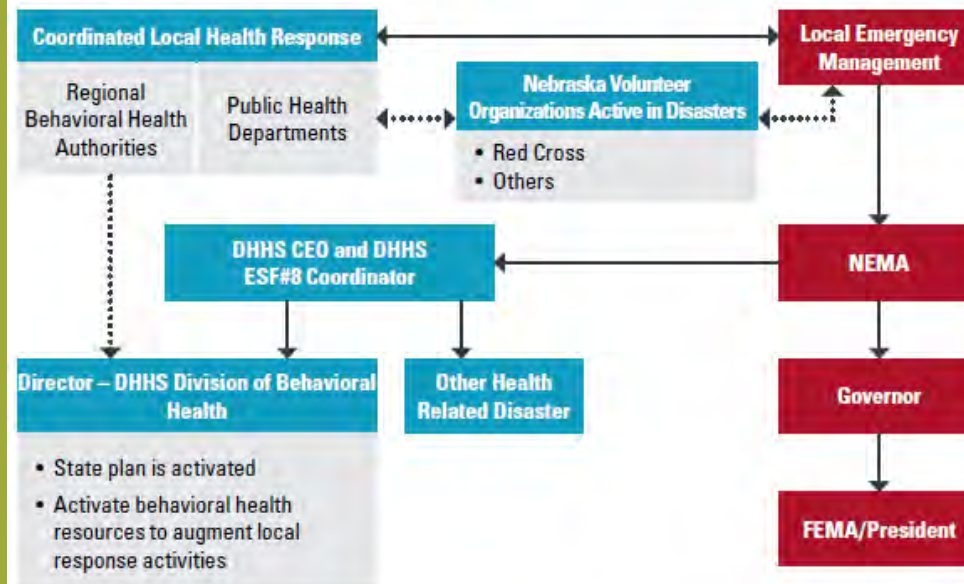
2019 Nebraska Regional Disaster Health Response Ecosystem Behavioral Health Plan

Preparedness

- Directed by Nebraska Department of Health and Human Services (DHHS) Division of Behavioral Health
- Plans carried out by the six behavioral health authorities (regions)
- State disaster behavioral health coordinators are liaisons to the regions and other agencies

Activation of disaster behavioral health resources

- County emergency management deploys public health
 - Public health activates the region's emergency behavioral health program
 - Regions may tap into Medical Reserve Corps, locally trained and managed volunteers, American Red Cross, and other voluntary organizations active in disaster



Overview of Response Coordination Among Agencies



Highlights: SIM-NE Triage Training

The SIM-NE trucks were piloted in Cass County to deliver SALT triage training. The response from participants was overwhelmingly positive. A data collection program was also piloted, which will permit improvements to be made and the ROI of training to be tracked in the future.



Challenges & Solutions

Challenges:

- Incorporate RDHRE expert consultation into existing telehealth programs/networks
- Limited resources in many areas of the state identified during risk assessment workshops
- Lack of access to specialized training needed to improve gaps identified in preparedness in rural and frontier areas

Solutions:

- Clarify the intent, purpose and scope of specialized consultation
- Develop more robust medical operations centers which incorporate all key stakeholders
- Leverage SIM NE to provide training solutions for coalition members

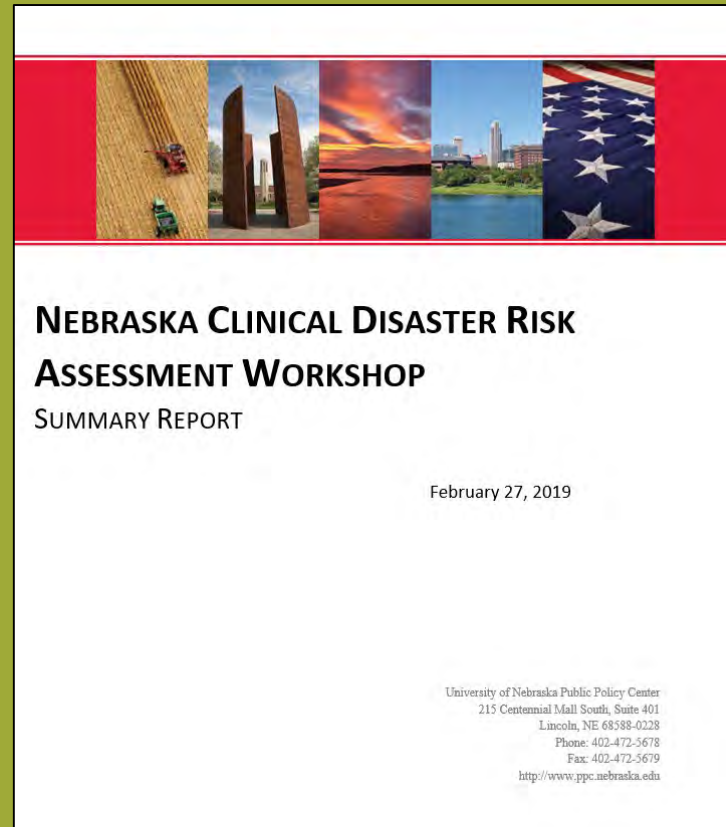


Dynamic

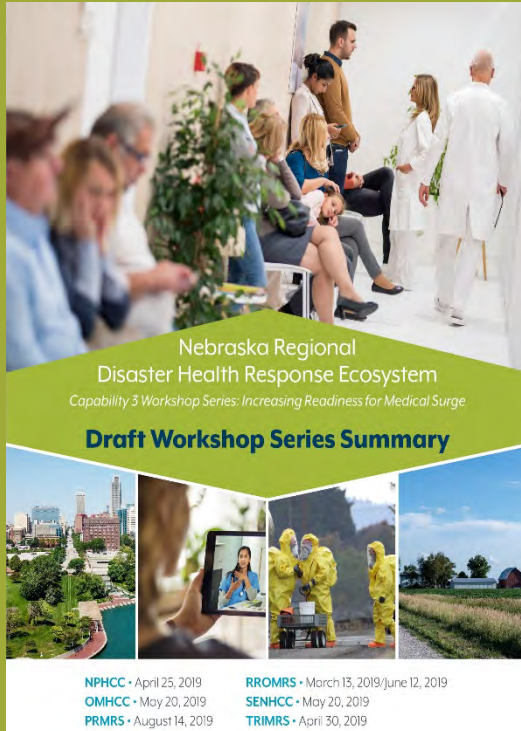
Evolve and align response to be self-actuating and situationally adaptive

Clinical Disaster Risk Assessment Workshop

A Critical Disaster Risk Assessment Workshop was held with stakeholders from across the state to identify gaps in disaster preparedness. The data from the workshop was collated into a report to use as a tool to assess, improve, and align preparedness plans in the region.



Gaps



Dynamic

Need/Gap
1. Need for standardized triage algorithm/protocol/process
2. Lack of reliable communication methods/issues with communication
3. Need to incorporate community-based and faith-based organizations in planning and response
4. Lack of staff/lack of trained staff for mass-casualty event
5. Need for more incorporation into the Incident Command System [ICS] and Unified Command
6. Inadequate exercising (exercises do not stress the system, need to include more entities)
7. Need for basic first aid training for the public (i.e., self-care)
8. Lack of ambulances and other medical transport devices
9. Issues with patient tracking during a mass-casualty event



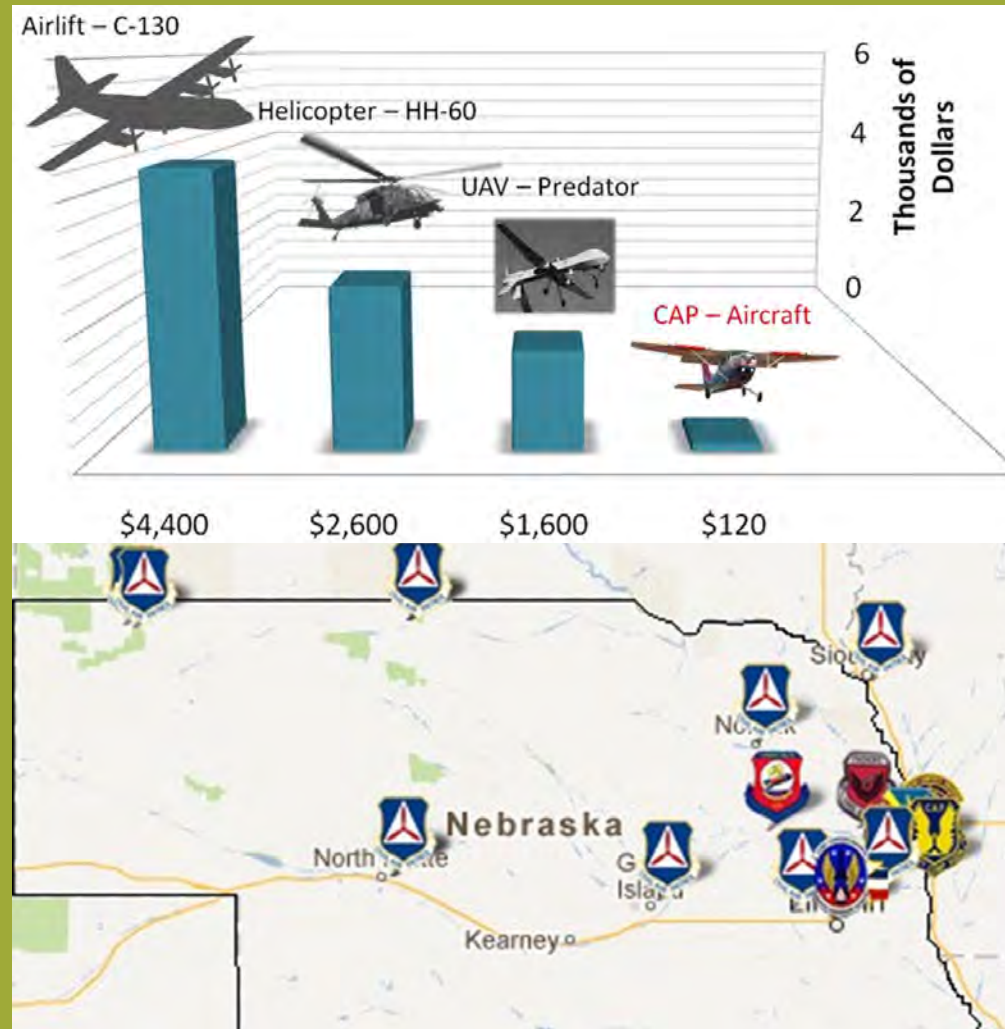
Dynamic

State, Federal, & Volunteer Assets



Civil Air Patrol

Nebraska Civil Air Patrol (NECAP) NECAP have numerous capabilities including the ability to transport specialty teams and equipment and conduct search and rescue missions. They also use an HF communications system that functions in the absence of cellular network availability.



Challenges & Solutions

Challenges:

- Varying opinions on what coalitions have the authority, accountability or ability to implement related to policies or procedures
- Large geographical areas contained within coalitions with highly variable demographics
- Lack of coordination between public health, emergency management and healthcare providers

Solutions:

- Collaborate with ASPR and coalition governing bodies to more clearly define what a coalition is or is not
- Develop more concrete regional disaster health response coordination strategies to support coalitions
- Develop action plans to assist coalitions advance and prioritize
- Develop mobile assets and asset inventories to better leverage strengths within and across coalitions



Sustainable

Explore economic incentives in health system, government, and business community to develop public-private partnerships for preparedness investment

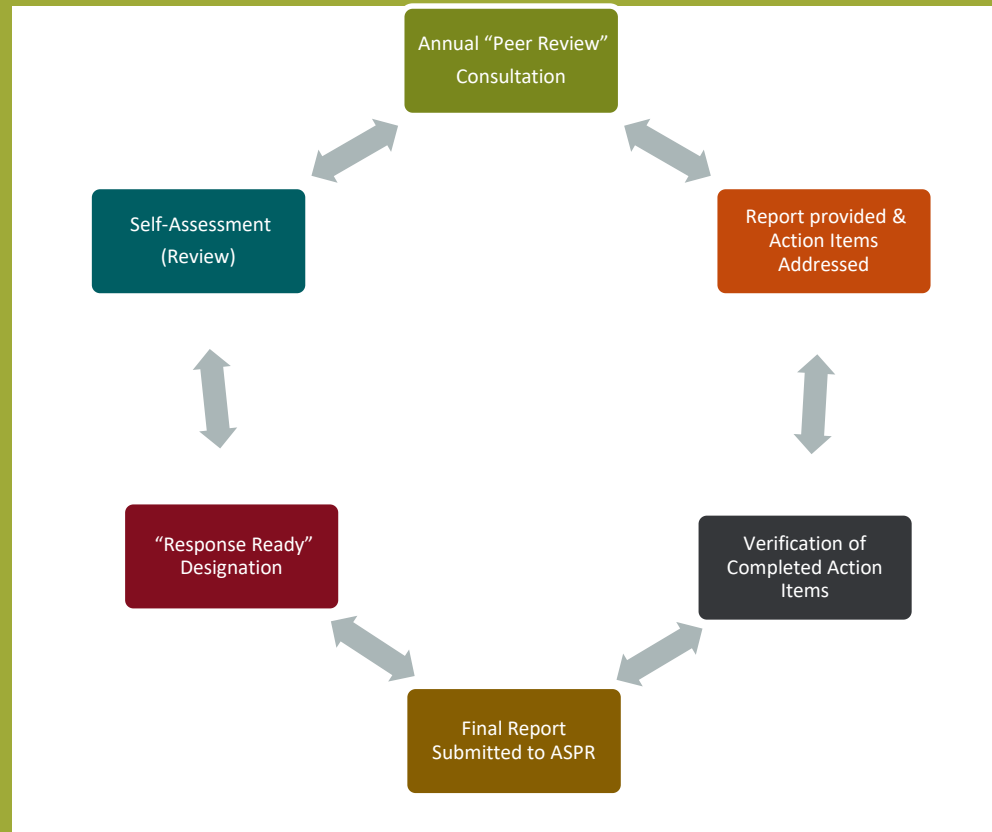
Preparedness Metrics

Example Metrics Only

Core Elements	Attributes
1. Consistent intra-coalition policies, protocols, procedures to facilitate coordinated medical surge management	a. Documentation of policies for intra-coalition coordinated medical surge management
	b. Documentation of protocols for intra-coalition coordinated medical surge management
	c. Documentation of procedures for intra-coalition coordinated medical surge management
2. Consistent inter-coalition policies, protocols, procedures to facilitate coordinated medical surge management	a. Documentation of policies for inter-coalition coordinated medical surge management
	b. Documentation of protocols for inter-coalition coordinated medical surge management
	c. Documentation of procedures for inter-coalition coordinated medical surge management
3. Consistent intra-coalition policies and procedures integrated with EMS /patient destination choices to facilitate coordinated out of hospital medical surge management	a. Documentation of policies for intra-coalition integrated with EMS/patient destination choices for coordinated out of hospital medical surge management
	b. Documentation of procedures for intra-coalition integrated with EMS/patient destination choices for coordinated out of hospital medical surge management
4. Consistent inter-coalition policies and procedures integrated with EMS /patient destination choices to facilitate coordinated out of hospital medical surge management	a. Documentation of policies for inter-coalition integrated with EMS/patient destination choices for coordinated out of hospital medical surge management
	b. Documentation of procedures for inter-coalition integrated with EMS/patient destination choices for coordinated out of hospital medical surge management



Response Readiness Designation



HEALTHCARE COALITION SELF-ASSESSMENT

Disaster Health Response Readiness Designation Program

BUILD A DISASTER RESPONSE NETWORK	ALIGN PLANS, POLICIES, PROCESSES, AND PROCEDURES RELATED TO CLINICAL EXCELLENCE IN DISASTERS	INCREASE COALITION AND INTER-COALITION MEDICAL SURGE CAPACITY	IMPROVE COALITION AND INTER-COALITION SITUATIONAL AWARENESS

NRDHRE

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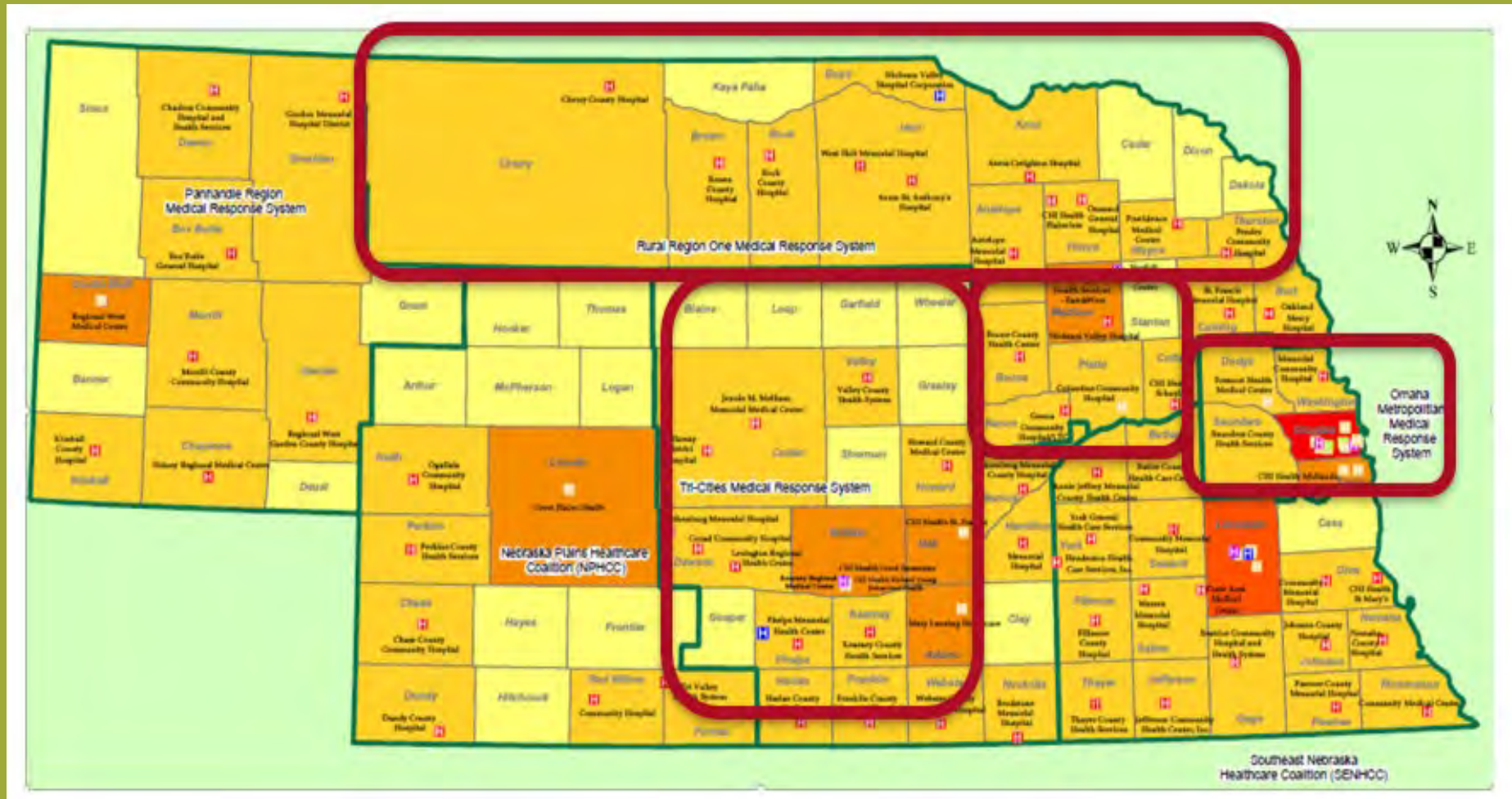
Themes & Enablers

	Self-organizing Medical Response	Tiered Casualty Management	Health System Expansion	Specialty Care Penetrance
Private Sector, Community Organization Actions	Community/business response teams, Preparedness events	First-aid, buddy-care awareness, transport assets	Business community ambassadors - credentialing	Transportation and communication assets
Economic Incentives	Business/community preparedness funds	State reimbursement mechanisms for disaster care	Insurance and underwriting discounts	Telemedicine cost reimbursement schemes
Local/Regional Adaptive Planning	Designated aid and transport stations, Good Samaritan laws	Hub and spoke system, Crisis standards of care	Outpatient asset integration, User managed inventory	Strike team training deployment plans
Education and Training Standards	Disaster life support training requirements	Mobile training (HEROES)	HCW cross training requirements	Simulation and virtual reality training
Information Sharing Platforms	Amateur radio teams, Apps and social media (Ushahidi, etc)	Knowledge Center, ASPR Med Maps integration,	Online decision support tools	Telemedicine platforms



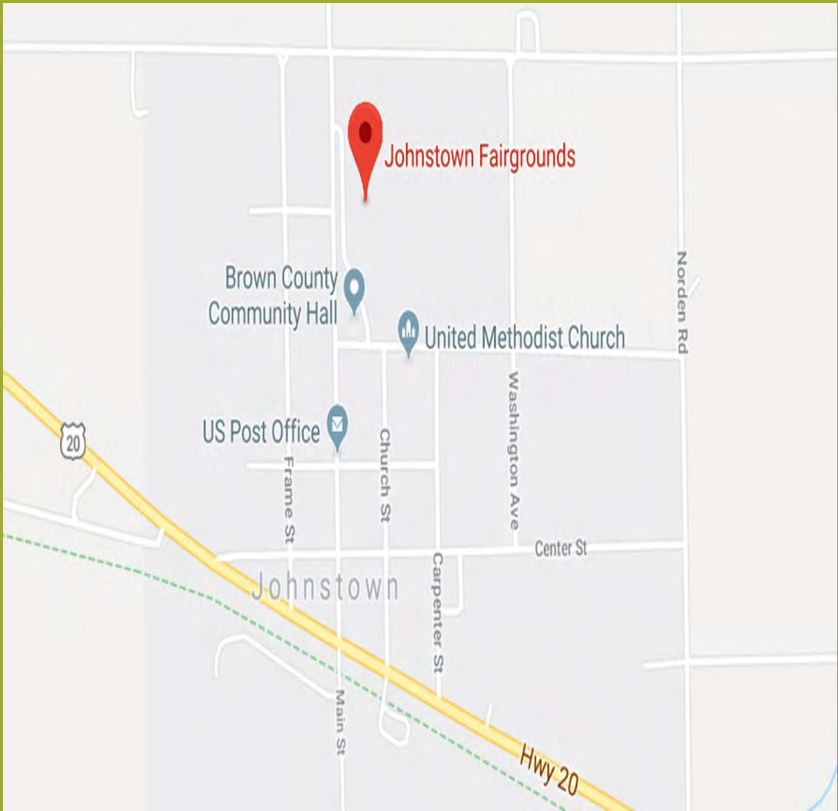
Testing the Model

Exercise Participants



Rural Full Scale

- A semi tractor trailer traveling west bound on HWY 20 loses control and crashes into a passenger van due to heavy rain. During the crash the tanker is ruptured and begins leaking all over the roadway.
- The tanker contains a chemical when mixed with water produces a toxic gas. Just a few miles north is the Johnstown Fair, in attendance are an estimated 2,000 people.



Phase		Activity Type	Event(s)
One	Notional	Initial On-Scene Actions	911 Calls start coming in for the accident on Hwy
			Local LE and FD arrive on scene, Hwy 20 is closed.
			Unified Command Established
			Scene size up for HAZMAT incident begins
			Rescue operations are started for the crash victims.
			Hospital notified of mass causality and chemical incident
			Critical Patients depart scene to Brown County Hospital.
			911 call start coming in for County Fairgrounds, people ha become ill.
			Hospital notified of chemical incident
			Chemical patients arrive at hospital
All Patients Triageed and Routed			
Two	Day 1- Roll Players	Patients Arrive at Point of Care	At-Risk Population Identification and Routing
			Regional Support Requests
			Surge Plan Criteria
PAUSE EXERCISE			
Three	Day 2- Paper Patients	Surge Plans, Patients are Moved	Outpatient Tracking
			Medical Procedure Tracking
			Patient Reunification



Exercise Day(s)



- 600 Miles
- 3 days
- 12 grant faculty
- 2 Coalitions
- Multiple hospitals
- Emergency Operations Center



Rural Functional Exercise-Testing Knowledge Center

- Multiple charter buses collide on I-80 resulting in mass casualty incident including geriatric, pediatric and adult patients.
- Affected patients requiring triage on scene, transport to appropriate facilities for treatment and care and reunification with family members.



Phase	Activity Type	Event(s)
One	Notification	911 Calls start coming in
	Initial On-Scene Actions	Local Ambulance arrives on scene, Medical Flight Services Requested, Medical Update
		Local LE and FD arrive on scene, Hwy 10 is closed, LZ Identified and Marked
		Critical Patients depart scene
		Unified Command Established
	Support	EOC Activation HICS Activation
	Other	Patients Airlifted Additional Medical Assets arrive Less Critical Patients depart scene Coroner
Two	Decision-making	All Patients Triage and Routed At-Risk Population Identification and Routing
	Notification	Regional Support Requests
	Documentation	Surge Plan Criteria
Three	Information Management	Outpatient Tracking Medical Procedure Tracking
	Notification	Patient Reunification



Key Exercise Outcomes

Strengths

- Increased recognition of unique needs in rural and frontier counties
- Successfully tested to use of specialty team capability for chemical response
- Demonstrated ability to enhance clinical expertise using telehealth in rural community hospital
- Increased collaboration and communication amongst coalition hospital members
- Identified specific ways that health care coalition coordinators can augment response in large scale incidents

Opportunities

- More clear communication on exercise expectations for participants
- Create more detailed job action sheets for use of Knowledge Center
- More clearly define roles and responsible personnel for incident response
- Expand training opportunities for HAZMAT response across rural healthcare coalitions
- Incorporate more of the established response capabilities of local emergency management into the exercise



Future Direction & Next Steps

What Next?

- Expand NRDHRE efforts to additional states and regions
- Continue collaboration with Massachusetts General Hospital
 - Compare and contrast urban and rural approaches
 - Refine readiness metrics to encompass tiered approach
- Refine and test key strategies initiated in year 1 of the demonstration period
 - Deployable specialty teams
 - Telemedicine consultation
 - Governors policy group
 - Interoperable communications system
- Pilot test the readiness metrics and further develop the conceptual model for a Response Ready Designation Program



In one word, what is one successful outcome that could result from the RDHRS regional disaster model?

📱 When poll is active, respond at PollEv.com/rdhrs 📱 Text **RDHRS** to **22333** once to join

🕵️ Answers to this poll are anonymous



In one word, what is one barrier that could reduce the success of the RDHRS regional disaster model?

🗳️ When poll is active, respond at PollEv.com/rdhhs 📱 Text **RDHRS** to **22333** once to join

🔒 Answers to this poll are anonymous



UNMC Nebraska Medicine

