Developing a Crisis Standards of Care Plan in the Midst of a Pandemic: Lessons Learned

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Speakers

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Agenda

- CSC Background
- CSC Planning in Nebraska
- CSC Legislation
- Planning Concerns for:
  - EMS
  - Critical Access Hospitals
  - Pediatrics
- Lessons Learned

- **Crisis Standards of Care (CSC)**

Demand for health care services and supply of resources as a function of time after disaster onset

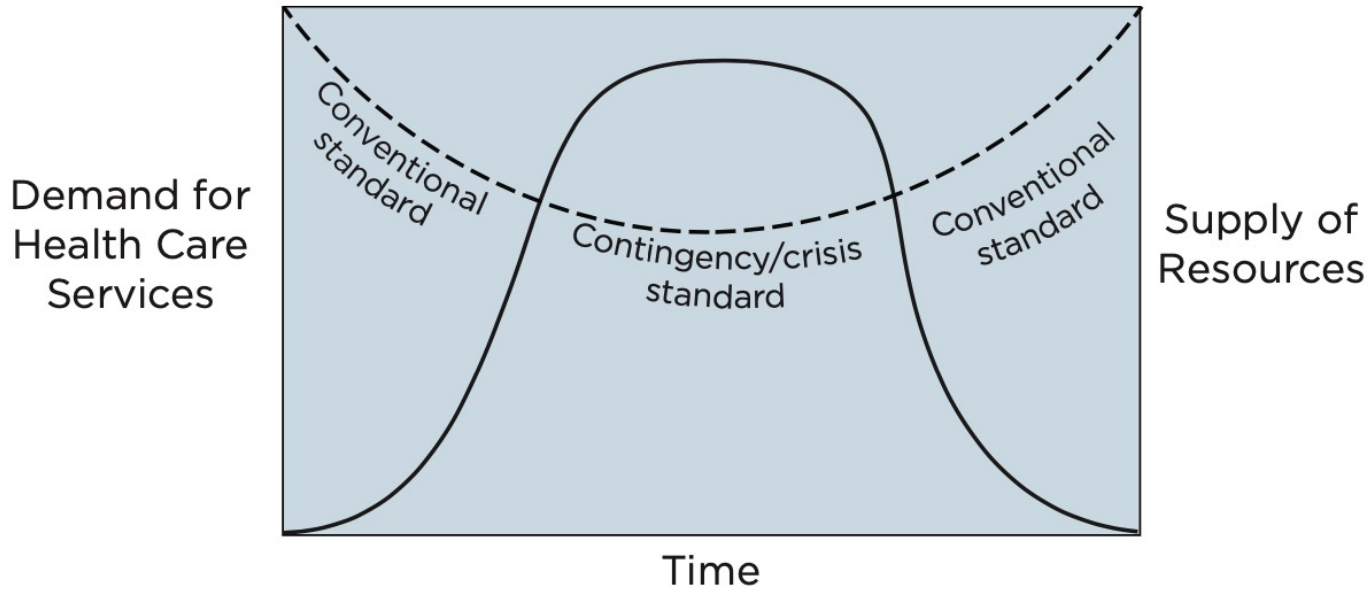


FIGURE 2-3
Demand for health care services and supply of resources as a function of time after disaster onset.

https://www.nap.edu/read/13351/chapter/2#42

Ethical Principles

- Respect for Human Dignity
- Proportionality
- Solidarity
- Transparency
- Duty to Care
- Reciprocity

What are the guiding principles underlying Crisis Standards of Care?

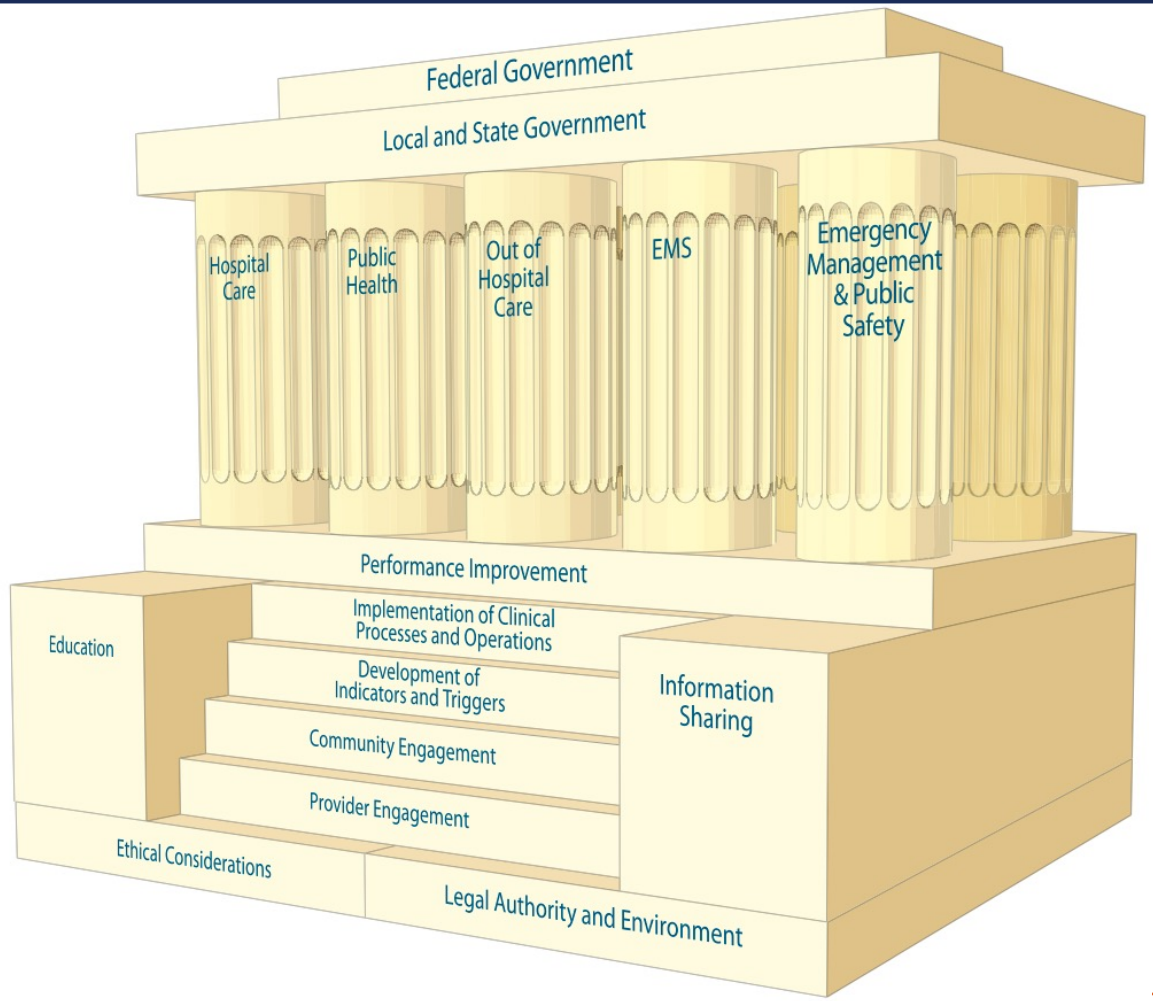
- The medical community aims to provide the best care for the most patients possible in Nebraska.
- The goal is to provide equitable and consistent treatment throughout the state, no matter where patients live or what health care facility they visit.
- CSC have the joint goals of extending the availability of key resources and minimizing the impact of shortages on clinical care.
- Implementation of CSC will require facility-specific decisions regarding the allocation of limited resources, including how patients will be triaged to receive life-saving care.

What decisions are involved in Crisis Standards of Care?

- If parts of Nebraska need to activate the Crisis Standards of Care, the medical community is faced with the most undesirable task of rationing care.
- There could be scarcity among intensive unit care (ICU) beds, ventilators, transport, and/or staffing to deliver care. It is possible that some patients who need these resources will not receive them because there are not enough.

A Systems Approach

NETEC



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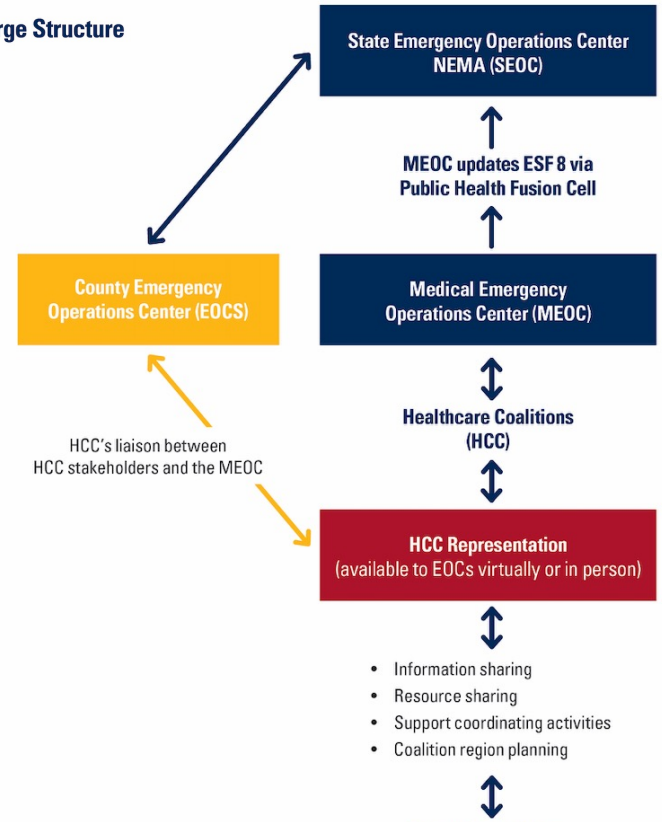
Nebraska Healthcare Surge Structure

REGION VII Disaster Health Response Ecosystem

Nebraska Healthcare Surge Structure



MEOC Lead Agency:

- Region VII Disaster Health Response Team (RDHRE)

MEOC Participants

- Healthcare CMOs & COOs
- Coalition Coordinators
- CHI Transfer Center
- EMS State Representatives
- ICAP Grant
- Agencies:
  - Nebraska Hospital Association
  - Nebraska Healthcare Association
  - Nebraska Medical Association
  - Leading Age
- State and Federal Representatives (DHHS, NEMA, ASPR Region VII)

MEOC Purpose

- Statewide healthcare situational awareness (information sharing & data)
- Problem solving
- Coordinates resources
- Provide clinical guidance if needed
- Consistent guidance implementation
- Statewide planning & mitigation

NETEC

University of Nebraska Medical Center
Nebraska Medicine

Nebraska Medical Emergency Operations Center

Monitoring the Pandemic

The MEOC served as a touch point for data transparency across the state, providing data at a local and healthcare coalition level for bed availability, COVID hospitalizations, supply and equipment needs and resources (see figure 3). Work groups were formed via the MEOC to address challenges such as movement of COVID recovered patients to bolster hospital capacity for surge, address staffing challenges, and disseminate best practice information.

Transfer Center

The NE State COVID-19 Transfer Center provided a 24/7 service designed to facilitate patient load balancing. Hospitals seeking to transfer suspected or confirmed COVID-19 patients were strongly encouraged to use the State Transfer Center, where clinical staff sought placement at the nearest hospital with capability and capacity to care for the patient. Due to the significant rise in COVID-19 and corresponding impact on hospitals across the state, patient preference was not a primary consideration in determining transfer location. Data on transfer times and acceptance/denial were reported via the MEOC.

Crisis Standards of Care Surge Team

The surge team conducted educational sessions across the state, working with the healthcare coalition leaders and facilities that reached out for training on CSC and triage decision-making. While providers and healthcare leaders across the state were eager for support in CSC planning, the language (e.g., SOFA scoring, continuum of care, triggers, etc.), guidance documents, and algorithms proved to be a steep learning curve for the already taxed medical community.

Public Health Orders Implementing NPIs

During the first two major waves of the COVID-19 pandemic in Nebraska used a series of directed health measures (DHMs) to attempt mitigate community spread of the disease. These DHMs were implemented with the explicit purpose of reducing the burden on healthcare facilities and preventing the need to deviate from routine standards of care. DHMs were not statewide but were targeted for specific geographic regions in the state and included provisions that limited gathering size, restricted occupancy levels of restaurants and businesses, specified distancing requirements, detailed isolation and quarantine directions, required face masks for certain situations, and placed limitations on hospital elective procedures that were tied to hospital capacity.

The last option, Crisis Standards of Care

- As providers across the state work to put Crisis Standards of Care guidelines in place, we will need to determine what factors the medical community will use to ration care if absolutely necessary during the COVID-19 pandemic.

How should facilities implement the Crisis Standards of Care?

Each healthcare facility should have access to a crisis triage team that will be activated in a crisis if that facility approaches its minimal operating capacity for resources like ventilators. A triage team will make decisions based on medical condition. A triage team should consist of:

- An expert on ethics or palliative care
- An attending physician or provider familiar with critical care
- A representative of nursing staff
- A representative of the facility's leadership
- The primary medical team caring for a patient SHOULD NOT be involved in crisis triage decision-making for their own patient. Each institution should create a crisis triage team that is objective and removed from the patient.

How does the triage team make decisions if Crisis Standards of Care have been enacted?

- The triage team should use a tiered approach for allocation/re-allocation of scarce resources like ventilators. In the event of a tie within a tier, the triage team should move to the next tier of considerations.

- Triage teams SHOULD NOT base decisions on factors clinically or ethically irrelevant to the triage process, for example: age, race, ethnicity, ability to pay, disability status, national origin, primary language, immigration status, sexual orientation, gender identity, HIV status, religion, veteran status, “VIP” status, criminal history, income level or housing status.

What is the SOFA score?

- The Sequential Organ Failure Assessment (SOFA) score predicts the chances of a patient dying in the short-term at the hospital.
- The SOFA score is an evidence-based scoring tools that would be used to help hospitals decide who should receive a breathing machine (ventilator) or bed in the intensive care unit (ICU) if there are not enough for all the patients who need one at a given time.

Multi-principle Strategy to Allocate Critical Care to Adult Patients During a Public Health Emergency

Specification	Point System*			
	1	2	3	4
Prognosis for survival of the acute illness	SOFA score <6	SOFA score 6-9	SOFA score 10-12	SOFA score > 12
Prognosis for survival beyond the acute illness				Severely life limiting conditions; death likely within 1 year regardless of whether patient survives the acute illness

SOFA = Sequential Organ Failure Assessment

*Persons with the lowest cumulative score will be given the highest priority to receive critical care services.

SOFA and issues of equity

- The term comorbidity means that a person has a chronic condition. Comorbidities are when a person experiences two or more diseases or conditions at the same time. Comorbidities can have a negative impact on an individual who is infected by COVID-19. Some examples of comorbidities might include hypertension, diabetes, or chronic lung disease.

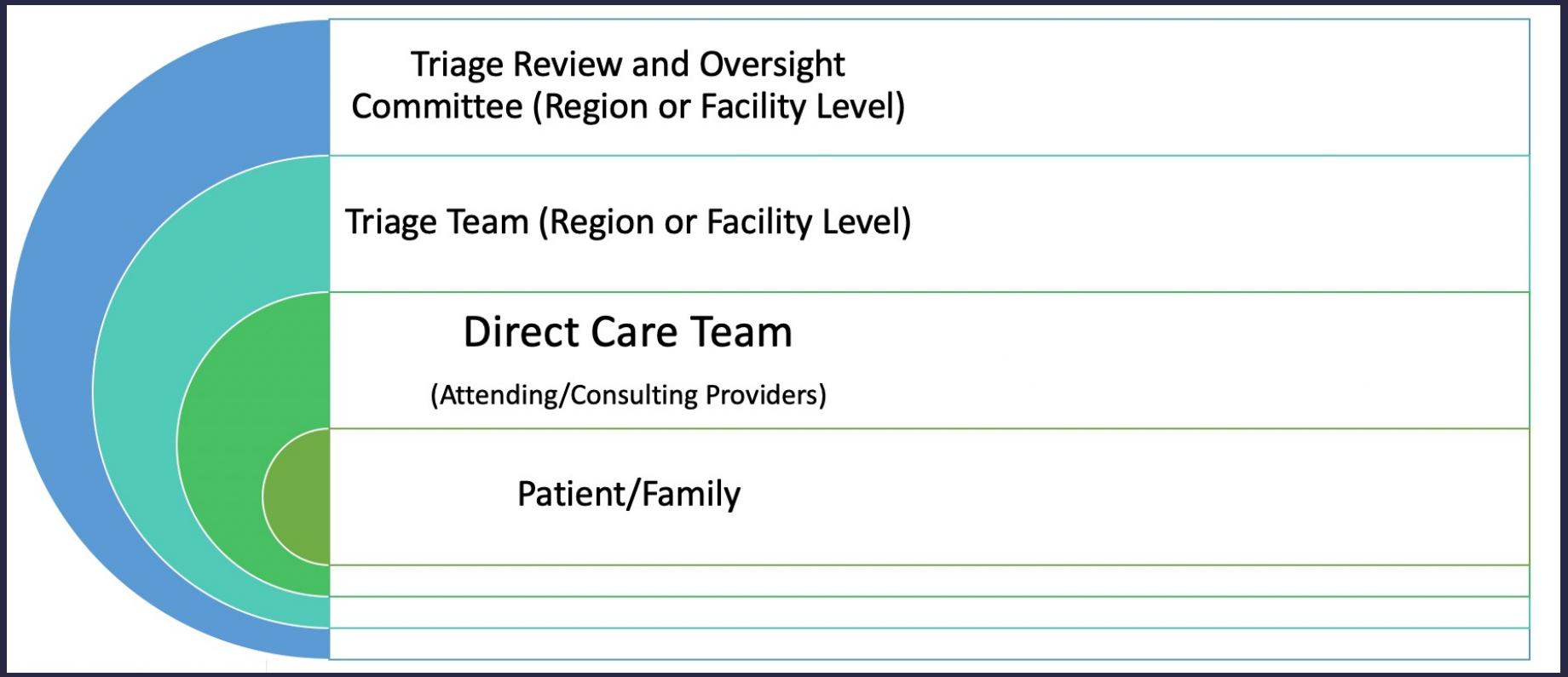
Assign patients to color-coded priority groups

Table 3

Step 2- Use Priority Score from Multi-principle Scoring System to Assign Priority Category

Level of Priority and Code Color	Priority score from Multi-principle Scoring System
RED **Highest priority**	**Priority score 1-2**
ORANGE **Intermediate priority** (reassess as needed)	Priority score 3-5
YELLOW **Lowest priority** (reassess as needed)	Priority score 6-8
GREEN **Do not manage with scarce critical care resources** (reassess as needed)	No significant organ failure or no requirement for critical care resources

Crisis Triage: Three Teams



Nebraska CSC Planning Process

Nebraska CSC Planning Process

- October 2020 - Nebraska Medical Emergency Operations Center Surge Team formed
- CSC Plan drafted and reviewed by numerous clinicians and stakeholders across the state
  - CSC plan was based on the Massachusetts CSC plan
- November 2020 – Nebraska Hospital Association and Nebraska Medical Association both endorsed the final plan

Nebraska CSC Planning Process

- Conducted education on CSC across the state
- Coalition planning initiated on CSC triage and how to operationalize the plan regionally across the state
- Shifted focus to specialized annexes and legislation

LB 53

- Introduced by Senator Steve Lathrop on January 7, 2021, hearing held in the Judiciary Committee on February 8, 2021
- Bill was written to provide immunity for healthcare providers acting under Crisis Standards of Care (CSC), and related strictly to the declared COVID-19 emergency
- Used the MEOC CSC planning guidance to define the state crisis standards

LB 139

- Introduced by Senator Briese on January 8, 2021
- Created as a general COVID-19 Liability act, providing liability protection to businesses and individuals from claims relating to COVID-19 exposure
- Merged with LB 53, but language changed to Health Care Crisis Protocol Act
- Passed legislature on May 20, and signed by the Governor on May 26

LB 139 Continued

- Health Care Crisis Protocol Act
  - Uses the MEOC Planning document as the state health care crisis protocol
  - Requires hospitals to have a copy of the health care crisis protocol and to make that copy available to the public
    - No other type of health care facility is included in this requirement
  - DHHS will also maintain a copy of the health care crisis protocol on their website

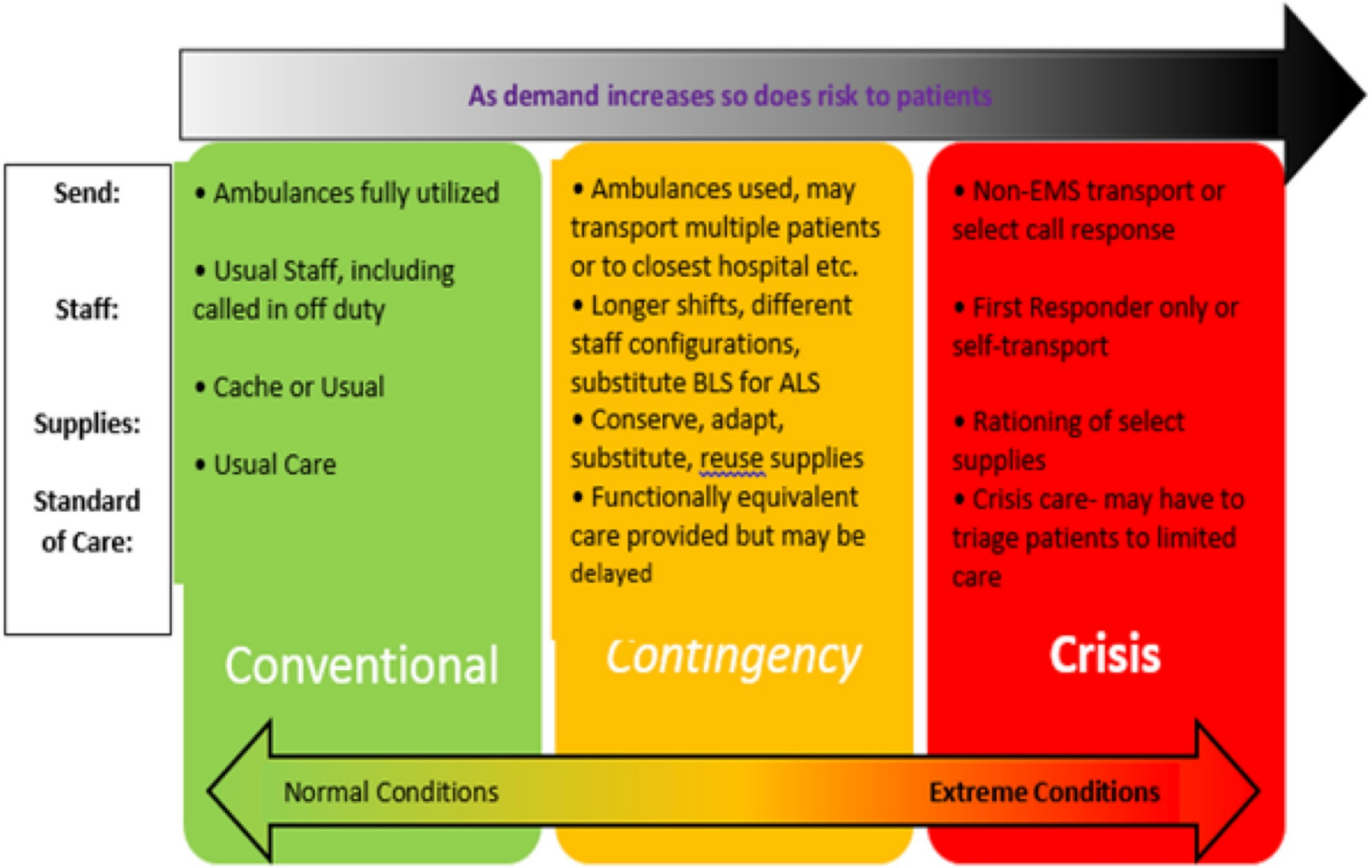
EMS CSC Planning

Crisis Standards of Care Emergency Medical Services

- CSC EMS
  - A working group convened in December to adapt the the Colorado EMS plan for Nebraska
- CSC EMS Working Group
  - EMS working group:
    - Eric Ernest, NE EMS State Medical Director
    - Tim Wilson, DHHS EMS/Trauma Systems Program Manager
    - Kristen Blum, Transfer Center lead
    - EMS from different regions and institutions across the state Michelle Hill, Randy Meininger, Shannon Odiet, Shelly Schwedhelm, Ben Tysor
    - CSC team
  - 25 EMS reviewers from across the state

Crisis Standards of Care Emergency Medical Services

- Emergency Medical Services (EMS) are an essential part of the continuum of health care
- Emergency health care system can be stressed to its limits during a pandemic
- Crisis Standards of Care involving the EMS system requires modifications to the usual procedures and protocol utilized


As demand increases so does risk to patients
Send:
Staff:
Supplies:
Standard of Care:
• Ambulances fully utilized
• Usual Staff, including called in off duty
• Cache or Usual
• Usual Care
• Ambulances used, may transport multiple patients or to closest hospital etc.
• Longer shifts, different staff configurations, substitute BLS for ALS
• Conserve, adapt, substitute, reuse supplies
• Functionally equivalent care provided but may be delayed
• Non-EMS transport or select call response
• First Responder only or self-transport
• Rationing of select supplies
• Crisis care- may have to triage patients to limited care
Conventional
Contingency
Crisis
Normal Conditions
Extreme Conditions

EMS Indicators, Triggers, and Tactics for Transitions Along the Continuum of Care

- EMS agencies should clearly identify indicators.
- Triggers should be established in conjunction with local EMS and public health agencies.
- The level of care that can be delivered may be dynamic and shift rapidly.

Crisis Standards of Care Emergency Medical Services includes Guidance on the Following:

- Public Safety Answering Points (PSAP) and Call Centers (performing emergency medical dispatch (EMD)), Non-EMD PSAPs, & Dispatch Centers
- EMS Agencies
- EMS Responders
- Transport Destination
- Medical Care On-Scene and During Transport
- Cardiac Arrest/DNR

Crisis Standards of Care Emergency Medical Services

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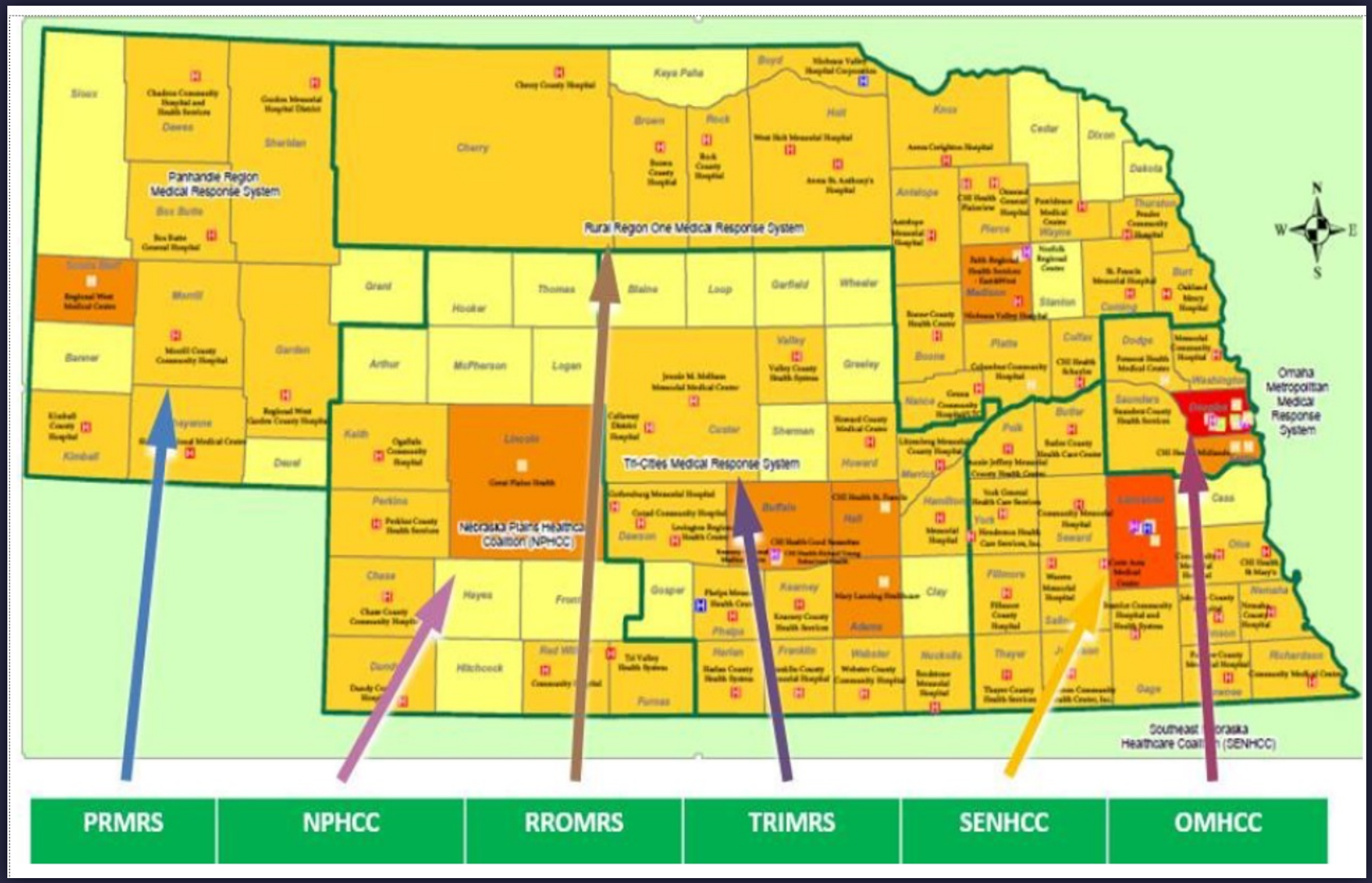
Critical Access Hospital CSC Planning


Panhandle Region
Medical Response System
Rural Region One Medica Response System
Tri-Cities Medical Response System
Nebraska Plains Healthca
Coalition (NPHCC)
Omaha
Metropolitan
Medical
Response
System
N
W
E
S
PRMRS
NPHCC
RROMRS
TRIMRS
SENHCC
OMHCC

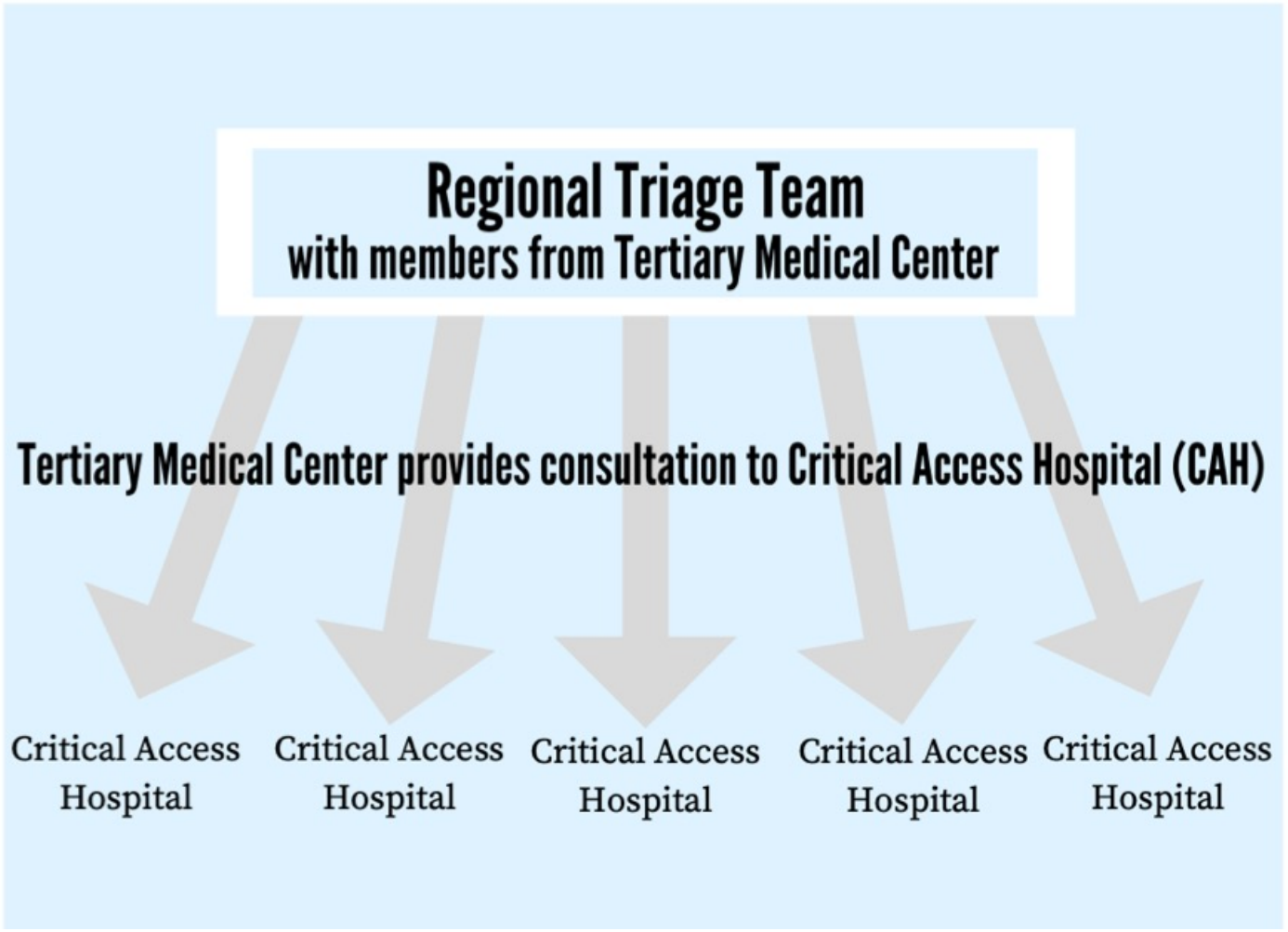
Crisis Standards of Care with considerations for Critical Access Hospitals

- While a number of frameworks, guidance documents, and resources are available to help healthcare systems and stakeholders prepare for and respond to the emergence of crisis standards of care (CSC), relatively few address the unique circumstances and information needs of rural small and critical access hospitals.
- CSC guidance for small and critical access hospitals may require bringing together regional triage team and/or other creative solutions to fit the facilities serving rural communities

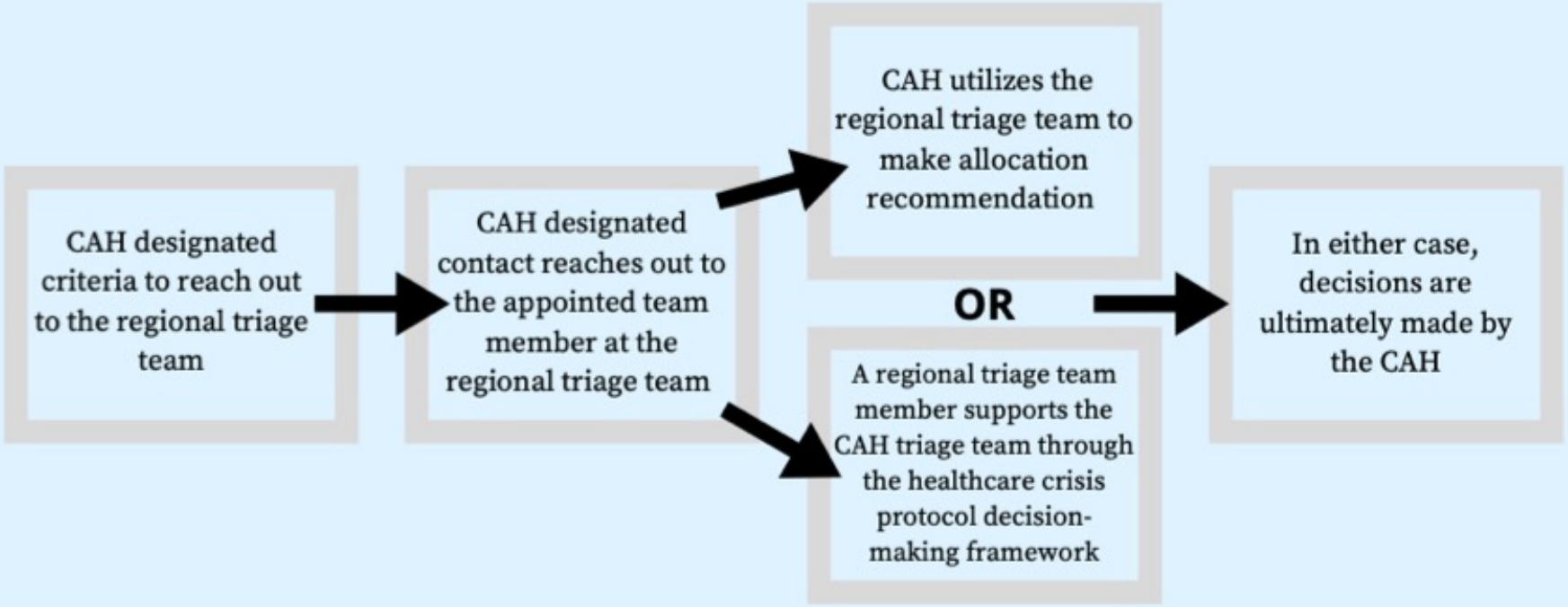
Crisis Standards of Care with considerations for Critical Access Hospitals

- Each coalition coordinator ask recommended 1-2 Small and Critical Access Hospital representatives within their coalition region to be part of a working group
- Working group included:
  - CAH representatives
  - Healthcare coalition leaders from all regions
  - CSC surge team
- Four facilitated conversations to understand the needs of CAH facilities and providers
- Two regions conducted workshops for CSC triage planning
- Working group drafted the **Crisis Standards of Care-Small and Critical Access Hospitals: *A Guidance Document for the State of Nebraska***

Example Schematic of Regional Triage Team:



Regional Triage Team and the CAH decision making process



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Pediatric CSC Planning

Nebraska Pediatric CSC Workgroup

- Workgroup of physicians, nurses, EMS workers, and representatives from the state health department and education agencies
- Representatives from rural and urban settings across the state
- Group met bi-weekly during plan formation
    - Reconvened during Delta surge

Pediatric CSC Plan Document

- Needed a pediatric annex to the general CSC plan that considered the unique needs and concerns of children/pediatric populations
- Adaptation of WRAP-EM CSC Template and existing plans from Children's Hospital in Omaha
- Supplement to general Nebraska Healthcare Crisis Protocol document

Pediatric Triage Scoring

- Use of different triage scoring systems (PELOD-2 vs. SOFA)

Table 1. Multi-principle Strategy to Allocate Critical Care/Ventilators During a Public Health Emergency

Principle	**Specification**	**Point System** lowest cumulative score = highest priority			
		1	**2**	**3**	**4**
Save the most lives	PEdiatric Logistic Organ Dysfunction-2 (PELOD-2)	PELOD-2 < 10	PELOD-2 = 10-15	PELOD-2 = 16-23	PELOD-2 > 23
Save the most life-years	Long-term survival prognosis (including comorbid conditions)	…	Major comorbid conditions with substantial impact on long-term survival	Major comorbid conditions with substantial impact on long-term survival + 3 or more medical technologies	Severely life-limiting conditions; death likely within one year

Rural vs. Urban Pediatric Planning Concerns

- Assumption of pediatric ICU bed availability
- Needs of critical access hospitals and smaller facilities who may have to treat children
- Staff needed for triage team decision-making

CSC Lessons Learned

- Inclusive planning is **critical**
- Build systems ahead of time to avoid ever having to activate CSC plans
- Be aware of political concerns that may arise

Questions