Health Care Crisis Protocol for the State of Nebraska[1]

May 10, 2021

Published by the Nebraska Medical Emergency Operations Center

Endorsed by Nebraska Hospital Association and Nebraska Medical Association, November 2020

[1] This plan is adapted from "Crisis Standards of Care: Planning Guidance for the COVID-19 Pandemic" from the Commonwealth of Massachusetts, Executive Office of Health and Human Services, Department of Public Health 250 Washington Street, Boston, MA 02108-4619

Publication date: 05/10/2021

Table of Contents

I. Overview

II. Introduction

III. Purpose, Assumptions, Concepts, and Ethical Principles

IV. Activation of Health Care Crisis Protocol

V. Strategies for Maximizing Critical Care Resources (Allocation Framework)

VI. References

VII. Acknowledgements

DRAFTING NOTE: This protocol is based on the current Massachusetts Crisis Standards of Care Plan. Modifications have been made to reflect Nebraska laws and other considerations unique to Nebraska.

I. Overview

In November 2020, a public health fusion cell was created by the Nebraska Department of Health and Human Services, with the intent of coordinating efforts and connecting stakeholders across public health in the COVID-19 response. Quickly, a request to establish a Fusion Cell team to focus on Healthcare Surge was approved and adopted. One aim of the Healthcare Surge team of the fusion cell was to develop a health care crisis protocol to be implemented across the state, in the event that hospitals and other healthcare facilities would be overwhelmed by a COVID-19-related surge. A work group representing clinical, legal, and ethical perspectives was convened to create such a plan. Depending on the needs and resources of a given healthcare facility or healthcare coalition, some components of the plan may be adapted to occur at a regional coalition level, rather than at a facility level. Implementation guidance for the health care crisis protocol will be included in each health care coalition's response plan. The Healthcare Surge team has established the Nebraska Medical Emergency Operations Center (NEMEOC) to coordinate, communicate and optimize collaboration across the state for healthcare surge.

II. Introduction

Crisis care must be the best care it can be in light of the circumstances and available resources. The purpose of this document is to provide guidance for the triage and application of services for critically ill patients in the event that an emergency creates demand for critical care resources that outstrips the supply.

The foundation of this approach to a health care crisis protocol is that such difficult decisions must be based on criteria that ensure that every patient has equitable access to any care from which they might benefit. These criteria must be as clear, transparent, and objective as possible, and must be based on biological factors related only to the likelihood and magnitude of benefit from the medical resources, and should at all times minimize inequitable outcomes.

Factors that have no bearing on the likelihood or magnitude of benefit from the provision of medical resources, including but not limited to race, disability, gender, sexual orientation, gender identity, ethnicity, ability to pay, socioeconomic status, English language proficiency, perceived social worth, perceived quality of life, immigration status, incarceration status, homelessness or past or post-emergency use of resources, are not to be considered by providers making allocation or triage decisions.

Catastrophic events can drastically disrupt the health care system, exhaust resources, and overwhelm the system's capacity to deliver care as usual. Healthcare system resources including adequate inpatient or outpatient clinical care spaces, medical supplies, and available trained staff may become depleted or in short supply.

Changes in the usual approaches to care and practice may be necessary due to limitations or fluctuations in resources. The healthcare system may be forced to transition from conventional or usual care, to contingency care that supports the provision of functionally equivalent care, and, if necessary, to "crisis" care when available resources are inadequate to meet all important patient needs.

The use of health care crisis protocols are limited to disaster scenarios where the resources available are significantly inadequate to the need. These protocols are part of a comprehensive preparedness and response strategy that acknowledges that regardless of the best planning and other preparatory efforts, an emergency or disaster could overwhelm the Nebraska healthcare system in ways that will require challenging decisions about how to allocate limited and potentially life-saving resources.

This protocol is intended to:

- Help healthcare institutions and providers make fair and consistent decisions about the use and allocation of scarce medical resources;
- Ensure that critical resources are conserved and distributed efficiently and ethically across the healthcare system;
- Promote transparent decision-making and public trust in the fairness and equity of the system;
- Protect those who might otherwise face barriers to accessing care; and
- Assure patients and their families that they will receive fair access to care under the circumstances regardless of where they live.

III. Purpose, Assumptions, Concepts, and Ethical Principles

A. Purpose

This protocol is intended to provide a unified, transparent framework that supports consistent provider decision-making aimed at maximizing the number of life years saved while taking equity matters into account. To assure providers, patients, their families, and the community that health care crisis protocols will be applied fairly, it is essential that the ethical grounding of this protocol be clearly and specifically stated. The delivery of healthcare under health care crisis protocols is ultimately about maximizing the care delivered to the population as a whole under circumstances that may limit treatment choices for both providers and patients.

B. Assumptions

- An emergency or disaster may result in a surge of patients requiring medical care that could overwhelm available resources.
- Demand on local medical resources may overwhelm local or regional capacity and capabilities, and local medical resources may be unavailable.
- Healthcare facilities may experience extreme resource challenges that may include: inadequate inpatient or outpatient care space, supply and equipment shortages, and/or a lack of sufficient trained personnel, and may become overwhelmed with persons requiring care.
- A significant percentage of healthcare workers may be unable to report or stay on the job because of:
    - Their own illness or that of family members, or
    - Practical impediments such as lack of dependent care or transportation.
- A percentage of healthcare workers may be unwilling to report or stay on the job during such situations because of:

    - Concerns about their personal health or safety, or that of family members, or
    - Concerns about their ability to effectively provide care, or
    - Concerns about legal liability, or
    - Concerns about moral distress. The process of triage and allocation of care is psychologically, emotionally and spiritually demanding for caregivers and may impair their capacity for patient care and decision-making.
- Pre-hospital and healthcare institutions have mutual aid agreements in place on a regional basis for supporting one another where possible, and will utilize these plans to the extent possible during a disaster.
- Patients will require medical transportation to and between healthcare facilities, and the increased volume of patient movement may require tracking.
- Coordination among response partners at all levels (facility, local, regional, state, and federal) is expected in order to best meet medical surge needs.
- Health care crisis protocols are to be activated only in extraordinary circumstances when the level of demand for medical care exceeds available resources required to deliver the generally accepted standard of care and crisis operations will be in effect for a sustained period.
- The public will need access to up-to-date, accurate, and transparent information about the use of health care crisis protocols, and access to any relevant instructions as to how they may best seek access to care during the disaster.
- This protocol will not supplant any guidance provided by the Nebraska Department of Health and Human Services (DHHS).

C. Concepts

1. Continuum of Care

As described by the National Academy of Medicine, the need for healthcare surge capacity in a disaster occurs along a continuum based on demand for health care services and available resources.

- **Conventional Capacity** The spaces, staff, and supplies used to deliver care are consistent with daily practices within institutions. The clinical care spaces and practices that are used in response to an emergency are adequate to support clinical care that is equivalent to usual patient care.

- **Contingency Capacity** The spaces, staff, and supplies used are not consistent with daily practices but support care that is functionally equivalent to usual patient care practices. Alterations in the use of clinical care spaces or practices may be used temporarily or on a more sustained basis during an emergency (when the demands of the incident exceed community resources). Some degree of regulatory action (such as with an EMS staffing waiver) may be required to support contingency capacity.

- **Crisis Capacity** Adaptive uses of space, staff, and supplies that are not consistent with usual standards of care, but provide sufficiency of care in the setting of an emergency (i.e., provide the best possible care to patients given the circumstances and resources available). Crisis capacity activation constitutes a significant adjustment to standards of care.

Figure 1: Care Continuum

Incident demand/resource imbalance increases →
Risk of morbidity/mortality to patient increases →
← Recovery

	Conventional	Contingency	Crisis
Space	Usual patient care space fully utilized	Patient care areas repurposed (PACU, monitored units for ICU-level care)	Facility non-patient care areas (classrooms, etc.) used for patient care; Physical space no longer available for clinical care
Staff	Usual staff called in and utilized	Staff extension (brief deferrals of non-emergent service, supervision of broader group of patients, change in responsibilities, documentation, etc.)	Trained staff unavailable or unable to adequately care for volume of patients even with extension techniques
Supplies	Cached and usual supplies used	Conservation, adaptation, and substitution of supplies with occasional reuse of select supplies	Critical supplies lacking, possible reallocation of life-sustaining resources
Standard of Care	Usual care	Functionally equivalent care	Health care crisis protocol

Normal operating conditions

Extreme operating conditions

Indicator: potential for health care crisis protocol

Trigger: health care crisis protocol

Along the continuum of care, strategies to maximize healthcare resources include:

- SUBSTITUTE: Use an essentially equivalent facility, professional, drug, or device for one that would usually be available.
- ADAPT: Use a facility, professional, drug, or device that is not equivalent, but provides the best possible care.
- CONSERVE: Use lower dosages or change practices, e.g., minimize use of oxygen by using air for nebulizers, when possible.
- REUSE: Use single use items again, after appropriate disinfection or sterilization.
- OPTIMIZE ALLOCATION: Allocate resources to patients whose need is greater or who are more likely to survive the immediate crisis.[2]

2. Triage

Triage is the process of screening, evaluating, and sorting patients based on their medical status and likely outcome.[3] Triage may occur at the site of a disaster, in the pre-hospital setting, in the emergency

[2] Adapted from The Guidelines for Use of Modified Health Care Protocols in Acute Care Hospitals During Public Health Emergencies. September 2013; Kansas Department of Health and Environment

[3] Dictionary of Military and Associated Terms. US Department of Defense. 2005

department or in the inpatient or outpatient acute care setting – and frequently is repeated at multiple levels for a given patient. Effective triage will be essential to prioritize care and to do the greatest good for the greatest number of patients. Although triage is generally a part of all disaster plans, many physicians, nurses, and others may be unfamiliar or uncomfortable with the process.

Primary triage is the first level of evaluation and prioritization and typically occurs before initial medical interventions: in the out-of-hospital setting, on EMS arrival, or in the hospital lobby.

Secondary triage occurs after an additional patient assessment and initial medical interventions are performed (e.g., intravenous fluids or airway management). These decisions are usually performed by medical staff to establish priority for diagnostic studies or treatment.

Tertiary triage involves assessment of the value of ongoing resource commitment during delivery of definitive care (e.g., deciding about continued ventilator support).[4]

Reverse triage also may be utilized while health care crisis protocols are in effect. Reverse triage is a system of reviewing the acuity and needs of current inpatients when a catastrophic disaster occurs and determining which patients may be safely triaged for early discharge from healthcare institutions. Discharging noncritical patients can be an effective way to increase a hospital's capacity for emergency admissions during a public disaster.[5] Patients with a level of one (minimum risk) can typically be discharged. Patients with a level of two (low risk) may be appropriate for transfer to a non-acute care facility (e.g., skilled nursing facility, rehabilitation facility) or for early discharge when the overall effects of a disaster exceed the individual risks of not remaining in the hospital or functional equivalency can be attained through community-based methods of patient monitoring, or both. Patients with a level of three (moderate risk) may be transferred to a facility with moderate capabilities if appropriate. Level 4 and level 5 will typically remain in the hospital.

---

[4] *Allocating scarce resources in disasters: emergency department principles*. Hick JL1, Hanfling D, Cantrill SV. Ann Emerg Med. 2012 Mar;59(3):177-87.

[5] Kelen GD, Kraus CK, McCarthy ML, Bass E, Hsu EB, Li G, Scheulen JJ, Shahan JB, Brill JD, Green GB. Inpatient disposition classification for the creation of hospital surge capacity: a multiphase study. Lancet. 2006 Dec 2;368(9551):1984-90.

Risk of consequential medical event	Basis	Mean upper limit of tolerance for consequential medical events (IQR)
1 (minimim)	Minimum to no anticipated medical events during next 72 h	3·8% (2–5)
2 (low)	Calculated risk of non-fatal medical event. Transfer to low acuity facility appropriate. Consider early discharge when effects of disaster exceed risks of remaining in hospital—eg, risk of biothreat transmission, effects of resource constraints	11·7% (8–15)
3 (moderate)	Consequential medical event quite likely without critical intervention Discharge to home not advisable Transfer to facility of moderate capabilities appropriate	33·1% (25–50)
4 (high)	Patient care cannot be interrupted without virtually assured morbidity or mortality. Highly skilled care required Transfer to major acute-care facility only	61% (45–80)
5 (very high)	Patient cannot be moved or readily transferred Generally unstable for transport Consider ICU-capable transport only	92·3% (95–100)

ICU=intensive-care unit.

Table 1: **Consensus disposition classification and tolerance for rate of consequential medical events**

Table: Reverse Triage Factors (Kelen, 2006)

3. Indicators and Triggers

Indicators and triggers will guide transitions along the continuum of care, from conventional to contingency to crisis, and in the return to conventional care. [6] Health care crisis protocols will be triggered only when there is no acceptable alternative, and its use will be discontinued as soon as possible.

Indicators are measures or predictors of changes in demand and/or resource availability in the healthcare system that may be based on situational awareness or factors specific to an event. The presence of indicators is detected through monitoring events that may affect the healthcare system and observing changes to the usual resources and usage patterns at the local, regional, and state levels.

Triggers are decision points leading to activation of health care crisis protocols. Based on changes in resource availability that require adaptations to health care services delivery along the care continuum, these events show that strategies implemented for contingency care are no longer sufficient to provide functionally equivalent care. The specific nature of these triggers may vary across healthcare facilities and healthcare coalition regions.

[6] Definitions taken from: Crisis Standards of Care: A Toolkit for Indicators and Triggers. Board on Health Sciences Policy. Dan Hanfling, John L. Hick, and Clare Stroud, Editors; Institute of Medicine of the National Academies. The National Academies Press. Washington, D.C.; Released: July 31, 2013.

D. Ethical Principles

These guidelines are based on the following ethics principles.

- **Respect for Human Dignity** – All healthcare providers demonstrate respect for human dignity by recognizing that the lives of all human beings are of inherent, equal, and incalculable value. While this allocation framework operationalizes the broad public health goal of maximizing benefit to populations of patients by giving priority to patients who are most likely to survive to discharge with appropriate treatment with critical care resources, it also aims to respect the dignity and inherent worth of each person and treat each individual patient fairly. To that end, there must be a balance between use of the decision framework and the application of clinical judgment.

- **Distributive and Procedural Justice/Fairness**[7] – All patients will be treated with respect, care, and compassion without regard race, ethnicity, color, national origin, religion, sex, disability, veteran status, age, genetic information, sexual orientation, gender identity, or any other protected characteristic under applicable law.[8] All patients will be eligible to receive critical care resources and receive a priority assignment based on illness severity and likelihood of benefit to the individual from the intervention. No person who, in usual circumstances would be eligible for critical care resources will be categorically excluded based on pre-existing disabilities, underlying conditions or short-term survivability.

- **Proportionality** – Any allocation decisions and limitations will be made commensurate with the degree of emergency and the degree of scarcity of resources (including staff resources). The degree of scarcity of resources particular to the emergency situation will impact prioritization decisions (including particular staff shortages in particular areas.[8] As an emergency evolves, expansion of critical care by all means possible will be the first measure taken, followed by conservation and allocation of critical care resources only if necessary. The timing of each measure should balance the dual imperatives of (a) minimizing the potential harms, and (b) maximizing overall benefit. [8]

- **Solidarity/Common Good** - When there are limited resources, all people must consider the greater good of the entire community. In the event of impending scarcity, the state will make every effort to maximize the capacity of the entire healthcare system to provide critical care to

---

[7] *Every effort has been made to use equity as the foundation of this framework, recognizing that this effort begins in a context where many populations have historically faced and continue to face discrimination, poverty, structural racism and structural ableism, each of which leads to unfair health burdens. By emphasizing objective medical criteria, individualized assessments, and the likelihood of surviving the acute illness, as described below, the aim is to minimize the impact of bias and inequitable consequences to the maximum extent possible. By accounting only for prognosis for surviving the acute illness and surviving one year beyond the acute illness, and not focusing on long-term life expectancy, the framework attempts to mitigate the impact of disparities caused by social inequity. Each hospital operationalizing health care crisis protocols must also make every effort to guard against the potential for disproportionate negative impact on already disadvantaged populations, including by ensuring that those who develop and oversee institutional health care crisis protocols reflect the full diversity of our communities, and by implementing robust data monitoring.*

[8] *Healthcare providers making allocation decisions should not consider characteristics that have no bearing on the likelihood or magnitude of benefit. Factors including but not limited to race, disability, gender, sexual orientation, gender identity, ethnicity, ability to pay, socioeconomic status, perceived social worth, perceived quality of life, immigration status, incarceration status, homelessness, and past or future use of resources have been taken into account in development of this framework. These factors will not be used to limit care, and efforts must be made to ensure that the application of the framework does not result in negative impact on individuals from these groups or with these characteristics.*[22]

as many patients as possible by coordinating efforts to load balance patients across institutions and directing critical care resources to the areas that are hardest hit by the given emergency.

- **Participatory Engagement and Transparency**- engaging the community, healthcare organizations and facilities, healthcare providers, and emergency management agencies during the development and implementation of guidelines encourages greater understanding and clarity when clinical triage is needed. Prior to the implementation of the triage recommendations included in this document, each institution will take all possible steps to extend capacity to deliver critical care resources, including
    - accumulating and redeploying supplies;
    - delaying non-urgent care;
    - preparing to use space, and other resources that are not typically used for critical care delivery to deliver critical care;
    - preparing healthcare workers to implement health care crisis protocols and to practice care at different standards or levels of care than normally expected, and
    - intensifying efforts to reduce critical care utilization for patients who are significantly unlikely to benefit from it.

.

- **Duty to Care -** During an emergency, such as a pandemic, health care providers and other healthcare workers are at a greater risk than the general population. Yet, there is a duty to care based on ethics codes of multiple professionals.[9] This ethical obligation holds even in the face of greater than usual risks to their own safety, health or life. The healthcare work force, however, is not an unlimited resource; therefore, when participating in disaster responses, physicians and other healthcare workers, and others with ability to provide essential healthcare services, should balance immediate benefits to individual patients with the ability to care for patients in the future." The goal is a population-focused duty of care that includes maximizing social benefit as lives or life-years saved.

- **Reciprocity** -- In addition, the health care professional is not the only one with a moral duty; society has the duty to protect the physicians, health care workers and first responders by providing protective equipment, antiviral medications, and available vaccines. The moral duty of society towards the healthcare system includes the duty of implementing state and local health measures to lower cases and transmission so as to not overload the healthcare system and avoid health care crisis protocol implementation. In addition, physicians and other healthcare workers by virtue of the healing relationships they support through their work and their ability to provide health care and other essential services to the community following their recovery, and first responders and others performing essential duties that expose them to greater risk of illness in order to protect the health and well-being of the community, may be justly given preference for scarce critical care resources under some circumstances.

- **Special Considerations for Re-allocation of life-sustaining treatments:** There are specific

[9] For example, based on to the American Medical Association policy statement, "Physician Obligation in Disaster Preparedness and Response": Because of their commitment to care for the sick and injured, individual physicians and other healthcare workers have an obligation to provide urgent medical care during disasters.

ethical issues involved in withdrawal of life sustaining treatment. These issues may be particularly pronounced when resources are withdrawn from critically ill patients who are already receiving them at the time that a health care crisis protocol is initiated. However, in the event of a worsening crisis, adhering to a first come, first-served principle for those who were already receiving critical care prior to application of the health care crisis protocol may result in unjust allocation of resources. As such, careful assessment and allocation will be necessary in order to maximize benefit during a crisis.

- **Activation of Health Care Crisis Protocol**

If a healthcare facility becomes, or anticipates becoming, no longer able to provide the usual standard of care, they may decide to activate health care crisis protocol. Due to the unique nature of healthcare delivery and the uneven distribution of resources across healthcare facilities, the resources at one facility may become exhausted well before another facility. Every effort will be made to avoid a situation where the health care crisis protocol need to be utilized.

In such an event, clear and frequent internal and external communication is essential to convey information and maintain situational awareness with hospitals, EMS, alternate care systems, healthcare personnel, and the public. It is important that the public be provided with a clear understanding of health care crisis protocol concepts such as triage of resources. Public information and messaging must be consistent and timely and be culturally and linguistically accessible to ensure that information reaches individuals who are deaf or hard of hearing, are blind, or have low vision, or have limited English proficiency.

These guidelines will be deactivated when a healthcare facility or health system is no longer operating at a crisis level. This deactivation will occur when affected healthcare regions and facilities are able to meet patient demand using contingency-level surge standards, or when patient transfer or evacuation becomes a feasible tactic to alleviate crisis-level surge at affected healthcare facilities.

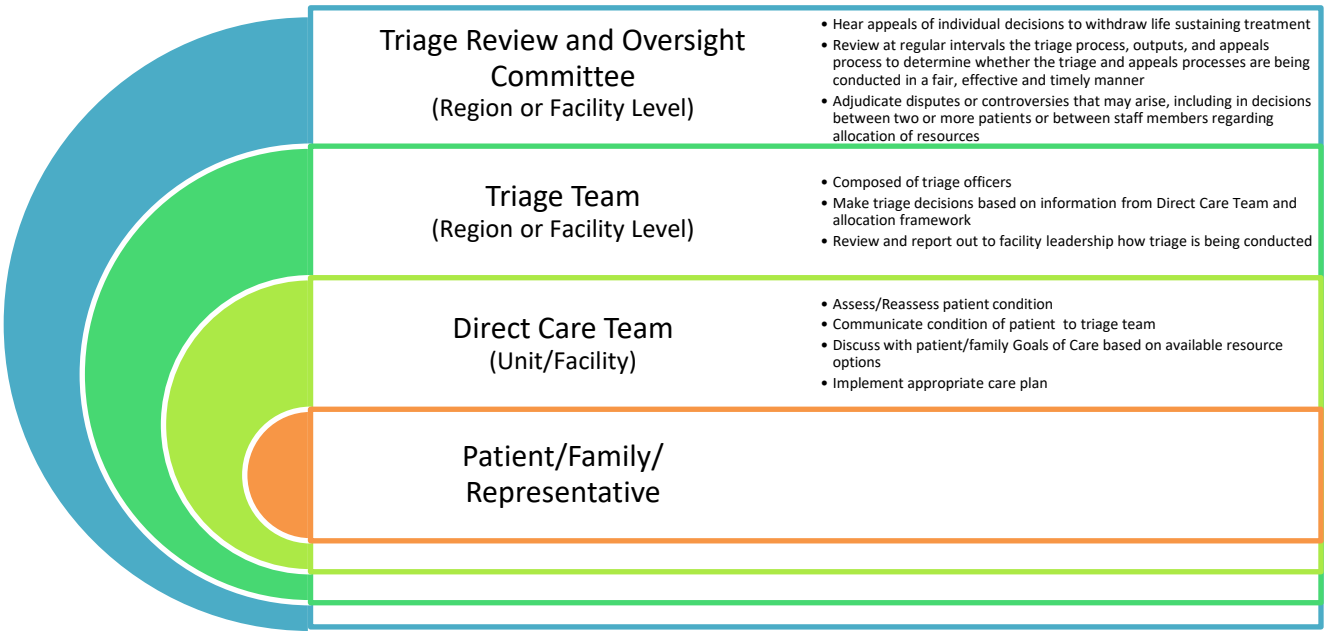
V. Strategies for Maximizing Critical Care Resources (Allocation Framework)

Key triage and allocation principles

Each healthcare institution may modify its specific triage processes based on its particular resources and circumstances, but each institution should adhere to the core triage principles set out in this document. These include: 1) creation of a triage team to separate triage decisions from bedside clinical decisions; 2) use of a critical care allocation framework that incorporates the scoring system and prioritization categories laid out in this document; 3) reassessment of patients receiving critical care with reallocation of resources where appropriate; 4) a commitment to the principle that allocation decisions should not consider characteristics that have no bearing on the likelihood or magnitude of benefit and should not penalize patients who identify with previously described historically marginalized communities; 5) reasonable accommodations for people with disabilities; and 6) incorporation of an appeals process for decisions to withdraw life-sustaining treatment over the objection of a patient or surrogate.

Creation of triage teams

376 Each healthcare facility should define a triage team according to their internal structures whose
377 responsibility it is to implement the allocation framework described below. If a facility does not have
378 the resources or staffing to create a triage team in their individual facility, a local triage team can be
379 used within the healthcare coalition region. A triage team with expertise in the allocation framework,
380 which is grounded in public health ethics, should make allocation decisions. The separation of the
381 triage role from the clinical role is intended to enhance objectivity, avoid conflicts of commitments,
382 and minimize moral distress. Every attempt should be made to assemble a team that reflects the
383 diversity of the community and population served. Patients' treating providers should not make triage
384 decisions.



385

386 **Triage Officers**

387 A diverse group of Triage Officers will be appointed at each facility, or within healthcare coalitions.
388 Triage Officers should be the most experienced provider with established expertise in the management
389 of critically ill patients, leadership ability, and effective communication and conflict resolution skills.
390 If available at an institution, pediatric intensivists and neonatologists will serve as Triage Officers for
391 children and newborns, respectively. Triage Officers will oversee the initial triage process, assess all
392 patients, assign a level of priority for each, communicate with treating physicians, and direct attention
393 to the highest-priority patients.

394 Triage Officers will make decisions according to the allocation framework described below. The
395 Triage Officers will have the responsibility and authority to make decisions about which patients will
396 receive the highest priority for receiving critical care. They will also be empowered to make decisions
397 regarding reallocation of critical care resources when there is ongoing scarcity and patients who have
398 been allocated critical care resources are deemed to have low likelihood of surviving the acute illness.
399 In carrying out these responsibilities, the Triage Officers will communicate clearly with bedside
400 nurses, physicians and other clinicians. In the event that triage decisions must be made that involve

401 adults, children, and newborns, the Triage Officers appropriate for each age group involved will
402 collaborate to determine respective priority levels.

403 Triage officers will be determined by the Chief Medical Officer or equivalent clinical leadership of the
404 facility.

405 **Triage Team**

406 There will be a Triage Team, which will consist of multiple Triage Officers, at least one nurse with
407 supervisory experience, and at least one administrative staff member.

408 In order to best mitigate implicit bias, to the greatest extent possible each facility should aim to have a
409 group of Triage Officers and a Triage Team that adequately reflects the diversity of the patient
410 population served by the facility in terms of demographics such as race, ethnicity, disability, preferred
411 language, sexual orientation and gender identity. Every attempt should be made to assemble a team
412 that reflects the diversity of the community and population served by the facility.

413 The Triage Team will provide information to the Triage Officer(s) making initial triage decisions and
414 help facilitate and support their decision-making process. The Triage Team will also conduct
415 reassessments of patients already receiving critical care in order to make decisions about continuation
416 of critical care, and will review and report out to clinical leadership how triage is being conducted.

417 The administrative staff member will conduct data-gathering activities, documentation, and record
418 keeping. The staff member must be provided with appropriate computer and IT support to maintain
419 updated databases of patient priority levels and scarce resource usage and availability (total numbers,
420 location, and type).

421 As is applicable, a representative from hospital administration should also be linked to the Triage
422 Team in order to supervise maintenance of accurate records of priority scores and triage decisions and
423 to serve as a liaison with hospital leadership. As hospital resources permit, there may be
424 representatives from social work, chaplaincy, and palliative care who are linked to the Triage Team to
425 assist in coordinating psychosocial support and/or intensive symptom management for patients and
426 families in situations where critical care resources cannot be offered or need to be reallocated.

427 **Triage Team Training**

428 All those involved in the triage process will undergo competency-based training to learn how to use
429 the allocation framework. Members will receive explicit education regarding using medical records to
430 accurately and efficiently identify information about patients without disclosing any patient
431 characteristics that should not be taken into consideration during the scoring and prioritization process
432 (for example, race, ethnicity, religion, disability, preferred language). Those involved in triage should
433 be trained to remove these factors from consideration and verify relevant diagnoses by evaluating the
434 primary medical data. Additionally, all Triage Team members and Triage Officers will receive training
435 on implicit bias in health care to understand and minimize the risk of unconscious bias in triage
436 decisions.

437 **Triage Mechanism**

438 The Triage Officer(s) will use the initial allocation framework to determine priority scores for all
439 patients who require a scarce critical care resource. All patients already being supported by the scarce
440 resource will be regularly reassessed as detailed below. The Triage Officers, with assistance from the
441 rest of the Triage Team, will communicate with the clinical teams immediately after a decision is
442 made regarding allocation or reallocation of a critical care resource.

443 **Triage Review and Oversight Committee**

444 There will be a Triage Review and Oversight Committee made up of individuals selected by clinical
445 leadership. This committee may be formed at the institutional or healthcare coalition region level,
446 depending on the needs and resources of a given institution or region. If practicable, committee
447 members should include representatives from medical, nursing, legal, and ethical perspectives.
448 Institutions or regions are strongly encouraged to include on the Triage Review and Oversight
449 Committee at least one lay community member who is not a member of a medical facility's staff to be
450 involved in the review of aggregate, anonymized data related to the triage process.

451 The roles of the Triage Review and Oversight Committee will be: 1) to hear appeals of individual
452 decisions to withdraw life sustaining treatment; 2) to review at regular intervals the triage process,
453 outputs, and appeals process to determine whether the triage and appeals processes are being
454 conducted in a fair, effective and timely manner; and 3) to adjudicate disputes or controversies that
455 may arise, including in decisions between two or more patients or between staff members regarding
456 allocation of resources.

457 The Triage Review and Oversight Committee should receive regular updates on decisions made during
458 an activation of the health care crisis protocol, and have the ability to convene rapidly when needed.

459 **Communication of triage decisions to patients and families**

460 If the triage decision results in a decision to not escalate care or to de-escalate care when that care
461 would be applied in usual circumstances, the Triage Officer (or designee) will first inform the affected
462 patient's attending provider of the triage decision. The Triage Officer (or designee) and attending
463 provider, in conjunction with bedside or supervisory nursing staff, will collaboratively determine the
464 best approach to inform the individual patient, family or emergency contact. Special consideration will
465 be made to ensure that this is done in a culturally competent manner, with racially, ethnically,
466 culturally and linguistically diverse team members available to assist in these communications when
467 possible. For individuals with communication disabilities, regardless of the presence of a formal
468 diagnosis, -- e.g., deaf, hard of hearing, blind, low vision, cognitively or intellectually disabled --
469 appropriate disability accommodations will be made.

470 As a default, the attending provider will explain the severity of the patient's condition and the Triage
471 Officer (or designee) will explain how the patient's condition and current circumstances resulted in the
472 triage decision. Both professionals must recognize the emotional nature of the conversation and should
473 consider whether others ought to be present to enhance empathy. If visitor restriction policies are in
474 place, all reasonable efforts should be made to contact the patient's family, emergency contact, or

designated decision-maker with power of attorney. The discussion may occur with the use of telephone or, preferably, video conferencing such as institutional Skype or Zoom accounts.

The Triage Officer (or designee) should also emphasize that the triage decision was made independent of the attending provider and care team, arising from the extraordinary emergency circumstances, and that it reflected a public health decision. In addition to explaining the medical factors that informed the decision, the triage officer should comment on the factors that were not relevant (e.g., race, disability, gender, sexual orientation, gender identity, ethnicity, ability to pay, socioeconomic status, perceived social worth, perceived quality of life, immigration status, incarceration status, homelessness, and past or future use of resources).

Other options for communicating a triage decision include: 1) the Triage Officer conducts the conversation; or 2) the attending provider conducts the conversation. To the extent possible within the constraints of the institution's resources, social workers, chaplains and/or palliative care clinicians should also be present (in person or virtually) when the triage decision is communicated.

Allocation process for ICU admission/ventilation

This section describes the framework that will be used to make initial triage decisions for patients who present with illnesses that typically require critical care resources. Allocation decisions must be free from stereotypes and biases, including generalizations or judgments about an individuals' quality of life or relative value to society, and must not be based on race, disability, gender, sexual orientation, gender identity, ethnicity, ability to pay, socioeconomic status, perceived social worth, perceived quality of life, immigration status, incarceration status, homelessness, and past or future use of resources. The scoring system detailed below applies to all patients presenting with critical illness, not simply those with the disease or disorders that arise from the given emergency. This triage process involves several steps, detailed below:

1. Calculating each patient's priority score based on the multi-principle allocation framework;
2. Assigning each patient to a priority group (to which facilities may assign color codes); and
3. Determining on a frequent basis how many priority groups will receive access to critical care interventions.

Initial assessment and stabilization of patients

First responders and bedside clinicians should perform the immediate stabilization of any patient in need of critical care, as they would under normal circumstances. Along with stabilization, temporary ventilator or other critical care support may be offered to allow the Triage Officer time to assess the patient for critical care resource allocation. Every effort should be made to complete the initial triage assessment as soon as possible after the recognition of the need for critical care resources.

Step 1: Calculation of each patient's priority score using the multi-principle allocation frame work

A. Priority Scoring for Adult Patients (18 and over)

512 This allocation framework has two primary scoring components: prognosis for hospital survival and
513 prognosis for survival beyond the acute episode of illness. As summarized in Table 1, the Sequential
514 Organ Failure Assessment (SOFA) score, with appropriate modifications for people with disabilities
515 and modification to mitigate the disproportionate impact of chronic kidney disease, is used to
516 characterize patients' prognosis for hospital survival. As discussed below, the presence of underlying
517 conditions in such an advanced state that they would limit duration of benefit to no more than one year
518 from the episode of acute illness is used to characterize patients' prognosis for survival beyond the
519 acute episode of illness.

520 Points are assigned for SOFA score category (1-4 points) and the presence of underlying conditions
521 that make death likely within 1 year (4 points). These points are then added together to produce a total
522 priority score, which ranges from 1 to 8. Lower scores indicate higher likelihood of benefiting from
523 critical care; priority will be given to those with lower scores.

524 **Table 1**: **Multi-principle Strategy to Allocate Critical Care to Adult Patients During an**
525 **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

526 SOFA = Sequential Organ Failure Assessment
527 *Persons with the lowest cumulative score will be given the highest priority to receive critical care
528 services.

529 **Limitations of SOFA scoring**

530 There are several objective scoring systems used to assess severity of critical illness and likelihood of
531 survival. Each has significant limitations in prognosticating survival for individual patients and all,
532 including SOFA, should be applied and adjusted in the context of clinical judgment.

533 **Adjustment to SOFA for patients with chronic kidney disease**

534 Use of SOFA scoring has the potential to compound existing structural inequities. For example, use of
535 SOFA scoring will have a disproportionately negative impact on patients with chronic kidney disease,
536 who are disproportionately persons of color. In an effort to mitigate this effect, any patient who is
537 known to have chronic kidney disease will be assigned no more than 2 points in the SOFA score for
538 elevated creatinine.

539 **Reasonable accommodations in use of SOFA in patients with disabilities**

540 The Glasgow Coma Scale, a tool for measuring acute brain injury severity in the SOFA, adds points to
541 the SOFA score when a patient cannot articulate intelligible words, even if this condition is due to a
542 pre-existing speech disability or chronic ventilation. Persons with disabilities who experience baseline
543 levels of impairment prior to the acute care episode should be afforded reasonable accommodations in
544 the scoring process so as not to increase SOFA scores for purposes of this protocol unless those
545 \conditions are believed to directly and substantially impact an individual's likelihood of survival of
546 the acute illness with treatment. Additionally, patients with communication disabilities and/or limited
547 English proficiency must be offered full access to interpreter services and, if indicated, assistive
548 technology or other reasonable accommodations in order to appropriately and objectively complete the
549 assessment. For some patients with significant communication disabilities, this may require having a
550 member of the patient's care team (e.g. a family member or personal PCA) present at the bedside with
551 appropriate safety training and PPE, or virtually present if the nature of the baseline information or
552 facilitation may be accommodated that way. This should be considered a reasonable accommodation
553 even in the context of otherwise restrictive visitor policies though the risk of coercion on the family
554 member or close associate by the need to be present should be considered.

555 If laboratory values or other elements needed for the priority score are not available prior to the need
556 for a time sensitive decision by the Triage Officer, the Triage Officer will do his/her best to
557 approximate a priority score.

558 **One-year prognostication**

559 In some cases, sufficient objective evidence about a patient's medical history will not be available at
560 the time of initial triage to determine whether a patient has underlying medical conditions that are
561 expected to limit survival to less than one year regardless of whether the patient survive the acute
562 illness. In these cases, clinicians should make conservative judgments regarding prognosis, relying
563 upon individualized assessment and the most expert clinical judgment available to them. Points should
564 only be assigned for "death likely within one year" if at least two providers agree with a high degree of
565 confidence that the patient is likely to die within one year regardless of whether he survives the acute
566 illness.
567
568 The mere existence of certain underlying medical conditions (including without limitation a diagnosis
569 of end stage renal disease, a diagnosis of congestive heart failure, or a diagnosis of dementia) should
570 not be used in and of themselves to assign points for "death likely within one year" without objective,
571 medical evidence that such conditions are of a severity that would limit life expectancy to less than
572 one year. Disabilities or chronic, stable underlying conditions that have no impact on the likelihood of
573 surviving the acute illness, or surviving one year beyond the acute illness, will not be considered in
574 assigning points.

575 **B. Approach to Pediatric Patients (< 18 years of age)**

576 When possible, pediatric patients should be managed in pediatric centers, allowing both best
577 application of experience with these cases as well as additional local resources for adults that by
578 fraction carry a higher burden of disease. If health care crisis protocol triage guidelines are in effect,

579 pediatric ICU patients may be stabilized in their local combined hospital emergency departments and
580 then transferred to the pediatric center where the triage can occur by an expert pediatric/neonatal triage
581 team.

582 Scoring systems meant for adult critical care patients are not validated in the pediatric populations.
583 While there are similar scoring systems for pediatric and neonatal patients, they are less reliable as the
584 basis for determining priority for several reasons. Most children requiring critical care and mechanical
585 ventilation have a much higher likelihood of survival to hospital discharge than adult patients who
586 require these interventions and drive the way that these scores perform. Moreover, children requiring
587 neonatal or pediatric critical care may have chronic medical and surgical conditions, some congenital
588 and some acquired. Many of these are rare conditions, and regardless they require multi-specialist
589 expertise. The interplay between the underlying disease and the current illness is not captured by any
590 scoring system. Finally, within the small range of ages included under the umbrella of pediatrics,
591 patient age is not a meaningful factor to distinguish priority for ventilators or critical care.

592 For these reasons, experienced pediatric intensivists and neonatologists serving as Triage Officers
593 should exercise clinical judgment in assigning priority scores for children. Triage Officers will focus
594 on the likelihood of surviving the current admission and will also take into account conditions that are
595 expected to limit survival to no more than one year regardless of whether the patient recovers from the
596 episode of critical illness. Triage should be guided by the acute severity of the patient's current
597 medical condition, the epidemiology of the disease, and the current status of any underlying medical
598 diseases that may hinder recovery. Triage Officers may use validated scoring systems (e.g., PELOD-2,
599 modified pediatric SOFA, SNAPPE-II) to aid in their assigning of priority scores. Triage Officers
600 should not factor a patient's pre-hospitalization quality-of-life or predictions of future quality-of-life
601 into the assignment of priority scores. Disabilities or chronic but stable underlying conditions that have
602 no impact on short term survivability should not be considered.

603 Points are assigned for prognosis for survival of the acute illness (1-4 points) and the presence of
604 underlying conditions (3 points for severe underlying conditions with life expectancy < 1 year and 4
605 points for conditions expected to be non-survivable during the hospital admission). These points are
606 then added together to produce a total priority score, which ranges from 1 to 8. Lower scores indicate
607 higher likelihood to benefit from critical care; priority will be given to those with lower scores.

608 **Table 2**: **Multi-principle Strategy to Allocate Critical Care to Pediatric Patients During**
609 **an Emergency**

Specification	**Point System**			
	1	2	3	4
Prognosis for survival of the acute illness	75-100% chance of short-term survival	50-75% chance of short-term survival	25-50% chance of short-term survival	0-25% chance of short-term survival
Presence of underlying conditions	.		Severe co-morbid conditions; death likely within 1 year	Conditions expected to be non-survivable during this admission

610 **C. Other patient characteristics**

611 In determining the priority score for a patient, the Triage Officer(s) may by necessity as part of the
612 evaluation have access to characteristics that have no bearing on the likelihood or magnitude of benefit
613 (including but not limited to: race, disability, gender, sexual orientation, gender identity, ethnicity,
614 ability to pay, socioeconomic status, perceived social worth, incarceration, homelessness, perceived
615 quality of life, immigration status, or past or future use of resources). Triage Officers must not
616 consider such characteristics in any way in making priority determinations and should be mindful of
617 the role that implicit bias may play in decision making.

618 Assessment of prognosis for survival and assignment of a priority score must not include subjective
619 criteria such as quality-of-life or intrinsic worth.

620 **D. Reasonable accommodations**

621 Treating doctors and triage teams should consider reasonable accommodations to triage protocols for
622 individuals with disabilities. No patient should be disqualified from receiving life-saving treatment
623 solely because of the presence of a disability. Additionally, treatment allocation decisions may not be
624 based on the perception that a person's disability will require the use of greater treatment resources,
625 either in the short or long term. This should preclude the denial of initial access to a scarce medical
626 resource, such as a ventilator, based on the assumption that the person will require its use for a longer
627 period of time than a nondisabled person. This provision also precludes denying care to an individual
628 because treating them will require that they be hospitalized for a longer period of time, will require
629 greater-than-normal investment of staff time, or will require accommodations to standard hospital
630 procedures.
631

632 **Step 2: Assign patients to color-coded priority groups**

633 Once a patient's priority score is calculated using the multi-principle scoring system described in
634 Tables 1 or 2 for adult and pediatric patients respectively, each patient will be assigned to a color-
635 coded triage priority group (Table 3), which should be noted clearly in their chart/electronic medical
636 record. This color-coded assignment of priority groups is designed to allow Triage Officers to create
637 operationally clear priority groups to receive critical care resources, according to their score on the
638 multi-principle allocation framework. For example, individuals in the Red group both require and have
639 the best chance to benefit from critical care interventions and should therefore receive priority over all
640 other groups in the face of scarcity. The Orange group has intermediate priority and should receive
641 critical care resources if there are available resources after all patients in the Red group have been
642 allocated critical care resources. The Yellow group has lowest priority and should receive critical care
643 resources if there are available resources after all patients in the Red and Orange groups have been
644 allocated critical care resources. The priority scoring process should be consistent across
645 organizations, although specific color codes used to designate priority group may vary.

646 The color coding allows prioritization and assignment of critical care resources to those eligible for
647 them. All patients other than those who are thought to be imminently dying regardless of critical care
648 interventions will be *eligible* to receive critical care beds and services regardless of their priority score.
649 The availability of critical care resources will determine how many eligible patients will receive
650 critical care, in the order described above. Patients who are not triaged to receive critical
651 care/ventilation will at a minimum receive symptom management and psychosocial support, and
652 additional medical care as resources allow. In some instances this may include robust hospitalist care,
653 though in others all advanced interventions including antimicrobial therapy, non-symptom directed
654 pharmacotherapy (e.g. dexamethasone), and respiratory therapy may be needed for those in critical
655 care. Each patient should be reassessed daily to determine if changes in resource availability or their
656 clinical status warrant provision of critical care or other intermediate services.

657 Where available, specialist palliative care teams will be available for consultation. Where palliative
658 care specialists are not available, the treating clinical teams should provide primary palliative care.

659

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

Step 3: Make daily determination of how many priority groups can receive the scarce resource

Hospital leaders and the Triage Team will make determinations twice daily, or more frequently if needed, about what priority groups will have access to critical care services. These determinations will be based on real-time knowledge of the degree of scarcity of the critical care resources, as well as information about the predicted volume of new cases that will be presenting for care over the following several days. For example, if there is clear evidence that there is an imminent shortage of critical care resources (i.e. few ventilators available and large numbers of new patients daily), only patients in the highest priority group (Red group) should receive the scarce critical care resource. As scarcity subsides, additional priority groups (e.g. first Orange group, then Yellow group) should have access to critical care interventions.

There may be situations in which the hospital determines that it will offer critical resources to a certain priority group on a given day, and then there are not enough critical care resources for all patients within that priority group to receive them. In such a case, the raw priority scores will determine the

674 priority order for patients in the same priority group (the lower the score, the higher the priority). In
675 some circumstances, it may be ethically permissible to conserve scarce critical care resources during
676 times of high demand to assure that the resources are available to those with the best prognoses.

677 **Pregnancy**

678 Pregnant patients will be assigned a priority score based on the same framework used for non-pregnant
679 patients. If a pregnant patient is at or beyond the usual standards for fetal viability, the patient will be
680 given a two-point reduction in priority score, giving her a higher priority.

681 **Distinguishing between patients in same priority group where resources are insufficient**
682 **("tiebreakers")**

683 In the event of severe scarcity, there may be several situations in which multiple patients are being
684 considered for initiation or continuation of critical care at the same time and need to be distinguished
685 from one another. These situations include 1) the need to compare multiple patients in the same
686 priority group awaiting initiation of critical care when there are limited critical care resources
687 available; 2) the need to compare patients already receiving critical care resources with those waiting
688 for them; and 3) the need to compare multiple critically ill patients already receiving critical care.

689 The reallocation of resources when patients are already receiving critical care is addressed below.
690 Regarding distinguishing between multiple patients who are being initially triaged for critical care
691 resources and fall into the same priority group, the following criteria should be used:

692 **Priority score**

693 In the event that multiple patients present for initial triage simultaneously and there are insufficient
694 critical care resources for all the patients, patients with a lower absolute priority score will receive
695 priority over those with a higher absolute priority score.

696 **Additional factors that affect short-term survival**

697 There may be multiple patients with the same absolute priority score who, based on individual patient
698 characteristics not accounted for by SOFA, are deemed to have substantially different prospects for
699 survival of the acute illness. Such individual patient characteristics may include age, progressive
700 frailty including from extreme age and/or severe underlying medical conditions for which there is
701 objective medical evidence. To the extent that several patients with the same priority score are
702 deemed to have substantially different prospects for survival of the acute illness, priority may be given
703 to the patients with the higher likelihood of surviving the acute illness.

704 Decisions to allocate resources to one patient over another patient with the same priority score should
705 be based on the consensus of at least two providers, should be documented in detail, and should be
706 subject to regular review to ensure that adjustments are not being driven by implicit or explicit bias in
707 favor of or against any group of similarly situated individuals.

708 **Pediatric patients**

709 If there are multiple patients who are thought to have similar prognoses for short-term survival after
710 consideration of additional factors as above, pediatric patients shall be given priority for allocation of
711 critical care resources over non-pediatric patients.[10] [11] [12]

712 **Randomized Allocation**

713 In the event that there are "ties" between patients for allocation of resources after consideration of the
714 factors listed above, random allocation may be used to determine which patients receive limited
715 critical care resources.[13]

716 **Categorical exclusion criteria and non-survivable conditions**

717 A central feature of this allocation framework is that it avoids the use of categorical exclusion criteria
718 to indicate individuals who should not have access to critical care services under any circumstances.
719 There are some conditions that lead to immediate or near-immediate death despite aggressive therapy
720 (e.g., cardiac arrest unresponsive to appropriate ACLS, overwhelming traumatic injuries or burns,
721 advanced and irreversible neurologic event, intractable shock). During an emergency, clinicians must
722 still make clinical judgments about the appropriateness of critical care using the same criteria they use
723 during normal clinical practice and, to the extent critical care utilization would be deemed non-
724 beneficial during normal clinical practice, it should not be offered during an emergency. Triage
725 Officers and attending providers will make clear in communicating with families whether critical care
726 is not being offered based on the existence of a non-survivable medical condition or based on the
727 allocation framework. To the extent possible within the constraints of the institution's resources, social
728 workers, chaplains and/or palliative care clinicians should also be present when the triage decision is
729 communicated.

730 **Reassessment for ongoing provision of critical care/ventilation**

731 The purpose of this section is to describe the process the Triage Team will use to reassess patients who
732 are receiving critical care services, in order to determine whether the patient will continue with the
733 treatment.

734

735

736 **Ethical goal of reassessment of patients who are receiving critical care services**

---

[10] Emanuel EJ, Wertheimer A. Public health. Who should get influenza vaccine when not all can? Science 2006;312:854-5.
[11] Rosenbaum SJ, Bayer R, Bernheim RG, et al. Ethical considerations for decision making regarding allocation of mechanical ventilators during a severe influenza pandemic or other public health emergency. Atlanta: Centers for Disease Control and Prevention, 2011.
[12] Neuberger J, Adams D, MacMaster P, Maidment A, Speed M. Assessing priorities for allocation of donor liver grafts: survey of public and clinicians. British Medical Journal 1998;317:172-5.
[13] Crisis standards of care: Guidance from the AMA Code of Medical Ethics. April 2020. Accessed on: October 2020. Available at: https://www.ama-assn.org/delivering-care/ethics/crisis-standards-care-guidance-ama-code-medical-ethics

737 Every approach to the allocation of critical care resources is imperfect, and requires trade-offs.
738 Because (1) initial triage under emergent circumstances is extremely challenging; (2) it is ethically
739 valuable to give as many patients as could benefit a chance to receive critical care resources; and (3)
740 many patients will have the same initial priority score, the initial framework laid out in this
741 document will likely result in a large element of first-come, first-served allocation. This can arbitrarily
742 favor those who were first in line by virtue of chance (timing of illness) and/or ability to access
743 hospital resources. As such, it is important to carefully plan for reassessing patients and reallocating
744 critical resources, and to approach reassessment and reallocation using the same ethical principles that
745 govern the initial allocation decisions.

746 In an emergency, when there are not enough critical care resources for all, the goal of maximizing
747 population outcomes would be jeopardized if patients who were determined to be unlikely to survive
748 were allowed indefinite use of scarce critical care services. On the other hand, when escalating care of
749 an individual, judicious use of critical care resources includes allowing a reasonable window to have
750 an effect once a triage decision has been made. Consequently, a deliberate approach to regular
751 reassessments of patients already receiving critical care resources, and reallocation of those resources
752 where appropriate, is required and will lessen the chance that arbitrary considerations (such as when
753 an individual develops critical illness or how able an individual is to access hospital resources) will
754 unduly affect patients' access to treatment or the value to be obtained by previous decisions.

755 **Therapeutic trial of critical care**

756 All patients who are allocated critical care services (other than those who receive critical care briefly
757 to allow for initial triage by a Triage Officer and are subsequently determined to be unable to receive
758 critical care based on priority assignment) will be allowed a therapeutic trial of a duration to be
759 determined by the clinical characteristics of the patient, the response to treatment, the patient's disease
760 and the expected trajectory of recovery. The duration of the therapeutic trial also may be affected by
761 the degree of scarcity a hospital is facing; therapeutic trials may be shorter if the ability of the hospital
762 to reallocate resources in the ordinary course of critical care is overwhelmed by the demand for such
763 resources (i.e., there is a significant queue of patients waiting for resources).

764 **Regular reassessments**

765 A Triage Team will conduct regular reassessments of all patients receiving critical care/ventilation to
766 determine the relative prognoses of the patients for survival of the acute illness. Given the importance
767 of consensus and confidence in determining prognosis, the Triage Team should include multiple
768 Triage Officers with relevant training and ideally include a clinician with a specific focus on diversity,
769 equity and inclusion.

770 Determination of prognosis may include consideration of individual factors known to influence the
771 outcomes of critical illness, including for example progressive frailty including from extreme age and/
772 or severe underlying medical conditions for which there is objective medical evidence, and
773 improvement or decline in organ function since the time of initial triage. Those factors will only be
774 considered to the extent that they are thought to affect prognosis for survival of the acute illness.

775 To the extent possible, members of the Triage Team making such decisions will be blinded to patient
776 characteristics that should not be used in decision making including race, disability, gender, sexual
777 orientation, gender identity, ethnicity, ability to pay, socioeconomic status, perceived social worth,
778 perceived quality of life, immigration status, or past or future use of resources.

779 **Reallocation**

780 If there are patients in the queue for initiation of critical care services who are in the high priority
781 group, then patients already receiving critical care who are deemed on reassessment to have very poor
782 prognoses for survival of the acute illness should not receive ongoing critical care/ventilation.

783 If there are multiple patients who are deemed to have equally poor prognoses for survival of the acute
784 illness, and decisions regarding continuation of critical care resources need to be made, a random
785 allocation may be used to determine which patients will and will not receive ongoing critical
786 care/ventilation.

787 This approach to reassessment will apply to all patients receiving critical care resources, including
788 those who were already receiving critical care resources at the time the allocation framework was
789 activated. The Triage Team will review all patients receiving critical care at the time the allocation
790 framework was activated and will determine in conjunction with bedside clinicians when it is
791 appropriate to reassess those patients.

792 **Reasonable modifications for persons with disabilities**

793 In the context of reallocation decisions and assessment of prognosis, reasonable modifications must be
794 made for persons with disabilities.[14] These may include interpreter services or other modifications or
795 additional services needed due to disability. Given that the clinical trajectory for any one patient may
796 be influenced by their underlying conditions including disabilities, clinicians should consider these
797 factors when performing reassessments and allow for variations on recovery that are in the context of
798 the underlying condition or disability. An underlying disability should not be used as the sole basis for
799 determining that a patient has a poor prognosis for surviving the acute illness.

800 **Communication regarding reallocation decisions**

801 When a determination has been made that a patient can no longer receive ongoing critical
802 care/ventilation, the Triage Team will explain in detail to the patient or the patient's surrogate
803 decision-maker the reasoning behind the decision and offer the opportunity for an appeal of the
804 determination (following the process for appeals detailed below). If an appeal is denied, assent of the
805 patient or surrogate will not be required for discontinuation of critical care/ventilation. Patients who
806 are no longer prioritized for critical care/ventilation should receive medical care including intensive
807 symptom management and psychosocial support. If available, palliative care teams will participate in
808 the communication process and the medical management of these patients.

[14] Mello MM, Persad G, White DB. Respecting Disability Rights - Toward Improved Crisis Standards of Care. N Engl J Med. 2020 Jul 30;383(5):e26.

809

810 **Patients requiring chronic ventilation**

811 Patients who present for acute care and are already using a personal ventilator for pre-
812 existing respiratory conditions (e.g. home ventilation or ventilation at a skilled nursing
813 facility) should not be separated from their ventilator in order to reallocate it to other
814 patients.

815 **Rapid reassessment of patients unable to be triaged initially**

816 Those patients who receive critical care services (e.g. mechanical ventilation) emergently in order to
817 allow time for initial triage by a Triage Officer, but who are subsequently determined to be unable to
818 receive critical care based on priority assignment (as above in the section regarding initial assessment),
819 will receive medical care including intensive symptom management and psychosocial support. They
820 will not receive a trial of critical care as described above. By way of example, this might include
821 patients intubated in the field, patients intubated emergently in the emergency department, patients
822 with severe trauma stabilized in the emergency department and brought to the ICU, and patients
823 resuscitated on a medical floor in a code situation. The appeals process for withdrawal of critical care
824 described below will not apply to these patients.

825 **Protections for people with disabilities**

826 Individuals with certain disabilities or background characteristics may be at particularly high risk of
827 being subject to inaccurate prognostic judgments based on implicit bias related to these characteristics,
828 including assumptions about life expectancy and quality of life. These conditions include, for example,
829 autism, communication disability (e.g., dysarthria), intellectual or cognitive disability (e.g. Down's
830 syndrome, genetic conditions with developmental delay), mental health disability (e.g. severe
831 depression or anxiety), physical mobility disability (e.g. spinal cord injury, spina bifida,
832 neuromuscular conditions), sensory disability (e.g. blindness, deafness).

833 In addition to the reasonable modifications and accommodations identified throughout this document
834 for people with disabilities, decisions to withhold or withdraw critical care resources from such
835 individuals should be subject to a high level of scrutiny, should be reviewed by at least two providers
836 and made only when there is consensus with a high degree of confidence, and should ideally be
837 reviewed by a provider with medical expertise related to the disability in question.

838 Providers and medical institutions operating in accordance with these standards may not deny,
839 withhold, remove, or suspend care to any patient based solely on their own assessment of the patient's
840 quality of life due to a disability or medical condition. This prohibition extends to both subjective
841 assessments and to the use of metrics such as Quality-Adjusted Life Years (QALYs) and Disability-
842 Adjusted Life Years (DALYs). Such assessments do not reflect the value that people with disabilities
843 place on their own lives.

844 **Appeals process for individual triage decisions**

845 It is possible that patients, families, or clinicians will challenge individual triage decisions. Procedural
846 fairness requires the availability of an accessible, prompt, and transparent appeals mechanism to
847 resolve such disputes. Special consideration will be made to ensure that this is done in a culturally
848 competent manner, with racially, ethnically, culturally and linguistically diverse team members
849 available to assist in these communications if possible, and specialized assistive technology or other
850 reasonable accommodations available for patients and families who require it. Ideally, these
851 challenges will be addressed by the Triage Review and Oversight Committee as detailed previously.

852 **Initial triage decisions**

853 By necessity, many initial triage decisions will be made in highly time-pressured circumstances. As
854 such, for initial triage decisions, the only appeals that will be entertained are those based on a claim
855 that an error was made by the Triage Officer in the calculation of the priority score or in the use or
856 nonuse of a tiebreaker consideration. In the event of such an appeal, the Triage Team will verify the
857 accuracy or the priority score by recalculating it or will revisit tiebreaker considerations.[16]

858 **Decisions to withdraw scarce resources**

859 Decisions to withdraw scarce resources (including mechanical ventilation) from a patient who is
860 already receiving critical care may cause heightened moral concern and may also depend on more
861 clinical judgment than initial allocation decisions. Clinicians, patients and surrogates will be informed
862 of their right to appeal any such decisions to the Triage Review and Oversight Committee. If a
863 clinician, patient or surrogate would like to appeal such a decision, the following process will take
864 place.

865 - The appeal will be immediately brought to the Triage Review and Oversight Committee.
866 - The individuals who are appealing the triage decision should explain the grounds for their
867 disagreement with the triage decision. An appeal may not be brought based on an objection to
868 the overall allocation framework.
869 - The Triage Team should explain the grounds for the triage decision that was made.
870 - Appeals based on considerations other than disagreement with the allocation framework should
871 immediately be brought to the Triage Review and Oversight Committee. Any triage decision
872 based on consideration prohibited under this document should be reversed and redetermined
873 using only the relevant, individualized clinical assessment
874 - The appeals process must occur quickly enough that the appeals process does not harm patients
875 who are in the queue for the scarce resource.
876 - Three committee members will be needed for a quorum to render a decision, using a simple
877 majority vote, but need not meet in person.
878 - The decision of the Triage Review and Oversight Committee for a given hospital will be final.
879 - The decision of the Triage Review and Oversight Committee will be documented in sufficient
880 detail to demonstrate that the outcome represents a well-considered decision.
881 - Periodically, the Triage Review and Oversight Committee should retrospectively evaluate
882 whether the review process is consistent with effective, fair, and timely application of the
883 allocation framework.

884

885

886

887 ---

888 **Other Provisions**

889 **Communication with staff**: Once Hospital Incident Command System (HICS) leadership has
890 determined that the institution is activating health care crisis protocols, this will be communicated
891 clearly and consistently to all hospital clinical staff.

892 **Consolidation of critical care triage**: Once the protocol has been activated, critical care triage
893 throughout the institution will be consolidated and the allocation framework will be applied to all
894 critical care triage within the institution.

895 **Early intervention**: Once the health care crisis protocol has been activated, every effort should be
896 made to identify early those patients in the hospital who are at high risk of declining to the point of
897 requiring critical care as soon as possible. Those patients should be called to the attention of a Triage
898 Officer.

899 **Transparency**: Once the health care crisis protocol is activated, clinicians will communicate in
900 transparent language with patients and families about the emergency and the need to allocate resources
901 differently than when the allocation framework is not activated. Special consideration will be made to
902 ensure that this is done in a culturally competent manner, with racially, ethnically, culturally and
903 linguistically diverse team members available to assist in these communications if possible, and
904 specialized assistive technology or other reasonable accommodations available for patients and
905 families with disabilities or those who otherwise require it. Local government and state officials and
906 the public should also be informed through appropriate means and media.
907
908 **Documentation**: All triage decisions made through the Triage Officer and Triage Team will be
909 documented in the medical record. As long as the allocation framework is in effect, the overall
910 allocation of critical care resources within the institution will be documented and reported to promote
911 transparency. When the appeals process is conducted, the Triage Review and Oversight Committee
912 will document in sufficient detail to demonstrate that the outcome reflects a well-considered decision.
913 A reporting mechanism will be developed to monitor the results of the triage process by race,
914 ethnicity, preferred language, gender, disability and other patient demographic characteristics.
915
916 **Reassessment of the allocation framework:** If it is determined that critical care resources are being
917 inequitably distributed based on demographic or other data, attempts will be made by the Triage
918 Review and Oversight Committee to identify where the inequity is occurring through an iterative
919 process and to immediately develop strategies for remediation. Identification of the factors causing
920 inequitable distribution and the immediate development of strategies for remediation should be
921 undertaken.
922

923 **Palliative care**: To the extent the resources of the institution allow, there will be palliative care staff
924 specifically designated to work closely with the Triage Officer and Triage Team and to facilitate
925 development of care plans for patients who require intensive symptom management and psychosocial
926 support. Palliative care plays an important role in responding to an emergency by assisting with
927 symptom management, decision-support, and emotional and spiritual support for patients and families.
928 As early as possible, health systems and palliative care teams should devise plans to accommodate the
929 surge in demand for palliative care services and the adaptations that will be required to deliver those
930 services, given the unique constraints posted by the circumstances of the given emergency.

931 **Cardiopulmonary resuscitation and intubation**: Any patient who is evaluated by the Triage Team
932 and is determined to be unable to receive scarce critical care resources under the allocation framework
933 will not undergo cardiopulmonary resuscitation or intubation. If circumstances materially change and
934 the patient subsequently is assigned a priority score that would allow receipt of critical care, the
935 clinical management in life-threatening circumstances should be reconsidered by the Triage Team or
936 available Triage Officer.

937 **Healthcare decision making.** Although there may be circumstances where a particular individual
938 cannot be offered critical care resources and will therefore will not be offered cardiopulmonary
939 resuscitation or intubation, no individual or their families shall be required to commit to a DNR and/or
940 DNI order as a prerequisite to receiving treatment, regardless of the level of strain on hospital
941 resources or the individual's disability, pre-existing health condition. Individuals with disabilities,
942 older adults, or people with chronic health conditions and their families may not be coerced into
943 agreeing to DNR and/or DNI orders. All individuals being treated should be fully informed on their
944 care options. Any individual should be offered the opportunity to execute a standard Nebraska health
945 care proxy form if they do not already have a designated emergency decision maker. All patients,
946 including older adults and patients with disabilities or chronic conditions should be afforded
947 accommodations as necessary to communicate their wishes and preferences with regard to treatment
948 decisions, and the providers/ethics committees, Triage Team or Triage Review and Oversight
949 Committee making recommendations regarding end of life decisions should guard against
950 discriminatory assumptions, including assumptions about an individual's competency, quality of life,
951 value to society, life expectancy, or desire to continue living with a chronic underlying disability.

952 **Use of extracorporeal life support**: If the allocation framework is activated, all decisions regarding
953 use of extracorporeal life support ("ECLS") will be made by the Triage Team in consultation with
954 Hospital Incident Command leadership and critical care ECLS specialists with the goals to reserve this
955 limited resource for those who would be most likely to benefit from it and to avoid prolonged use in
956 patients who are not showing signs of recovery.

957 **Use of other specific critical care resources:** Once the allocation framework is activated, there may
958 be specific critical care resources other than ECLS that become limited (e.g., dialysis, mechanical
959 circulatory support). Once Hospital Incident Command leadership has made this determination, the
960 Triage Team in conjunction with respective clinical are groups (e.g. nephrology in the case of dialysis,
961 cardiology and cardiac surgery in the case of mechanical circulatory support) will make all decisions
962 regarding initiation of such specific resources. The goals will be to reserve these resources for those
963 most likely to benefit from them and to avoid prolonged use in patients who are not showing signs of
964 recovery.

965 **Patient personal equipment:** If a patient presents to a hospital and has personal medical equipment
966 (including equipment used or rented by the patient prior to presentation at the hospital), such as a
967 ventilator, that equipment will not be confiscated or used for any other patient. Efforts should be made
968 to keep this personal medical equipment with the patient.

969 **Accommodations for communication:** Hospitals will ensure access to interpretive services through
970 electronic means or other methods appropriate for the clinical circumstance. For patients who require
971 assistance to communicate effectively, hospitals will make reasonable accommodations to hospital
972 non-visitation policies attempts to and use other adaptive methods for communication, including but
973 not limited to the provision of American Sign Language interpretation to patients who are Deaf.
974
975 **Outside hospital transfers**: When the allocation framework is activated, triage of outside hospital
976 requests for an ICU bed will be centralized through the Triage Team. In communicating about a
977 proposed transfer of a patient, the transferring hospital should communicate the priority score of the
978 patient to the receiving hospital. In case of conflict or competing requests for transfer, the Triage Team
979 may use a randomized allocation approach to resolve the conflict. If the Triage Team decision is
980 challenged, the Triage Review and Oversight Committee should review and make the final decision.

981 **Suspension of standard hospital policy**: The Hospital Incident Commander should suspend hospital
982 policies based on routine operations that are in conflict with this document, to implement the health
983 care crisis protocol, to the extent these can be identified in a timely fashion.

984 **Flexibility and limitations**: This document provides a framework for decision-making regarding
985 critical care resources in the event that demand for critical care resources outstrips capacity. In
986 institutions that have a limited number of critical care, ethics or other resources, it may not be possible
987 to follow the precise processes and guidelines outlined in this document. Each institution will follow
988 the processes and guidelines to the extent possible, modifying as necessary to adhere to the spirit of
989 the document given the hospital or other organization's constraints. If the processes laid out in this
990 document need to be modified throughout the course of the emergency, any modifications will be done
991 through a fair and transparent process that involves Hospital Incident Command, critical care and
992 ethics leadership.

993 **Retrospective Review:** The accumulated data of all hospital triage decisions in facilities which have
994 activated the health care crisis protocol will be subject to retrospective review at the hospital level.

995 In addition, if Triage Teams perform health care crisis protocol allocation decision-making over a
996 prolonged time period, health systems should take steps to develop and deploy, in a timely way, a
997 method of tracking the implementation of their policy, defining and describing quality performance of
998 Triage Teams, and longitudinally analyzing the performance. Data collection should include data on
999 morbidity and mortality outcomes to assess trends by demographic factors such as gender, race and
1000 ethnicity, disability type (including physical disability, mental health diagnosis, and
1001 intellectual/developmental disability), geographic location, or socioeconomic status. These processes
1002 should be reviewed by the Triage Review and Oversight Committee.

1003 At the conclusion of an emergency triggering health care crisis protocols and implementation of the
1004 triage protocol, a formal report describing the health system's experience, patient outcomes,

1005 community response, and lessons learned should be developed and shared with providers, system
1006 leaders, governing authorities, patients, and the public. This consultation process must include
1007 organizations which advocate for the rights of racial and ethnic minorities and people with disabilities
1008 in healthcare settings. Feedback from these stakeholders should be utilized to evaluate and update, as
1009 appropriate, all aspects of the triage framework. The report should be reviewed and approved by the
1010 Triage Team, the Triage Review and Oversight Committee and health system leadership.

1011 **Publication**: All healthcare facilities or healthcare coalitions should publish their health care crisis
1012 protocols, including appeal procedures, on their websites.

1013

VI. REFERENCES

1. Institute of Medicine (US) Forum on Medical and Public Health Preparedness for Catastrophic Events. Crisis Standards of Care: Summary of a Workshop Series. Washington (DC): National Academies Press (US); 2010. B, Summary of Guidance for Establishing Crisis Standards of Care for Use in Disaster Situations: A Letter Report. Available from: https://www.ncbi.nlm.nih.gov/books/NBK32748/

2. The Guidelines for Use of Modified Health Care Protocols in Acute Care Hospitals During Public Health Emergencies, September 2013, Kansas Department of Health and Environment

3. Dictionary of Military and Associated Terms. US Department of Defense. 2005.

4. *Allocating scarce resources in disasters: emergency department principles*. Hick JL1, Hanfling D, Cantrill SV. Ann Emerg Med. 2012 Mar;59(3):177-87.

5. Kelen GD, Kraus CK, McCarthy ML, Bass E, Hsu EB, Li G, Scheulen JJ, Shahan JB, Brill JD, Green GB. Inpatient disposition classification for the creation of hospital surge capacity: a multiphase study. Lancet. 2006 Dec 2;368(9551):1984-90.

6. Crisis Standards of Care: A Toolkit for Indicators and Triggers. Board on Health Sciences Policy. Dan Hanfling, John L. Hick, and Clare Stroud, Editors; Institute of Medicine of the National Academies. The National Academies Press. Washington, D.C.; Released: July 31, 2013.

7. Childress JF, Faden RR, Gaare RD, et al. Public health ethics: mapping the terrain. J Law Med Ethics 2002;30:170-8.

8. Gostin L. Public health strategies for pandemic influenza: ethics and the law. JAMA 2006;295:1700-4.

9. Beauchamp TL, Childress JF. Principles of Biomedical Ethics. 6th ed. ed. New York, NY: Oxford University Press; 2009.

10. Emanuel EJ, Wertheimer A. Public health. Who should get influenza vaccine when not all can? Science 2006;312:854-5.

11. Rosenbaum SJ, Bayer R, Bernheim RG, et al. Ethical considerations for decision making regarding allocation of mechanical ventilators during a severe influenza pandemic or other public health emergency. Atlanta: Centers for Disease Control and Prevention, 2011.

12. Neuberger J, Adams D, MacMaster P, Maidment A, Speed M. Assessing priorities for allocation of donor liver grafts: survey of public and clinicians. British Medical Journal 1998;317:172-5.

13. Crisis standards of care: Guidance from the AMA Code of Medical Ethics. April 2020. Accessed on: October 2020. Available at: https://www.ama-assn.org/delivering-care/ethics/crisis-standards-care-guidance-ama-code-medical-ethics

14. Mello MM, Persad G, White DB. Respecting Disability Rights - Toward Improved Crisis Standards of Care. N Engl J Med. 2020 Jul 30;383(5):e26.

Publication date: 05/10/2021

VII. ACKNOWLEDGEMENTS

The following individuals were involved in the review and creation of this document:

Dr. David M. Brett-Major, MD
Dr. Mark W. Davis, MD
Dr. Stephen E. Doran, MD*
Dr. Harris A. Frankel, MD
Dr. Brian J. Keegan, MD
Dr. Leslie A. Kuhnel, DBe*
Dr. James V. Lawler, MD
Rachel E. Lookadoo, JD*
Abigail E. Lowe, MA*
Dr. Kate M. McKillip, MD
Dr. Robert W. Plambeck, MD
Dr. Kevin J. Reichmuth, MD
Shelly M. Schwedhelm, MSN*
Dr. Michael C. Wadman, MD

*Denotes members of the Healthcare Surge Workgroup