



AHS CRISIS STANDARD OF CARE RESOURCE ALLOCATION IN CONDITIONS OF ABSOLUTE SCARCITY

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**Crisis Standard of Care
 Resource Allocation in Conditions of Absolute Scarcity
 Principles and Guidelines
 COVID-19 Outbreak
 Alameda Health System**

Executive Summary

Introduction: The purpose of this document is to provide guidance on a triage allocation system during a public health emergency in the event that the demand for critical care resources (beds, ventilators, etc.) overwhelms the supply available within our region. These triage recommendations will be enacted only if: 1) critical care resources are to the point of becoming overwhelmed regionally despite taking all appropriate steps, including transferring to other facilities, to increase surge capacity to care for critically ill patients; and 2) the Public Health Officer or other regional authority has declared a public health emergency. This allocation framework is grounded in ethical obligations that include the duty to care, duty to steward scarce resources to optimize population health, distributive and procedural justice and transparency. It is consistent with existing national recommendations for how to allocate scarce resources in a crisis standard of care. Until any additional national, state, or county guidance is provided, this policy will serve as a guide for Alameda Health System during a crisis standard of care.

This document describes 1) the creation of triage teams to ensure consistent and unbiased decision making; 2) allocation criteria for initial allocation decisions and 3) reassessment criteria to determine whether ongoing provision of scarce critical care resources are justified for individual patients.

Section 1. Creation of triage teams: An impartial, objective and multidisciplinary team appears to be a universally accepted and encouraged form of making decisions regarding allocation of resources nationwide in settings of a public health emergency. Alameda Health System supports such a team to remove the burden of rationing decisions from the bedside care team. The following document will outline the roles and responsibilities of the triage teams.

Section 2. Allocation criteria for utilization of scarce resources: Consistent with current and accepted standards during public health emergencies, the primary goals of this allocation

framework are to save lives and save life-years, enacted within the context of ensuring meaningful access for all patients, ensuring individualized patient assessments, and diminishing the negative effect of social inequalities that lessen some patients' long-term life expectancy. All patients who meet usual medical indications for critical care services will be assigned a priority score using a 1-8 scale (lower scores indicate higher likelihood of benefit from critical care resources and will be given priority). The scoring system is derived from 1) patient's likelihood of surviving to hospital discharge, assessed with an objective and validated measure of acute physiology (e.g., the SOFA score); and 2) presence of a severely limited life expectancy even if the patient survived the acute critical illness. Once priority scores have been calculated patients will be assigned to color-coded priority groups. All patients will be eligible to receive critical care services in accordance with their stated goals and wishes, regardless of their priority scores. Available critical care resources will be allocated according to priority groups with the availability of resources determining how many priority groups will receive critical care. Patients who are triaged to not receive ICU beds or services will be offered medical care including intensive symptom management and psychosocial support.

Section 3. Reassessment for ongoing provision of critical care resources:

The triage team will conduct periodic reassessments of all patients receiving critical care services during times of crisis (i.e., not merely those initially triaged under the crisis standards). The timing of reassessments should be based on evolving understanding of typical disease trajectories and of the severity of the crisis. A multidimensional, individualized assessment should be used to quantify changes in patients' conditions, such as recalculation of severity of illness scores, appraisal of new complications, and treating clinicians' input. Patients showing improvement will continue to receive critical care services until the next assessment. Patients showing substantial clinical deterioration that portends a very low chance for survival will have critical care discontinued. These patients will receive medical care including intensive symptom management and psychosocial support. Where available, specialist palliative care teams will provide additional support and consultation.

Introduction and Ethical Considerations

Introduction: Alameda Health System anticipates a surge in seriously and critically ill patients related to the Novel Coronavirus Disease-2019 (Covid19). This increase in demand of ICU-level care and services may result in shortages of these highly utilized resources, including materials, staffing and space. In response to this demand, Alameda Health System leadership, in conjunction with the Ethics Committee, has outlined a triage system to ensure equitable and just allocation of resources. The healthcare system has already begun to ensure identification of scarce resources, acquisition of additional supplies and personnel, and conservation of the materials identified with controlled distribution and re-allocation of resources when necessary. The healthcare system is also actively working on alternatives and work arounds for scarce resources.

When critical resources become substantially reduced or depleted, the adoption of crisis standard of care must follow. In this scenario, it is imperative that ethical standards remain at the cornerstone of decisions surrounding criteria for access to (and discharge from) ICU level of care. These criteria will not only be decided upon based on clinical appropriateness, but also by principles and concepts outlined below. These principles are a culmination of articles and

statement pieces from various medical societies and healthcare systems and adopted here for use at Alameda Health System. It is our hope that these guidelines and policies are utilized at the county and regional level in order to assure just allocation of resources throughout our community. It is also important that all patients be treated equally, regardless of race, ethnicity, gender, disability, perceptions of quality of life, insurance or socioeconomic status, perceptions of social worth, immigration status, etc. AHS affirms its duty and moral obligation to care for our marginalized population.

If crucial resources become so scarce that they need to be allocated on a case-by-case basis, such decisions will be made by the System Triage Team. This Triage Team will consist of physicians, nurses and members of the Ethics Committee none of whom are intimately involved in the care of the patient. Roles and responsibilities, along with steps to activate said team are discussed in more detail below.

Ethical principles of the allocation framework: Consistent with accepted standards during public health emergencies, a goal of the allocation framework is to achieve benefit for populations of patients, often expressed as doing the greatest good for the greatest number. It should be noted that this goal is different from the traditional focus of medical ethics, which is centered on promoting the wellbeing of individual patients. In addition, the framework is designed to achieve the following:

1. To create meaningful access for all patients. All patients who are eligible for ICU services during ordinary circumstances remain eligible, and there are no exclusion criteria based on age, disabilities, or other factors.
2. To ensure that all patients receive individualized assessments by clinicians, based on the best available objective medical evidence.
3. To ensure that no one is denied care based on stereotypes, assessments of quality of life, or judgments about a person’s “worth” based on the presence or absence of disabilities or other factors.
4. To diminish the impact of social inequalities that negatively impact patients’ long-term life expectancy.

The four main guiding ethical principles in resource allocation during a public health emergency, which are universally accepted and will be the driving concepts embedded within this statement piece center around our *duty to care*, *duty to steward resources*, *distributive and procedural justice* and *transparency*.

Ethical Principle	Ethical Obligation
Duty to Care	Fundamental obligation shared by providers to care for all patients.
Duty to Steward Resources	Providers duty to responsibly manage resources during periods of true scarcity
Distributive Justice	Requires that an allocation system be applied broadly and consistently to be fair to all
Transparency	Ensures that the process is open to feedback and revision, and promotes public trust

The allocation framework is guided by a multi-principle approach, based primarily on two considerations: 1) saving lives; and 2) saving life-years, both within the context of ensuring meaningful access for all patients and individualized patient assessments based on objective medical knowledge. Patients who are more likely to survive with intensive care are prioritized over patients who are less likely to survive with intensive care. Patients who do not have a severely limited near-term prognosis are given priority over those who are likely to die in the near-term from conditions in advanced stages, even if they survive the acute critical illness.

The allocation framework does not incorporate long-term life expectancy into priority scores. The reason is that doing so would unfairly disadvantage patients with a decreased long-term life expectancy from disabilities or from diseases exacerbated by social inequalities. Instead, the framework incorporates prognosis for near-term survival. An implication of this design choice is that the framework treats as equal all patients who are not in the late stages of a severe condition. For example, a patient expected to live 5 more years would receive equal priority for ICU treatment as a patient expected to live 65 more years. This step was taken to affirmatively diminish the impact of disabilities and social inequalities that negatively impact patients' life expectancy.

No use of categorical exclusion criteria:

The allocation framework does not categorically exclude any patients who, in usual circumstances, would be eligible for critical care resources. Instead, all patients are treated as eligible to receive critical care resources and are prioritized based on potential to benefit from those resources; the availability of critical care resources determines how many priority groups can receive critical care. There are compelling reasons to not use exclusion criteria. Alameda Health System wants to make clear that all individuals are “worth saving” and we have a duty and obligation to provide the best possible care in all instances. Moreover, categorical exclusions are too rigid to be used in a dynamic crisis, when ventilator shortages will likely surge and decline episodically during the pandemic. In addition, such exclusions violate a fundamental principle of public health ethics: use the means that are least restrictive to individual liberty to accomplish the public health goal. Categorical exclusions are not necessary because less restrictive approaches are feasible, such as allowing all patients to be eligible and giving priority to those most likely to benefit.

In times of public health emergencies, Alameda Health System is committed to ensuring that the triage system does not disproportionately impact marginalized and vulnerable groups. Furthermore, this triage system will be utilized at the system level and affect all patients, not just those suffering from COVID-19.

Code Status for Critically Ill Patients:

It is recognized that there is a highly controversial and charged debate regarding the effectiveness and utility of CPR in critically ill patients, specifically those suffering from acute respiratory failure associated with COVID-19. **Alameda Health System does not endorse a blanket DNR policy for COVID-19 patients.**

The ethical framework that helps guide shared-decision making during normal situations should still hold true in a public health emergency. However, there are ethical obligations that go beyond the individual in such extraordinary circumstances. Factors that take into account the safety and well-being of healthcare workers performing CPR along with the effectiveness of the treatment modality should be analyzed on a case-by-case basis. In situations in which the treating physician, in consultation with other physicians and specialists, agree that the potential risks to staff along with the potential burden to the patient outweigh the potential benefits to such an intervention, then this treatment modality should not be offered. In this situation, informed assent, in which the treating physician asks the patient/surrogate/family to allow them to make the code decision based on an individualized assessment of the persons' disease process, comorbidities and anticipated clinical course may be more helpful and therapeutic than the traditional informed consent.

For patients with known or suspected COVID-19 infection, the benefits and burdens are even more nuanced. All patients who are Full Code deserve high quality CPR and post-ROSC care in order to make the intervention as effective as possible. Similarly, all responders who are performing duties surrounding BLS/ACLS protocols must be given access to and should wear all appropriate PPE (in accordance with hospital policy) in order to protect themselves and others from becoming ill. If one or both of these two priorities cannot be met, then CPR should not be undertaken.

Even if it may not be possible to provide critical care services to all patients who might be in need, our goal is to align with patients and families and to demonstrate our commitment to their care and well-being by emphasizing empathetic, direct, and transparent communication, proactively engaging in goals of care conversations, and actively utilizing the services of the palliative and spiritual care teams.

Section 1: Triage Team Composition, Activation, Process, Communication of Decision Making, and Appeals Process

The Alameda Health System Triage Team will have responsibility to implement the allocation framework outlined in this policy. It is important to emphasize that patients' treating physicians should not make triage decisions. The separation of the triage role from the clinical role is intended to enhance objectivity, avoid conflicts of commitments, and minimize moral distress.

Triage Team Composition

The triage team will be composed of:

- One attending physician with general knowledge of critical care
- One nurse leader
- One member of the Ethics Committee

Within this group, a Triage Officer(s) could be elected and would take call to help make decisions that are more time sensitive than would be allowable for an entire assembly of the Triage Team. Any decisions made by the Triage Officer, without the entire Team, will be reviewed as soon as a meeting with the entire Triage Team is able to be coordinated.

Alameda Health System will maintain a collective group of physicians, nurses and Ethics Committee members with familiarity with the ethical implications associated with these delicate triage decisions.

The triage team members should function in shifts lasting no longer than 13 hours (to enable 30 minutes of overlap and handoffs on each end). Therefore, there should be two shifts per day to fully staff the triage function. Team decisions and supporting documentation should be reported daily to appropriate hospital leadership and incident command.

Triage team members will be oriented to the Crisis Standard of Care Policy and its ethical framework, applying the allocation framework, communicating with clinicians and families about triage decisions, avoiding implicit bias, respecting disability rights, and diminishing the impact of social inequalities on health outcomes.

Alameda Health System recognizes that Triage Team members may be personally affected by the crisis, or suffering moral distress due to the demands of their role. If at any point in time a Triage Team member feels they are unable to fulfill their role, they can request to be excused from the Triage Team.

Activation of the Triage Team

Step 1: Public Health Officer or Incident Command Center activates “**Crisis Standard of Care**”

Defined by lack of critical care beds, ventilators or other scarce resource throughout the region and to begin allocation of said resources on a triage basis

Step 2: The ICU attending(s), with the help of the ICU charge nurse, will assign all critical care patients a raw priority score and give them the appropriate Color Code

Step 3: Incident Command Center activates the Triage Team

Triage Team Process

- Triage Team convenes to discuss triage options and make triage decisions
- The Triage Team will be given information about availability of resources, priority scores, and priority groupings.
- The Triage Team will be given a list of each patient’s Priority Group (color code) and note of significant clinical change (for reassessment). Names, MRNs, and comorbidities will not be communicated to the triage team.
- Patients’ ages, whether or not they are healthcare workers, and raw SOFA scores will be available to the Triage Team in the event that a tie-breaker is necessary (see below).
- The Triage Team will meet (remotely if needed) to discuss the above patients and triage them with a multi-principle approach.
- The team will make decisions about withholding, withdrawing, initiating, and continuing ICU level of care for each patient
- Once a decision has been made, a member of the Triage Team will notify the team, patient, and patient’s family in consultation with Palliative Care if available and Spiritual Care will be notified
- Documentation will be done by the Triage Team

Communication of triage decisions to patients and families

Although the *authority* for triage decisions rests with the triage team, there are several potential strategies to *disclose* triage decisions to patients and families. Communicating triage decisions to patients and/or their next of kin is a required component of a fair allocation process that provides respect for persons. The triage team should first inform the affected patient's attending physician about the triage decision. The triage team and attending physician should collaboratively determine the best approach to inform the individual patient and family. Options for who should communicate the decision include:

- 1) solely the attending physician;
- 2) solely the triage team; or
- 3) a collaborative effort between the attending physician and triage team.

The best approach will depend on a variety of case-specific factors, including the dynamics of the individual doctor-patient-family relationship and the preferences of the attending physician. If the attending physician is comfortable with undertaking the disclosure, this approach is useful because the communication regarding triage will bridge naturally to a conveyance of prognosis, which is a responsibility of bedside physicians, and because it may limit the number of clinicians exposed to a circulating pathogen. The third (collaborative) approach is useful because it may lessen moral distress for individual clinicians and may augment trust in the process, but these benefits must be balanced against the risk of greater clinician exposure. Under this approach, the attending physician would first explain the severity of the patient's condition in an emotionally supportive way, and then a triage team member would explain the implications of those facts in terms of the triage decision. A triage team member would also emphasize that the triage decision was not made by the attending physician but is instead one that arose from the extraordinary emergency circumstances, and reflects a public health decision. Regardless of who communicates the decision, it may be useful to explain the medical factors that informed the decision, as well as the factors that were not relevant (e.g., race, ethnicity, gender, disability, perceptions of quality of life, insurance or socioeconomic status, perceptions of social worth, immigration status, among others). If resources permit, palliative care, spiritual care, and social work may also be helpful to provide ongoing emotional support to the patient and family.

Appeals process for individual triage decisions

It is possible that patients, families, or clinicians will challenge individual triage decisions. Procedural fairness requires the availability of an appeals mechanism to resolve such disputes. On practical grounds, different appeals mechanisms are needed for the initial decision to allocate a scarce resource among individuals, none of whom are currently using the resource, and the decision whether to withdraw a scarce resource from a patient who is not clearly benefiting from that resource. This is because initial triage decisions for patients awaiting the critical care resource will likely be made in highly time-pressured circumstances. Therefore, an appeal will need to be adjudicated in real time to be operationally feasible. For the initial triage decision, the only permissible appeals are those based on a claim that an error was made by the triage team in the calculation of the priority score or use/non-use of a tiebreaker (as detailed in Section 2). The process of evaluating the appeal should include the triage team verifying the accuracy of the

priority score calculation by recalculating it. The treating clinician or triage team should be prepared to explain the calculation to the patient or family on request.

Decisions to withdraw a scarce resource such as mechanical ventilation from a patient who is already receiving it may cause heightened moral concern. Furthermore, such decisions depend on more clinical judgment than initial allocation decisions. Therefore, there should be a more robust process for appealing decisions to withdraw or reallocate critical care beds or services. Elements of this appeals process should include:

- The individuals appealing the triage decision should explain to the triage team the grounds for their appeal. Appeals based in an objection to the overall allocation framework should not be granted.
- The triage team should explain the grounds for the triage decision that was made.
- Appeals based in considerations other than disagreement with the allocation framework should immediately be brought to the Incident Command Center. The ICC is independent of the triage team and of the patient's care team.
- The appeals process must occur quickly enough that the appeals process does not harm patients who are in the queue for scarce critical care resources currently being used by the patient who is the subject of the appeal.
- The decision of the Incident Command Center in consultation with the CMO/ACMO or their physician designee experienced with inpatient care will be final.
- Decisions made in cases of appeal by the ICC will be communicated to the attending physician for the patients involved.
- Periodically, the Ethics Committee should retrospectively evaluate whether the review process is consistent with effective, fair, and timely application of the allocation framework.

Section 2: Allocation Process under Crisis Standard of Care

The purpose of this section is to describe the allocation framework that should be used to make initial triage decisions for patients who present with illnesses that typically require critical care resources (i.e., illnesses that cannot be managed on a hospital ward in that hospital). The scoring system applies to all patients presenting with critical illness, not merely those with the disease or disorders that have caused the public health emergency. For example, in the setting of a severe pandemic, those patients with respiratory failure from illnesses not caused by the pandemic illness will also be subject to the allocation framework. This process involves two steps, detailed below:

1. Calculating each patient's priority score based on the multi-principle allocation framework;
2. Determining each day how many priority groups will receive access to critical care interventions.

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 ventilatory support may be offered to allow the triage team to assess the patient for critical resource allocation.

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

As outlined in **Table 1** below, points are assigned according to the patient's Sequential Organ Failure Assessment (SOFA) score (see SOFA clinical parameters in **Table 2** below), plus the determination that a patient has a severely limited life expectancy even if they survive to hospital discharge. These are then added together to produce a total priority score, which ranges from 1 to 8. Lower scores indicate higher likelihood of benefiting from critical care, and priority will be given to those with lower scores.

SOFA scores may occasionally need to be modified to reflect the acute condition being assessed and not disabled patients' functional baselines. This is intended to ensure, for example, that a chronically ventilated patient who is stable (i.e. on home settings) or a baseline non-verbal patient not be disadvantaged by the SOFA scoring system.

The assessment of a patient's limited life expectancy should be based on the most objective medical evidence and individualized clinical judgment, not simply the patient's age or comorbid diagnoses. Assumptions about post-hospitalization quality of life should not be included in the individualized assessment of patients' prognoses.

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

Principle	Specification	Point System*			
		1	2	3	4
Save lives	Prognosis for hospital survival (SOFA score [#])	SOFA score < 6	SOFA score 6-8	SOFA score 9-11	SOFA score ≥12
Save life-years	Prognosis for near-term survival (medical assessment of near term prognosis)	...	Death expected within 5 years despite successful treatment of acute illness	...	Death expected within 1 year despite successful treatment of acute illness

Table 2. Sequential Organ Failure Assessment (SOFA) Scoring System

Variable	SOFA Score				
	0	1	2	3	4
PaO ₂ /FiO ₂ mm Hg	>400	301-400	201-300	101-200	<100
Platelets, x10 ³ /μL	>150	101-150	51-100	21-50	≤20
Bilirubin, mg/dL (μmol/L)	<1.2 (<20)	1.2-1.9 (20-32)	2.0-5.9 (33-100)	6.0-11.9 (101-203)	>12 (>203)
Hypotension	None	MABP <70mmHg	Dop <5	Dop 6-15 <i>or</i> Epi ≤0.1 <i>or</i> Norepi < 0.1	Dop >15 <i>or</i> Epi > 0.1 <i>or</i> Norepi > 0.1
Glasgow Coma Score	15	13-14	10-12	6-9	<6
Creatinine, mg/dL (μmol/L)	<1.2 (<106)	1.2-1.9 (106-168)	2.0-3.4 (169-300)	3.5-4.9 (301-433)	>5 (>434 or anuric)

*FIO₂=fraction of inspired oxygen; MAP mean arterial pressure; PaO₂ partial pressure of oxygen

**Hypotension:

- MABP=mean arterial blood pressure in mm Hg [diastolic + 1/3(systolic-diastolic)]
- Dop=dopamine in micrograms/kg/min
- Epi=epinephrine in micrograms/kg/min
- Norepi=norepinephrine in micrograms/kg/min

fStep 2: Assign patients to color-coded priority groups

Once a patient’s priority score is calculated using the multi-principle scoring system described in Table 1, each patient should be assigned to a color-coded triage priority group (Table 3). This color-coded assignment of priority groups is designed to allow the Triage Team to create operationally clear priority groups to receive critical care resources, according to their score on the multi-principle allocation framework. For example, individuals in the red group have the best chance to benefit from critical care interventions and should therefore receive priority over all other groups in the face of scarcity. The orange group has intermediate priority and should receive critical care resources if there are available resources after all patients in the red group have been allocated critical care resources. The yellow group has lowest priority and should receive critical care resources if there are available resources after all patients in the red and orange groups have been allocated critical care resources.

Table 3. Assigning Patients to Color-coded Priority Groups

Use Raw 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 1-3
ORANGE Intermediate priority (reassess as needed)	Priority score 4-5
YELLOW Lowest priority (reassess as needed)	Priority score 6-8

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

The triage team will make determinations daily, or more frequently if needed, about which priority groups will have access to critical care services based on the availability of those resources. These determinations should 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 near-term (several days). For example, if there is clear evidence that there is 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, more priority

groups (e.g., first Orange group, then Yellow group) should have access to critical care interventions.

Resolving “ties” in priority scores/categories between patients. In the event that there are ‘ties’ in priority categories between patients and not enough critical care resources for all patients with the lowest scores, the following considerations should be used as tie-breakers:

1. Life-cycle considerations should be used as the first tiebreaker, with priority going to younger patients.

We recommend the following categories: age 12-40, age 41-60; age 61-75; older than age 75. The ethical justification for incorporating the life-cycle principle is that it is a valuable goal to give individuals equal opportunity to pass through the stages of life—childhood, young adulthood, middle age, and old age. The justification for this principle does not rely on considerations of one’s intrinsic worth or social utility. Rather, younger individuals receive priority because they have had the least opportunity to live through life’s stages.

2. Heightened priority should be given to those who are central to the public health response as the second tie-breaker

Individuals who perform tasks that are vital to the public health response, including those whose work directly supports the provision of acute care to others, should be given heightened priority. This category should be broadly construed to include those individuals who play a critical role in the chain of treating patients. However, it would not be appropriate to prioritize front-line physicians and not prioritize other front-line clinicians (e.g., nurses and respiratory therapists) and other key personnel (e.g., maintenance staff that disinfects hospital rooms).

3. Raw Priority Score

If there are still ties after applying priority based on consideration of healthcare workers and life-cycle considerations, the raw priority score should be used as a third tiebreaker, with priority going to the patient with the lower score.

4. Random lottery

If there are still ties after these three tiebreakers are applied, a lottery (i.e., random allocation) should be used to break the tie.

It is important to reiterate that all patients will be *eligible* to receive critical care beds and services regardless of their priority score. The availability of critical care resources will determine how many eligible patients will receive critical care.

Appropriate clinical care of patients who cannot receive critical care. Patients who are not triaged to receive critical care/ventilation will receive medical care that includes intensive symptom management and psychosocial support. They should be reassessed daily to determine if changes in resource availability or their clinical status warrant provision of critical care services. Where available, specialist palliative care teams will be available for consultation. Where

palliative care specialists are not available, the treating clinical teams should provide primary palliative care.

Section 3: Reassessment for ongoing provision of critical care/ventilator support

The purpose of this section is to describe the process the Triage Team should use to conduct reassessments on patients who are receiving critical care services, in order to determine whether s/he continues with the treatment.

Ethical goal of reassessments of patients who are receiving critical care services. The ethical justification for such reassessment is that, in a public health emergency when there are not enough critical care resources for all, the goal of maximizing population outcomes would be jeopardized if patients who were determined to be unlikely to survive were allowed indefinite use of scarce critical care services. In addition, periodic reassessments lessen the chance that arbitrary considerations, such as when an individual develops critical illness, unduly affect patients' access to treatment.

Approach to reassessment

All patients who are allocated critical care services (other than those who receive critical care briefly to allow for initial triage by the Triage Team and are subsequently determined to be unable to receive critical care based on priority assignment) will be allowed a therapeutic trial of a duration to be determined by the clinical characteristics of the patient's disease and the expected trajectory of recovery. To the extent that the public health emergency involves a novel disease, the decision about trial duration for patients with that novel disease will ideally be made as early in the public health emergency as possible, when data become available about the natural history of the disease. The trial duration for such patients should be modified as appropriate if subsequent data emerge which suggest the trial duration should be longer or shorter. Trial duration will also need to be tailored for other non-pandemic diseases and patient contexts, given the concern that patients with certain disabilities may need longer trials to determine benefit. Patients who present for acute care and are already using a ventilator chronically for pre-existing respiratory conditions (e.g., home ventilation or ventilation at a skilled nursing facility) should NOT be separated from their chronic ventilator to reallocate it to other patients.

The triage team will conduct periodic reassessments of patients receiving critical care/ventilation based on information provided by the clinical team. A multidimensional assessment should be used to quantify changes in patients' conditions, such as recalculation of severity of illness scores, appraisal of new complications, and treating clinicians' input. Patients showing improvement will continue with critical care/ventilation until the next assessment. If there are patients in the queue for critical care services, then patients who upon reassessment show substantial clinical deterioration as evidenced by worsening SOFA scores or overall clinical judgment should have critical care withdrawn, including discontinuation of mechanical ventilation, after this decision is disclosed to the patient and/or family. Although patients should generally be given the full duration of a trial, if patients experience a precipitous decline (e.g., refractory shock and DIC) or a highly morbid complication (e.g., massive stroke) which portends

a very poor prognosis, the triage team may make a decision before the completion of the specified trial length that the patient is no longer eligible for critical care treatment

Rapid reassessment of patients unable to be triaged initially

Those patients who receive critical care services (e.g. mechanical ventilation) emergently in order to allow time for initial triage by the triage team, but who are subsequently determined to be unable to receive critical care based on priority assignment, will receive medical care including intensive symptom management and psychosocial support. They will not receive a full trial of critical care as described above. By way of example, this might include patients intubated in the field, patients intubated emergently in the emergency department, patients with severe trauma stabilized in the emergency department and brought to the ICU, and patients resuscitated on a medical floor in a code situation.

Appropriate clinical care of patients who cannot receive critical care.

Patients who are no longer eligible for critical care treatment should receive medical care including intensive symptom management and psychosocial support. Where available, specialist palliative care teams will be available for consultation. Where palliative care specialists are not available, the treating clinical teams should provide primary palliative care.

This is a working document and one that will be continually updated as more becomes understood surrounding the public health emergency and the disease severity within our community.

Resources

University of Pittsburgh, “Allocation of Scarce Critical Care Resources During a Public Health Emergency Model Policy”:

<https://ccm.pitt.edu/?q=content/model-hospital-policy-allocating-scarce-critical-care-resources-available-online-now>

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APPROVALS

		System	Alameda	AHS/Highland/John George/San Leandro
Department	Date:	N/A	05/2020	05/2020
Pharmacy and Therapeutics (P&T)	Date:	N/A	N/A	N/A
Clinical Practice Council (CPC)	Date:	05/2020	N/A	N/A
Medical Executive Committee (MEC)	Date:	N/A	05/2020	05/2020
Board of Trustees	Date:	09/2020	N/A	N/A