

Pandemic Triage Committee

1. Purpose

History indicates that there are times where demand for healthcare exceeds the ability of health systems to supply it.[1] In such circumstances “triage standards of care” are ethically justified to allocate healthcare resources according to broadly consequentialist reasoning, meaning that a shift from focusing on the individual autonomy of patients to the overall public good is warranted.[2]

The novel corona virus pandemic[3] has caused sufficient crises in other countries[4] to indicate that it may impact the US healthcare system such that in some localities a shift from normal standard of care to a triage standard of care may be necessary.

[INSERT APPROPRIATE INSTITUTIONAL AUTHORITY] hereby create(s) a Pandemic Triage Committee (PTC), for the purpose of developing and implementing ethical methods for allocating scarce healthcare resources and supporting health care professionals in a crisis circumstance.

2. PTC Operations Procedures

2.1 *Structure and Function*

The PTC is a subcommittee of the [BIOETHICS COMMITTEE, MEDICAL EXECUTIVE COMMITTEE, ETC.], with direct relationships to [LEADERSHIP AUTHORITY] and the [HOSPITAL INCIDENT COMMAND CENTER]. The PTC has two basic functions:

1. To develop guidance for ethically allocating scarce healthcare resources and supporting health care professionals in a crisis circumstance.
2. To implement allocation methods, making choices to provide, withhold, or withdraw scarce resources from patients in a crisis.

When developing guidance and supporting health care professionals, the PTC requires a quorum to operate, defined as one third of all primary or secondary members, as described below. In this function, which is anticipated to occur prior to (and potentially during) implementing triage standards of care, the committee meets regularly to work on developing and agreeing upon the ethical framework for decision making, clinical algorithms for triage, educational materials and methods, and other business as needs arise. All PTC business of this nature may be performed remotely, including any voting required to ratify committee actions.

When making allocation decisions, the PTC operates in smaller groups, called decision making teams (DMTs) of at least two individuals, preferably three, one of whom must always be a physician committee member. As long as circumstances allow it, preference will be to staff PTC-DMTs solely by physicians.

Allocation decisions are decisions to provide, withhold, or withdraw a resource (e.g., a hospital bed, a ventilator) to or from a patient when resources are scarce, meaning that the volume of patients in need of the resource is far greater than the amount of the resource available. **Allocation decisions are made by the PTC, in smaller groups, using guidelines endorsed by the PTC and approved institutionally, not by individual healthcare professionals at the bedside.** In this way, frontline healthcare providers are spared the moral burden of having to make allocation decisions, which, rather, are thereby across the institution.

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In the event the hospital anticipates a surge of patients to such an extent that triage standards of care are likely to be implemented and allocation decisions likely to be necessary, the PTC Chair will designate one or more member of the PTC to:

- Group committee members into sets of three to form decision making teams (DMTs);
- Coordinate an on-call schedule for DMTs, such that they are available 24 hours a day, 7 days a week;
- Identify a communication method for decision making teams, such as [insert method here];
- Determine and communicate how leaders and frontline providers will communicate with decision making teams;
- Regularly attend the hospital incident command center;
- Report to [APPROPRIATE INSTITUTIONAL AUTHORITY] or their delegate on the actions of the PTC;
- Collaborate with [HEALTHCARE SYSTEM] facilities, as necessary, regarding the operations of their PTCs or similar bodies;
- Collaborate with geographically nearby facilities regarding the operations of their PTCs or similar bodies, including the ethical frameworks and clinical standards upon which their decisions are being made.

In the event the hospital experiences a surge of patients to such an extent that triage standards of care are implemented, and allocation decisions must be made, the PTC Chair or designee will:

- Notify decision making teams of their position in the on-call schedule, the duration over which the on-call schedule is in force, and the expectations of each team;
- Procure explicit written authorization from the [APPROPRIATE AUTHORITY] to implement allocation decision making as described in this document;
- Request additional staff from hospital leadership to support the functioning of decision making teams;
- Implement a regularly occurring, mandatory operations huddle for the full PTC, which may be virtual;
- Identify operational indicators to determine when triage standards of care are likely to be suspended.

In the event the PTC's decision making teams are implemented, the PTC Chair shall schedule a mandatory debrief for all PTC members no later than 72 hours after the conclusion of the last decision making team's work, which may be virtual.

2.2 Membership

Academic literature,[6] and allocation plans from other jurisdictions,[7] state that PTCs should be multidisciplinary bodies. The membership of the PTC will necessarily be fluid in the setting of a crisis. The following roles should be filled to the extent possible. For each role, a primary and secondary member should be identified by [HOSPITAL] leaders, to be approved by the [INSERT APPROPRIATE AUTHORITY] or their delegates, as appropriate.

- a) Critical Care Representative: This individual must be a physician with expertise in critical care, pulmonology, or internal medicine.
- b) Infection Control Representative: This individual must be either a physician or other employee with expertise in infection control and/or infectious diseases.

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- c) Emergency Medicine Representative: This individual must be a physician with expertise in emergency medicine.
- d) Hospitalist Representative: This individual must be a physician with expertise in internal medicine or hospital medicine (i.e., a “Hospitalist”).
- e) Nursing Management Representative: This individual must be a nursing manager, with a preference for expertise in critical care nursing.
- f) Respiratory Care Representative: This individual must have expertise in respiratory therapy.
- g) Palliative Care Representative: This individual must be a physician with expertise in palliative care.
- h) Medical Ethics Representative: This individual must have expertise in biomedical ethics.
- i) Pharmacy Representative: This individual must have expertise in clinical pharmacy, preferably with expertise in operations and utilization.
- j) Social Work Representative: This individual must have expertise in social work.
- k) Community Representative: This individual must be a [Hospital Ethics] Committee community member.

If the volume of allocation decisions and related work is high, the primary and secondary members will be required to rotate to the best of their availability. Members may fill a primary and secondary role but neither two primary nor two secondary roles.

The group shall be chaired by [INSERT APPROPRIATE INSTITUTIONAL AUTHORITY] physician administrator or their delegate, who has clinical privileges at [HEALTH SYSTEM or HOSPITAL]. The chair may rotate as needed and must fulfill at least a secondary role.

2.3 Ethical Framework

Academic literature[8], emergency preparedness plans from [YOUR STATE, ETC. IF TRUE] and other jurisdictions,[9] and professional society guidelines[10] all agree that ethical allocation of scarce resources in crisis conditions should be supported by an explicit ethical framework. The PTC is responsible for developing, vetting, and approving the ethical framework that supports its work prior to the implementation of allocation decision making.

An ethical framework supports the PTCs structure, function, and operations. In times of crisis, allocation decisions rest on the principles of minimizing mortality: allocation decisions aim to minimize overall mortality by finding the right balance between overtriage and undertriage. Ethical allocation decisions are also based upon the principle of harm reduction; a duty to care; principles of justice, fairness, and equity; transparency; professionalism; and other principles as delineated in the appendix, **Ethical Framework for Allocation Decision Making**.

Bioethics policies already under affect across [YOUR HOSPITAL] will be helpful in supporting ethical medical decision making under normal and surge conditions prior to the implementation of triage standards of care. These include:

- [DNR POLICY, such as: this policy supports an attending physician in making decisions about a patient’s code status in the event a patient’s surrogate is in disagreement with the physician’s recommendation. It will support a physician in changing a patient’s code status during normal

operations conditions and surge conditions, prior to the implementation of crisis standards of care.]

- [Non-Beneficial Treatment Policy: this policy supports an attending physician in responding to requests for treatment that is perceived as non-beneficial, which may support a physician in unilaterally redirecting care toward more comfort oriented treatments.[11]]
- [Decision Making for Unrepresented Patients Who Lack Capacity: this policy supports an attending physician in making treatment decisions that would otherwise require documented informed consent and the patient both lacks capacity and lacks an available surrogate decision maker. In this case, decisions may be made by a bioethics subcommittee per existing policy. During a pandemic, like the novel coronavirus, which effects family clusters, it is more likely than in normal circumstances that legally recognized health care decision makers for patients who lack capacity will themselves be ill and unavailable to participate in decision making. In such a setting this policy may be used to support treatment decision making without an available surrogate.]

2.4 Clinical Algorithms

Allocation decisions made by the PTC must be supported by clinical algorithms that are vetted and approved by appropriate subject matter experts [HEALTHCARE SYSTEM]. The PTC is responsible for developing these algorithms in as timely a manner as possible based on anticipated need. Current algorithms are defined in the appendix, **Clinical Algorithm for Allocating Critical Care and Mechanical Ventilators in the Setting of a Pandemic Crisis**.

2.5 Educational Materials

As needed, the PTC will develop educational materials for leaders, frontline healthcare providers, staff, and other stakeholders explaining allocation decision making in a crisis setting, including the ethical framework and clinical algorithms that support decision making. Educational materials must be vetted and approved by [APPROPRIATE AUTHORITY] or their delegates. Approved educational materials become appendices to this document.

2.6 Personnel

Work by additional personnel may be needed to be included to meet the above goals, such as a project manager, quality analyst, or Public Affairs. The PTC Chair or designee should request temporary personnel assignments from [APPROPRIATE AUTHORITY] as indicated.

3. References

As of 03/18/2020, most of these references are available [here](#).

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8. Hick et al 2006; Hick JL, Hanfling D, Wynia MK, Pavia AT. Duty to Plan: Health Care, Crisis Standards of Care, and Novel Coronavirus SARS-CoV-2. Discussion Paper National Academy of Medicine. March 5, 2020.
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4. Appendices

- PTC Membership
- Clinical Algorithm for Allocating Critical Care and Mechanical Ventilators in the Setting of a Pandemic Crisis
- Ethical Framework for Allocation Decision Making
- Educational materials

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Appendix: PTC Members

Role	Name	Primary or Secondary	Assigned DMT #
Critical Care Representative		Primary	
Critical Care Representative		Secondary	
Infection Control Representative		Primary	
Infection Control Representative		Secondary	
Emergency Medicine Representative		Primary	
Emergency Medicine Representative		Secondary	
Hospitalist Representative		Primary	
Hospitalist Representative		Secondary	
Nursing Management Representative		Primary	
Nursing Management Representative		Secondary	
Respiratory Care Representative		Primary	
Respiratory Care Representative		Secondary	
Palliative Care Representative		Primary	
Palliative Care Representative		Secondary	
Medical Ethics Representative		Primary	
Medical Ethics Representative		Secondary	
Pharmacy Representative		Primary	
Pharmacy Representative		Secondary	
Social Medicine Representative		Primary	
Social Medicine Representative		Secondary	
Community Representative:		Primary	
Community Representative:		Secondary	

Appendix: Clinical Algorithm for Allocating Critical Care and Mechanical Ventilators in the Setting of a Pandemic Crisis

After [APPROPRIATE AUTHORITY] explicitly authorizes the implementation of PTCs and triage standards of care, the clinical algorithm for allocating critical care and mechanical ventilators in the setting of a pandemic crisis consist of the following steps. All acute care patients in need of critical care, a ventilator, or both, whether due to influenza or other conditions, are subject to the clinical ventilator allocation protocol.[12] As long as it is practically feasible given the circumstances, whenever the PTC makes an allocation decision to withhold or withdraw critical care or a ventilator (or both) from a patient, at least one member of the PTC decision making team (PTC-DMT) must communicate to the patient's legally recognized healthcare decision maker why the decision was made. Loved ones should be provided or directed to supportive resources to the extent practically feasible under the circumstances

Step 1: The attending physician evaluates the patient for meeting exclusion criteria. If the patient meets these criteria, then the attending physician documents this on the allocation decision making worksheet or using the allocation decision making dotphrase. **[NB: Either needs to be developed]**

Exclusion criteria

The patient is excluded from admission or transfer to critical care if *any* of the following is present:

- A. Severe trauma
- B. Severe burns of patient with any 2 of the following:
 - Age > 60 yr
 - > 40% of total body surface area affected
 - Inhalation injury
- C. Cardiac arrest
 - Unwitnessed cardiac arrest
 - Witnessed cardiac arrest, not responsive to electrical therapy (defibrillation or pacing)
 - Recurrent cardiac arrest
- D. Severe baseline cognitive impairment
- E. Advanced untreatable neuromuscular disease
- F. Metastatic malignant disease
- G. Advanced and irreversible immunocompromise
- H. Severe and irreversible neurologic event or condition
- I. End-stage organ failure meeting the following criteria:
 - Heart*
 - NYHA class III or IV heart failure
 - Lungs*
 - COPD with FEV₁ < 25% predicted, baseline PaO₂ < 55 mm Hg, or secondary pulmonary hypertension
 - Cystic fibrosis with postbronchodilator FEV₁ < 30% or baseline PaO₂ < 55 mm Hg
 - Pulmonary fibrosis with VC or TLC < 60% predicted, baseline PaO₂ < 55 mm Hg, or secondary pulmonary hypertension
 - Primary pulmonary hypertension with NYHA class III or IV heart failure, right atrial pressure > 10 mm Hg, or mean pulmonary arterial pressure > 50 mm Hg
 - Liver*
 - Child-Pugh score ≥ 7
- J. Age > 85 yr
- K. Elective palliative surgery

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Step 2: The attending physician assesses and documents the patient’s mortality and organ failure risk by assigning the patient a **SOFA score** (Sequential Organ Failure Assessment) on the allocation decision making worksheet or allocation decision making dotphrase.

Appendix 1: Scoring criteria for the Sequential Organ-Failure Assessment (SOFA) score*					
Variable	Score				
	0	1	2	3	4
PaO ₂ /FIO ₂ , mm Hg	> 400	≤ 400	≤ 300	≤ 200	≤ 100
Platelet count, × 10 ⁶ /L	> 150	≤ 150	≤ 100	≤ 50	≤ 20
Bilirubin level, 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 < 70	Dop ≤ 5	Dop > 5 Epi ≤ 0.1 Norepi ≤ 0.1	Dop > 15 Epi > 0.1 Norepi > 0.1
Glasgow Coma score	15	13-14	10-12	6-9	< 6
Creatinine level, 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)

Note: PaO₂ = partial pressure of arterial oxygen; FIO₂ = fraction of inspired oxygen; MABP = mean arterial blood pressure, in mm Hg;
 *Adapted, with permission, from Ferreira FL, Bota DP, Bross A, et al. Serial evaluation of the SOFA score to predict outcome in critically ill patients. JAMA 2001;286:1754-8. Copyright © 2001, American Medical Association. All rights reserved.
 †Dop (dopamine), epi (epinephrine) and norepi (norepinephrine) doses in μg/kg per min.

Step 3: The attending physician informs the PTC (or delegate) of the patient’s assessments in Steps 1 and 2. The PTC-DMT assigns the patient a color code according to the Initial Assessment Triage Tool. The PTC-DMT then votes on whether to allocate the patient critical care or a ventilator (or both) based on their priority, as coded, the availability of resources, and, as needed, assessments based on additional criteria.

Initial Assessment

Triage code	Criteria	Action or priority
Blue	Exclusion criteria met or SOFA score > 11*	<ul style="list-style-type: none"> • Manage medically • Provide palliative care as needed • Discharge from critical care
Red	SOFA score ≤ 7 or single-organ failure	Highest priority
Yellow	SOFA score 8-11	Intermediate priority
Green	No significant organ failure	<ul style="list-style-type: none"> • Defer or discharge • Reassess as needed

Step 4: For patients who are allocated critical care, a ventilator, or both, the attending physician periodically assesses and documents the patient’s mortality and organ failure risk by assigning the patient a **SOFA score** on the allocation decision making worksheet or allocation decision making dotphrase and communicates that an assessment has been made to the PTC.

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Step 5: For patients who are allocated critical care, a ventilator, or both, the PTC-DMT reviews attending physician assessments upon notification that they have been made and assigns any such patient a color code according to the 48-hour and 120-hour Assessment Triage Tools, as indicated based on the timing of the assessment. At each interval, the PTC-DMT then votes on whether to continue to allocate the patient critical care or a ventilator (or both) based on their priority, as coded, the availability of resources, and, as needed, assessments based on additional criteria.

48-Hour Assessment

Triage code	Criteria	Action or priority
Blue	Exclusion criteria met or SOFA score > 11 or SOFA score stable at 8-11 with no change	<ul style="list-style-type: none"> • Provide palliative care • Discharge from critical care
Red	SOFA score < 11 and decreasing	Highest priority
Yellow	SOFA score stable at < 8 with no change	Intermediate priority
Green	No longer dependant on ventilator	<ul style="list-style-type: none"> • Discharge from critical care

120-Hour Assessment

Triage code	Criteria	Action or priority
Blue	Exclusion criteria met or SOFA score > 11 or SOFA score < 8 with no change†	<ul style="list-style-type: none"> • Provide palliative care • Discharge from critical care
Red	SOFA < 11 and decreasing progressively	Highest priority
Yellow	SOFA < 8 with minimal decrease (< 3-point decrease in past 72 h)	Intermediate priority
Green	No longer dependant on ventilator	<ul style="list-style-type: none"> • Discharge from critical care

Step 6: For patients who remain allocated critical care, a ventilator, or both at the 120-hour interval, the attending physician continues to assess and document the patient's mortality and organ failure risk every 24 hours by assigning the patient a **SOFA score** on the allocation decision making worksheet or allocation decision making dotphrase and communicates that an assessment has been made to the PTC.

Step 7: For patients who remain allocated critical care, a ventilator, or both at the 120-hour interval, the PTC-DMT assigns any such patient a color code according to the 120-hour Assessment Triage Tool, as indicated based on the timing of the assessment. At each interval, the PTC-DMT then votes on whether to continue to allocate the patient critical care or a ventilator (or both) based on their priority, as coded, the availability of resources, and, as needed, assessments based on additional criteria.

Additional Criteria: In situations of extreme crisis, where need for critical care and mechanical ventilation severely exceeds availability, it may be ethically reasonable to use additional clinical or ethical criteria for allocation decision making. Clinical criteria may include methods of predicting

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recovery and survival in the near term, such as increased risk of inpatient mortality in the next 3 years [18]. Ethical criteria may include heuristics such as maximizing narrow social utility, life years, or life cycles.[19] In the event such additional criteria are judged necessary, they must be operationalized by the PTC chair or designee and explicitly vetted by [APPROPRIATE AUTHORITY].

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Appendix: Ethical Framework for Allocation Decision Making

Recognition of Circumstances: Allocation choices are appropriate only under true conditions of scarcity, where triage standards of care are ethically appropriate and legally justified.

Minimizing Mortality: The aim of allocation decisions is to minimize overall mortality by finding the right balance between overtriage and undertriage, as either is predicted to yield higher mortality than the ideal amount of triage.

Harm Reduction: During crises, everyone experiences harms, including patients, loved ones, healthcare professionals, and the general public. Allocation decisions strive to reduce harms to providers, patients as a population, loved ones, and the general public by adopting fair, reasonable methods of allocation and creating critical distance between healthcare professionals who provide care and those who make allocation decisions.

Duty to Care: Health care providers have special obligations to provide care in a pandemic. This duty is different from the health care providers normal professional duties to provide care to patients. Even in settings of crisis, patients must always be cared for, although healthcare professionals may weigh their duty to care with obligations to their own health and that of their families. Healthcare professionals should never withhold or withdraw care, only specific treatments. Although triage standards of care necessitate that population health be prioritized over individual patient wellbeing, an ethical allocation process must respect the fundamental obligation of health care professionals to care for specific, individual patients. Patients must not be abandoned, and cannot fear abandonment, even in situations of austerity and allocation. Patients who do not receive ventilators or other therapies because they are deemed to be insufficiently likely to benefit are still under their physician's care and should be provided alternative medically indicated treatments, including (but not limited to) palliative care.

Justice, Fairness, and Equity: A system of allocation during crisis must be applied consistently and broadly, to maximize the chances of fairness and minimize the influence of biases such as ageism, sexism, racism, or ableism. Allocation decisions should seek to support access to care for all, and especially the most vulnerable or those who suffer disproportionately, depending upon the length of time over which triage standards of care are implemented.

Duty to Plan for Difficult Circumstances: As crisis circumstances emerge, leaders have a duty to continue to allocate human resources to planning, so that while the crisis evolves some resources continue to be allocated toward anticipating and responding to future circumstances.

Duty to Protect Resources: In crisis settings, normal standards of care are no longer in effect. Therefore, all resources are potential scarce, and all clinicians have a duty to protect resources. This does not entail that resources should not be utilized. Rather, all resources should be carefully allocated according to their known scarcity, likelihood of renewal, and the extent to which they can be replaced or reused.

Transparency: To the extent practically feasible, allocation plans should be communicated as efficiently, widely, and comprehensively as possible across the healthcare system and moral community, inclusive of government agencies, nearby healthcare facilities, staff, patients, and other stakeholders. Such transparency is likely to minimize actual and vicarious trauma to patients, loved ones, staff, and members of the public after the crisis has abated.

Professionalism: Allocation decisions made by hospital leaders should be made and communicated in a way that educates frontline healthcare providers on their substance, justification, and importance by referring to existing codes of professional ethics or institutional policies delineating professional expectations. Doing so both respects and reinforces professional roles, obligations, and expectations.

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Appendix: Education Materials

To Be Developed