



ICU Resource Allocation for Covid-19 Patients Who Require Critical Care¹

Deviating from usual patterns of resource allocation is ethically necessary and appropriate in crisis situations when adequate resources are not available.

The Institute of Medicine (IOM) published several reports, which are available to be downloaded for free addressing the management of crises by health care systems and which provide guidance for our current challenges.

Ethical Considerations (quoted from the IOM consensus report, Crisis Standards of Care:

A Systems Framework for Catastrophic Disaster Response: Volume 1: Introduction and CSC Framework)

Health care professionals must adhere to ethical norms even in conditions of overwhelming scarcity that limit practitioner and patient choices. As a starting point for (Crisis Standards of Care) CSC planning deliberations, ethical values should include the concept of fairness, together with professional duties to care for patients and steward resources. The CSC development process should be guided by key ethical values, including transparency, consistency, proportionality, and accountability. (1-18)ⁱ

Following the publication of the consensus report, the committee developed a toolkit, which provides valuable examples.ⁱⁱ

The Tennessee Altered Standard of Care Workgroup in 2016 issued Guidance for the Ethical Allocation of Scarce Resources during a Community-Wide Public Health Emergency as Declared by the Governor.ⁱⁱⁱ This document includes pertinent ethical guidelines (highlights added), which include:

- ***Duty to Plan:*** Healthcare professionals acknowledge the responsibility to plan for allocation of limited resources . . . ***[There must be continual reevaluation as this crisis emerges.]***
- ***Duty to Care:*** Healthcare professionals have unique responsibilities to provide care during a public health emergency with the potential to cause high morbidity and mortality. ***During a public health emergency, the primary duty of healthcare professionals and institutions is to the health of the public as a whole. . . .***
- ***Stewardship of Resources:*** Due to an unavoidable scarcity of resources that may occur in public health emergencies, patients and physicians may not be able to provide every treatment as they typically would. ***When resources become scarce, healthcare professionals and institutions must leverage limited resources responsibly. Allocation guidelines and triage plans must reflect the goals of reducing morbidity and mortality. A responsible and appropriate stewardship of resources requires some discernment about whether or not use of a scarce resource will be effective for the community as a whole.***

¹ This document represents the views of several members of the Center for Biomedical Ethics and Society and the Department of Health Policy at Vanderbilt University Medical Center (VUMC) and does not represent policy of VUMC.



- ***Respect for Human Dignity:*** *The most fundamental of these principles is the obligation to respect human dignity. For this reason, emergency operation[al] plans and triage guidelines must be clear to everyone they affect. Every person has an inherent dignity and intrinsic moral worth, regardless of age, race, gender, creed, socioeconomic status, functional ability or any other characteristic. **All people deserve equal respect as human beings. With this in mind, the allocation mechanism cannot discriminate based on any [factor which] is not directly relevant to the eligibility of individuals to receive care as established through the triage system.***
- ***Communication: Deliberations regarding triage and allocation must be participatory, community-values-based and transparent.*** *Since [invocation of crisis triage measures is] an alteration from the normal standard of care, there is a responsibility to justify and explain these alterations to the public. . . .*

The University of Washington recently published helpful guidelines for resource allocation, making clear that the primary ethical framework in emergency situations where adequate resources are lacking is providing the greatest good for the greatest number, quoted below.^{iv}

Two-step process:

1. Triage to allocate critical care resources becomes appropriate only when the need for resources – personnel, ventilators, etc. -- exceeds their availability.
All attempts to increase available resources or transfer patients have been exhausted (e.g., non-emergent surgeries suspended, use of operating room ventilators, and ventilators otherwise used in in educational, training and research programs).
2. Resources should be provided to acutely ill patients most likely to suffer irreversible harm without them and most likely to benefit medically from them.

Factors to be considered in making decisions about allocation focus on the likelihood that patient will survive the trial of intensive care management. Pertinent issues may include:

- a. Frailty
- b. The patient's preferred or medically appropriate resuscitation status [e.g., Do Not Resuscitate or Do Not Resuscitate/Do Not Intubate] that would not allow for full resuscitative interventions
- c. Existence of significant medical conditions which are reasonably expected, on their own or in conjunction with severe intercurrent infection, to limit survival

If a decision is made to proceed with mechanical ventilation and ICU care in a patient despite poor prognosis and in the face of inadequate resources, justification should be provided in order to maintain trust. In these cases, it may be valuable to conduct a time-limited trial of critical care resources with clarified end-points for evaluating response to therapy.



In all cases, once critical care has been initiated, the care team should continuously reevaluate the appropriateness of continuing intervention in light of the patient's evolving condition, prognosis and availability of resources.

If likelihood of survival is unclear or if clinicians express concerns about appropriate course of action, consultation with a hospital-level care or ethics committee may be pursued.

All patients should receive the appropriate pain relief and anxiety management if required. If not receiving supportive care, critically ill patients should receive optimal palliative care to optimize comfort and symptom control.

ⁱ Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response: Volume 1: Introduction and CSC Framework, (National Academies Press: Washington, DC, 2012) available at <https://www.nap.edu/catalog/13351/crisis-standards-of-care-a-systems-framework-for-catastrophic-disaster>

ⁱⁱ Crisis Standards of Care: A Toolkit for Indicators and Triggers, (National Academies Press: Washington, DC, 2013) available at <https://www.nap.edu/catalog/18338/crisis-standards-of-care-a-toolkit-for-indicators-and-triggers>

ⁱⁱⁱ Tennessee Altered Standards of Care Workgroup, Guidance for the Ethical Allocation of Scarce Resources during a Community-Wide Public Health Emergence as Declared by the Governor of Tennessee, (2016) available at https://www.tn.gov/content/dam/tn/health/documents/2016_Guidance_for_the_Ethical_Allocation_of_Scarce_Resources.pdf

^{iv} **Principles of resource allocation:**

The standard construct for medical resource allocation in time of scarcity is based upon a utilitarian framework, often stated as making decisions that provide the greatest good for the greatest number. It is worth noting that this stance differs from the standard approach of clinicians, who see their ethical obligation as advocating for and prioritizing the care of a particular patient.

Greatest good, in a protracted clinical situation such as the COVID-19 outbreak, is generally considered maximizing survival of patients with COVID-19 within the institution and the region. Overall survival may be further qualified as healthy, long-term survival, recognizing that this represents weighing the survival probability of young previously healthy patients in comparison to that of older, chronically ill/debilitated patients. Such weighting has general support in medicine and society-at-large.

Beyond material resources, achieving the best overall survival depends upon the maintenance of a healthy and functional group of medical providers. Sufficient equipment and resources are of no value without competent clinicians to deliver use and deliver them appropriately. In addition, medical providers, while assuming some risk in caring for patients with communicable diseases, have both a duty of care and an ethical claim to adequate protection. As such, decisions around resource allocation must consider the protection and health of healthcare providers.

The primary criteria for resource allocation are:

- Resources should be provided to acutely ill patients most likely to suffer irreversible harm without them and most likely to medically benefit from them.
- Resources should be provided to maintain the health and safety of healthcare providers, particularly those caring for patients with known communicable diseases.

<https://covid-19.uwmedicine.org/Pages/default.aspx>