

Supplemental Online Content:

Supplemental table 1. Ethical principles framing the triage process provided to Triage team participants

Principle	Definition
Fairness	Standards that are, to the highest degree possible, recognized as fair by all those affected by them – including the members of affected communities, practitioners, and provider organizations, evidence-based and responsive to specific needs of individuals and the population
Duty to care	Standards are focused on the duty of healthcare professionals to care for patients in need of medical care
Duty to steward resources	Healthcare institutions and public health officials have a duty to steward scarce resources, reflecting the utilitarian goal of saving the greatest possible number of lives
Transparency	In design and decision making
Consistency	In application across populations and among individuals regardless of their human condition (e.g. race, age disability, ethnicity, ability to pay, socioeconomic status, preexisting health conditions, social worth, perceived obstacles to treatment, past use of resources)
Proportionality	Public and individual requirements must be commensurate with the scale of the emergency and degree of scarce resources
Accountability	If individual decisions and implementation standards, and of governments for ensuring appropriate protections and just allocation of available resources

Adapted from: Institute of Medicine (US) Committee on Guidance for Establishing Standards of Care for Use in Disaster Situations; Altevogt BM, Stroud C, Hanson SL, et al., editors. Washington (DC): [National Academies Press \(US\)](#); 2009.

Supplemental Figure 1. Example patient case information form

Please review the available information for this patient

Triage Tracking ID:	4172a3958D756 and record #: RED - COVID-SAMPLE
Patients Age:	35 _____
Patient's Preferences:	Wants ALL medically appropriate ICU treatments OR UNKNOWN _____

PAST MEDICAL HISTORY: NO known SEVERE or END-STAGE conditions in medical history

Blank lines = No data entered			
Chronic Lung Disease	_____	Chronic Kidney disease	_____
Heart Failure	_____	Chronic Liver Disease	_____
Coronary Artery Disease	_____	Malignancy	_____
Other SEVERE or END-STAGE:	_____		
Striped Category:	_____		

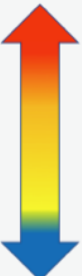
Check to ensure free text information entered is objective, clinically relevant to survival to discharge, and based on the best evidence and clinician judgment.

Is death within 6 months is expected (from either an underlying terminal/end-stage condition or irreversible cause rendering death imminent) based on the best evidence and clinician judgment?	NO. This patient is expected to live LONGER than 6 months.
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Patient's Clinical Status:

Days since patient was first hospitalized: (Transfers use 1st date)	12
Primary reason for hospital admission:	COVID-19+ ARDS
Does the patient meet ICU Admission Criteria? (Criteria linked below)	Yes for 12 days
Current indications for admission to the ICU:	Requires ventilatory support
COVID Test Status:	Positive _____
Current level of respiratory support:	Ventilator _____
What degree of ARDS does the patient have?	Mild (PaO2/FiO2 =200-300 with PEEP or CPAP≥5)
What is the patient's response to current treatment?	Improving = Is clinically improving

Supplemental Figure 2 A&B. Reporting forms for A) Phase 1 and B) Phase 2

Priority Levels:	Considerations for Priority Level	
	Likelihood to Survive to Discharge with Resource	Reevaluation of Treatment
<div>RED</div> <div>Priority 1</div> <div>Scarce Resource (SR) when available</div>	>75%	<div>Improving</div> <div></div> <div>Worsening</div>
<div>ORANGE</div> <div>Priority 2</div> <div>SR when available <i>after RED</i></div>	50-75%	
<div>YELLOW</div> <div>Priority 3</div> <div>SR when available <i>after RED & ORANGE</i></div>	25-50%	
<div>BLUE</div> <div>Priority 4</div> <div>SR when available <i>after RED, ORANGE, & YELLOW</i></div>	<25%	
<div>Striped</div> <div>Priority 5</div> <div>ICU when available <i>after RED, ORANGE, YELLOW, and BLUE</i></div>	<div>Persons with the following conditions:</div> <div><div>a. Severe acute trauma, or</div><div>b. Severe Burns with low survival rate, or</div><div>c. Persistent Vegetative State/Coma, or</div><div>d. No chance of survival to discharge</div></div>	

A

Priority Levels:	Considerations for Priority Level	
	Likelihood to Survive to Discharge with Resource	Reevaluation of Treatment
RED Priority 1 Scarce Resource (SR) when available	≥90%	<div>Improving</div>  <div>Worsening</div>
ORANGE Priority 2 SR when available <i>after RED</i>	50-89%	
YELLOW Priority 3 SR when available <i>after RED & ORANGE</i>	11-49%	
BLUE Priority 4 SR when available <i>after RED, ORANGE, & YELLOW</i>	≤10%	
Striped Priority 5 ICU when available <i>after RED, ORANGE, YELLOW, and BLUE</i>	Persons with the following conditions: a. Severe acute trauma with a low survival rate, b. Severe Burns with low survival rate, or c. Persistent Vegetative State/Coma	

B

Supplemental Table 2. Triage team timing outcomes

	Patients reviewed per session, median (IQR)	Time of discussion per patient*, seconds, median (IQR)
Phase 1 (9 team simulations)	20 (15-28)	78 (37-171)
Phase 2 (3 team simulations)	22 (15-25)	124 (84-167)
Combined phases	20 (15-27)	102 (50-168)

*Triage teams were given 90 minutes to review as many patient cases as they thought appropriate. Only time spent discussing a specific patient was counted toward timing outcomes.

Supplemental Figure 3: Exemplar cases

Reference table: Paradigm cases



	Paradigm case – COVID-19	Paradigm case – myocardial infarction
Red >90% survival to discharge	35-year-old patient with no known severe or end-stage comorbidities admitted for COVID-19 requiring mechanical ventilation for mild ARDS. Hospital day #12 with clinical status improving.	71-year-old patient with no known severe chronic conditions admitted for an acute ST-elevation myocardial infarction (STEMI), now post re-vascularization requiring vasoactive support for shock refractory to volume resuscitation. Hospital day #1 with clinical status improving.
Orange 50-90% survival	63-year-old patient with no known severe or end-stage comorbidities admitted for COVID-19 requiring mechanical ventilation for mild ARDS and vasoactive support for shock refractory to volume resuscitation. Hospital day #3, currently with expected clinical course.	65-year-old patient with severe coronary disease and end-stage kidney disease admitted with an acute STEMI awaiting coronary artery bypass graft (CABG) requiring vasoactive support for hypotension refractory to volume resuscitation. Hospital day #2, currently with expected clinical course.
Yellow 10-50% survival	72-year-old patient with severe chronic lung disease and severe heart failure admitted with COVID-19 requiring mechanical ventilation for moderate ARDS. Hospital day #5, currently with expected clinical course.	50-year-old patient with severe coronary artery disease and end-stage kidney disease admitted with acute STEMI status post CABG requiring ventilator support for airway protection and vasoactive support for shock refractory to volume resuscitation. Hospital day #8 with clinical status worsening.
Blue <10% survival	66-year-old patient with end-stage lung disease, severe heart failure, and severe coronary disease admitted with COVID-19 and requiring mechanical ventilation for severe ARDS and vasoactive support for shock refractory to volume resuscitation. Hospital day #16 with clinical status worsening.	75-year-old patient with severe chronic lung disease, severe coronary artery disease, and severe chronic liver disease admitted with STEMI status post CABG requiring mechanical ventilation for mild ARDS and airway protection and vasoactive support for shock refractory to volume resuscitation. Hospital day #10 with worsening clinical status.
Striped	45-year-old patient COVID positive, with severe burns (>75% total body surface area) Hospital day 7 with clinical status worsening.	45-year-old patient with severe burns with low chance of survival (>75% total body surface area) requiring ventilatory support for airway protection and vasoactive support for shock refractory to volume resuscitation. Hospital day #0.

These cases are examples of patients for whom there is broad agreement among a group of intensivists that they fall clearly within each category. They are intended as a tool to anchor discussion. For example, you may use these as comparator cases for new patients with characteristics that may or may not be sufficiently different to change your estimation of their prognostic category. This approach will also support consistency across teams by anchoring everyone to a common spectrum of prognostic predictions. As for other example or teaching cases in medicine, these cases are not meant to represent the spectrum of types of cases in a given prognostic category, to be prescriptive, or to indicate 'required' characteristics for each category.