

Crisis Continuum of Care Guidelines

- I. **KEY WORDS:** Pandemic, Influenza, COVID-19, Crisis Response, Crisis Standards
- II. **OBJECTIVE:** To guide the provision of care during a respiratory viral pandemic or other public health emergency when crisis triaging becomes necessary. Application of these guidelines will require physician judgment at the point of patient care.
- III. **POLICY STATEMENT:** During a crisis that requires the implementation of these guidelines, our Mission and Values remain the same. Triage decisions should be made using operational and clinical guidelines according to these evidence-based clinical criteria related to patient condition and survivability in crisis circumstances such as a public health emergency, a pandemic, or other Crisis Response situation that unpredictably increases the volume or health status severity of patients beyond standard operations. These guidelines should be used along with the NIMS Standards of Incident Command.

All patients will be treated with respect, care, and compassion without regard to basis of 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. However, during a Crisis Response, treatment of all patients should be based on these evidenced based guidelines.

IV. DEFINITIONS:

- A. **Emergency patients:** Those patients whose clinical conditions indicate that they require admission to the hospital and/or surgery within 24 hours.
- B. **Elective surgery:**
 - 1. **Category 1:** Urgent patients who require surgery within 30 days.
 - 2. **Category 2:** Semi-urgent patients who require surgery within 90 days.
 - 3. **Category 3:** Non-urgent patients who need surgery at some time in the future.
- C. **Long-term Care Facility:** A residential program with 24-hour care, to include: Residential Care Facilities, Nursing Homes, Skilled Nursing Facilities, Assisted Living, and other such facilities.
- D. **Palliative care:** To make a patient comfortable by treating symptoms from an illness and by addressing issues causing physical or emotional pain or suffering.
- E. **Patient categories:** Triage levels for patients:
 - 1. **BLUE** – Lowest chance of survival even with treatment; provide palliative care as appropriate; SOFA \geq 15, mortality rate > 80%
 - 2. **YELLOW** – Intermediate priority for treatment; SOFA = 10 to 14, mortality rate 40-60%
 - 3. **RED** – Highest chance of survival with treatment; highest priority for admission and treatment; SOFA = 1 to 9, mortality rate 10-20%
 - 4. **GREEN** – Highest chance of survival without treatment; SOFA = 0
- F. **Peer Based Review Team (PBRT):** A peer review resource jointly authorized by a care site's Chief of Staff in collaboration with its Chief Medical Officer. The PBRT serves as a committee and operates for the direct benefit of the care site in facilitating crisis response efforts. It consists of 2 to 4 physicians, not including advisors or designees. When deciding who should serve as PBRT members, strong consideration should be given to diversity of members based

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on race, ethnicity, and gender; if key physicians are not ethnic or racial minorities, consider adding physicians of other specialties who are. The PBRT's function is to make decisions about and evaluate the quality and availability of medical care or health care services with an emphasis on reviewing patient assessment decisions, including hospital and ICU admissions, patient triage, elective procedures, discharge planning, transition to comfort care, and other interventions or processes as deemed necessary during a Crisis Response. The PBRT will objectively evaluate patients using the criteria and protocols below to identify opportunities, necessity, and suitability of care. PBRT activities are intended to be confidential and privileged in nature. Any documents created specifically by the PBRT in carrying out its duties on behalf of the care site should be marked "Privileged and Confidential" and maintained in a separate, confidential file to preserve and maintain any applicable privileges.

- G. **Patient and Facility action Team (PFT)**: A team that provides counseling and care coordination and works with the families of loved ones who have been triaged to comfort care, e.g. **BLUE** patients. Team members should include spiritual care staff and others not directly involved in the care and treatment of patients in order to preserve the resource of clinicians.
- H. **SOFA Score**: The Sequential Organ Failure Assessment assesses the performance of organ systems (neurologic, blood, liver, kidney, and blood pressure/hemodynamics) and assigns a score based on data for each system. Higher SOFA scores mean higher likelihood of mortality.
- I. **National Incident Management System (NIMS)**: Guides all levels of government, non-governmental organizations, and the private sector to work together to prevent, protect against, mitigate, respond to, and recover from incidents. It contains shared vocabulary, systems, and processes for the National Preparedness System.
- J. **Worried Well**: Persons who do not need treatment but want reassurance by clinicians.

V. PROCESS:

- A. Establish a PBRT per the Peer Based Review Team Guidelines. The PBRT makes decisions and evaluates quality following Flowchart 1, the Triage Tools and Tables, and related documents.
- B. Institute a PFT. Ensure security is available to assist with difficult, emotional interactions.
- C. Medical staff should establish a method for peer support and expert consultation to PBRTs.
- D. During a situation where a pandemic or public health threat has been identified that could possibly impact CommonSpirit Health ministries, a triage status system will be utilized to guide readiness and interventions. See Table 1: Overview of Pandemic Triage Levels.
- E. These guidelines and processes apply to all patients, regardless of COVID-19 status during a Crisis Response.
- F. Triage Levels will be implemented and scaled up locally based on local events, not at the system level. The decision to increase the Triage Level in a particular Ministry will be made by the local Incident Command, the system Incident Command, and the CommonSpirit Health CMO.

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TABLE 1: OVERVIEW OF PANDEMIC TRIAGE LEVELS

Triage Level 0	Triage Level 1	Triage Level 2	Triage Level 3
First known threat identified	First known community spread	High volume community spread	Local or state disaster declarations, schools closed, facilities inundated

Emergency Department, Hospital, and ICU - Clinical Triage

Use **HOSPITAL AND ICU/VENTILATOR ADMISSION TRIAGE** algorithm and tools on the following pages to determine which patients to send home for comfort care or medical management and which patients to admit or keep in hospital or ICU as supported by the patient’s SOFA score, patient category, and placement criteria.

Physician judgment should be used in applying these guidelines. Other factors to consider when applying triage guidelines, especially regarding whether to admit, transfer, or discharge a patient, include (these are **not** placement criteria):

- If the patient can be transferred to another local facility or a facility elsewhere in CommonSpirit that has the needed resource available (EMTALA requirements must still be met).
 - If another facility is available, transfer should be considered especially if the patient does not have COVID-19 and is not a Person Under Investigation (PUI).
- Whether the patient is homeless or has someone to care for them at home upon discharge.
- Whether the patient is pregnant with gestational age greater than 12 weeks or is past viability.
- If multiple patients need access to critical care resources at the same time, and the PBRT believes they are equally likely to benefit from an available resource, the available resource should be provided by randomization. See Appendix 2 for details.
- Patients who bring a personal ventilator should not be included in the triage algorithm for ventilator use as long as their personal ventilator sufficiently addresses their clinical needs. They should be included if their clinical condition requires a hospital ventilator. They may also be included in triage for other resources (e.g. ICU bed, ECMO) as needed.

Triage Level 2:

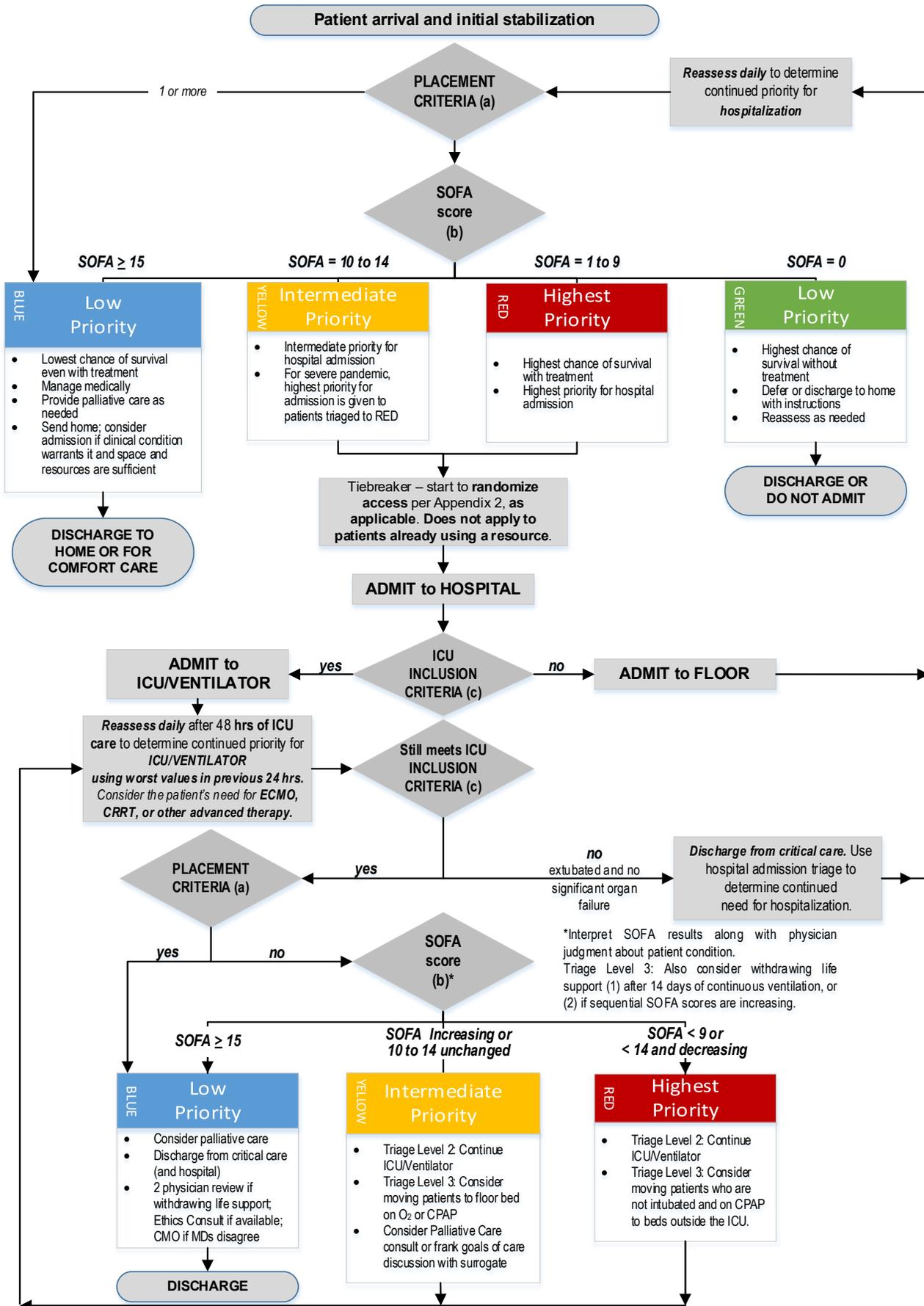
1. Initiate **HOSPITAL AND ICU/VENTILATOR TRIAGE** algorithm to determine priority for ICU admission, intubation, and/or mechanical ventilation.
2. Reassess need for ICU/Ventilator treatment daily after 48 hours of ICU care.
3. If a patient is triaged as **BLUE**, either before admission or in the ICU, a DNR order must be automatically written. Complete a POLST, MOST, or OOH-DNR form if the patient will be discharged.

Triage Level 3:

1. Continue to use **HOSPITAL AND ICU/ VENTILATOR TRIAGE** algorithm to determine priority for ICU, intubation, and/or mechanical ventilation.
2. Triage more **YELLOW** patients to floor on oxygen or CPAP.
3. Triage more **RED** patients who are intubated and on CPAP with lower acuity to manage outside ICU.

FLOWCHART 1: HOSPITAL AND ICU/VENTILATOR ADMISSION TRIAGE

Applies at Pandemic Triage Levels 2B and 3



TRIAGE TOOLS AND TABLES

These criteria and tools are intended to be based on evidence-based likelihood of survival, not external judgments of a patient's quality-of-life. Consider them to the extent they affect survival within reasonable medical judgment.

(a) PLACEMENT CRITERIA for Hospital Admission:

The patient is placed at lowest priority for hospital admission or transfer to critical care if ANY of the following is present **which would significantly decrease their comparable likelihood of survival:**

1. **Patient Wishes.** Have a goals of care discussion with each patient or surrogate. Ask if their goals of care include temporary or prolonged intensive care given the prognosis, or if they prefer comfort care.
2. **Acute severe neurologic event with minimal chance of functional neurologic recovery (physician judgment).** Includes traumatic brain injury, severe hemorrhagic stroke, hypoxic ischemic brain injury, and intracranial hemorrhage.
3. **Severe acute trauma with a REVISED TRAUMA SCORE <2 (see (d) and (e))**
GCS: _____ SBP: _____ RR: _____ Revised trauma score: _____
4. **Severe burns with <50% anticipated survival (patients identified as "Low" or worse on the TRIAGE DECISION TABLE FOR BURN VICTIMS (f)).** Burns not requiring critical care resources may be cared for at the local facility (e.g., burns that might have been transferred to a Burn Center under normal circumstances).
Score: _____
5. **Cardiac arrest not responsive to ACLS interventions within 20 minutes,** includes unwitnessed, recurrent, or trauma-related arrest.
6. End-stage disease with an evidence-based prognosis of 6 months or less, including but not limited to:
 - **Known end-stage dementia** medically treated and requiring assistance with activities of daily living.
 - **Advanced untreatable neuromuscular disease** (such as ALS, end-stage MS, or SMA) requiring assistance with activities of daily living or requiring chronic ventilator support.
 - **Known chromosomal or untreatable disorders** that are uniformly fatal in the first 2 years of life.
 - **Incurable metastatic malignant disease.**
 - **End-stage organ failure** meeting the following criteria:
 - Heart: NEW YORK HEART ASSOCIATION (NYHA) FUNCTIONAL CLASSIFICATION SYSTEM Class III or IV (g). Class: _____
 - Lung (any of the following):
 - Chronic Obstructive Pulmonary Disease (COPD) with Forced Expiratory Volume in one second (FEV1) < 25% predicted baseline, PaO2 < 55 mm Hg, severe secondary pulmonary hypertension, or Stage 4 with oxygen dependency.
 - Cystic fibrosis with post-bronchodilator FEV1 <30% or baseline PaO2 <55 mm Hg.
 - Pulmonary fibrosis with VC or TLC < 60% predicted, baseline PaO2 <55 mm Hg, or severe secondary pulmonary hypertension.
 - Primary pulmonary hypertension with NYHA class III or IV heart failure (g), right atrial pressure >10 mm Hg, or mean pulmonary arterial pressure >50 mm Hg.
 - Liver: PUGH SCORE >7 (h), when available. Includes bili, albumin, INR, ascites, encephalopathy. Total score: _____

(b) The Sequential Organ Failure Assessment (SOFA)

SOFA score	1	2	3	4
<u>Respiration</u> PaO ₂ /FIO ₂ (mmHg)	<400	<300	<200	<100
<u>Coagulation</u> Pltx10 ³ /mm ³	<150	<100	<50	<20
<u>Liver</u> Bilirubin (mg/dL)	1.2- 1.9	2.0-5.9	6.0-11.9	>12.0
<u>Cardiovascular</u> Hypotension	MAP <70	Dopamine ≤5 or dobutamine any	Dopamine > 5 or norepinephrine ≤ 0.1	Dopamine >15 or Norepinephrine > 0.1
<u>CNS</u> Glasgow Coma Score	13- 14	10-12	6-9	<6
<u>Renal</u> Creatinine (mg/dL) or Urine output	1.2- 1.9	2.0-3.4	3.5-4.9 or <500 (mL/day)	>5.0 or <200 (mL/day)

For Respiratory Scoring:

- The PaO₂/FiO₂ ratio will be calculated for all patients via an arterial gas for any part of each day using the lowest value in the previous 24 hours.
- For patients on nasal cannula oxygen, an estimated FiO₂ may be calculated by multiplying the liter flow/minute by 0.03 and adding that to 0.21 or using a standard table.
- Patients dependent upon high flow nasal cannula (HFNC) to maintain adequate oxygenation should have their PaO₂/FiO₂ ratio calculated based on the fraction of inspired oxygen set by the device.

(c) Access to Critical Care Resources

Patients with no **PLACEMENT CRITERIA** (a) should be given access to critical care resources (e.g. ICU beds, ventilator, ECMO, CVVH/CRRT, etc.) before patients with **PLACEMENT CRITERIA**.

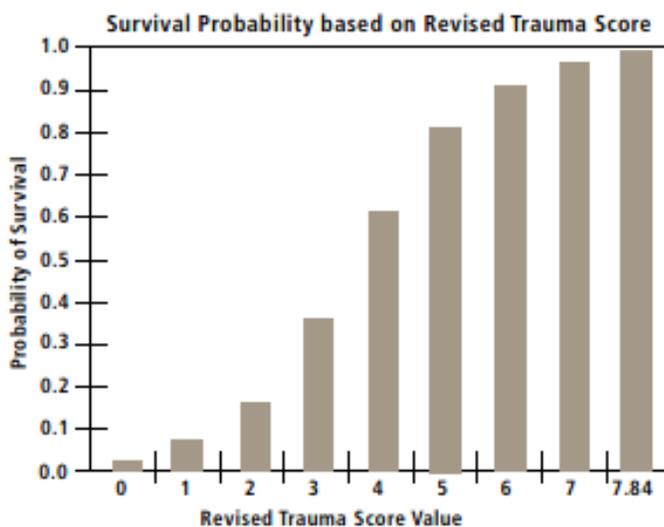
(d) GLASGOW COMA SCORE (GCS) The GCS score is used as part of the Revised Trauma Score (table (e)) in determining placement criteria for access to critical care resources and hospital admission at triage levels 2 and 3.

Glasgow Coma Scoring Criteria				
Criteria	Adults and Children	Infants and Young Toddlers	Score	Criteria Score
Best Eye Response (4 possible points)	No eye opening	No eye opening	1	
	Eye opens to pain	Eye opens to pain	2	
	Eye opens to verbal command	Eye opens to speech	3	
	Eyes open spontaneously	Eyes open spontaneously	4	
Best Verbal Response (5 possible points)	No verbal response	No verbal response	1	
	Incomprehensible sounds	Infant moans to pain	2	
	Inappropriate words	Infant cries to pain	3	
	Confused	Infant is irritable and continually cries	4	
	Oriented	Infant coos or babbles (normal activity)	5	
Best Motor Response (6 possible points)	No motor response	No motor response	1	
	Extension to pain	Extension to pain	2	
	Flexion to pain	Abnormal flexion to pain	3	
	Withdraws from pain	Withdraws from pain	4	
	Localizes to pain	Withdraws from touch	5	
	Obeys commands	Moves spontaneously or purposefully	6	
Total Score (add 3 subscores; range 3 to 15):				
GCS – If on vent and sedated: Triage Level 2, assume GCS of 15; Triage Level 3, use last known GCS FiO2 – Use indwelling arterial cannula, nasal cannula O2, or fraction on inspired O2 if on HFNC				

(f) TRIAGE DECISION FOR BURN VICTIMS A burn score of "Low"

(e) REVISED TRAUMA SCORE (RTS)

Values for the REVISED TRAUMA SCORE (RTS) range from 0 to 7.8408. The RTS is heavily weighted towards the GLASGOW COMA SCORE (GCS) to compensate for major head injury without multisystem injury or major physiological changes. The RTS correlates well with the probability of survival. A Revised Trauma Score of <2 is a placement criterion for access to critical care resources and hospital admission at triage levels 2 and 3.



Revised Trauma Score Calculation				
Criteria	Score	Coded value	Weighting	Adjusted Score
Glasgow Coma Score	3	0	x 0.9368	
	4 to 5	1		
	6 to 8	2		
	9 to 12	3		
	13 to 16	4		
Systolic Blood Pressure (SBP)	0	0	x 0.7326	
	1 to 49	1		
	50 to 75	2		
	76 to 89	3		
	>89	4		
Respiratory Rate (RR) in breaths per minute (BPM)	0	0	x 0.2908	
	1 to 5	1		
	6 to 9	2		
	>29	3		
	10 to 29	4		
Revised Trauma Score (add 3 adjusted scores):				

Age (yrs)	Burn Size (% total body surface area)									
	0-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91%+
0-1.9	Very high	Very high	Very high	High	Medium	Medium	Medium	Low	Low	Low/expectant
2.0-4.9	Outpatient	Very high	Very high	High	High	High	Medium	Medium	Low	Low
5.0-19.9	Outpatient	Very high	Very high	High	High	High	Medium	Medium	Medium	Low
20.0-29.9	Outpatient	Very high	Very high	High	High	Medium	Medium	Medium	Low	Low
30.0-39.9	Outpatient	Very high	Very high	High	Medium	Medium	Medium	Medium	Low	Low
40.0-49.9	Outpatient	Very high	Very high	Medium	Medium	Medium	Medium	Low	Low	Low
50.0-59.9	Outpatient	Very high	Very high	Medium	Medium	Medium	Low	Low	Low/expectant	Low/expectant
60.0-69.9	Very high	Very high	Medium	Medium	Low	Low	Low	Low/expectant	Low/expectant	Low/expectant
70.0+	Very high	Medium	Medium	Low	Low	Low/expectant	Expectant	Expectant	Expectant	Expectant

Outpatient: Survival and good outcome expected, without requiring initial admission; **Very high:** Survival and good outcome expected with limited/short-term initial admission and resource allocation (straightforward resuscitation, LOS <14-21 days, 1-2 surgical procedures); **High:** Survival and good outcome expected (survival $\geq 90\%$) with aggressive and comprehensive resource allocation, including aggressive fluid resuscitation, admission $\geq 14-21$ days, multiple surgeries, prolonged rehabilitation; **Medium:** Survival 50-90% and/or aggressive care and comprehensive resource allocation required, including aggressive resuscitation, initial admission $\geq 14-21$ days, multiple surgeries and prolonged rehabilitation; **Low:** Survival <50% even with long-term aggressive treatment and resource allocation; **Expectant:** Predicted survival $\leq 10\%$ even with unlimited aggressive treatment.

(g) NEW YORK HEART ASSOCIATION (NYHA) FUNCTIONAL CLASSIFICATION SYSTEM

The NYHA functional classification system relates symptoms to everyday activities and the patient's quality of life. NYHA Class III or IV heart failure are placement criteria for access to critical care resources and hospital admission at triage levels 2 and 3.

NYHA Classes	
Class	Patient Symptoms
Class I (Mild)	No limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitations, or dyspnea.
Class II (Mild)	Slight limitation of physical activity. Comfortable at rest, but ordinary physical activity results in fatigue, palpitations, or dyspnea.
Class III (Moderate)	Marked limitation of physical activity. Comfortable at rest, but less than ordinary activity causes fatigue, palpitations, or dyspnea.
Class IV (Severe)	Unable to carry out physical activity without discomfort. Symptoms of cardiac insufficiency at rest. If any physical activity is undertaken, discomfort is increased.

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(h) PUGH SCORE A total PUGH SCORE >7 is a placement criterion for access to critical care resources and hospital admission at triage levels 2 and 3.

Scoring criteria			
Criteria	Value	Points	Total for criteria
Total Serum Bilirubin	<2 mg/dL	1	
	2-3 mg/dL	2	
	>3 mg/dL	3	
Serum Albumin	>3.5 g/dL	1	
	2.8 - 3.5 g/dL	2	
	<2.8 g/dL	3	
INR	<1.70	1	
	1.71-2.20	2	
	>2.20	3	
Ascites	None	1	
	Controlled medically	2	
	Poorly controlled	3	
Encephalopathy	None	1	
	Controlled medically	2	
	Poorly controlled	3	
Total Pugh Score			
Score interpretation			
Total PUGH SCORE	Class		
5-6	A	Life expectancy 15-20 years Abdominal surgery perioperative mortality 10%	
7 to 9	B	Liver transplant evaluation indicated Abdominal surgery perioperative mortality 30%	
10 to 15	C	Life expectancy 1-3 years Abdominal surgery perioperative mortality 82%	

VI. RELATED POLICIES: Examples

- A. Emergency Management Plans – Per Facility
- B. Infection Prevention Plans – Per Facility
- C. Security Management Plan – Per Facility
- D. Medical Staff Rules and Regulations – Emergency Preparedness – Per Facility
- E. COVID-19 N95 Respirator and Medical Mask Extended Use and Reuse Guidelines
- F. Visitor Screening Guideline
- G. Associate/Clinician Screening Guideline
- H. Peer Based Review Team Guidelines

VII. REFERENCES:

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Appendix 1: Guideline on Code Status for COVID-19

1. These guidelines on code status apply to all patients confirmed to have COVID-19 AND all PUIs.
2. In a code, staff need to follow regular processes for a code with a patient in isolation
 1. This means caregivers responding to a code **must put on PPE** before assisting with a resuscitation attempt.
 2. Since CPR/ACLS is an aerosolizing procedure, caregivers who do not wear PPE while attempting resuscitation on a patient with confirmed or suspected COVID-19 **will be subject to quarantine** in order to prevent spread of the illness.
 3. Responders should protect themselves in any response and COVID-19 does not change the obligation to protect yourself while trying to rescue others.
3. Caregivers should be re-educated on the PPE expectations during resuscitation attempts, especially those in the ED, ICU, and members of the Rapid Response Team.
4. Concerns about medically inappropriate or medically ineffective care that do not fall under the triage guidelines should follow the normal policy for addressing these concerns. Ethics Consults are always available.

Appendix 2: Tiebreaker

1. Randomization should be used as a tiebreaker if:
 - a. multiple patients meet inclusion criteria at the same time, and the PBRT believes they are equally likely to benefit from an available resource; or
 - b. no resources are currently available and the PBRT believes that multiple patients on the waiting list are equally likely to benefit from an available resource.
2. Patients who present at different times (e.g. on different days or several hours apart), should not be included in the same randomization process due to the logistical difficulty of an ever-expanding list of patients to include in a randomization.
3. It is strongly encouraged to use a digital randomization process (that can be saved for future reference) rather than manual randomization.
4. Patients who are currently using an available scarce resource should not be included in the randomization process, including those undergoing a 48 hour reassessment, because they may take two to three weeks to recover.

Appendix 3: Reconsidering PBRT Decisions

1. A member of the patient's direct care team, or their legally authorized surrogate decision maker by statute or advance directive, may request the PBRT reconsider a decision for the patient.
2. Requests will not be granted if they are based on object to or disagreement with the process or these Guidelines as a whole.
3. Requests to reconsider may be based on:
 - a. Providing relevant clinical information the PBRT did not have when making the initial decision;
 - b. A change in the patient's clinical condition, especially a significant improvement or a decline; or
 - c. An update in the availability of available resources.
4. An After Action Review of the PBRT's decisions will be conducted regularly.